INTERIM REMEDIAL MEASURES WORK PLAN FOR PHASE II CONSTRUCTION ACTIVITIES

WHITE PLAINS FORMER MGP SITE

White Plains, New York

PREPARED FOR:

Consolidated Edison Company of New York, Inc.

31-01 20th Avenue
Long Island City, NY 11105

PREPARED BY:

PARSONS
290 Elwood Davis Road, Suite 312
Liverpool, New York 13088
(315) 451-9560 Fax (315) 451-9570

OCTOBER 2003

INTERIM REMEDIAL MEASURES WORK PLAN FOR PHASE II CONSTRUCTION ACTIVITIES

WHITE PLAINS FORMER MGP SITE

White Plains, New York

Prepared For:

Consolidated Edison Company of New York, Inc.

31-01 20th Avenue
Long Island City, NY 11105

Prepared By:

PARSONS

290 Elwood Davis Road, Suite 312
Liverpool, New York 13088
Phone: (315) 451-9560
Fax: (315) 451-9570

REVIEWED AND APPROVED BY:

Project Manager: _____ 10/29/03 Date

Technical Manager: _____ 10/29/03 Date

STATE OF NEW YORK
EDWARD CADWELL GUZA
LICENSED PROFESSIONAL ENGINEER
070938

OCTOBER 2003

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

SECTION

SECTION 1

INTRODUCTION

1.1 PROJECT BACKGROUND

Consolidated Edison Company of New York, Inc. (Con Edison) owns and operates an electric distribution substation in the City of White Plains, Westchester County, New York. The substation provides electric service to approximately 23,000 commercial and residential consumers within the White Plains area. Con Edison is in the process of modernizing and upgrading its facilities at the White Plains substation to ensure continued reliability of the substation. The White Plains substation is one of Con Edison's oldest active electric substations, dating back to 1925.

As of April 2003, the first phase of substation improvements (Phase I) was completed. Two new transformers (#1 and #2) were installed, replacing two of the substation's older outdoor transformers, and a new building enclosure for the transformers was completed. Phase I also included expansion of the substation's existing control room and switchgear building and installation of a new pressurizing plant. In addition, site drainage was improved and an oil/water separator was installed to control and treat storm water runoff from areas with oil-filled equipment.

Subsequent phases of the improvement project include the replacement of older outdoor equipment with new equipment. Phase II construction activities have begun at the Substation. Phase II activities involve the decommissioning/removal of aboveground and belowground equipment associated with transformers #5 and #6, the replacement of existing transformers #5 and #6 with new transformer vaults #3 and #4, the installation of new underground electrical feeder conduits associated with the new Phase I and Phase II equipment, and the eventual removal of old switchgear #7 and #8 from the northern portion of the substation.

Historical information indicates that the substation and portions of an adjoining commercial office building property located west of the substation site (12 Water Street) were once the location of a manufactured gas plant (MGP). In anticipation of the construction activities associated with the substation improvement/modernization project, a Preliminary Site Assessment (PSA) was conducted in several phases between March 2000 and August 2001 to identify potential subsurface conditions that might pose a risk to the health and safety of site workers and the public during those activities. Additional investigations have also been conducted to assess potential impacts of the former MGP on adjacent properties surrounding the substation.

Con Edison submitted a Voluntary Cleanup Program application for the White Plains former MGP site (the Site) to the New York State Department of Environmental Conservation (NYSDEC) on July 11, 2000. In the application, Con Edison has proposed

to coordinate remediation of the MGP-impacted areas of the Site and adjacent lands with the planned removal of the energized electric equipment during the substation improvement project. The PSA Report and Interim Remedial Measures Work Plan for Phase I Construction Activities (PSA/IRM Work Plan) were submitted with the application. Con Edison received a letter from the NYSDEC on July 27, 2001 stating that they had no objection to the commencement of Phase I construction activities in accordance with the IRM Work Plan. On September 23, 2002, Con Edison entered into a Voluntary Cleanup Agreement with the NYSDEC for the Site.

This document presents the IRM Work Plan for Phase II construction activities. This work plan addresses, to the extent practicable and technically feasible, the impacted materials associated with the former southernmost relief gasholder located beneath transformer #5, the construction activities associated with the replacement of transformers #5 and #6, and the installation of new electrical feeder conduits.

1.2 SITE DESCRIPTION

The White Plains MGP Site consists of two improved parcels encompassing approximately two acres of commercially-zoned land located in the downtown core area of the City of White Plains, Westchester County, New York (Figure 1). The Site is bounded by Water Street on the north, New Street on the south, and North Lexington Avenue on the west. It is bounded on the east by a parking lot located over the former roadbed of a de-mapped public thoroughfare that was known as Spring Street. Presently, the closest public street located east of the Site is Dr. Martin Luther King, Jr. Boulevard.

The northwestern portion of the Site, known as 12 Water Street, consists of a four-story commercial office building and a paved off-street parking area. The remaining portion of the Site, known as 9 New Street, is occupied by an electric distribution substation that is owned and operated by Con Edison, and that is used by Con Edison to provide electric service to approximately 23,000 commercial and residential consumers within the White Plains area. A chain link fence secures the perimeter of the Site. The Site encompasses approximately 1.2 acres of land and includes a two-story brick switchgear/control room building, and a substantial amount of aboveground outdoor electric equipment (e.g., transformers, circuit breakers, switching gear, buss work, etc.), and extensive underground electric cables and feeders related to Con Edison's power distribution system (Figure 2). Surface materials consist of soil, pavement, bluestone, and concrete.

With the exception of the St. John the Evangelist R.C. Church and Elementary School, which are located south of the Site on the opposite side of New Street, the surrounding area is predominately commercial, consisting of a car dealership, office buildings, and a bus depot.

1.3 SUMMARY OF INVESTIGATION RESULTS

1.3.1 Site Investigation

Soil boring and monitoring well locations installed during previous investigation activities at the Site are shown on Figure 3. Based on previous investigation results, soils at the Site consist of up to 9 feet of fill, underlain by up to 77 feet of fine to medium sand, which is underlain by up to 15 feet of glacial till. Mica schist bedrock at the Site ranges in depth from 8 feet in the northeast corner of the Site to 84 feet in the southwestern corner of the Site. Groundwater generally flows towards the west and south and was found at depths of 7 to 28 feet below the ground surface (bgs). Groundwater was shallowest in the northeastern portion of the Site, which is at a lower elevation than the southern portion of the Site. A north-south geologic cross section of the site is shown on Figure 4.

Investigation results indicate soils in the vicinity of the former MGP structures have been impacted by MGP residuals. Non-aqueous phase liquids (NAPL), consisting of oily or tar-like material, was encountered at various depths in borings conducted within and in the vicinity of the former gasholders, within the former purifying house area, in the vicinity of the former above ground oil and tar tanks, and near the former tar well and tar separator. NAPL at depths of less than 20 feet was generally present within and/or in close proximity to these former structures. NAPL at depths of greater than 20 feet occurred in vertically isolated intervals primarily in the vicinity of the former MGP structures. Volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs) and metals were detected in the soil samples at concentrations exceeding the NYSDEC TAGM 4046 Soil Cleanup Objectives. The highest concentrations were detected in the vicinity of the former MGP structures. One sample of tarry material from the southernmost relief gasholder also exceeded the maximum concentration of benzene for toxicity characteristic hazardous waste under the New York State hazardous waste program. Investigation results indicate soils in the southeastern and western portions of the Site have not been impacted by MGP residuals.

Groundwater in the vicinity of the former MGP structures has also been impacted by MGP residuals. Minor amounts of NAPL, consisting of either sheen, a thin layer of light non-aqueous phase liquid (LNAPL) (0.01 feet to 0.18 feet in thickness), or floating globules of a brownish oily material were encountered in six wells. VOCs and SVOCs were also detected in the groundwater samples. The highest concentrations were detected in wells located in the vicinity of the former MGP structures.

1.3.2 Investigation of Former Southernmost Relief Gasholder

The former southernmost relief gasholder is currently located beneath transformer #5. Available substation drawings indicate the gasholder is approximately 45 feet in diameter. The walls of the gasholder are constructed of steel lined with brick on either side and are approximately 3-foot thick. The concrete bottom of the gasholder is approximately 18 feet bgs. Substation drawings indicate a number of support columns and a beam were installed within the former gasholder during installation of the transformer #5 foundation. Access to the gasholder is extremely limited by the new pressurizing plant located

approximately 7 feet to the west of the gasholder, and by a retaining wall and 10-foot drop-off located approximately 15 feet to the north and east of the gasholder.

Due to the limited access and the presence of active aboveground and belowground electrical equipment present in this area, very few subsurface drilling locations could be installed during the PSA in the areas of transformers #5 and #6. Therefore, limited data could be obtained to assess the extent of impacts associated with the former southernmost relief gasholder. Soil borings installed during the PSA in the vicinity of the gasholder are shown on Figure 5.

The de-energizing of the aboveground and belowground electrical equipment in anticipation of the replacement of transformers #5 and #6 for Phase II construction activities facilitated more extensive access to this area than was previously allowed during the PSA. To supplement the PSA data, additional investigation activities were recently conducted in May 2003. Seven additional soil borings (SB-101 through SB-107) were installed in the vicinity of the former gasholder (Figure 5). The general locations for the additional soil borings were selected on May 5, 2003 in the presence of the NYSDEC project manager. The additional soil borings were installed using direct-push drilling methods (Geoprobe). Continuous soil samples were collected for visual characterization and headspace screening with a photoionization detector (PID). Detailed soil boring logs for the May 2003 soil borings are provided in Appendix A.

The location, depths, and visual observations of the soil borings installed within and in the vicinity of the former southernmost relief gasholder during the PSA and May 2003 investigations are summarized below.

Soil Boring	Approximate Location	Depth of Boring	Depth to Groundwater	Depth Intervals with Visible NAPL
SB-17	Outside and 30 feet NW of Gasholder	56'	26'	54.5–55'
SB-18	Outside and 25 feet West of Gasholder	60'	26'	None
TB-1	Outside and 5 feet NE of Gasholder	39'	24'	36–39'
TB-2	Inside NE Corner of Gasholder	18.5'	8'	17.5-18'

Soil Boring	Approximate Location	Depth of Boring	Depth to Groundwater	Depth Intervals with Visible NAPL
TB-3	Outside and 7 feet SE of Gasholder	12'	NA	None
SB-101	Outside and 5 feet North of Gasholder	45'	24'	27–28' and 40-44'
SB-102	Inside in SE Corner of Gasholder	13'	NA	9.5-13'
SB-103	Outside and 15 feet SE of Gasholder	40'	24'	None
SB-104	Outside and 17 feet SE of Gasholder	40'	23'	None
SB-105	Outside and 5 feet South of Gasholder	40'	27'	None
SB-106	Outside and 32 feet South of Gasholder (transformer #6 area)	40'	24'	None
SB-107	Outside and 45 feet South of Gasholder (transformer #6 area)	40'	24'	None

The data summarized above indicate NAPL may be present within the southernmost relief gasholder at depths ranging from 9.5 feet bgs to the bottom of the gasholder (18 feet bgs). NAPL encountered in borings immediately outside and in the vicinity of the gasholder is present at depths greater than 27 feet bgs, significantly deeper than the bottom of the gasholder and below the groundwater table which was encountered between 23 and 27 feet bgs.

In addition to visual characterization and PID screening, select soil samples were also collected during the May 2003 investigation and submitted for laboratory analysis for VOCs, SVOCs, metals, polychlorinated biphenyls (PCBs), cyanide, and total petroleum hydrocarbons (TPH). The unvalidated analytical results for these samples are summarized in Table 1. Results indicate elevated concentrations of BTEX and PAHs at soil boring locations SB-101, SB-103, and SB-105 at depths greater than 23 feet below ground surface (bgs).

During hand excavation of a test pit at the SB-104 soil boring location, an unknown white substance with a sulfur odor was encountered between 4 and 5 feet bgs. A sample of this material was collected and submitted to Con Edison's laboratory for analysis for PCBs, metals, VOCs, SVOCs, hexavalent chromium, cyanide, sulfides, sulfates, and TPH. The analytical results for this sample are provided in Appendix B. The results indicate PCBs were not detected in the sample. Only two VOCs, acetone (87.7 ppb) and carbon disulfide (13.7 ppb), were detected in the sample. Concentrations of SVOCs were below the NYSDEC TAGM 4046 soil cleanup objectives of 500 ppm. The sample did exhibit calcium (173,000 ppm), cyanide (8.27 ppm), iron (7,280 ppm), and several PAHs. These constituents as well as carbon disulfide are found in some purifier wastes, particularly sulfided lime purifiers, and may be associated with former MGP operations at the site.

1.4 DESCRIPTION OF CONSTRUCTION ACTIVITIES

The planned Phase II construction activities at the site are shown on Figure 6. These activities will include the removal and replacement of existing transformer #5 and #6. As part of Phase II construction activities, various excavations will be required for the removal/installation of structures and equipment:

- As shown on Figure 6, various concrete pads, foundations, footings, and piers associated with transformers #5 and #6 and the existing pump house will be removed. In addition, various underground electrical conduits in the vicinity of the transformer #5 and #6 area will be removed. Removal of these structures will require excavation to depths between 3 and 5 feet bgs;

- As shown on Figure 6, three new 13kV underground electrical conduits/feeders will be installed (two directly to the north and one directly to the south of the former southern gasholder). These feeders will convey 13kV cables from the switchgear building and control room to manholes located on the eastern portion of the site. The new conduits/feeders will require excavations to approximately 10 feet bgs; and

- New concrete pads and foundations will be installed for future transformers vaults #3 and #4. The design for the pads and foundations have not yet been finalized, however a preliminary foundation plan and cross sections are shown on Figure 7. The structures will include a concrete moat slab with spread footers and will not require the driving of support piles. Excavations required for the foundation installation are not anticipated to exceed six feet bgs.

1.5 INTERIM REMEDIAL MEASURE OBJECTIVES

The NYSDEC's Draft Voluntary Cleanup Program Guide (NYSDEC, May 2002), defines an IRM as "a discrete set of activities which can be undertaken without extensive investigation and evaluation, to prevent, mitigate, or remedy site contamination. Its purpose is to address obvious issues quickly, often in conjunction with site investigation."

As discussed in Section 1.3.2, investigation results indicate soils visibly impacted with NAPL are present within the southernmost relief gasholder, while NAPL encountered at locations immediately outside the gasholder was observed at depths greater than 27 feet bgs. This area will remain a restricted area for electrical equipment and will be covered in gravel, concrete, or pavement.

Given the nature and extent of visual impacts in the vicinity of the southernmost relief gasholder and the future use plans for the area, the following IRM objectives have been developed:

- Prevent, to the extent practicable, the potential migration of NAPL in subsurface soils associated with the former southernmost relief gasholder; and
- Protect site workers and the surrounding community from potential exposure to impacted materials during implementation of the IRM and Phase II construction activities.

SECT

SECTION 2

WORK PLAN
FOR INTERIM REMEDIAL MEASURES

2.1 DESCRIPTION OF INTERIM REMEDIAL MEASURES

2.1.1 Removal of Southern Gasholder

The former southern relief gasholder will be removed. Steel sheet piling/bracing will be installed in accordance with substation requirements, as necessary, to facilitate removal of the former gasholder contents, walls, and foundation, and to preserve the integrity of nearby structures and electrical equipment. The sheet piling will be installed using either vibratory or hammer driven techniques to depths necessary for removal of the gasholder. During excavation, materials visually impacted with NAPL encountered adjacent to and beneath the gasholder and above the groundwater table (located at approximately 23 to 28 feet bgs) will also be excavated, to the extent practicable, and transported off-site for treatment/disposal. In addition, piping or structures associated with the gasholder that are encountered during excavation will be removed to the extent practicable and transported off-site for disposal.

2.1.2 Installation of NAPL Cut-Off Wall and Recovery Wells

As discussed in Section 1.3.2, NAPL was encountered in borings immediately outside and in the vicinity of the southern gasholder at depths greater than 27 feet bgs, significantly deeper than the bottom of the gasholder and below the groundwater table. To address the potential for migration of NAPL present below the groundwater table in this area, a 65-foot long NAPL cut-off wall will be installed south of the former southern relief gasholder as shown on Figure 6. Con Edison intends to install the cut-off wall prior to the removal of the former gasholder to also serve as sheet piling for excavation purposes.

As discussed previously with the NYSDEC, Con Edison has explored the possibility of installing the cut-off wall farther to the south in the proximity of New Street and closer to the St. John's School. However, this area is significantly congested with existing underground utilities as shown on Figure 6. In addition, it is preferable to locate the NAPL recovery wells on Con Edison's property to limit access to these wells and associated equipment. Given the future construction planned for this area, the most appropriate location for the cut-off wall is between future transformers vaults #3 and #4 (Figure 6). Con Edison will provide a copy of the engineering specifications or contract drawings for the NAPL cut-off wall to NYSDEC for review.

The cut-off wall will be constructed of continuous steel sheet pile sections. The joints between sheet pile sections will be sealed with an appropriate sealant material such as bentonite. The specific method for sealing the sheet pile joints will be determined by the

selected remedial contractor; however, Con Edison has identified the following potential techniques:

- A housing comprising a removable barrier and containing a sealant material is attached to a sheet piling section parallel to and overlapping the connecting edge prior to installation. After the sheet piling section is installed, the barrier is removed and the sealant material contacts the interlocking joint and the adjacent sheet piling section to form a watertight seal; or

- Interlocking sheet pile sections are driven into the ground. The interlocking cavity is flushed to remove soil and debris and sealant is then injected into the cavity to form a watertight joint between sheet pile sections.

The cut-off wall will extend from the ground surface to the top of bedrock (approximately 50 feet bgs). Future installation of electrical feeders associated with new transformer #3 may require limited cutting of the wall at depths less than 10 feet bgs.

Three NAPL recovery wells will be installed along the upgradient side of the cut-off wall to intercept potentially recoverable NAPL. One recovery well will be installed at each end of the wall, and one will be installed near the center of the wall as shown on Figure 6. If necessary, additional NAPL recovery wells will be installed at a later date to enhance the collection of any potential recoverable NAPL. The three NAPL recovery wells will be monitored for a period of six months in accordance with the post-IRM monitoring plan. If significant recoverable NAPL is present in the wells, Con Edison in consultation with NYSDEC will evaluate the results and determine whether additional NAPL recovery wells are appropriate.

Two additional NAPL monitoring/recovery wells will be installed in the sidewalk on the north side of New Street. The purpose of these wells is to collect any potentially flowable residual NAPL that has migrated past the location of the NAPL cut-off wall and/or to serve as sentinel wells that monitor for potential future NAPL migration. One monitoring/recovery well will be installed on each side of existing well MW-8 as shown on Figure 6. The exact location of each well will be determined based on evaluation of the IRM findings and consultation with NYSDEC.

Borings for the NAPL recovery wells will be conducted using 8.25-inch inside diameter hollow stem augers and a truck- or track-mounted drill rig to the depth of bedrock. The wells will be constructed with six-inch diameter PVC with 0.02-inch slotted screens installed from approximately two feet above the water table to two feet above the bottom of the well. A two-foot long sump will be installed at the bottom of each well to provide a reservoir for DNAPL accumulation (if any). The sump will not penetrate an underlying confining layer. The annular space around the well screen will be backfilled with sand filter pack extending from the bottom of the well to two feet above the screen. The annular space around the well riser will be sealed with bentonite/cement grout extending one to two feet above the sand filter pack and completed with a non-shrinking cement mixture to approximately one foot below grade. Recovery wells will be completed

using locking, flush-with-grade gate boxes set in concrete. A recovery well construction detail is shown on Figure 8.

Following installation, each recovery well will be developed by either over-pumping or surging and pumping. The extracted water will be monitored for turbidity and water quality indicators (i.e., pH, dissolved oxygen, oxidation-reduction potential, temperature, and specific conductivity) with measurements collected approximately every five minutes. Development will continue until turbidity is less than 50 nephelometric turbidity units (NTUs) for three successive readings or until water quality indicators have stabilized, whichever occurs first. The criteria for stabilization will be three successive readings within 10% for pH, temperature and specific conductivity.

2.1.3 Post-IRM Monitoring

The proposed six-inch diameter for the recovery wells has been selected to facilitate potential future NAPL recovery from the wells. Following completion of the IRM, each of the five new recovery wells will be monitored on a monthly basis for a period of one year. During each monitoring event, the depth to groundwater and NAPL thickness (if present) will be measured in the wells using an electronic oil/water interface probe attached to a measuring tape accurate to 0.01 feet. All measurements will be recorded. If a measurable amount of NAPL is observed in a well during a monitoring event, the NAPL will be bailed from the well at that time and the removed volume recorded. Measurements obtained from that well during subsequent monitoring events will determine whether the NAPL in that well is recoverable. Results from the monthly monitoring events will be reported to the NYSDEC in the monthly progress reports for the project. Following completion of one year of monitoring, Con Edison, in consultation with the NYSDEC, will evaluate the results and determine whether future monitoring/enhanced recovery efforts are appropriate.

In addition to the five new recovery wells, existing monitoring well MW-8 will also be included in the above monthly monitoring program. MW-8 is located on the north side of New Street, directly downgradient from the proposed cut-off wall and upgradient from the St. John's School (Figure 5). In August 2000, NAPL was observed in soil samples during installation of monitoring well MW-8 at depths between 35 and 35.5 feet and 38 and 39 feet bgs. NAPL was not encountered, however, in soil borings SB-25 and SB-23 located less than 45 feet directly to the east and west of MW-8, respectively. Following installation and development, monitoring well MW-8 has been gauged for the presence of NAPL in December 2000, July of 2001, and most recently in August of 2003. NAPL was not observed in monitoring well MW-8 on any of these occasions.

2.1.4 Interim Remedial Measures During Construction Activities

It is possible that impacted soils will be encountered during excavation associated with the Phase II construction activities described in Section 1.4. Visually impacted soils, if encountered during the construction activities, will be removed in accordance with procedures described in Sections 2.2 through 2.4 to ensure that safe conditions are maintained for Site workers and the surrounding community.

2.2 WORKER HEALTH AND SAFETY

The remedial/construction contractor will prepare a Site Health and Safety Plan (HASP) to provide a safe working environment for construction personnel, to minimize the risk of human and economic losses resulting from unnecessary accidents, to comply with safety and health laws and regulations, and to satisfy the specific needs of Con Edison. The plan will be prepared in accordance with 29 CFR 1910.120 and applicable sections of 29 CFR 1926 and will be certified by a certified industrial hygienist or certified safety professional. The HASP will address, among other things, community and work zone air monitoring, odor control, and appropriate training and personal protective equipment for site workers.

Potential contaminants which may be encountered in Site soils include VOCs (primarily BTEX), PAHs, metals, and cyanide (SI Report, Parsons 2003). Of the suspected volatile chemicals present in site soils, benzene has the lowest Permissible Exposure Limit (PEL) as set by OSHA, and hence, sets the action limit for monitoring with a PID. PAHs could pose significant health threats if ingested or inhaled as a dust. On-site personnel will make efforts to avoid activities that could generate potentially contaminated dust and, to the extent feasible, will work upwind of contaminated soils and groundwater during excavation activities.

2.3 SOIL AND GROUNDWATER HANDLING AND DISPOSAL

2.3.1 Site Access and Control

A gated, chain-link security fence that surrounds the entire Site currently controls site access. During excavation activities, a four-foot high, orange high-visibility fence will be installed to establish an exclusion zone. Unprotected onlookers should be located upwind of any excavation activities, if possible. All personnel within the exclusion zone will be required to use the specified level of protection. In the event that volatile organics are detected in the breathing zone above specified levels, all personnel within the exclusion zone must upgrade the level of protection appropriate to the chemicals anticipated. No food, drink, or smoking will be allowed in the exclusion or decontamination zones. Contact lenses and cosmetics will not be permitted in contaminated areas.

2.3.2 Storm Water/Erosion Control Measures

To minimize increased water infiltration in the disturbed area during the IRM and Phase II construction activities and to minimize the potential for rainfall or flood-induced migration of soils into adjacent streets and storm sewers, Con Edison will require the contractor performing the work to implement adequate storm water control measures during construction. Such measures may include the following:

Grading the work area prior to excavation activities to ensure that surface water runoff is diverted away from the excavation area. Soil berms may also be constructed along the perimeter of the excavations to prevent surface water from entering the excavation areas; and/or

- Installing silt fencing to intercept surface water runoff. Silt fencing is installed parallel to ground surface contours and prior to clearing, grading, or excavation activities within the work area. The lower edge of the fabric is buried below the ground surface to prevent undermining. The ends of the fence are curved uphill to the extent necessary to mitigate the potential for flow around the ends of the fence. Silt fencing would be removed following the backfilling of the excavations.

The specific locations of the storm water/erosion controls described above will be determined in the field based on Site-specific drainage and working conditions. In addition to implementing these measures, the contractor will be prepared to provide pumps, hoses, and other equipment to divert ponded or flowing surface water away from the excavation areas, as necessary.

2.3.3 Dust/Odor Control

Engineering controls and abatement measures may become necessary to control dust and particulate emissions during excavation of impacted soils. The primary means of controlling dust emissions will be spraying water over the dust-generating area. Sufficient water will be used to suppress dust production, but not so much as to pool and produce muddy areas on the Site.

Excavation of impacted soils may also generate significant odors. Odor control of the excavation and excavated materials, if necessary, will be obtained with engineering controls such as foam suppression using chemical masking and/or encapsulation, covering the excavation with ultraviolet-resistant polyethylene plastic, or minimizing the excavation area. Fabric will also be placed along the perimeter fencing to mitigate dust/odor migration.

2.3.4 Excavation, Transportation, and Disposal

Excavation during the IRM and excavation for the Phase II construction activities will be conducted by a contractor having 40-hour OSHA HAZWOPER-certified personnel that are qualified to perform environmental work. Excavation will be conducted using typical excavation and construction equipment, such as excavators, backhoes, and front-end loaders. Investigation results indicate that some of the material excavated from within the former gasholder may be characteristically hazardous for benzene. Soils in the TB-2 area, where hazardous concentrations of benzene have been detected, and any other visually impacted soils with oily or tarry material that are encountered during the IRM or construction excavations will be segregated, to the extent possible, and staged on-site for testing prior to off-site disposal. Existing analytical results will be used, to the extent possible, to obtain pre-approval for disposal or treatment of the soils at the selected disposal or thermal treatment facilities. Concrete or steel removed will be visually inspected and cleaned to the extent possible and disposed of as construction debris or scrap metal. Any stained concrete will be segregated and disposed of as non-hazardous waste.

Depending on the volume, segregated materials will be contained in either a lined roll-off container or placed in a stockpile. The staging area will be bermed and lined with 20-

mil plastic sheeting. The stockpile will be covered with plastic to control odors and appropriate erosion and sedimentation controls will be implemented. The location of the roll-off or stockpile will be determined in the field based on site conditions and access at that time.

If the segregated soils exhibit the toxicity characteristic for benzene, they will be transported off-site for thermal treatment at a facility permitted to receive MGP-contaminated soil or sediment, provided that they meet the applicability requirements under TAGM 4061 (NYSDEC, 2001). Transportation of the materials to the disposal facility will be accomplished by a licensed hauler with a valid waste transporter permit in accordance with appropriate local, state, and federal regulations. All trucks will be decontaminated, covered with a tarp, and manifested prior to leaving the decontamination area or the exclusion zone. The trucks will be required to have covers that do not require men to enter the bed of the truck. Due to the limited space available on-site, trucks may be weighed at a local certified truck scale, a portable truck scale, or the axle gauges on the trucks will be used to determine the approximate load weights. A representative of Con Edison will sign the manifests and bills of lading. Copies of completed and signed manifests will be obtained and included in the certification report to verify proper transport and disposal of soils at the designated disposal facility.

2.3.5 Dewatering/Stabilization

Perched water was encountered within the former southern gasholder at a depth of 8 feet during the PSA investigation activities. Water was not encountered within the gasholder during the May 2003 soil boring investigation. Excavation below the groundwater table is not anticipated, therefore dewatering may not be necessary to complete the IRM activities. Soils excavated from within the gasholder may require stabilization prior to or after removal. Stabilization of soil will be accomplished by mixing the material with a stabilizing agent, as appropriate, to facilitate off-site transportation in accordance with applicable rules and regulations.

2.3.6 Decontamination

A decontamination pad will be constructed to remove potentially contaminated soil from trucks and equipment prior to leaving the Site. The decontamination pad will consist of an impermeable barrier (concrete or geomembrane covered with plywood or gravel) bermed along the edges and sloped to a collection sump (Figure 9). Decontamination will consist of steam cleaning visible soils from the trucks. Liquid materials and other residual material generated during equipment decontamination will be collected and containerized for subsequent treatment or off-site disposal in accordance with the analytical results.

Excavating equipment used to remove impacted materials will be decontaminated at completion of the excavation and prior to leaving the Site. The excavation bucket will be decontaminated over the bermed decontamination pad by scraping and utilizing a power washer and/or steam cleaner.

2.4 COMMUNITY AIR MONITORING PLAN

The New York State Department of Health (NYSDOH) Generic Community Air Monitoring Plan (CAMP) requires that, during excavation at contaminated sites, real-time monitoring for VOCs and particulates (i.e., dust) be conducted at the downwind perimeter of each designated work area. Air monitoring at the Site will be conducted in accordance with the NYSDOH CAMP. The purpose of the air monitoring program is to ensure that the community and general public are not exposed to hazardous constituents at levels above accepted regulatory limits provided in the NYSDOH CAMP. For the construction and IRM activities proposed for the Site, the worker protection and community air monitoring will be conducted by a third party air monitoring contractor who will have the authority to act as the Site Health and Safety Officer (HSO) during intrusive soil excavation activities. The third party air monitoring contractor will provide all necessary personnel and equipment to conduct the air monitoring program. The HSO authority will supercede all other parties at the Site.

2.4.1 Meteorological Measurements

Meteorological data consisting of wind speed, wind direction, temperature and relative humidity will be collected as part of the community air monitoring program. The third party air monitoring contractor will select a location for the meteorological monitoring station. Meteorological readings will be recorded continuously and a 5-minute running average will be computed automatically by the meteorological monitoring station.

2.4.2 Background Monitoring

Perimeter air monitoring will be conducted prior to any soil disturbance to establish a baseline measure of air quality before excavation begins. Heavy construction equipment will be run during this time to measure the potential emissions. These readings will be considered background and will be used for comparison with air quality once soil disturbance begins.

2.4.3 Real-Time Perimeter Air Monitoring

Real-time air monitoring for VOCs and suspended particulates will be conducted upwind and downwind of the work area along the site perimeter. The intent of the real-time monitoring program is to prevent and/or mitigate potential short-term emissions and off-site migration of Site-related VOCs and dusts by early detection in the field. Monitoring will be conducted at both upwind and downwind locations. The air monitoring stations will be determined in the field based on Site conditions. All instantaneous and average readings will be recorded.

VOC Monitoring

Continuous monitoring for VOCs will be conducted using portable PID gas chromatographs (GCs) during all ground intrusive activities (i.e., excavation). VOCs will be monitored continuously at each monitoring station.

- If total organic vapor levels exceed 5 ppm above background at the perimeter, work activities will be temporarily halted and monitoring continued. If levels readily decrease (per instantaneous readings) below 5 ppm above background, work activities will resume with continued monitoring.
- If total organic vapor levels at the downwind perimeter persist at levels in excess of 5 ppm above background but less than 25 ppm, work activities will be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps work activities will resume provided that the total organic vapor level 200 feet downwind of the hot zone or half the distance to the nearest potential receptor or residential /commercial structure, whichever is less – but in no case less than 20 feet, is below 5 ppm above background for the 15-minute average.
- If the total organic vapor level is above 25 ppm at the downwind perimeter, activities will be shutdown.

All readings will be recorded and available for NYSDEC and NYSDOH personnel to review. Instantaneous readings, if any, will also be recorded.

Particulate Monitoring

Particulate concentrations will be monitored both upwind and downwind during all dust-generating activities (e.g., excavation and backfilling) using a portable real-time particulate monitor capable of measuring particulate matter less than 10 micrometers in size. Particulate will be monitored continuously at each monitoring station. The equipment will include an audible alarm to indicate exceedence of the action level.

- If the downwind particulate level is 100 micrograms per cubic meter ($\mu g/m^3$) or if dust is observed leaving the work area, then dust suppression techniques will be employed. Work will continue with dust suppression provided that the downwind particulate level does not exceed 150 $\mu g/m^3$ above background and no visible dust is migrating from the work area.
- If, after implementation of dust suppression techniques, the downwind particulate level is greater than 150 $\mu g/m^3$ above background, work will be stopped and a re-evaluation of activities initiated. Work will resume provided that dust suppression measures and other controls are successful in reducing the downwind particulate level to within 150 $\mu g/m^3$ of the background (upwind) level and in preventing visible dust migration.

All readings will be recorded and be available for NYSDEC and NYSDOH personnel to review.

2.4.4 Reporting

A daily record of all field readings will be maintained. Upon completion of the air monitoring program and receipt of all air sample data from the laboratory, an Air Monitoring Data Report will be prepared. The data report is intended to document the

actual field conditions encountered during the Site activity and present all air monitoring data measured/generated during the program. The data report will include at a minimum:

- Introduction summarizing the objectives of the air monitoring program.
- Description of the sampling and analytical program including sampling locations, sampling methods, analytical methods, quality assurance and quality control procedures, chain-of-custody procedures,
- Summary of the sampling results including data tables and graphs, comparison with baseline and background results, any irregularities and exceedances of action levels and responses.
- Conclusions
- Appendices containing field logs and data sheets, recordings, calibration data, chain-of-custody forms and laboratory analytical results.

2.5 CITIZEN PARTICIPATION PLAN

A site Fact Sheet will be prepared and meetings will be held to inform nearby businesses, local elected officials and the St. John's R.C. Church and St. John's Elementary School of the upcoming Site activities. The Fact Sheet will summarize the proposed site activities and the project schedule, and will provide key contact information. Community outreach activities will be conducted in accordance with Con Edison's Draft Citizen Participation Plan for the MGP Program.

2.6 ENGINEERING CERTIFICATION REPORT

After completion of the IRM, an engineering certification report will be prepared to document the IRM activities. The report will include:

- A summary of the IRM activities;
- A description of any approved modifications to the work plan;
- A listing of quantities and types of materials removed from the Site;
- A listing of the disposal sites used;
- A summary of the sampling and analysis and air monitoring performed, including QA/QC data and chain-of-custody records; and
- Copies of manifests, photographs, and daily work logs.

The report will be signed and stamped by a licensed engineer in the State of New York certifying that the information is true, accurate and complete.

SECTION

SECTION 3
PROJECT ORGANIZATION

3.1 PROJECT ORGANIZATION

The Parsons management and technical staff required to execute this project and their areas of responsibility are described below. Table 1 lists addresses and telephone numbers of the key project personnel.

Project Manager

Ms. Megan A. Miller, P.E. will be the Project Manager for this project. Ms. Miller will be responsible for maintaining the project schedule, keeping the project within budget, and ensuring the technical adequacy of the work performed. Ms. Miller will be the primary contact with Con Edison on all technical, schedule, and contractual issues.

Technical Director

Mr. Ray D'Hollander, P.E. will be the Technical Director for this project. Mr. D'Hollander will provide technical support and overall quality assurance for the project. The primary objective of the Technical Director is to ensure compliance with all regulatory guidance and regulations.

Health and Safety Officer

The Health and Safety Officer for this project will be Mr. Andy Soos. Mr. Soos will ensure that the health and safety plan is properly implemented and that all Parsons site personnel are trained in the site-specific project health and safety requirements, as well as those of Con Edison.

Lead Project Engineer

Ms. Ayesha Dolasa, Environmental Engineer will serve as the lead project engineer. Ms. Dolasa is responsible for assisting in preparing project deliverables and overseeing the construction phase of the remediation project.

TABLE 1
KEY PROJECT CONTACTS

Name	Responsibility	Address	Telephone
Con Edison			
Mr. Steven Lapidus	Con Edison Project Manager	Con Edison 4 Irving Place New York, New York, 10003	212/460-4857
Ms. Yelena Skorobogatov	Con Edison Project Manager	Con Edison 31-01 20th Ave. Building 138 Long Island City, NY 11105	718/204-4205
Parsons			
Imants Reks, C.P.G.	Parsons Program Manager	Parsons 290 Elwood Davis Road, Suite 312 Liverpool, NY 13088	315/451-9560
Megan A. Miller, P.E.	Parsons Project Manager	Parsons 290 Elwood Davis Road, Suite 312 Liverpool, NY 13088	315/451-9560
Ray D'Hollander, P.E.	Parsons Technical Director	Parsons 290 Elwood Davis Road, Suite 312 Liverpool, NY 13088	315/451-9560
Ayesha Dolasa	Parsons Project Engineer	Parsons 200 Cottontail Lane South Somerset, NJ 08873	732/537-3660

SECTION 4
PROJECT SCHEDULE

Figure 10 provides the overall anticipated schedule for implementation of planned construction activities at the substation and future remediation of impacted areas at the site. The anticipated schedule and how it will facilitate future remediation activities at the site is outlined below. Equipment that is referred to below and planned for removal/installation is shown on Figures 6 and 7. Schedule for Tasks 4 through 13 below may change based on availability of funding.

1. The first task under Phase II includes the removal of aboveground equipment associated with transformers #5 and #6. These activities are currently being conducted and are expected to be completed by November 2003.

2. Following removal of above grade equipment, the underground structures associated with transformers #5 and #6 (including concrete pads/foundations, conduits, etc.) will be removed. A description of the underground demolition work was provided to the NYSDEC in an August 11, 2003 letter to the NYSDEC. The NYSDEC provided approval of this work on August 28, 2003. This task is anticipated to begin in December 2003 and be completed by January 2003.

3. Once all above grade and underground structures associated with transformers #5 and #6 have been removed, the IRM for this area can be implemented. The revised IRM approach presented herein includes the removal of the former southern relief gasholder and installation of a NAPL cut-off wall and recovery wells. The remedial activities are expected to begin in early 2004, following the NYSDEC approval of the IRM Work and the subsequent public review of the document.

4. Installation of new conduits/distribution feeders associated with the new switchgear #3 and #4 are currently scheduled to occur in 2005 after the IRM activities have been completed.

5. Once the new distribution feeders are in place, the new oil lines that serve these feeders can be installed and connected.

6. Demolition of the existing pumphouse and removal of the existing oil lines associated with old transformers #5 and #6 will be conducted following installation of the new oil lines.

7. New switchgear #3 and #4 can be placed into service following installation of the new conduits/distribution feeders. The anticipated service date for the new switchgear is May 2006.

8. Following completion of the IRM activities, Con Edison could potentially install the foundations for future transformer vaults #3 and #4 in 2007.

9. Once new switchgear #3 and #4 is in service, old switchgear #7 and #8 located in the northern portion of the site can be removed. This task is currently scheduled to be completed in 2008.

10. Following the removal of switchgear #7 and #8, impacted areas associated with the northern and central former gasholders at the site will be addressed to the extent practicable. According to the anticipated schedule, remediation of this area can begin in 2009. There are no future plans for construction in this area.

11. The installation of new transformer #3 and #4 is not scheduled until 2008 at the earliest (unless equipment failures at the site accelerate this schedule).

12. Once transformers #3 and #4 are installed and in service, old transformers #7 and #8 can be removed.

13. Following the removal of transformers #7 and #8, impacted areas in the northeastern portion of the site associated with the former purifying house and tar well and separator will be addressed to the extent practicable. As shown on Figure 10, this area will not be accessible for remediation until 2011 at the earliest. There are no future plans for construction in this area.

SECTION 3

SECTION 5

REFERENCES

NYSDEC. 1994. Determination of Soil Cleanup Objectives and Cleanup Levels. New York State Department of Environmental Conservation Division Technical Administrative Guidance Memorandum HWR-94-4046. January 1994.

NYSDEC. 1998. Ambient Water Quality Standards and Guidance Values. New York State Department of Environmental Conservation Division of Water Technical and Operational Guidance Series (1.1.1). October 1998.

NYSDEC. 2001. Technical and Administrative Guidance Memorandum #4061.

NYSDEC. 2002. Draft Voluntary Cleanup Program Guide. May 2002

Parsons. 2003. Site Investigation Report, White Plains Former MGP Site. Prepared by Parsons for Consolidated Edison Company of New York. January 2003.

TABLES

Table 1

Consolidated Edison Company of New York
White Plains Former MGP Site

May 2003 Soil Sampling Results

Consolidated Edison White Plains Former MGP Site Preliminary Soil Analytical Data May 2003		Sample ID: Lab Sample Id: Depth: Source: SDG: Matrix: Sampled: Validated:	SB101A R2561-01 23-25' Chemtech R2561 SOIL 5/16/2003	SB101B R2561-02 40-42' Chemtech R2561 SOIL 5/16/2003	SB101C R2561-03 44-45' Chemtech R2561 SOIL 5/16/2003	SB103A R2561-04 26-27' Chemtech R2561 SOIL 5/15/2003	SB103B R2561-05 35-40' Chemtech R2561 SOIL 5/15/2003	SB104A R2561-06 26-30' Chemtech R2561 SOIL 5/15/2003	SB104B R2561-07 35-40' Chemtech R2561 SOIL 5/15/2003
CAS NO.	COMPOUND	UNITS:							
	VOLATILES								
75-09-2	Methylene Chloride	ug/Kg	ND	ND	3.5 JB	ND	3.5 JB	9.7	3.6 JB
108-88-3	Toluene	ug/Kg	ND	1100 J	2.2 J	ND	ND	ND	ND
100-41-4	Ethyl Benzene	ug/Kg	100000	65000	50	13000	ND	ND	ND
136777-61-2	m/p-Xylenes	ug/Kg	20000	160000	100	8900	ND	ND	ND
1330-20-7	o-Xylene	ug/Kg	15000	59000	45	10000	ND	ND	ND
	Total VOCs	**ug/Kg**	**135000**	**285100**	**200.7**	**31900**	**3.5**	**9.7**	**3.6**
	SEMIVOLATILES								
91-20-3	Naphthalene	ug/Kg	330000 D	860000 D	280 J	560000 D	ND	ND	ND
91-57-6	2-Methylnaphthalene	ug/Kg	88000 D	290000 D	ND	200000 D	ND	48 J	ND
208-96-8	Acenaphthylene	ug/Kg	16000 JD	29000 JD	ND	14000 JD	ND	1400	ND
83-32-9	Acenaphthene	ug/Kg	120000 D	190000 D	ND	160000 D	ND	690	ND
100-02-7	4-Nitrophenol	ug/Kg	ND	ND	ND	ND	ND	ND	ND
132-64-9	Dibenzofuran		5200	32000 JD	ND	ND	ND	ND	ND
86-73-7	Fluorene	ug/Kg	48000 D	97000 JD	ND	67000 D	ND	770	ND
85-01-8	Phenanthrene	ug/Kg	130000 JD	640000 D	58 J	270000 D	ND	11000 D	ND
120-12-7	Anthracene	ug/Kg	4800	89000 JD	ND	3800	ND	3100 JD	ND
86-74-8	Carbazole		ND	8600	ND	ND	ND	ND	ND
206-44-0	Fluoranthene		75000 D	16000	ND	120000 D	ND	4700 D	ND
129-00-0	Pyrene	ug/Kg	15000	12000	ND	74000 JD	ND	1900	ND
120-12-7	Benzo(a)anthracene	ug/Kg	36000 D	60000 JD	ND	49000 D	ND	3200 JD	ND
218-01-9	Chrysene	ug/Kg	25000 D	30000 JD	ND	30000 D	ND	1900 JD	ND
117-81-7	Bis(2-ethylhexyl)phthalate	ug/Kg	240 J	270 J	ND	260 J	ND	58 J	ND
205-99-2	Benzo(b)fluoranthene	ug/Kg	5500 JD	15000 JD	ND	8100 JD	ND	1000 JD	ND
207-08-9	Benzo(k)fluoranthene	ug/Kg	5000 JD	ND	ND	8700 JD	ND	ND	ND
50-32-8	Benzo(a)pyrene	ug/Kg	15000 JD	31000 JD	ND	26000 D	ND	2000 JD	ND
193-39-5	Indeno(1,2,3-cd)pyrene	ug/Kg	700 J	570 J	ND	520 J	ND	230 J	ND
53-70-3	Dibenz(a,h)anthracene		940 J	830 J	ND	ND	ND	ND	ND
191-24-2	Benzo(g,h,i)perylene	ug/Kg	1800 J	1200 J	ND	2500	ND	780	ND
	Total SVOCs	**ug/Kg**	**922180**	**2402470**	**338**	**1593880**	**ND**	**32776**	**ND**

J = Indicates an estimated value.
ND = Indicates constituent was not detected.
NA = Indicates constituent was not analyzed for.

Table 1

Consolidated Edison Company of New York
White Plains Former MGP Site

May 2003 Soil Sampling Results

Consolidated Edison White Plains Former MGP Site Preliminary Soil Analytical Data May 2003		Sample ID: Lab Sample Id: Depth: Source: SDG: Matrix: Sampled: Validated:	SB101A R2561-01 23-25' Chemtech R2561 SOIL 5/16/2003	SB101B R2561-02 40-42' Chemtech R2561 SOIL 5/16/2003	SB101C R2561-03 44-45' Chemtech R2561 SOIL 5/16/2003	SB103A R2561-04 26-27' Chemtech R2561 SOIL 5/15/2003	SB103B R2561-05 35-40' Chemtech R2561 SOIL 5/15/2003	SB104A R2561-06 26-30' Chemtech R2561 SOIL 5/15/2003	SB104B R2561-07 35-40' Chemtech R2561 SOIL 5/15/2003
CAS NO.	COMPOUND	UNITS:							
	METALS								
7429-90-5	Aluminum	mg/Kg	3290	1710	13200	3430	2830	2740	2280
7440-36-0	Antimony	mg/Kg	0.33 J	0.35 J	0.4 J	0.34 J	0.32 J	0.39 J	0.37 J
7440-38-2	Arsenic	mg/Kg	0.38 J	0.59 J	0.8 J	0.47 J	ND	ND	0.31 J
7440-39-3	Barium		29.7	18.3 J	203	28.5	33.8	25.5	26.5
7440-41-7	Beryllium	mg/Kg	0.14 J	0.07 J	0.32 J	0.13 J	0.12 J	0.12 J	0.09 J
7440-70-2	Calcium	mg/Kg	4280	20400	24800	7670	19500	16800	18700
7440-47-3	Chromium	mg/Kg	6.9	2.4	29.9	7.2	5.2	4.2	3.8
7440-48-4	Cobalt	mg/Kg	4.3 J	3.3 J	13.7	3.9 J	4 J	3.5 J	3.2 J
7440-50-8	Copper	mg/Kg	9.2	7.2	26	10.5	10.7	7.2	9
7439-89-6	Iron	mg/Kg	5560	3510	19900	5820	5450	6040	4170
7439-92-1	Lead	mg/Kg	1.6	1.3	2.8	2.3	1.5	1.3	1.4
7439-95-4	Magnesium	mg/Kg	4280	10600	19600	6020	11900	11600	10200
7439-96-5	Manganese	mg/Kg	99.2	50.6	321	73	82.5	97.6	65.7
7440-02-0	Nickel	mg/Kg	5.3	4.3 J	21.2	5.4	5.5	3.9 J	3.8 J
7440-09-7	Potassium	mg/Kg	975	706	8980	1170	1260	1110	1030
7440-23-5	Sodium	mg/Kg	125 J	252 J	301 J	135 J	394 J	87.7 J	276 J
7440-62-2	Vanadium	mg/Kg	11.2	5.7 J	43.7	10	10.3	8.9	7.9
7440-66-6	Zinc	mg/Kg	6.7	0.07 U	60.1	5.6	0.07 U	0.07 U	0.07 U
	OTHER								
	TPH	mg/Kg	5800	13000	160	5800	220	210	89

J = Indicates an estimated value.
ND = Indicates constituent was not detected.
NA = Indicates constituent was not analyzed for.

Table 1

Consolidated Edison Company of New York
White Plains Former MGP Site

May 2003 Soil Sampling Results

Consolidated Edison White Plains Former MGP Site Preliminary Soil Analytical Data May 2003		Sample ID: Lab Sample Id: Depth: Source: SDG: Matrix: Sampled: Validated:	SB105A R2561-08 26-27' Chemtech R2561 SOIL 5/15/2003	SB105B R2561-09 38-40' Chemtech R2561 SOIL 5/15/2003	SB106A R2561-10 29-29.6' Chemtech R2561 SOIL 5/16/2003	SB106B R2561-11 37-39' Chemtech R2561 SOIL 5/16/2003	SB107A R2561-12 34-34.6' Chemtech R2561 SOIL 5/16/2003	SB107B R2561-16 35-40' Chemtech R2561 SOIL 5/16/2003	SB107B DUP R2561-15 35-40' Chemtech R2561 SOIL 5/16/2003
CAS NO.	COMPOUND	UNITS:							
	VOLATILES								
75-09-2	Methylene Chloride	ug/Kg	ND	3.3 JB	4.7 JB	3.1 JB	15	5.5 JB	8 B
108-88-3	Toluene	ug/Kg	ND	ND	ND	ND	ND	ND	ND
100-41-4	Ethyl Benzene	ug/Kg	35000	ND	ND	ND	ND	ND	ND
136777-61-2	m/p-Xylenes	ug/Kg	36000	ND	ND	ND	ND	ND	ND
1330-20-7	o-Xylene	ug/Kg	21000	ND	ND	ND	ND	ND	ND
	Total VOCs	**ug/Kg**	**92000**	**3.3**	**4.7**	**3.1**	**15**	**5.5**	**8**
	SEMIVOLATILES								
91-20-3	Naphthalene	ug/Kg	720000 D	ND	NA	ND	NA	ND	ND
91-57-6	2-Methylnaphthalene	ug/Kg	250000 D	ND	NA	ND	NA	ND	ND
208-96-8	Acenaphthylene	ug/Kg	14000 JD	ND	NA	ND	NA	ND	ND
83-32-9	Acenaphthene	ug/Kg	190000 D	ND	NA	ND	NA	ND	ND
100-02-7	4-Nitrophenol	ug/Kg	ND	ND	NA	ND	NA	ND	ND
132-64-9	Dibenzofuran	ug/Kg	7200	ND	NA	ND	NA	ND	ND
86-73-7	Fluorene	ug/Kg	67000 D	ND	NA	ND	NA	ND	ND
85-01-8	Phenanthrene	ug/Kg	320000 D	ND	NA	ND	NA	41 J	ND
120-12-7	Anthracene	ug/Kg	5200	ND	NA	ND	NA	57 J	ND
86-74-8	Carbazole	ug/Kg	ND	ND	NA	ND	NA	ND	ND
206-44-0	Fluoranthene	ug/Kg	120000 D	ND	NA	ND	NA	ND	ND
129-00-0	Pyrene	ug/Kg	96000 D	ND	NA	ND	NA	ND	ND
120-12-7	Benzo(a)anthracene	ug/Kg	51000 D	ND	NA	ND	NA	ND	ND
218-01-9	Chrysene	ug/Kg	32000 D	ND	NA	ND	NA	ND	ND
117-81-7	Bis(2-ethylhexyl)phthalate	ug/Kg	280 J	ND	NA	ND	NA	ND	ND
205-99-2	Benzo(b)fluoranthene	ug/Kg	6900 JD	ND	NA	ND	NA	ND	ND
207-08-9	Benzo(k)fluoranthene	ug/Kg	8000 JD	ND	NA	ND	NA	ND	ND
50-32-8	Benzo(a)pyrene	ug/Kg	31000 D	ND	NA	ND	NA	ND	ND
193-39-5	Indeno(1,2,3-cd)pyrene	ug/Kg	ND	ND	NA	ND	NA	ND	ND
53-70-3	Dibenz(a,h)anthracene	ug/Kg	910 J	ND	NA	ND	NA	ND	ND
191-24-2	Benzo(g,h,i)perylene	ug/Kg	1500 J	ND	NA	ND	NA	ND	ND
	Total SVOCs	**ug/Kg**	**1920990**	**ND**	**NA**	**ND**	**NA**	**98**	**ND**

J = Indicates an estimated value.
ND = Indicates constituent was not detected.
NA = Indicates constituent was not analyzed for.

Table 1

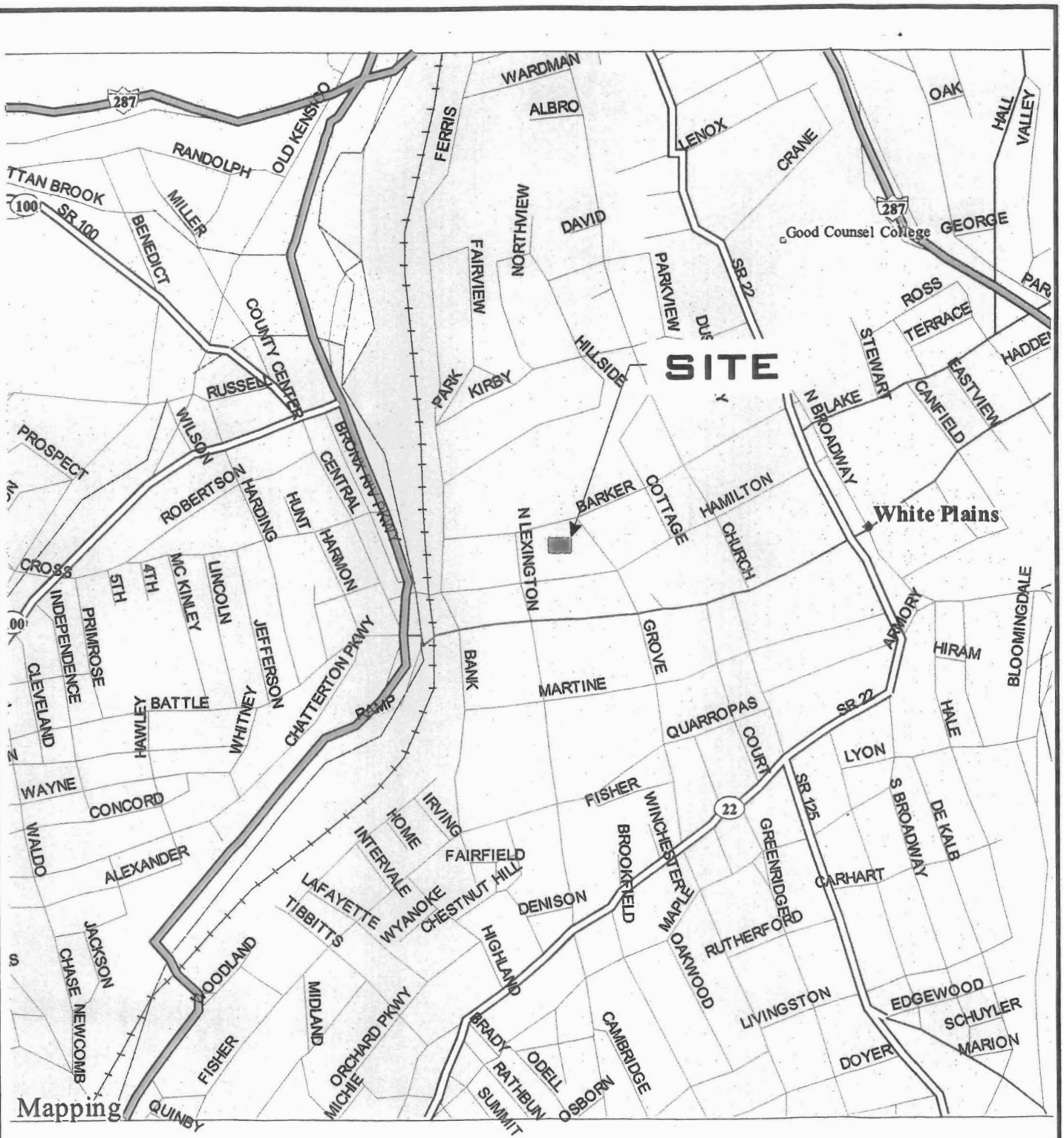
Consolidated Edison Company of New York
White Plains Former MGP Site

May 2003 Soil Sampling Results

Consolidated Edison White Plains Former MGP Site Preliminary Soil Analytical Data May 2003		Sample ID: Lab Sample Id: Depth: Source: SDG: Matrix: Sampled: Validated:	SB105A R2561-08 26-27' Chemtech R2561 SOIL 5/15/2003	SB105B R2561-09 38-40' Chemtech R2561 SOIL 5/15/2003	SB106A R2561-10 29-29.6' Chemtech R2561 SOIL 5/16/2003	SB106B R2561-11 37-39' Chemtech R2561 SOIL 5/16/2003	SB107A R2561-12 34-34.6' Chemtech R2561 SOIL 5/16/2003	SB107B R2561-16 35-40' Chemtech R2561 SOIL 5/16/2003	SB107B DUP R2561-15 35-40' Chemtech R2561 SOIL 5/16/2003
CAS NO.	COMPOUND	UNITS:							
	METALS								
7429-90-5	Aluminum	mg/Kg	2230	2470	NA	3840	NA	3060	2800
7440-36-0	Antimony	mg/Kg	ND	ND	NA	0.42 J	NA	0.59 J	ND
7440-38-2	Arsenic	mg/Kg	0.4 J	0.33 J	NA	ND	NA	ND	0.39 J
7440-39-3	Barium	mg/Kg	19.5 J	26.7	NA	47	NA	36.5	31.8
7440-41-7	Beryllium	mg/Kg	0.1 J	0.11 J	NA	0.14 J	NA	0.13 J	0.12 J
7440-70-2	Calcium	mg/Kg	1340	17500	NA	22700	NA	20200	21100
7440-47-3	Chromium	mg/Kg	3.8	4.7	NA	5.7	NA	4.9	4.4
7440-48-4	Cobalt	mg/Kg	3 J	3.5 J	NA	4.5 J	NA	3.7 J	3.4 J
7440-50-8	Copper	mg/Kg	21.9	8.2	NA	9.7	NA	11.5	9
7439-89-6	Iron	mg/Kg	3800	5200	NA	5500	NA	5070	4900
7439-92-1	Lead	mg/Kg	2.5	1.3	NA	1.4	NA	1.4	1.2
7439-95-4	Magnesium	mg/Kg	1780	10300	NA	13400	NA	11800	12100
7439-96-5	Manganese	mg/Kg	38.8	79.4	NA	78.9	NA	68.6	64.9
7440-02-0	Nickel	mg/Kg	3.8 J	4.1 J	NA	5.7	NA	4.7 J	4.2 J
7440-09-7	Potassium	mg/Kg	687	1040	NA	2310	NA	1580	1410
7440-23-5	Sodium	mg/Kg	113 J	302 J	NA	329 J	NA	280 J	247 J
7440-62-2	Vanadium	mg/Kg	6.9	9.4	NA	11.8	NA	9.8	9.4
7440-66-6	Zinc	mg/Kg	0.07 U	0.07 U	NA	3.6	NA	0.67 J	0.77 J
	OTHER								
	TPH	mg/Kg	7800	98	NA	100	NA	140	110

J = Indicates an estimated value.
ND = Indicates constituent was not detected.
NA = Indicates constituent was not analyzed for.

FIGURES



SOURCE: DeLORME MAPEXPERT, 1996

FIGURE 1

ConEdison

Site Location Map
White Plains Former MGP Site

PARSONS
DESIGN * RESEARCH * PLANNING
290 Elwood Davis Road, Suite 312, Liverpool, New York 13088 * (315) 451-9560
Offices in Principal Cities

P:\736109\GRAPHICS\SITELOC.CDR

WATER STREET

NORTHERN GASHOLDER

CENTRAL GASHOLDER

SOUTHERN GASHOLDER

4 STORY OFFICE BUILDING (12 WATER STREET)

SWITCHGEAR #7 & #8

TRANSFORMER #7

TRANSFORMER #8

FORMER PURIFYING HOUSE

FORMER TAR WELL AND SEPARATOR

STOCKADE FENCE

CHAIN LINK FENCE

NORTH LEXINGTON AVENUE

NEW SWITCHGEAR #1 & #2

NEW TRANSFORMER #1

NEW TRANSFORMER #2

NEW BURIED OIL/WATER SEPARATOR TANK

NEW CONTROL/ BATTERY ROOM

NEW PRESSURING PLANT

FUTURE TRANSF VAULT NO.3

(EXISTING TRANSFORMER #5)

NEW ASPHALT

OLD SWITCHGEAR BUILDING #3 & #4

(EXISTING TRANSFORMER #6)

FUTURE TRANSF VAULT NO.4

NEW PARK. AREA

EXISTING PUMPHOUSE

NEW STREET

"Dr. MARTIN LUTHER KING, JR." GROVE STREET

OFFICE BUILDING

Legend

COMPLETED PHASE I STRUCTURES

PROPOSED PHASE II STRUCTURES

FORMER MGP STRUCTURES

No XREFs
P:\440627\CAD\627C001.dwg, 07/16/03 at 09:11, CLW

40 20 0 40

SCALE: 1"=40'

ORIGINAL BASE MAP INFORMATION DERIVED FROM STRATUS SERVICES GROUP, ENGINEERING DIVISION, INC CRANBURY, NEW JERSEY.

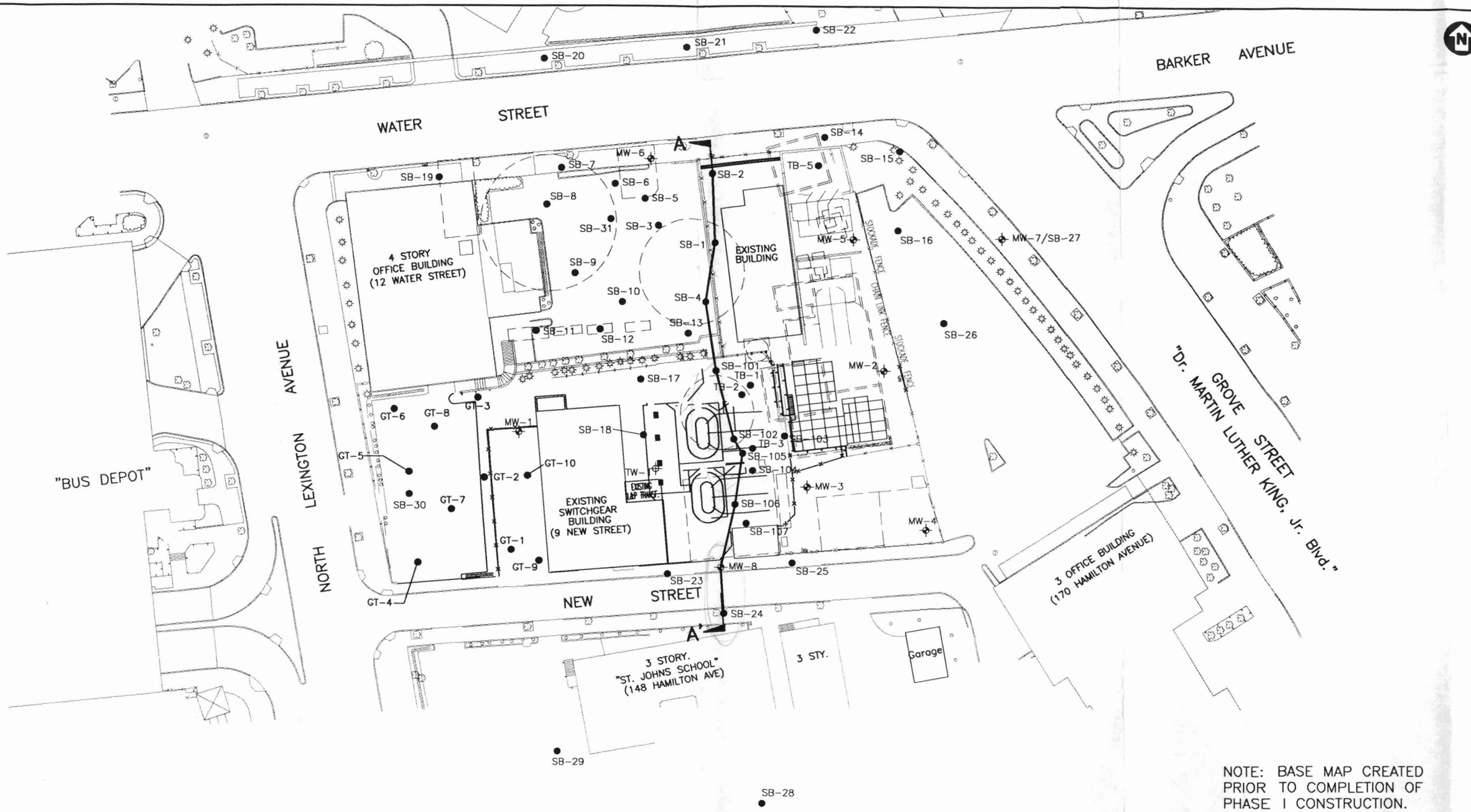
PARSONS
290 ELWOOD DAVIS ROAD
SUITE 312
LIVERPOOL, N.Y. 13088
PHONE: (315) 451-9560
FAX: (315) 451-9570

Con Edison

WHITE PLAINS FORMER MGP SITE
WHITE PLAINS, NEW YORK

SUBSTATION SITE PLAN

FIGURE 2



Legend

- SB-1 ● SOIL BORING
- TB-1 ● TEST BORING
- GT-1 ● GEOTECHNICAL BORING (CONDUCTED IN 1999)
- MW-3 ⊕ MONITORING WELL
- TW-1 ⊕ TEMPORARY WELL
- ■ DRY WELL
- FORMER MGP STRUCTURES
- A ——— A' GEOLOGIC CROSS SECTION (SHOWN ON FIGURE 4)

NOTE: BASE MAP CREATED PRIOR TO COMPLETION OF PHASE I CONSTRUCTION.

60 30 0 60 120

SCALE: 1"=60'

ORIGINAL BASE MAP INFORMATION DERIVED FROM STRATUS SERVICES GROUP, ENGINEERING DIVISION, INC., CRANBURY, NEW JERSEY.

PARSONS
OFFICES IN PRINCIPAL CITIES
290 ELWOOD DAVIS ROAD, SUITE 312
LIVERPOOL, N.Y. 13088
PHONE: (315) 451-9560
FAX: (315) 451-9570

Con Edison

WHITE PLAINS FORMER MGP SITE
WHITE PLAINS, NEW YORK

SOIL BORINGS AND MONITORING WELL LOCATIONS

FIGURE NO. 3

No XREFs
P:\736109\Cad\a-series\36109g14a.dwg, 08/06/03 at 14:45, jar, 1=1

NORTH
A

SOUTH
A'

FORMER NORTHERN RELIEF HOLDER

FORMER SOUTHERN RELIEF HOLDER

ELEVATION ABOVE SEA LEVEL

220
200
180
160
140
120
100

FENCE

FILL

SB-2
SB-1
SB-4
SB-101
SB-102
SB-105
SB-106
MW-8
SB-24

FINE-MEDIUM SAND

BEDROCK

0 30 60 90 120 150 180 210 240 270 300

LEGEND:

- FORMER MGP STRUCTURE
- VISUAL DNAPL
- VISUAL STAINING
- SOIL BORING / MONITORING WELL LOCATION
- SCREENED INTERVAL

20 10 0 20
VERTICAL SCALE: 1"=20'

30 15 0 30
HORIZONTAL SCALE: 1"=30'

PARSONS
OFFICES IN PRINCIPAL CITIES
290 ELWOOD DAVIS ROAD, SUITE 312
LIVERPOOL, N.Y. 13088
PHONE: (315) 451-9560
FAX: (315) 451-9570

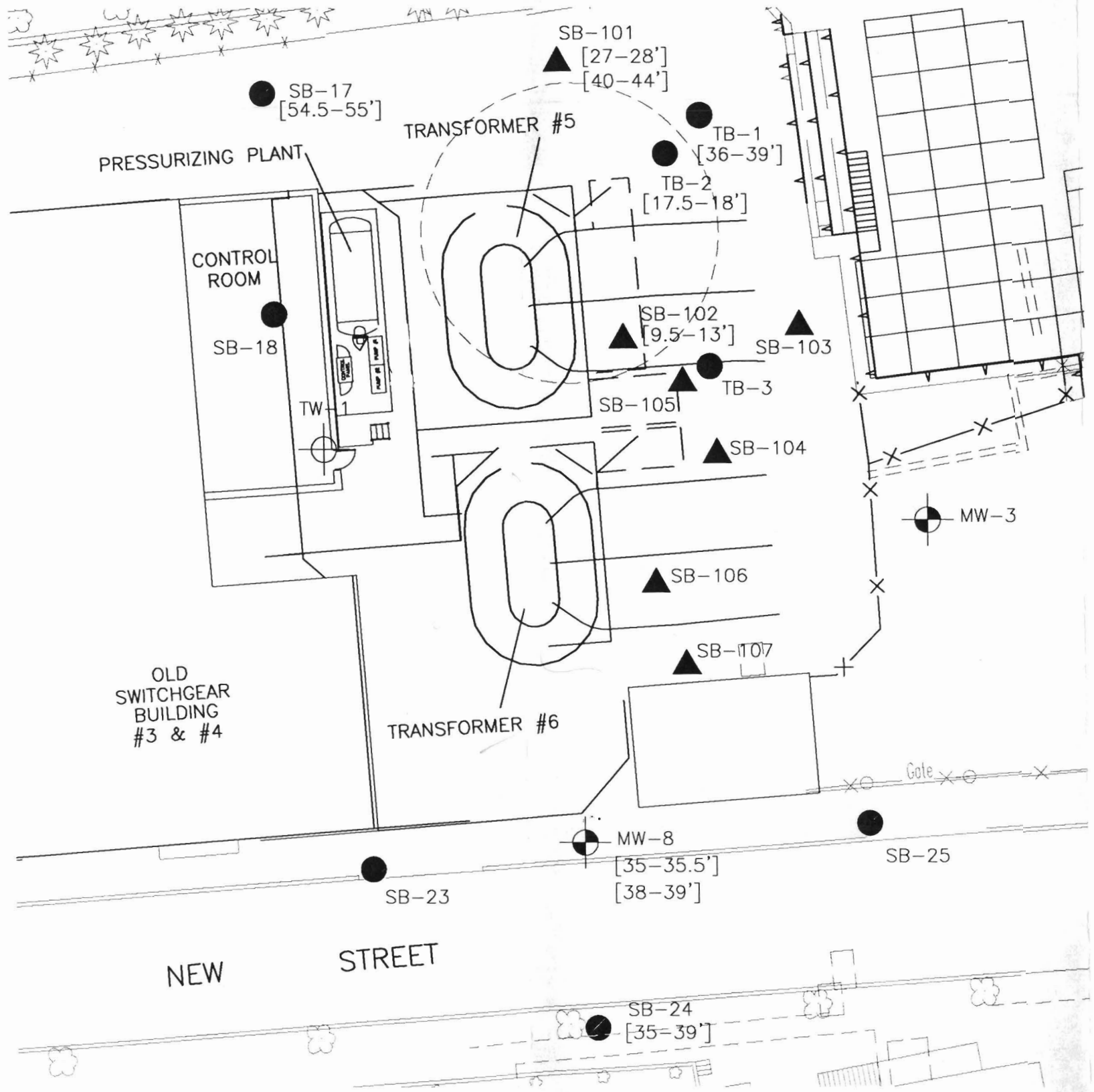
Con Edison

WHITE PLAINS FORMER MGP SITE
WHITE PLAINS, NEW YORK

GEOLOGIC CROSS SECTION

FIGURE NO.
4

No XREFs
P:\736109\Cad\109G009.dwg, 06/23/03 at 14:07, CLW, 1=1



Legend

- SB-1 ● SOIL BORING
- TB-1 ● TEST BORING
- FORMER MGP STRUCTURES
- MW-3 ⊕ MONITORING WELL
- TW-1 ⊕ TEMPORARY WELL
- ▲ NEW SOIL BORING (MAY 2003)
- [38-39'] DEPTH INTERVAL WITH VISIBLE NAPL

20 10 0 20 40

SCALE: 1"=20'

ORIGINAL BASE MAP INFORMATION DERIVED FROM STRATUS SERVICES GROUP, ENGINEERING DIVISION, INC., CRANBURY, NEW JERSEY.

No XREFs
P:\736109\Cad\a-series\36109g20a.dwg, 5/14/03 at 11:32, CLW, 1=1

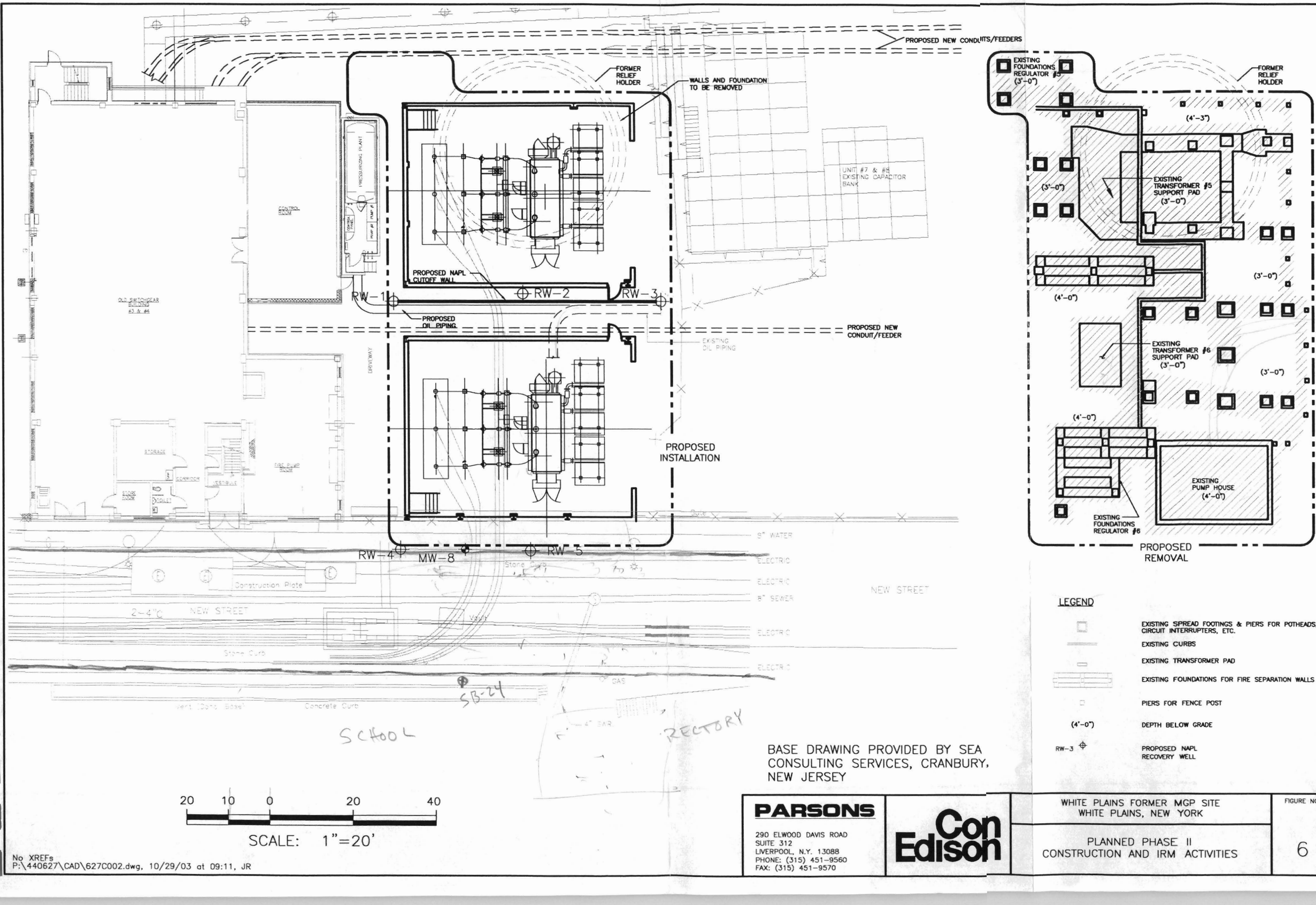
PARSONS
OFFICES IN PRINCIPAL CITIES
290 ELWOOD DAVIS ROAD, SUITE 312
LIVERPOOL, N.Y. 13088
PHONE: (315) 451-9560
FAX: (315) 451-9570

Con Edison

WHITE PLAINS FORMER MGP SITE
WHITE PLAINS, NEW YORK

DISTRIBUTION OF VISIBLE NAPL IN SUBSURFACE SOIL

FIGURE NO. 5



LEGEND

- EXISTING SPREAD FOOTINGS & PIERS FOR POTHEADS, CIRCUIT INTERRUPTERS, ETC.
- EXISTING CURBS
- EXISTING TRANSFORMER PAD
- EXISTING FOUNDATIONS FOR FIRE SEPARATION WALLS
- PIERS FOR FENCE POST
- (4'-0") DEPTH BELOW GRADE
- RW-3 PROPOSED NAPL RECOVERY WELL

BASE DRAWING PROVIDED BY SEA CONSULTING SERVICES, CRANBURY, NEW JERSEY

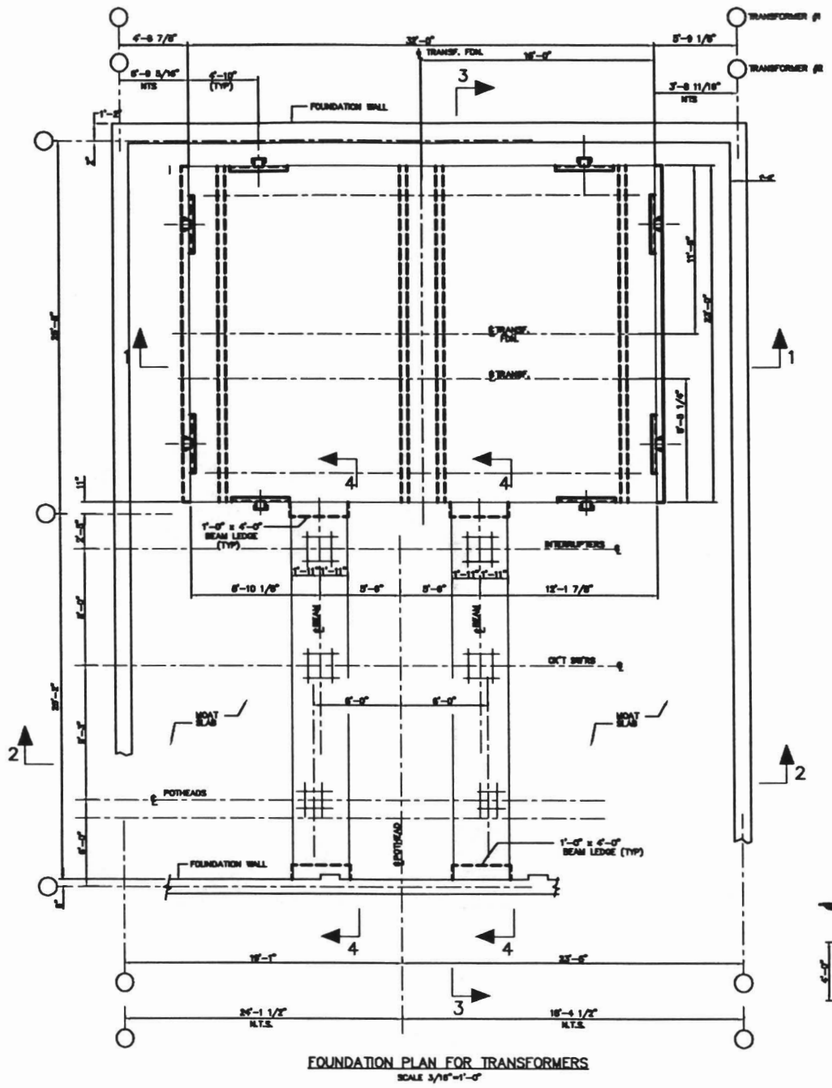
PARSONS
290 ELWOOD DAVIS ROAD
SUITE 312
LIVERPOOL, N.Y. 13088
PHONE: (315) 451-9560
FAX: (315) 451-9570

Con Edison

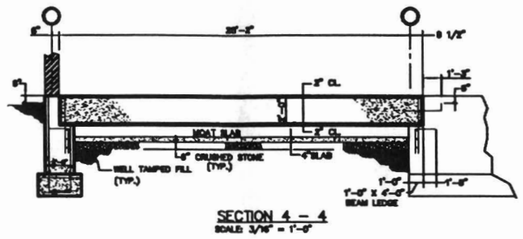
WHITE PLAINS FORMER MGP SITE
WHITE PLAINS, NEW YORK

PLANNED PHASE II
CONSTRUCTION AND IRM ACTIVITIES

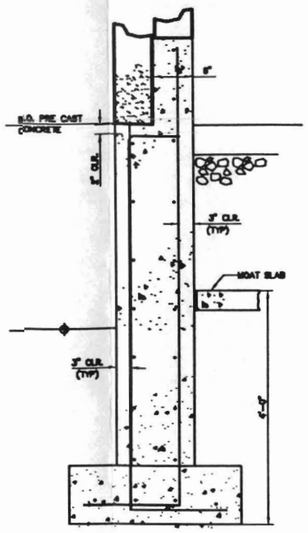
FIGURE NO. 6



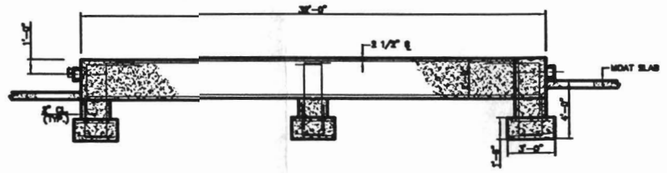
FOUNDATION PLAN FOR TRANSFORMERS
SCALE 3/16"=1'-0"



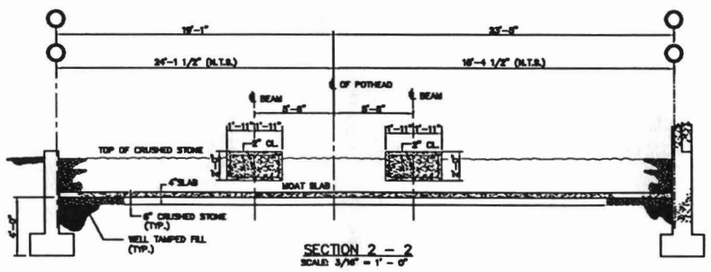
SECTION 4 - 4
SCALE: 3/16" = 1'-0"



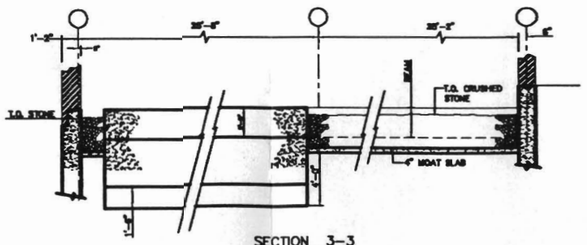
SECTION 1-1
SCALE: 3/4"=1'-0"



SECTION 1-1
SCALE 3/16"=1'-0"



SECTION 2 - 2
SCALE: 3/16" = 1'-0"



SECTION 3-3
SCALE 3/16"=1'-0"

NOTE:
THIS DRAWING IS SCHEMATIC
DIMENSIONS INDICATED ARE BASED ON SIMILAR CONSTRUCTION AT VAULT #1 & #2

DRAWING PROVIDED BY SEA CONSULTING SERVICES, CRANBURY, NEW JERSEY

PARSONS
290 ELWOOD DAVIS ROAD
SUITE 312
LIVERPOOL, N.Y. 13088
PHONE: (315) 451-9560
FAX: (315) 451-9570

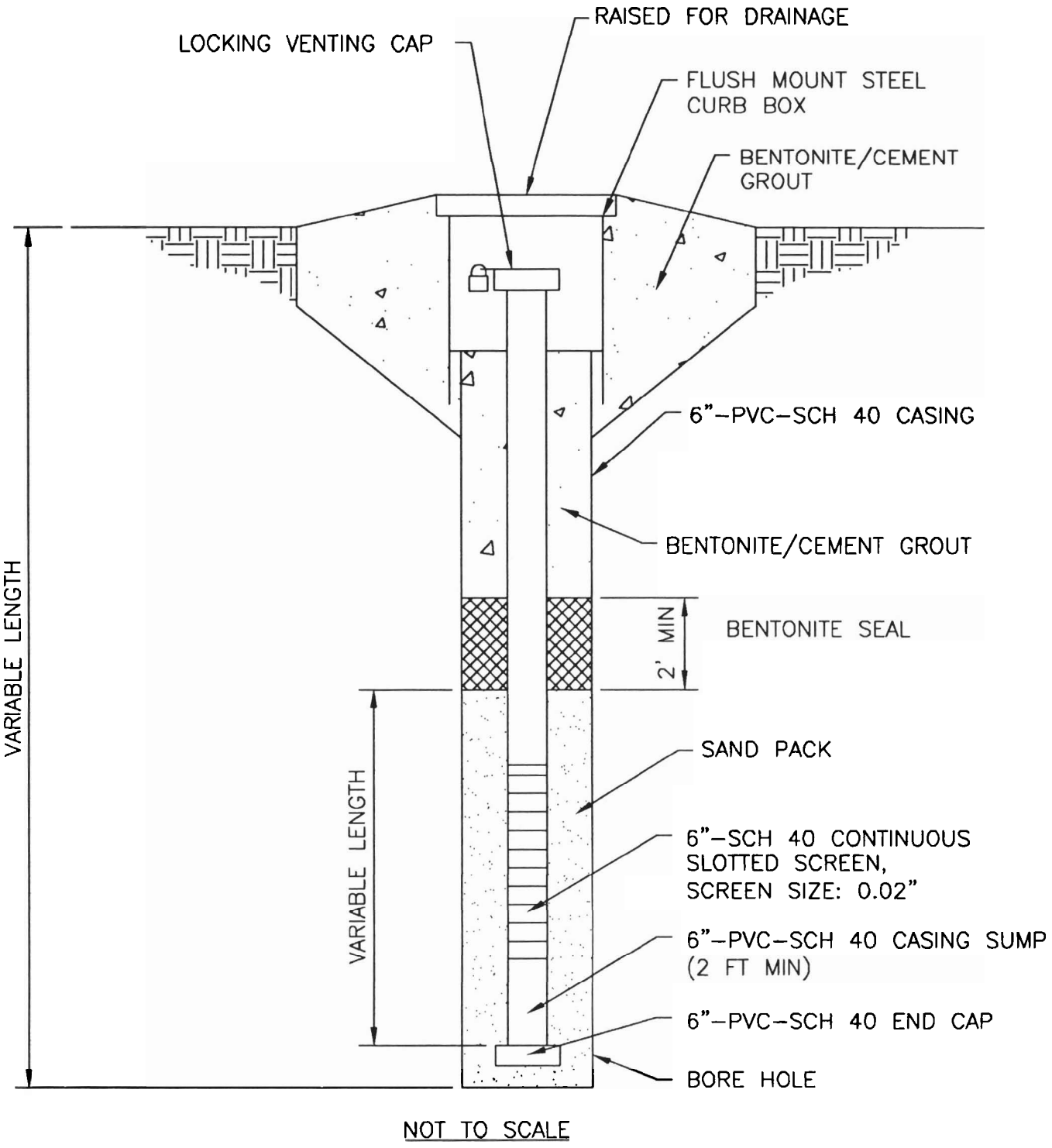
Con Edison

WHITE PLAINS FORMER MGP SITE
WHITE PLAINS, NEW YORK

FUTURE TRANSFORMER VAULT
FOUNDATION PLAN

FIGURE NO. 7

No XREFs
P:\440627\CAD\627C003.dwg, 07/16/03 at 09:11, CLW



NOT TO SCALE

NOTES:

1. WELL SCREEN WILL BE INSTALLED APPROXIMATELY 2 FEET ABOVE WATER TABLE.

2. TOTAL WELL DEPTHS ARE ANTICIPATED TO BE APPROXIMATELY 50 FEET.

No XREFs
P:\440627\CAD\627C004.dwg, 08/05/03; STEVE, 1=1

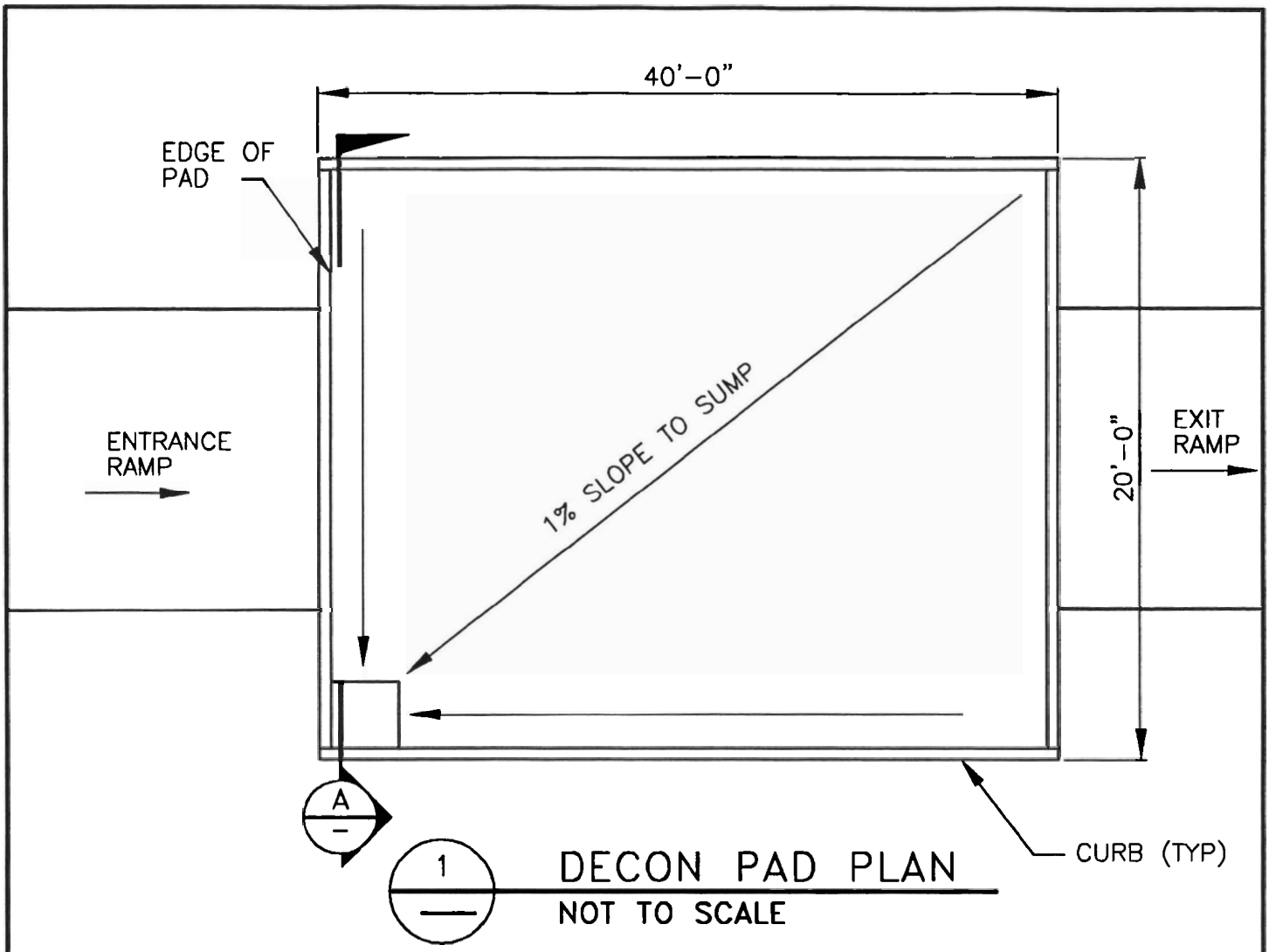
FIGURE 8

Con Edison

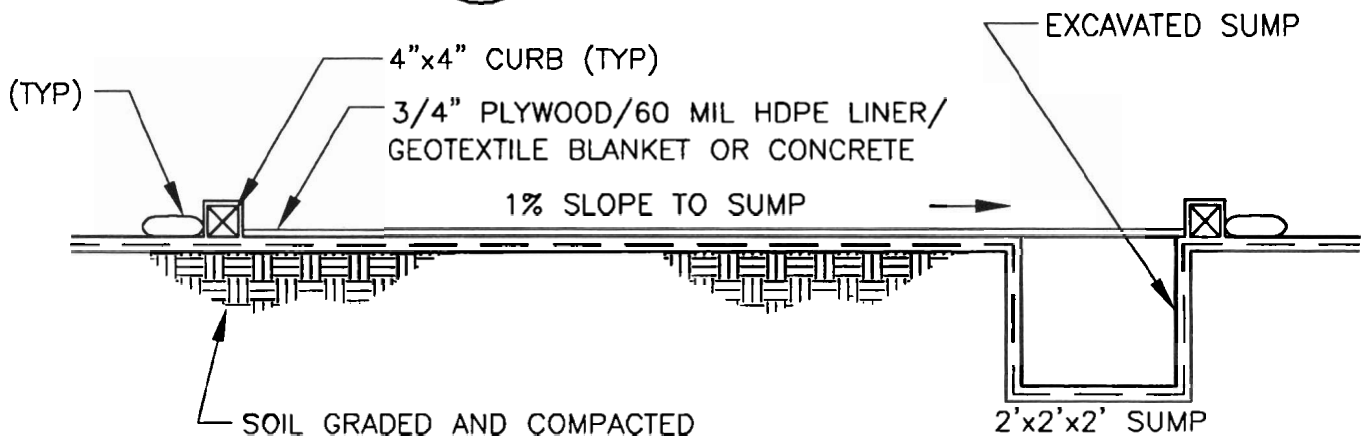
WHITE PLAINS FORMER MPG SITE
WHITE PLAINS, NEW YORK

RECOVERY WELL CROSS SECTION

PARSONS
290 ELWOOD DAVIS ROAD, SUITE 312, LIVERPOOL, N.Y. 13088, PHONE: 315-451-9560



1 — DECON PAD PLAN
NOT TO SCALE



A — DECON PAD SECTION
NOT TO SCALE

FIGURE 9

WHITE PLAINS FORMER MGP SITE
WHITE PLAINS, NEW YORK

GENERAL DECON PAD PLAN

PARSONS
290 ELWOOD DAVIS ROAD, SUITE 312, LIVERPOOL, N.Y. 13088, PHONE: 315-451-9560

No XREFs
P:\736109\CAD\109G008.DWG 5/20/03 JR

FIGURE 10

Anticipated Schedule for Construction and IRM Activities

White Plains Former MGP Site

ACTIVITY	10/03	11/03	12/03	2004 1/04	2/04	3/04	4/04	5/04	6/04	7/04	8/04	9/04	10/04	11/04	12/04	2005 1/05	2/05	3/05	4/05	5/05	6/05	7/05	8/05	9/05	10/05	11/05	12/05	2006 1/06	2/06	3/06	4/06	2007-2011 2 years	1 year	2 years
1. Removal of Transformers #5 & #6																																		
2. Underground Demolition in Transformer #5 and #6 Area																																		
3. Removal of Southern Relief Gasholder and Installation of Barrier Wall																																		
4. New Conduit/Feeder Installation																																		
5. Connect New Oil Lines																																		
6. Demolition of Pumphouse and Old Oil Lines																																		
7. Place New Switchgear #3 and #4 In Service																																		
8. Install New Transformer #3 and #4 Foundations																																		
9. Removal of Switchgear #7 and #8																																		
10. Remediation of Northern and Central Gasholder Area																																		
11. Installation of New Transformers #3 & #4 (including transformer vaults and transmission lines)																																		
12. Removal of Transformers #7 and #8																																		
13. Remediation of Transformer #7 and #8 Area																																		

APPEN

APPENDIX A

Contractor: ADT
Driller: Mark Larabie
Inspector: Chris Kibler
Rig Type: Geoprobe 6600

PARSONS
DRILLING RECORD

BORING/ WELL NO. SB - 101 Sheet 1 of 7

Location Description: Northern most sample location. Approx. 15' north and 20' east of northern most transformer.

PROJECT NAME: Con Ed / White Plains
PROJECT NUMBER: 440090.01000

Weather: Warm, Partly Sunny, 60 F
Date/Time Start: May 16, 2003 0755
Date/Time Finish: May 16, 2003 1015

Location Plan

See Site Plan

GROUNDWATER OBSERVATIONS				
Water Level				
Date				
Time				
Meas. From				

Sample Depth	Sample I.D.	SPT	% Rec.	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL
+1					
0		HC		0.0	
		HC			
		HC			
		HC			
		HC			
5		GP			
		GP			
		GP			
		GP			**Reddish-brown, med-coarse sand, loose, moist, no odor or stain (8-9 ft)**
		GP			Light brown-brown, coarse-med sand, dry-moist, loose, no odor or stain (9 -10 ft)
10		GP	50	1.5	
		GP			
		GP			Brown-light brown, coarse-med sand, loose, dry-moist, no odor or stain (10-15ft)
		GP			
		GP			
15		GP	60	0.2	Brown-light brown, coarse-med sand, loose, dry-moist, no odor or stain (15-17ft)
		GP			Brick and broken brick fragments (17-18 ft)
		GP			Brown, fine sand, moist-dry, loose-firm, no odor or stain (18 - 18.6 ft)
		GP			Cement/Concrete (18.6 - 19.0 ft)
		GP			Brick fragments with coarse sand, loose, moist-dry, no odor or stain(19-19.2ft)
20		GP	100	1.5	Dark grey, fine sand, dry-moist, loose-firm, strong petroleum odor (19.2 - 20 ft)
		GP			
		GP			
	SB-101A	GP			**Dark grey-black, fine sand, moist-wet, strong petroleum odor, brown-orange stain**
		GP			**on tube and spoon (23-25 ft)**
25		GP	20	28.1	
		GP			
		GP			Dark grey-black, fine sand, firm, wet-moist, some free product seeping out. Stain
		GP		50.4	on tube and spoon (27 - 28 ft)
		GP			
30		GP	40	6.7	Dark grey fine sand, moist-wet, loose-firm, no odor or stain (28 - 35 ft)
		GP			
		GP			
		GP			
		GP			
35		GP	90	1.2	
		GP			
		GP		1.6	Light brown-grey, fine sand, wet, firm-loose, no odor or stain (36 - 38 ft)
		GP			Dark grey-black, fine sand, wet, firm-loose, strong petroleum odor, orange-brown
		GP			stain on spoon and tube. (38 - 40 ft)
40	SB-101B	GP	80	75.6	Black fine-sand, wet, firm-loose, strong petroleum odor, orange-brown stain on
		GP			spoon and tube. Oily sheen coming out of sample. (40 -42 ft)
		GP		200.0	Black-dark grey, fine sand, wet, firm-loose, strong petroleum odor, orange-brown
		GP			stain on spoon and tube. Oily sheen seeping out of sample (42 - 44 ft)
	SB-101C	GP		>200	Grey-dark grey clay, firm-loose, moist-wet, no odor or stain (44 - 45 ft)
45		GP	100	2.3	Rock / Refusal at 45 ft. Boring stopped

SCHEMATIC (drawing not to scale)

COMMENTS

COMMENTS:
Water table was reached at 24'
Samples were taken from three intervals 23-25', 40-42', and 44-45'

SAMPLING METHOD
HC = HAND CLEARED
VC = VACUUM CLEARED
GP = GEOPROBE/DIRECT PUSH

Contractor: ADT
Driller: Mark Larabie
Inspector: Chris Kibler
Rig Type: Geoprobe 6600

PARSONS
DRILLING RECORD

BORING/ WELL NO. SB - 102 Sheet 2 of 7

PROJECT NAME: Con Ed / White Plains
PROJECT NUMBER: 440090.01000

Location Description: East of the northern most transformer. Approx. 10' east from center Located inside the underground holder.

GROUNDWATER OBSERVATIONS				
Water Level				
Date				
Time				
Meas. From				

Weather: Warm, Sunny, 68 F
Date/Time Start: May 15, 2003 1445
Date/Time Finish: May 15, 2003 1500

Location Plan

See Site Plan

Sample Depth	Sample I.D.	SPT	% Rec.	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	SCHEMATIC (drawing not to scale)	COMMENTS
+3							
+2							
+1							
0		VC		0.0			
		VC			Brown - dark brown, coarse - med sand, dry-moist, loose, no odor or stain		
3		VC					
		VC					
6		VC					
		GP			Light brown, coarse-med, sand, loose, moist, no odor or stain (8.6 - 9 ft)		
9		GP			Grey-dark grey, med-fine sand, slight petroleum odor (9 - 9.6 ft)		
		GP	10	0.2	Broken wood debris covered in black petroleum product (9.6 - 10 ft)		
12		GP			Broken wood debris covered in black petroleum product, strong petroleum odor		
		GP			(10 - 13 ft)		
15		GP	10	4.7	Refusal at 13 ft. Boring stopped		
		GP					
18		GP					
		GP					
21		GP					
		GP					
24		GP					
		GP					
27		GP					
		GP					
30		GP					
		GP					
33		GP					
		GP					
36		GP					
		GP					
39		GP					
		GP					
42							
45							
48							
51							
53							

SAMPLING METHOD
HC = HAND CLEARED
VC = VACUUM CLEARED
GP = GEOPROBE/DIRECT PUSH

COMMENTS:
Boring was stopped at 13 ft.
A sample was taken from the 10-13 ft interval, but no sent for analysis. Head space PID reading = 72.4ppm
Water table was not encountered.

Contractor: ADT **Driller:** Mark Larabie **Inspector:** Chris Kibler **Rig Type:** Geoprobe 6600	**PARSONS** **DRILLING RECORD** **PROJECT NAME:** Con Ed / White Plains **PROJECT NUMBER:** 440090.01000	**BORING/ WELL NO. SB - 103** Sheet 3 of 7 **Location Description:** East of the northern most transformer. Approx. 20' east from center

GROUNDWATER OBSERVATIONS				
Water Level				
Date				
Time				
Meas. From				

Weather: Warm, Sunny, 68 F

Date/Time Start: May 15, 2003 1315

Date/Time Finish: May 15, 2003 1400

Location Plan

See Site Plan

Sample Depth	Sample I.D.	SPT	% Rec.	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	SCHEMATIC (drawing not to scale)	COMMENTS
+3							
+2							
+1							
0		VC		0.0			
		VC			Brown - dark brown, coarse - med sand, dry-moist, loose, no odor or stain		
3		VC					
		VC					
6		VC					
		GP					
9		GP					
		GP	40	0.2			
12		GP			Brown - dark brown, coarse - med sand, dry-moist, loose, trace brick, no odor or stain		
		GP					
15		GP	60	1.0			
		GP			Br - dk br, coarse - med sand, dry-moist, loose, trace brick, no odor or stain		
18		GP			Light brown-white, med-coarse sand, some pebbles, no odor or stain		
		GP	80	1.1	Dk br-lt br/wt fine-med sand,2-5cm lt to dk banding(not oil based),loose,moist		
21		GP			Dark brown-brown, med-coarse sand,loose,moist-wet, trace brick, no oil or stain		
		GP			Light brown-white, fine-med sand, loose, dry-moist, no odor or stain (22 -22.6')		
24		GP			Dark brown, fine sand, loose-firm, moist, slight petroleum odor (22.6 - 24.6')		
		GP	80		Black, fine sand, wet, loose-firm, strong petroleum odor, brown staining on tube		
27	SB-103A	GP			Black - dark grey, fine sand, wet, loose-firm, strong petroleum odor, brown-orange		
		GP			stain on tube and sample spoon (26 - 27')		
30		GP	75	18.1	Dark grey, fine sand, wet, loose, no petroleum odor or stain (27 - 30')		
		GP			Brown-light brown, med-coarse sand, loose, wet, no oil or stain(30-32 ft)		
33		GP					
		GP	75	2.0	Grey-dark grey, fine-med sand, loose-firm, wet, no oil or stain(32-35 ft)		
36		GP			Dark grey, fine-med sand, wet, loose-firm, no odor or stain (35-40 ft)		
		GP					
39		GP					
	SB-103B	GP	75	0.6			
42					Boring stopped (40ft)		
45							
48							
51							
53							

SAMPLING METHOD
HC = HAND CLEARED
VC = VACUUM CLEARED
GP = GEOPROBE/DIRECT PUSH

COMMENTS:
Water table was reached at 24'
Samples were taken from the intervals 26-27' and 35-40'

PARSONS
DRILLING RECORD

BORING/ Sheet 4 of 7
WELL NO. SB - 104

Contractor: ADT
Driller: Mark Larabie
Inspector: Chris Kibler
Rig Type: Geoprobe 6600

PROJECT NAME: Con Ed / White Plains
PROJECT NUMBER: 440090.01000

Location Description: East of the existing transformers. Perpindicular to the firewall.

GROUNDWATER OBSERVATIONS				
Water Level				
Date				
Time				
Meas. From				

Weather: Warm, Sunny, 68 F
Date/Time Start: May 15, 2003 0921
Date/Time Finish: May 15, 2003 1021

Location Plan

See Site Plan

Sample Depth	Sample I.D.	SPT	% Rec.	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL
+3					
+2					
+1					
0		HC		0.6	
		HC			
3		VC			
		VC			
6		VC		0.6	
		GP			Light brown - brown, coarse - med sand, moist-wet, loose, no oil or stain.(6-10 ft)
9		GP			
		GP			
12		GP			Light brown - brown, coarse - med sand, moist-wet, loose, no oil or stain.(10-15 ft)
		GP			
15		GP		0.6	
		GP		0.9	Light brown - brown, coarse - med sand, moist-wet, loose, no oil or stain.(15-18 ft)
18		GP			Light brown - whitish brown, fine sand, dry, no odor or stain.(18-20 ft)
		GP		0.9	
21		GP		0.6	Light brown, fine - med, sand, loose, dry - moist, no odor or stain.(20-25 ft)
		GP			
24		GP			Wet toward bottom of section.
	SB-104A	GP			Light brown - brown, med sand, loose, moist - wet, no odor or stain.(25-26 ft)
27		GP			1/2" Band black fine sand, strong petroleum odor and staining on tube. (26 ft)
		GP			
30		GP		2.8	Dark grey med - fine sand, loose, wet, no odor or stain(26-30 ft)
		GP			Brown - light brown, medium - coarse sand, wet, loose, no odor or stain.(30-33 ft)
33		GP			
		GP		0.6	Dark grey, fine - medium sand, wet, loose - stiff, no odor or stain.(33-35 ft)
36	SB-104B	GP		0.7	Dark grey, fine - medium sand, wet, loose - stiff, no odor or stain.(35-40 ft)
		GP			
39		GP			
		GP			
42					Boring stopped (40ft)
45					
48					
51					
53					

SCHEMATIC (drawing not to scale)

COMMENTS

COMMENTS:
Watertable was reached at 23'
Samples were taken at the 26-30' and the 35-40' intervals

SAMPLING METHOD
HC = HAND CLEARED
VC = VACUUM CLEARED
GP = GEOPROBE/DIRECT PUSH

Contractor: ADT Driller: Mark Larabie Inspector: Chris Kibler Rig Type: Geoprobe 6600	**PARSONS** **DRILLING RECORD** **PROJECT NAME:** Con Ed / White Plains **PROJECT NUMBER:** 440090.01000	**BORING/** Sheet 5 of 7 **WELL NO. SB - 105** **Location Description:** East of the existing transformers. Approx. 3' from transformer containment wall

GROUNDWATER OBSERVATIONS				
Water Level				
Date				
Time				
Meas. From				

Weather: Warm, Sunny, 68 F

Date/Time Start: May 15, 2003 1045

Date/Time Finish: May 15, 2003 1140

Location Plan

See Site Plan

Sample Depth	Sample I.D.	SPT	% Rec.	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	SCHEMATIC (drawing not to scale)	COMMENTS
+3							
+2							
+1							
0		HC		0.1			
		HC					
3		VC					
		VC					
6		VC			Brown - dark brown, coarse - med sand, moist, loose, trace brick no odor or stain		
		GP			(6-10 ft)		
9		GP					
		GP	40	1.2			
12		GP			Brown - dark brown, fine-med sand, moist, loose, no odor or stain (10 - 15 ft)		
		GP					
15		GP	40	2.0			
		GP			Dark brown - brown, med-coarse sand, loose, moist, no odor or stain.(15-19 ft)		
18		GP					
		GP	80		Light brown - whiteish brown, fine-med sand, dry-moist, no odor or stain (19-20ft)		
21		GP		1.0	Light brown-brown, fine-med sand, loose, moist, no odor or stain.(20-23ft)		
		GP		1.3	White-brown, fine sand, dry-moist, few greenish bands (2-5cm thick) toward 24'		
24		GP	60	2.4	Dark brown - black, fine sand, moist, strong petroleum odor.(24-25 ft)		
		GP		>100	Dark brown - black, fine-med sand, wet, loose, strong petroleum odor, orange-		
27	SB-105A	GP			brown stain on tube.(25-27 ft)		
		GP			Dark grey fine-med sand, wet, loose, no odor or stain (27 - 30 ft)		
30		GP	80				
		GP			Dark grey - grey, fine-med sand, wet, loose-stiff, no odor or stain (30 -35 ft)		
33		GP					
		GP	80	0.6			
36		GP			Dark grey - grey, fine sand, wet, loose-firm, no odor or stain (35 - 40 ft)		
		GP					
39	SB-105B	GP					
		GP	90	0.6			
42					Boring stopped (40ft)		
45							
48							
51							
53							

SAMPLING METHOD
HC = HAND CLEARED
VC = VACUUM CLEARED
GP = GEOPROBE/DIRECT PUSH

COMMENTS:

Water table was reached at 27'

Samples were taken from the intervals 26-27' and 38-40'

Contractor: ADT **Driller:** Mark Larabie **Inspector:** Chris Kibler **Rig Type:** Geoprobe 6600	**PARSONS** **DRILLING RECORD** **PROJECT NAME:** Con Ed / White Plains **PROJECT NUMBER:** 440090.01000	**BORING/ WELL NO. SB - 106** Sheet 6 of 7 **Location Description:** Approx. 15' east of southern-most transformer.

GROUNDWATER OBSERVATIONS				
Water Level				
Date				
Time				
Meas. From				

Weather: Warm, Partly Sunny, 60 F

Date/Time Start: May 16, 2003 1245

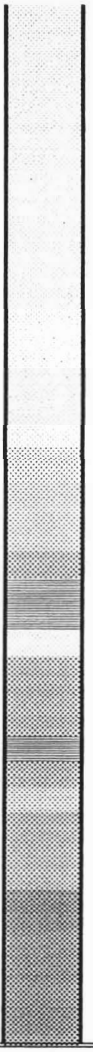
Date/Time Finish: May 16, 2003 1400

Location Plan

See Site Plan

Sample Depth	Sample I.D.	SPT	% Rec.	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL
+1					
0		HC		0.0	
		HC			
		HC			
		HC			
		HC			
5		GP			
		GP			
		GP			
		GP			
		GP			
10		GP		0.2	Brown, med-coarse sand, moist-dry, loose, no odor or stain (6 - 10 ft)
		GP			
		GP			
		GP			
		GP			Br,med-fine sand, moist-dry, loose-firm, some pebbles, no odor or stain (10-14.6')
15		GP	75	0.3	Light brown-white brown, coarse sand, dry, loose, no odor or stain (14.6 - 15 ft)
		GP			
		GP			Light brown-white brown, coarse sand, dry, loose, no odor or stain (15 - 17.6 ft)
		GP			
		GP			
20		GP	90	0.3	Lt brown-wt brown,med-fine sand,loose-firm,moist-dry,no odor or stain (17.6-21')
		GP			
		GP			Brown, fine-med sand, firm-loose, moist-dry, no odor or stain (21 - 22 ft)
		GP			Light brown-white brown, fine-med sand banded with black fine sand. Black
		GP			bands range from 3-10cm. Firm, moist-dry, no odor or stain. (22 - 24.6 ft)
25		GP	90	0.4	Light brown coarse sand, wet, loose, no odor or stain (24.6 - 25 ft)
		GP			Brown-dark brown med-fine sand, firm-loose, moist-wet, no odor or stain (25-29')
		GP			
		GP			Dark brown, med-fine sand, moist, firm. Black bands, 2-5cm thick, with slight
	SB-106A	GP			petroleum odor throughout section (29 - 29.6 ft)
30		GP	50	0.3	Brn-dk brn med-fine sand, firm-loose, moist-wet, no odor or stain (29.6-30')
		GP			Dk br-blk,fine-med sand,wet,loose,slight petroleum odor,no stain on tube(30-30.4')
		GP			Light brown-brown, fine sand, loose-firm, wet, no odor or stain (30.4-34 ft)
		GP			
		GP			
35		GP	60	0.4	Dark grey, fine-med sand, loose-firm, wet, no odor or stain (34 - 35 ft)
		GP			Dark grey, med-fine sand, loose, wet, no odor or stain (35 - 40 ft)
	SB-106B	GP			
		GP			
		GP			
40		GP	80	0.4	Boring stopped (40 ft)

SCHEMATIC (drawing not to scale)



COMMENTS

COMMENTS:

Water table was reached at 24'

Samples were taken from two intervals 29-29.6' and 37-39'

Sample SB-106A was analyzed for VOC's only, due to limited impacted material

SAMPLING METHOD
HC = HAND CLEARED
VC = VACUUM CLEARED
GP = GEOPROBE/DIRECT PUSH

Contractor: ADT Driller: Mark Larabie Inspector: Chris Kibler Rig Type: Geoprobe 6600	**PARSONS** **DRILLING RECORD** **PROJECT NAME:** Con Ed / White Plains **PROJECT NUMBER:** 440090.01000	**BORING/** Sheet 7 of 7 **WELL NO. SB - 107** **Location Description:** Southern most sample location. Approx. 10' south and 15' east of southern most transformer.

GROUNDWATER OBSERVATIONS				
Water Level				
Date				
Time				
Meas. From				

Weather: Warm, Partly Sunny, 60 F

Date/Time Start: May 16, 2003 1020

Date/Time Finish: May 16, 2003 1130

Location Plan

See Site Plan

Sample Depth	Sample I.D.	SPT	% Rec.	PID (ppm)	FIELD IDENTIFICATION OF MATERIAL	SCHEMATIC (drawing not to scale)	COMMENTS
+1							
0		HC		0.0			
		HC					
		HC					
		HC					
		HC					
5		GP					
		GP					
		GP					
		GP					
		GP			Light brown, coarse-med sand, moist-dry, loose, trace of wood debris at top of		
10		GP	50	0.3	section, no odor or stain (8 -10 ft)		
		GP					
		GP					
		GP			Dark brown-brown, coarse-med sand, moist-dry, loose, trace brick, no odor or		
		GP			stain (13-14ft)		
15		GP	60	0.5	Light brown-white brown, coarse-med sand, moist-dry, no odor or stain (14 - 15 ft)		
		GP			Dark brown-brown, fine-med sand, loose, moist-dry, trace brick at bottom of		
		GP			section, no odor or stain (15 - 16 ft)		
		GP			Light brown-white brown, coarse sand, loose, moist-dry, no odor or stain (16-19')		
		GP			Dark brown-brown, fine-med sand, loose, moist-dry, no odor or stain (19 - 19.6 ft)		
20		GP	70	0.3	Light brown-white brown, coarse sand, loose, moist-dry no odor or stain(19.6-20')		
		GP					
		GP			Dark brown-brown,med-fine sand,dry-moist,loose-firm,no odor or stain(20-23.6')		
		GP					
		GP			Light brown, coarse-med sand, loose, moist-dry, no odor or stain (23.6 - 24.6 ft)		
25		GP	60	0.4	Dark brown, med-fine sand, dry-moist, loose-firm, no stain or odor (24.6 - 25 ft)		
		GP			Light brown-brown, coarse-med sand, loose, dry-moist, no odor or stain (25-26')		
		GP			Brown-dark brown, coarse-med sand, loose-med loose, wet-moist, light and dark		
		GP			banding throughout section (bands range from 2-5cm thick) (26 - 30 ft)		
		GP					
30		GP	100	0.4			
		GP					
		GP			Brown-light brown, fine-med sand, wet, loose-firm, no odor or stain (32 - 33 ft)		
	SB-107A	GP			Grey-black, fine-med sand, wet, loose-firm. Black bands, 2-10cm thick, with strong		
		GP			petroleum odor throughout section (33 - 34 ft)		
35		GP	75	9.8	Brown-light brown, fine sand, wet, loose-firm, no odor or stain (34 - 35 ft)		
	SB-107B	GP			Dark grey, fine-med sand, wet, firm-loose, no odor or stain (35 - 40 ft)		
	SB-107MS	GP					
	SB-107MSD	GP					
	SB-7B	GP					
40		GP	80	0.4	Boring stopped (40 ft)		

SAMPLING METHOD

HC = HAND CLEARED

VC = VACUUM CLEARED

GP = GEOPROBE/DIRECT PUSH

COMMENTS:

Water table was reached at 24'

Samples were taken from two intervals 34-34.6' and 35-45'

MS, MSD, and duplicate samples were all collected from the 35-45' interval

Sample SB-107A was analyzed for VOC's only, due to limited impacted material

APPENDIX B

Sample Analytical Results
SB-104 (4-5')

Parameter	Result	Units
PCBs		
Aroclor 1016	< 8.1	ppb
Aroclor 1221	< 9.9	ppb
Aroclor 1232	< 7.1	ppb
Aroclor 1242	< 8.9	ppb
Aroclor 1248	< 11.0	ppb
Aroclor 1254	< 6.6	ppb
Aroclor 1260	< 6.7	ppb
Metals		
Arsenic	2.39	ppm
Beryllium	< 0.024	ppm
Cadmium	0.49	ppm
Chromium	7.15	ppm
Lead	26.6	ppm
Mercury	0.15	ppm
Nickel	5.63	ppm
Selenium	< 0.52	ppm
Silver	0.91	ppm
Aluminum	4340	ppm
Antimony	6.02	ppm
Barium	39.3	ppm
Calcium	173000	ppm
Cobalt	3.25	ppm
Copper	6.29	ppm
Iron	7280	ppm
Magnesium	3860	ppm
Manganese	159	ppm
Potassium	7090	ppm
Sodium	93.3	ppm
Thallium	1.39	ppm
Vanadium	9.85	ppm
Zinc	42.1	ppm

Sample Analytical Results
SB-104 (4-5')

Parameter	Result	Units
VOCs		
Dichlorodifluoromethane	< 0.99	ppb
Chlorodifluoromethane	< 1.43	ppb
Methyl Chloride	< 1.14	ppb
Vinyl Chloride	< 2.57	ppb
Methyl Bromide	< 2.44	ppb
Chloroethane	< 2.54	ppb
Trichlorofluoromethane	< 1.31	ppb
1,1,2-Trichlorofluoroethane	< 0.87	ppb
1,1-Dichloroethene	< 1.67	ppb
Acetone	87.7	ppb
Carbon Disulfide	13.7	ppb
Methylene Chloride	< 1.45	ppb
trans-1,2-Dichloroethene	< 1.04	ppb
Methyl t-Butyl Ether (MTBE)	< 0.80	ppb
1,1-Dichloroethane	< 0.75	ppb
2,2-Dichloropropane	< 1.16	ppb
cis-1,2-Dichloroethene	< 0.85	ppb
Methyl Ethyl Ketone (MEK)	< 6.92	ppb
Bromochloromethane	< 2.15	ppb
Chloroform	< 0.80	ppb
1,1,1-Trichloroethane	< 0.97	ppb
Carbon Tetrachloride	< 1.04	ppb
1,1-Dichloropropene	< 2.27	ppb
Benzene	< 0.90	ppb
1,2-Dichloroethane	< 1.04	ppb
Trichloroethene	< 0.99	ppb
1,2-Dichloropropane	< 1.84	ppb
Dibromomethane	< 0.63	ppb
Bromodichloromehane	< 0.90	ppb
2-Chloroethyl Vinyl Ether	< 1.74	ppb
cis-1,3-Dichloropropene	< 0.63	ppb
4-Methyl-2-Pentanone (MIBK)	< 11.9	ppb
Toluene	< 0.80	ppb
trans-1,3-Dichloropropene	< 1.16	ppb

Sample Analytical Results
SB-104 (4-5')

Parameter	Result	Units
VOCs (continued)		
1,1,2-Trichloroethane	< 0.94	ppb
Tetrachloroethene	< 1.19	ppb
1,3-Dichloropropane	< 1.06	ppb
2-Hexanone	< 9.99	ppb
Dibromochloromethane	< 0.80	ppb
1,2-Dibromoethane	< 0.63	ppb
Chlorobenzene	< 0.77	ppb
1,1,1,2-Tetrachloroethane	< 0.94	ppb
Ethyl Benzene	< 0.46	ppb
m,p-Xylene	< 1.45	ppb
o-Xylene	< 0.94	ppb
Styrene	< 0.94	ppb
Bromoform	< 1.43	ppb
Isopropylbenzene	< 0.77	ppb
Bromobenzene	< 0.70	ppb
1,1,2,2-Tetrachloroethane	< 0.90	ppb
n-Propylbenzene	< 0.44	ppb
1,2,3-Trichloropropane	< 1.69	ppb
p-Ethyltoluene	< 0.80	ppb
1,3,5-Trimethylbenzne	< 0.63	ppb
2-Chlorotoluene	< 1.96	ppb
tert-Butylbenzene	< 0.51	ppb
1,2,4-Trimethylbenzne	< 0.17	ppb
sec-Butylbenzene	< 0.65	ppb
p-Isopropyltoluene	< 0.58	ppb
1,3-Dichlorobenzene	< 0.61	ppb
1,4-Dichlorobenzne	< 0.65	ppb
1,2-Dichlorobenzene	< 0.77	ppb
p-Diethylbenzene	< 0.22	ppb
n-Butylbenzene	< 0.58	ppb
1,2,4,5-Tetramethylbenzene	< 1.11	ppb
1,2-Dibromo-3-Chloropropane	< 1.52	ppb
1,2,4-Trichlorobenzene	< 0.94	ppb
Hexachlorobutadiene	< 1.09	ppb
Naphthalene	< 1.82	ppb
1,2,3-Trichlorobenzene	< 1.14	ppb

Sample Analytical Results
SB-104 (4-5')

Parameter	Result	Units
SVOCs		
Phenol	< 124	ppb
bis(2-Choroethyl)ether	< 71.1	ppb
2-Chlorophenol	< 94.8	ppb
1,3-Dichlorobenzene	< 136	ppb
1,4-Dichlorobenzene	< 124	ppb
1,2-Dichlorobenzene	< 118	ppb
Benzyl Alcohol	< 59.2	ppb
o-Cresol	< 59.2	ppb
bis(2-Chloroisopropyl)ether	< 124	ppb
m,p-Cresol	< 71.1	ppb
N-Nitroso-di-n-propylamine	< 113	ppb
Hexachloroethane	< 118	ppb
Nitrobenzene	< 88.9	ppb
Isophorone	< 71.1	ppb
2-Nitrophenol	< 71.1	ppb
2,4-Dimethylphenol	< 71.1	ppb
Benzoic Acid	< 77.0	ppb
bis(2-Chloroethoxy)methane	< 88.9	ppb
2,4-Dichlorophenol	< 94.8	ppb
1,2,4-Trichlorobenzene	< 94.8	ppb
Naphthalene	338	ppb
4-Chloroaniline	< 184	ppb
Hexachlorobutadiene	< 130	ppb
p-Chloro-m-cresol	< 88.9	ppb
2-Methylnapthalene	< 88.9	ppb
Hexachlorocyclopentadiene	< 65.2	ppb
2,4,6-Trichlorophenol	< 47.4	ppb
2,4,5-Trichlorophenol	< 43.8	ppb
2-Chloronaphthalene	< 71.1	ppb
2-Nitroaniline	< 59.2	ppb
Dimethyl Phthalate	< 71.1	ppb
Acenaphthylene	782	ppb
2,6-Dinitrotoluene	< 59.2	ppb

Sample Analytical Results
SB-104 (4-5')

Parameter	Result	Units
SVOCs (continued)		
3-Nitroaniline	< 94.8	ppb
Acenapthene	< 136	ppb
2,4-Dinitrophenol	< 367	ppb
4-Nitrophenol	< 88.9	ppb
Dibenzofuran	< 94.8	ppb
2,4-Dinitrotoluene	< 82.9	ppb
Diethyl Phthalate	< 94.8	ppb
4-Chlorophenyl Phenyl Ether	< 101	ppb
Fluorene	< 166	ppb
4-Nitroaniline	< 71.1	ppb
4,6-Dinitro-o-cresol	< 545	ppb
N-Nitrosodiphenylamine	< 88.9	ppb
4-Bromophenyl Phenyl Ether	< 113	ppb
Hexachlorobenzene	< 107	ppb
Pentachlorophenol	< 409	ppb
Phananthrene	1760	ppb
Anthracene	1340	ppb
Di-n-butyl Phthalate	< 82.9	ppb
Fluoranthene	12700	ppb
Pyrene	13600	ppb
Butyl Benzyl Phthalate	< 107	ppb
3,3'-Dichlorobenzidine	< 267	ppb
Benzo(a)anthracene	13800	ppb
Chrysene	11300	ppb
bis(2-Ethylhexyl) Phthalate	< 124	ppb
Di-n-octyl Phthalate	< 65.2	ppb
Benzo(b)fluoranthene	13500	ppb
Benzo(k)fluoranthene	14900	ppb
Benzo(a)pyrene	16200	ppb
Indeno(1,2,3-cd)pyrene	7280	ppb
Dibenz(a,h)anthracene	3010	ppb
Benzo(g,h,I)perylene	5850	ppb

Sample Analytical Results
SB-104 (4-5')

Parameter	Result	Units
TPH		
Gasoline	< 12.1	ppm
Lubricating Oils	< 12.1	ppm
Kerosene/Jet Fuel	< 12.1	ppm
#2 Fuel Oil/Diesel	< 12.1	ppm
#4 Fuel Oil	< 12.1	ppm
#6 Fuel Oil	< 12.1	ppm
THC	673	ppm
DiChevrol Fluid 100 Cable Oil	< 12.1	ppm
DiChevrol Fluid 500 Cable Oil	< 12.1	ppm
Silicone Base Transformer Oil	< 12.1	ppm
Low Visc. Polybutene Cable Oil	< 12.1	ppm
Sun #2 Base Transformer Oil	< 12.1	ppm
Sun #4 Cable Oil	< 12.1	ppm
Sun #6 Cable Oil	< 12.1	ppm
Sun #8 II Base Transformer Oil	< 12.1	ppm
Petroleum Base Transformer Oil	< 12.1	ppm
Feeder 51 Oil	< 12.1	ppm
Others		
Chromium +6	< 0.003	ppm
Cyanide	8.27	ppm
Sulfate	538	ppm
Sulfide	< 0.88	ppm
Sulfite	< 1	ppm