

**132-20 Merrick Boulevard**  
**Tax Block 12999, a portion of Lot 44**  
**SPRINGFIELD GARDENS, QUEENS, NEW YORK**

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**Final Engineering Report**

**AKRF Project Number: 80022**

**NYSDEC VCP Number: V00304**

**Prepared for:**

HD Development of Maryland, Inc.  
and  
Home Depot U.S.A., Inc.  
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**AUGUST 2011**

### CERTIFICATION

I, Michelle Lapin, certify that I am currently a NYS registered professional engineer, I had primary direct responsibility for the implementation of the subject construction program, and I certify that the Remedial Work Plan dated October 1999 was implemented and that all construction activities were completed in substantial conformance with the New York State Department of Environmental Conservation (NYSDEC)-approved Remedial Work Plan.

The data submitted to the NYSDEC demonstrates that the remediation requirements set forth in the Remedial Work Plan and all applicable statutes and regulations have been or will be achieved in accordance with the time frames, if any, established in the work plan to the extent practicable.

All use restrictions, institutional controls, engineering controls and/or any operation and maintenance requirements applicable to the site are contained in a declaration of covenants and restrictions created and filed with the clerk of the County in which the site is located.

A Site Management Plan has been submitted for the continual and proper operation, maintenance, and monitoring of any engineering controls employed at the site including the proper maintenance of any remaining monitoring wells, and that such plan has been approved by the NYSDEC.

Any financial assurance mechanisms required by the NYSDEC pursuant to Environmental Conservation Law have been executed.



NYS Professional Engineer #073934-1

8-5-11

Date

A handwritten signature in black ink, appearing to read "Michelle Lapin", written over a horizontal line.

Signature

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## 1.0 BACKGROUND

FC Springfield Associates, LLC entered into a Voluntary Cleanup Agreement (VCA) with the New York State Department of Environmental Conservation (NYSDEC) in December 1999 to investigate and remediate an 8.56-acre property located at 132-20 Merrick Boulevard in Springfield Gardens, Queens, New York (Site). FC Springfield Associates, LLC is the Volunteer under the VCA; however, Home Depot U.S.A., Inc. (Home Depot) contractually assumed FC Springfield Associates, LLC's rights and obligations under the VCA per an Assignment and Assumption Agreement. NYSDEC was notified of the sale of the property to Home Depot and Home Depot's assumption of the responsibilities and rights to act for the Volunteer in implementation of the VCA. The VCA listed the Site as comprising an 8.56-acre property on Block 12999 including former Lots 44 (a portion of the current Lot 44 boundaries) 54, 74, and 94. Beginning with tax year 2002, the former lots in Block 12999 were consolidated into one 9.066-acre lot, currently known as Lot 44, of which the VCA Site comprises Parcel A; an 8.56-acre portion of current Lot 44. The VCA Site is described as Parcel A of the metes and bounds, documented on the current ASTM/ALTA Site survey which is included in Appendix I. The Site's current usage type is commercial and consists of a retail store and parking lot for The Home Depot. Refer to the Voluntary Cleanup Program (VCP) application for additional details. A digital copy of this Final Engineering Report (FER), along with other project documents approved under the VCP is included on a DVD in Appendix A.

### 1.1 SITE LOCATION AND DESCRIPTION

The VCA listed the Site as comprising an 8.56-acre property on Block 12999 in Springfield Gardens, Country of Queens, New York and including former Lots 44 (a portion of the current Lot 44 boundaries) 54, 74, and 94. Beginning with tax year 2002, the former lots in Block 12999 were consolidated into one 9.066-acre lot, currently known as Lot 44, of which the VCA Site comprises Parcel A; an 8.56-acre portion of current Lot 44. The VCA Site is described as Parcel A of the metes and bounds, documented on the current ASTM/ALTA Site survey which is included in Appendix I. A United States Geological Survey (USGS) topographical quadrangle, included as Figure 1, shows the Site location. The VCA listed the Site as a parcel bounded by Merrick Boulevard to the north, 137<sup>th</sup> Avenue to the south, Belknap Street to the west, and Long Island Railroad tracks to the east. The Site Plan shown on a 2004 aerial photograph is included as Figure 2. The boundary of this VCP Site is more fully described in Appendix B – Metes and Bounds for Parcel A, an 8.56-acre portion of current Lot 44.

### 1.2 SITE DEVELOPMENT

The Remedial Action (see Section 4.0) performed under the Remedial Work Plan (RWP) has made the Site protective of human health and the environment to standards consistent with a commercial end use. Remedial action work performed under the RWP consisted of the construction of an air sparge (AS) and soil vapor extraction (SVE) system in May 2000.

The Site is located in a light industrial area, which includes commercial and residential uses. Commercial and industrial properties are located to the north, along Merrick Boulevard and to the east, opposite the Long Island Railroad tracks, along Springfield Avenue. Residential areas are located south of the Site, along Belknap Street. A public school is located approximately 1,000 feet southeast of the Site, on the western side of Belknap Street.

### 1.3 SITE HISTORY

This summary of the Site history is based on two Phase I Environmental Site Assessment (ESA) Reports (Eder Associates, July 1998 and EMCON, March 1997). A detailed description of

manufacturing processes of the previous Site occupant, Knomark, Inc. (Knomark), is included in Roux Associates, Inc. (Roux) report, titled “Environmental Audit”, dated March 1988. Previous reports are included in Appendix A.

#### Prior to 1957

Historical Sanborn maps for 1926 and 1949 showed no industrial use at the Site for this period. According to the 1926 map, only a private residence occupied the northwestern corner of the Site, with the remainder of the Site being undeveloped. By 1949, the Site was labeled “Sherwood Oval” and appeared to be playing fields.

#### 1957-1988

Knomark constructed a building on the Site in 1957. This firm manufactured various products, including fabric softeners, toilet bowl cleaners, fabric dyes and shoe polish from 1957 to 1988. In the 1960s, Arden-Esquire Realty Company purchased the property from Knomark, which continued to occupy the Site until 1988 as a tenant.

Knomark’s manufacturing process used the solvent tetrachloroethene (PCE) and mineral spirits. The company stored these chemicals in two 5,000-gallon underground storage tanks (USTs) on the Site. Other chemicals used by Knomark included 1,1,1-trichloroethene, methylene chloride, and methyl ethyl ketone. The key manufacturing process involved the use of batch mixing tanks (for mixing of volatile chemicals) and kettles (for nonvolatile chemicals). Sludge from Knomark’s manufacturing process settled out into an above ground catch basin and the remaining sludge was disposed of off-site by a private waste contractor. After the sludge had settled out into the catch basin, the wastewater from the facility was discharged into New York City’s sewer system. One 20,000-gallon and one 10,000-gallon underground fuel oil storage tanks were located on-Site, on the northern side of the former building.

#### 1988-1999

After Knomark vacated the Site, United Parcel Service (UPS) leased the property between 1988 and 1998 as a processing and distribution center for shipped packages and used the four 4,000-gallon underground gasoline storage tanks for fueling vehicles. UPS vacated the Site in 1995; the tanks were removed, and the Site remained unoccupied from 1995 to 1999.

Forest City Ratner purchased the property in 1999 and demolished the Site buildings in 2000. The property was purchased by Home Depot U.S.A., Inc. in 2000 and later transferred to HD Development of Maryland, Inc. Construction of the current retail building commenced in mid-2000, and the Site has been operated as a Home Depot retail store since August 2001.

## **1.4 GEOLOGICAL CONDITIONS**

The hydrogeologic units in Queens County, New York consist of unconsolidated sediments underlain by crystalline bedrock. The aquifer system underlying the Site is designated by the U.S. Environmental Protection Agency (USEPA) as a “sole source aquifer” for drinking water supply.

The principal hydrological units on the Site are upper Pleistocene glacial deposits (shallow upper glacial unit), the Gardiners Clay (deep upper glacial unit), and the Magothy Formation-Matawan Group (Magothy aquifer). Boring logs and geophysical logs of three Magothy Formation wells formerly on the Site (MW-9M, MW-14M, and MW-17M) showed a six to eight-foot clay layer at approximately 55 to 60 feet below ground surface that is continuous throughout the Site. This unit is referred to as the Gardiners Clay Unit and restricts the flow of water between the upper glacial unit to the underlying Magothy aquifer (Roux, 1989). Near the monitoring well cluster

MW-17, in addition to the Gardiners Clay Unit, an eight-foot thick layer of black clay with pyrite nodules and lignite was encountered from 130 to 140 feet below ground surface. The black clay layer was estimated to be limited in extent and not a significant barrier to groundwater flow (Roux, 1989). Well design drawings indicated that the wells in the Magothy Formation were properly installed to avoid cross-contamination between the upper glacial units and the Magothy Formation. The Magothy Formation wells were screened 60 feet below the Gardiners Clay Unit with a 5-foot bentonite seal above the well screen. Thus, the Gardiners Clay Unit continues to restrict flow between the upper Pleistocene glacial deposits and the underlying Magothy Formation.

On-site monitoring wells revealed an approximate depth to groundwater of 17 feet in the shallow upper Pleistocene glacial deposits. Based upon surveyed groundwater elevations, the direction of current groundwater flow is to the southeast for the upper glacial aquifer units.

Water wells belonging to the New York City Department of Environmental Protection (NYCDEP), formerly of the Jamaica Water Company, are situated approximately 3,000 feet to the northeast, at 90-42 Springfield Boulevard, and 4,000 feet to the east, at 222<sup>nd</sup> Street and 134<sup>th</sup> Road. Prior to 1986, the regional groundwater flow in the area had been to the north, towards the former Jamaica Water Company well field. A pump test performed by Roux on December 15, 1988, showed the groundwater flow rate of the upper Pleistocene glacial deposits to be one foot per day. A geologic section (Roux, 1989) is provided in Appendix C. A groundwater contour map based on data collected in 2008 is included as Figure 3A. Historical groundwater flow conditions for the shallow upper glacial unit, deep upper glacial unit, and Magothy aquifer are shown in Figures 3B, 3C, and 3D, respectively. Logs for monitoring wells used in determining geologic conditions are included in Appendix D.

## 2.0 DESCRIPTION OF REMEDIAL INVESTIGATION FINDINGS

Numerous soil and groundwater investigations have been conducted on the Site. A brief overview of the previous testing and remediation work is presented in the following section.

### 2.1 REMEDIAL INVESTIGATIONS SUMMARY

#### General Site Cleanup performed by Knomark, Inc.

In 1988, Knomark retained H2M Group (H2M) who hired Marine Pollution Control to conduct Site activities relating to the closure of its Site operations, including the cleaning of stained building surfaces, removal of the two chemical USTs (one 3,000-gallon and one 5,000-gallon tank) and two fuel oil USTs (one 10,000-gallon and one 20,000-gallon tank), and removal of two drywells (and subsequent installation of two new wells) and associated contaminated soil.

H2M's field screening measurements indicated no contaminated soil remained in the area of the former chemical underground storage tanks. These results were forwarded to NYSDEC along with head-space results indicating no remaining contamination after the chemical underground storage tank removal.

The building owner retained Roux to complete the surficial cleaning of the building and removal of the fuel oil USTs (Roux, March 1989 and Roux, May 1989).

#### Environmental Audit of Toxic and Hazardous Waste Management and Disposal at Knomark, Inc., Roux Associates Inc., 1988

Roux Associates, Inc. (Roux) conducted an environmental audit during the time the facility was occupied by Knomark. The purpose of Roux's audit was to evaluate existing environmental conditions to determine Knomark's responsibility for cleanup at the termination of its lease.

Roux's audit indicated the following:

- Knomark used volatile chemicals, including tetrachloroethylene (PCE), 1,1,1-trichloroethane, methylene chloride, and methyl ethyl ketone, in its manufacturing process. The manufacturing of dyes account for most of these chemicals used at the facility.
- All wastewater from the building led to an indoor, above ground catch basin (for settling and sludge collection), which subsequently discharged into the municipal sewer. Knomark generated approximately 6,000 kilograms of sludge per month, which was pumped regularly from the aboveground catch basin and disposed of off-site by Liberty Ash of Elmont, New York. Air emissions by Knomark complied with permits from NYCDEP.
- The Knomark facility had small motor capacitors and step-up transformers built into process equipment that were inside the building that potentially contained polychlorinated biphenyls (PCBs). Knomark had no records of PCB-containing equipment on file or a PCB inventory or management program, which would be required by Toxic Substances Control Act (TSCA) regulations.
- Several potential sources of groundwater contamination were identified, including: the chemical drum storage area outside the building at the northern end of the Site, which lacked appropriate containment; chemical USTs and petroleum USTs; and visible spills and leaks onto the ground, which could migrate into on-site drywells in the parking areas.
- Soil samples collected from a drywell near the chemical drum storage area and in the back of the building had elevated levels of solvents.

Environmental Investigation of Subsurface Conditions, TRC, 1988

TRC Environmental Consultants (TRC) was retained by UPS to assess potential groundwater contamination at the Site prior to UPS's lease. To meet this objective, TRC installed one monitoring well in the expected upgradient groundwater flow direction and six monitoring wells in the expected down gradient groundwater flow direction to assess potential environmental concerns including the fuel oil underground storage tanks, the former chemical underground storage tanks, and the drywell closest to the building. In addition, TRC sampled blue-stained soil from excavated areas formerly occupied by drywells and the northeastern corner of the former Site building. Groundwater samples were analyzed for volatile organic compounds (VOCs), polynuclear aromatic hydrocarbons (PAHs), total petroleum hydrocarbons (TPH), and metals (arsenic, cadmium, chromium, hexavalent chromium, cobalt, copper, mercury, silver and zinc). Soil samples were analyzed for VOCs and metals.

TRC's report indicated the following:

- No VOCs were detected in the blue-stained soil from areas near the drywells.
- Solvents were detected in all but one of the monitoring wells. TRC attributed the groundwater contamination to past usage of the property. However, the highest levels of VOCs were detected in a well at the upgradient end of the Site (MW-14s), and subsequent testing indicated a potential off-site source of solvent contamination (Roux, 1990).
- All drywells and solvent-contaminated soil identified by TRC were excavated from the Site.

Results of Building Decontamination, Roux Associates, 1989

Roux was retained by Shea and Gould to perform an independent evaluation of the H2M closure implementation during March 1988. Roux determined that building was not sufficiently decontaminated based on cleanup criteria developed by H2M and that further decontamination was required. Roux oversaw further building decontamination performed by O.H. Materials and documented this cleanup in a report dated March 21, 1989. Twenty five concrete chip samples from the first floor and 15 concrete chip samples from the second floor were collected and analyzed for metals.

Roux's findings included:

- Building decontamination resulted in the accumulation of 60 cubic yards of spent solvents listed as hazardous waste which was to be incinerated off-site.
- All chip samples met H2M's cleanup criteria established for the eight RCRA metals.

Evaluation of Soil and Ground-Water Quality, Roux Associates, 1989

Roux performed a comprehensive soil and groundwater sampling program based on TRC's assessment that on-Site groundwater was contaminated. The study included the installation of 18 monitoring wells and 20 soil borings. Groundwater samples were collected from both the upper glacial unit and the Magothy Formation. The separate aquifers were screened at four depth intervals: shallow upper glacial unit at 18-28 feet below grade; deep upper glacial unit at 50-60 feet below grade; Magothy at 90-100 feet below grade; and deep Magothy at 130-140 feet below grade.

Roux's 1989 report indicated:

- No soil contamination was detected at levels exceeding Technical and Administrative Guidance Memorandum (TAGM) #4046 Recommended Soil Cleanup Objectives (RSCOs) (although results were not compared to any guidance values) in soil above the groundwater.
- Groundwater flow in the shallow and intermediate aquifers was to the southeast. Groundwater flow in the deep aquifer was to the southwest.
- Prior Site usage had caused a limited impact to groundwater conditions on the property, and was mainly attributed to releases that had occurred in the former chemical drum storage area outside the building.

Removal of Underground Fuel Oil Tanks, Roux Associates, 1990

Roux oversaw the removal of two fuel oil USTs (one 10,000-gallon No. 2 fuel oil tank and one 20,000-gallon No. 4 fuel oil tank) as part of the heating system conversion to natural gas.

Roux's 1990 report indicated:

- After repairs to the feed line of the 10,000-gallon UST, both tanks passed a tightness test prior to removal.
- Two soil borings were advanced adjacent to the USTs and fuel line, one of which (SB-2) detected a total petroleum hydrocarbon concentration of 2,100 parts per million (ppm) at approximately 8 to 10 feet below ground surface, in the vicinity of the repaired feed line, which was removed as part of the tank removal process.
- A NYSDEC representative was present during the removal of the tanks and directed the removal of 10 cubic yards of petroleum-contaminated soil for disposal off-site.

Results of the April 1990 Ground-Water Sampling, Roux Associates, 1990

Roux resampled all groundwater monitoring wells in response to a meeting between Arden-Esquire Realty Company (property owner) and NYSDEC. New monitoring wells were installed to replace damaged wells. A total of 22 on-site monitoring wells were sampled.

Roux's 1990 groundwater study indicated:

- Groundwater contamination on the Site was attributed to an unknown off-site source. The highest levels of VOCs, primarily solvents, were detected in the groundwater wells at the upgradient (northern) end of the property.
- Roux concluded that no further action was warranted for the Site since an off-Site source was responsible for the groundwater contamination.

Phase I Environmental Site Assessment, EMCON, 1997

In October 1996, United States Postal Service (USPS) was planning to lease the building for the John F. Kennedy Air Mail Center Support Annex and retained EMCON to perform a Phase I ESA. The following conclusions and recommendations were made:

- USPS should obtain full disclosure and review of data related to the removal of the fuel oil tanks, UST integrity test records and leak detection records, and the groundwater monitoring wells at the Site.
- All fluids, floor stains, drums, dye stains, remaining fluids in oil/water separators, and tanks should be removed.

- USPS should rectify boilers being operated without a current Operating Permit from NYSDEC.
- A lead-based paint survey should be conducted in areas where employee exposure would occur.
- PCB-filled light ballasts and mercury-containing light tubes should be removed during regular building maintenance or re-lamping.
- A drinking water evaluation should be performed due to the age of the building.
- In a Site Condition Report prepared by Berger/Hill in September 1995, potential asbestos-containing spray-on fireproofing was observed on structural steel. The Site Condition Report noted that documentation from Warren Panzer Engineers indicated no exposed asbestos-containing materials (ACMs) were found within the building on a confirmatory walk-through survey, supporting that all exposed ACMs had been removed in 1988.

Phase II Study: Analytical Results Only, Malcolm Pirnie, Inc., 1998

Malcolm Pirnie performed soil and groundwater sampling on behalf of a prospective buyer. The sampling consisted of collecting and analyzing 5 soil samples (for VOCs and TPH) and sampling groundwater from 14 existing wells.

Malcolm Pirnie's investigation found:

- No VOCs or TPH-DRO were detected in any of the soil samples.
- No pesticides, semivolatile organic compounds (SVOCs) or PCBs were detected in the groundwater samples.
- Low levels of solvents were detected in the groundwater samples. The solvent concentrations were similar to the levels reported by Roux during the 1990 groundwater sampling, *Results of the April 1990 Ground-Water Sampling*, Roux Associates, 1990.

Although no report was available for review, Malcolm Pirnie and Eder Associates (Eder) also reportedly sampled the sediment from inside the on-site drywells. Analytical results identified no VOCs in the samples, and Eder subsequently excavated and disposed of the drywell sediment as a petroleum-contaminated waste.

Underground Storage Tank Closure, Leggette, Brashears & Graham, Inc., 1998

Leggette, Brashears & Graham Inc. (LBG) conducted environmental monitoring during the removal of UPS's petroleum USTs and aboveground storage tanks (ASTs). The closure activities included the removal of four 4,000-gallon gasoline USTs, two dispenser islands and associated piping, and removal of two anti-freeze and used oil 275-gallon ASTs.

LBG's report indicated:

- Based on visual inspection of the four 4,000-gallon gasoline USTs, LBG noted that the tanks were in excellent condition. Post-excavation sampling results from the gasoline UST areas, dispenser island, and associated piping indicated no impact to surrounding soil conditions.
- A visual inspection of the two 275-gallon ASTs showed that the tanks to be in excellent condition.

Phase I Environmental Site Assessment, Eder Associates, 1998

Proskauer Rose LLP retained the Eder Division of Gannett Fleming, Inc. (Eder) on behalf of its client, Mendik Realty, in May 1998 to conduct a Phase I ESA of the Site. The assessment revealed evidence of the following environmental conditions:

- Groundwater sampling of on-site monitoring wells detected VOCs that were attributable to an upgradient source(s).
- UPS indicated that four gasoline USTs were removed in accordance with NYSDEC guidelines. Subsequent post-excavation soil sampling indicated that no additional sampling or remediation of this area was warranted.
- All exposed ACMs were removed as part of the 1989 building renovation.
- Eder recommended cleaning and inspecting the oil/water separator and sampling groundwater from downgradient monitoring wells MW-6 and MW-7.

Phase II Environmental Assessment, AKRF, Inc., 1999

Forest City Ratner Companies, a prospective purchaser, retained AKRF to implement a soil and groundwater investigation and sample building materials for asbestos. The overall objectives of the study were as follows:

1. Confirm the current direction of groundwater flow and groundwater quality.
2. Sample soil and groundwater underneath the building, since no previous testing had evaluated subsurface conditions at this location.
3. Sample soil and groundwater in the areas of the former chemical USTs and dry wells to verify that these areas of environmental concern had been remediated.
4. Perform an asbestos survey to identify, locate, and quantify asbestos-containing building materials.

AKRF sampled all 18 existing monitoring wells, collected 8 soil samples and 6 groundwater samples under the building, and 8 soil samples from the former locations of chemical USTs and drywells for laboratory analysis.

Significant findings of AKRF's Phase II Environmental Assessment were:

- Laboratory analysis showed only trace amounts of VOCs in the soil. The levels detected were well below NYSDEC TAGM RSCOs and STARS Memorandum #1 guidance values. Thus, past remedial actions, as documented in prior studies, were effective in removing solvent and petroleum contamination from the vadose zone.
- Solvent levels, in particular PCE, exceeded NYSDEC Class GA standards at most groundwater sampling locations in the shallow upper glacial aquifer. The highest PCE levels were found downgradient or within the immediate vicinity of the former chemical drum storage area, former drywells, and chemical USTs. This finding suggests that prior Site usage contributed to the Site's groundwater quality. The presence of PCE in upgradient wells suggested that an off-site source was also present (also see Roux 1990).
- Solvent levels in the deep upper glacial aquifer did not exceed NYSDEC Class GA standards. Historic levels of PCE showed a noticeable decrease in all wells installed in the deep upper glacial aquifer. AKRF reported that the higher levels of solvents detected in the Magothy wells likely reflected a regional groundwater problem. The former Jamaica Water



Supply Company operated wells in the Magothy Aquifer throughout southeastern Queens. As of 1990, groundwater quality data showed that nearly half of their Magothy wells had solvent levels greater than the GA standard of 5 parts per billion (ppb). The NYCDEP, the owner of the Jamaica Water Supply Company wells, reported similar widespread contamination of the Magothy Aquifer in the area at that time. Furthermore, groundwater sampling on the Site showed the presence of PCE in the upgradient Magothy well MW-14 (located at the northern end of the Site). This finding lended further support that the PCE detected in the Magothy wells was indicative of regional groundwater quality.

Supplemental Soil/Groundwater Sampling, AKRF, Inc., 1999

The results of this investigation are presented in Appendix C of AKRF's revised Remedial Work Plan (RWP). AKRF installed an additional monitoring well and collected groundwater samples for laboratory analysis. At the time of AKRF's Phase II Investigation, AKRF was unable to locate monitoring well MW-12 installed by Roux Associates at the northwestern corner of the Site. Consequently, AKRF installed a replacement well in the shallow upper glacial aquifer at this location. During the installation of the replacement well, Roux's monitoring well MW-12 was found. The replacement well, MW-18S, was then offset to the south to optimize Site coverage.

Based upon field observations, soil samples exhibiting evidence of contamination (elevated PID readings, odor, staining, and/or sheen) were submitted to a state certified laboratory and analyzed for Target Compound List (TCL) VOCs. Sampling and analytical methodology complied with NYSDEC and New York State Department of Health (NYSDOH) protocol applicable at the time of the investigation.

Significant findings of AKRF's supplemental testing were:

- Soil sampling found no PCE in the soil above the groundwater table at MW-18S.
- Groundwater from MW-12 and MW-18S were not sampled but were proposed to be sampled during the remedial action in the NYSDEC-approved RWP; therefore, no groundwater results were reported.

Indoor Air Quality Study, AKRF Inc., September, 1999

The results of this investigation are presented in Appendix D of AKRF's revised RWP. AKRF performed an indoor air monitoring survey in the existing on-Site building. The purpose of this air sampling was to determine whether nearby PCE groundwater contamination had affected the ambient atmosphere within the on-site building. All sampling and analyses were conducted in accordance with New York State Department of Health protocol applicable at the time of the investigation.

Significant findings of AKRF's supplemental indoor air quality study were:

- All indoor PCE air levels were less than 1 ppb.
- Levels of airborne volatile organic compounds inside the building were comparable to background levels measured outside the building and to levels measured at the NYSDEC monitoring station in Brooklyn, which is considered typical of urban background levels.

## 2.2 CONTAMINATION CONDITIONS

Extensive sampling performed on the project Site between 1988 and 1999, prior to remedial action under the Remedial Work Plan (RWP), indicated no soil contamination detected at levels exceeding TAGM #4046 RSCOs in soil above the groundwater table. Prior to the NYSDEC-

approved remedy outlined in Section 4.0, Site contamination was identified in soil vapor and groundwater. Contamination conditions and locations at the Site are summarized on the following figures:

- Areas of concern are shown on Figure 4.
- Figure 5A shows all soil sampling locations except the 1998 samples by Malcolm Pirnie (report unavailable for review), and by Leggette, Brashears & Graham, Inc., which corresponded only to the former petroleum tank area and reported no impacts.
- Figure 5B shows all groundwater sampling locations with extent of PCE contamination prior to remedial action.
- Figure 6 shows historical PCE concentrations in groundwater.
- Figure 7 is a spider map showing post remedial action soil vapor sampling locations and concentrations.

### 2.2.1 Description of Areas of Concern

Based on the results of extensive testing, PCE levels in groundwater in the shallow upper glacial unit represented the only environmental contamination requiring further remediation beyond the tank and drywell removals performed between 1988 and 1998. The groundwater data indicated that low levels of solvent contamination in the deeper Magothy Formation were attributable to off-site sources. An evaluation of other environmental issues is summarized below:

#### VOC Levels in groundwater

The shallow upper glacial unit contained PCE levels exceeding Class GA standards in the northeastern and eastern areas of the Site building. These areas correspond approximately to the locations of the former chemical USTs, chemical drum storage area, and drywells.

#### VOC Levels in soil vapor

Subsurface investigations by Roux (1989) and AKRF (1999) evaluated VOC levels in the soil vapor. The method used to measure VOC levels in the soil vapor consisted of collecting soil samples, then taking head-space readings with field instrumentation (organic vapor meter). Headspace readings showed VOC levels in the soil vapor ranging from undetected to 10 ppm; however, elevated VOC levels were also found within the immediate vicinity of a former fuel oil tank. As documented by Roux (1990), the petroleum contaminated soil was removed from the Site as part of the tank removal activities.

### 2.2.2 Identification of Standards, Criteria and Guidance (SCG)

Applicable NYSDEC SCGs include Technical and Administrative Guidance Memorandum (TAGM) #4046 Recommended Soil Cleanup Objectives (RSCOs) for soil and Technical and Operational Guidance Series (TOGS) 1.1.1 Ambient Water Quality Standards and Guidance Values Class GA (Drinking Water) Standards for groundwater.

### 2.2.3 On-site and Off-site Groundwater Contamination

Based on the Site investigations conducted by AKRF and other consultants between 1988 and 1999, groundwater has been contaminated by PCE in some areas of the Site. As shown in Figure 6, the shallow upper glacial unit had PCE levels exceeding the Class GA

standard of 5 ppb in the northeastern and eastern areas of the Site building. These areas correspond approximately to the locations of the former chemical USTs and chemical drum storage area. The groundwater data indicated that low levels of solvent contamination in the deeper Magothy Formation were attributable to off-site sources.

Groundwater VOC analytical results from October 2004 through December 2008, including exceedances of Class GA standards, are shown in Table 1. Laboratory analytical results from previous years were not available in digital format; however, the scanned laboratory analytical reports and summary tables are presented in prior reports included in Appendix A. All available historical groundwater PCE analytical results are provided in Table 3. A spider map that indicates the locations and historical concentrations of PCE in groundwater (prior to, during, and post-remediation) is shown on Figure 6.

#### **2.2.4 On-site and Off-site Soil Vapor Contamination**

During the TRC and H2M investigations, a PID was used to detect the presence of organic vapors on recoverable subsurface materials on-site. As discussed in Section 2.1, total VOC concentrations in soil headspace coincided with the soil sampling results of previous investigations, which showed VOC levels in the soil to be well below NYSDEC TAGM #4046 Recommended Soil Cleanup Objectives (RSCOs). An indoor air quality study performed by AKRF in September 1999 (see Section 2.1) indicated that PCE groundwater contamination had not affected the ambient atmosphere within the on-site building at that time. A post-remediation soil vapor survey performed, in 2007 found that soil vapor was not a significant source of contamination (see Section 4.3.2).

Soil vapor results collected during investigations prior to the remedial action are included in Appendices A and E. Soil vapor results collected during the post-remediation soil vapor survey are shown in Table 2. A spider map indicating the locations and summarizing post-remediation soil vapor data is shown in Figure 7.

### **2.3 ENVIRONMENTAL AND PUBLIC HEALTH ASSESSMENTS**

#### **2.3.1 On-site and Off-site Exposure Assessment**

The following exposure assessment was included in the NYSDEC-approved RWP, using guidance applicable at the time the RWP was prepared, and identifies contamination sources and potential exposure pathways for contamination prior to the implementation of the RWP.

##### Contamination Source

PCE in the groundwater of the shallow upper glacial unit (18-28 feet below grade) exceeded NYSDEC Class GA water quality standards. Groundwater on portions of the Site was contaminated by PCE in the approximate locations of the former chemical USTs and chemical drum storage area. The extensive sampling performed prior to the RWP was not indicative of other on-site contamination sources. The deeper Magothy Formation also contained PCE levels exceeding Class GA standards; however, the contamination of this deeper aquifer was attributed to off-site sources and generally reflected regional groundwater quality.

### Pathway/Receptor Analysis

There were no on-site and no known off-site usages of the shallow upper glacial unit within a one-mile radius of the project Site. The nearest production wells relied upon the deeper Magothy Formation as their source of water.

Pathways other than direct water consumption included vapor intrusion from the groundwater and direct contact or inhalation of VOCs during dewatering for construction. To evaluate the potential for VOC vapor intrusion from the groundwater, the indoor air of the building was tested for volatile organic compounds. The testing was performed in accordance with the sampling and analytical procedures established by the NYSDOH, as applicable at the time of sampling in September 1999. Test results indicated that all PCE levels within the indoor air were less than 1 ppb and were comparable to background levels outside the building and to levels at the nearest NYSDEC monitoring station in Brooklyn, New York. Thus, vapor intrusion of VOCs from the groundwater was determined to unlikely pose a significant exposure risk to the building occupants.

Similarly, no impact from this pathway was expected to off-site receptors, since air testing in the areas of the highest levels of PCE in the groundwater on the Site, showed no impact to receptors. Nonetheless, a quantitative exposure assessment was performed as part of the Remedial Work Plan (RWP) to evaluate the impact of VOC off-gassing upon the nearest potential, residential off-site receptor. The assessment is presented in Appendix F and was based upon the Emergency Standard Guide for Risk-Based Corrective Action (RBCA) issued by the American Society for Testing Material (ASTM), which was appropriate at the time of the RWP. The analysis indicated that no such impacts would occur from the levels of VOCs in the shallow upper glacial unit. In addition, the assessment is also accurate when compared to current NYSDOH guidance (Guidance for Evaluating Soil Vapor Intrusion in the State of New York, October 2006). Moreover, direct contact or inhalation of VOCs during construction was avoided by implementation of the Health and Safety Plan contained in the RWP.

## **2.4 REMEDIAL ACTION OBJECTIVES**

Based on the results of the remedial investigations, the following Groundwater Remedial Action Objectives (RAOs) were identified for this Site:

1. General RAOs for Public Health Protection
  - Prevent ingestion of groundwater containing contaminant levels exceeding drinking water standards.
  - Prevent contact with, or inhalation of, volatiles emanating from contaminated groundwater.
2. General RAOs for Environmental Protection
  - Restore the groundwater aquifer, to the extent practicable, to pre-disposal/pre-release conditions.
  - Prevent the discharge of contaminants to surface water.
  - Remove the source of ground or surface water contamination.

### 3.0 DESCRIPTION OF APPROVED REMEDIAL ACTION PLAN

The Site was remediated in accordance with the scope of work presented in the NYSDEC-approved Remedial Work Plan (RWP) dated October 1999. A Voluntary Cleanup Agreement (VCA) was signed in 1999 between Forest City Springfield Associates LLC (Volunteer) and NYSDEC. The RWP presented the conceptual plan for remediation of the Site. A Notice of Availability for Comment was posted in the Environmental Notice Bulletin on January 12, 2000 and is included in Appendix G. The goal of the remediation was to remove solvent-contaminated groundwater from the shallow upper glacial aquifer.

The factors considered during the analysis of remedial alternatives included:

- Protection of human health and the environment
- Compliance with standards, criteria, and guidelines (SCGs)
- Short-term effectiveness and impacts
- Long-term effectiveness and permanence
- Reduction of toxicity, mobility, or volume of contaminated material
- Implementability
- Cost effectiveness
- Community acceptance
- Land use

Remedial Action standards, criteria and guidance included:

- New York State Groundwater Quality Standards – 6 NYCRR Part 703
- NYSDEC Ambient Water Quality Standards and Guidance Values – TOGS 1.1.1

### 3.1 SUMMARY OF PROPOSED REMEDIAL ACTION

The following proposed Remedial Action was required by the NYSDEC-approved RWP.

1. Construction of an air sparging (AS) system working in conjunction with a soil vapor extraction (SVE) system to remove PCE and other VOCs from the saturated zone.

In addition to the requirements of the October 1999 RWP, the following elements were considered part of the Site remedy to maintain consistency with current NYSDEC policy:

1. Construction and maintenance of an engineered composite cover consisting of asphalt covered roads, concrete covered sidewalks, and concrete building slabs (also referred to as the “Site Cover”) to prevent human exposure to residual contaminated soil remaining under the Site.
2. Recording of a Deed Restriction, including Institutional Controls, to prevent future exposure to any residual contamination remaining at the Site (a copy of the Deed Restriction is provided in Appendix H).
3. Publication of a Site Management Plan (SMP) for long term management of residual contamination as required by the Deed Restriction, including plans for: (1) Institutional and Engineering Controls; (2) monitoring; (3) operation and maintenance; and (4) reporting.

4. Address all responsibilities associated with the Remedial Action, including permitting requirements and pretreatment requirements, in accordance with all applicable Federal, State and local rules and regulations.

## 4.0 DESCRIPTION OF REMEDIAL ACTIONS PERFORMED

Remedial activities completed at the Site were conducted in general accordance with the NYSDEC-approved revised RWP dated October 1999. Deviations from the RWP are noted in Section 4.6. The approved RWP is included in Appendix A.

### 4.1 GOVERNING DOCUMENTS

Governing documents and procedures included in the RWP include a Site-specific Health and Safety Plan (HASP). The HASP was a Site-specific version for all remedial and invasive work performed at the Site. All remedial work performed under this Remedial Action was in compliance with governmental requirements, including Site and worker safety requirements mandated by the Occupational Safety and Health Administration (OSHA). The purpose of the HASP was to assign responsibilities, establish personnel protection standards and mandatory safety practices and procedures, and provide contingencies that may arise during remedial activities at the Site. The HASP included protocols for the implementation, work zone air monitoring, personal protection equipment, general work practices, and emergency procedures and an emergency response plan.

### 4.2 REMEDIAL PROGRAM ELEMENTS

Based on the Site investigations conducted by AKRF and other consultants between 1988 and 1999, groundwater was contaminated by PCE in some on-Site areas. As shown in Figure 5B, the shallow upper glacial unit had PCE levels exceeding Class GA standards in the northeastern and eastern areas of the former Site building. These areas correspond approximately to the locations of the former chemical USTs and chemical drum storage area. The remediation consisted of an AS system working in conjunction with an SVE system to remove PCE from the saturated zone. In this system, air was injected into the saturated zone through a series of 33 AS wells. PCE was volatilized and transported into the vadose zone, and vapors were collected using a series of eight SVE wells for treatment.

#### 4.2.1 Pilot Test

The groundwater remediation was performed using an in-situ air sparging (AS) system, which operated simultaneously with a soil vapor extraction (SVE) system (AS/SVE system). Off-gas from the AS/SVE system was treated with an activated carbon adsorption system. Pilot tests for both systems were conducted prior to the final design and installation of the full-scale system. The goals of the pilot study were to determine the feasibility of the AS/SVE approach and to estimate parameters needed for system design, including soil permeability, zone of influence for the SVE and air sparging wells, anticipated vapor concentrations in the off-gas, vacuum and flow rates necessary to adequately affect the subsurface soil, and the depth at which the air sparging well screens were to be located. In the SVE pilot test, soil vapor was extracted from an SVE well while vacuum measurements were made at monitoring wells located at varying distances and directions from the extraction well. The blower flow rate and vacuum was varied to determine its effect on pressures in the soil by measuring the vacuum response at the monitoring wells.

Similarly, the air sparging pilot test consisted of injecting air into the groundwater from an air sparging well, and taking pressure measurements at monitoring wells installed at varying distances and directions from the air sparging well. The blower flow rate was varied to determine its effect on pressures in the soil by measuring the pressure response at the monitoring wells. In addition, levels of dissolved oxygen and groundwater

elevations were measured at existing monitoring wells MW-3, MW-4 and MW-14S to determine the air sparging system's zone of influence.

The pilot test for the SVE system occurred first, followed by the air sparging test. The SVE pilot test was then repeated to remove any volatile contaminants from the vadose zone created by the air sparging test. The system was installed so that it was air-tight and pressure gauge was attached to the top of each monitoring point. Output from the blower was routed to an activated carbon canister. The results of the pilot test and engineering design calculations were presented in a Pilot Test Report dated January 2000.

#### 4.2.2 Site Preparation and System Installation

The 33 AS wells were constructed of two-inch (outer diameter) PVC casing with a two-foot long screen. The screens were located at variable depths as contamination had a potential to be present at 28 to 30 feet below grade, but up to 55 feet below grade; therefore, wells were placed at a depth based on the contaminant concentration at either 30 feet below grade or to provide a maximum dispersion of air in the contaminated area. To prevent injected air from "short circuiting" up the well casing, the area above the filter pack was sealed with approximately four feet of bentonite and then grouted up to the ground surface. A spacing of 30 feet between AS wells was used.

The eight SVE wells were constructed of two-inch (outer diameter) PVC casing with a five-foot long screen. The bottom of the screen was placed approximately five feet above the groundwater table to accommodate possible variations in the groundwater level, including the possible rise in the groundwater level resulting from reducing the pressure in the vadose zone. To prevent atmospheric air from leaking into the well, the area above the filter pack was sealed with approximately four feet of bentonite, and then grouted up to the ground surface. SVE wells were spaced approximately 30 feet apart. The plan of AS and SVE well locations is shown on Figure 8A and cross-sectional views of typical AS and SVE wells are shown on Figure 8B.

AKRF oversaw the installation, start-up, and operation of the remediation system, which was completed in May 2000. Conformance to specifications and performance criteria were confirmed by AKRF. After installation was complete, the system was leak tested. During start-up, the equipment vendor and contractor performed tests and trained personnel on the operation and maintenance of the system. An as-built drawing of the AS wells, SVE wells, and piping layout is included as Figure 8B.

#### 4.2.3 System Operation

The system was inspected and maintained from mid-2000 to 2005. The following is a summary of the progress memos and other project documentation as related to system operation and maintenance

##### Summary of AS/SVE System Operation Documentation

Progress Memo	Date	Summary
1	2/3/2000	Performed pilot test for the proposed AS/SVE system. Included Pilot Test Report Dated January 2000
2	3/23/2000	No on-site work performed. Designing the AS/SVE system.



<b>Progress Memo</b>	<b>Date</b>	<b>Summary</b>
3	5/3/2000	Construction of AS/SVE system began on 4/25/2000 and, at the time of the report, had the installed 25 of the 41 AS/SVE wells. Trenching and pump house delivery scheduled.
4	5/26/2000	Construction of AS/SVE system completed on 5/24/2000. Start-up testing performed on 5/25/2000 and 5/26/2000. System was functional and working properly.
5	9/8/2000	System running 24 hours/day from start-up until beginning of August. System shut down due to power service changeover. System was shut off.
6	11/6/2000	System was still shut off due to construction activities and disruption of power service.
7	7/3/2001	The system was turned on briefly on 6/07/2001 and turned back off. Damages to the system were repaired and the system was turned on again in 8/2001.
8	9/17/2001	System functioning properly; noted of previous shut down periods.
9	3/11/2002	System functioning properly.
10	5/21/2002	Repairs to the system were made two weeks prior to sampling event.
11	8/20/2002	System functioning properly.
12 and 13	3/5/2003	System functioning properly.
14 and 15	10/13/2003	System functioning properly. PCE levels at the downgradient boundary of the property approximate those of the upgradient wells, which indicated that the remedial objectives of the 1999 RWP were fulfilled.
16	1/20/2004	System functioning properly.
17	6/10/2004	System functioning properly.
NA	Late 2005	Permanent AS/SVE shut off.

In May 2000, the remediation system construction was completed and the system was started. Subsequently, in August 2000, the system was shut down due to construction activities and was not started again until August 2001 (a brief startup occurred in June 2001, but was not operating for a significant amount of time).

#### **4.2.4 Groundwater Monitoring**

As specified in the RWP, groundwater monitoring was performed before, during, and after the operation of the AS/SVE remediation system. Only upper glacial unit (shallow)

wells were sampled as the shallow aquifer was the zone of concern during remediation. Some shallow wells were damaged or destroyed during on-site construction activities; therefore, only the wells available at the time of the groundwater monitoring event were sampled. Groundwater PCE monitoring results from 1999 to 2008 are summarized in Figure 6 and Table 3 with observed conditions described in the following table:

**Summary of Groundwater Monitoring Documentation**

<b>Progress Memo</b>	<b>Date</b>	<b>Summary</b>	<b>Results Submitted</b>
NA	2/4/1999	Baseline levels for seven monitoring wells.	NA
4	5/26/2000	Construction of AS/SVE system completed on 5/24/2000. Start-up testing performed on 5/25/2000 and 5/26/2000. System was functional and working properly.	None
5	9/8/2000	Seven monitoring wells sampled on 7/28/2000. PCE levels in groundwater have declined as compared to 2/1999 analysis.	6/8/00 bag sample analytical results for VOCs. 2/2000 and 7/28/00 groundwater analytical results for VOCs.
8	9/17/2001	Six monitoring wells sampled on 8/10/2001. Results to serve as new baseline.	8/10/01 groundwater analytical results for VOCs.
9	3/11/2002	Eight monitoring wells sampled on 12/18/2001. PCE levels primarily decreased, except in MW-1 (well installed after start-up) and MW-6 (PCE level consistent).	12/18/01 groundwater analytical results for VOCs.
10	5/21/2002	Eight monitoring wells sampled on 4/17/2002. PCE levels declined in wells furthest from system and increased in wells closer to system. Repairs to the system were made two weeks prior to sampling event.	4/17/02 groundwater analytical results for VOCs.
11	8/20/2002	Eight monitoring wells sampled on 8/2/2002. PCE detected in wells adjacent to system and low levels of PCE detected in downgradient wells.	8/2/02 groundwater analytical results for VOCs.

12 and 13	3/5/2003	Eight monitoring wells sampled on 11/6/2002 and 2/5/2003. No groundwater sample collected from MW-14 during the 11/6/2002 event.	11/6/02 and 2/5/03 groundwater analytical results for VOCs.
14 and 15	10/13/2003	Eight monitoring wells sampled on 5/9/2003 and 8/22/2003. Determined that PCE levels at the downgradient boundary of the property approximate those of the upgradient wells, which indicated that the remedial objectives of the 1999 RWP were fulfilled.	5/9/03 and 8/22/03 groundwater analytical results for VOCs.
16	1/20/2004	Eight monitoring wells sampled on 12/26/2003. Increase in PCE levels for upgradient wells.	12/26/03 groundwater analytical results for VOCs.
17	6/10/2004	Eight monitoring wells sampled on 5/19/2004 (year incorrectly reported in text as 5/14/2003). Increase in PCE levels for upgradient wells and MW-6 on the eastern boundary; the remaining wells indicated decreasing or undetected levels of PCE.	5/19/04 groundwater analytical results for VOCs.
NA	10/08/2004	Eight monitoring wells sampled.	10/2004 groundwater analytical results for VOCs.
NA	6/22/2005	Eight monitoring wells sampled.	06/2005 groundwater analytical results for VOCs.
NA	11/21/2005	Eight monitoring wells sampled. Permanent AS/SVE system shut off after this groundwater monitoring event.	11/2005 groundwater analytical results for VOCs.
NA	6/22/2007	Eight monitoring wells sampled for post-remediation groundwater sampling.	06/2007 groundwater analytical results for VOCs.
NA	12/11/2008	Eight monitoring wells sampled for post-remediation groundwater sampling.	12/2008 groundwater analytical results for VOCs.

To summarize, in February 1999, groundwater was monitored prior to remediation system installation and operation, which represented the baseline levels for the Site prior to implementing the remedy. The first groundwater monitoring event after system

startup on July 28, 2000, showed a moderate decrease in PCE, concentrations in all sampled wells. Shortly after the August 2001 startup, a second groundwater monitoring event was performed. The results showed variable levels of PCE, primarily due to the recent soil disturbance and short time the system was operating before the monitoring event. In December 2001, four months after system operation resumed, groundwater monitoring showed stable and significant decreases in PCE concentrations in the majority of the wells sampled except MW-6 (located near the eastern property boundary) and MW-1 (located at the northwestern corner of the property). It was suspected that the concentrations of PCE in MW-1 and MW-6 may have been affected by off-site conditions. Subsequent monitoring from 2002 to 2005 showed variable concentrations of PCE, especially in the upgradient wells in the northeastern portion of the Site. The variation was potentially associated with a combination of system shutoffs, such as the incidents previously described (due to construction activities at the Site, system malfunctions and deliberate short-term interruptions (pulsing) to evaluate system performance and rebound) and off-site sources. Permanent system shut-off occurred in 2005, as results for the majority of the wells had shown stabilized PCE concentration reductions of greater than 90% from pre-remedial concentrations.

PCE at the Site was partially attributed to unidentified off-site sources. For that reason, the RWP specified that the remediation on-site could be concluded when PCE levels at the downgradient property boundary approximated those in the upgradient monitoring well. PCE levels in the original source area (near MW-3 and to a lesser extent, MW-14S) declined considerably since the beginning of remedial activities and the December 2008 sampling event indicated PCE concentrations less than five percent (5%) of pre-remediation levels.

MW-6 and MW-14S, the two wells with groundwater concentrations above Class GA standards in December 2008, are located near the eastern property boundary and appear to be affected by off-site sources. In addition, regional groundwater quality is known to contain elevated levels of PCE in the vicinity of the Site and may have affected the Site. Furthermore, a NYCDEP high-volume supply well (reportedly no longer pumping) near the Site may have affected on-site groundwater flow over time.

#### **4.2.5 Reporting**

All progress memos are included in Appendix A.

### **4.3 RESIDUAL CONTAMINATION REMAINING ON-SITE**

#### **4.3.1 Groundwater**

Table 3 and Figure 6 (spider map) summarize results of PCE concentrations in groundwater at the Site, including residual PCE documented during December 2008 sampling event.

As discussed in Section 4.2.4, PCE at the Site was partially attributed to unidentified off-site sources. For that reason, the RWP specified that the remediation on-site could be concluded when PCE levels at the downgradient property boundary approximated those in the upgradient monitoring well. PCE levels in the original source area (near MW-3 and to a lesser extent, MW-14S) declined considerably since the beginning of remedial activities and the December 2008 sampling event indicated PCE concentrations less than 5% of pre-remediation levels.

Since residual contaminated groundwater exists beneath the Site after completion of the Remedial Action, Institutional and Engineering Controls are required to protect human health and the environment. Long-term management of these Engineering and Institutional Controls (EC/ICs) and residual contamination will be performed under a Site Management Plan (SMP) provided in Appendix A of this FER.

#### 4.3.2 Soil Vapor

A post-remediation soil vapor survey was requested by NYSDEC in a letter dated March 8, 2007. A total of 17 soil vapor probes were installed around the perimeter of the Site. Soil vapor samples were collected on November 30 and December 4, 2007 from 19 locations on the Site (including two ambient air samples) as shown on Figure 7. Sampling was conducted in accordance with NYSDOH guidelines for sub-slab soil vapor sampling (Guidance for Evaluating Soil Vapor Intrusion in the State of New York, October 2006). Prior to initiating sample collection, each soil vapor sampling point was sealed, purged, and screened for the helium tracer gas. Following purging, soil vapor samples for VOC analysis were collected by connecting the sample tubing to a Summa canister equipped with a vacuum gauge and flow regulator. Samples were submitted to Chemtech Environmental Services of Mountainside, NJ and analyzed for VOCs by EPA Method TO-15. Results were submitted to NYSDEC in a letter dated January 8, 2008, which is included in Appendix A. Analytical results are shown in Table 2.

The VOCs detected at the highest levels were dichlorodifluoromethane and trichlorofluoromethane at four sample location (sample IDs SE-2, SW-2, SE-1, and SE-3). Both are Freon compounds, which are used as refrigerants in air conditioning systems and formerly used as propellants in aerosol cans. As the sample locations were adjacent to the store parking lot, it was estimated that the compounds detected may have originated from automobile air conditioning systems. PCE was detected in 11 samples at levels ranging from 0.68 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ) to 94.94  $\mu\text{g}/\text{m}^3$ .

Based on the low levels of VOCs detected in the on-site soil vapor and groundwater samples, soil vapor was not considered to be a significant source of contamination at the Site. Prior to this 2007 soil vapor sampling event, results from the Indoor Air Quality Study (AKRF, 1999) determined that PCE groundwater contamination prior to remediation had not affected the ambient air quality within the on-site building at the time of the study. In addition, the construction of the retail store on the Site included a moisture barrier. Even if compounds detected beneath the slab were to migrate into the building above, levels would typically be expected to attenuate rapidly due to high ventilation and mixing rates (including air exchange through freight entrances that remain open during business hours and customer entranceways) associated with the open nature of the store, further reducing the potential for vapor accumulation. It should be noted that the retail building currently on-Site is not continuously occupied and, as outlined in Section 4.5, the deed restriction for the Site includes a provision that converting the Site to other less restricted uses requires an amendment to, or the extinguishment of, the deed restriction and NYSDEC approval.

#### 4.4 ENGINEERING CONTROL SYSTEMS

Residual contamination is present at this Site; Engineering Controls (ECs) were implemented to protect public health and the environment in the future. The Site has one primary Engineering Control System - a composite cover system (Site Cover) consisting of asphalt covered roads and parking areas, concrete covered sidewalks, and concrete building slabs.

#### **4.4.1 Composite Cover System**

Exposure to residual contaminated soil is prevented by a composite cover system built on the Site as part of redevelopment. This composite cover system comprises asphalt paved roads and parking areas, concrete sidewalks, and concrete building slabs. A survey of the Site is included as Appendix I and shows the location of each cover type built at the Site.

#### **4.5 INSTITUTIONAL CONTROLS**

The Site remedy require that a Deed Restriction be placed on the property to (1) implement, maintain, and monitor the Engineering Controls; (2) prevent future exposure to remaining contamination by controlling disturbances of the subsurface contamination; and, (3) limit the use and development of the Site.

The deed restriction for the Site was filed with the Queens County Clerk on July 20, 2011. The City Registrar File Number for this filing is 2011000256789. A copy of the deed restriction and proof of filing is provided in Appendix H.

#### **4.6 DEVIATIONS FROM THE REMEDIAL WORK PLAN**

The following is a summary of deviations from the RWP:

- The AS/SVE system was to operate continuously after the initial start-up; however, there were instances where the system was required to be shut off due to construction, system malfunctions and pulsing to evaluate system performance and rebound.
- Groundwater monitoring was to be performed on 30-day intervals; however, no groundwater samples were taken while the AS/SVE system was shut off (see Section 4.2.3). Progress Memos, included in Appendix A, documented the periods for which the system was shut off.

## 5.0 REFERENCES

*Environmental Audit of Toxic and Hazardous Waste Management and Disposal at Knomark, Inc.*, Roux Associates Inc., March 1988.

*Environmental Investigation of Subsurface Conditions at the Knomark Site, Jamaica, New York*, TRC Environmental Consultants, July 1988.

*Results of Building Decontamination*, Roux Associates Inc., March 1989.

*Evaluation of Soil and Ground-Water Quality*, Roux Associates, Inc., May 1989.

*Removal of Underground Fuel Oil Tanks*, Roux Associates, Inc., revised May 1990.

*Results of the April 1990 Ground-Water Sampling*, Roux Associates, Inc., June 1990.

*Phase II Study: Analytical Results Only*, Malcolm Pirnie, Inc., 1998.

*Phase I Environmental Site Assessment Report*, EMCON, March 1997.

*Phase I Environmental Site Assessment Report*, Eder Associates, July 1998.

*Underground Storage Tank Closure*, Leggette, Brashears & Graham, Inc., July 1998.

*Phase II Environmental Assessment*, AKRF, Inc., revised March 1999.

*Supplemental Soil/Groundwater Sampling*, AKRF, Inc., September 1999 included in *Remedial Work Plan, 132-20 Merrick Boulevard, Springfield Gardens, Queens, New York*, AKRF, Inc., Revised October 1999.

*Supplemental Indoor Air Quality Study*, AKRF, Inc., September 1999 included in *Remedial Work Plan, 132-20 Merrick Boulevard, Springfield Gardens, Queens, New York*, AKRF, Inc., Revised October 1999.

*Remedial Work Plan, 132-20 Merrick Boulevard, Springfield Gardens, Queens, New York*, AKRF, Inc., Revised October 1999.

*Pilot Test Report 132-20 Merrick Boulevard, Springfield Gardens, New York*, AKRF, Inc., January 2000.

*Technical Specifications for the Construction of a Groundwater Remediation System, 132-20 Merrick Boulevard, Queens, NY*, AKRF, Inc., March 2000.

Progress Reports dated February 2000, March 2000, May 2000, September 2000, November 2000, July 2001, September 2001, March 2002, May 2002, August 2002, March 2003, October 2003, January 2004, June 2004, February 2006, July 2007, September 2007, and January 2008.

## **TABLES**



**Table 1 Notes**  
**132-20 Merrick Blvd.**  
**Springfield Gardens, Queens, NY**  
Groundwater Analytical Results  
*Volatile Organic Compounds*

- µg/L** : micrograms per Liter = parts per billion (ppb)
- U** : compound not detected
- \*** : MS/MSD quality control exceeds control limits
- J** : Result is an estimated value below the reporting limit or a tentatively identified compound (TIC)
- NA** : Not Analyzed
- Data only included for monitoring wells sampled between October 2004 and December 2008 as no digital form of the results prior to October 2004 are available. See Appendix E for laboratory analytical reports and summary tables available for the entire project record. See Table 3 for historical tetrachloroethene (PCE) summary.

**Table 1**  
**132-20 Merrick Blvd.**  
**Springfield Gardens, Queens, NY**  
Groundwater Analytical Results  
Volatile Organic Compounds

Client ID Lab Sample ID Date Sampled Dilution	NYSDEC Class GA Ambient Standard	MW-1					MW-3				
		207787-08 10/12/2004 1	209707-6 6/3/2005 1	211456-006 11/21/2005 1	220-2024-1 6/30/2007 1	220-7534-1 12/11/2008 1	207787-02 10/8/2004 1	209707-2 6/3/2005 1	211456-007 11/21/2005 1	220-1964-2 6/25/2007 1	220-7534-2 12/11/2008 1
Units=µg/L											
1,1,1-Trichloroethane	5	0.9 U	0.4 U	0.4 U	0.4 U	0.69 U	0.9 U	0.4 U	0.4 U	0.4 U	0.69 U
1,1,2,2-Tetrachloroethane	5	0.7 U	0.4 U	0.4 U	0.4 U	0.81 U	0.7 U	0.4 U	0.4 U	0.4 U	0.81 U
1,1,2-Trichloroethane	1	0.8 U	0.6 U	0.6 U	0.6 U	0.65 U	0.8 U	0.6 U	0.6 U	0.6 U	0.65 U
1,1-Dichloroethane	5	0.4 U	0.6 U	0.6 U	0.6 U	1.0 U	0.4 U	0.6 U	0.6 U	0.6 U	1.0 U
1,1-Dichloroethene	5	0.8 U	0.7 U	0.7 U	0.7 U	0.83 U	0.8 U	0.7 U	0.7 U	0.7 U	0.83 U
1,2-Dichloroethane	0.6	0.6 U	0.6 U	0.6 U	0.6 U	0.72 U	0.6 U	0.6 U	0.6 U	0.6 U	0.72 U
1,2-Dichloropropane	1	0.7 U	0.9 U	0.9 U	0.9 U	0.71 U	0.7 U	0.9 U	0.9 U	0.9 U	0.71 U
2- Butanone (MEK)	50	1.6 U	1.2 U	1.2 U	1.2 U	1.1 U	1.6 U	1.2 U	1.2 U	1.2 U	1.1 U
2-Hexanone	50	0.7 U	0.8 U	0.8 U	0.8 U	1.1 U	0.7 U	0.8 U	0.8 U	0.8 U	1.1 U
4-Methyl-2-pentanone (MIBK)	NS	0.9 U	0.7 U	0.7 U	0.7 U	0.38 U	0.9 U	0.7 U	0.7 U	0.7 U	0.38 U
Acetone	50	2 U	1.4 U	1.4 U	2.4 J	1.0 U	2 U	1.4 U	1.4 U	1.4 U	1.0 U
Benzene	1	0.5 U	0.4 U	0.4 U	0.4 U	0.74 U	0.5 U	0.4 U	0.4 U	0.4 U	0.74 U
Bromodichloromethane	50	0.7 U	0.4 U	0.4 U	0.4 U	0.48 U	0.7 U	0.4 U	0.4 U	0.4 U	0.48 U
Bromoform	50	0.8 U	0.8 U	0.8 U	0.8 U	0.46 U	0.8 U	0.8 U	0.8 U	0.8 U	0.46 U
Bromomethane	5	2.7 U	1.2 U	1.2 U	1.2 U	2.1 U	2.7 U	1.2 U	1.2 U	1.2 U	2.1 U
Carbon disulfide	60	0.4 U	0.9 U	0.9 U	0.9 U	0.90 U	0.4 U	0.9 U	0.9 U	0.9 U	0.90 U
Carbon tetrachloride	5	0.6 U	1 U	1 U	1 U	1.1 U	0.6 U	1 U	1 U	1 U	1.1 U
Chlorobenzene	5	0.5 U	0.4 U	0.4 U	0.4 U	0.72 U	0.5 U	0.4 U	0.4 U	0.4 U	0.72 U
Chloroethane	5	1.7 U	0.8 U	0.8 U	0.8 U	1.1 U	1.7 U	0.8 U	0.8 U	0.8 U	1.1 U
Chloroform	7	0.6 U	0.7 U	0.7 U	0.7 U	0.67 U	0.6 U	0.7 U	0.7 U	0.9 J	0.67 U
Chloromethane	5	1.4 U	0.5 U	0.5 U	0.5 U	1.1 U	1.4 U	0.5 U	0.5 U	0.5 U	1.1 U
cis-1,2-Dichloroethene	5	0.7 U	0.6 U	0.6 U	0.6 U	0.99 U	23	2.4 J	0.6 U	35	24
cis-1,3-Dichloropropene	0.4	0.4 U	0.5 U	0.5 U	0.5 U	0.28 U	0.4 U	0.5 U	0.5 U	0.5 U	0.28 U
Dibromochloromethane	50	0.5 U	0.5 U	0.5 U	0.5 U	0.55 U	0.5 U	0.5 U	0.5 U	0.5 U	0.55 U
Ethylbenzene	5	0.5 U	1 U	1 U	1 U	0.87 U	0.5 U	1 U	1 U	1 U	0.87 U
Methylene Chloride	5	0.6 U	0.4 U	0.4 U	0.4 U	0.78 U	0.6 U	0.4 U	0.63 JB	0.4 U	0.78 U
Methyl-tert-butyl-ether (MTBE)	10	NA	0.3 U	0.3 U	0.82 J	NA	NA	6.2	0.5 J	0.3 U	NA
Styrene	5	0.7 U	0.5 U	0.5 U	0.5 U	0.64 U	0.7 U	0.5 U	0.5 U	0.5 U	0.64 U
Tetrachloroethene	5	0.4 U	1 J	1.9 J	0.5 U	+ J	98	41	10	7.7	3.2 J
Toluene	5	0.4 U	0.3 U	0.3 U	0.3 U	0.72 U	0.4 U	0.3 U	0.3 U	0.3 U	0.72 U
trans-1,2-Dichloroethene	5	0.5 U	0.5 U	0.5 U	0.5 U	0.76 U	0.5 U	0.5 U	0.5 U	0.5 U	0.76 U
trans-1,3-Dichloropropene	0.4	0.8 U	0.8 U	0.8 U	0.8 U	0.57 U	0.8 U	0.8 U	0.8 U	0.8 U	0.57 U
Trichloroethene	5	0.8 U	0.7 U	0.7 U	0.7 U	0.62 U	3 J	0.7 U	0.7 U	1.5 J	0.66 J
Vinyl acetate	NS	1.9 U	0.2 U	0.2 U	NA	NA	1.9 U	0.2 U	0.2 U	NA	NA
Vinyl chloride	2	0.6 U	0.8 U	0.8 U	0.8 U	0.99 U	0.6 U	0.8 U	0.8 U	0.8 U	0.99 U
Xylenes, Total	5	0.9 U	1 U	1 U	1 U	2.3 U	0.9 U	1 U	1 U	1 U	2.3 U

**Table 1**  
**132-20 Merrick Blvd.**  
**Springfield Gardens, Queens, NY**  
Groundwater Analytical Results  
Volatile Organic Compounds

Client ID Lab Sample ID Date Sampled Dilution	NYSDEC Class GA Ambient Standard	MW-5S					MW-6				
		207787-01 10/12/2004 1	209707-5 6/3/2005 1	211456-003 11/21/2005 1	220-1964-4 6/25/2007 1	220-7534-3 12/11/2008 1	207787-05 10/12/2004 1	209707-7 6/3/2005 1	211456-005 11/21/2005 1	220-1964-5 6/25/2007 1	220-7534-4 12/11/2008 1
Units=µg/L											
1,1,1-Trichloroethane	5	0.9 U	0.4 U	0.4 U	0.4 U	0.69 U	0.9 U	0.4 U	0.4 U	0.4 U	0.69 U
1,1,2,2-Tetrachloroethane	5	0.7 U	0.4 U	0.4 U	0.4 U	0.81 U	0.7 U	0.4 U	0.4 U	0.4 U	0.81 U
1,1,2-Trichloroethane	1	0.8 U	0.6 U	0.6 U	0.6 U	0.65 U	0.8 U	0.6 U	0.6 U	0.6 U	0.65 U
1,1-Dichloroethane	5	0.4 U	0.6 U	0.6 U	0.6 U	1.0 U	0.4 U	0.6 U	0.6 U	0.6 U	1.0 U
1,1-Dichloroethene	5	0.8 U	0.7 U	0.7 U	0.7 U	0.83 U	0.8 U	0.7 U	0.7 U	0.7 U	0.83 U
1,2-Dichloroethane	0.6	0.6 U	0.6 U	0.6 U	0.6 U	0.72 U	0.6 U	0.6 U	0.6 U	0.6 U	0.72 U
1,2-Dichloropropane	1	0.7 U	0.9 U	0.9 U	0.9 U	0.71 U	0.7 U	0.9 U	0.9 U	0.9 U	0.71 U
2- Butanone (MEK)	50	1.6 U	1.2 U	1.2 U	1.2 U	1.1 U	1.6 U	1.2 U	1.2 U	1.2 U	1.1 U
2-Hexanone	50	0.7 U	0.8 U	0.8 U	0.8 U	1.1 U	0.7 U	0.8 U	0.8 U	0.8 U	1.1 U
4-Methyl-2-pentanone (MIBK)	NS	0.9 U	0.7 U	0.7 U	0.7 U	0.38 U	0.9 U	0.7 U	0.7 U	0.7 U	0.38 U
Acetone	50	2 U	1.4 U	1.4 U	1.4 U	1.0 U	2 U	1.4 U	1.4 U	1.4 U	1.0 U
Benzene	1	0.5 U	0.94 J	4.6 J	0.4 U	0.74 U	0.5 U	0.4 U	0.4 U	8.3	0.74 U
Bromodichloromethane	50	0.7 U	0.4 U	0.4 U	0.4 U	0.48 U	0.7 U	0.4 U	0.4 U	0.4 U	0.48 U
Bromoform	50	0.8 U	0.8 U	0.8 U	0.8 U	0.46 U	0.8 U	0.8 U	0.8 U	0.8 U	0.46 U
Bromomethane	5	2.7 U	1.2 U	1.2 U	1.2 U	2.1 U	2.7 U	1.2 U	1.2 U	1.2 U	2.1 U
Carbon disulfide	60	0.4 U	0.9 U	0.9 U	0.9 U	0.90 U	0.4 U	0.9 U	0.9 U	0.9 U	0.90 U
Carbon tetrachloride	5	0.6 U	1 U	1 U	1 U	1.1 U	0.6 U	1 U	1 U	1 U	1.1 U
Chlorobenzene	5	0.5 U	0.4 U	0.4 U	0.4 U	0.72 U	0.5 U	0.4 U	0.4 U	0.4 U	0.72 U
Chloroethane	5	1.7 U	0.8 U	0.8 U	0.8 U	1.1 U	1.7 U	0.8 U	0.8 U	0.8 U	1.1 U
Chloroform	7	0.6 U	0.7 U	0.7 U	0.7 U	0.67 U	0.6 U	1.3 J	0.7 U	0.7 U	0.67 U
Chloromethane	5	1.4 U	0.5 U	0.5 U	0.5 U	1.1 U	1.4 U	0.5 U	0.5 U	0.5 U	1.1 U
cis-1,2-Dichloroethene	5	0.7 U	0.6 U	0.6 U	0.6 U	0.99 U	1.4 J	0.6 U	0.6 U	0.6 U	0.99 U
cis-1,3-Dichloropropene	0.4	0.4 U	0.5 U	0.5 U	0.5 U	0.28 U	0.4 U	0.5 U	0.5 U	0.5 U	0.28 U
Dibromochloromethane	50	0.5 U	0.5 U	0.5 U	0.5 U	0.55 U	0.5 U	0.5 U	0.5 U	0.5 U	0.55 U
Ethylbenzene	5	0.5 U	1 U	1 U	1 U	0.87 U	0.5 U	1 U	1 U	1 U	0.87 U
Methylene Chloride	5	0.6 U	0.4 U	0.4 U	0.4 U	0.78 U	0.6 U	0.46 B	0.64 JB	0.4 U	0.78 U
Methyl-tert-butyl-ether (MTBE)	10	NA	19	5.9	11	NA	NA	4 J	6.1	11	NA
Styrene	5	0.7 U	0.5 U	0.5 U	0.5 U	0.64 U	0.7 U	0.5 U	0.5 U	0.5 U	0.64 U
Tetrachloroethene	5	1.1 J	5.6	3.2 J	1.4 J	2.1 J	170	26	14	5 J	5.6
Toluene	5	0.4 U	0.3 U	0.3 U	0.3 U	0.72 U	0.4 U	0.3 U	0.3 U	0.3 U	0.72 U
trans-1,2-Dichloroethene	5	0.5 U	0.5 U	0.5 U	0.5 U	0.76 U	0.5 U	0.5 U	0.5 U	0.5 U	0.76 U
trans-1,3-Dichloropropene	0.4	0.8 U	0.8 U	0.8 U	0.8 U	0.57 U	0.8 U	0.8 U	0.8 U	0.8 U	0.57 U
Trichloroethene	5	0.8 U	0.7 U	0.7 U	0.7 U	0.62 U	1.9 J	0.7 U	0.7 U	0.7 U	0.62 U
Vinyl acetate	NS	1.9 U	0.2 U	0.2 U	NA	NA	1.9 U	0.2 U	0.2 U	NA	NA
Vinyl chloride	2	0.6 U	0.8 U	0.8 U	0.8 U	0.99 U	0.6 U	0.8 U	0.8 U	0.8 U	0.99 U
Xylenes, Total	5	0.9 U	1 U	1 U	1 U	2.3 U	0.9 U	1 U	1 U	1 U	2.3 U

**Table 1**  
**132-20 Merrick Blvd.**  
**Springfield Gardens, Queens, NY**  
Groundwater Analytical Results  
Volatile Organic Compounds

Client ID Lab Sample ID Date Sampled Dilution	NYSDEC Class GA Ambient Standard	MW-7					MW-14S				
		207787-07 10/12/2004 1	209707-3 6/3/2005 1	211456-009 11/22/2005 1	220-2024-3 6/30/2007 1	220-7534-5 12/11/2008 1	207787-01 10/8/2004 1	209707-1 6/3/2005 1	211456-008 11/22/2005 1	220-1964-1 6/22/2007 1	220-7534-6 12/11/2008 1
Units=µg/L											
1,1,1-Trichloroethane	5	0.9 U	0.4 U	0.4 U	0.4 U	0.69 U	0.9 U	0.4 U	0.4 U	0.4 U	0.69 U
1,1,2,2-Tetrachloroethane	5	0.7 U	0.4 U	0.4 U	0.4 U	0.81 U	0.7 U	0.4 U	0.4 U	0.4 U	0.81 U
1,1,2-Trichloroethane	1	0.8 U	0.6 U	0.6 U	0.6 U	0.65 U	0.8 U	0.6 U	0.6 U	0.6 U	0.65 U
1,1-Dichloroethane	5	0.4 U	0.6 U	0.6 U	0.6 U	1.0 U	0.4 U	0.6 U	0.6 U	0.6 U	1.0 U
1,1-Dichloroethene	5	0.8 U	0.7 U	0.7 U	0.7 U	0.83 U	0.8 U	0.7 U	0.7 U	0.7 U	0.83 U
1,2-Dichloroethane	0.6	0.6 U	0.6 U	0.6 U	0.6 U	0.72 U	0.6 U	0.6 U	0.6 U	0.6 U	0.72 U
1,2-Dichloropropane	1	0.7 U	0.9 U	0.9 U	0.9 U	0.71 U	0.7 U	0.9 U	0.9 U	0.9 U	0.71 U
2- Butanone (MEK)	50	1.6 U	1.2 U	1.2 U	1.2 U	1.1 U	1.6 U	1.2 U	1.2 U	1.2 U	1.1 U
2-Hexanone	50	0.7 U	0.8 U	0.8 U	0.8 U	1.1 U	0.7 U	0.8 U	0.8 U	0.8 U	1.1 U
4-Methyl-2-pentanone (MIBK)	NS	0.9 U	0.7 U	0.7 U	0.7 U	0.38 U	0.9 U	0.7 U	0.7 U	0.7 U	0.38 U
Acetone	50	2 U	1.4 U	1.4 U	1.5 J	4.0 J	2 U	1.4 U	1.4 U	1.4 U	1.2 J
Benzene	1	0.5 U	0.4 U	0.4 U	0.4 U	0.4 U	0.5 U	0.4 U	0.4 U	0.4 U	0.74 U
Bromodichloromethane	50	0.7 U	0.4 U	0.4 U	0.4 U	0.48 U	0.7 U	0.4 U	0.4 U	0.4 U	0.48 U
Bromoform	50	0.8 U	0.8 U	0.8 U	0.8 U	0.46 U	0.8 U	0.8 U	0.8 U	0.8 U	0.46 U
Bromomethane	5	2.7 U	1.2 U	1.2 U	1.2 U	2.1 U	2.7 U	1.2 U	1.2 U	1.2 U	2.1 U
Carbon disulfide	60	0.4 U	0.9 U	0.9 U	0.9 U	0.90 U	0.4 U	0.9 U	0.9 U	0.9 U	0.90 U
Carbon tetrachloride	5	0.6 U	1 U	1 U	1 U	1.1 U	0.6 U	1 U	1 U	1 U	1.1 U
Chlorobenzene	5	0.5 U	0.4 U	0.4 U	0.4 U	0.72 U	0.5 U	0.4 U	0.4 U	0.4 U	0.72 U
Chloroethane	5	1.7 U	0.8 U	0.8 U	0.8 U	1.1 U	1.7 U	0.8 U	0.8 U	0.8 U	1.1 U
Chloroform	7	0.6 U	0.7 U	0.7 U	0.7 U	0.67 U	0.6 U	0.7 U	0.7 U	0.7 U	0.67 U
Chloromethane	5	1.4 U	0.5 U	0.5 U	0.5 U	1.1 U	1.4 U	0.5 U	0.5 U	0.5 U	1.1 U
cis-1,2-Dichloroethene	5	0.7 U	11	8.1	0.6 U	0.99 U	19	17	1.1 J	12	1.3 J
cis-1,3-Dichloropropene	0.4	0.4 U	0.5 U	0.5 U	0.5 U	0.28 U	0.4 U	0.5 U	0.5 U	0.5 U	0.28 U
Dibromochloromethane	50	0.5 U	0.5 U	0.5 U	0.5 U	0.55 U	0.5 U	0.5 U	0.5 U	0.5 U	0.55 U
Ethylbenzene	5	0.5 U	1 U	1 U	1 U	0.87 U	0.5 U	1 U	1 U	1 U	0.87 U
Methylene Chloride	5	0.6 U	0.4 U	0.4 U	0.4 U	0.78 U	0.6 U	0.4 U	0.45 JB	0.4 U	0.78 U
Methyl-tert-butyl-ether (MTBE)	10	NA	0.6 J	1.6 J	0.3 U	NA	NA	2.5 J	0.3 U	0.3 U	NA
Styrene	5	0.7 U	0.5 U	0.5 U	0.5 U	0.64 U	0.7 U	0.5 U	0.5 U	0.5 U	0.64 U
Tetrachloroethene	5	4.2 J	1.7 J	1.1 J	0.5 U	0.81 U	86	66	6.8	44	5.4
Toluene	5	0.4 U	0.3 U	0.3 U	0.3 U	0.72 U	0.4 U	0.3 U	0.3 U	0.3 U	0.72 U
trans-1,2-Dichloroethene	5	0.5 U	0.5 U	0.5 U	0.5 U	0.76 U	0.5 U	0.5 U	0.5 U	0.5 U	0.76 U
trans-1,3-Dichloropropene	0.4	0.8 U	0.8 U	0.8 U	0.8 U	0.57 U	0.8 U	0.8 U	0.8 U	0.8 U	0.57 U
Trichloroethene	5	0.8 U	1.1 J	0.7 U	0.7 U	0.62 U	0.8 U	2.6 J	0.7 U	1.9 J	0.62 U
Vinyl acetate	NS	1.9 U	0.2 U	0.2 U	NA	NA	1.9 U	0.2 U	0.2 U	NA	NA
Vinyl chloride	2	0.6 U	0.8 U	0.8 U	0.8 U	0.99 U	0.6 U	0.8 U	0.8 U	0.8 U	0.99 U
Xylenes, Total	5	0.9 U	1 U	1 U	1 U	2.3 U	0.9 U	1 U	1 U	1 U	2.3 U

**Table 1**  
**132-20 Merrick Blvd.**  
**Springfield Gardens, Queens, NY**  
Groundwater Analytical Results  
Volatile Organic Compounds

Client ID Lab Sample ID Date Sampled Dilution	NYSDEC Class GA Ambient Standard	MW-16					MW-171
		207787-03 10/8/2004 1	209707-4 6/3/2005 1	211456-004 11/21/2005 1	220-1964-3 6/25/2007 1	220-7534-7 12/11/2008 1	220-7534-8 12/11/2008 1
Units=µg/L							
1,1,1-Trichloroethane	5	0.9 U	0.4 U	0.4 U	0.4 U	0.69 U	0.69 U
1,1,2,2-Tetrachloroethane	5	0.7 U	0.4 U	0.4 U	0.4 U	0.81 U	0.81 U
1,1,2-Trichloroethane	1	0.8 U	0.6 U	0.6 U	0.6 U	0.65 U	0.65 U
1,1-Dichloroethane	5	0.4 U	0.6 U	0.6 U	0.6 U	1.0 U	1.0 U
1,1-Dichloroethene	5	0.8 U	0.7 U	0.7 U	0.7 U	0.83 U	0.83 U
1,2-Dichloroethane	0.6	0.6 U	0.6 U	0.6 U	0.6 U	0.72 U	0.72 U
1,2-Dichloropropane	1	0.7 U	0.9 U	0.9 U	0.9 U	0.71 U	0.71 U
2- Butanone (MEK)	50	1.6 U	1.2 U	1.2 U	1.2 U	1.1 U	1.1 U
2-Hexanone	50	0.7 U	0.8 U	0.8 U	0.8 U	1.1 U	1.1 U
4-Methyl-2-pentanone (MIBK)	NS	0.9 U	0.7 U	0.7 U	0.7 U	0.38 U	0.38 U
Acetone	50	2 U	1.4 U	1.4 U	1.4 U	2.9 J	1.0 U
Benzene	1	0.5 U	3.9 J	8.6	1.5 J	0.74 U	0.74 U
Bromodichloromethane	50	0.7 U	0.4 U	0.4 U	0.4 U	0.48 U	0.48 U
Bromoform	50	0.8 U	0.8 U	0.8 U	0.8 U	0.46 U	0.46 U
Bromomethane	5	2.7 U	1.2 U	1.2 U	1.2 U	2.1 U	2.1 U
Carbon disulfide	60	0.4 U	0.9 U	0.9 U	0.9 U	0.90 U	0.90 U
Carbon tetrachloride	5	0.6 U	1 U	1 U	1 U	1.1 U	1.1 U
Chlorobenzene	5	0.5 U	0.4 U	0.4 U	0.4 U	0.72 U	0.72 U
Chloroethane	5	1.7 U	0.8 U	0.8 U	0.8 U	1.1 U	1.1 U
Chloroform	7	0.6 U	0.7 U	0.7 U	0.7 U	0.67 U	0.67 U
Chloromethane	5	1.4 U	0.5 U	0.5 U	0.5 U	1.1 U	1.1 U
cis-1,2-Dichloroethene	5	0.7 U	0.6 U	0.6 U	0.6 U	0.99 U	0.99 U
cis-1,3-Dichloropropene	0.4	0.4 U	0.5 U	0.5 U	0.5 U	0.28 U	0.28 U
Dibromochloromethane	50	0.5 U	0.5 U	0.5 U	0.5 U	0.55 U	0.55 U
Ethylbenzene	5	0.5 U	1 U	1 U	1 U	0.87 U	0.87 U
Methylene Chloride	5	0.6 U	0.4 U	0.53 JB	0.4 U	0.78 U	0.78 U
Methyl-tert-butyl-ether (MTBE)	10	NA	4.7 J	16	0.3 U	NA	NA
Styrene	5	0.7 U	0.5 U	0.5 U	0.5 U	0.64 U	0.64 U
Tetrachloroethene	5	16	3.9 J	3.6 J	1 J	0.81 U	15
Toluene	5	0.4 U	0.3 U	0.3 U	0.3 U	0.72 U	0.72 U
trans-1,2-Dichloroethene	5	0.5 U	0.5 U	0.5 U	0.5 U	0.76 U	0.76 U
trans-1,3-Dichloropropene	0.4	0.8 U	0.8 U	0.8 U	0.8 U	0.57 U	0.57 U
Trichloroethene	5	0.8 U	0.7 U	0.7 U	0.7 U	0.62 U	0.87 J
Vinyl acetate	NS	1.9 U	0.2 U	0.2 U	NA	NA	NA
Vinyl chloride	2	0.6 U	0.8 U	0.8 U	0.8 U	0.99 U	0.99 U
Xylenes, Total	5	0.9 U	1 U	1 U	1 U	2.3 U	2.3 U

**Table 1**  
**132-20 Merrick Blvd.**  
**Springfield Gardens, Queens, NY**  
Groundwater Analytical Results  
Volatile Organic Compounds

Client ID Lab Sample ID Date Sampled Dilution	NYSDEC Class GA Ambient Standard	MW-17S				
		207787-01 10/8/2004 1	209707-8 6/3/2005 1	211456-010 11/22/2005 1	220-2024-2 6/30/2007 1	220-7534-9 12/11/2008 1
Units=µg/L						
1,1,1-Trichloroethane	5	0.9 U	0.4 U	0.4 U	0.4 U	0.69 U
1,1,1,2-Tetrachloroethane	5	0.7 U	0.4 U	0.4 U	0.4 U	0.81 U
1,1,2-Trichloroethane	1	0.8 U	0.6 U	0.6 U	0.6 U	0.65 U
1,1-Dichloroethane	5	0.4 U	0.6 U	0.6 U	0.6 U	1.0 U
1,1-Dichloroethene	5	0.8 U	0.7 U	0.7 U	0.7 U	0.83 U
1,2-Dichloroethane	0.6	0.6 U	0.6 U	0.6 U	0.6 U	0.72 U
1,2-Dichloropropane	1	0.7 U	3 J	0.9 U	0.9 U	2.6 J
2- Butanone (MEK)	50	1.6 U	1.2 U	1.2 U	1.2 U	1.1 U
2-Hexanone	50	0.7 U	0.8 U	0.8 U	0.8 U	1.1 U
4-Methyl-2-pentanone (MIBK)	NS	0.9 U	0.7 U	0.7 U	0.7 U	0.38 U
Acetone	50	2 U	1.4 U	1.4 U	1.4 U	1.5 J
Benzene	1	0.5 U	0.4 U	0.4 U	0.4 U	0.74 U
Bromodichloromethane	50	0.7 U	0.4 U	0.4 U	0.4 U	0.48 U
Bromoform	50	0.8 U	0.8 U	0.8 U	0.8 U	0.46 U
Bromomethane	5	2.7 U	1.2 U	1.2 U	1.2 U	2.1 U
Carbon disulfide	60	0.4 U	0.9 U	0.9 U	0.9 U	0.90 U
Carbon tetrachloride	5	0.6 U	1 U	1 U	1 U	1.1 U
Chlorobenzene	5	0.5 U	0.4 U	0.4 U	0.4 U	0.72 U
Chloroethane	5	1.7 U	0.8 U	0.8 U	1.3 J *	1.1 U
Chloroform	7	0.6 U	0.7 U	0.7 U	0.7 U	0.67 U
Chloromethane	5	1.4	0.5 U	0.5 U	0.5 U *	1.1 U
cis-1,2-Dichloroethene	5	0.7 U	76	120	60	4.1 J
cis-1,3-Dichloropropene	0.4	0.4 U	0.5 U	0.5 U	0.5 U	0.28 U
Dibromochloromethane	50	0.5 U	0.5 U	0.5 U	0.5 U	0.55 U
Ethylbenzene	5	0.5 U	1 U	1 U	1 U	0.87 U
Methylene Chloride	5	0.6 U	0.4 U	0.52 JB	0.4 U	0.78 U
Methyl-tert-butyl-ether (MTBE)	10	NA	0.3 U	0.3 U	1.3 J	NA
Styrene	5	0.7 U	0.5 U	0.5 U	0.5 U	0.64 U *
Tetrachloroethene	5	0.4 U	31	44	5.9	3.8 J
Toluene	5	0.4 U	0.3 U	0.3 U	0.3 U	0.72 U
trans-1,2-Dichloroethene	5	0.5 U	0.5 U	0.5 U	0.5 U	0.76 U
trans-1,3-Dichloropropene	0.4	0.8 U	0.8 U	0.8 U	0.8 U	0.57 U
Trichloroethene	5	0.8 U	13	35	5.9	13
Vinyl acetate	NS	1.9 U	0.2 U	0.2 U	NA	NA
Vinyl chloride	2	0.6 U	1.8 J	1.7 J	1.5 J	0.99 U
Xylenes, Total	5	0.9 U	1 U	1 U	1 U	2.3 U

**Table 2 Notes**  
**132-20 Merrick Blvd.**  
**Springfield Gardens, Queens, NY**  
Post-Remediation Soil Vapor Survey Analytical Results  
*Notes*

**U** : The compound was not detected at the indicated concentration.

**J** : Data indicates the presence of a compound that meets the identification criteria.  
The result is less than the quantitation limit but greater than zero.

**B** : The analyte was found in the laboratory blank as well as the sample. This indicates possible laboratory contamination of the environmental sample.

**P** : For dual column analysis, the percent difference between the quantitated concentrations on the two columns is greater than 40%.

**E** : Indicates the analyte's concentration exceeds the calibrated range of the instrument for that specific analysis.

**D** : This flag identifies all compounds identified in an analysis at a secondary dilution factor.

$\mu\text{g}/\text{m}^3$  : micrograms per cubic meter of air

**Table 2**  
**132-20 Merrick Boulevard**  
**Springfield Gardens, Queens, NY**  
 Post-Remediation Soil Vapor Survey Analytical Results  
 Volatile Organic Compounds

Client ID Lab Sample ID Date Sampled Dilution	SN-1-HOME-DEPOT Y5443-02 11/30/07 1	SN-2-HOME-DEPOT Y5443-03 11/30/07 1	SN-2-HOME-DEPOTDL Y5443-03DL 11/30/07 2	SN-3-HOME-DEPOT Y5443-04 11/30/07 1	SE-1-HOME-DEPOT Y5443-05 11/30/07 20
µg/m <sup>3</sup>					
1,1,1-Trichloroethane	0.55 J	4.91	4.36 JD	2.18 J	40.37 J
1,1,1,2-Tetrachloroethane	0.16 U	0.16 U	0.33 U	0.16 U	3.30 U
1,1,2-Trichloroethane	0.24 U	0.24 U	0.48 U	0.24 U	4.80 U
1,1,2-Trichlorotrifluoroethane	0.20 U	0.20 U	0.39 U	0.20 U	3.91 U
1,1-Dichloroethane	0.10 U	0.10 U	0.19 U	0.10 U	1.94 U
1,1-Dichloroethene	0.10 U	0.10 U	0.19 U	0.10 U	1.94 U
1,2,4-Trichlorobenzene	0.26 U	0.26 U	0.52 U	0.26 U	5.20 U
1,2,4-Trimethylbenzene	1.47 J	2.46 J	1.97 JD	0.98 J	21.63 J
1,2-Dibromoethane	1.00 U	1.00 U	2.00 U	1.00 U	19.98 U
1,2-Dichlorobenzene	0.13 U	0.13 U	0.26 U	0.13 U	13.23 J
1,2-Dichloroethane	0.20 U	0.20 U	0.40 U	0.20 U	4.05 U
1,2-Dichloropropane	0.22 U	0.22 U	0.44 U	0.22 U	4.44 U
1,3,5-Trimethylbenzene	0.17 U	0.17 U	0.34 U	0.17 U	3.44 U
1,3-Butadiene	0.08 U	0.08 U	0.16 U	0.08 U	1.61 U
1,3-Dichlorobenzene	0.10 U	0.60 J	0.20 U	0.10 U	10.82 J
1,4-Dichlorobenzene	0.60 J	1.20 J	1.20 JD	0.15 U	9.62 J
1,4-Dioxane	0.25 U	0.25 U	0.50 U	0.25 U	5.00 U
2,2,4-Trimethylpentane	0.93 J	0.12 U	0.23 U	0.93 J	2.29 U
2-Butanone	12.98	26.84	25.66 D	5.60	50.14
2-Hexanone	0.85 J	0.83 U	1.62 U	0.83 U	16.16 U
4-Ethyltoluene	0.07 U	0.07 U	0.15 U	0.07 U	1.47 U
4-Methyl-2-Pentanone	0.41 J	0.20 U	0.41 U	0.20 U	4.06 U
Acetone	15.20	20.67	19.72 D	11.16	33.26 B
Allyl Chloride	0.19 U	0.19 U	0.38 U	0.19 U	3.76 U
Benzene	1.92	1.92	1.60 JD	1.60 J	2.81 U
Benzyl Chloride	0.18 U	0.18 U	0.36 U	0.18 U	3.55 U
Bromodichloromethane	0.33 U	0.33 U	0.67 U	0.33 U	6.70 U
Bromoethene	0.10 U	0.10 U	0.21 U	0.10 U	2.10 U
Bromoform	0.16 U	0.16 U	0.32 U	0.16 U	3.21 U
Bromomethane	0.09 U	0.09 U	0.19 U	0.09 U	1.86 U
Carbon Disulfide	2.18	2.49	2.18 JD	0.05 U	0.97 U
Carbon Tetrachloride	0.50	0.11 U	0.21 U	0.44	2.14 U
Chlorobenzene	0.12 U	0.12 U	0.23 U	0.12 U	2.35 U
Chloroethane	0.04 U	0.04 U	0.09 U	0.04 U	0.90 U
Chloroform	0.15 U	0.98 J	0.30 U	0.15 U	2.98 U
Chloromethane	1.45	2.27	2.27 D	1.65	1.01 U
cis-1,2-Dichloroethene	0.14 U	0.14 U	0.28 U	0.14 U	10.31 J
cis-1,3-Dichloropropene	0.23 U	0.23 U	0.45 U	0.23 U	4.49 U
Cyclohexane	0.69 J	0.69 J	0.08 U	0.04 U	0.83 U
Dibromochloromethane	0.22 U	0.22 U	0.43 U	0.22 U	4.34 U
Dichlorodifluoromethane	2.97	5.93	5.93 D	15.82	10878.53 E
Dichlorotetrafluoroethane	0.15 U	0.15 U	0.30 U	0.15 U	3.01 U
Ethanol	376.85 E	810.23 E	847.91 ED	141.32 E	960.97 E
Ethyl Acetate	0.19 U	0.19 U	0.38 U	0.19 U	3.77 U
Ethyl Benzene	0.87 J	0.87 J	0.16 U	0.43 J	1.56 U
Heptane	0.82 J	1.23 J	0.82 JD	0.82 J	1.97 U
Hexachloro-1,3-Butadiene	0.23 U	0.23 U	0.46 U	0.23 U	40.53 J
Hexane	2.82	1.76	1.76 JD	1.76	1.80 U
m/p-Xylene	2.17 J	2.61	2.61 JD	1.30 J	3.78 U
Methyl tert-Butyl Ether	0.06 U	0.36 J	0.12 U	0.06 U	1.23 U
Methylene Chloride	2.78 B	0.69 JB	1.04 JDB	1.04 JB	12.51 JB
o-Xylene	0.87 J	0.87 J	0.87 JD	0.43 J	2.08 U
Propene	4.12	1.72	1.89 D	2.58	0.74 U
Styrene	0.26 U	0.26 U	0.51 U	0.26 U	5.11 U
t-1,3-Dichloropropene	0.26 U	0.26 U	0.50 U	0.26 U	4.99 U
tert-Butyl alcohol	0.24 U	0.24 U	1.52 JD	0.24 U	4.85 U
Tetrachloroethene	0.68 J	39.33	36.62 D	21.70	94.94
Tetrahydrofuran	4.41	10.08	9.45 D	1.89 J	45.35 J
Toluene	4.52	5.65	5.28 D	3.39	6.03 J
trans-1,2-Dichloroethene	0.12 U	0.12 U	0.24 U	0.12 U	2.42 U
Trichloroethene	0.81	1.50	1.40 D	3.87	18.27
Trichlorofluoromethane	15.17	118.01 E	112.39 D	30.35	1067.73
Vinyl Acetate	0.35 U	0.35 U	0.68 U	0.35 U	6.84 U
Vinyl Chloride	0.06 U	0.06 U	0.12 U	0.06 U	1.23 U



**Table 2**  
**132-20 Merrick Boulevard**  
**Springfield Gardens, Queens, NY**  
 Post-Remediation Soil Vapor Survey Analytical Results  
 Volatile Organic Compounds

Client ID	SE-1-HOME-DEPOTDL	SE-2-HOME-DEPOT	SE-3-HOME-DEPOT	SE-3-HOME-DEPOTDL	SE-4-HOME-DEPOT
Lab Sample ID	Y5443-05DL	Y5443-06	Y5443-07	Y5443-07DL	Y5443-20
Date Sampled	11/30/07	11/30/07	11/30/07	11/30/07	12/04/07
Dilution	200	20	1	5	1
$\mu\text{g}/\text{m}^3$					
1,1,1-Trichloroethane	23.46 U	37.10 J	40.92	43.10 D	10.91
1,1,2,2-Tetrachloroethane	32.96 U	3.30 U	0.16 U	0.82 U	0.16 U
1,1,2-Trichloroethane	48.01 U	4.80 U	0.24 U	1.20 U	0.24 U
1,1,2-Trichlorotrifluoroethane	39.09 U	3.91 U	0.20 U	1.00 U	0.20 U
1,1-Dichloroethane	19.43 U	1.94 U	0.10 U	0.49 U	0.10 U
1,1-Dichloroethene	19.43 U	1.94 U	0.10 U	0.48 U	0.10 U
1,2,4-Trichlorobenzene	51.96 U	26.72 J	0.26 U	1.34 U	0.26 U
1,2,4-Trimethylbenzene	23.60 U	58.99	1.47 J	0.59 U	4.92
1,2-Dibromoethane	199.81 U	19.98 U	1.00 U	5.00 U	1.00 U
1,2-Dichlorobenzene	25.85 U	2.59 U	0.13 U	0.66 U	0.13 U
1,2-Dichloroethane	40.47 U	4.05 U	0.20 U	1.01 U	0.20 U
1,2-Dichloropropane	44.37 U	4.44 U	0.22 U	1.11 U	0.22 U
1,3,5-Trimethylbenzene	34.41 U	15.73 J	0.17 U	0.88 U	1.47 J
1,3-Butadiene	16.15 U	1.61 U	0.08 U	0.40 U	0.08 U
1,3-Dichlorobenzene	20.44 U	2.04 U	1.20 J	0.51 U	0.10 U
1,4-Dichlorobenzene	29.46 U	2.95 U	0.60 J	0.72 U	0.60 J
1,4-Dioxane	50.04 U	5.00 U	0.25 U	1.25 U	0.25 U
2,2,4-Trimethylpentane	22.89 U	2.29 U	0.12 U	0.56 U	0.93 J
2-Butanone	58.99 U	29.49	15.63	10.32 D	10.03
2-Hexanone	161.64 U	16.16 U	0.83 U	4.08 U	0.83 U
4-Ethyltoluene	14.75 U	1.47 U	0.07 U	0.37 U	1.47 J
4-Methyl-2-Pentanone	40.57 U	4.06 U	0.20 U	1.02 U	0.82 J
Acetone	38.01 U	30.88 B	18.29	19.95 D	47.51 EB
Allyl Chloride	37.56 U	3.76 U	0.19 U	0.97 U	0.19 U
Benzene	28.11 U	2.81 U	1.28 J	0.70 U	3.83
Benzyl Chloride	35.53 U	3.55 U	0.18 U	0.89 U	0.18 U
Bromodichloromethane	66.99 U	6.70 U	0.33 U	1.67 U	0.33 U
Bromoethene	20.99 U	2.10 U	0.10 U	0.52 U	0.10 U
Bromofrom	32.05 U	3.21 U	0.16 U	0.79 U	0.16 U
Bromomethane	18.64 U	1.86 U	0.09 U	0.47 U	0.09 U
Carbon Disulfide	9.65 U	0.97 U	0.05 U	0.24 U	3.74
Carbon Tetrachloride	21.39 U	2.14 U	0.11 U	0.53 U	0.50
Chlorobenzene	23.49 U	2.35 U	0.12 U	0.60 U	0.12 U
Chloroethane	8.97 U	0.90 U	0.04 U	0.22 U	0.04 U
Chloroform	29.79 U	2.98 U	0.98 J	0.73 U	1.47 J
Chloromethane	10.12 U	6.20 J	0.05 U	0.25 U	0.05 U
cis-1,2-Dichloroethene	27.75 U	2.78 U	0.14 U	0.71 U	0.14 U
cis-1,3-Dichloropropene	44.94 U	4.49 U	0.23 U	1.13 U	0.23 U
Cyclohexane	8.26 U	0.83 U	0.04 U	0.21 U	0.69 J
Dibromochloromethane	43.45 U	4.34 U	0.22 U	1.11 U	0.22 U
Dichlorodifluoromethane	11373.01 D	227.46	49.45	54.39 D	4.94
Dichlorotetrafluoroethane	30.06 U	3.01 U	0.15 U	0.77 U	0.15 U
Ethanol	1130.55 D	678.33	471.06 E	527.59 ED	263.80 E
Ethyl Acetate	37.69 U	3.77 U	0.19 U	0.95 U	0.19 U
Ethyl Benzene	15.64 U	1.56 U	0.43 J	0.39 U	4.34
Heptane	19.67 U	1.97 U	0.82 J	0.49 U	2.05
Hexachloro-1,3-Butadiene	45.87 U	49.07 J	0.23 U	1.17 U	0.23 U
Hexane	17.97 U	1.80 U	1.76 J	0.46 U	2.47
m/p-Xylene	37.79 U	3.78 U	1.74 J	0.96 U	13.47
Methyl tert-Butyl Ether	12.26 U	1.23 U	0.06 U	0.30 U	0.06 U
Methylene Chloride	10.77 U	25.01 JB	1.39 JB	0.26 U	1.39 JB
o-Xylene	20.85 U	2.08 U	0.43 J	0.52 U	5.21
Propene	7.39 U	8.59 J	1.55	0.19 U	3.61
Styrene	51.09 U	5.11 U	0.26 U	1.32 U	0.85 J
t-1,3-Dichloropropene	49.94 U	4.99 U	0.26 U	1.27 U	0.26 U
tert-Butyl alcohol	48.50 U	4.85 U	2.43	1.21 U	0.24 U
Tetrachloroethene	64.42 U	33.91 J	16.27	46.11 D	19.67
Tetrahydrofuran	107.08 U	18.90 J	6.30	5.67 JD	4.41
Toluene	35.80 U	5.28 J	3.39	3.39 JD	16.58
trans-1,2-Dichloroethene	24.19 U	2.42 U	0.12 U	0.59 U	0.12 U
Trichloroethene	43.53 U	12.90	27.95	27.95 D	13.44
Trichlorofluoromethane	1404.91 D	1966.87	297.84 E	365.28 D	78.67
Vinyl Acetate	68.38 U	6.84 U	0.35 U	1.73 U	0.35 U
Vinyl Chloride	12.27 U	1.23 U	0.06 U	0.31 U	0.06 U

**Table 2**  
**132-20 Merrick Boulevard**  
**Springfield Gardens, Queens, NY**  
 Post-Remediation Soil Vapor Survey Analytical Results  
 Volatile Organic Compounds

Client ID Lab Sample ID Date Sampled Dilution	SE-4-HOME-DEPOTDL Y5443-20DL 12/04/07 4	SW-1-HOME-DEPOT Y5443-01 11/30/07 1	SW-2-HOME-DEPOT Y5443-08 11/30/07 1	SW-2-HOME-DEPOTDL Y5443-08DL 11/30/07 10	SW-3-HOME-DEPOT Y5443-09 12/04/07 1
µg/m <sup>3</sup>					
1,1,1-Trichloroethane	12.00 D	0.55 J	36.56	37.10 D	0.12 U
1,1,2,2-Tetrachloroethane	0.65 U	0.16 U	0.16 U	1.65 U	0.16 U
1,1,2-Trichloroethane	0.98 U	0.24 U	0.24 U	2.40 U	0.24 U
1,1,2-Trichlorotrifluoroethane	0.77 U	0.20 U	0.20 U	1.99 U	0.20 U
1,1-Dichloroethane	0.38 U	0.10 U	0.10 U	0.97 U	0.10 U
1,1-Dichloroethene	0.39 U	0.10 U	0.10 U	0.99 U	0.10 U
1,2,4-Trichlorobenzene	1.04 U	0.26 U	0.26 U	2.60 U	0.26 U
1,2,4-Trimethylbenzene	3.93 JD	1.47 J	2.46	1.18 U	2.46
1,2-Dibromoethane	4.00 U	1.00 U	1.00 U	9.99 U	1.00 U
1,2-Dichlorobenzene	0.52 U	0.13 U	0.13 U	1.32 U	0.13 U
1,2-Dichloroethane	0.81 U	0.20 U	0.20 U	2.02 U	0.20 U
1,2-Dichloropropane	0.88 U	0.22 U	0.46 J	2.22 U	0.22 U
1,3,5-Trimethylbenzene	0.69 U	0.17 U	0.49 J	1.72 U	0.98 J
1,3-Butadiene	0.33 U	0.08 U	0.08 U	0.80 U	0.08 U
1,3-Dichlorobenzene	0.40 U	0.10 U	2.40 J	1.02 U	0.10 U
1,4-Dichlorobenzene	0.60 U	1.20 J	1.20 J	1.50 U	0.15 U
1,4-Dioxane	0.98 U	0.25 U	0.25 U	2.50 U	0.25 U
2,2,4-Trimethylpentane	0.46 U	0.93 J	0.12 U	1.17 U	0.47 J
2-Butanone	10.32 D	28.90	29.49	32.44 D	2.95
2-Hexanone	3.32 U	0.83 U	1.70 J	8.25 U	0.83 U
4-Ethyltoluene	0.29 U	0.07 U	0.07 U	0.74 U	0.98 J
4-Methyl-2-Pentanone	0.82 U	0.20 U	0.82 J	2.05 U	0.20 U
Acetone	52.26 DB	19.72	16.87	33.26 DB	11.64 B
Allyl Chloride	0.78 U	0.19 U	0.19 U	1.91 U	0.31 J
Benzene	3.83 JD	1.28 J	1.60	1.41 U	3.19
Benzyl Chloride	0.70 U	0.18 U	0.18 U	1.78 U	0.18 U
Bromodichloromethane	1.34 U	0.33 U	0.33 U	3.35 U	0.33 U
Bromoethene	0.42 U	0.10 U	0.10 U	1.05 U	0.10 U
Bromoform	0.63 U	0.16 U	0.16 U	1.55 U	0.16 U
Bromomethane	0.37 U	0.09 U	0.09 U	0.93 U	0.09 U
Carbon Disulfide	12.46 D	0.05 U	0.05 U	0.47 U	0.31 J
Carbon Tetrachloride	0.42 U	0.11 U	0.31	1.07 U	0.44
Chlorobenzene	0.46 U	0.12 U	0.12 U	1.20 U	0.12 U
Chloroethane	0.18 U	0.04 U	0.04 U	0.45 U	0.04 U
Chloroform	0.59 U	3.42	1.47 J	1.51 U	0.15 U
Chloromethane	0.20 U	0.05 U	0.05 U	4.75 JD	1.45
cis-1,2-Dichloroethene	0.56 U	0.14 U	0.14 U	1.39 U	0.79 J
cis-1,3-Dichloropropene	0.91 U	0.23 U	0.23 U	2.27 U	0.23 U
Cyclohexane	0.17 U	0.04 U	0.04 U	0.41 U	0.34 J
Dibromochloromethane	0.85 U	0.22 U	0.22 U	2.22 U	0.22 U
Dichlorodifluoromethane	0.33 U	0.08 U	0.08 U	34.61 D	3.46
Dichlorotetrafluoroethane	0.61 U	0.15 U	0.15 U	1.54 U	0.15 U
Ethanol	358.01 ED	904.44 E	697.17 E	810.23 ED	139.43 E
Ethyl Acetate	0.75 U	0.19 U	0.19 U	1.90 U	3.57
Ethyl Benzene	3.91 JD	0.43 J	0.87 J	0.78 U	2.61
Heptane	2.05 JD	0.41 J	0.82 J	0.98 U	0.41 J
Hexachloro-1,3-Butadiene	0.93 U	0.23 U	0.23 U	2.35 U	0.23 U
Hexane	2.47 JD	1.76	1.06 J	0.92 U	1.76 J
m/p-Xylene	12.60 D	1.74 J	2.61	1.87 U	8.25
Methyl tert-Butyl Ether	0.24 U	0.36 J	0.06 U	0.61 U	0.06 U
Methylene Chloride	2.08 JDB	1.39 JB	1.04 JB	5.21 JDB	2.78 B
o-Xylene	4.78 JD	0.43 J	0.87 J	1.04 U	3.04
Propene	4.98 D	0.04 U	0.04 U	5.15 JD	1.72
Styrene	1.06 U	0.26 U	0.26 U	2.64 U	0.43 J
t-1,3-Dichloropropene	1.04 U	0.26 U	0.26 U	2.59 U	0.26 U
tert-Butyl alcohol	0.97 U	0.24 U	0.24 U	2.39 U	0.24 U
Tetrachloroethene	18.99 D	1.36 J	20.34	20.34 JD	0.68 J
Tetrahydrofuran	5.04 JD	11.34	12.60	14.49 JD	1.89 J
Toluene	15.83 D	4.90	5.28	4.90 JD	13.19
trans-1,2-Dichloroethene	0.48 U	0.12 U	0.12 U	1.23 U	0.12 U
Trichloroethene	13.44 D	0.54	53.20	51.06 D	0.22 U
Trichlorofluoromethane	78.67 D	21.92	230.40 E	241.64 D	6.74
Vinyl Acetate	1.40 U	0.35 U	0.35 U	3.49 U	1.08 J
Vinyl Chloride	0.24 U	0.06 U	0.06 U	0.61 U	0.06 U

**Table 2**  
**132-20 Merrick Boulevard**  
**Springfield Gardens, Queens, NY**  
 Post-Remediation Soil Vapor Survey Analytical Results  
 Volatile Organic Compounds

Client ID	SW-4-HOME-DEPOT	SW-5-HOME-DEPOT	SW-6-HOME-DEPOT	SS-1-HOME-DEPOT	SS-2-HOME-DEPOT
Lab Sample ID	Y5443-11	Y5443-12	Y5443-13	Y5443-14	Y5443-16
Date Sampled	12/04/07	12/04/07	12/04/07	12/04/07	12/04/07
Dilution	1	1	1	1	1
$\mu\text{g}/\text{m}^3$					
1,1,1-Trichloroethane	0.12 U	0.55 J	1.09 J	1.09 J	1.09 J
1,1,2,2-Tetrachloroethane	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
1,1,2-Trichloroethane	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U
1,1,2-Trichlorotrifluoroethane	0.77 J	0.20 U	0.20 U	0.77 J	0.77 J
1,1-Dichloroethane	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
1,1-Dichloroethene	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
1,2,4-Trichlorobenzene	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
1,2,4-Trimethylbenzene	1.97 J	3.44	4.42	2.46 J	3.93
1,2-Dibromoethane	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,2-Dichlorobenzene	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
1,2-Dichloroethane	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
1,2-Dichloropropane	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
1,3,5-Trimethylbenzene	0.49 J	0.98 J	1.47 J	0.98 J	0.98 J
1,3-Butadiene	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U
1,3-Dichlorobenzene	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
1,4-Dichlorobenzene	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
1,4-Dioxane	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
2,2,4-Trimethylpentane	0.93 J	0.93 J	1.40 J	1.40 J	0.93 J
2-Butanone	3.83	5.31	5.90	4.13	5.31
2-Hexanone	0.83 U	0.83 U	0.83 U	0.83 U	0.83 U
4-Ethyltoluene	0.98 J	0.98 J	1.47 J	0.98 J	0.98 J
4-Methyl-2-Pentanone	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Acetone	17.34 B	23.75 B	16.39 B	12.83 B	15.92 B
Allyl Chloride	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Benzene	2.56	3.83	3.51	2.88	2.56
Benzyl Chloride	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
Bromodichloromethane	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
Bromoethene	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
Bromoform	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
Bromomethane	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U
Carbon Disulfide	1.87	0.05 U	0.05 U	0.05 U	0.05 U
Carbon Tetrachloride	0.38	0.44	0.44	0.44	0.50
Chlorobenzene	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U
Chloroethane	0.53 J	0.04 U	0.04 U	0.04 U	0.04 U
Chloroform	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
Chloromethane	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
cis-1,2-Dichloroethene	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
cis-1,3-Dichloropropene	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U
Cyclohexane	0.69 J	0.69 J	1.03 J	0.69 J	0.69 J
Dibromochloromethane	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
Dichlorodifluoromethane	2.97	9.89	0.08 U	2.47	2.97
Dichlorotetrafluoroethane	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
Ethanol	114.94 E	207.27 E	160.16 E	126.24 E	150.74 E
Ethyl Acetate	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Ethyl Benzene	2.61	3.91	3.47	2.61	2.61
Heptane	1.64 J	0.41 J	1.23 J	0.82 J	0.82 J
Hexachloro-1,3-Butadiene	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U
Hexane	1.41 J	1.41 J	1.41 J	1.06 J	2.11
m/p-Xylene	7.82	13.47	12.16	7.82	7.82
Methyl tert-Butyl Ether	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U
Methylene Chloride	2.08 B	1.74 JB	2.78 B	1.39 JB	5.91 B
o-Xylene	3.04	4.78	5.21	3.04	3.47
Propene	18.90	1.20	1.03	1.20	1.37
Styrene	0.43 J	0.43 J	0.43 J	0.43 J	0.43 J
t-1,3-Dichloropropene	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
tert-Butyl alcohol	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U
Tetrachloroethene	1.36 J	1.36 J	2.71 J	1.36 J	1.36 J
Tetrahydrofuran	1.89 J	3.78	3.15 J	1.89 J	2.52 J
Toluene	12.06	19.60	16.96	12.06	11.31
trans-1,2-Dichloroethene	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U
Trichloroethene	0.22 U	0.22 U	0.27	0.22 U	0.48
Trichlorofluoromethane	30.91	11.24	19.67	21.92	61.82
Vinyl Acetate	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U
Vinyl Chloride	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U

**Table 2**  
**132-20 Merrick Boulevard**  
**Springfield Gardens, Queens, NY**  
 Post-Remediation Soil Vapor Survey Analytical Results  
 Volatile Organic Compounds

Client ID	SS-3-HOME-DEPOT	SS-4-HOME-DEPOT	SS-4-HOME-DEPOTDL	SSW-2-HOME-DEPOT
Lab Sample ID	Y5443-17	Y5443-18	Y5443-18DL	Y5443-19
Date Sampled	12/04/07	12/04/07	12/04/07	11/30/07
Dilution	1	1	5	1
$\mu\text{g}/\text{m}^3$				
1,1,1-Trichloroethane	3.82	1.64 J	0.60 U	3.27
1,1,2,2-Tetrachloroethane	0.16 U	0.16 U	0.82 U	0.16 U
1,1,2-Trichloroethane	0.24 U	0.24 U	1.20 U	0.24 U
1,1,2-Trichlorotrifluoroethane	0.77 J	0.20 U	1.00 U	0.77 J
1,1-Dichloroethane	0.10 U	0.10 U	0.49 U	0.10 U
1,1-Dichloroethene	0.10 U	0.40 J	0.48 U	0.10 U
1,2,4-Trichlorobenzene	0.26 U	0.26 U	1.34 U	0.26 U
1,2,4-Trimethylbenzene	4.42	3.44	0.59 U	0.98 J
1,2-Dibromoethane	1.00 U	1.00 U	5.00 U	1.00 U
1,2-Dichlorobenzene	0.13 U	0.13 U	0.66 U	0.13 U
1,2-Dichloroethane	0.20 U	0.20 U	1.01 U	0.20 U
1,2-Dichloropropane	0.22 U	0.22 U	1.11 U	0.22 U
1,3,5-Trimethylbenzene	0.98 J	0.98 J	0.88 U	0.17 U
1,3-Butadiene	0.08 U	0.08 U	0.40 U	0.08 U
1,3-Dichlorobenzene	0.10 U	0.10 U	0.51 U	0.10 U
1,4-Dichlorobenzene	0.15 U	0.15 U	0.72 U	0.15 U
1,4-Dioxane	0.25 U	0.25 U	1.25 U	0.25 U
2,2,4-Trimethylpentane	0.93 J	0.93 J	0.56 U	0.93 J
2-Butanone	4.72	5.01	3.24 JD	5.01
2-Hexanone	1.70 J	0.83 U	4.08 U	0.83 U
4-Ethyltoluene	0.98 J	0.98 J	0.37 U	0.07 U
4-Methyl-2-Pentanone	0.41 J	0.20 U	1.02 U	0.20 U
Acetone	16.63 B	30.88 B	28.51 D	12.35 B
Allyl Chloride	0.19 U	0.19 U	0.97 U	0.19 U
Benzene	2.24	2.24	0.70 U	1.60 J
Benzyl Chloride	0.18 U	0.18 U	0.89 U	0.18 U
Bromodichloromethane	0.33 U	0.33 U	1.67 U	0.33 U
Bromoethene	0.10 U	0.10 U	0.52 U	0.10 U
Bromoform	0.16 U	0.16 U	0.79 U	0.16 U
Bromomethane	0.09 U	0.09 U	0.47 U	0.09 U
Carbon Disulfide	0.05 U	20.86	15.57 D	0.05 U
Carbon Tetrachloride	0.44	0.44	0.53 U	0.57
Chlorobenzene	0.12 U	0.12 U	0.60 U	0.12 U
Chloroethane	0.04 U	0.04 U	0.22 U	0.04 U
Chloroform	0.15 U	0.49 J	0.73 U	0.15 U
Chloromethane	1.86	0.05 U	0.25 U	1.65
cis-1,2-Dichloroethene	0.14 U	0.14 U	0.71 U	0.14 U
cis-1,3-Dichloropropene	0.23 U	0.23 U	1.13 U	0.23 U
Cyclohexane	0.04 U	0.04 U	0.21 U	0.04 U
Dibromochloromethane	0.22 U	0.22 U	1.11 U	0.22 U
Dichlorodifluoromethane	2.97	3.46	3.46 JD	6.92
Dichlorotetrafluoroethane	0.15 U	0.15 U	0.77 U	0.15 U
Ethanol	207.27 E	207.27 E	207.27 ED	114.94 E
Ethyl Acetate	0.19 U	0.19 U	0.95 U	0.19 U
Ethyl Benzene	3.04	2.61	0.39 U	0.43 J
Heptane	0.41 J	0.82 J	0.49 U	1.23 J
Hexachloro-1,3-Butadiene	0.23 U	0.23 U	1.17 U	0.23 U
Hexane	1.06 J	2.11	0.46 U	1.41 J
m/p-Xylene	9.56	9.12	5.65 JD	1.30 J
Methyl tert-Butyl Ether	0.06 U	0.06 U	0.30 U	0.06 U
Methylene Chloride	2.43 B	1.04 JB	0.26 U	1.74 JB
o-Xylene	3.91	3.91	0.52 U	0.43 J
Propene	1.20	80.74 E	73.87 D	2.58
Styrene	0.43 J	0.43 J	1.32 U	0.26 U
t-1,3-Dichloropropene	0.26 U	0.26 U	1.27 U	0.26 U
tert-Butyl alcohol	0.24 U	0.24 U	1.21 U	0.24 U
Tetrachloroethene	14.92	2.71 J	4.75 JD	3.39 J
Tetrahydrofuran	3.15 J	3.15 J	2.65 U	1.89 J
Toluene	11.31	11.31	7.54 JD	3.01
trans-1,2-Dichloroethene	0.12 U	0.12 U	0.59 U	0.12 U
Trichloroethene	1.29	0.32	1.07 U	4.35
Trichlorofluoromethane	26.41	14.05	14.61 D	26.41
Vinyl Acetate	0.35 U	0.35 U	1.73 U	0.35 U
Vinyl Chloride	0.06 U	0.06 U	0.31 U	0.06 U

**Table 2**  
**132-20 Merrick Boulevard**  
**Springfield Gardens, Queens, NY**  
 Post-Remediation Soil Vapor Survey Analytical Results  
 Volatile Organic Compounds

Client ID	AA-NORTH-HOME-DEPOT	AA-SOUTH-HOME-DEPOT
Lab Sample ID	Y5443-10	Y5443-15
Date Sampled	12/04/07	12/04/07
Dilution	1	1
$\mu\text{g}/\text{m}^3$		
1,1,1-Trichloroethane	0.12 U	0.12 U
1,1,2,2-Tetrachloroethane	0.16 U	0.16 U
1,1,2-Trichloroethane	0.24 U	0.24 U
1,1,2-Trichlorotrifluoroethane	0.77 J	0.77 J
1,1-Dichloroethane	0.10 U	0.10 U
1,1-Dichloroethene	0.10 U	0.10 U
1,2,4-Trichlorobenzene	0.26 U	0.26 U
1,2,4-Trimethylbenzene	0.49 J	1.47 J
1,2-Dibromoethane	1.00 U	1.00 U
1,2-Dichlorobenzene	0.13 U	0.13 U
1,2-Dichloroethane	0.20 U	0.20 U
1,2-Dichloropropane	0.22 U	0.22 U
1,3,5-Trimethylbenzene	0.17 U	0.17 U
1,3-Butadiene	0.08 U	0.08 U
1,3-Dichlorobenzene	0.10 U	0.10 U
1,4-Dichlorobenzene	0.15 U	0.15 U
1,4-Dioxane	0.25 U	0.25 U
2,2,4-Trimethylpentane	0.12 U	0.47 J
2-Butanone	0.88 J	1.47 J
2-Hexanone	0.83 U	0.83 U
4-Ethyltoluene	0.07 U	0.07 U
4-Methyl-2-Pentanone	0.20 U	0.20 U
Acetone	7.13 B	10.45 B
Allyl Chloride	0.19 U	0.19 U
Benzene	1.28 J	1.28 J
Benzyl Chloride	0.18 U	0.18 U
Bromodichloromethane	0.33 U	0.33 U
Bromoethene	0.10 U	0.10 U
Bromoform	0.16 U	0.16 U
Bromomethane	0.09 U	0.09 U
Carbon Disulfide	0.62 J	0.05 U
Carbon Tetrachloride	0.50	0.63
Chlorobenzene	0.12 U	0.12 U
Chloroethane	0.04 U	0.04 U
Chloroform	0.15 U	0.15 U
Chloromethane	1.24	1.24
cis-1,2-Dichloroethene	0.14 U	0.14 U
cis-1,3-Dichloropropene	0.23 U	0.23 U
Cyclohexane	0.04 U	0.04 U
Dibromochloromethane	0.22 U	0.22 U
Dichlorodifluoromethane	2.97	2.97
Dichlorotetrafluoroethane	0.15 U	0.15 U
Ethanol	9.99	14.51
Ethyl Acetate	0.19 U	0.19 U
Ethyl Benzene	0.08 U	0.43 J
Heptane	0.10 U	0.41 J
Hexachloro-1,3-Butadiene	0.23 U	0.23 U
Hexane	1.41 J	1.41 J
m/p-Xylene	0.87 J	1.74 J
Methyl tert-Butyl Ether	0.06 U	0.06 U
Methylene Chloride	2.43 B	4.17 B
o-Xylene	0.10 U	0.87 J
Propene	1.55	2.06
Styrene	0.26 U	0.26 U
t-1,3-Dichloropropene	0.26 U	0.26 U
tert-Butyl alcohol	0.24 U	0.24 U
Tetrachloroethene	0.33 U	0.33 U
Tetrahydrofuran	0.53 U	0.53 U
Toluene	1.88	3.01
trans-1,2-Dichloroethene	0.12 U	0.12 U
Trichloroethene	1.67	0.22 U
Trichlorofluoromethane	1.69 J	1.69 J
Vinyl Acetate	0.35 U	0.35 U
Vinyl Chloride	0.06 U	0.06 U

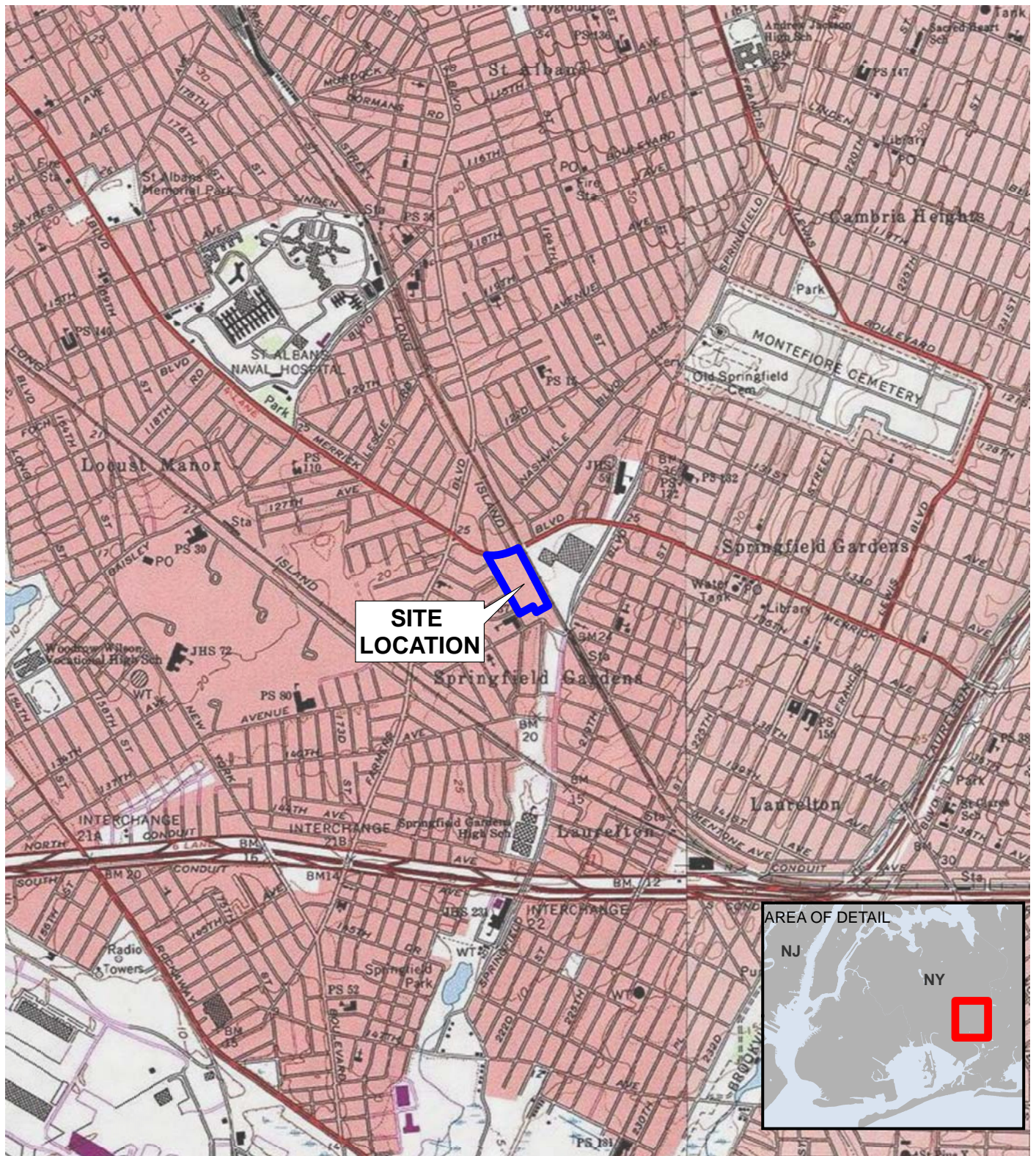
**Table 3**  
**132-20 Merrick Blvd.**  
**Springfield Gardens, Queens, NY**  
Groundwater Analytical Results  
*Historical PCE Groundwater Concentrations*

Client ID	Date Sampled	NYSDEC Class GA Ambient Standard	MW-1	MW-3	MW-4	MW-5S	MW-6	MW-7	MW-11	MW-13	MW-14S	MW-15	MW-16	MW-17S
Tetrachloroethylene	7/18/1988	5	NS	NS	105	NS	NS	4	2	94	NS	150	NS	NS
Tetrachloroethylene	10/28/1988	5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Tetrachloroethylene	2/26/1989	5	NS	NS	NS	NS	NS	1	1	53	NS	NS	NS	NS
Tetrachloroethylene	02/04/1999	5	NS	240	NS	710	120	ND	NS	NS	82	NS	870	74
Tetrachloroethylene	07/28/2000	5	NS	230	NS	NS	NS	ND	NS	NS	39	NS	7.5	ND
Tetrachloroethylene	08/10/2001	5	21	15	NS	0.4	18	1	NS	NS	100	NS	130	7
Tetrachloroethylene	12/18/2001	5	52	6	NS	ND	63	0.8	NS	NS	90	NS	29	7
Tetrachloroethylene	04/17/2002	5	11	24	NS	7	130	ND	NS	NS	510	NS	19	2
Tetrachloroethylene	08/02/2002	5	NS	120	NS	ND	95	ND	NS	NS	230	NS	310	6
Tetrachloroethylene	11/06/2002	5	72	53	NS	2	35	ND	NS	NS	NS	NS	120	18
Tetrachloroethylene	02/05/2003	5	28	71	NS	ND	82	ND	NS	NS	33	NS	89	6
Tetrachloroethylene	05/09/2003	5	18	410	NS	1	32	0.4	NS	NS	71	NS	32	13
Tetrachloroethylene	08/22/2003	5	2	130	NS	5	28	1 J	NS	NS	230	NS	88	17
Tetrachloroethylene	12/26/2003	5	3	160	NS	34	60	ND	NS	NS	350	NS	160	23
Tetrachloroethylene	05/19/2004	5	0.7	81	NS	10	120	ND	NS	NS	400	NS	29	0.8
Tetrachloroethylene	10/08/2004	5	ND	98	NS	1.1	170	4.2 J	NS	NS	86	NS	16	0.4
Tetrachloroethylene	06/22/2005	5	1	41	NS	5.6	26	1.7 J	NS	NS	66	NS	3.9	31
Tetrachloroethylene	11/21/2005	5	1.9	10	NS	3.2	14	1.1 J	NS	NS	6.8	NS	3.6	44
Tetrachloroethylene	06/22/2007	5	0.5	7.7	NS	1.4	5	ND	NS	NS	44	NS	1	5.9
Tetrachloroethylene	12/11/2008	5	1.4 J	3.2 J	NS	2.1 J	5.6	ND	NS	NS	5.4	NS	0.8 U	3.8

ND-Not Detected  
NS-Not Sampled. MW-4, MW-11, MW-13, and MW-15 due to well being destroyed during on-site construction activities.  
Wells shown are upper glacial unit (shallow) wells only as they pertain to the zone of concern during remediation.

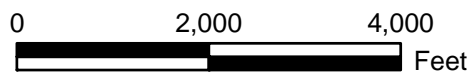
## FIGURES





**SITE  
LOCATION**

**SOURCE**  
USGS 7.5 Minute Topographic Map  
Jamaica Quad 1995



**132-20 MERRICK BLVD  
SPRINGFIELD GARDENS, NEW YORK**



**PROJECT SITE LOCATION**

**Environmental Consultants**  
440 Park Avenue South, New York, N.Y. 10016

DATE  
**09.08.10**

PROJECT No.  
**80022**

FIGURE  
**1**

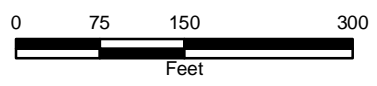




Aerial Source: 2004 U.S. Geological Survey Orthographic photo taken for CUNY & NY (DoITT).

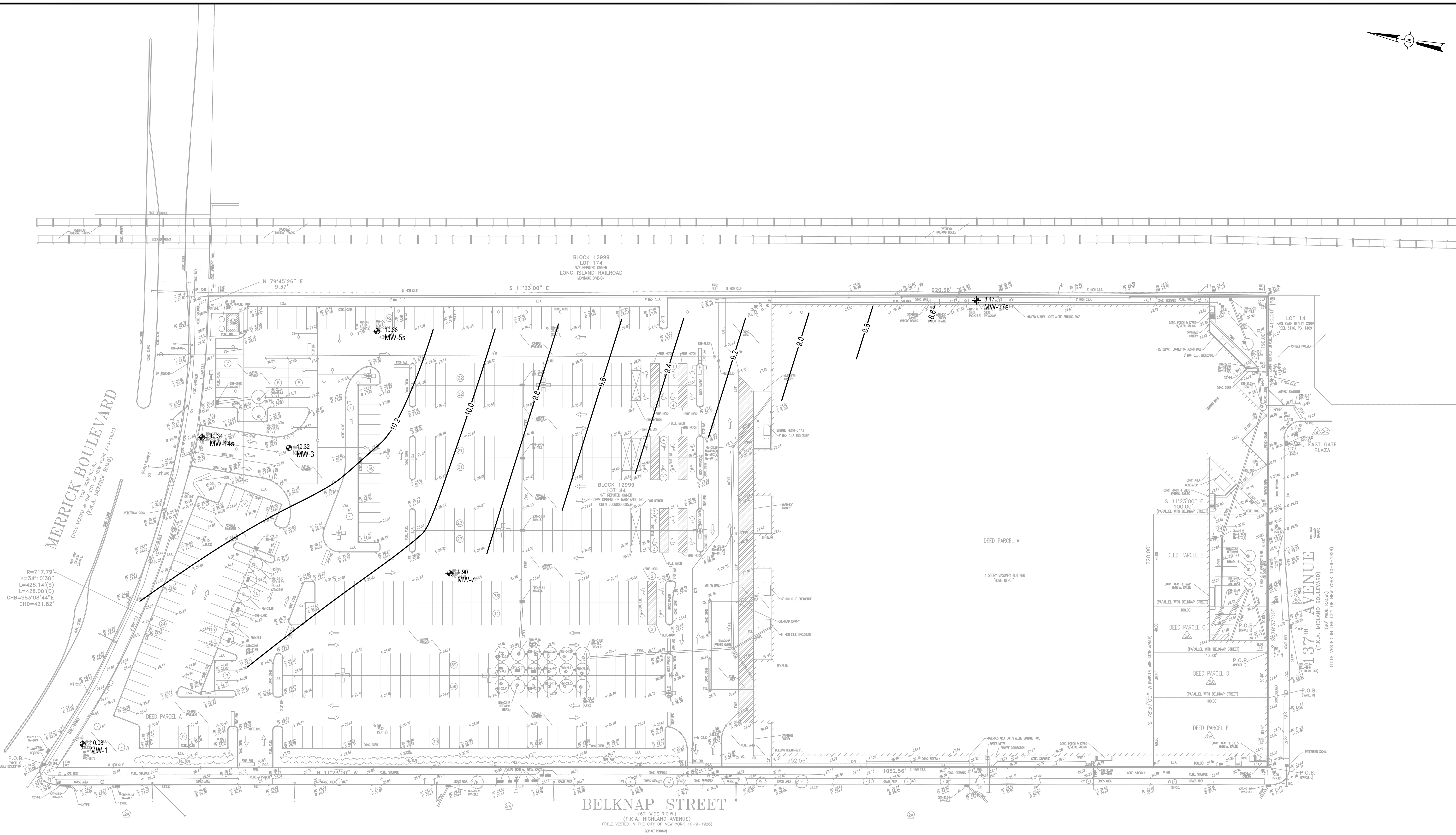
### Legend

Project Site Location

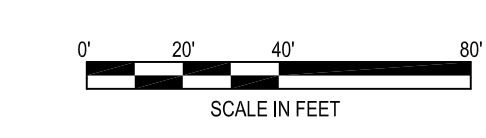


<p>132-20 MERRICK BLVD SPRINGFIELD GARDENS, NEW YORK</p>		<p>DATE 9.09.10</p>
<p><b>SITE PLAN</b></p>	<p>Environmental Consultants 440 Park Avenue South, New York, N.Y. 10016</p>	<p>PROJECT No. 80022</p> <p>FIGURE 2</p>



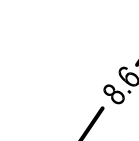
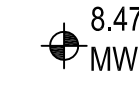


$R=717.79'$   
 $\Delta=34^{\circ}10'30''$   
 $L=428.14'(S)$   
 $L=428.00'(D)$   
 $CHB=583^{\circ}08'44''E$   
 $CHD=421.82'$



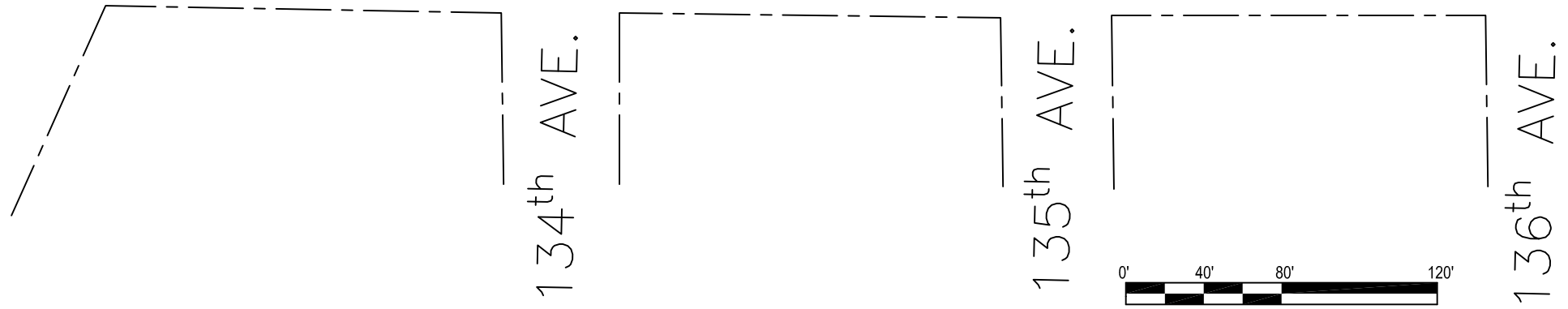
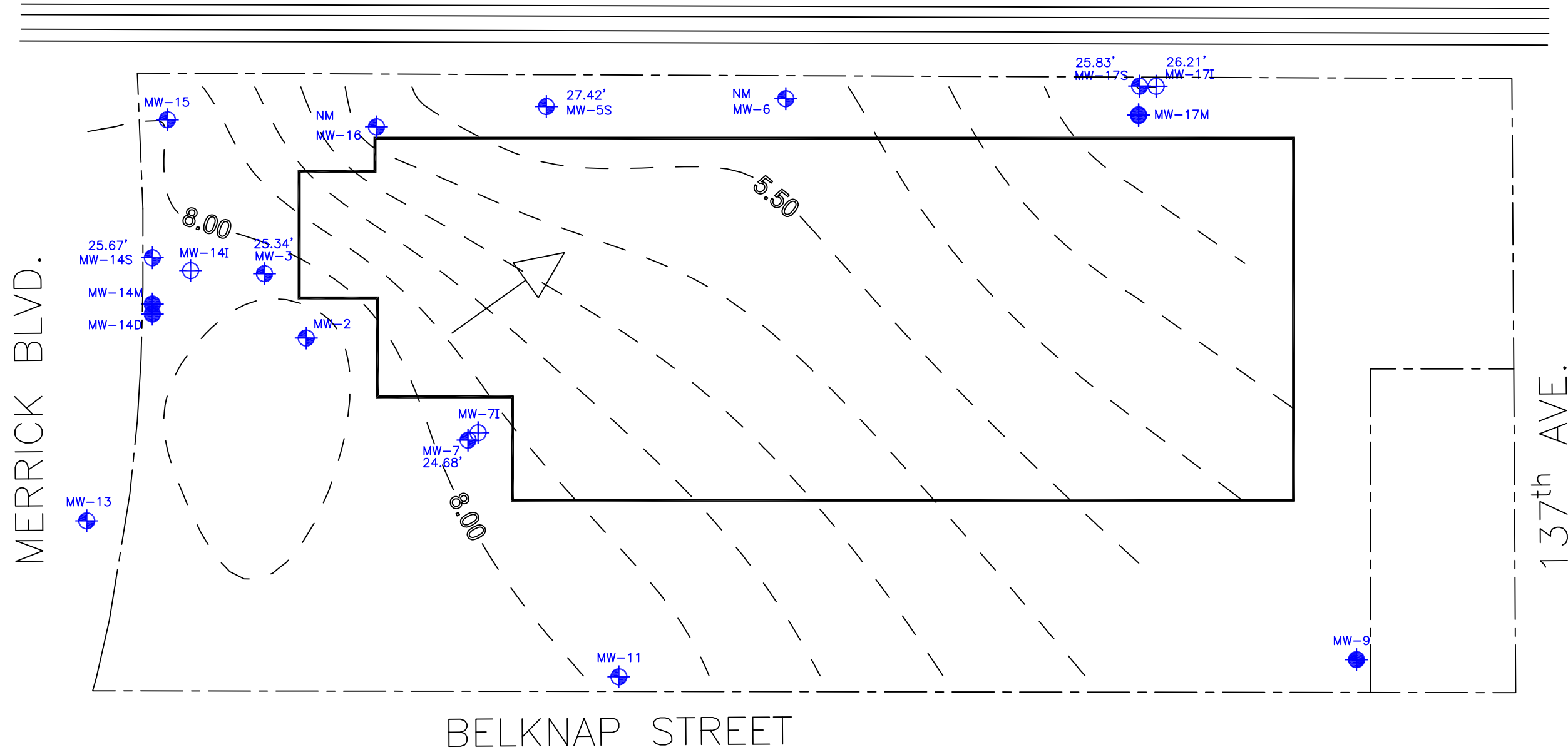
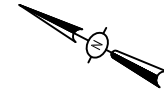
**SOURCE:**  
 Based on Figure ALTA / ACSM LAND TITLE SURVEY, HOME DEPOT U.S.A., INC.  
 Provided by CONTROL POINT ASSOCIATES, INC.  
 35 Technology drive Warren, New Jersey  
 Dec 2008

ELEVATIONS ARE BASED UPON BOROUGH OF QUEENS DATUM, REPUTED TO BE 2.725 FEET ABOVE USCG DATUM, REF. BENCHMARK 2423, ELEV.=25.529. DEPTH TO GROUNDWATER MEASUREMENTS MADE BY AKRF ON DECEMBER 11, 2008.

- LEGEND:**
-  CONTOR LINES WITH ELEVATION IN FEET
  -  8.47 MW-17s MONITORING WELL LOCATIONS WITH ELEVATION IN FEET

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# LONG ISLAND RAILROAD TRACKS



### LEGEND:

- BUILDING LINE OF FORMER UPS FACILITY
- SHALLOW UPPER GLACIAL MW-# (NO LETTERS) OR (LETTER S)
- DEEP UPPER GLACIAL MW-# (W/ LETTER D) OR (LETTER M)
- MAGOTHY AQUIFER MW-# (W/ LETTER I)
- GROUNDWATER CONTOUR
- 25.67' TOP OF PVC WELL CASING ELEVATION
- NM WELL CASING ELEVATION NOT MEASURED

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132-20 MERRICK BLVD  
 SPRINGFIELD GARDENS, NEW YORK  
 HISTORICAL GROUNDWATER CONTOUR MAP  
 SHALLOW UPPER GLACIAL UNIT (02/22/99)

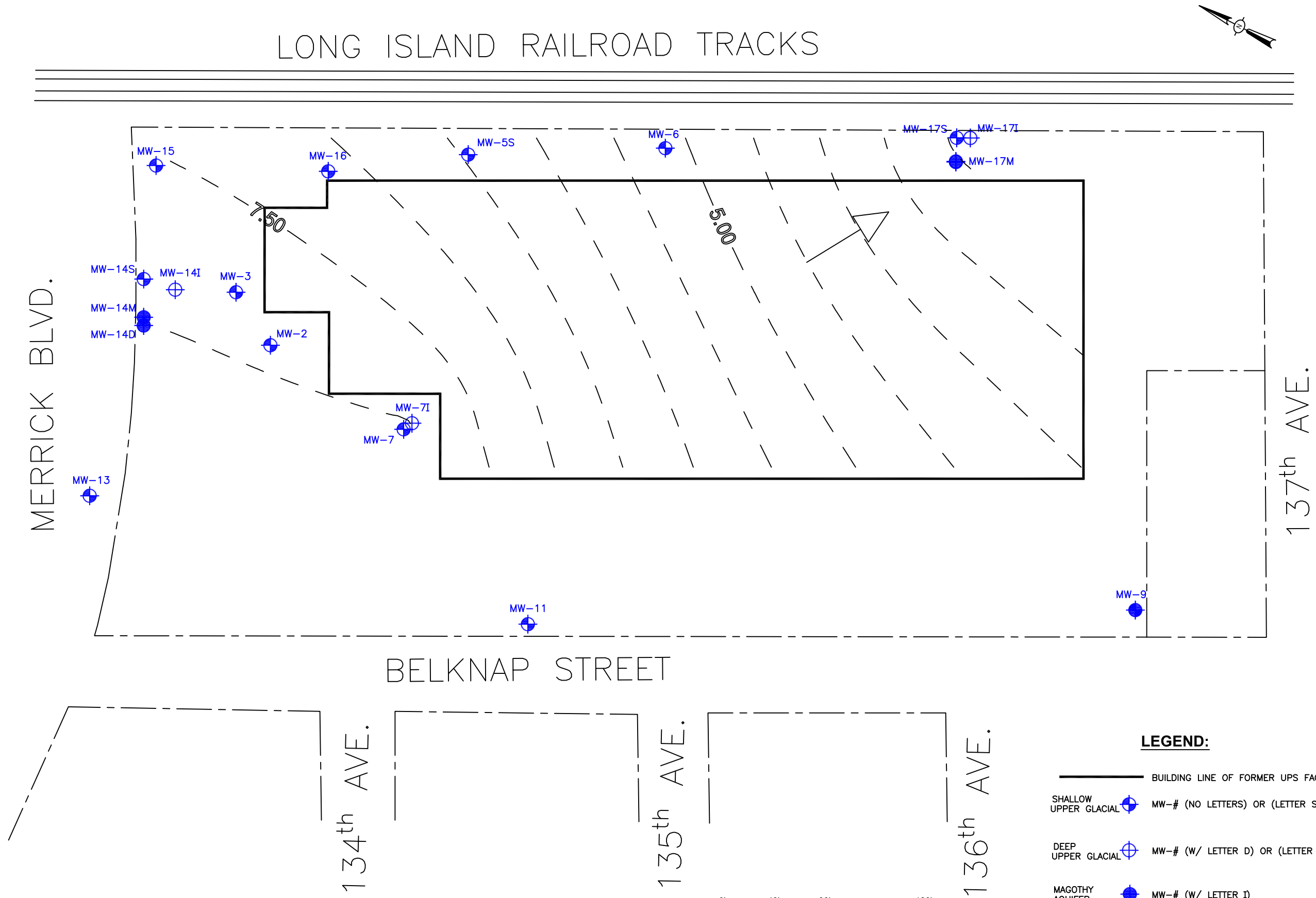
DATE  
**6.05.09**

PROJECT NO.  
**80022**




SCALE  
**as shown**

FIGURE  
**3B**


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**LEGEND:**

- BUILDING LINE OF FORMER UPS FACILITY
- SHALLOW UPPER GLACIAL  MW-# (NO LETTERS) OR (LETTER S)
- DEEP UPPER GLACIAL  MW-# (W/ LETTER D) OR (LETTER M)
- MAGOTHY AQUIFER  MW-# (W/ LETTER I)
- - - GROUNDWATER CONTOURS





**Environmental Consultants**  
440 Park Avenue South, New York, NY 10016

---

**132-20 MERRICK BLVD**  
SPRINGFIELD GARDENS, NEW YORK

**HISTORICAL GROUNDWATER CONTOUR MAP**  
DEEP UPPER GLACIAL UNIT (02/22/99)

---

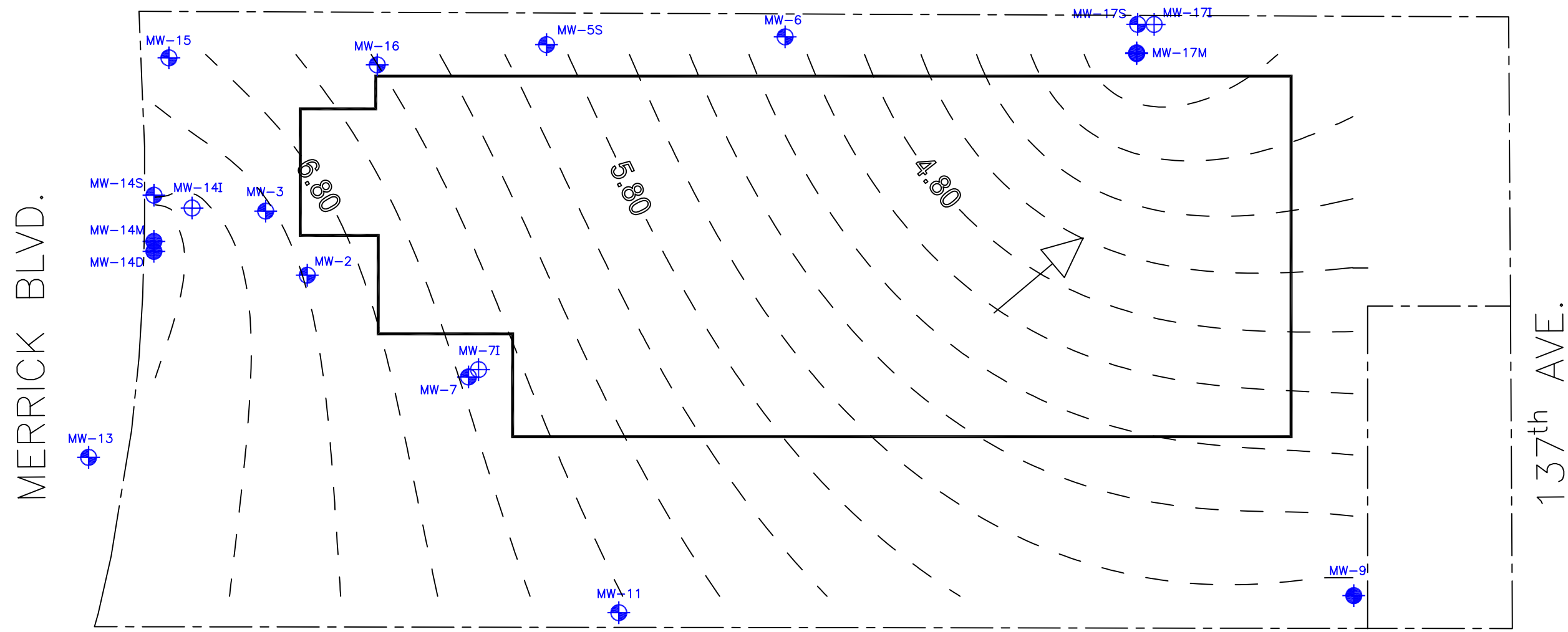
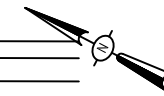
DATE  
**6.05.09**

PROJECT NO.  
**80022**

SCALE  
**as shown**

FIGURE  
**3C**

# LONG ISLAND RAILROAD TRACKS



MERRICK BLVD.

137th AVE.






BELKNAP STREET

134th AVE.

135th AVE.

136th AVE.

**LEGEND:**

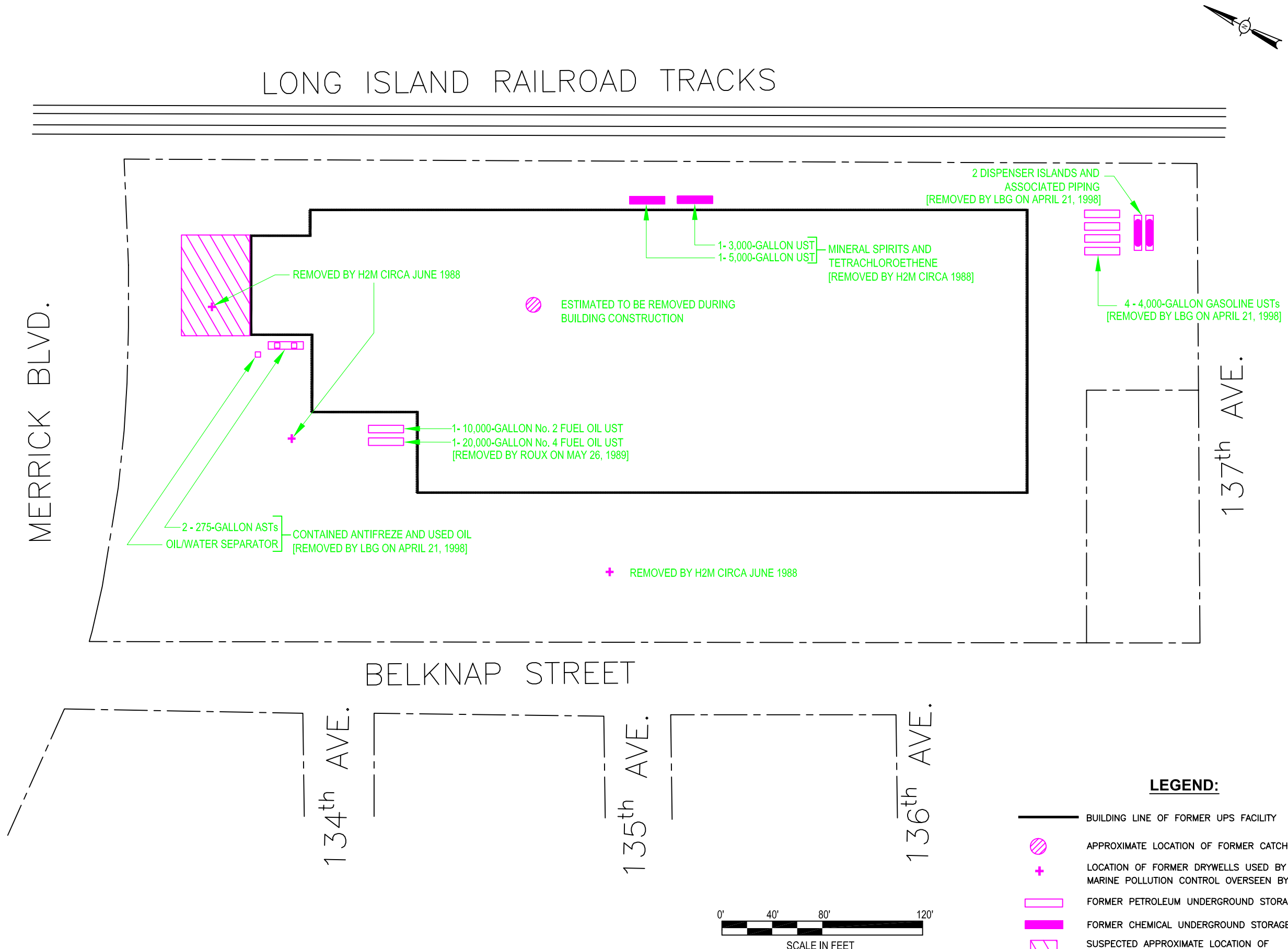
-  BUILDING LINE OF FORMER UPS FACILITY
-  SHALLOW UPPER GLACIAL MW-# (NO LETTERS) OR (LETTER S)
-  DEEP UPPER GLACIAL MW-# (W/ LETTER D) OR (LETTER M)
-  MAGOTHY AQUIFER MW-# (W/ LETTER I)
-  GROUNDWATER CONTOUR



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132-20 MERRICK BLVD  
SPRINGFIELD GARDENS, NEW YORK  
GROUNDWATER CONTOUR MAP  
MAGOTHY AQUIFER (02/22/99)

DATE	06.05.09
PROJECT NO.	80022
SCALE	as shown
FIGURE	3D



**LEGEND:**

- BUILDING LINE OF FORMER UPS FACILITY
- APPROXIMATE LOCATION OF FORMER CATCH BASIN
- LOCATION OF FORMER DRYWELLS USED BY KNOMARK MARINE POLLUTION CONTROL OVERSEEN BY H2M
- FORMER PETROLEUM UNDERGROUND STORAGE TANK
- FORMER CHEMICAL UNDERGROUND STORAGE TANK
- SUSPECTED APPROXIMATE LOCATION OF FORMER DRUM STORAGE AREA
- LBG LEGETTE, BRASHEARS & GRAHAM, INC.



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132-20 MERRICK BLVD.  
SPRINGFIELD GARDENS, NEW YORK  
AREAS OF CONCERN

DATE  
**6.05.09**

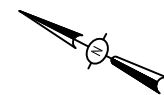
PROJECT NO.  
**80022**

SCALE  
**as shown**

FIGURE  
**4**

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LONG ISLAND RAILROAD TRACKS

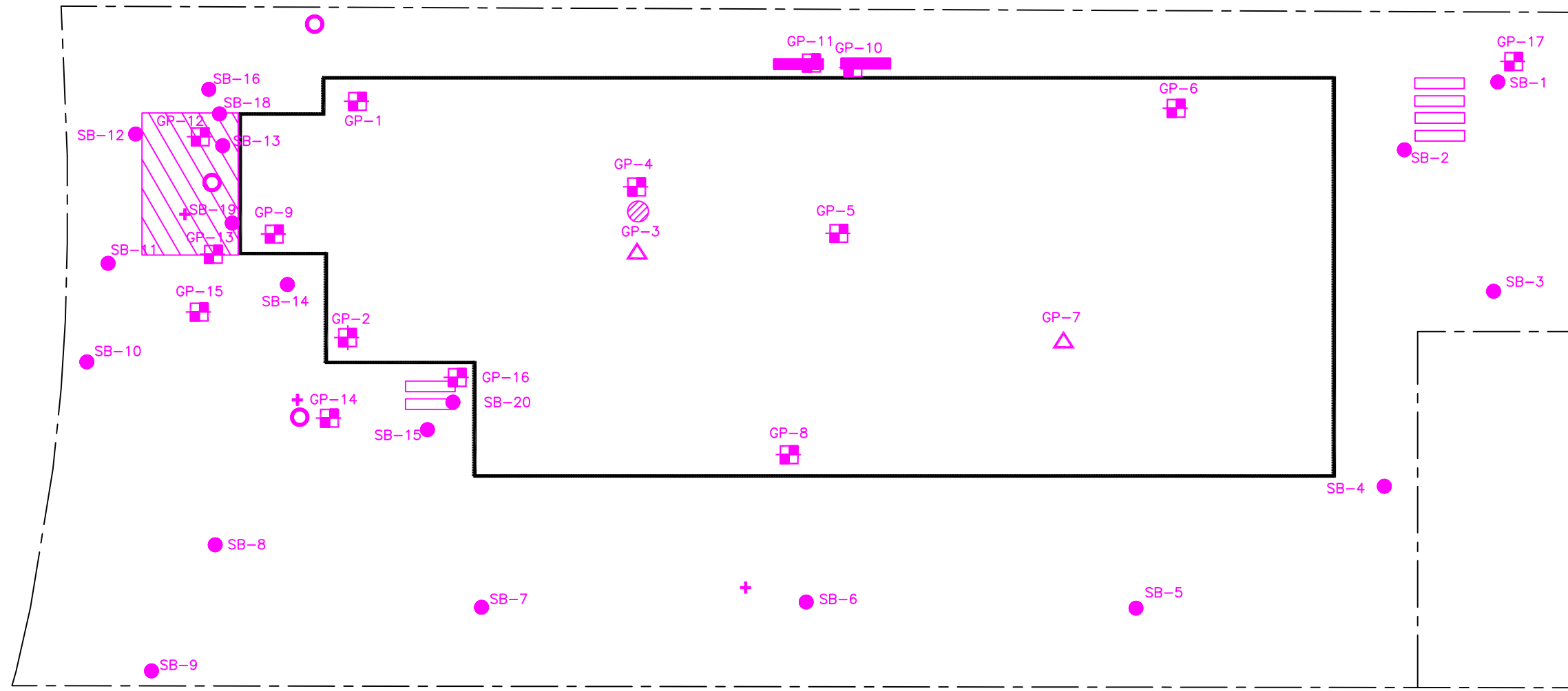


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132-20 MERRICK BLVD  
SPRINGFIELD GARDENS, NEW YORK  
SOIL SAMPLING LOCATIONS PRIOR TO REMEDY

DATE  
**6.05.08**  
PROJECT NO.  
**80022**  
SCALE  
**as shown**  
FIGURE  
**5A**

MERRICK BLVD.



137th AVE.

BELKNAP STREET

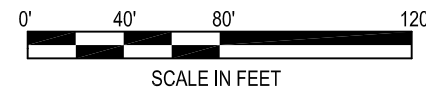
134th AVE.

135th AVE.

136th AVE.

**LEGEND:**

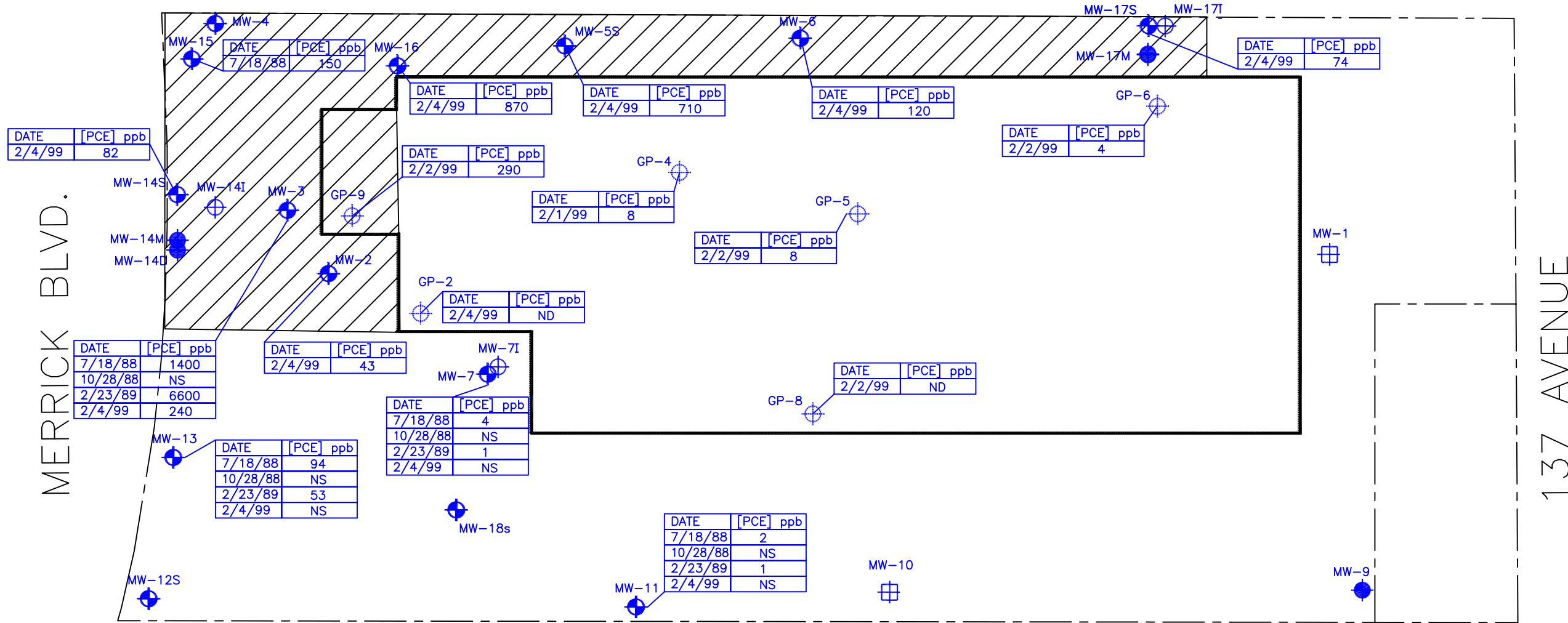
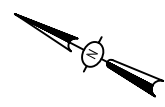
- BUILDING LINE OF FORMER UPS FACILITY
- GEOPROBE SOIL SAMPLING BY AKRF
- SOIL SAMPLING BY ROUX ASSOCIATES
- SOIL SAMPLING BY TRC
- APPROXIMATE LOCATION OF FORMER CATCH BASIN
- LOCATION OF FORMER DRYWELLS USED BY KNOMARK
- FORMER PETROLEUM UNDERGROUND STORAGE TANK
- FORMER CHEMICAL UNDERGROUND STORAGE TANK
- SUSPECTED APPROXIMATE LOCATION OF FORMER DRUM STORAGE AREA



SCALE IN FEET



# LONG ISLAND RAILROAD TRACKS



DATE	[PCE] ppb
2/4/99	82

DATE	[PCE] ppb
7/18/88	150

DATE	[PCE] ppb
2/4/99	870

DATE	[PCE] ppb
2/4/99	710

DATE	[PCE] ppb
2/4/99	120

DATE	[PCE] ppb
2/4/99	74

DATE	[PCE] ppb
2/2/99	290

DATE	[PCE] ppb
2/2/99	4

DATE	[PCE] ppb
2/1/99	8

DATE	[PCE] ppb
2/2/99	8

DATE	[PCE] ppb
2/4/99	ND

DATE	[PCE] ppb
2/2/99	ND

DATE	[PCE] ppb
7/18/88	1400
10/28/88	NS
2/23/89	6600
2/4/99	240

DATE	[PCE] ppb
2/4/99	43

DATE	[PCE] ppb
7/18/88	4
10/28/88	NS
2/23/89	1
2/4/99	NS

DATE	[PCE] ppb
7/18/88	94
10/28/88	NS
2/23/89	53
2/4/99	NS

DATE	[PCE] ppb
7/18/88	2
10/28/88	NS
2/23/89	1
2/4/99	NS

**NOTES:**  
 PCE: TETRACHLOROETHENE  
 PPB: PARTS PER BILLION  
 ND: NOT DETECTED  
 NS: NOT SAMPLED



- LEGEND:**
- APPROXIMATE EXTENT OF PCE GROUNDWATER CONTAMINATION IN SHALLOW UPPER GLACIAL UNIT
  - BUILDING LINE OF FORMER UPS FACILITY
  - SHALLOW UPPER GLACIAL Monitoring wells (shallow) MW-# (NO LETTERS) OR (LETTER S)
  - DEEP UPPER GLACIAL MW-# (W/ LETTER I) Geoprobe Sample Location
  - MAGOTHY AQUIFER MW-# (W/ LETTER M OR O)
  - WELL NOT FOUND DURING FEB 99 SAMPLING EVENT

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 440 Park Avenue South, New York, NY 10016

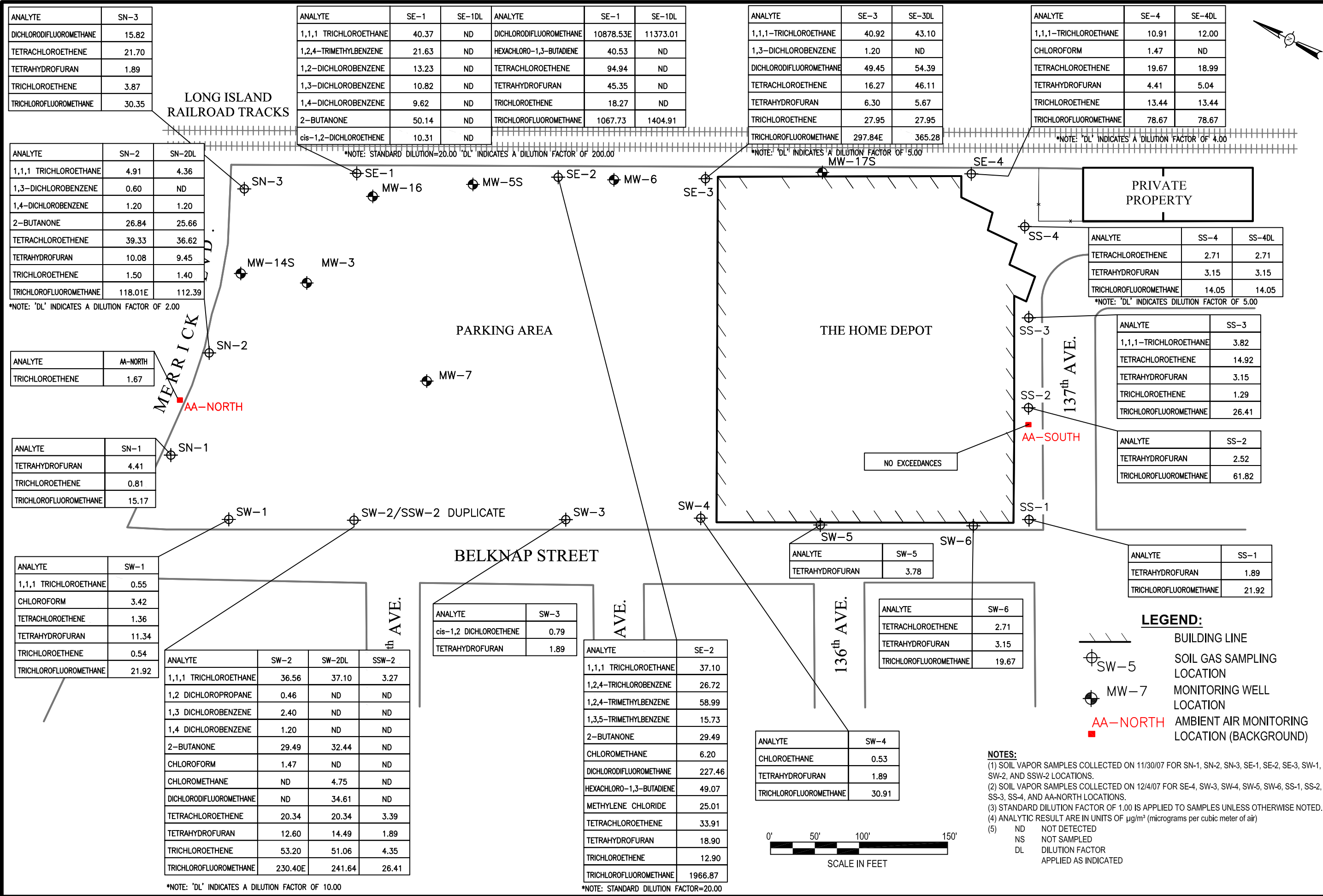
132-20 MERRICK BLVD  
 SPRINGFIELD GARDENS, NEW YORK  
**GROUNDWATER SAMPLING LOCATIONS PRIOR TO REMEDY WITH EXTENT OF SHALLOW PCE CONTAMINATION**

DATE	6.05.09
PROJECT NO.	80022
SCALE	as shown
FIGURE	5B





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ANALYTE	SN-3
DICHLORODIFLUOROMETHANE	15.82
TETRACHLOROETHENE	21.70
TETRAHYDROFURAN	1.89
TRICHLOROETHENE	3.87
TRICHLOROFLUOROMETHANE	30.35

ANALYTE	SN-2	SN-2DL
1,1,1 TRICHLOROETHANE	4.91	4.36
1,3-DICHLOROBENZENE	0.60	ND
1,4-DICHLOROBENZENE	1.20	1.20
2-BUTANONE	26.84	25.66
TETRACHLOROETHENE	39.33	36.62
TETRAHYDROFURAN	10.08	9.45
TRICHLOROETHENE	1.50	1.40
TRICHLOROFLUOROMETHANE	118.01E	112.39

ANALYTE	AA-NORTH
TRICHLOROETHENE	1.67

ANALYTE	SN-1
TETRAHYDROFURAN	4.41
TRICHLOROETHENE	0.81
TRICHLOROFLUOROMETHANE	15.17

ANALYTE	SW-1
1,1,1 TRICHLOROETHANE	0.55
CHLOROFORM	3.42
TETRACHLOROETHENE	1.36
TETRAHYDROFURAN	11.34
TRICHLOROETHENE	0.54
TRICHLOROFLUOROMETHANE	21.92

ANALYTE	SW-2	SW-2DL	SSW-2
1,1,1 TRICHLOROETHANE	36.56	37.10	3.27
1,2 DICHLOROPROPANE	0.46	ND	ND
1,3 DICHLOROBENZENE	2.40	ND	ND
1,4 DICHLOROBENZENE	1.20	ND	ND
2-BUTANONE	29.49	32.44	ND
CHLOROFORM	1.47	ND	ND
CHLOROMETHANE	ND	4.75	ND
DICHLORODIFLUOROMETHANE	ND	34.61	ND
TETRACHLOROETHENE	20.34	20.34	3.39
TETRAHYDROFURAN	12.60	14.49	1.89
TRICHLOROETHENE	53.20	51.06	4.35
TRICHLOROFLUOROMETHANE	230.40E	241.64	26.41

ANALYTE	SE-1	SE-1DL	ANALYTE	SE-1	SE-1DL
1,1,1 TRICHLOROETHANE	40.37	ND	DICHLORODIFLUOROMETHANE	10878.53E	11373.01
1,2,4-TRIMETHYLBENZENE	21.63	ND	HEXACHLORO-1,3-BUTADIENE	40.53	ND
1,2-DICHLOROBENZENE	13.23	ND	TETRACHLOROETHENE	94.94	ND
1,3-DICHLOROBENZENE	10.82	ND	TETRAHYDROFURAN	45.35	ND
1,4-DICHLOROBENZENE	9.62	ND	TRICHLOROETHENE	18.27	ND
2-BUTANONE	50.14	ND	TRICHLOROFLUOROMETHANE	1067.73	1404.91
cis-1,2-DICHLOROETHENE	10.31	ND			

\*NOTE: STANDARD DILUTION=20.00 'DL' INDICATES A DILUTION FACTOR OF 200.00

ANALYTE	SE-3	SE-3DL
1,1,1-TRICHLOROETHANE	40.92	43.10
1,3-DICHLOROBENZENE	1.20	ND
DICHLORODIFLUOROMETHANE	49.45	54.39
TETRACHLOROETHENE	16.27	46.11
TETRAHYDROFURAN	6.30	5.67
TRICHLOROETHENE	27.95	27.95
TRICHLOROFLUOROMETHANE	297.84E	365.28

\*NOTE: 'DL' INDICATES A DILUTION FACTOR OF 15.00

ANALYTE	SE-4	SE-4DL
1,1,1-TRICHLOROETHANE	10.91	12.00
CHLOROFORM	1.47	ND
TETRACHLOROETHENE	19.67	18.99
TETRAHYDROFURAN	4.41	5.04
TRICHLOROETHENE	13.44	13.44
TRICHLOROFLUOROMETHANE	78.67	78.67

\*NOTE: 'DL' INDICATES A DILUTION FACTOR OF 4.00

ANALYTE	SS-4	SS-4DL
TETRACHLOROETHENE	2.71	2.71
TETRAHYDROFURAN	3.15	3.15
TRICHLOROFLUOROMETHANE	14.05	14.05

\*NOTE: 'DL' INDICATES DILUTION FACTOR OF 5.00

ANALYTE	SS-3
1,1,1-TRICHLOROETHANE	3.82
TETRACHLOROETHENE	14.92
TETRAHYDROFURAN	3.15
TRICHLOROETHENE	1.29
TRICHLOROFLUOROMETHANE	26.41

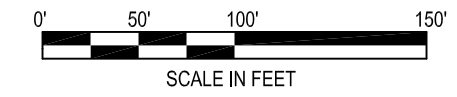
ANALYTE	SS-2
TETRAHYDROFURAN	2.52
TRICHLOROFLUOROMETHANE	61.82

ANALYTE	SS-1
TETRAHYDROFURAN	1.89
TRICHLOROFLUOROMETHANE	21.92

ANALYTE	SW-3
cis-1,2 DICHLOROETHENE	0.79
TETRAHYDROFURAN	1.89

ANALYTE	SE-2
1,1,1 TRICHLOROETHANE	37.10
1,2,4-TRICHLOROBENZENE	26.72
1,2,4-TRIMETHYLBENZENE	58.99
1,3,5-TRIMETHYLBENZENE	15.73
2-BUTANONE	29.49
CHLOROMETHANE	6.20
DICHLORODIFLUOROMETHANE	227.46
HEXACHLORO-1,3-BUTADIENE	49.07
METHYLENE CHLORIDE	25.01
TETRACHLOROETHENE	33.91
TETRAHYDROFURAN	18.90
TRICHLOROETHENE	12.90
TRICHLOROFLUOROMETHANE	1966.87

ANALYTE	SW-4
CHLOROETHANE	0.53
TETRAHYDROFURAN	1.89
TRICHLOROFLUOROMETHANE	30.91



**LEGEND:**

- BUILDING LINE
- SOIL GAS SAMPLING LOCATION
- MONITORING WELL LOCATION
- AMBIENT AIR MONITORING LOCATION (BACKGROUND)

**NOTES:**

- (1) SOIL VAPOR SAMPLES COLLECTED ON 11/30/07 FOR SN-1, SN-2, SN-3, SE-1, SE-2, SE-3, SW-1, SW-2, AND SSW-2 LOCATIONS.
- (2) SOIL VAPOR SAMPLES COLLECTED ON 12/4/07 FOR SE-4, SW-3, SW-4, SW-5, SW-6, SS-1, SS-2, SS-3, SS-4, AND AA-NORTH LOCATIONS.
- (3) STANDARD DILUTION FACTOR OF 1.00 IS APPLIED TO SAMPLES UNLESS OTHERWISE NOTED.
- (4) ANALYTIC RESULT ARE IN UNITS OF µg/m³ (micrograms per cubic meter of air)
- (5) ND NOT DETECTED  
NS NOT SAMPLED  
DL DILUTION FACTOR APPLIED AS INDICATED

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---

**132-20 MERRICK BLVD**  
SPRINGFIELD GARDENS, NEW YORK

**POST REMEDIATION SOIL GAS SAMPLING LOCATIONS AND DETECTIONS**

---

DATE  
**6.08.09**

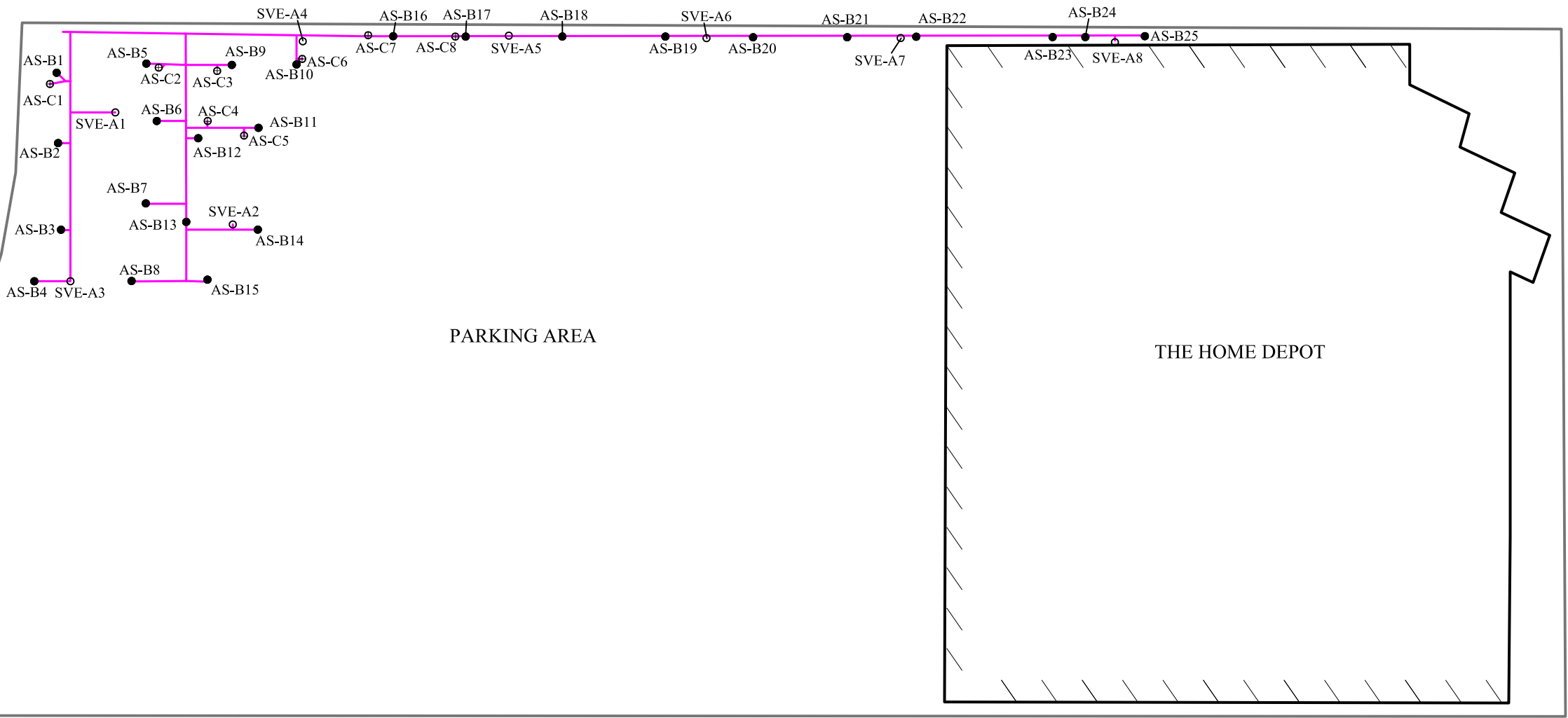
PROJECT NO.  
**80022**

SCALE  
**as shown**

FIGURE  
**7**

LONG ISLAND RAILROAD TRACKS

MERRICK BLVD.



PARKING AREA

THE HOME DEPOT






137<sup>th</sup> AVE.

BELKNAP STREET

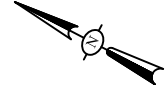
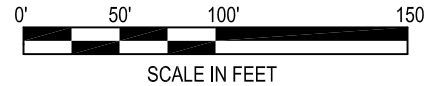
134<sup>th</sup> AVE.

135<sup>th</sup> AVE.

**LEGEND:**

-  BUILDING LINE
-  AS/SVE PVC PIPE
-  SVE WELL
-  DEEP AIR SPARGING WELL (HIGH PRESSURE SYSTEM)
-  SHALLOW AIR SPARGING WELL (LOW PRESSURE SYSTEM)

TYPICAL TRENCH DIMENSIONS :  
 2'-0" ± WIDE  
 3'-4" BELOW EXISTING GRADE



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**132-20 MERRICK BLVD**  
 SPRINGFIELD GARDENS, NEW YORK  
**AIR SPARGING/SOIL VAPOR EXTRACTION SYSTEM PLAN**

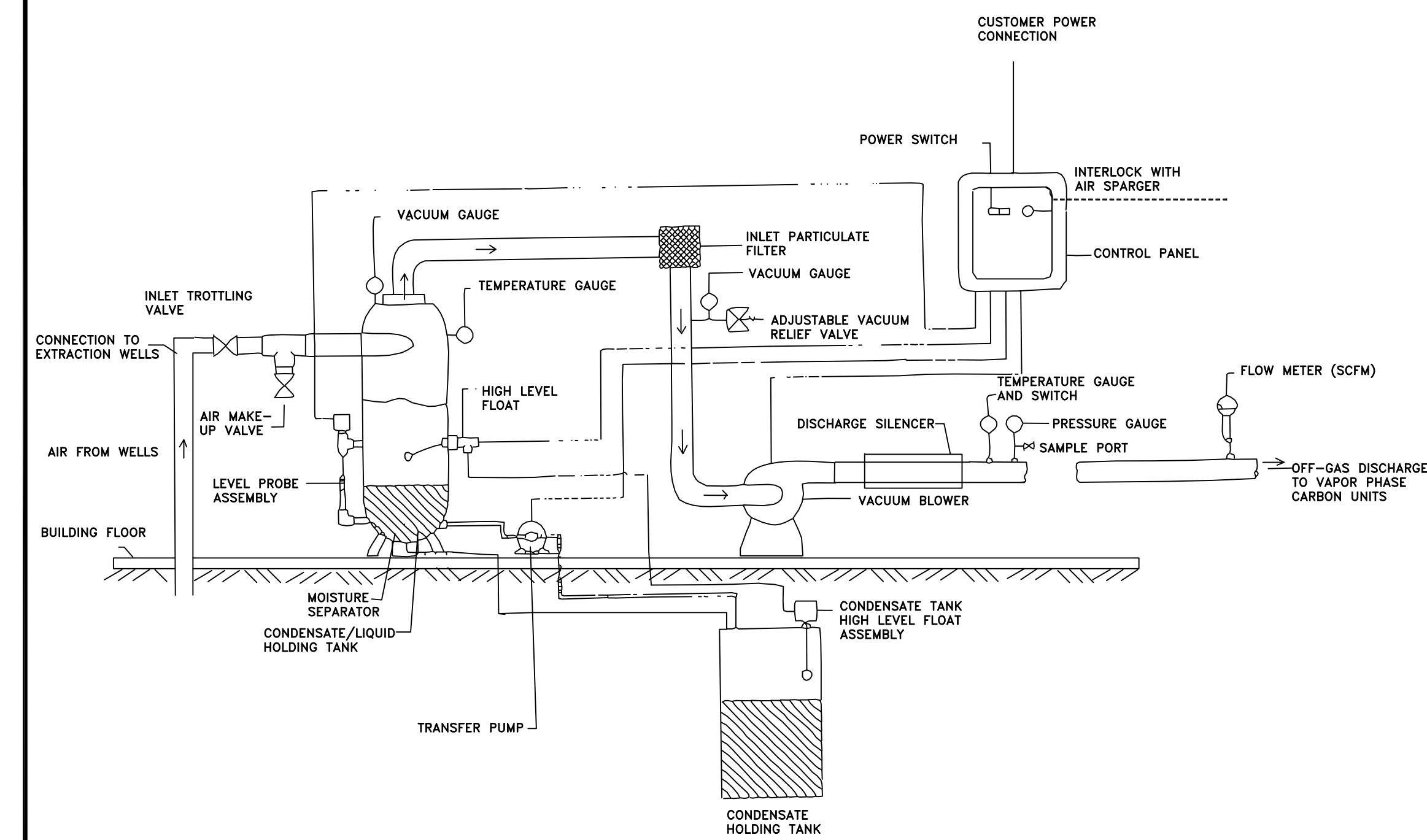
DATE  
**6.05.09**

PROJECT NO.  
**80022**

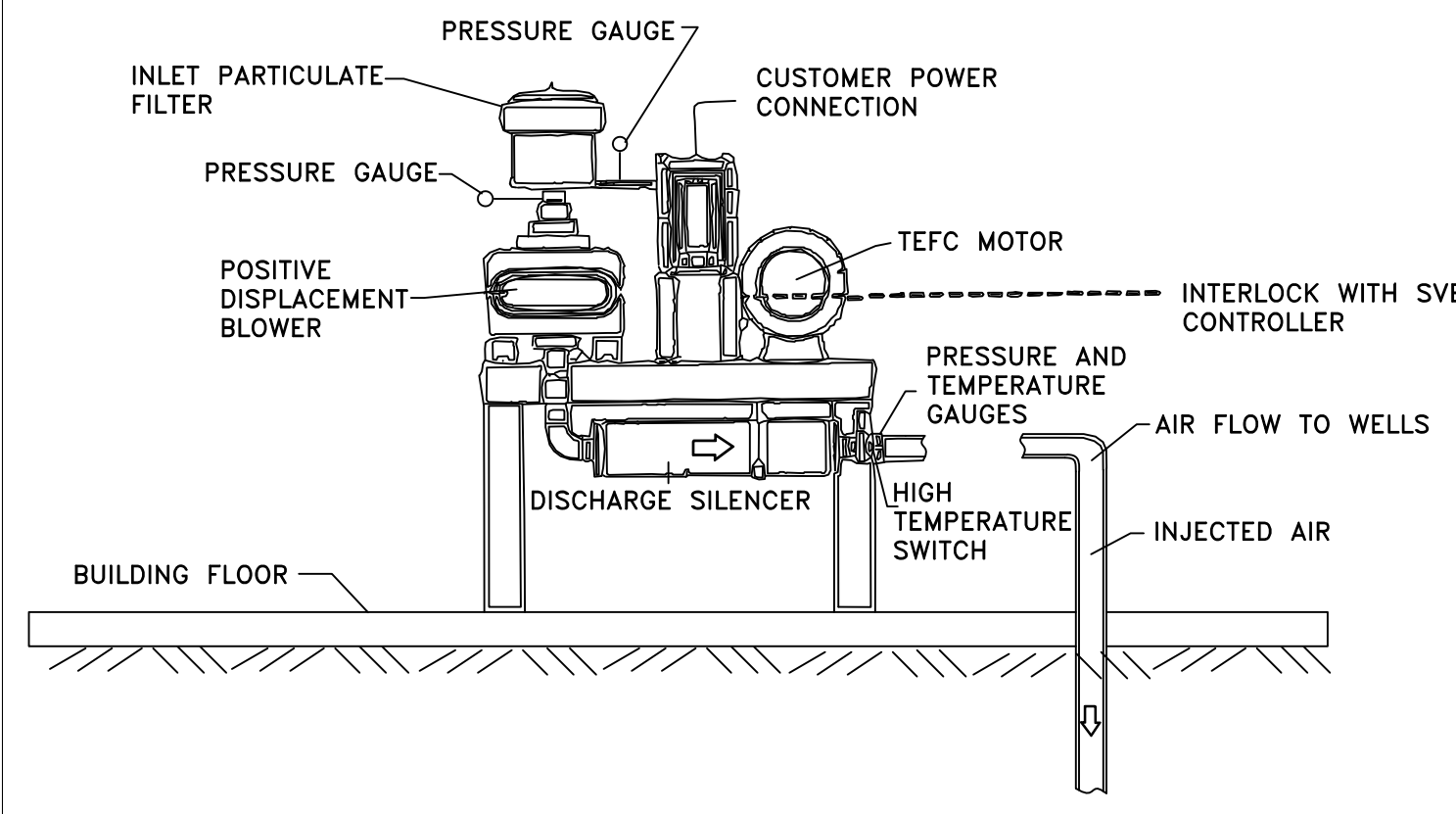
SCALE  
**as shown**

FIGURE  
**8A**

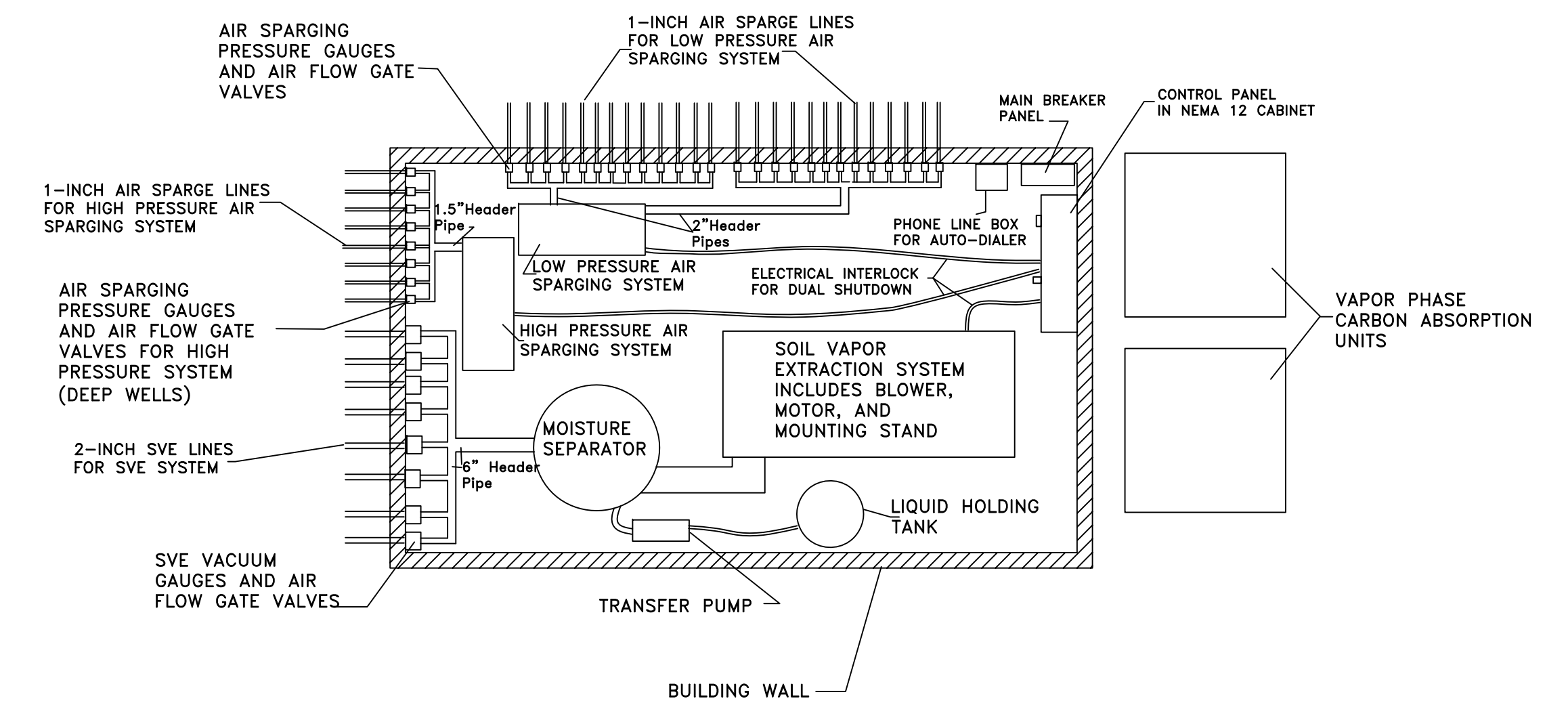




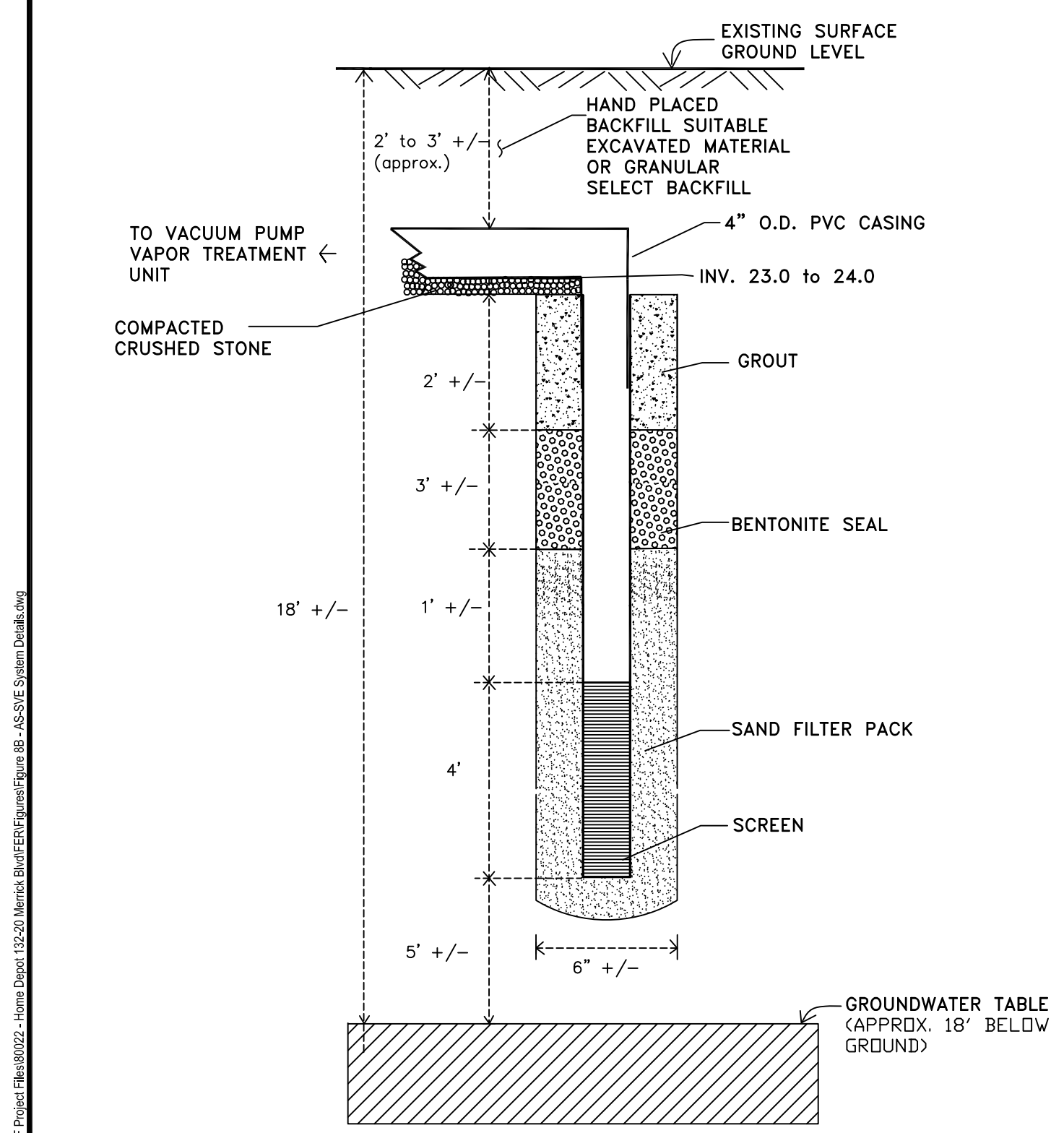
VACUUM EXTRACTION SYSTEM



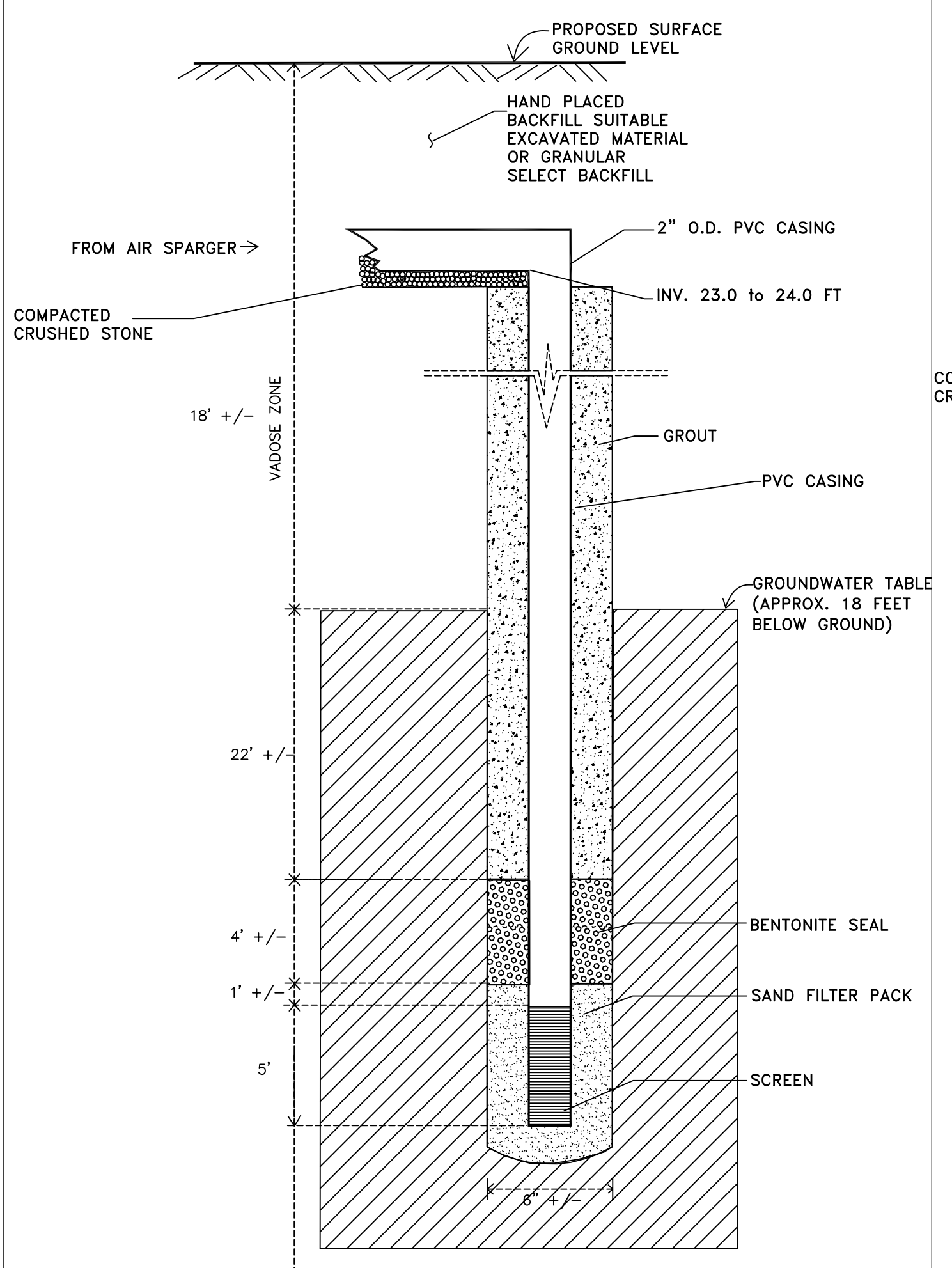
AIR SPARGING SYSTEM  
(BOTH HIGH AND LOW PRESSURE SYSTEMS)



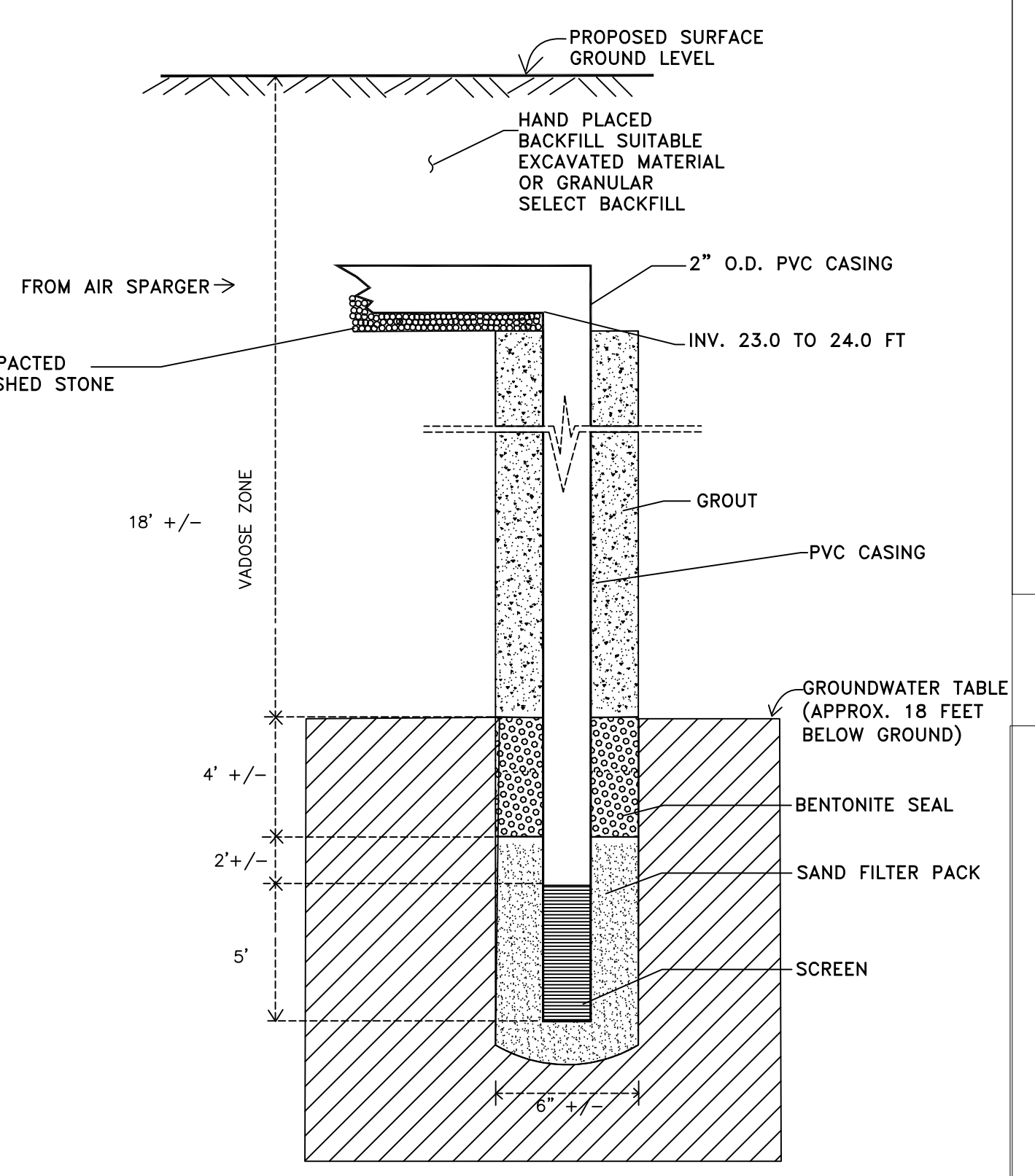
BUILDING PLAN LAYOUT



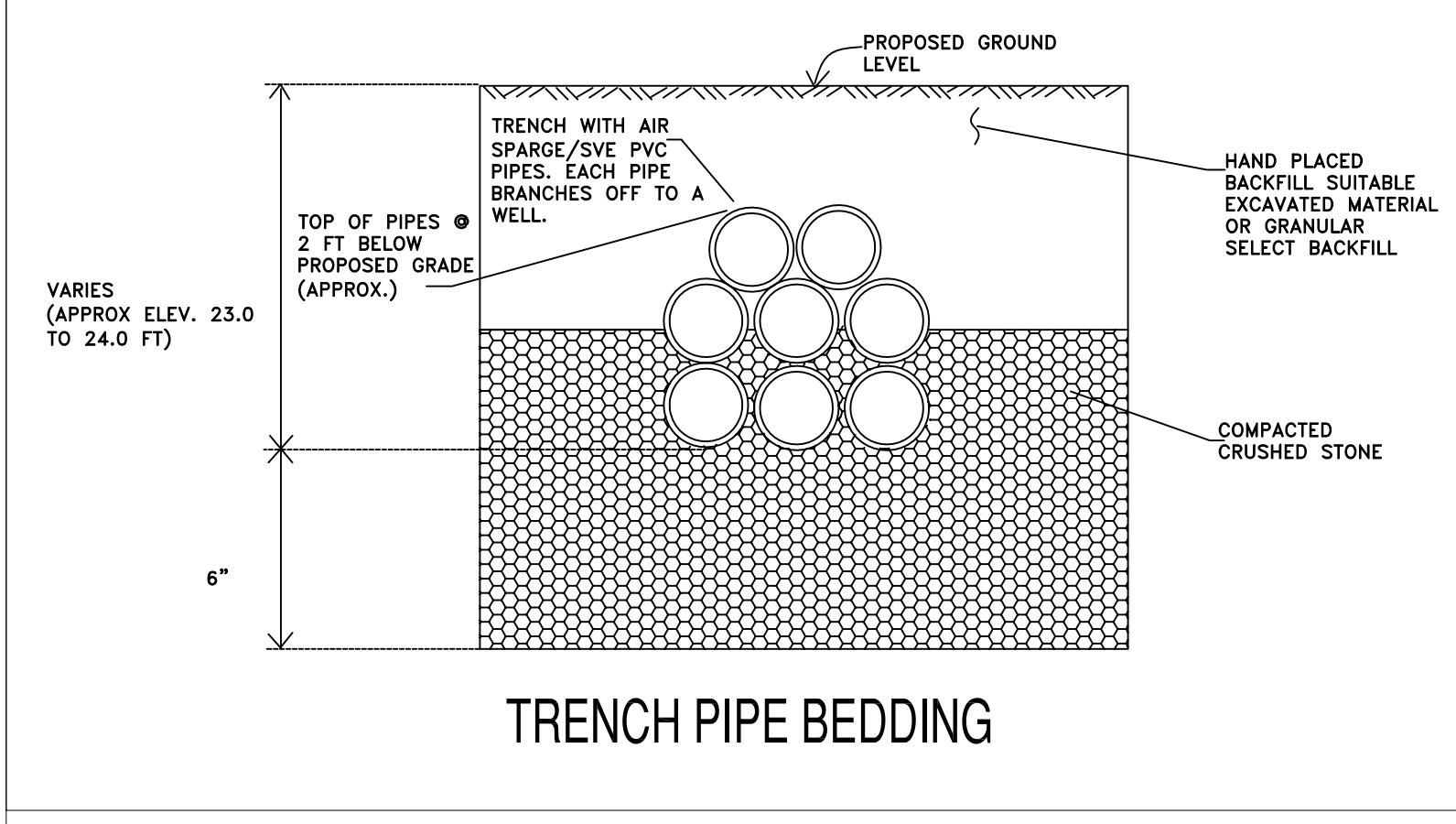
TYPICAL VAPOR EXTRACTION WELL



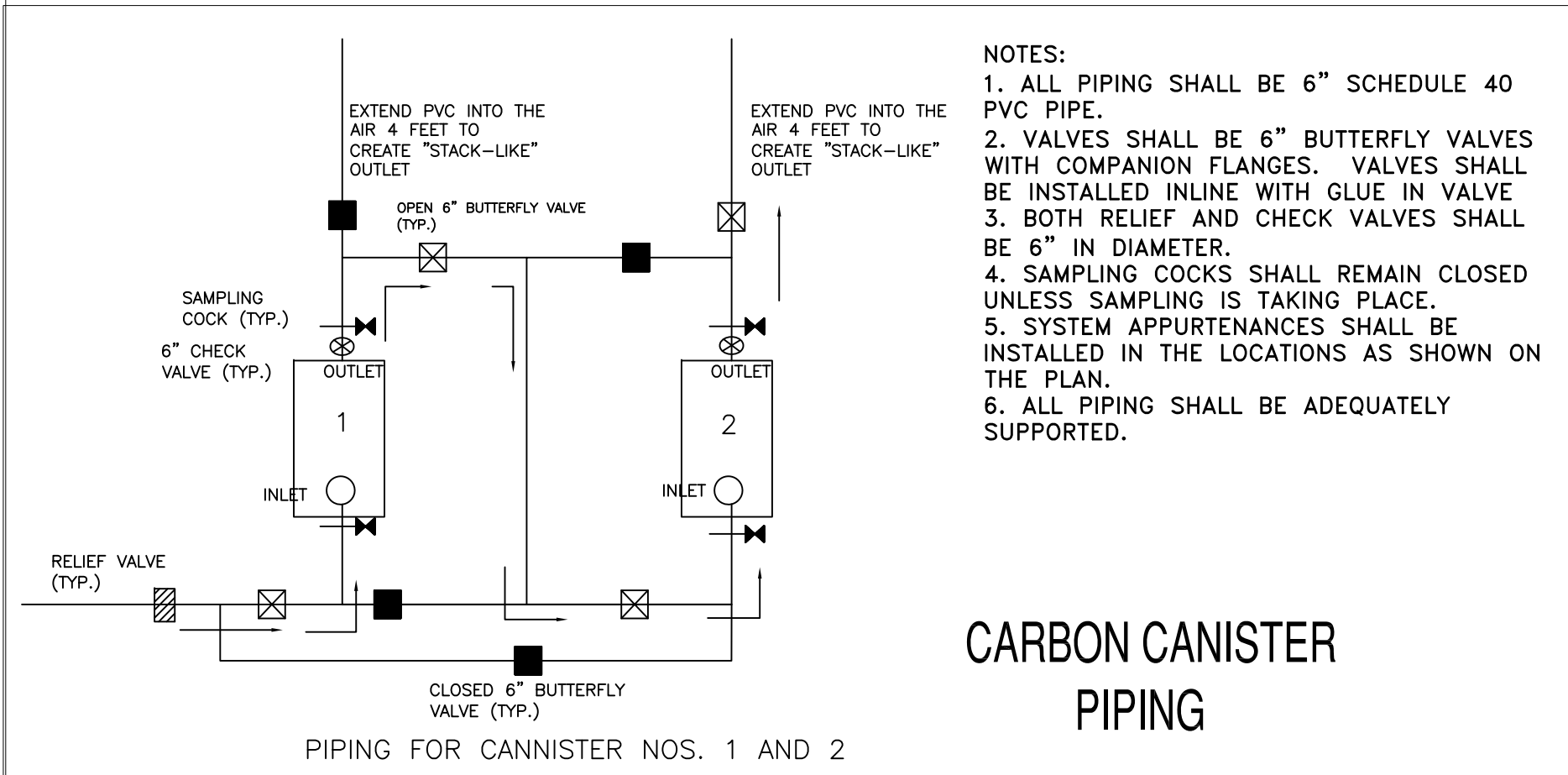
HIGH PRESSURE SYSTEM -  
DEEP AIR SPARGING WELL



LOW PRESSURE SYSTEM -  
SHALLOW AIR SPARGING WELL



TRENCH PIPE BEDDING



CARBON CANISTER  
PIPING

**APPENDIX A**  
**COMPLETE PROJECT RECORD (CD)**

**APPENDIX A IS NOT INCLUDED IN THIS .PDF FILE  
PLEASE SEE CD PROVIDED UNDER SEPARATE COVER**

**APPENDIX B**  
**METES AND BOUNDS**



# New York Land Services, Inc.

---

Title No.: 00NYQ8072 A, B, C, D, E

Policy No.: 207-975770

## DEED VESTING SCHEDULE

### As to Parcel A:

Home Depot U.S.A., Inc., which acquired title by deed dated as of June 15, 2000, made by FC Springfield Associates LLC, and recorded in the Office of the New York City Register, Queens County, on June 30, 2000, in Reel 5618, page 2181.

### As to Parcel B:

Home Depot U.S.A., Inc., which acquired title by deed dated June 21, 2000, made by Lesly Bontemps and Serge Bontemps and recorded in the Office of the New York City Register, Queens County, on July 12, 2000, in Reel 5630, page 957.

### As to Parcel C:

Home Depot U.S.A., Inc., which acquired title by deed dated December 22, 2000, made by Marlo Brown and recorded in the Office of the New York City Register, Queens County, on January 24, 2001, in Reel 5771, page 1718.

### As to Parcel D:

Home Depot U.S.A., Inc., which acquired title by deed dated January 12, 2001, made by Lillian Williams and Marguerite Williams and recorded in the Office of the New York City Register, Queens County, on February 22, 2001, in Reel 5797, page 1459.

### As to Parcel E:

Home Depot U.S.A., Inc., which acquired title by deed dated December 26, 2000, made by Lillie Coleman, f/k/a Lillie Howard, and Georgia Monroe, f/k/a Georgia Smith and recorded in the Office of the New York City Register, Queens County, on January 24, 2001, in Reel 5771, page 1728.

**END OF DEED VESTING SCHEDULE**





# New York Land Services, Inc.

---

Title No.: 00NYQ8072 A, B, C, D, E

Policy No.: 207-975770

## SCHEDULE A DESCRIPTION

### Parcel A

ALL that certain plot, piece or parcel of land, situate, lying and being in the Fourth Ward, Borough of Queens, City and State of New York, bounded and described as follows:

BEGINNING at the corner formed by the intersection of the southerly side of Merrick Boulevard, 100 feet wide, with the easterly side of Belknap Street, 60 feet wide;

RUNNING THENCE easterly along the southerly side of Merrick Boulevard, along an arc of a circle bearing to the left having a radius of 717.793 feet, a distance of 428 feet (deed) (428.14 feet on survey) to a point;

THENCE still easterly along the southerly side of Merrick Boulevard, north 79 degrees 45 minutes 26 seconds east, 9.37 feet to the westerly line of land of the Long Island Railroad Co.;

THENCE southerly along the westerly line of land of the Long Island Railroad Co. and parallel with the easterly side of Belknap Street, 920.36 feet to a point;

THENCE south 78 degrees 37 minutes 00 seconds west, 1 90 feet to a point;

THENCE north 11 degrees 23 minutes 00 seconds west, parallel with the easterly side of Belknap Avenue, 100 feet;

THENCE south 78 degrees 37 minutes 00 seconds west, parallel with the northerly side of 137<sup>th</sup> Avenue, 220 feet to the easterly side of Belknap Street;

THENCE along the easterly side of Belknap Street, north 11 degrees 23 minutes 00 seconds west, 952.56 feet to the corner, the point or place of BEGINNING.



# New York Land Services, Inc.

---

Title No.: 00NYQ8072 A, B, C, D, E

Policy No.: 207-975770

## SCHEDULE A DESCRIPTION

### Parcel B

ALL that certain plot, piece or parcel of land, situate, lying and being in the Borough and County of Queens, City and State of New York, known and designated as Lots 34, 35, 36, and 37 in Block 27 on a certain map entitled "Map of Springfield Gardens in the Fourth Ward, Borough of Queens, City of New York, surveyed April, 1911, by Frederick L. Greiffenberg, C.E. and C.S." and filed on February 21, 1912 as Map No. 38, more particularly bounded and described according to said map as follows:

BEGINNING at a point on the northerly side of Midland Boulevard (now known as 137<sup>th</sup> Avenue) distant 140 feet easterly from the corner formed by the intersection of the northerly side of Midland Boulevard with the easterly side of Highland Avenue (now known as Belknap Street);

RUNNING THENCE northerly parallel with Highland Avenue 100 feet;

THENCE easterly parallel with Midland Boulevard 80 feet;

THENCE southerly again parallel with Highland Avenue 100 feet to the northerly side of Midland Boulevard;

THENCE westerly along the northerly side of Midland Boulevard 80 feet to the point or place of BEGINNING.



# New York Land Services, Inc.

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Title No.: 00NYQ8072 A, B, C, D, E

Policy No.: 207-975770

## SCHEDULE A DESCRIPTION

### Parcel C

ALL that certain plot, piece or parcel of land, situate, lying and being in the Fourth Ward, Borough and County of Queens, City and State of New York, known and designated as Lots 38 and 39 in Block 27 on a certain map entitled, "Map of Springfield Gardens, Situated in the Fourth Ward, Borough of Queens, City of New York, Property of Springfield Development Company, surveyed April, 1911, by Frederick L. Greiffenberg, C.E. & C.S.," filed in the Office of the Clerk (now Register) of the County of Queens, February 21, 1912, as Map No. 38, bounded and described according to said map as follows:

BEGINNING at a point on the northerly side of Midland Boulevard (now 137<sup>th</sup> Avenue) distant 100 feet easterly from the corner formed by the intersection of the northerly side of Midland Boulevard (now 137<sup>th</sup> Avenue) with the easterly side of Highland Avenue (now known as Belknap Street);

RUNNING THENCE northerly parallel with Belknap Street, 100 feet;

THENCE easterly, parallel with 137<sup>th</sup> Avenue, 40 feet;

THENCE southerly again parallel with Belknap Street, 100 feet to the northerly side of 137<sup>th</sup> Avenue;

THENCE westerly along the northerly side of 137<sup>th</sup> Avenue, 40 feet to the point or place of BEGINNING.



# New York Land Services, Inc.

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Title No.: 00NYQ8072 A, B, C, D, E

Policy No.: 207-975770

## SCHEDULE A DESCRIPTION

### Parcel D

ALL that certain plot, piece or parcel of land, situate, lying and being in the Fourth Ward of the Borough and County of Queens, City and State of New York, known and designated as Lot No. 40 and the easterly part of Lot No. 41 in Block 27 on a certain map entitled, "Map of Springfield Gardens, situated in the Fourth Ward, Borough of Queens, City of New York, Property of Springfield Development Co.," surveyed April, 1911, by Frederick L. Greiffenberg, and filed in the Office of the Clerk of the County of Queens on February 21, 1912, as Map No. 38, and bounded and described according to said map as follows:

BEGINNING at a point on the northerly side of 137<sup>th</sup> Avenue (formerly Midland Boulevard) distant 60.60 feet easterly from the corner formed by the intersection of the northerly side of 137<sup>th</sup> Avenue with the easterly side of Belknap Street (formerly Highland Avenue);

RUNNING THENCE easterly along the northerly side of 137<sup>th</sup> Avenue, 39.40 feet;

THENCE northerly and parallel with Belknap Street, 100 feet;

THENCE westerly parallel with 137<sup>th</sup> Avenue, 39.40 feet;

THENCE southerly again parallel with Belknap Street, 100 feet to the northerly side of 137<sup>th</sup> Avenue at the point or place of BEGINNING.



# New York Land Services, Inc.

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Title No.: 00NYQ8072 A, B, C, D, E

Policy No.: 207-975770

## SCHEDULE A DESCRIPTION

### Parcel E

ALL that certain plot, piece or parcel of land, situate, lying and being in the Fourth Ward, Borough and County of Queens, City and State of New York, known and designated as Lots 42, 43, 44, and part of Lot 41 in Block 27 on a certain map entitled, "Map of Springfield Gardens, situated in the Fourth Ward, Borough of Queens, City of New York, Property of Springfield Development Co.," surveyed April, 1911, by Frederick L. Greiffenberg, and filed in the Office of the Clerk (now Register) of the County of Queens on February 21, 1912 as Map No. 38, and bounded and described according to said map as follows:

BEGINNING at the corner formed by the intersection of the northerly side of Midland Boulevard, now 137<sup>th</sup> Avenue, with the easterly side of Highland Avenue, now Belknap Street;

RUNNING THENCE northerly along the easterly side of Highland Avenue, 100 feet;

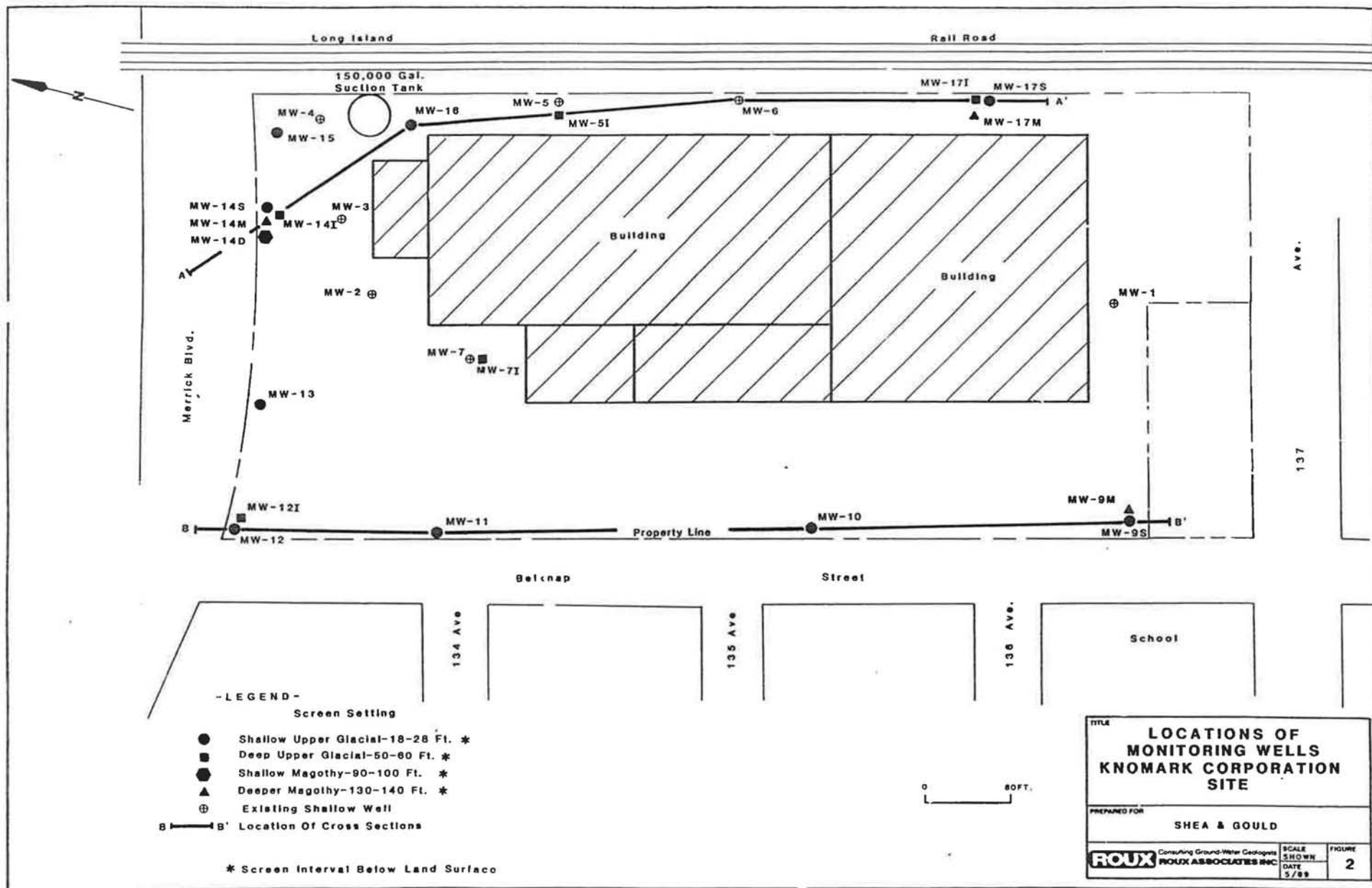
THENCE easterly parallel with Midland Boulevard, 60.60 feet;

THENCE southerly parallel with Highland Avenue, 100 feet to the northerly side of Midland Avenue;

THENCE westerly along the northerly side of Midland Boulevard, 60.60 feet to the corner at the point or place of BEGINNING.

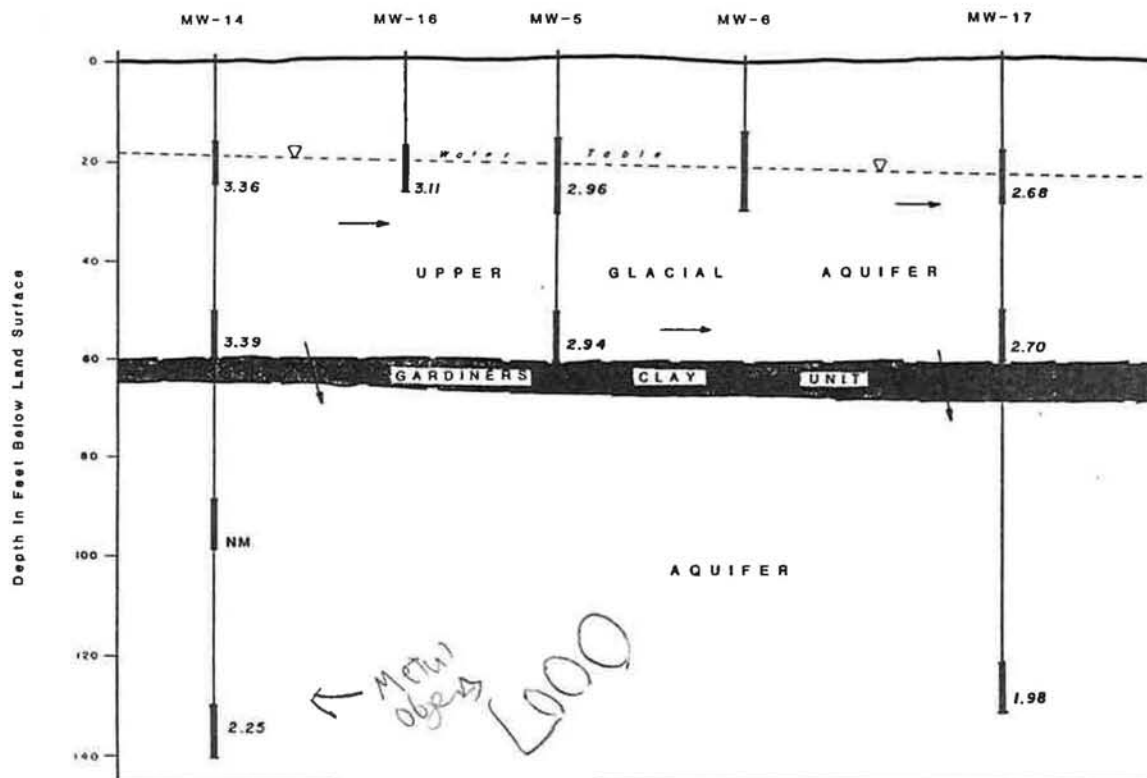
**END OF SCHEDULE A**

**APPENDIX C**  
**GEOLOGIC CROSS SECTIONS**



A  
North

A'  
South



- LEGEND -

- Shallow Upper Glacial Screened Interval
  - Deep Upper Glacial Screened Interval
  - Shallow Magothy Screened Interval
  - Deeper Magothy Screened Interval
- Hydraulic Head Referenced To Mean Sea Level (7/13/88)

→ Approximate Direction Of Ground-Water Flow

Location Of Cross Section Shown On Figure 2

NM Not Measured

0 80 160 FT

Vertical Exaggeration: 8x

TITLE		<b>HYDROGEOLOGIC CROSS SECTION</b>	
		<b>A - A'</b>	
PREPARED FOR			
SHEA & GOULD			
<b>ROUX</b>	Consulting Ground Water Geologists	SCALE	FIGURE
	<b>ROUX ASSOCIATES INC</b>	Shown	
		DATE	
		5 / 88	



B  
North

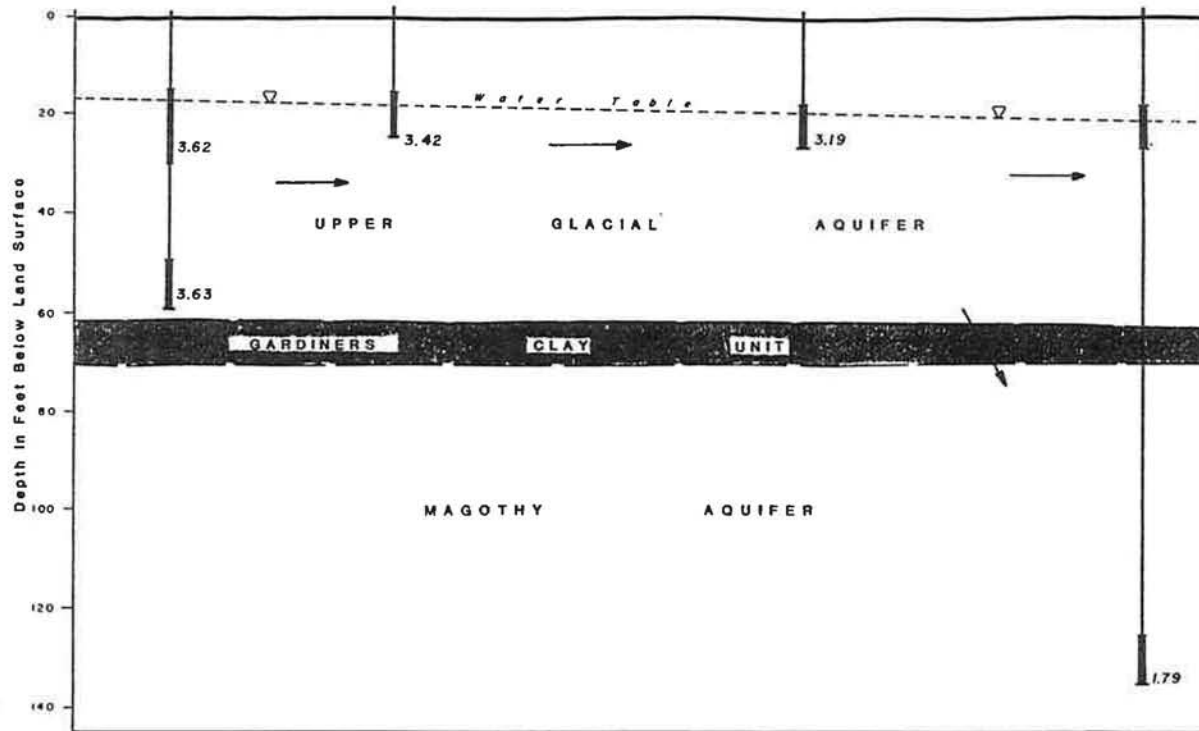
B'  
South

MW-12

MW-11

MW-10

MW-9



- LEGEND -

Monitoring Well

- Shallow Upper Glacial Screen Interval 3.67
  - Deep Upper Glacial Screen Interval
  - Deeper Magothy Screen
- Hydraulic Head Measurement On 7/13/88 Reference To Mean Sea Level

→ Approximate Direction Of Ground-Water Flow

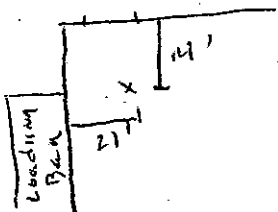
0 80 160 FT

Vertical Exaggeration: 8x

TITLE	
<b>HYDROGEOLOGIC CROSS SECTION B - B'</b>	
PREPARED FOR	
SHEA & GOULD	
<b>ROUX</b> Consulting Ground-Water Geologists ROUX ASSOCIATES INC	SCALE Shown DATE 5/89
FIGURE	<b>13</b>

**APPENDIX D**  
**MONITORING WELL LOGS**

# AKRF SOIL BORING LOG

 <p style="margin-top: 10px;">from inside wall</p>	Job No. <b>30079</b>	Client <b>FCI2</b>	Location <b>North corner</b>	
	Drilling Method <b>geo-probe</b>		Boring No. <b>GP-1</b>	
	Sampling Method <b>4' macro sampler</b>		Sheet <b>1</b> of <b>3</b>	
	Water Level			Drilling
	Time <b>8:20</b>		Start	Finish
	Date <b>2/1/99</b>		Time <b>9:00</b>	Date <b>2/1/99</b>

Sample Type	IN. DRY IN. RECD	Sample No.	Depth	PID/FID READING	Depth Feet	Surface Condition: concrete
4' MS	4 2.75					background 1.6
		1.4			1	0-2" concrete
					2	2"-4" BROWN m-c sand, little silt, moist
		2.0			3	
					4	VOC
1' MS	4 4	3.2			5	4-5 same as above, moist
		3.9			6	
		2.4			7	
					8	
4' MS	4 2	1.6*			9	8-12 same as above
					10	Note: macro tube is over packed and unable to remove linear sample placed in zip-lock bag and a head space reading is obtained
					11	
					12	

# AKRF SOIL BORING LOG

<b>Job No.</b> 30079	<b>Client</b> FCP	<b>Location</b> North corner
<b>Drilling Method</b> geo-probe		<b>Boring No.</b> GP-1
<b>Sampling Method</b> 4' macro sample		<b>Sheet</b> 2 of 2
<b>Drilling</b>		
<b>Water Level</b>		<b>Start</b>
<b>Time</b>		<b>Finish</b>
<b>Date</b>		<b>Time</b> 9:00
		<b>Date</b> 2/1/99
		<b>Time</b> 9:20
		<b>Date</b> 2/1/99

Sample Type	IN. DRV. / IN. RECYD		Sample No. / Depth	PID/FID READING	Depth Feet	Surface Condition:
					11	
					12	
4MS	4/4	2.1			13	12-16 same as above, moist
		2.4			14	
		1.8			15	
		5.2			16	16-20 same as above, trace silt
4MS	4/4	3.2			17	
		2.1			18	
		2.3			19	
		2.8			20	
					P	

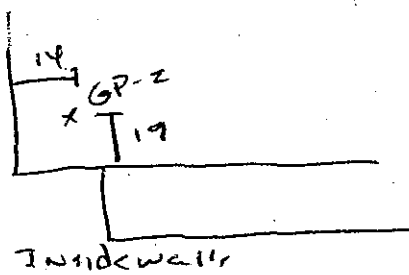
# AKRF SOIL BORING LOG

Job No. <b>30079</b>		Client <b>FCR</b>		Location <b>Nordh</b>	
Drilling Method <b>geoprobe</b>				Boring No. <b>GP-1</b>	
Sampling Method <b>4' macro sampler</b>				Sheet <b>3</b> of <b>3</b>	
Drilling					
Water Level		<b>~21.5</b>		Start	Finish
Time		<b>9:41</b>		Time	Date
Date		<b>2/1/99</b>		<b>9:20</b>	<b>2/1/99</b>
				Time	Date
				<b>9:40</b>	<b>2/1/99</b>

Sample Type	IN. DRV. / IN. RECYD		Sample No. / Depth	PID/ID READING	Depth Feet	Surface Condition:
4'ms	4	2.9			21	20-24 same as above grading to wet @ ~21.5
		3.3			22	
		4.3			23	
		1.9			24	
					5	
					6	
					7	
					8	
					9	
					0	
						Geoprobe-1 complete @ 24' on 2/1/99

# AKRF SOIL BORING LOG

Job No. 30079	Client FCR	Location
Drilling Method geoprobe		Boring No. GP-2
Sampling Method 4' macro sampler		Sheet 1 of 3
Drilling		
Water Level		Start
Time		Finish
Date		Time
		Date



Surface Condition: concrete	
0-2" concrete	
2"-4 Brown m-c sand, little silt, moist	
4-8 same as above, moist	
8-10 same as above, moist	

Sample Type	IN. DRY IN. RECD	Sample No. Depth	DEPTH Feet
4ms	4/3	3.2	1
		2.8	2
		1.1	3
4ms	4/4	2.4	4
		1.8	5
		2.2	6
		1.9	7
			8
4ms	4/3.7	2	9
		2.7	10

10:10 - 10:20 Barish

### AKRF SOIL BORING LOG

	Job No. <b>30079</b>	Client <b>FCR</b>	Location
	Drilling Method <b>geoprobe</b>		Boring No. <b>GP-2</b>
	Sampling Method <b>41 macro samples</b>		Sheet <b>2</b> of <b>3</b>
			Drilling
Water Level			Start
Time			Time
Date			Date
			Finish
			Time
			Date

Sample Type	IN. DRY. IN. RECYD	Sample No. Depth	PID/FID READING	Depth Feet	Surface Condition:
		2.2		11	10-12 same as above, moist
		1.9		12	
4MS	4	3.6		13	12-16 same as above, trace silt, moist
		1.2		14	
		3.2		15	
		1.4		16	GP-2 sampled from 15-15.5 for TCL VOC split sample w/ GF
4MS	4	3.3		17	16-28 same as above, moist
		1.9			Note: 2 <sup>nd</sup> sample thought H <sub>2</sub> O was @ 18'
		1.8			
		1.6		18	
4MS	4	2.6	2.4	19	18-22 same as above
		2.0		20	





# AKRF SOIL BORING LOG

Job No.			Client			Location		
30079			FCR			center-catch		
Drilling Method						Boring No.		
geoprobe						GP-3		
Sampling Method						Sheet		
4' macro sampler						1 of 3		
Water Level						Drilling		
						Start		Finish
						Time		Date
						13:20		2/1/99
						Time		Date
						13:40		2/1/99

Sample Type	IN. DRV. IN. RECYD	Sample No.	Depth Feet	PID/FID READING	Surface Condition
4' MS	4 3		8.5		0-2" concrete 2"-4" Brown m-c sand, little silt, moist
			7.5	1	
			5.3	2	
			6.7	3	
4' MS	4 2.5		4.9	4	4-8 same as above, moist
			8.9	5	
			11.5	6	
4' MS	4 3		6.2	7	GP-3 sampled from 5.5-6 for VOC (K)
			2.2	8	
			8.7	9	
			0		

# AKRF SOIL BORING LOG

242-4687

	Job No. 30079	Client FCR	Location center-catch basin
	Drilling Method geoprobe	Boring No. GP-3	
	Sampling Method 4' macro sampler	Sheet 2 of 3	
	Water Level		
Time			Time 13:40
Date			Date 2/1/99
			Time 14:30
			Date 2/1/99

Sample Type	IN. DRV. IN. RECYD	Sample No. Depth	PDRIFID READING	Depth Feet	Surface Condition:
			6.2	1	10-12 same as above, moist
			4.8	2	
4MS	1/2		2.1*	3	12-14 same as above, moist  Note: tube was jammed in sampler, soil placed in bags and headspace reading obtained
			1.4	4	
4MS	4/4		2.6	5	16-20 same as above, moist
			5.6	6	
			4.7	7	
			2.9	8	
				9	
				20	

# AKRF SOIL BORING LOG

Job No. <b>30079</b>		Client <b>FC12</b>		Location <b>center catch</b>	
Drilling Method <b>geoprobe</b>				Boring No. <b>GP-3</b>	
Sampling Method <b>4' macro sampler</b>				Sheet <b>of 3</b>	
<b>Drilling</b>					
Water Level		<b>20.5</b>		Start	Finish
Time		<b>14:00</b>		<b>14:30</b>	<b>21/199</b>
Date		<b>21/99</b>		<b>15:00</b>	<b>21/199</b>

Sample Type	Sample No.		PIDIFID READING	Depth Feet
	IN. DRY	IN. RECYD		
yms	9	4	1.8	21
			2.2	22
			21	23
			1.9	24
				25
				6
				7
				8
				9
				0

Surface Condition:

20-24 same as above, trace silt & grading to wet @ 20.5

H<sub>2</sub>O sampling probe driven to 25 TCC UOC sample collected using peristaltic pump w/ dedicated tubing

Geo-probe (GP-3) completed @ 25 on 21/99

# AKRF SOIL BORING LOG

	Job No. 30079	Client FC12	Location
	Drilling Method COPROBE		Boring No. GP-4
	Sampling Method		Sheet 1 of 3
	Water Level		Drilling
Time		Start	Finish
Date		Time 15:15	Date 2/1/99
		Time 15:35	Date 2/1/99

Sample Type	IN. DRY. IN. RECYD	Sample No.	Depth	PIEDIFID READING	Depth Feet	Surface Condition: concrete
YMS	4/30		4.2		1	0-2" CONCRETE
			4.0		2	
			6.2		3	
			6.9		4	
YMS	4/4		10.4		5	4-8 same as above, moist
			6.1		6	
			9.4		7	
			5.8		8	
YMS	4/4		6.7		9	8-10 same as above, moist
			6.0		0	

# AKRF SOIL BORING LOG

		Job No. <b>30079</b>		Client <b>FC12</b>		Location	
		Drilling Method <b>geo probe</b>		Boring No. <b>GP-4</b>			
		Sampling Method <b>4' macro sampler</b>		Sheet <b>2</b> of <b>3</b>			
				Drilling			
		Water Level		Start		Finish	
		Time		Time <b>15:35</b>		Date <b>2/1/99</b>	
		Date		Time <b>16:05</b>		Date <b>2/1/99</b>	

Sample Type	IN. DRY. IN. RECYD	Sample No. Depth	PIDFID READING	Depth Feet	Surface Condition:
			2.1	11	10-12 same as above, moist (+trace silt (instead of little))
			3.2	12	
4' MS	4'		1.4*	13	12-14 same as above, moist *macro sampler w/ jammed, sample placed in zip-lock bag and headspace
			1.1*	14	14-16 same as above
				15	* same as above
				16	
4' MS	4'		1.8	17	16-20 same as above, moist
			1.6	18	
			2.1	19	
			1.6	20	



# AKRF SOIL BORING LOG

Job No. <b>30079</b>	Client <b>FCR</b>	Location
Drilling Method <b>geoprobe</b>	Boring No. <b>GP-5</b>	
Sampling Method <b>4' macro sampler</b>	Sheet <b>1</b> of <b>3</b>	
Driftlog		
Water Level	Start	Finish
Time	<b>9:00</b>	<b>2/2/99</b>
Date	<b>9:30</b>	<b>2/2/99</b>

Sample Type	IN. DRV.		Sample No.	PID/FID READING	Depth Feet
	IN. REC'D	IN. RECYD			
4' MS	2 2/3		6	13.2	1
			13	11	2
			17	27	3
			12	13	4
4' MS	4/4		2.7		5
			1		6
			1		7
			2		8
4' MS	4/4		3		9
			1		10

Surface Condition: **concrete**  
 Note: PID will not ~~out~~.

0-3" concrete

3"-6" Brown F-C sand w/ little gravel and silt, moist

6"-4' Brown F-C sand w/ little silt moist

4-8 Brown F-C sand w/ trace silt moist

8-10 same as above, moist

### AKRF SOIL BORING LOG

	Job No. <b>30079</b>	Client <b>FCR</b>	Location
	Drilling Method <b>Geoprobe</b>		Boring No. <b>GP-5</b>
	Sampling Method <b>4' macro sampler</b>		Sheet <b>2</b> of <b>3</b>
	Drilling		
Water Level		Start	Finish
Time		Time <b>9:30</b>	Date <b>2/2/99</b>
Date		Time <b>10:10</b>	Date <b>2/2/99</b>

Sample Type	IN. DRY IN. RECYD	Sample No.	Depth	PID/FID READING	Depth Feet	Surface Condition:
				3.2	1	10-12 same as above, moist
				12	2	
4ms	4/4			OK	13	12-16 same as above, moist  note: plastic liner, collapsed and samples placed in zip-lock bags 12-14 (one bag) 14-16 (2nd bag)
				OK	14	
					15	
					16	
4ms	4/4			1.4	17	16-170 same as above, trace salt and gravel, moist
				1	18	
				1	19	
				0	20	



# AKRF SOIL BORING LOG

Job No. <b>30079</b>		Client <b>FCR</b>		Location	
Drilling Method <b>geoprobe</b>			Boring No. <b>GP-5</b>		
Sampling Method <b>4' macro sampler</b>			Sheet <b>3</b> of <b>3</b>		
Drilling					
Water Level			Start		Finish
Time			Time <b>10:10</b>		Date <b>2/2/99</b>
Date			Time <b>10:55</b>		Date <b>2/2/99</b>

Sample Type	IN. DRY.		Sample No.	Depth	PID/ID READING	Depth Feet
	IN. RECVD					
				2.7		21
				1.6		22
				1.6		23
				7.2		24
						5
						6
						7
						8
						9
						0

Surface Condition:

20-24 same as above, moist

H<sub>2</sub>O samples collected @ 25' using a peristaltic pump and dedicated tubing TCL VOC only

Geoprobe GP 5 completed @ 25 on 2/2/99



# AKRF SOIL BORING LOG

Job No. <b>30079</b>	Client <b>FCR</b>	Location
Drilling Method <b>geoprobe</b>		Boring No. <b>GP-6</b>
Sampling Method <b>4' macro sampler</b>		Sheet <b>2</b> of <b>3</b>
Drilling		
Water Level		Start
Time		Finish
Date		Time <b>11:25</b>
		Date <b>2/2/99</b>
		Time <b>16:00</b>
		Date <b>2/2/99</b>

Sample Type	IN. DRV. IN. RECD	Sample No. Depth	PIFID READING	Depth Feet
			1.0	10
			1	11
				12
4MS	4/4		4.0	13
			2.1	14
			4.9	15
			6.4	16
4MS	4/4		0	17
			0	18
			0	19
			0	20

Surface Condition:

10-12 same as above, moist

Geoprobe halted @ 12' @ 11:30 due to equipment failure (ADTs)

12-16 same as above, moist

16-20 same as above

# AKRF SOIL BORING LOG

	Job No. <b>30079</b>	Client <b>FCR</b>	Location
	Drilling Method <b>geoprobe (pickup)</b>	Boring No. <b>GP-6</b>	
	Sampling Method <b>4' macro sampler</b>	Sheet <b>3</b> of <b>3</b>	
	Drilling		
	Water Level <b>~22</b>	Start	Finish
	Time <b>16:10</b>	Time <b>16:00</b>	Date <b>2/2/99</b>
	Date <b>2/2/99</b>	Time <b>16:20</b>	Date <b>9C</b>

**2/13 = 592'**

Sample Type	IN. DRY / IN. RECYD		Sample No.	Depth	PID/FID READING	Depth Feet
4' MS	4	4			0	20
					0	21
					0	22
					0	23
					0	24
						5
						6
						7
						8
						9
						0

Surface Condition:

7

20-24 Same as above, moist grade to wet @ ~22'

H<sub>2</sub>O collected @ 24 from peristaltic pump using dedicated tubing



# AKRF SOIL BORING LOG

Job No. <b>30079</b>	Client <b>FCR</b>	Location
Drilling Method <b>geoprobe (van)</b>		Boring No. <b>GP-7B</b>
Sampling Method <b>10-12 4' macro</b> <b>12-16 4' macro</b> <b>16-20 2' micro</b>		Sheet <b>2</b> of <b>3</b>
Water Level <b>~22</b>		Start Time <b>13:30</b>
Time <b>14:20</b>		Finish Date <b>2/2/99</b>
Date <b>2/2/99</b>		Time <b>14:00</b>
		Date <b>2/2/99</b>

Sample Type	IN. DRY IN. RECD	Sample No.	Depth	PID/FID READING	Depth Feet
				0	
				0	11
				OK	12
4ms	4/4				13
				OK	14
4ms	4/4				15
					16
					17
					18
2' micro	24/20			1.6	19
				2.1	20

Surface Condition:

note: due to collapsed hole,  
they will use large bore hole

10-12 same as above, moist to dry

12-14 same as above, moist to dry

\* Note macro sample tube collapsed and sample placed in zip lock

14-16 same as above, moist to dry

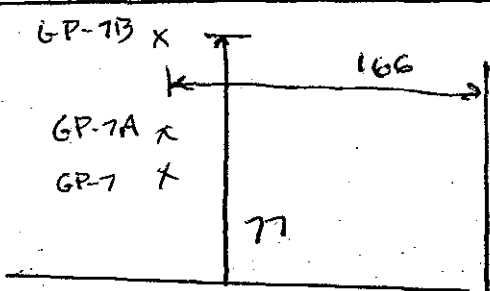
\* same note as above

drove to 18' collected sample using micro sample

18-20 same as above, moist to dry

11.5  
10.0  
split

# AKRF SOIL BORING LOG



Job No. <b>30079</b>	Client <b>FC12</b>	Location
Drilling Method <b>Geo probe (UW)</b>		Boring No. <b>GP-7B</b>
Sampling Method <b>2' micro sampler</b>		Sheet <b>3</b> of <b>3</b>
Drilling		
Water Level		Start
Time		Finish
Date		Date
		Time
		Date
		Time
		Date

Sample Type	IN. DRY		Sample No.	PID/FID READING	Depth Feet
	IN. RECYD	IN. RECYD			
					21
				N/A	22
2' micro	2	1		↓	23
					24
					5
					6
					7
					8
					9
					0

Surface Condition:

drouk to 22

22-24 same as above, wet

H<sub>2</sub>O collected @ 25' using a peristaltic pump and dedicated tubing

Geo probe GP-7B completed @ 25' on 2/2/99

# AKRF SOIL BORING LOG

Job No.	30079	Client	FCR	Location
Drilling Method	Geoprobe (van)			Boring No.
Sampling Method	4' Macro Sampler			Sheet 1 of 3
Water Level				Start
Time				14:35
Date				2/2/98
Finish				14:45
Date				2/2/98

W226 = 12N

Sample Type	IN. DRY IN. RECYD	Sample No.	Depth	PID/FID READING	Depth Feet
4MS	4 3.5			1	1
				1	2
				1.6	3
				1	4
4MS	4 3.5			4.9	5
				5.2	6
				2.7	7
				1.2	8
4MS	4 4			0	9
				0	10

Surface Condition: concrete

0-4" concrete

4"-4" Brown F-8 sand, trace silt, dry to moist

4-8 same as above moist to dry

8-10 same as above moist to dry



# AKRF SOIL BORING LOG

Job No. <b>30079</b>	Client <b>FCR</b>	Location
Drilling Method <b>9co probe (van)</b>		Boring No. <b>GP-8</b>
Sampling Method <b>10-16 4' macro</b> <b>16-20 2' micro</b>		Sheet <b>2</b> of <b>3</b>
Water Level		Drilling
Time	Start	Finish
Date	Time <b>14:45</b>	Date <b>2/2/99</b>
	Time <b>15:00</b>	Date <b>2/2/99</b>

Sample Type	IN. DRV. IN. RECYD	Sample No.	Depth	PID/FID READING	Depth Feet
				0	
					11
				0	
					12
4MS	4/9			0	
					13
				0	
					14
				0	
					15
				0	
					16
				0	
					17
					18
2' MICRO	2/11			0	
					19
				0	
					20

Surface Condition:

10-12 same as above moist to dr

12-16 same as above moist to dry

drove to 18' and switched to 2' micro sampler, hole started to collapse

18-20 same as above

# AKRF SOIL BORING LOG

Job No. <b>30079</b>		Client <b>FCR</b>		Location	
Drilling Method <b>scoprobe (van)</b>				Boring No. <b>GP-8</b>	
Sampling Method <b>2' micro sample</b>				Sheet <b>3</b> of <b>3</b>	
Drilling					
Water Level <b>222</b>			Start		
Time <b>15:15</b>			Time <b>15:00</b>		
Date <b>2/2/99</b>			Date <b>2/2/99</b>		
			Finish		
			Time		
			Date		

Sample Type	IN. DRV. IN. RECVD	Sample No. Depth	PID/FID READING	Depth Feet
				21
				22
2' micro	2 1.5		0	23
			0	24
				5
				6
				7
				8
				9
				0

Surface Condition:

Drive probe to 22'

22-24 same as above, wet

H<sub>2</sub>O sample collected @ 23' using peristaltic pump and dedicated tubing

# AKRF SOIL BORING LOG

Job No. <b>30079</b>	Client <b>FCR</b>	Location
Drilling Method <b>geoprobe (u)</b>		Boring No. <b>GP-9</b>
Sampling Method <b>4' macro sampler</b>		Sheet <b>1</b> of <b>2</b>
Drilling		
Water Level		Start
Time		Time
Date		Date
		Finish
		Time
		Date

**N24 = 10W**

Sample Type	Sample No.		PID/FID READING	Depth Feet	Surface Condition: <b>concrete</b>
	IN. DRV.	IN. RECYD			
<b>4ms</b>	<b>4</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0-10" concrete</b>
			<b>0</b>	<b>1</b>	
			<b>0</b>	<b>2</b>	<b>10"-4 Brown M-c sand, little silt, moist</b>
			<b>0</b>	<b>3</b>	
			<b>0</b>	<b>4</b>	
<b>4ms</b>	<b>4</b>	<b>3.5</b>	<b>1</b>	<b>5</b>	<b>4-8 same as above, moist</b>
			<b>1.6</b>	<b>6</b>	
			<b>1</b>	<b>7</b>	
			<b>0</b>	<b>8</b>	
			<b>1</b>	<b>9</b>	<b>8-10 same as above, moist</b>
			<b>0</b>	<b>10</b>	

# AKRF SOIL BORING LOG

Job No. <b>30079</b>	Client <b>FCR</b>	Location
Drilling Method <b>Geoprobe (VAN)</b>		Boring No. <b>GP-9</b>
Sampling Method		Sheet <b>2</b> of <b>2</b>
Drilling		
Water Level		Start
Time		Finish
Date		Time
		Date

*Handwritten note:* E N 5' 3"

Sample Type	IN. DRV. / IN. RECD	Sample No.	Depth	PID/FID READING	Depth Feet
				1	
				0	11
					12
4MS	4/4			1	
				0	13
					14
				1.6	
					15
				1	
					16
					17
					18
2 micro	2/1			N/A	
					19
					20

Surface Condition:

10-12 same as above

12-16 same as above, ~~with~~ most grading to wet @

@ 16' hole started to collapse, drove to 18 and switched to micro sampler

18-20 same as above

H<sub>2</sub>O collected @ 18'-20' interval

GP-9 completed @ 20' on 2/2/95

# AKRF SOIL BORING LOG

327  
E-34.7" N 5'3"

Job No. 30079		Client FC12		Location	
Drilling Method geo probe			Boring No. GP-11		
Sampling Method 2' micro			Sheet 3 of 7		
Drilling					
Water Level		~22		Start	Finish
Time		9:15		Time	Date
Date		2/2/99		Time	Date
				9:20	2/3/99

Sample Type	IN. DRV.		Sample No.	PID/ID READING	Depth Feet
	IN. RECYD	Depth			
					21
					22
2' MICRO	2	1.5		NA	23
					24
					5
					6
					7
					8
					9
					0

Surface Condition:

22-24 same as above, wet

Geo probe GP-11 completed @ 24' on 2/3/99

No H<sub>2</sub>O sample - well located in the area

# AKRF SOIL BORING LOG

Job No. <b>30079</b>	Client <b>FC12</b>	Location
Drilling Method <b>geoprobe (uam)</b>		Boring No. <b>GP-10</b>
Sampling Method <b>4' macro sampler</b>		Sheet <b>2 of 3</b>
<b>from 10-16</b>		Drilling
<b>2' from 18-20</b>		Start
Water Level		Time
Time		Date <b>8:50 2/3/99</b>
Date		Time
		Date <b>9:05 2/3/99</b>

Sample Type	IN. DRV.		Sample No.	PID/FID READING	Depth Feet
	IN. RECVD	IN. RECVD			
				0	
				0	1
				0	2
4ms	4	3		0	3
				0	4
				0	5
				0	6
				0	7
				0	8
2macro	2	1.5		1.0	9
				1	0

Surface Condition:  
tank is ~ 5x20 buried 5' below surface

10-12 same as above

12-16 same as above, moist  
 - sample collected from 12-12.5  
 - first sample @ invert of tank  
 - note 8-12 no recovery

18-20 same as above, moist

# AKRF SOIL BORING LOG

Job No. <b>30079</b>	Client <b>FCR</b>	Location
Drilling Method <b>Geoprobe (Uae)</b>		Boring No. <b>GP-10</b>
Sampling Method <b>4' macro sampler</b>		Sheet <b>1</b> of <b>1</b>
Drilling		
Water Level		Start
Time		Finish
Date		Time <b>8:20</b> Date <b>2/3/99</b>
		Time <b>8:50</b> Date <b>2/3/99</b>

Sample Type	IN. DRY. IN. RECYD	Sample No.	Depth	PIDIFID READING	Depth Feet	Description
4ms	4 1.25			0	0	Surface Condition: Asphalt calibrated Thermo - Reading 254 @ 248 standard
					1	0-6" Asphalt w/ crushed stone sub-base
					2	6"-4" Dark brown M-C sand and little silt moist, trace gravel
				0	3	
					4	
4ms	4 0				5	4-8 No recovery
					6	
					7	
					8	
4ms	4 1.5				9	8-10 Brown F-C sand, trace silt and gravel, moist
					10	

# AKRF SOIL BORING LOG

Job No. <b>30079</b>	Client <b>FC12</b>	Location <b>outside-chem tank</b>
Drilling Method <b>geoprobe</b>		Boring No. <b>GP-1B</b>
Sampling Method <b>4' macro</b>		Sheet <b>1</b> of <b>3</b>
Drilling		
Water Level		Start
Time		Finish
Date		Time <b>9:35</b>
		Date <b>2/3/99</b>
		Time <b>9:40</b>
		Date <b>2/3/99</b>

Sample Type	IN. DRY. IN. RECYD	Sample No. Depth	PID/FID READING	Depth Feet	Surface Condition: <b>Asphalt</b>
<b>1MS</b>	<b>4</b> <b>9.25</b>		<b>0</b>		<b>0-6" Asphalt w/ crushed stone sub-base</b>
			<b>0</b>	<b>1</b>	<b>6"-4" Brown/gray F-m sand, and silt w/ trace gravel, mois</b>
			<b>0</b>	<b>2</b>	
			<b>0</b>	<b>3</b>	
			<b>0</b>	<b>4</b>	
<b>4MS</b>	<b>7</b> <b>3.75</b>		<b>0</b>	<b>5</b>	<b>4-5 same as above w/ trace concrete and asphalt @ 7.5-8</b>
			<b>6</b>	<b>6</b>	
			<b>6</b>	<b>7</b>	
			<b>6</b>	<b>8</b>	
<b>4MS</b>	<b>9</b> <b>2</b>		<b>12.4</b>	<b>9</b>	<b>8-10 same as above, no fill</b>
				<b>10</b>	<b>TCL VOC sample collected (split) @ 9-9.5</b>



# AKRF SOIL BORING LOG

Job No. <b>30079</b>	Client <b>FCR</b>	Location <b>outside-chem</b>
Drilling Method <b>geoprobe (van)</b>		Boring No. <b>GP-11</b>
Sampling Method <b>10-18 4' micro sampler 18-20 2' micro sampler</b>		Sheet <b>2</b> of <b>7</b>
Drilling		
Water Level		Start
Time		Time
Date		Date
		<b>9:40</b>
		<b>2/3/99</b>
		<b>10:10</b>
		<b>2/3/99</b>

Sample Type	Sample No.		Depth Feet
	IN. DRY	IN. RECYD	
			10.1
			11
			12
<b>AMS</b>	<b>4</b>	<b>1</b>	<b>7.3</b>
			13
			3.4
			14
			1.6
			15
			0
			16
			17
			18
<b>2' micro</b>	<b>2</b>	<b>1.25</b>	<b>6</b>
			19
			0
			20

Surface Condition:

10-12 Yellow M-C sand, trace silt and gravel, moist

12-16 Brown F-C sand, trace silt, moist

Drove probe to 18', hole start to collapse in on itself, switch to 2' micro sampler

18-20 Same as above, moist

# AKRF SOIL BORING LOG

Job No. <b>30079</b>		Client <b>FCD</b>		Location	
Drilling Method <b>geo probe (uax)</b>			Boring No. <b>GP-11</b>		
Sampling Method <b>2' micro sampler</b>			Sheet <b>3</b> of <b>3</b>		
Drilling					
Water Level <b>~22</b>				Start	Finish
Time <b>10:10</b>				Time <b>10:10</b>	Date <b>2/3/99</b>
Date <b>2/3/99</b>				Time <b>10:15</b>	Date <b>2/3/99</b>

E' 327 N' 6' 11"

Sample Type	IR, DRY / IN, RECYD	Sample No.	Depth	PID/FID READING	Depth Feet
					21
					22
					23
					24
					5
					6
					7
					8
					9
					0

Surface Condition:

drove to 22'

22-24 Brown F-m sand, trace silt wct

Geo probe GP-11 completed @ 24 on 2/3/99  
- NO H2O sample collected

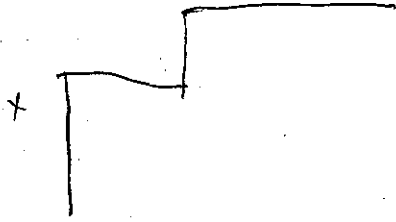
# AKRF SOIL BORING LOG

		Job No. <b>30079</b>	Client <b>FCR</b>	Location <b>Drywell</b>
		Drilling Method <b>geoprobe (van)</b>		Boring No. <b>GP-12</b>
		Sampling Method <b>4' macro sampler</b>		Sheet <b>1</b> of <b>2</b>
Dating				
		Start		Finish
Water Level		Time		Date
		<b>11:20</b>		<b>2/3/99</b>
Date		Time		Date
		<b>11:25</b>		<b>2/3/99</b>

Sample Type	IN. DRV. IN. RECYD	Sample No.	Depth	PICKED READING	Depth Feet	Surface Condition:
4MS	4/3.25			0		0-6" Asphalt w/ crushed stone
					1	6"-1 Black F-m sand and silt, moist
				0	2	1-4 Brown F-C sand, little silt and gravel moist
				0	3	
				0	4	
4MS	4/4			2.8	5	4-8 same as above, moist
				1	6	
				0	7	
				0	8	
4MS	4/4			0	9	8-10 same as above, moist
				1.2	10	
					0	

# AKRF SOIL BORING LOG



S 13'8" W 24'5"

Job No. <b>30076</b>		Client <b>FCR</b>		Location <b>dry well</b>	
Drilling Method <b>geoprobe (van)</b>			Boring No. <b>GP-12</b>		
Sampling Method <b>4' macro</b>			Sheet <b>2</b> of <b>2</b>		
Drilling					
Water Level		217		Start	Finish
Time		12:00		Time	Date
Date		2/3/99		Time	Date
				12:00	2/3/99

Sample Type	IN. DRY IN. RECYD	Sample No. Depth	PIDIFID READING	Depth Feet
			0	10
				11
			0	12
4045	1/3		0	3
			0	4
			0	5
			0	6
				7
				8
2' macro	2 1.25		N/A	9
				10
				11
				12
				13
				14
				15
				16
				17
				18
				19
				20

Surface Condition:

10-12 same as above, moist

12-16 same as above

Drove to 18' hole started to collapse and switched to 2' macro

19-20 same as above, moist to wet

H<sub>2</sub>O sample collected @ 20' from GP-12  
GP-12 completed @ 20' on 2/3/99

# AKRF SOIL BORING LOG

Job No. <b>30076</b>	Client <b>FCIR</b>	Location <b>drywell</b>
Drilling Method <b>geoprobe</b>		Boring No. <b>GP-13</b>
Sampling Method <b>4' macro 4-0</b> <b>2' micro 10-12</b> <b>2'</b>		Sheet <b>1</b> of <b>2</b>
Water Level		Drilling
Time		Start
Date		Finish
		Time <b>12:15</b>
		Date <b>2/3/99</b>
		Time <b>12:20</b>
		Date <b>2/3/99</b>

Sample Type	IN. DRV. IN. RECYD	Sample No.	Depth	PID/FID READING	Depth Feet	Surface Condition: <b>Asphalt</b>
<b>4ms</b>	<b>4</b>			<b>0</b>		<b>0-6" Asphalt w/ crushed stone sub-base</b>
				<b>0</b>	<b>1</b>	<b>6"-4" Brown M-C sand and little silt, trace gravel, moist</b>
				<b>0</b>	<b>2</b>	<b>Drove probe to 10'</b>
				<b>0</b>	<b>3</b>	
				<b>0</b>	<b>4</b>	
				<b>0</b>	<b>5</b>	
				<b>0</b>	<b>6</b>	
				<b>0</b>	<b>7</b>	
				<b>0</b>	<b>8</b>	
				<b>0</b>	<b>9</b>	
				<b>0</b>	<b>10</b>	

# AKRF SOIL BORING LOG

	Job No. <b>30076</b>	Client <b>FCI 2</b>	Location <b>dry well 4</b>
	Drilling Method <b>geo probe</b>		Boring No. <b>GP-13</b>
	Sampling Method <b>2' micro sampler</b>		Sheet <b>2</b> of <b>2</b>
	Drilling		
Water Level <b>16.5'</b>		Start <b>12:20</b>	Finish <b>2/3/99</b>
Time <b>13:00</b>		Time <b>13:00</b>	Date <b>2/3/99</b>
Date <b>2/3/99</b>		Time <b>13:00</b>	Date <b>2/3/99</b>

Sample Type	IN. DRY. IN. RECD	Sample No. Depth	PICKED READING	Depth Feet	Surface Condition:
2' micro	2 1.5		0*	1	10-12 same as above, moist ↓ head space from top of micro,  drove 16'
			0	2	
				3	
				4	
				5	
				6	
2' micro	2 1.5		0	7	16-18 same as above, moist grading to wet  GP-13 completed @ 18 on 2/3/99
			0	8	
				9	
				0	

# AKRF SOIL BORING LOG

Job No. <b>30079</b>		Client <b>FCR</b>		Location	
Drilling Method <b>geoprobe (vac)</b>			Boring No. <b>GP-14</b>		
Sampling Method <b>4' macro 0-4</b>			Sheet <b>1</b> of <b>2</b>		
Drilling					
Water Level				Start	Finish
Time				Time	Date
Date				Time	Date
				<b>13:10</b>	<b>2/3/99</b>
				<b>13:20</b>	<b>2/3/99</b>

Sample Type	IN. DRY.		Sample No.	PID/FID READING	Depth Feet
	IN. RECYD	IN. RECYD			
4MS	4	4		0	0
				0	1
				0	2
				0	3
				0	4
					5
					6
					7
					8
					9
					10

Surface Condition:

0-6" Asphalt w/ crushed stone

6"-3' Dark brown F-M sand and silt, trace gravel

3'-4' Brown F-C sand, little silt, moist

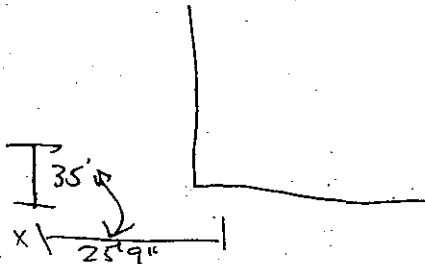
Drove probe to 10'





AKRF SOIL BORING LOG

Job No. 30079	Client FCR	Location parking/drywell
Drilling Method geo probe (van)	Boring No. GP-15 15	Sheet 1 of 2
Sampling Method 4' Macro	Drilling	
Water Level	Start	Finish
Time	Time 13:45	Date 2/3/99
Date	Time 14:00	Date 2/3/99



Sample Type	IN. DRY.		Sample No	PID/FID READING	Depth Feet
	IN. RECYD	IN. RECYD			
4' macro	4	3		0	0
					1
				0	2
				0	3
				0	4
					5
					6
					7
					8
					9
					10

Surface Condition:

0-6" Asphalt, w/ crushed stone sub-base

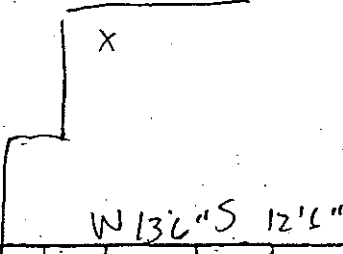
6"-1 Black F-m sand and silt, trace gravel, moist

1-4 Brown F-m sand, trace silt moist

drove probe to 10'

### AKRF SOIL BORING LOG

Job No. 30079	Client FCI2	Location parking/drywell
Drilling Method Geo probe (vac)		Boring No. GP-16
Sampling Method 2' micro		Sheet 2 of 2
Drilling		
Water Level -17	Time 14:10	Start Time 15:00
Time Date 2/3/99	Finish Date 2/3/99	Time Date 15:25 2/3/99



Sample Type	IN. DRY.		Sample No.	DEPTH	PIDIFID READING	Depth Feet
	IN. RECYD					
Zmicro	2				OA	1
					OA	2
						3
						4
						5
Zmicro	2				OA	6
					Uif	7
						8
						9
						0

Surface Condition:

10-12 Brown F-m sand, trace silt and gravel, moist

\* headspace reading from top of tube, tubing will be submitted for analysis

Drove probe to 15'

15-17 same as above, grading to wet

\* ntc same as above

Geo probe GP-15 completed @ 17' on 2/3/99



BORING NO.: MW-1  
 PROJECT NO.: 5063-N71  
 PROJECT: UPS  
 CLIENT: UPS  
 LOCATION: JAMAICA, NY

BORING DEPTH: 32 FT.  
 CONTRACTOR: JERSEY BORING & DRILLING  
 DRILLERS: JIM BOWEN  
 TRC INSPECTOR: WILLIAM PENN  
 DRILLING METHOD: DRIVEN 3" CASING

DATE STARTED: JUNE 14, 1988  
 DATE COMPLETED: JUNE 14, 1988  
 DEPTH TO WATER: 18.33 FT.  
 WATER TABLE LEVEL: 6.02 FT. (6/17/88)

DEPTH (FT)	BLOWS	SOIL DESCRIPTION	WELL CONSTRUCTION	
0-2	10 7 4 4	ASPHALT AND STONE, 0-6"; DRANGE-BROWN FINE TO MEDIUM SAND, TRACE SILT, TRACE GRAVEL, 6-18".	0.0	FLUSH COVER
5-7	7 8 9 10	DRANGE-BROWN FINE TO MEDIUM SND, TRACE SILT, TRACE GRAVEL.		1.5" SCHEDULE 40 PVC RISER
		SAND.		3" BOREHOLE
		SAND	15.0	TOP OF SCREEN
20-22		SAND		1.5" PVC SCREEN 15 SLOT
25-27		SAND		
30-32		SAND	32.0	BOTTOM OF WELL BOTTOM OF HOLE

BORING NO.:	MW-2	BORING DEPTH:	42 FT.	DATE STARTED:	JUNE 7, 1988
PROJECT NO.:	5063-N71	CONTRACTOR:	JERSEY BORING & DRILLING	DATE COMPLETED:	JUNE 8, 1988
PROJECT:	UPS	DRILLERS:	JIM BOWEN	DEPTH TO WATER:	19.19 FT.
CLIENT:	UPS	TRC INSPECTOR:	WILLIAM PENN	WATER TABLE LEVEL:	6.36 FT. (6/17/88)
LOCATION:	JAMAICA, NY	DRILLING METHOD:	DRIVEN 3" CASING		

DEPTH (FT)	BLOWS	SOIL DESCRIPTION	WELL CONSTRUCTION
0-2	7 13 6 7	TOPSOIL, 0-6"; COMPACTED MATERIAL, ANGULAR FRAGS, FINE TO COARSE SAND, TR. GRAVEL, 6-12"; DRNG-BRN, F. TO MED. SAND, TR. SILT, TR. GRAVEL, 12-18".	0.0 FLUSH COVER
5-7	18 19 18 24	WASH, 0-2"; BROWN FINE TO MEDIUM SAND, TRACE SILT, TRACE COARSE SAND, 2-12". LOST FISH TAIL IN HOLE WHEN WASHING DOWN. MOVED ONE FOOT NORTH AND DROVE CASING TO 10 FEET AND RESUMED DRILLING.	1.5" SCHEDULE 40 PVC RISER
8-9	17 22 21 19	WASH, 0-2"; BRN TO DRNG-BRN FINE TO MEDIUM SAND, TRACE COARSE SAND AND GRAVEL, 2-9".	3" BOREHOLE
10-17	14 15 17 18	WASH, 0-1"; ORANGE-BROWN FINE TO MEDIUM SAND, TRACE COARSE SAND, SILT, 1-9".	
20-22	22 17 19 25	BROWN, FINE TO MEDIUM SAND, TRACE COARSE SAND, 0-5"; BROWN MEDIUM TO COARSE SAND, TRACE GRAVEL, TRACE FINE SAND, 5-12".	
25-27	15 14 15 15	WASH, 0-2"; BROWN TO ORANGE-BROWN FINE TO VERY FINE SAND, TRACE SILT, 2-10".	
30-32	13 11 11 15	BROWN, FINE TO MEDIUM SAND, TRACE SILT, 0-11".	30.0 TOP OF SCREEN
35-37	7 6 8 7	BROWN FINE TO MEDIUM SAND, TRACE SILT, 0-1"; GRAVEL AND COARSE SAND, FINER MATERIALS APPEAR TO HAVE WASHED OUT OF SAMPLE, 1-2".	1.5" PVC SCREEN 15 SLOT
40-42	11 9 9 11	BROWN, FINE TO MEDIUM SAND, TRACE SILT, 0-7".	40.0 BOTTOM OF WELL
			42.0 BOTTOM OF HOLE

BORING NO.: NW-3  
 PROJECT NO.: 5063-W71  
 PROJECT: UPS  
 CLIENT: UPS  
 LOCATION: JAMAICA, NY

BORING DEPTH: 32 FT.  
 CONTRACTOR: JERSEY BORING & DRILLING  
 DRILLERS: JIM BOWEN  
 TRC INSPECTOR: WILLIAM PENN  
 DRILLING METHOD: DRIVEN 3" CASING

DATE STARTED: JUNE 8, 1988  
 DATE COMPLETED: JUNE 8, 1988  
 DPTH TO WATER: 18.03 FT.  
 WATER TABLE LEVEL: 6.35 FT. (6/17/88)

DEPTH (FT)	BLOWS	SOIL DESCRIPTION	WELL CONSTRUCTION	
0-2	36 11 10 10	ASPHALT AND STONE, 0-7"; ORANGE-BRN FINE TO VERY FINE SAND, SOME SILT, 7-16"; BROWN, FINE TO VERY FINE SAND, TRACE MEDIUM SAND, 16-24".	0.0	FLUSH COVER
5-7	14 17 21 31	WASH, 0-1"; BROWN, FINE TO MEDIUM SAND, TRACE COARSE SAND AND GRAVEL, 1-9".		1.5" SCHEDULE 40 PVC RISER
10-12	11 16 19 18	NO RECOVERY, COBBLE STUCK IN NOSE OF SPLIT SPOON.		3' BOREHOLE
15-17	10 11 12 12	ORANGE-BROWN FINE TO MEDIUM SAND, TRACE COARSE SAND, TRACE SILT, 0-9".	15.0	TOP OF SCREEN
20-22	12 12 17 15	WASH, 0-2"; ORANGE-BROWN FINE TO MEDIUM SAND, TRACE SILT, 2-10".		1.5" PVC SCREEN 15 SLOT
25-27	6 7 10 14	WASH, 0-3"; ORANGE-BROWN FINE TO MEDIUM SAND, TRACE SILT, 3-4".		
30-32	7 8 10 10	NO RECOVERY, WASHED OUT.	30.0	BOTTOM OF WELL
			32.0	BOTTOM OF HOLE

BORING NO.: MW-4  
 PROJECT NO.: 5063-M71  
 PROJECT: UPS  
 CLIENT: UPS  
 LOCATION: JAMAICA, NY

BORING DEPTH: 32 FT.  
 CONTRACTOR: JERSEY BORING & DRILLING  
 DRILLERS: JIM BOWEN  
 TRC INSPECTOR: WILLIAM PENN  
 DRILLING METHOD: DRIVEN 3" CASING

DATE STARTED: JUNE 13, 1988  
 DATE COMPLETED: JUNE 13, 1988  
 DEPTH TO WATER: 18.82 FT.  
 WATER TABLE LEVEL: 3.88 FT. (6/17/88)

DEPTH (FT)	BLOWS	SOIL DESCRIPTION	WELL CONSTRUCTION	
0-2	14 4 4 4	ASPHALT AND STONE, 0-6". ORANGE-BROWN FINE TO MED. SAND, TR. SILT, 6-18".	0.0	FLUSH COVER
5-7	10 17 19 21	BROWN FINE TO MEDIUM SAND, TRACE SILT, FINE GRAVEL, 0-10".		1.5" SCHEDULE 40 PVC RISER
12-14	17 26 21 27	BROWN FINE TO MEDIUM SAND, TRACE SILT, FINE GRAVEL, 0-8".		3" BOREHOLE
14-15		WASH 0-2"; ORANGE-BROWN FINE TO MEDIUM SAND, TRACE SILT, FINE GRAVEL, 2-10".	15.0	TOP OF SCREEN
20-22	14 14 13 17	BROWN MED. TO F. SAND, TR. SILT, 0-6"; F. TO MED. GRAVEL AND C. SAND, TR. MED. SAND, 6-9"; BROWN F. TO MED. SAND, TR. GRAVEL, SILT, 9-15".		1.5" PVC SCREEN 15 SLOT
25-27		BROWN MEDIUM TO FINE SAND, TRACE SILT, 0-2".		
30-32	17 18 19 21	BROWN MED. TO F. SAND, TR. SILT, 0-7"; F. TO MED. GRAVEL AND C. SAND, LITTLE MED. SAND, 7-10"; ORANGE-BROWN F. TO MED. SAND, TR. SILT, 10-16".	30.0	BOTTOM OF WELL
			32.0	BOTTOM OF HOLE

BORING NO.: MW-5  
 PROJECT NO.: 5063-M71  
 PROJECT: UPS  
 CLIENT: UPS  
 LOCATION: JAMAICA, NY

BORING DEPTH: 32 FT.  
 CONTRACTOR: JERSEY BORING & DRILLING  
 DRILLERS: JIM BOWEN  
 TRC INSPECTOR: WILLIAM PENN  
 DRILLING METHOD: DRIVEN 3" CASING

DATE STARTED: JUNE 10, 1988  
 DATE COMPLETED: JUNE 10, 1988  
 DEPTH TO WATER: 18.44 FT.  
 WATER TABLE LEVEL: 5.98 FT. (6/17/88)

DEPTH (FT)	BLOWS	SOIL DESCRIPTION	WELL CONSTRUCTION
0-2	3 4 6 6	BROWN FINE TO MEDIUM SAND, 0-6".	0.0 FLUSH COVER
5-7	2 1 2 1	BROWN FINE TO MEDIUM SAND, TRACE COARSE SAND, GRAVEL, 0-5". COBBLE IN NOSE OF SPOON MAY HAVE OBSTRUCTED SAMPLER.	1.5" SCHEDULE 40 PVC RISER
10-12	20 19 19 23	WASH, 0-2"; BROWN FINE TO MEDIUM SAND, TRACE GRAVEL, 2-8"; BROWN MEDIUM TO FINE SAND, TRACE GRAVEL, COARSE SAND, 8-12".	3" BOREHOLE
17-19	17 17 19 18	ORANGE-BROWN FINE TO MEDIUM SAND, TRACE COARSE SAND, 0-10".	15.0 TOP OF SCREEN
20-22	13 13 12 13	WASH, 0-1"; ORANGE-BROWN FINE TO MEDIUM SAND, TRACE COARSE SAND, 1-10".	1.5" PVC SCREEN 15 SLOT
25-27	17 19 21 20	BROWN TO ORANGE-BROWN FINE TO MEDIUM SAND, 0-14".	
30-32		BROWN FINE TO MEDIUM SAND, 0-7".	30.0 BOTTOM OF WELL 32.0 BOTTOM OF HOLE



BORING NO.: MW-6  
 PROJECT NO.: 5063-N71  
 PROJECT: UPS  
 CLIENT: UPS  
 LOCATION: JAMAICA, NY

BORING DEPTH: 32 FT.  
 CONTRACTOR: JERSEY BORING & DRILLING  
 DRILLERS: JIM BOWEN  
 TRC INSPECTOR: WILLIAM PENN  
 DRILLING METHOD: DRIVEN 3" CASING

DATE STARTED: JUNE 8, 1988  
 DATE COMPLETED: JUNE 10, 1988  
 DEPTH TO WATER: 19.70 FT.  
 WATER TABLE LEVEL: 5.88 FT. (6/17/88)

DEPTH (FT)	BLOWS	SOIL DESCRIPTION	WELL CONSTRUCTION	
0-2	3 6 5 6	TOPSOIL, 0-3"; BROWN FINE TO MEDIUM SAND, TRACE SILT, 3-8".		FLUSH COVER
5-7	1 1 2 6	WASH, 0-2"; BROWN FINE TO MEDIUM SAND, TRACE SILT, GRAVEL, 2-7".		1.5" SCHEDULE 40 PVC RISER
9-11	16 21 22 24	WASH, 0-4"; BROWN FINE TO MEDIUM SAND, TRACE SILT, GRAVEL, COARSE SAND, 0-4".		3" BOREHOLE
13-15	11 12 15 16	WASH, 0-2"; ORANGE-BROWN FINE TO MEDIUM SAND, TRACE SILT, 2-8".	14.0	TOP OF SCREEN
16-22	14 12 14 17	WASH, 0-2"; ORANGE-BROWN FINE TO MEDIUM SAND, TRACE SILT, 2-7".		1.5" PVC SCREEN 15 SLOT
25-27	12 13	BROWN FINE TO MEDIUM SAND, TRACE COARSE SAND, GRAVEL, 0-6"; BROWN MEDIUM TO COARSE SAND, LITTLE GRAVEL. 6-9". FINES WASHED OUT?		
30-32	6 6 10 12	NO RECOVERY	29.0 32.0	BOTTOM OF WELL BOTTOM OF HOLE

BORING NO.: MW-7  
 PROJECT NO.: 5063-N71  
 PROJECT: UPS  
 CLIENT: UPS  
 LOCATION: JAMAICA, NY

BORING DEPTH: 32 FT.  
 CONTRACTOR: JERSEY BORING & DRILLING  
 DRILLERS: JIM BOWEN  
 TRC INSPECTOR: WILLIAM PENN  
 DRILLING METHOD: DRIVEN 3" CASING

DATE STARTED: JUNE 13, 1988  
 DATE COMPLETED: JUNE 14, 1988  
 DEPTH TO WATER: 20.09 FT.  
 WATER TABLE LEVEL: 6.31 FT. (6/17/88)

DEPTH (FT)	BLOWS	SOIL DESCRIPTION	WELL CONSTRUCTION	
0-2	16 5 4 5	ASPHALT AND STONE, 0-4"; ORANGE-BROWN FINE TO MEDIUM SAND, TR. SILT, 6-19".	0.0	FLUSH COVER
3-4	8 10 12 12	BROWN FINE TO MEDIUM SAND, TRACE SILT, GRAVEL, 0-12".		1.5" SCHEDULE 40 PVC RISER
5-10		BROWN FINE TO MEDIUM SAND, LITTLE COARSE SAND AND GRAVEL, 0-5"		3" BOREHOLE
10-15		BROWN FINE TO MEDIUM SAND, 0-10"		TOP OF SCREEN
15-17	15 19 20 20	BROWN FINE TO MEDIUM SAND, 0-10"	15.0	
17-22	17 19 19 20	WASH, 0-8"; BROWN FINE TO MEDIUM SAND, 0-10"		1.5" PVC SCREEN 15 SLOT
25-27	18 19 22 21	BROWN, GRAVEL AND COARSE SAND, LITTLE MEDIUM TO FINE SAND, WASH?, 0-10"; BROWN FINE TO MEDIUM SAND, TRACE SILT, 10-16".		BOTTOM OF WELL
30-32	16 17 17 18	BROWN FINE TO MEDIUM SAND, TRACE GRAVEL, 0-2"	30.0	
			32.0	BOTTOM OF HOLE

**APPENDIX E**  
**HISTORICAL SOIL VAPOR RESULTS**

**Table 1**  
**132-20 Merrick Boulevard**  
**Springfield Gardens, Queens, NY**  
Soil Vapor Analytical Results  
Volatile Organic Compounds

Dilution Client ID Date Sampled Lab Sample ID Units	1 SN-1-HOME-DEPOT 11/30/07 Y5443-02 µg/m3	1 SN-2-HOME-DEPOT 11/30/07 Y5443-03 µg/m3	2 SN-2-HOME-DEPOTDL 11/30/07 Y5443-03DL µg/m3	1 SN-3-HOME-DEPOT 11/30/07 Y5443-04 µg/m3	20 SE-1-HOME-DEPOT 11/30/07 Y5443-05 µg/m3
Analyte					
1,1,1-Trichloroethane	0.55 J	4.91	4.36 JD	2.18 J	40.37 J
1,1,2,2-Tetrachloroethane	0.16 U	0.16 U	0.33 U	0.16 U	3.30 U
1,1,2-Trichloroethane	0.24 U	0.24 U	0.48 U	0.24 U	4.80 U
1,1,2-Trichlorotrifluoroethane	0.20 U	0.20 U	0.39 U	0.20 U	3.91 U
1,1-Dichloroethane	0.10 U	0.10 U	0.19 U	0.10 U	1.94 U
1,1-Dichloroethene	0.10 U	0.10 U	0.19 U	0.10 U	1.94 U
1,2,4-Trichlorobenzene	0.26 U	0.26 U	0.52 U	0.26 U	5.20 U
1,2,4-Trimethylbenzene	1.47 J	2.46 J	1.97 JD	0.98 J	21.63 J
1,2-Dibromoethane	1.00 U	1.00 U	2.00 U	1.00 U	19.98 U
1,2-Dichlorobenzene	0.13 U	0.13 U	0.26 U	0.13 U	13.23 J
1,2-Dichloroethane	0.20 U	0.20 U	0.40 U	0.20 U	4.05 U
1,2-Dichloropropane	0.22 U	0.22 U	0.44 U	0.22 U	4.44 U
1,3,5-Trimethylbenzene	0.17 U	0.17 U	0.34 U	0.17 U	3.44 U
1,3-Butadiene	0.08 U	0.08 U	0.16 U	0.08 U	1.61 U
1,3-Dichlorobenzene	0.10 U	0.60 J	0.20 U	0.10 U	10.82 J
1,4-Dichlorobenzene	0.60 J	1.20 J	1.20 JD	0.15 U	9.62 J
1,4-Dioxane	0.25 U	0.25 U	0.50 U	0.25 U	5.00 U
2,2,4-Trimethylpentane	0.93 J	0.12 U	0.23 U	0.93 J	2.29 U
2-Butanone	12.98	26.84	25.66 D	5.60	50.14
2-Hexanone	0.85 J	0.83 U	1.62 U	0.83 U	16.16 U
4-Ethyltoluene	0.07 U	0.07 U	0.15 U	0.07 U	1.47 U
4-Methyl-2-Pentanone	0.41 J	0.20 U	0.41 U	0.20 U	4.06 U
Acetone	15.20	20.67	19.72 D	11.16	33.26 B
Allyl Chloride	0.19 U	0.19 U	0.38 U	0.19 U	3.76 U
Benzene	1.92	1.92	1.60 JD	1.60 J	2.81 U
Benzyl Chloride	0.18 U	0.18 U	0.36 U	0.18 U	3.55 U
Bromodichloromethane	0.33 U	0.33 U	0.67 U	0.33 U	6.70 U
Bromoethene	0.10 U	0.10 U	0.21 U	0.10 U	2.10 U
Bromoform	0.16 U	0.16 U	0.32 U	0.16 U	3.21 U
Bromomethane	0.09 U	0.09 U	0.19 U	0.09 U	1.86 U
Carbon Disulfide	2.18	2.49	2.18 JD	0.05 U	0.97 U
Carbon Tetrachloride	0.50	0.11 U	0.21 U	0.44	2.14 U
Chlorobenzene	0.12 U	0.12 U	0.23 U	0.12 U	2.35 U
Chloroethane	0.04 U	0.04 U	0.09 U	0.04 U	0.90 U
Chloroform	0.15 U	0.98 J	0.30 U	0.15 U	2.98 U
Chloromethane	1.45	2.27	2.27 D	1.65	1.01 U
cis-1,2-Dichloroethene	0.14 U	0.14 U	0.28 U	0.14 U	10.31 J
cis-1,3-Dichloropropene	0.23 U	0.23 U	0.45 U	0.23 U	4.49 U
Cyclohexane	0.69 J	0.69 J	0.08 U	0.04 U	0.83 U
Dibromochloromethane	0.22 U	0.22 U	0.43 U	0.22 U	4.34 U
Dichlorodifluoromethane	2.97	5.93	5.93 D	15.82	10878.53 E
Dichlorotetrafluoroethane	0.15 U	0.15 U	0.30 U	0.15 U	3.01 U
Ethanol	376.85 E	810.23 E	847.91 ED	141.32 E	960.97 E
Ethyl Acetate	0.19 U	0.19 U	0.38 U	0.19 U	3.77 U
Ethyl Benzene	0.87 J	0.87 J	0.16 U	0.43 J	1.56 U
Heptane	0.82 J	1.23 J	0.82 JD	0.82 J	1.97 U
Hexachloro-1,3-Butadiene	0.23 U	0.23 U	0.46 U	0.23 U	40.53 J
Hexane	2.82	1.76	1.76 JD	1.76	1.80 U
m/p-Xylene	2.17 J	2.61	2.61 JD	1.30 J	3.78 U
Methyl tert-Butyl Ether	0.06 U	0.36 J	0.12 U	0.06 U	1.23 U
Methylene Chloride	2.78 B	0.69 JB	1.04 JDB	1.04 JB	12.51 JB
o-Xylene	0.87 J	0.87 J	0.87 JD	0.43 J	2.08 U
Propene	4.12	1.72	1.89 D	2.58	0.74 U
Styrene	0.26 U	0.26 U	0.51 U	0.26 U	5.11 U
t-1,3-Dichloropropene	0.26 U	0.26 U	0.50 U	0.26 U	4.99 U
tert-Butyl alcohol	0.24 U	0.24 U	1.52 JD	0.24 U	4.85 U
Tetrachloroethene	0.68 J	39.33	36.62 D	21.70	94.94
Tetrahydrofuran	4.41	10.08	9.45 D	1.89 J	45.35 J
Toluene	4.52	5.65	5.28 D	3.39	6.03 J
trans-1,2-Dichloroethene	0.12 U	0.12 U	0.24 U	0.12 U	2.42 U
Trichloroethene	0.81	1.50	1.40 D	3.87	18.27
Trichlorofluoromethane	15.17	118.01 E	112.39 D	30.35	1067.73
Vinyl Acetate	0.35 U	0.35 U	0.68 U	0.35 U	6.84 U
Vinyl Chloride	0.06 U	0.06 U	0.12 U	0.06 U	1.23 U

**Table 1**  
**132-20 Merrick Boulevard**  
**Springfield Gardens, Queens, NY**  
Soil Vapor Analytical Results  
Volatile Organic Compounds

Dilution	200	20	1	5	1
Client ID	SE-1-HOME-DEPOTDL	SE-2-HOME-DEPOT	SE-3-HOME-DEPOT	SE-3-HOME-DEPOTDL	SE-4-HOME-DEPOT
Date Sampled	11/30/07	11/30/07	11/30/07	11/30/07	12/04/07
Lab Sample ID	Y5443-05DL	Y5443-06	Y5443-07	Y5443-07DL	Y5443-20
Units	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3
Analyte					
1,1,1-Trichloroethane	23.46 U	37.10 J	40.92	43.10 D	10.91
1,1,2,2-Tetrachloroethane	32.96 U	3.30 U	0.16 U	0.82 U	0.16 U
1,1,2-Trichloroethane	48.01 U	4.80 U	0.24 U	1.20 U	0.24 U
1,1,2-Trichlorotrifluoroethane	39.09 U	3.91 U	0.20 U	1.00 U	0.20 U
1,1-Dichloroethane	19.43 U	1.94 U	0.10 U	0.49 U	0.10 U
1,1-Dichloroethene	19.43 U	1.94 U	0.10 U	0.48 U	0.10 U
1,2,4-Trichlorobenzene	51.96 U	26.72 J	0.26 U	1.34 U	0.26 U
1,2,4-Trimethylbenzene	23.60 U	58.99	1.47 J	0.59 U	4.92
1,2-Dibromoethane	199.81 U	19.98 U	1.00 U	5.00 U	1.00 U
1,2-Dichlorobenzene	25.85 U	2.59 U	0.13 U	0.66 U	0.13 U
1,2-Dichloroethane	40.47 U	4.05 U	0.20 U	1.01 U	0.20 U
1,2-Dichloropropane	44.37 U	4.44 U	0.22 U	1.11 U	0.22 U
1,3,5-Trimethylbenzene	34.41 U	15.73 J	0.17 U	0.88 U	1.47 J
1,3-Butadiene	16.15 U	1.61 U	0.08 U	0.40 U	0.08 U
1,3-Dichlorobenzene	20.44 U	2.04 U	1.20 J	0.51 U	0.10 U
1,4-Dichlorobenzene	29.46 U	2.95 U	0.60 J	0.72 U	0.60 J
1,4-Dioxane	50.04 U	5.00 U	0.25 U	1.25 U	0.25 U
2,2,4-Trimethylpentane	22.89 U	2.29 U	0.12 U	0.56 U	0.93 J
2-Butanone	58.99 U	29.49	15.63	10.32 D	10.03
2-Hexanone	161.64 U	16.16 U	0.83 U	4.08 U	0.83 U
4-Ethyltoluene	14.75 U	1.47 U	0.07 U	0.37 U	1.47 J
4-Methyl-2-Pentanone	40.57 U	4.06 U	0.20 U	1.02 U	0.82 J
Acetone	38.01 U	30.88 B	18.29	19.95 D	47.51 EB
Allyl Chloride	37.56 U	3.76 U	0.19 U	0.97 U	0.19 U
Benzene	28.11 U	2.81 U	1.28 J	0.70 U	3.83
Benzyl Chloride	35.53 U	3.55 U	0.18 U	0.89 U	0.18 U
Bromodichloromethane	66.99 U	6.70 U	0.33 U	1.67 U	0.33 U
Bromoethene	20.99 U	2.10 U	0.10 U	0.52 U	0.10 U
Bromoform	32.05 U	3.21 U	0.16 U	0.79 U	0.16 U
Bromomethane	18.64 U	1.86 U	0.09 U	0.47 U	0.09 U
Carbon Disulfide	9.65 U	0.97 U	0.05 U	0.24 U	3.74
Carbon Tetrachloride	21.39 U	2.14 U	0.11 U	0.53 U	0.50
Chlorobenzene	23.49 U	2.35 U	0.12 U	0.60 U	0.12 U
Chloroethane	8.97 U	0.90 U	0.04 U	0.22 U	0.04 U
Chloroform	29.79 U	2.98 U	0.98 J	0.73 U	1.47 J
Chloromethane	10.12 U	6.20 J	0.05 U	0.25 U	0.05 U
cis-1,2-Dichloroethene	27.75 U	2.78 U	0.14 U	0.71 U	0.14 U
cis-1,3-Dichloropropene	44.94 U	4.49 U	0.23 U	1.13 U	0.23 U
Cyclohexane	8.26 U	0.83 U	0.04 U	0.21 U	0.69 J
Dibromochloromethane	43.45 U	4.34 U	0.22 U	1.11 U	0.22 U
Dichlorodifluoromethane	11373.01 D	227.46	49.45	54.39 D	4.94
Dichlorotetrafluoroethane	30.06 U	3.01 U	0.15 U	0.77 U	0.15 U
Ethanol	1130.55 D	678.33	471.06 E	527.59 ED	263.80 E
Ethyl Acetate	37.69 U	3.77 U	0.19 U	0.95 U	0.19 U
Ethyl Benzene	15.64 U	1.56 U	0.43 J	0.39 U	4.34
Heptane	19.67 U	1.97 U	0.82 J	0.49 U	2.05
Hexachloro-1,3-Butadiene	45.87 U	49.07 J	0.23 U	1.17 U	0.23 U
Hexane	17.97 U	1.80 U	1.76 J	0.46 U	2.47
m/p-Xylene	37.79 U	3.78 U	1.74 J	0.96 U	13.47
Methyl tert-Butyl Ether	12.26 U	1.23 U	0.06 U	0.30 U	0.06 U
Methylene Chloride	10.77 U	25.01 JB	1.39 JB	0.26 U	1.39 JB
o-Xylene	20.85 U	2.08 U	0.43 J	0.52 U	5.21
Propene	7.39 U	8.59 J	1.55	0.19 U	3.61
Styrene	51.09 U	5.11 U	0.26 U	1.32 U	0.85 J
t-1,3-Dichloropropene	49.94 U	4.99 U	0.26 U	1.27 U	0.26 U
tert-Butyl alcohol	48.50 U	4.85 U	2.43	1.21 U	0.24 U
Tetrachloroethene	64.42 U	33.91 J	16.27	46.11 D	19.67
Tetrahydrofuran	107.08 U	18.90 J	6.30	5.67 JD	4.41
Toluene	35.80 U	5.28 J	3.39	3.39 JD	16.58
trans-1,2-Dichloroethene	24.19 U	2.42 U	0.12 U	0.59 U	0.12 U
Trichloroethene	43.53 U	12.90	27.95	27.95 D	13.44
Trichlorofluoromethane	1404.91 D	1966.87	297.84 E	365.28 D	78.67
Vinyl Acetate	68.38 U	6.84 U	0.35 U	1.73 U	0.35 U
Vinyl Chloride	12.27 U	1.23 U	0.06 U	0.31 U	0.06 U

**Table 1**  
**132-20 Merrick Boulevard**  
**Springfield Gardens, Queens, NY**  
Soil Vapor Analytical Results  
Volatile Organic Compounds

Dilution	4	1	1	10	1
Client ID	SE-4-HOME-DEPOTDL	SW-1-HOME-DEPOT	SW-2-HOME-DEPOT	SW-2-HOME-DEPOTDL	SW-3-HOME-DEPOT
Date Sampled	12/04/07	11/30/07	11/30/07	11/30/07	12/04/07
Lab Sample ID	Y5443-20DL	Y5443-01	Y5443-08	Y5443-08DL	Y5443-09
Units	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3
Analyte					
1,1,1-Trichloroethane	12.00 D	0.55 J	36.56	37.10 D	0.12 U
1,1,2,2-Tetrachloroethane	0.65 U	0.16 U	0.16 U	1.65 U	0.16 U
1,1,2-Trichloroethane	0.98 U	0.24 U	0.24 U	2.40 U	0.24 U
1,1,2-Trichlorotrifluoroethane	0.77 U	0.20 U	0.20 U	1.99 U	0.20 U
1,1-Dichloroethane	0.38 U	0.10 U	0.10 U	0.97 U	0.10 U
1,1-Dichloroethene	0.39 U	0.10 U	0.10 U	0.99 U	0.10 U
1,2,4-Trichlorobenzene	1.04 U	0.26 U	0.26 U	2.60 U	0.26 U
1,2,4-Trimethylbenzene	3.93 JD	1.47 J	2.46	1.18 U	2.46
1,2-Dibromoethane	4.00 U	1.00 U	1.00 U	9.99 U	1.00 U
1,2-Dichlorobenzene	0.52 U	0.13 U	0.13 U	1.32 U	0.13 U
1,2-Dichloroethane	0.81 U	0.20 U	0.20 U	2.02 U	0.20 U
1,2-Dichloropropane	0.88 U	0.22 U	0.46 J	2.22 U	0.22 U
1,3,5-Trimethylbenzene	0.69 U	0.17 U	0.49 J	1.72 U	0.98 J
1,3-Butadiene	0.33 U	0.08 U	0.08 U	0.80 U	0.08 U
1,3-Dichlorobenzene	0.40 U	0.10 U	2.40 J	1.02 U	0.10 U
1,4-Dichlorobenzene	0.60 U	1.20 J	1.20 J	1.50 U	0.15 U
1,4-Dioxane	0.98 U	0.25 U	0.25 U	2.50 U	0.25 U
2,2,4-Trimethylpentane	0.46 U	0.93 J	0.12 U	1.17 U	0.47 J
2-Butanone	10.32 D	28.90	29.49	32.44 D	2.95
2-Hexanone	3.32 U	0.83 U	1.70 J	8.25 U	0.83 U
4-Ethyltoluene	0.29 U	0.07 U	0.07 U	0.74 U	0.98 J
4-Methyl-2-Pentanone	0.82 U	0.20 U	0.82 J	2.05 U	0.20 U
Acetone	52.26 DB	19.72	16.87	33.26 DB	11.64 B
Allyl Chloride	0.78 U	0.19 U	0.19 U	1.91 U	0.31 J
Benzene	3.83 JD	1.28 J	1.60	1.41 U	3.19
Benzyl Chloride	0.70 U	0.18 U	0.18 U	1.78 U	0.18 U
Bromodichloromethane	1.34 U	0.33 U	0.33 U	3.35 U	0.33 U
Bromoethene	0.42 U	0.10 U	0.10 U	1.05 U	0.10 U
Bromoform	0.63 U	0.16 U	0.16 U	1.55 U	0.16 U
Bromomethane	0.37 U	0.09 U	0.09 U	0.93 U	0.09 U
Carbon Disulfide	12.46 D	0.05 U	0.05 U	0.47 U	0.31 J
Carbon Tetrachloride	0.42 U	0.11 U	0.31	1.07 U	0.44
Chlorobenzene	0.46 U	0.12 U	0.12 U	1.20 U	0.12 U
Chloroethane	0.18 U	0.04 U	0.04 U	0.45 U	0.04 U
Chloroform	0.59 U	3.42	1.47 J	1.51 U	0.15 U
Chloromethane	0.20 U	0.05 U	0.05 U	4.75 JD	1.45
cis-1,2-Dichloroethene	0.56 U	0.14 U	0.14 U	1.39 U	0.79 J
cis-1,3-Dichloropropene	0.91 U	0.23 U	0.23 U	2.27 U	0.23 U
Cyclohexane	0.17 U	0.04 U	0.04 U	0.41 U	0.34 J
Dibromochloromethane	0.85 U	0.22 U	0.22 U	2.22 U	0.22 U
Dichlorodifluoromethane	0.33 U	0.08 U	0.08 U	34.61 D	3.46
Dichlorotetrafluoroethane	0.61 U	0.15 U	0.15 U	1.54 U	0.15 U
Ethanol	358.01 ED	904.44 E	697.17 E	810.23 ED	139.43 E
Ethyl Acetate	0.75 U	0.19 U	0.19 U	1.90 U	3.57
Ethyl Benzene	3.91 JD	0.43 J	0.87 J	0.78 U	2.61
Heptane	2.05 JD	0.41 J	0.82 J	0.98 U	0.41 J
Hexachloro-1,3-Butadiene	0.93 U	0.23 U	0.23 U	2.35 U	0.23 U
Hexane	2.47 JD	1.76	1.06 J	0.92 U	1.76 J
m/p-Xylene	12.60 D	1.74 J	2.61	1.87 U	8.25
Methyl tert-Butyl Ether	0.24 U	0.36 J	0.06 U	0.61 U	0.06 U
Methylene Chloride	2.08 JDB	1.39 JB	1.04 JB	5.21 JDB	2.78 B
o-Xylene	4.78 JD	0.43 J	0.87 J	1.04 U	3.04
Propene	4.98 D	0.04 U	0.04 U	5.15 JD	1.72
Styrene	1.06 U	0.26 U	0.26 U	2.64 U	0.43 J
t-1,3-Dichloropropene	1.04 U	0.26 U	0.26 U	2.59 U	0.26 U
tert-Butyl alcohol	0.97 U	0.24 U	0.24 U	2.39 U	0.24 U
Tetrachloroethene	18.99 D	1.36 J	20.34	20.34 JD	0.68 J
Tetrahydrofuran	5.04 JD	11.34	12.60	14.49 JD	1.89 J
Toluene	15.83 D	4.90	5.28	4.90 JD	13.19
trans-1,2-Dichloroethene	0.48 U	0.12 U	0.12 U	1.23 U	0.12 U
Trichloroethene	13.44 D	0.54	53.20	51.06 D	0.22 U
Trichlorofluoromethane	78.67 D	21.92	230.40 E	241.64 D	6.74
Vinyl Acetate	1.40 U	0.35 U	0.35 U	3.49 U	1.08 J
Vinyl Chloride	0.24 U	0.06 U	0.06 U	0.61 U	0.06 U

**Table 1**  
**132-20 Merrick Boulevard**  
**Springfield Gardens, Queens, NY**  
Soil Vapor Analytical Results  
Volatile Organic Compounds

Dilution	1	1	1	1	1
Client ID	SW-4-HOME-DEPOT	SW-5-HOME-DEPOT	SW-6-HOME-DEPOT	SS-1-HOME-DEPOT	SS-2-HOME-DEPOT
Date Sampled	12/04/07	12/04/07	12/04/07	12/04/07	12/04/07
Lab Sample ID	Y5443-11	Y5443-12	Y5443-13	Y5443-14	Y5443-16
Units	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3
Analyte					
1,1,1-Trichloroethane	0.12 U	0.55 J	1.09 J	1.09 J	1.09 J
1,1,2,2-Tetrachloroethane	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
1,1,2-Trichloroethane	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U
1,1,2-Trichlorotrifluoroethane	0.77 J	0.20 U	0.20 U	0.77 J	0.77 J
1,1-Dichloroethane	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
1,1-Dichloroethene	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
1,2,4-Trichlorobenzene	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
1,2,4-Trimethylbenzene	1.97 J	3.44	4.42	2.46 J	3.93
1,2-Dibromoethane	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U
1,2-Dichlorobenzene	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
1,2-Dichloroethane	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
1,2-Dichloropropane	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
1,3,5-Trimethylbenzene	0.49 J	0.98 J	1.47 J	0.98 J	0.98 J
1,3-Butadiene	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U
1,3-Dichlorobenzene	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
1,4-Dichlorobenzene	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
1,4-Dioxane	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
2,2,4-Trimethylpentane	0.93 J	0.93 J	1.40 J	1.40 J	0.93 J
2-Butanone	3.83	5.31	5.90	4.13	5.31
2-Hexanone	0.83 U	0.83 U	0.83 U	0.83 U	0.83 U
4-Ethyltoluene	0.98 J	0.98 J	1.47 J	0.98 J	0.98 J
4-Methyl-2-Pentanone	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U
Acetone	17.34 B	23.75 B	16.39 B	12.83 B	15.92 B
Allyl Chloride	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Benzene	2.56	3.83	3.51	2.88	2.56
Benzyl Chloride	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U
Bromodichloromethane	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
Bromoethene	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
Bromoform	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U
Bromomethane	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U
Carbon Disulfide	1.87	0.05 U	0.05 U	0.05 U	0.05 U
Carbon Tetrachloride	0.38	0.44	0.44	0.44	0.50
Chlorobenzene	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U
Chloroethane	0.53 J	0.04 U	0.04 U	0.04 U	0.04 U
Chloroform	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
Chloromethane	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
cis-1,2-Dichloroethene	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U
cis-1,3-Dichloropropene	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U
Cyclohexane	0.69 J	0.69 J	1.03 J	0.69 J	0.69 J
Dibromochloromethane	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
Dichlorodifluoromethane	2.97	9.89	0.08 U	2.47	2.97
Dichlorotetrafluoroethane	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U
Ethanol	114.94 E	207.27 E	160.16 E	126.24 E	150.74 E
Ethyl Acetate	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U
Ethyl Benzene	2.61	3.91	3.47	2.61	2.61
Heptane	1.64 J	0.41 J	1.23 J	0.82 J	0.82 J
Hexachloro-1,3-Butadiene	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U
Hexane	1.41 J	1.41 J	1.41 J	1.06 J	2.11
m/p-Xylene	7.82	13.47	12.16	7.82	7.82
Methyl tert-Butyl Ether	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U
Methylene Chloride	2.08 B	1.74 JB	2.78 B	1.39 JB	5.91 B
o-Xylene	3.04	4.78	5.21	3.04	3.47
Propene	18.90	1.20	1.03	1.20	1.37
Styrene	0.43 J	0.43 J	0.43 J	0.43 J	0.43 J
t-1,3-Dichloropropene	0.26 U	0.26 U	0.26 U	0.26 U	0.26 U
tert-Butyl alcohol	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U
Tetrachloroethene	1.36 J	1.36 J	2.71 J	1.36 J	1.36 J
Tetrahydrofuran	1.89 J	3.78	3.15 J	1.89 J	2.52 J
Toluene	12.06	19.60	16.96	12.06	11.31
trans-1,2-Dichloroethene	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U
Trichloroethene	0.22 U	0.22 U	0.22 U	0.22 U	0.48
Trichlorofluoromethane	30.91	11.24	19.67	21.92	61.82
Vinyl Acetate	0.35 U	0.35 U	0.35 U	0.35 U	0.35 U
Vinyl Chloride	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U

**Table 1**  
**132-20 Merrick Boulevard**  
**Springfield Gardens, Queens, NY**  
Soil Vapor Analytical Results  
Volatile Organic Compounds

Dilution	1	1	5	1
Client ID	SS-3-HOME-DEPOT	SS-4-HOME-DEPOT	SS-4-HOME-DEPOTDL	SSW-2-HOME-DEPOT
Date Sampled	12/04/07	12/04/07	12/04/07	11/30/07
Lab Sample ID	Y5443-17	Y5443-18	Y5443-18DL	Y5443-19
Units	µg/m3	µg/m3	µg/m3	µg/m3
Analyte				
1,1,1-Trichloroethane	3.82	1.64 J	0.60 U	3.27
1,1,2,2-Tetrachloroethane	0.16 U	0.16 U	0.82 U	0.16 U
1,1,2-Trichloroethane	0.24 U	0.24 U	1.20 U	0.24 U
1,1,2-Trichlorotrifluoroethane	0.77 J	0.20 U	1.00 U	0.77 J
1,1-Dichloroethane	0.10 U	0.10 U	0.49 U	0.10 U
1,1-Dichloroethene	0.10 U	0.40 J	0.48 U	0.10 U
1,2,4-Trichlorobenzene	0.26 U	0.26 U	1.34 U	0.26 U
1,2,4-Trimethylbenzene	4.42	3.44	0.59 U	0.98 J
1,2-Dibromoethane	1.00 U	1.00 U	5.00 U	1.00 U
1,2-Dichlorobenzene	0.13 U	0.13 U	0.66 U	0.13 U
1,2-Dichloroethane	0.20 U	0.20 U	1.01 U	0.20 U
1,2-Dichloropropane	0.22 U	0.22 U	1.11 U	0.22 U
1,3,5-Trimethylbenzene	0.98 J	0.98 J	0.88 U	0.17 U
1,3-Butadiene	0.08 U	0.08 U	0.40 U	0.08 U
1,3-Dichlorobenzene	0.10 U	0.10 U	0.51 U	0.10 U
1,4-Dichlorobenzene	0.15 U	0.15 U	0.72 U	0.15 U
1,4-Dioxane	0.25 U	0.25 U	1.25 U	0.25 U
2,2,4-Trimethylpentane	0.93 J	0.93 J	0.56 U	0.93 J
2-Butanone	4.72	5.01	3.24 JD	5.01
2-Hexanone	1.70 J	0.83 U	4.08 U	0.83 U
4-Ethyltoluene	0.98 J	0.98 J	0.37 U	0.07 U
4-Methyl-2-Pentanone	0.41 J	0.20 U	1.02 U	0.20 U
Acetone	16.63 B	30.88 B	28.51 D	12.35 B
Allyl Chloride	0.19 U	0.19 U	0.97 U	0.19 U
Benzene	2.24	2.24	0.70 U	1.60 J
Benzyl Chloride	0.18 U	0.18 U	0.89 U	0.18 U
Bromodichloromethane	0.33 U	0.33 U	1.67 U	0.33 U
Bromoethene	0.10 U	0.10 U	0.52 U	0.10 U
Bromoform	0.16 U	0.16 U	0.79 U	0.16 U
Bromomethane	0.09 U	0.09 U	0.47 U	0.09 U
Carbon Disulfide	0.05 U	20.86	15.57 D	0.05 U
Carbon Tetrachloride	0.44	0.44	0.53 U	0.57
Chlorobenzene	0.12 U	0.12 U	0.60 U	0.12 U
Chloroethane	0.04 U	0.04 U	0.22 U	0.04 U
Chloroform	0.15 U	0.49 J	0.73 U	0.15 U
Chloromethane	1.86	0.05 U	0.25 U	1.65
cis-1,2-Dichloroethene	0.14 U	0.14 U	0.71 U	0.14 U
cis-1,3-Dichloropropene	0.23 U	0.23 U	1.13 U	0.23 U
Cyclohexane	0.04 U	0.04 U	0.21 U	0.04 U
Dibromochloromethane	0.22 U	0.22 U	1.11 U	0.22 U
Dichlorodifluoromethane	2.97	3.46	3.46 JD	6.92
Dichlorotetrafluoroethane	0.15 U	0.15 U	0.77 U	0.15 U
Ethanol	207.27 E	207.27 E	207.27 ED	114.94 E
Ethyl Acetate	0.19 U	0.19 U	0.95 U	0.19 U
Ethyl Benzene	3.04	2.61	0.39 U	0.43 J
Heptane	0.41 J	0.82 J	0.49 U	1.23 J
Hexachloro-1,3-Butadiene	0.23 U	0.23 U	1.17 U	0.23 U
Hexane	1.06 J	2.11	0.46 U	1.41 J
m/p-Xylene	9.56	9.12	5.65 JD	1.30 J
Methyl tert-Butyl Ether	0.06 U	0.06 U	0.30 U	0.06 U
Methylene Chloride	2.43 B	1.04 JB	0.26 U	1.74 JB
o-Xylene	3.91	3.91	0.52 U	0.43 J
Propene	1.20	80.74 E	73.87 D	2.58
Styrene	0.43 J	0.43 J	1.32 U	0.26 U
t-1,3-Dichloropropene	0.26 U	0.26 U	1.27 U	0.26 U
tert-Butyl alcohol	0.24 U	0.24 U	1.21 U	0.24 U
Tetrachloroethene	14.92	2.71 J	4.75 JD	3.39 J
Tetrahydrofuran	3.15 J	3.15 J	2.65 U	1.89 J
Toluene	11.31	11.31	7.54 JD	3.01
trans-1,2-Dichloroethene	0.12 U	0.12 U	0.59 U	0.12 U
Trichloroethene	1.29	0.32	1.07 U	4.35
Trichlorofluoromethane	26.41	14.05	14.61 D	26.41
Vinyl Acetate	0.35 U	0.35 U	1.73 U	0.35 U
Vinyl Chloride	0.06 U	0.06 U	0.31 U	0.06 U



**Table 1**  
**132-20 Merrick Boulevard**  
**Springfield Gardens, Queens, NY**  
Soil Vapor Analytical Results  
Volatile Organic Compounds

Dilution	1	1
Client ID	AA-NORTH-HOME-DEPOT	AA-SOUTH-HOME-DEPOT
Date Sampled	12/04/07	12/04/07
Lab Sample ID	Y5443-10	Y5443-15
Units	µg/m3	µg/m3
Analyte		
1,1,1-Trichloroethane	0.12 U	0.12 U
1,1,2,2-Tetrachloroethane	0.16 U	0.16 U
1,1,2-Trichloroethane	0.24 U	0.24 U
1,1,2-Trichlorotrifluoroethane	0.77 J	0.77 J
1,1-Dichloroethane	0.10 U	0.10 U
1,1-Dichloroethene	0.10 U	0.10 U
1,2,4-Trichlorobenzene	0.26 U	0.26 U
1,2,4-Trimethylbenzene	0.49 J	1.47 J
1,2-Dibromoethane	1.00 U	1.00 U
1,2-Dichlorobenzene	0.13 U	0.13 U
1,2-Dichloroethane	0.20 U	0.20 U
1,2-Dichloropropane	0.22 U	0.22 U
1,3,5-Trimethylbenzene	0.17 U	0.17 U
1,3-Butadiene	0.08 U	0.08 U
1,3-Dichlorobenzene	0.10 U	0.10 U
1,4-Dichlorobenzene	0.15 U	0.15 U
1,4-Dioxane	0.25 U	0.25 U
2,2,4-Trimethylpentane	0.12 U	0.47 J
2-Butanone	0.88 J	1.47 J
2-Hexanone	0.83 U	0.83 U
4-Ethyltoluene	0.07 U	0.07 U
4-Methyl-2-Pentanone	0.20 U	0.20 U
Acetone	7.13 B	10.45 B
Allyl Chloride	0.19 U	0.19 U
Benzene	1.28 J	1.28 J
Benzyl Chloride	0.18 U	0.18 U
Bromodichloromethane	0.33 U	0.33 U
Bromoethene	0.10 U	0.10 U
Bromoform	0.16 U	0.16 U
Bromomethane	0.09 U	0.09 U
Carbon Disulfide	0.62 J	0.05 U
Carbon Tetrachloride	0.50	0.63
Chlorobenzene	0.12 U	0.12 U
Chloroethane	0.04 U	0.04 U
Chloroform	0.15 U	0.15 U
Chloromethane	1.24	1.24
cis-1,2-Dichloroethene	0.14 U	0.14 U
cis-1,3-Dichloropropene	0.23 U	0.23 U
Cyclohexane	0.04 U	0.04 U
Dibromochloromethane	0.22 U	0.22 U
Dichlorodifluoromethane	2.97	2.97
Dichlorotetrafluoroethane	0.15 U	0.15 U
Ethanol	9.99	14.51
Ethyl Acetate	0.19 U	0.19 U
Ethyl Benzene	0.08 U	0.43 J
Heptane	0.10 U	0.41 J
Hexachloro-1,3-Butadiene	0.23 U	0.23 U
Hexane	1.41 J	1.41 J
m/p-Xylene	0.87 J	1.74 J
Methyl tert-Butyl Ether	0.06 U	0.06 U
Methylene Chloride	2.43 B	4.17 B
o-Xylene	0.10 U	0.87 J
Propene	1.55	2.06
Styrene	0.26 U	0.26 U
t-1,3-Dichloropropene	0.26 U	0.26 U
tert-Butyl alcohol	0.24 U	0.24 U
Tetrachloroethene	0.33 U	0.33 U
Tetrahydrofuran	0.53 U	0.53 U
Toluene	1.88	3.01
trans-1,2-Dichloroethene	0.12 U	0.12 U
Trichloroethene	1.67	0.22 U
Trichlorofluoromethane	1.69 J	1.69 J
Vinyl Acetate	0.35 U	0.35 U
Vinyl Chloride	0.06 U	0.06 U

**APPENDIX F**  
**QUANTITATIVE EXPOSURE ASSESSMENT**

**Quantitative Exposure Assessment for Nearest Residential Receptor in Basement**

Highest VOC concentration at a downgradient end of the site (MW-5S):

710 parts per billion (ppb)

Distance to nearest off-site residential receptor (SE of site, east side of Springfield Blvd):

1,160 feet

Concentration in groundwater at off-site receptor:

710 ppb x 503 (dilution factor)<sup>1</sup> = 1.41 ppb

Equation to evaluate risk posed by VOCs in groundwater<sup>2</sup>:

$$\mathbf{RBSL}_w = \mathbf{RBSL}_a \div \mathbf{VF}_{wesp}$$

where:

$\mathbf{RBSL}_w$  = Risk-based screening level in water (mg/L - H<sub>2</sub>O),

$\mathbf{RBSL}_a$  = Risk-based screening level in air, which, as per New York State Department of Health, is 15 ppb per m<sup>3</sup> for residential receptors or 0.1335 mg/m<sup>3</sup>

$\mathbf{VF}_{wesp}$  = Volatization factor from groundwater to ambient air (mg/M<sup>3</sup> ÷ mg/l - H<sub>2</sub>O), and accounts for volatization from groundwater to enclosed space and is calculated as:

Solve for  $\mathbf{RBSL}_w$  as per equation in 4. Unknown term is  $\mathbf{VF}_{wesp}$

$$\mathbf{VF}_{wesp} = \left( \mathbf{H} * \left[ \frac{\mathbf{D}^{eff/ws}}{\mathbf{L}_{GW}} \div \mathbf{ER} * \mathbf{L}_B \right] \div 1 + \left[ \frac{\mathbf{D}^{eff/ws}}{\mathbf{L}_{GW}} \div \mathbf{ER} * \mathbf{L}_B \right] + \left[ \frac{\mathbf{D}^{eff/ws}}{\mathbf{L}_{GW}} \div \left( \frac{\mathbf{D}^{eff}}{\mathbf{L}_{crack} / \mathbf{L}_{crack(n)}} \right) \right] \right) * 10^3$$

$\mathbf{H}$  = Henry Law's constant for PERC = 0.5

$\mathbf{L}_{GW}$  = Depth to groundwater in a residential basement (18-10 feet) = 8 feet = 243.84 centimeters

$\mathbf{D}^{eff/ws}$  = Effective diffusion coefficient between groundwater and soil surface (Cm<sup>2</sup>/s) : See

Equation 5.1

$\mathbf{ER}$  = Enclosed space air exchange: 0.00014<sup>3</sup>

$\mathbf{L}_B$  = Enclosed space volume/infiltration area ratio: 0.00014<sup>3</sup>

$\mathbf{D}^{eff_{crack}}$  = Effective diffusion coefficient through foundation cracks: See equation 5.2

$\mathbf{L}_{crack}$  = Enclosed space foundation area/wall thickness: 15<sup>3</sup>

Equation 5.1

$$D^{eff/ws} = (h_{cap} + h_v) * [h_{cap}/D_{eff/cap} + h_v/D_{eff/s}]^{-1} \text{ where:}$$

$D^{eff/ws}$  is effective diffusion coefficient between groundwater and soil surface,  
 $h_{cap}$  = thickness of capillary fringe (cm):  
 24.6 centimeters<sup>4</sup>  
 $h_v$  = thickness of vadose zone = 8 feet (18 feet to groundwater -  
 10 feet for basement):  
 243.84 centimeters  
 $D_{eff/cap}$  = effective diffusion through capillary fringe (cm<sup>2</sup>/s):  $[D^a * \theta_{acap}^{3.3}/\theta_T^2] + [D^w * 1/H * \theta_{wcap}^{3.3}/\theta_T^2]$ :  
 $D^a$  = Diffusion coefficient in air (cm<sup>2</sup>/s) for perc: 0.00720<sup>5</sup>  
 $\theta_{acap}$  = Volumetric air content in capillary fringe soils: 0.038  
 $\theta_T$  = Total soil porosity (cm<sup>3</sup>/cm<sup>3</sup>-soil): 0.38<sup>3</sup>  
 $D^w$  = Diffusion coefficient in water for perc: 0.000000820<sup>5</sup>  
 $\theta_{wcap}$  = Volumetric water content in capillary fringe soils:  
 0.342<sup>3</sup>  
 $D_{eff/s}$  = effective diffusion through vadose zone (cm<sup>2</sup>/s):  $[D^a * \theta_{vas}^{3.3}/\theta_T^2] + [D^w * 1/H * \theta_{ws}^{3.3}/\theta_T^2]$ :  
 $\theta_{vas}$  = Volumetric air content in vadose zone soils: 0.26<sup>3</sup>  
 $\theta_{ws}$  = Volumetric water content in vadose zone soils: 0.12<sup>3</sup>

Based upon Equation 5.1  $D^{eff/ws} = 1.21 \times 10^{-5}$

Equation 5.2

$$D^{eff-crack} = (D_a \times (\theta_{crack}^{3.3}/\theta_T^2) + (D_w * 1/H * (\theta_{wcrack}^{3.3}/\theta_T^2)), \text{ where}$$

$D^{eff-crack}$  is the effective diffusion coefficient through foundation cracks of residential building,

$D_a$  = Diffusion factor of perc in air = 0.0072<sup>5</sup>,  
 $D_w$  = Diffusion factor of perc in water = 0.000000820<sup>5</sup>,  
 $\theta_{crack}$  = volumetric air content in foundation wall cracks (cm<sup>3</sup>-air/cm<sup>3</sup>) = 0.038,  
 $\theta_{wcrack}$  = volumetric water content in foundation wall cracks (cm<sup>3</sup>-water/cm<sup>3</sup>) = 0.12  
 $H$  = Henry's Law Constant for Perc = 0.5

Based upon Equation 5.2  $D^{eff-crack} = 5.62 \times 10^{-4}$

Solving for  $VF_{wesp} = 5.3 \times 10^{-5}$

Solving for  $RBSLw = 131$  ppm of Perc

Predicted levels of Perc in groundwater at residential receptor is 1.41 ppb  
 Highest levels of Perc in groundwater at downgradient end of site is 710 ppb.

## References:

<sup>1</sup> Dilution factor based upon DEC steady-state dilution attenuation factors in the saturate zone assuming no chemical decay, as presented in the Department's Interim Procedures for

- Inactivation of Petroleum-impacted Sites and The Emergency Standard Guide for Risk-Based Corrective Action (RBCA) issued by the American Society of Testing and Materials (ASTM)
- <sup>2</sup> Equation is based upon Department's Interim Procedures for Inactivation of Petroleum-impacted Sites and The Emergency Standard Guide for Risk-Based Corrective Action (RBCA) issued by the American Society of Testing and Materials (ASTM).
  - <sup>3</sup> Tier 1 Default Fate and Transport Parameters, as per DEC Interim Procedures for Inactivation of Petroleum-impacted Sites.
  - <sup>4</sup> Thickness of capillary fringe for site based upon published data in C.W. Fetter for the average grain size of the site soil (medium sand), Contaminant Hydrogeology, 1993, pg 218.
  - <sup>5</sup> Diffusion coefficients in air and water for perc were obtained from the US EPA publication titled *Soil Screening Guidance: User's Guide*, Second Edition, 1996

**APPENDIX G**

**ENVIRONMENTAL NOTICE BULLETIN – NOTICE OF AVAILABILITY FOR COMMENT**

## ENB - REGION 2 NOTICES

### Negative Declaration

**Kings County** - The New York City Housing Development Corporation, as lead agency has determined that the proposed 50 Greene Avenue development will not have a significant adverse environmental impact. The action involves the financing of the conversion of a vacant medical service building to a residential housing development to contain thirty-nine (39) units and sixteen (16) parking spaces to be located in the cellar level of the building. The project is located at 50 Greene Avenue on the northeast corner of the block bounded by Greene Avenue and Fulton Street to the north and south and Carlton Avenue and Adelphi Street to the west and east, Brooklyn, New York

**Contact:** David S. Boccio, New York City Housing Development Corporation, 110 William Street, New York, NY 10038 (212) 227-5500 Fax: (212) 227-6886

### Notice of Availability for Comment

#### Voluntary Cleanup Agreement

**Name of Volunteer:** FC Springfield Associates, LLC.

**Project Location:** The New York State Department of Environmental Conservation (NYCDEC) and FC Springfield Associates, LLC have entered into a Remedial Voluntary Agreement, Index No. D2-0010-9911, which includes an attached Remedial Work Plan (the "Agreement"). The Voluntary Cleanup site is located at 132-20 Merrick Boulevard in Springfield Gardens, Queens, New York (the "Site").

**Project Description:** This 8.5 acre property, located in a commercial/industrial area, contains a 189,000 square foot building which was previously leased by Knomark, who manufactured fabric softeners, toilet bowl cleaners, fabric dyes and shoe polish from 1957-1988. It was also leased by UPS from 1988-1998 for vehicle maintenance. Soil and groundwater investigations were conducted in 1989, 1990, 1998 and 1999. The results of these investigations indicate that only trace amounts of solvents are present in the soils. The potential sources (drywells and USTs), together with contaminated soils, were removed from the site in 1988. Elevated levels of tetrachloroethene were detected in on-site wells in February 1999. FC Springfield Associates, LLC plans to develop the site and remove a portion of the existing building as part of site development.

To address the groundwater contamination at the Site, FC Springfield Associates, LLC plans to install and pilot test a soil vapor extraction and air sparging system. This system will operate until the remedial objectives are achieved.

**Comment Period:** The Agreement and attached Work Plan for the Site are available for review at the location below. The public is invited to review the Agreement and attached Work Plan and submit written comments to the contact person within 30 days following the date of this notice. Written comments expressing objection or opposition to the Work Plan must explain the basis of the opposition, and identify the specific grounds which could lead the Department to impose significant changes to the Work Plan. No formal response is made to comments received, but as a result of comments, the Department may reevaluate and revise the Work Plan.

**Contact person:** Jennifer Kann, New York State Department of Environmental Conservation, Region 2, 1 Hunters Point Plaza, 47-40 21st Street, Long Island City, NY 11101-5407

## Final EIS

**Queens County** - New York City School Construction Authority as lead agency has accepted a final Environmental Impact Statement on the proposed Public School 228-Queens. The action involves the proposed site selection, acquisition, acceptance of construction funding and construction of a new early childhood center on an approximately 19,000 square-foot site at the northeast corner of Northern Boulevard and 93rd Street in Jackson Heights, Queens. The proposed project includes a 300-seat, three-story school facility and an approximately 3,000 square-foot early childhood playground serving students in Community School District #30. Comments will be accepted at the address provided until 1/18/00.

**Contact:** Ross J. Holden, Vice President & General Counsel, New York City School Construction Authority, 30-30 Thompson Ave., Long Island City, NY 11101 (718) 472-8220 Fax: (718) 472-8808

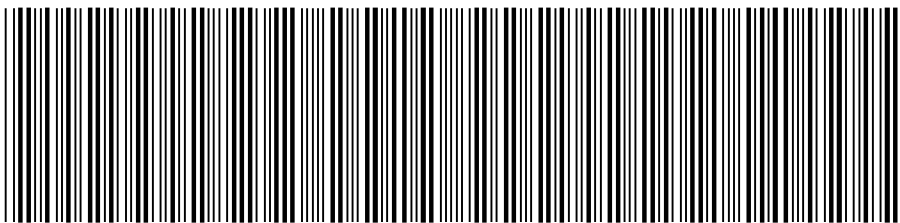
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**APPENDIX H**  
**DEED RESTRICTION**

**NYC DEPARTMENT OF FINANCE  
OFFICE OF THE CITY REGISTER**

This page is part of the instrument. The City Register will rely on the information provided by you on this page for purposes of indexing this instrument. The information on this page will control for indexing purposes in the event of any conflict with the rest of the document.



2011071300637001001E46B1

**RECORDING AND ENDORSEMENT COVER PAGE**

**PAGE 1 OF 11**

**Document ID: 2011071300637001**

Document Date: 06-01-2011

Preparation Date: 07-13-2011

Document Type: SUNDRY AGREEMENT

Document Page Count: 10

**PRESENTER:**

CHICAGO TITLE INSURANCE CO. (PICK-UP)  
711 THIRD AVE, 5TH FLOOR  
3711-95096  
NEW YORK, NY 10017  
212-880-1200  
sabrina.kessler@ctt.com

**RETURN TO:**

CHICAGO TITLE INSURANCE CO. (PICK-UP)  
HARTMAN SIMONS & WOOD, LLP  
6400 POWERS FERRY ROAD, SUITE 400  
ATLANTA, GA 30339  
ATTN: ALICE D. WILCOX

**PROPERTY DATA**

Borough	Block	Lot	Unit	Address
QUEENS	12999	44	Entire Lot	132-20 MERRICK BOULEVARD
<b>Property Type: 1-3 FAMILY WITH STORE / OFFICE</b>				

**CROSS REFERENCE DATA**

CRFN \_\_\_\_\_ or Document ID \_\_\_\_\_ or Year \_\_\_\_\_ Reel \_\_\_\_\_ Page \_\_\_\_\_ or File Number \_\_\_\_\_

**PARTIES**

**PARTY 1:**

HD DEVELOPMENT OF MARYLAND, INC.  
2455 PACES FERRY ROAD, N.W., BUILDING C-20  
ALTANTA, GA 30339

**FEES AND TAXES**

Mortgage		Filing Fee:	
Mortgage Amount:	\$ 0.00	\$	0.00
Taxable Mortgage Amount:	\$ 0.00	NYC Real Property Transfer Tax:	\$ 0.00
Exemption:		NYS Real Estate Transfer Tax:	\$ 0.00
TAXES: County (Basic):	\$ 0.00		
City (Additional):	\$ 0.00		
Spec (Additional):	\$ 0.00		
TASF:	\$ 0.00		
MTA:	\$ 0.00		
NYCTA:	\$ 0.00		
Additional MRT:	\$ 0.00		
<b>TOTAL:</b>	<b>\$ 0.00</b>		
Recording Fee:	\$ 87.00		
Affidavit Fee:	\$ 0.00		



**RECORDED OR FILED IN THE OFFICE  
OF THE CITY REGISTER OF THE  
CITY OF NEW YORK**

Recorded/Filed 07-20-2011 15:10  
City Register File No.(CRFN):  
**2011000256789**

*Annette McMill*

*City Register Official Signature*

371,95096 (Q)  
Block 12999  
Lot 44

## DECLARATION of COVENANTS and RESTRICTIONS

**THIS COVENANT** is made the 1<sup>ST</sup> day of June, 2011, by HD Development of Maryland, Inc. ("HD Development"), having an office for the transaction of business at 2455 Paces Ferry Road, N.W., Building C-20, Atlanta, Georgia 30339.

**WHEREAS**, HD Development owns that certain parcel of real property located at 132-20 Merrick Boulevard in the City of Springfield Gardens, County of Queens, State of New York being more particularly described in Appendix "A" attached to this declaration and made a part hereof, and hereinafter referred to as the "Property"; and

**WHEREAS**, the Property is the subject of that certain Voluntary Cleanup Agreement ("VCA") entered into in 1999 by FC Springfield Associates, LLC ("FCSA") as the Volunteer as part of the New York State Department of Environmental Conservation's (the "Department") Voluntary Cleanup Program ("VCP"); and

**WHEREAS**, FCSA conveyed the Property to Home Depot U.S.A., Inc. ("Home Depot") by Bargain and Sale Deed dated June 15, 2000 and recorded in the Office of the City Register of the City of New York on June 30, 2000 on Reel 5618 at Pages 2181-2185; and

**WHEREAS**, FCSA assigned, transferred and conveyed to Home Depot all of FCSA's right, title and interest in and to the VCA under that certain Assignment and Assumption Agreement by and between FCSA and Home Depot, dated June 15, 2000; and,

**WHEREAS**, the Property was conveyed by Home Depot to HD Development by Warranty Deed dated September 16, 2005 and recorded or filed in the Office of the City Register of the City of New York on September 11, 2006 as City Register File No. (CRFN) 2006000509539; and

**WHEREAS**, Home Depot leases the Property from HD Development and controls the day-to-day operations of the Property and remains responsible for all matters related to the VCA and VCP pursuant to the Assignment and Assumption Agreement; and

**WHEREAS**, the Department approved a remedy to eliminate or mitigate all significant threats to the environment presented by the contamination disposed at the Property and such remedy requires that the Property be subject to restrictive covenants.

**NOW, THEREFORE**, HD Development of Maryland, Inc. for itself and its successors and/or assigns, covenants that:

First, the Property subject to this Declaration of Covenants and Restrictions is as shown on a map attached to this declaration as Appendix "B" and made a part hereof.

Second, unless prior written approval by the Department or, if the Department shall no longer exist, any New York State agency or agencies subsequently created to protect the environment of the State and the health of the State's citizens, hereinafter referred to as "the Relevant Agency", is first obtained, where contamination remains at the Property subject to the

provisions of the Site Management Plan (“SMP”), there shall be no construction, use or occupancy of the Property that results in the disturbance or excavation of the Property which threatens the integrity of the engineering controls or which results in unacceptable human exposure to contaminated soils.

Third, the owner of the Property shall not disturb, remove, or otherwise interfere with the installation, use, operation, and maintenance of engineering controls required for the remedy, which are described in the SMP, unless in each instance the owner first obtains a written waiver of such prohibition from the Department or Relevant Agency.

Fourth, the owner of the Property shall prohibit the Property from ever being used for purposes other than for commercial use without the express written waiver of such prohibition by the Relevant Agency.

Fifth, the owner of the Property shall prohibit the use of the groundwater underlying the Property without treatment rendering it safe for drinking water or industrial purposes, as appropriate, unless the user first obtains permission to do so from the Department or Relevant Agency.

Sixth, the owner of the Property shall provide a periodic certification, prepared and submitted by a professional engineer or environmental professional acceptable to the Department or Relevant Agency, which will certify that the institutional and engineering controls put in place are unchanged from the previous certification, comply with the SMP, and have not been impaired.

Seventh, the owner of the Property shall continue in full force and effect any institutional and engineering controls required for the approved remedy and maintain such controls, unless the owner first obtains permission to discontinue such controls from the Department or Relevant Agency, in compliance with the approved SMP, which is incorporated and made enforceable hereto, subject to modifications as approved by the Department or Relevant Agency.

Eighth, this Declaration is and shall be deemed a covenant that shall run with the land and shall be binding upon all future owners of the Property, and shall provide that the owner and its successors and assigns consent to enforcement by the Department or Relevant Agency of the prohibitions and restrictions that the Voluntary Cleanup Agreement requires to be recorded, and hereby covenant not to contest the authority of the Relevant Agency to seek enforcement.

Ninth, any deed of conveyance of the Property, or any portion thereof, shall recite, unless the Department or Relevant Agency has consented to the termination of such covenants and restrictions, that said conveyance is subject to this Declaration of Covenants and Restrictions.

'IN WITNESS WHEREOF, the undersigned has executed this instrument the day written below.

HD Development of Maryland, Inc.

By: [Handwritten Signature]

Name: Brett D. Soloway, Esq. *CTZ*

Title: Senior Counsel - Real Estate Law

STATE OF GEORGIA )

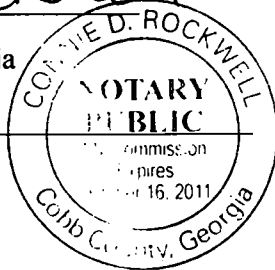
COUNTY OF COBB )

On the 1 day of June, in the year 2011, before me, the undersigned, personally appeared Brett D. Soloway, personally known to me to be the individual whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his capacity, and that by his signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

Connie D. Rockwell

Notary Public State of Georgia

My Commission Expires: \_\_\_\_\_



SEAL

Appendix "A"

All that certain plot, piece or parcel of land, situate, lying and being in the Borough and County of Queens, City and State of New York, bounded and described as follows:

BEGINNING at the corner formed by the intersection of the southerly side of Merrick Boulevard, 100 feet wide, with the easterly side of Belknap Street, 60 feet wide;

RUNING THENCE easterly along the southerly side of Merrick Boulevard, along an arc of a circle bearing to the left having a radius of 717.793 feet, a distance of 428 feet (deed) (428.14 feet on survey) to a point;

THENCE still easterly along the southerly side of Merrick Boulevard, north 79 degrees 45 minutes 26 seconds east, 9.37 feet to the westerly line of land of the Long Island Railroad Co.;

THENCE southerly along the westerly line of land of the Long Island Railroad Co. and parallel with the easterly side of Belknap Street, 920.36 feet to a point;

THENCE south 78 degrees 37 minutes 00 seconds west, 190 feet to a point;

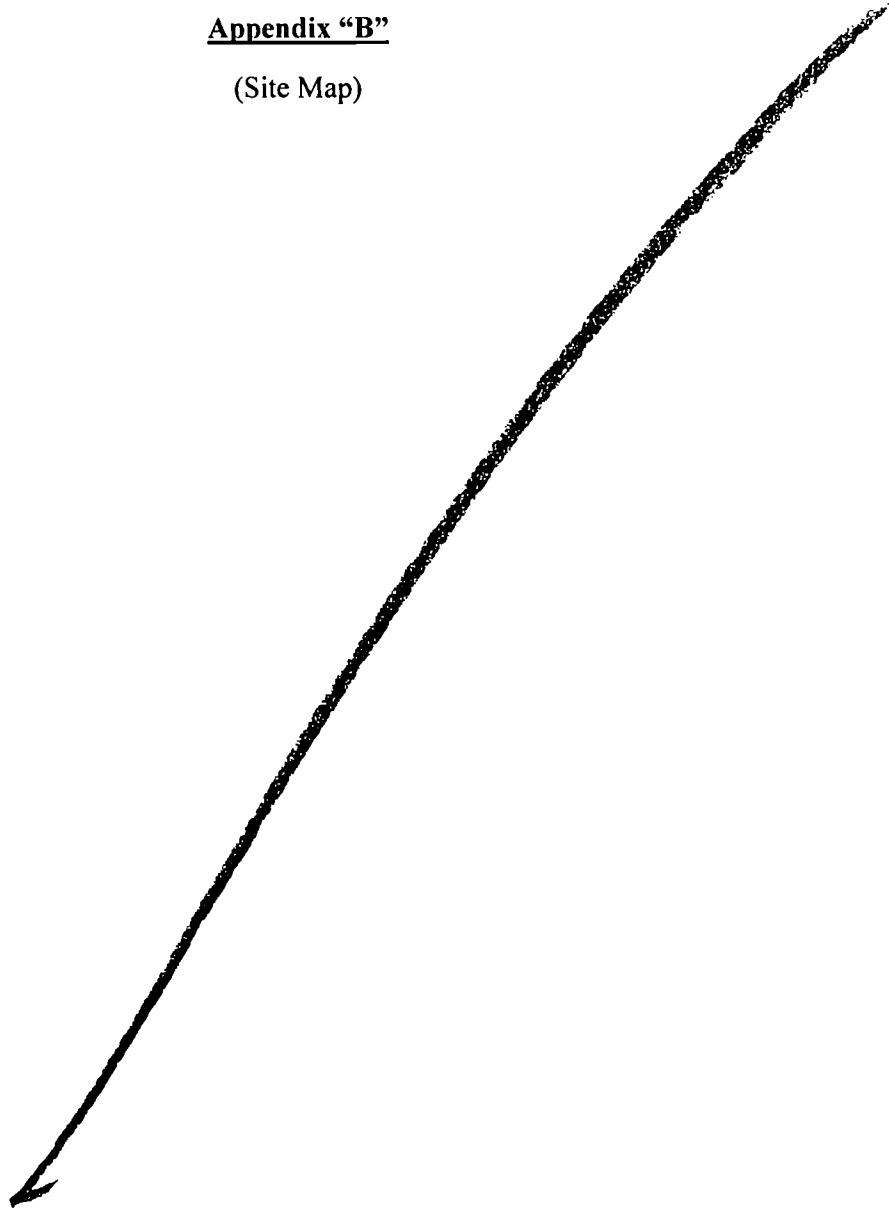
THENCE north 11 degrees 23 minutes 00 seconds west, parallel with the easterly side of Belknap Avenue, 100 feet;

THENCE south 78 degrees 37 minutes 00 seconds west parallel with the northerly side of 137<sup>th</sup> Avenue, 220 feet to the easterly side of Belknap Street;

THENCE along the easterly side of Belknap Street, north 11 degrees 23 minutes 00 seconds west, 952.56 feet to the corner, the point or place of BEGINNING.

**Appendix "B"**

(Site Map)







## INCUMBENCY/SECRETARIAL CERTIFICATE

The undersigned Assistant Secretary of Home Depot U.S.A., Inc., a Delaware corporation (the "Corporation"), hereby certifies:

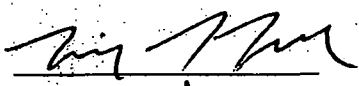
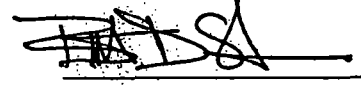

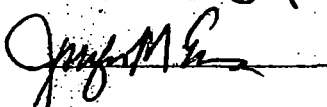
1. That the resolutions below constitute a true and correct copy of the resolutions contained in the Home Depot U.S.A., Inc., Unanimous Written Consent of the Board of Directors in Lieu of A Special Meeting, effective March 3, 2008, and that these resolutions have not been amended, annulled, rescinded or revoked and remain in full force and effect as of the date hereof.

RESOLVED, that the Executive Vice President, Secretary and General Counsel and the Vice President - Real Estate, each company employee with the title of Senior Counsel - Real Estate Law, Counsel - Real Estate Law, Senior Attorney - Real Estate Law, and Attorney - Real Estate Law, and each of them acting alone or together, or their duly delegated designee, are hereby authorized and directed, in the name of the Corporation, to take such steps as are necessary or desirable to effect the Corporation's policy of expansion and maintenance of its properties including, but not limited to, the acquisition, disposition or financing of real estate, the execution of Leases, Reciprocal Easement Agreement, Development Agreements, Easements, Servitudes, Right of Way, Assignments and any amendments or modifications to the foregoing, or any other instrument required to accomplish the aforesaid Corporate purposes; and

FURTHER RESOLVED, that the Executive Vice President, Secretary and General Counsel and the Vice President - Real Estate, each company employee with the title of Senior Counsel - Real Estate Law, Counsel - Real Estate Law, Senior Attorney - Real Estate Law, and Attorney - Real Estate Law, and each of them acting either alone or together, or their duly delegated designee, are hereby authorized and directed, in the name of the Corporation, to take, or cause to be taken, any and all actions and to execute and deliver any and all such other contracts, assignments, easements, conveyances, deeds, leases, subleases, agreements, certificates, instruments or any other documents as such individual or delegated designee may consider necessary or desirable to carry out the foregoing resolution and the transactions contemplated thereby; and

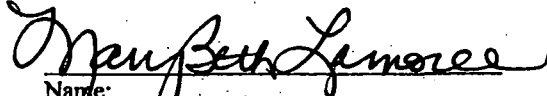
FURTHER RESOLVED, that these resolutions hereby revoke and supersede any other resolutions that heretofore granted the delegation of corporate authority to execute and deliver real estate documents by and on behalf of the Corporation.

2. The persons named below were on the date hereof the duly designated and qualified signatories of the Corporation, as set opposite his or her respective name, and that the signature appearing opposite his or her name, is the genuine facsimile signature of said signatory:

<u>Name</u>	<u>Title</u>	<u>Signature</u>
Michael C. LaFerle	Vice President Real Estate	
Brett D. Soloway	Senior Counsel Real Estate Law	
Erika M. Strawn	Senior Attorney Real Estate Law	
Jennifer M. Evans	Attorney Real Estate Law	

IN WITNESS WHEREOF, the undersigned has hereunto affixed the seal of the Corporation and set his/her signature, on this, the \_\_\_\_\_ day of \_\_\_\_\_, 2009.

[CORPORATE SEAL]

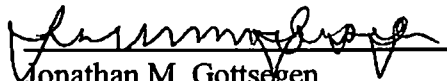
  
Name: Mary Beth Lamoree  
Title: Assistant Secretary

9/25/2009

**SECRETARIAL CERTIFICATE**

I, Jonathan M. Gottsegen, Assistant Secretary of The Home Depot, Inc., a Delaware corporation (the "Company"), certify that the attached is a true, complete and correct copy of the Delegation of Authority dated May 22, 2008, and that such Delegation of Authority has not been modified, amended or rescinded and remains in full force and effect on the date hereof.

Dated: July 7, 2008

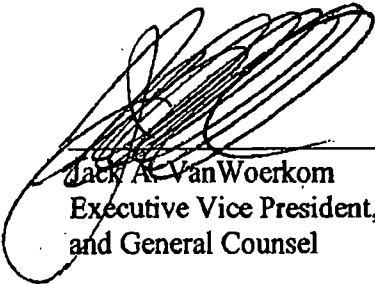
  
Jonathan M. Gottsegen  
Assistant Secretary



## DELEGATION OF AUTHORITY

I, Jack A. VanWoerkom, Executive Vice President, General Counsel and Corporate Secretary of The Home Depot, Inc. (the "Company"), do hereby designate the Vice President and Associate General Counsel-Real Estate Law, each Senior Counsel-Real Estate Law, each Counsel-Real Estate Law, each Senior Attorney-Real Estate Law and each Attorney-Real Estate Law of Home Depot U.S.A., Inc. as my designees and authorize each of them acting either alone or together to execute and deliver, or cause to be executed and delivered, any and all contracts, assignments, easements, conveyances, deeds, leases, subleases, agreements, certificates, instruments or any other documents on behalf of the Company, and each of its direct and indirect subsidiaries, related to real property owned or leased or to be acquired or leased by the Company or its direct and indirect subsidiaries (the "Documents") and to take, or cause to be taken, any and all actions in connection therewith as such individual or individuals may consider necessary or desirable, with such necessity or desirability being conclusively evidenced by the actions so taken. Further, I hereby ratify and approve all previous actions taken with respect to the execution and delivery of such Documents in the name of and on behalf of the Company and its direct and indirect subsidiaries.

IN WITNESS WHEREOF, I have hereunto set my hand this 22<sup>nd</sup> day of May, 2008.



---

Jack A. VanWoerkom  
Executive Vice President, Secretary  
and General Counsel

**APPENDIX I**  
**ALTA/ASCM SITE SURVEY**



- LEGEND**
- X 123.45 EXISTING SPOT ELEVATION
  - X TO 123.45 EXIST. TOP OF CURB ELEVATION
  - X O 123.45 EXIST. GUTTER ELEVATION
  - X W 123.45 EXIST. TOP OF WALL ELEVATION
  - X BW 123.45 EXIST. BOTTOM OF WALL ELEVATION
  - X I 123.45 EXIST. TOP OF ISLAND ELEVATION
  - X B 123.45 EXIST. BOTTOM OF ISLAND ELEVATION
  - HYDRANT
  - WV WATER VALVE
  - GV GAS VALVE
  - OVERHEAD WIRES
  - UNCONFIRMED LOC. UNDERGROUND GAS LINE PER REF. 8 (NOT FIELD VERIFIED, SEE NOTE 3)
  - UNCONFIRMED LOC. UNDERGROUND WATER LINE PER REF. 8 (NOT FIELD VERIFIED, SEE NOTE 3)
  - UNCONFIRMED LOC. UNDERGROUND ELECTRIC LINE PER REF. 8 (NOT FIELD VERIFIED, SEE NOTE 3)
  - UTILITY POLE
  - UTILITY POLE/LIGHT POLE
  - GUY WIRE
  - TRAFFIC SIGNAL POLE
  - TRAFFIC SIGNAL
  - MONITORING WELL
  - GAS METER
  - SIGN
  - MAIL BOX
  - BOLLARD
  - GUIDE RAIL
  - LANDSCAPED AREA
  - EDGE OF PAVEMENT
  - CONC. CURB
  - MC METAL COVER
  - (S.N.12) SEE NOTE 12
  - C.L.F. CHAIN LINK FENCE
  - N.P.V. NO PIPES VISIBLE
  - TOP TOP OF PIPE
  - AREA LIGHT
  - PAINTED ARROWS
  - TITLE REPORT EXCEPTION
  - PARKING SPACE COUNT
  - 10' DENOTES OFFSET OF STRUCTURE AT GROUND LEVEL RELATIVE TO PROPERTY LINE
  - STREET LIGHT
  - 12" TREE LOCATION AND TRUNK DIAMETER
  - MANHOLE ELECTRIC
  - MANHOLE SEWER
  - MANHOLE USE UNKNOWN
  - MANHOLE WATER
  - C.O.L. COLUMN
  - SOL VAPOR RECOVERY SYSTEM PER REF. 8 (NOT FIELD VERIFIED, SEE NOTE 3)

**TITLE SEARCH LEGAL DESCRIPTION**  
PARCEL A

ALL THAT CERTAIN PLOT, PIECE OR PARCEL OF LAND, SITUATE, LYING AND BEING IN THE FOURTH WARD, BOROUGH OF QUEENS, CITY AND STATE OF NEW YORK, BOUNDED AND DESCRIBED AS FOLLOWS:  
BEGINNING AT THE CORNER FORMED BY THE INTERSECTION OF THE SOUTHERLY SIDE OF MERRICK BOULEVARD, 100.00 FEET WIDE, WITH THE EASTERLY SIDE OF BELKNAP STREET, 60.00 FEET WIDE;  
RUNNING THENCE EASTERLY ALONG THE SOUTHERLY SIDE OF MERRICK BOULEVARD, ALONG AN ARC OF A CIRCLE BEARING TO THE LEFT HAVING A RADIUS OF 717.793 FEET, A DISTANCE OF 428.00 FEET (0003) 428.14 FEET (ON SURVEY), TO A POINT;  
THENCE STILL EASTERLY ALONG THE SOUTHERLY SIDE OF MERRICK BOULEVARD, NORTH 79 DEGREES - 45 MINUTES - 26 SECONDS EAST, 9.37 FEET TO THE WESTERLY LINE OF LAND OF THE LONG ISLAND RAILROAD CO.;  
THENCE SOUTHERLY ALONG THE WESTERLY LINE OF LAND OF THE LONG ISLAND RAILROAD CO. AND PARALLEL WITH THE EASTERLY SIDE OF BELKNAP STREET, 90.00 FEET TO A POINT;  
THENCE SOUTH 78 DEGREES - 37 MINUTES - 00 SECONDS WEST, 100.00 FEET TO A POINT;  
THENCE NORTH 11 DEGREES - 23 MINUTES - 00 SECONDS WEST, PARALLEL WITH THE EASTERLY SIDE OF BELKNAP AVENUE, 100.00 FEET;  
THENCE SOUTH 78 DEGREES - 37 MINUTES - 00 SECONDS WEST, PARALLEL WITH THE NORTHERLY SIDE OF 137TH AVENUE, 220.00 FEET TO THE EASTERLY SIDE OF BELKNAP STREET;  
THENCE ALONG THE EASTERLY SIDE OF BELKNAP STREET, NORTH 11 DEGREES - 23 MINUTES - 00 SECONDS WEST, 952.56 FEET TO THE CORNER, THE POINT OR PLACE OF BEGINNING.

**TITLE SEARCH LEGAL DESCRIPTION**  
PARCEL B

ALL THAT CERTAIN PLOT, PIECE OR PARCEL OF LAND, SITUATE, LYING AND BEING IN THE BOROUGH AND COUNTY OF QUEENS, CITY AND STATE OF NEW YORK, KNOWN AND DESIGNATED AS LOTS 34, 35, 36 AND 37 IN BLOCK 27 ON A CERTAIN MAP ENTITLED "MAP OF SPRINGFIELD GARDENS, SITUATED IN THE FOURTH WARD, BOROUGH OF QUEENS, CITY AND STATE OF NEW YORK, SURVEYED APRIL, 1911, BY FREDERICK L. GREFFENBERG, C.E. AND C.S." AND FILED ON FEBRUARY 21, 1912 AS MAP NO. 38, MORE PARTICULARLY BOUNDED AND DESCRIBED ACCORDING TO SAID MAP AS FOLLOWS:  
BEGINNING AT A POINT ON THE NORTHERLY SIDE OF MIDLAND BOULEVARD (NOW KNOWN AS 137TH AVENUE) DISTANT 140.00 FEET EASTERLY FROM THE CORNER FORMED BY THE INTERSECTION OF THE NORTHERLY SIDE OF MIDLAND BOULEVARD (NOW 137TH AVENUE) WITH THE EASTERLY SIDE OF HIGHLAND AVENUE (NOW KNOWN AS BELKNAP STREET);  
RUNNING THENCE NORTHERLY PARALLEL WITH HIGHLAND AVENUE 100.00 FEET;  
THENCE EASTERLY PARALLEL WITH MIDLAND BOULEVARD 80.00 FEET;  
THENCE SOUTHERLY AGAIN PARALLEL WITH HIGHLAND AVENUE 100.00 FEET TO THE NORTHERLY SIDE OF MIDLAND BOULEVARD;  
THENCE WESTERLY ALONG THE NORTHERLY SIDE OF MIDLAND BOULEVARD 80.00 FEET TO THE POINT OR PLACE OF BEGINNING.

**TITLE SEARCH LEGAL DESCRIPTION**  
PARCEL C

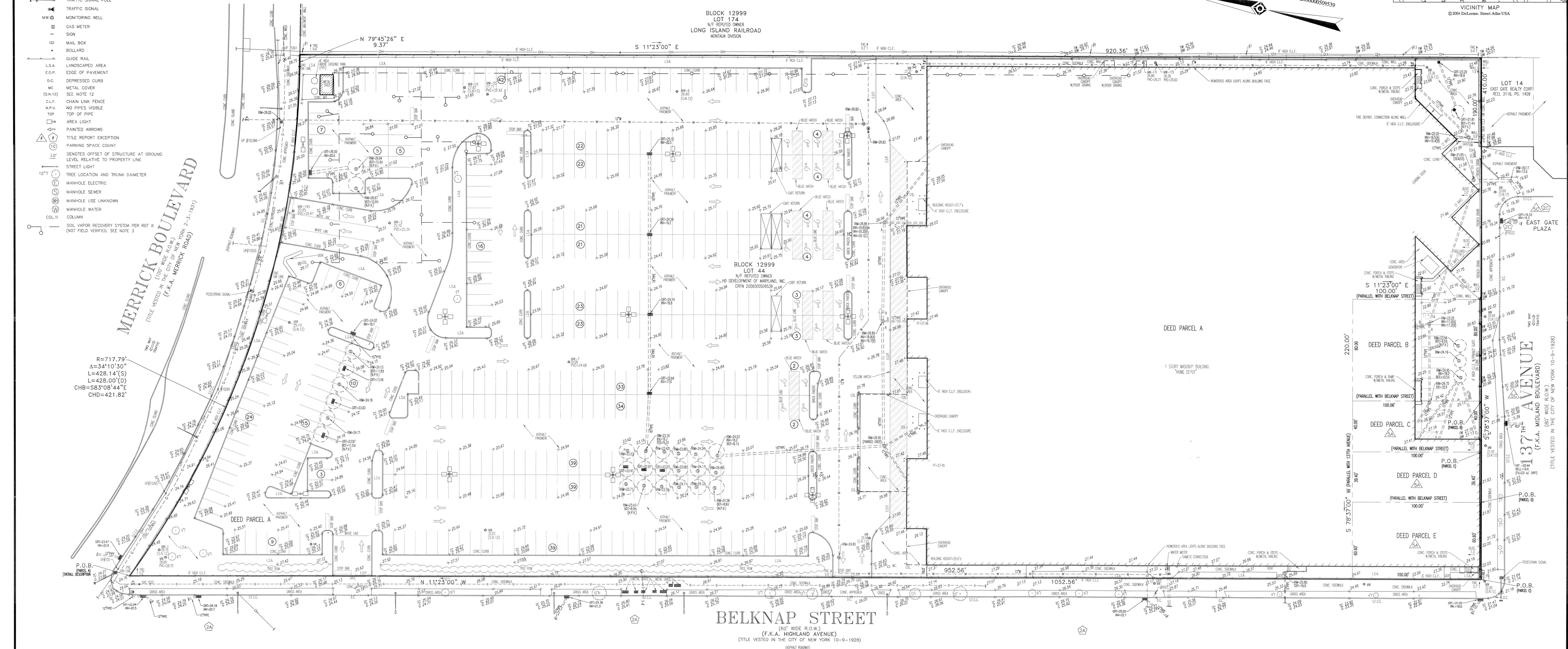
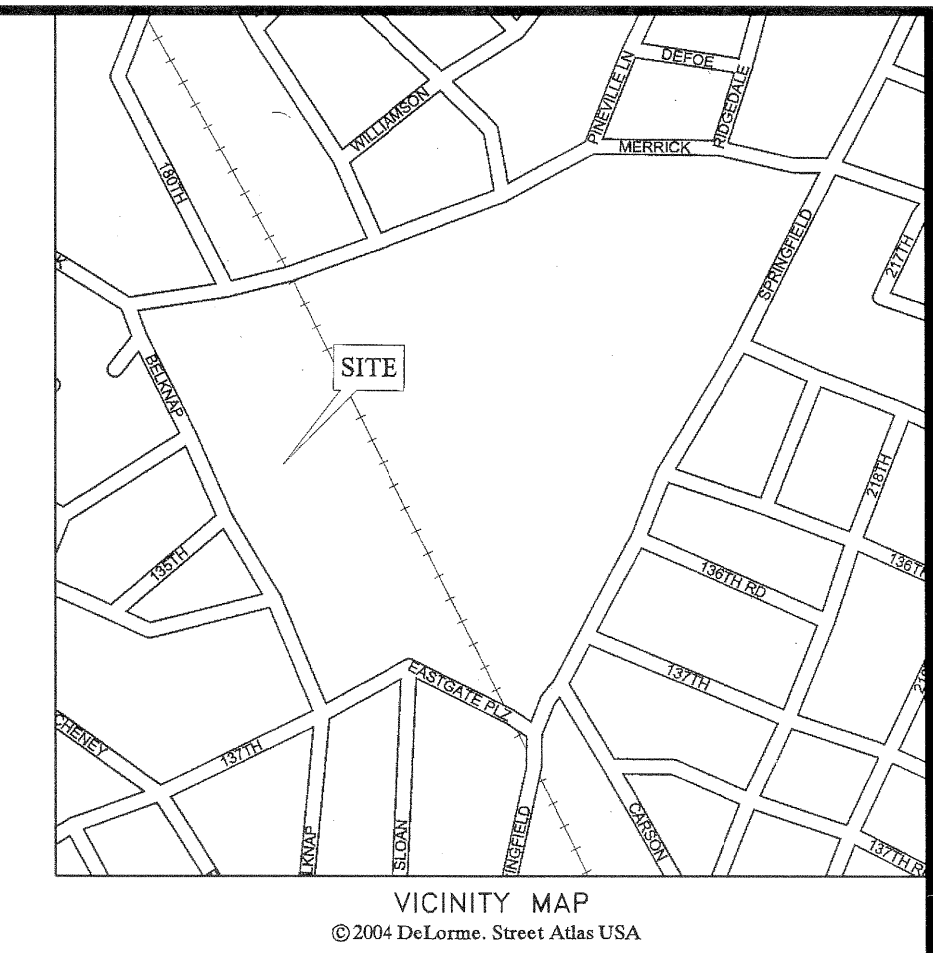
ALL THAT CERTAIN PLOT, PIECE OR PARCEL OF LAND, SITUATE, LYING AND BEING IN THE FOURTH WARD, BOROUGH AND COUNTY OF QUEENS, CITY AND STATE OF NEW YORK, KNOWN AND DESIGNATED AS LOTS 38 AND 39 IN BLOCK 27 ON A CERTAIN MAP ENTITLED "MAP OF SPRINGFIELD GARDENS, SITUATED IN THE FOURTH WARD, BOROUGH OF QUEENS, CITY AND STATE OF NEW YORK, SURVEYED APRIL, 1911, BY FREDERICK L. GREFFENBERG, C.E. AND C.S." AND FILED IN THE OFFICE OF THE CLERK (NOW REGISTER) OF THE COUNTY OF QUEENS, FEBRUARY 21, 1912 AS MAP NO. 38, BOUNDED AND DESCRIBED ACCORDING TO SAID MAP AS FOLLOWS:  
BEGINNING AT A POINT ON THE NORTHERLY SIDE OF MIDLAND BOULEVARD (NOW 137TH AVENUE) DISTANT 100.00 FEET EASTERLY FROM THE CORNER FORMED BY THE INTERSECTION OF THE NORTHERLY SIDE OF MIDLAND BOULEVARD (NOW 137TH AVENUE) WITH THE EASTERLY SIDE OF HIGHLAND AVENUE (NOW KNOWN AS BELKNAP STREET);  
THENCE NORTHERLY PARALLEL WITH BELKNAP STREET, 100.00 FEET;  
THENCE EASTERLY, PARALLEL WITH 137TH AVENUE, 40.00 FEET;  
THENCE SOUTHERLY AGAIN PARALLEL WITH BELKNAP STREET, 100.00 FEET TO THE NORTHERLY SIDE OF 137TH AVENUE;  
THENCE WESTERLY ALONG THE NORTHERLY SIDE OF 137TH AVENUE, 40.00 FEET TO THE POINT OR PLACE OF BEGINNING.

**TITLE SEARCH LEGAL DESCRIPTION**  
PARCEL D

ALL THAT CERTAIN PLOT, PIECE OR PARCEL OF LAND, SITUATE, LYING AND BEING IN THE FOURTH WARD, BOROUGH AND COUNTY OF QUEENS, CITY AND STATE OF NEW YORK, KNOWN AND DESIGNATED AS LOTS 40, 41 AND 42 IN BLOCK 27 ON A CERTAIN MAP ENTITLED "MAP OF SPRINGFIELD GARDENS, SITUATED IN THE FOURTH WARD, BOROUGH OF QUEENS, CITY AND STATE OF NEW YORK, SURVEYED APRIL, 1911, BY FREDERICK L. GREFFENBERG, C.E. AND C.S." AND FILED IN THE OFFICE OF THE CLERK (NOW REGISTER) OF THE COUNTY OF QUEENS ON FEBRUARY 21, 1912, AS MAP NO. 38, BOUNDED AND DESCRIBED ACCORDING TO SAID MAP AS FOLLOWS:  
BEGINNING AT A POINT ON THE NORTHERLY SIDE OF 137TH AVENUE (FORMERLY MIDLAND BOULEVARD) DISTANT 60.00 FEET EASTERLY FROM THE CORNER FORMED BY THE INTERSECTION OF THE NORTHERLY SIDE OF 137TH AVENUE WITH THE EASTERLY SIDE OF BELKNAP STREET (FORMERLY HIGHLAND AVENUE);  
RUNNING THENCE EASTERLY ALONG THE NORTHERLY SIDE OF 137TH AVENUE, 59.40 FEET;  
THENCE NORTHERLY AND PARALLEL WITH BELKNAP STREET, 100.00 FEET;  
THENCE WESTERLY PARALLEL WITH 137TH AVENUE, 39.40 FEET;  
THENCE SOUTHERLY AGAIN PARALLEL WITH BELKNAP STREET, 100.00 FEET TO THE NORTHERLY SIDE OF 137TH AVENUE AT THE POINT OR PLACE OF BEGINNING.

**TITLE SEARCH LEGAL DESCRIPTION**  
PARCEL E

ALL THAT CERTAIN PLOT, PIECE OR PARCEL OF LAND, SITUATE, LYING AND BEING IN THE FOURTH WARD, BOROUGH AND COUNTY OF QUEENS, CITY AND STATE OF NEW YORK, KNOWN AND DESIGNATED AS LOTS 43, 44 AND PART OF LOT 41 IN BLOCK 27 ON A CERTAIN MAP ENTITLED "MAP OF SPRINGFIELD GARDENS, SITUATED IN THE FOURTH WARD, BOROUGH OF QUEENS, CITY AND STATE OF NEW YORK, SURVEYED APRIL, 1911, BY FREDERICK L. GREFFENBERG, C.E. AND C.S." AND FILED IN THE OFFICE OF THE CLERK (NOW REGISTER) OF THE COUNTY OF QUEENS ON FEBRUARY 21, 1912, AS MAP NO. 38, AND BOUNDED AND DESCRIBED ACCORDING TO SAID MAP AS FOLLOWS:  
BEGINNING AT THE CORNER FORMED BY THE INTERSECTION OF THE NORTHERLY SIDE OF MIDLAND BOULEVARD, NOW 137TH AVENUE, WITH THE EASTERLY SIDE OF HIGHLAND AVENUE, NOW BELKNAP STREET;  
RUNNING THENCE NORTHERLY ALONG THE EASTERLY SIDE OF HIGHLAND AVENUE, 100.00 FEET;  
THENCE EASTERLY PARALLEL WITH MIDLAND BOULEVARD, 60.00 FEET;  
THENCE SOUTHERLY PARALLEL WITH HIGHLAND AVENUE, 100.00 FEET TO THE NORTHERLY SIDE OF MIDLAND AVENUE;  
THENCE WESTERLY ALONG THE NORTHERLY SIDE OF MIDLAND BOULEVARD, 60.00 FEET TO THE CORNER AT THE POINT OR PLACE OF BEGINNING.



- NOTES:**
- PROPERTY KNOWN AS LOT 44, BLOCK 12999 AS SHOWN ON THE OFFICIAL TAX MAP OF THE BOROUGH AND COUNTY OF QUEENS, CITY AND STATE OF NEW YORK
  - AREA = 394,917 S.F. OR 9.066 AC.
  - LOCATION OF UNDERGROUND UTILITIES ARE APPROXIMATE. ALL LOCATIONS AND SIZES ARE BASED ON UTILITY MARK-OUTS, ABOVE GROUND STRUCTURES THAT WERE VISIBLE & ACCESSIBLE IN THE FIELD, AND THE MAPS AS LISTED IN THE REFERENCES AVAILABLE AT THE TIME OF THE SURVEY. AVAILABLE AS-BUILT PLANS AND UTILITY MARK-OUT DOES NOT ENSURE MAPPING OF ALL UNDERGROUND UTILITIES AND STRUCTURES. BEFORE ANY EXCAVATION IS TO BE MADE, ALL UNDERGROUND UTILITIES SHOULD BE VERIFIED AS TO THEIR LOCATION, SIZE AND TYPE BY THE PROPER UTILITY COMPANIES. CONTROL POINT ASSOCIATES, INC. DOES NOT GUARANTEE THE UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA EITHER IN SERVICE OR ABANDONED.
  - THIS PLAN IS BASED ON INFORMATION PROVIDED BY A SURVEY PREPARED IN THE FIELD BY CONTROL POINT ASSOCIATES, INC. AND OTHER REFERENCE MATERIAL AS LISTED HEREIN.
  - THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A CURRENT TITLE REPORT AND IS SUBJECT TO THE RESTRICTIONS, COVENANTS AND/OR EASEMENTS THAT MAY BE CONTAINED THEREIN. PRIOR TITLE REPORT INFORMATION SHOWN.
  - BY GRAPHIC PLOTTING ONLY PROPERTY IS LOCATED IN FLOOD HAZARD ZONE X (AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD PLAN) PER REF. 2.
  - THE EXISTENCE OF UNDERGROUND STORAGE TANKS, IF ANY, WAS NOT KNOWN AT THE TIME OF THE FIELD SURVEY.
  - THERE WERE NO NATURAL STREAMS OR WATERCOURSES VISIBLE AT THE TIME OF THE FIELD SURVEY.
  - ENCROACHMENTS AND VAULTS, IF ANY, BELOW SURFACE NOT SHOWN HEREON
  - ELEVATIONS ARE BASED UPON THE BOROUGH OF QUEENS HIGHWAY DATUM, REFERENCE BENCHMARK 2423, ELEVATION 25.920 FEET, REPUTED TO BE 2.725 FEET ABOVE MEAN SEA LEVEL AT SANDY HOOK (N.G.V.D. 1929).
  - THE OFFSETS SHOWN ARE NOT TO BE USED FOR THE CONSTRUCTION OF ANY STRUCTURE, FENCE, PERMANENT ADJUSTMENT, ETC.
  - MONITORING WELLS SHOWN HEREON WITHOUT PVC ELEVATION INFORMATION DUE TO LOCATIONS PACKED WITH GREASE.

- REFERENCES:**
- THE OFFICIAL TAX MAPS OF BOROUGH OF QUEENS, QUEENS COUNTY, CITY AND STATE OF NEW YORK, SECTION 35, SHEETS 7 AND 8.
  - MAP ENTITLED "FIRM FLOOD INSURANCE RATE MAP, CITY OF NEW YORK, NEW YORK, BRONX, RICHMOND, NEW YORK, QUEENS AND KINGS COUNTIES," PANEL 242 OF 457 MAP NUMBER 3604970242 MAP REVISED SEPTEMBER 5, 2007.
  - MAP ENTITLED "MAP SHOWING STREET SYSTEM FOR THE TERRITORY DESIGNATED AS SECTION 157 OF THE FINAL MAPS OF THE BOROUGH OF QUEENS" DATED MARCH 16, 1935.
  - MAP ENTITLED "MAP SHOWING STREET SYSTEM FOR THE TERRITORY DESIGNATED AS (PARTIAL) SECTION 152 OF THE FINAL MAPS OF THE BOROUGH OF QUEENS" DATED MAY 1, 1930.
  - MAP ENTITLED "CITY OF NEW YORK, BOROUGH OF QUEENS OFFICE OF THE PRESIDENT, TOPOGRAPHICAL BUREAU, MAP NO. 3813 SHOWING A CHANGE IN THE STREET SYSTEM HERETOFORE LAID OUT WITHIN THE TERRITORY BOUNDED BY MERRICK BOULEVARD, LIJ, MONTAUK DIVISION, 137TH AVENUE AND BELKNAP STREET IN THE FOURTH WARD" DATED APRIL 18, 1955.
  - MAP ENTITLED "CITY OF NEW YORK, BOROUGH OF QUEENS OFFICE OF THE PRESIDENT, TOPOGRAPHICAL BUREAU, MAP NO. 4389 SHOWING A CHANGE IN THE STREET SYSTEM HERETOFORE LAID OUT WITHIN THE TERRITORY BOUNDED BY MERRICK BOULEVARD, LI (MONTAUK DIVISION) RR, 137TH AVENUE AND BELKNAP STREET" DATED JULY 14, 1964.
  - MAP ENTITLED "SURVEY OF TAX LOTS 44, 54, 74 AND 94, BLOCK 12999 SPRINGFIELD GARDENS, BOROUGH OF QUEENS, NEW YORK CITY, NY" PREPARED BY FREDERICK R. POKORNY DATED SEPTEMBER 19, 1988.
  - PLAN ENTITLED "SCQ 147/0058 SITE CONNECTION DRAINAGE AND GRADING PLAN, THE HOME DEPOT 132-30 MERRICK BOULEVARD, SPRINGFIELD GARDENS, N.Y.," PREPARED BY VOLLMUTH & BRUSH, DATED OCTOBER 20, 2000, LAST REVISED APRIL 17, 2001, SHEET S01.
  - MAP ENTITLED "ALTA/ACSM LAND TITLE SURVEY, HOME DEPOT U.S.A., INC., LOTS 33, 35, 37, 39, 41, 44, 54, 74 & 94, BLOCK 12999, SECTION 55, 132-30 MERRICK BLVD., BOROUGH AND COUNTY OF QUEENS, CITY AND STATE OF NEW YORK," PREPARED BY CONTROL POINT ASSOCIATES, DATED JANUARY 22, 1999, LAST REVISED JUNE 18, 2001.
  - MAP ENTITLED "CHLORINATED SOLVENT LEVELS IN GROUND WATER 11/21/2005, 132-30 MERRICK BOULEVARD, JAMAICA, NEW YORK," PREPARED BY AKRF ENVIRONMENTAL CONSULTANTS, DATED FEBRUARY 23, 2006.

**PRIOR TITLE:**

THIS SURVEY IS PREPARED WITH REFERENCE TO A TITLE REPORT PREPARED BY NEW YORK LAND SERVICES, INC. TITLE NO. D0NY08072A, DATED JUNE 2000, FOR LOTS 33, 35, 44, 54, 74 & 94. WE REVIEWED THE FOLLOWING SURVEY RELATED ITEMS IN SCHEDULE B:

- (A) WATER MAIN EASEMENT IN LIBER 3960, PG. 482-RIGHTS TO JAMAICA WATER SUPPLY COMPANY TO LAY WATER MAINS - APPROXIMATE LOCATION SHOWN.
- (B) UTILITY EASEMENT IN LIBER 1944, PG. 38-RIGHTS TO NEW YORK TELEPHONE COMPANY FOR MAINTENANCE OF THEIR FACILITIES ALONG AND ACROSS HIGHWAYS, REFERENCES AN EXHIBIT "A," DOCUMENT NOT PROVIDED.
- (C) DECLARATION IN LIBER 6905, PG. 228-PERTAINING TO THE INSTALLATION OF A PRIVATE STORM DRAIN IN SPRINGFIELD BOULEVARD, 137TH AVENUE AND EAST GATE PLAZA - SHOWN.

THIS SURVEY IS PREPARED WITH REFERENCE TO A TITLE REPORT PREPARED BY NEW YORK LAND SERVICES, INC., TITLE NUMBER D0NY08072-C, WITH AN EFFECTIVE DATE OF AUGUST 8, 2000 FOR LOT 37, TITLE NUMBER D0NY08072-D, WITH AN EFFECTIVE DATE OF AUGUST 8, 2000 FOR LOT 39, AND TITLE NUMBER D0NY08072-E WITH AN EFFECTIVE DATE OF AUGUST 8, 2000 FOR LOT 41, WHERE THE FOLLOWING SURVEY RELATED ITEMS APPEAR IN SCHEDULE B:

- (A) COVENANTS AND RESTRICTIONS REFERRED TO IN AGREEMENT IN DATED SEPTEMBER 9, 1921 AND RECORDED IN LIBER 2369, PAGE 518. BUILDING RESTRICTIONS WHICH PROHIBIT THE ERECTION OF ANY BUILDINGS EXCEPT DETACHED PRIVATE DWELLINGS, BLANKET.
- (B) UTILITY EASEMENT IN FAVOR OF NEW YORK TELEPHONE COMPANY RECORDED IN LIBER 1944, PAGE 38. RIGHTS TO NEW YORK TELEPHONE COMPANY FOR MAINTENANCE OF THEIR FACILITIES AND ACROSS HIGHWAYS. REFERENCES AN EXHIBIT "A," DOCUMENT NOT PROVIDED.
- (C) DECLARATION DATED AUGUST 21, 1956, BY 899 KENT CORP. AND RECORDED AUGUST 24, 1956 IN LIBER 6905, PAGE 228 FOR INSTALLATION OF A PRIVATE STORM WATER DRAIN IN SPRINGFIELD BOULEVARD, 137TH AVENUE AND EAST GATE PLAZA - SHOWN.

TITLE SEARCH PREPARED BY CHICAGO TITLE INSURANCE COMPANY, NO. 3608-95087, DATED DECEMBER 19, 2008 WITH THE FOLLOWING EXCEPTION CONTAINED THEREIN:

**OVERALL LEGAL DESCRIPTION**  
LOT 44, BLOCK 12999  
SECTION 55  
BOROUGH OF QUEENS  
QUEENS COUNTY, CITY AND STATE OF NEW YORK

BEGINNING AT A POINT OF INTERSECTION OF THE SOUTHERLY SIDELINE OF MERRICK BOULEVARD (100 FEET WIDE, AKA MERRICK ROAD), WITH THE EASTERLY SIDELINE OF BELKNAP STREET (60 FEET WIDE), FKA HIGHLAND AVENUE, AND FROM SAID POINT OF BEGINNING RUNNING, THENCE:

- ALONG THE SOUTHERLY SIDELINE OF MERRICK BOULEVARD ALONG A CURVE TO THE LEFT HAVING A CENTRAL ANGLE OF 34 DEGREES - 10 MINUTES - 30 SECONDS, A RADIUS OF 717.79 FEET AND AN ARC LENGTH OF 428.14 FEET (428.00 FEET), BEARING A CHORD OF SOUTH 83 DEGREES - 08 MINUTES - 44 SECONDS EAST, A CHORD DISTANCE OF 100.00 FEET TO A POINT OF TANGENCY, THENCE;
- ALONG THE SOUTHERLY SIDELINE OF MERRICK BOULEVARD NORTH 79 DEGREES - 45 MINUTES - 26 SECONDS EAST, A DISTANCE OF 9.37 FEET TO A POINT, THENCE;
- ALONG THE DIVIDING LINE BETWEEN LOT 44 AND LOT 174, BLOCK 12999 SOUTH 11 DEGREES - 23 MINUTES - 00 SECONDS EAST, A DISTANCE OF 920.36 FEET TO A POINT, THENCE;
- ALONG THE DIVIDING LINE BETWEEN LOT 44 AND LOT 14, (AKA MIDLAND BOULEVARD AS PER TAX MAP) AND ALONG THE NORTHERLY SIDELINE OF 137TH AVENUE, AKA MIDLAND BOULEVARD (80 FEET WIDE), SOUTH 78 DEGREES - 37 MINUTES - 00 SECONDS WEST, A DISTANCE OF 410.00 FEET TO A POINT ON THE EASTERLY SIDELINE OF BELKNAP STREET, THENCE;
- ALONG THE EASTERLY SIDELINE OF BELKNAP STREET NORTH 11 DEGREES - 23 MINUTES - 00 SECONDS WEST, A DISTANCE OF 1052.56 FEET TO THE POINT AND PLACE OF BEGINNING

CONTAINING 394,917 SQUARE FEET OR 9.066 ACRES

**UTILITY STATEMENT:**

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

**GRAPHIC SCALE**

0 10 20 30 40 50 60 70 80 90 100 110 120  
( IN FEET )  
1 inch = 30 ft

**CERTIFIED TO:** THE STATE OF NEW YORK DEPARTMENT OF ENVIRONMENTAL CONSERVATION

THIS IS TO CERTIFY THAT THIS MAP OR PLAN AND THE SURVEY ON WHICH IT WAS BASED WERE MADE IN ACCORDANCE WITH "MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/ACSM LAND TITLE SURVEYS," JOINTLY ESTABLISHED AND ADOPTED BY ALTA, AND NSPS IN 2005, AND INCLUDES ITEMS 2, 3, 4, 8, 9, 10 & 13 OF TABLE A THEREOF, PURSUANT TO THE ACCURACY STANDARDS AS ADOPTED BY ALTA AND NSPS AND IN EFFECT ON THE DATE OF THIS CERTIFICATION. UNDERSIGNED FURTHER CERTIFIES THAT IN MY PROFESSIONAL OPINION, AS A LAND SURVEYOR REGISTERED IN THE STATE OF NEW YORK, THE RELATIVE POSITIONAL ACCURACY OF THIS SURVEY DOES NOT EXCEED THAT WHICH IS SPECIFIED THEREIN.

NOT A VALID ORIGINAL DOCUMENT UNLESS REPRODUCED WITH RAISED IMPRESSION OR BLUE INK SEAL

**GREGORY S. GALLAS**  
NEW YORK PROFESSIONAL LAND SURVEYOR

1-12-2009  
DATE

**ALTA/ACSM LAND TITLE SURVEY**  
**HOME DEPOT U.S.A., INC.**  
132-30 MERRICK BOULEVARD  
LOT 44, BLOCK 12999  
BOROUGH AND COUNTY OF QUEENS  
CITY AND STATE OF NEW YORK

**CONTROL POINT ASSOCIATES, INC.**  
33 TECHNOLOGY DRIVE  
WARREN, NJ 07059  
908.668.0099 - 908.668.9595 FAX

NEW BRITAIN CORPORATE CENTER  
1000 MAJOR DRIVE, SUITE 100  
CHALFONT, PA 18914  
610.312.8800 - 233.312.9822 FAX

FIELD DATE	12-22-08
FIELD BOOK NO.	08-35
FIELD BOOK PG.	70-74
FIELD CREW	
B.B./S.R.	
DRAWN	G.R.E.
REVIEWED	F.B.L.
APPROVED	D.A.H.
DATE	1-12-2009
SCALE	1"=30'
FILE NO.	C98534.01
DWG. NO.	1 OF 1