REMEDIAL ACTION WORK PLAN
OPERABLE UNIT 1 (OU-1)
WHITE PLAINS FORMER MGP SITE (Site # V00438-3)
White Plains, New York

Prepared For:

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INTRODUCTION

1.1 PROJECT BACKGROUND

This Remedial Action Work Plan (RAWP) has been prepared on behalf of Consolidated Edison Company of New York, Inc. (Con Edison) pursuant to Voluntary Cleanup Agreement Index No. D3-0002-00-10 (the VCA) between Con Edison and the New York State Department of Environmental Conservation (NYSDEC) to provide a scope of work for implementing the preferred remedial action for Operable Unit 1 (OU-1) of the White Plains Former Manufactured Gas Plant (MGP) Site in White Plains, New York (Figure 1). The OU-1 RAWP addresses the MGP-related impacts that have been detected beneath portions of the Saint John the Evangelist R.C. Church and Elementary School (St. John's) at 146-148 Hamilton Avenue, which is located on the north side of New Street directly across from the White Plains Former MGP Site (Figure 1). The source of the MGP impacts on the St. John's Property is considered to be the carbureted water gas relief holder of that Con Edison's corporate predecessors operated on the White Plains Former MGP Site until the mid-1920's. The White Plains Former MGP Site is currently occupied by an electric distribution substation owned and operated by Con Edison (White Plains Substation), and a four-story office building and parking lot located at 12 Water Street (Figure 2).

The NYSDEC has divided the White Plains Former MGP Site into two operable units as illustrated on Figure 2. Operable Unit 1 (OU-1) is comprised of the southern substation area and the St. John's Property. Operable Unit 2 (OU-2) includes the northern portion of the Con Edison substation and the 12 Water Street office building and parking lot. To date, several phases of investigation have been completed at both OU-1 and OU-2. An interim remedial measure (IRM) was implemented at OU-1 to address MGP-related impacts present on the substation portion of OU-1.

In December 2005, Con Edison submitted a Remedial Alternatives Report (RAR) [Parsons and RETEC, 2005] to the NYSDEC, which summarized the findings of the investigation and outlined several possible solutions to remediate the remaining portion of OU-1, the St. John's Property. On April 25, 2007, the NYSDEC indicated that Alternative 1 from the RAR, Monitoring and Institutional Controls, appeared to be an acceptable and appropriate remedy for the St. John's Property [NYSDEC, 2007].

Accordingly, this RAWP describes in detail the Monitoring and Institutional Controls remedy for the St. John's Property, which includes long-term groundwater monitoring to demonstrate the presence of a continuous clean groundwater layer beneath that property. Additionally, contingency measures for monitoring and assuring that vapor intrusion in the existing buildings on the property is not a threat, are discussed. The purpose of this RAWP is to provide a scope of work for implementing that remedial action including the field work, health and safety, and quality assurance/quality control (QA/QC).

1.2 SITE DESCRIPTION

The properties which comprised the Former White Plains MGP Site include 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. 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 owned and operated 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 substation 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. Surface materials consist of soil, pavement, bluestone, and concrete.

The northern portion of the substation property which is part of OU-2 is currently being decommissioned and all above-grade equipment and structures will be removed from this area by August 2007. Following the remedial action to address MGP-related impacts in this area, Con Edison has agreed to give this property to the owner of 12 Water Street for use as additional parking for the tenants of the 12 Water Street office building.

The St. John's property is located at 146-148 Hamilton Avenue in White Plains, New York, directly south of the former MGP Site. It is comprised of a rectangular parcel of improved land encompassing a total area of approximately 1.75 acres. Site features include a paved parking lot, an open court yard and grassy areas, and four buildings consisting of St. John's Church, a rectory house, a three-story building housing St. John's school, and the school's gymnasium building. The property is bounded by Hamilton Avenue, open space, and commercial buildings to the south, North Lexington Avenue, open space and an above-ground parking garage and commuter transportation center to the west, and office buildings and above-ground parking garage to the east. The St John's property is bounded on the north by New Street and Con Edison's White Plains substation. A site layout map depicting the current structures at both the former MGP and the St. John's properties along with the locations of the primary former MGP structures is presented on Figure 2.

With the exception of the St. John's property, the area is predominately commercial, consisting of a car dealership, office buildings, and a bus depot.

1.3 SITE TOPOGRAPHY AND DRAINAGE

The U.S. Geologic Survey (USGS) topographic map for the White Plains, New York Quadrangle was reviewed to provide information about the topography of the Site. The map

shows that relief at the Site is generally flat at a typical elevation of approximately 205 feet and with a gradual slope to the west towards the Bronx River, and to the north and east towards New Street and Dr. Martin Luther King Jr. Boulevard (formerly Grove Street).

Given the urban nature of the area in which the Site is located, precipitation runoff from the Site is captured by local storm drains. Several storm drain catch basins were noted within and adjacent to the Site area.

The nearest surface water body is the Bronx River, which is located approximately 900 feet west of the Site. The Bronx River in Westchester County is designated as "Class C" surface water. Class C surface water is defined in NYSDEC regulations as follows: "Class C, fresh surface waters, best usage is fishing. Waters shall be suitable for fish propagation and survival. The water quality shall be suitable for primary and secondary contact recreation, although other factors may limit the use for these purposes."

1.4 SITE GEOLOGY AND HYDROGEOLOGY

Site geology is consistent with regional geology reported in the area and consists of two distinct unconsolidated lithologic units overlying bedrock. Based on observations made during the Remedial Investigation (RI) of the St. John's Property, a fill unit ranging in thickness from 5 to 8 feet is present across the property. This unit is composed primarily of reworked brown, dry, fine sand from the unit below. Beneath the fill is a thick sequence of fine interbedded sands up to 81 feet thick. The unit was observed to extend from the base of the fill to the bedrock surface encountered at approximately 64 and 86 feet below ground surface (bgs), respectively. This lower sand unit is comprised of brown and gray, fine sand with trace layers of silt and gravel. The bedding is marked by slight changes in color and composition. The limited samples of weathered bedrock in the tip of the macro-cores were observed to be consistent with a mica-schist. The bedrock depth (described above) and its composition are consistent with Manhattan Schist. The bedrock slopes to the southwest and south in the Site area.

Groundwater in the vicinity of the Site is classified in NYSDEC regulations as GA: fresh groundwaters with best usage as a source of potable water supply. However, the Site is not located within a primary water supply aquifer (i.e., significant unconsolidated aquifer) or a principal aquifer.

The following information regarding Site hydrogeology is based on a groundwater monitoring well network comprised of eight wells in the MGP areas of the White Plains Substation and 12 Water Street properties (MW-1 through MW-8), a downgradient well at the St. John's Property (MW-9), and observations of groundwater elevations in the soil borings installed beneath the St John's School building during the RI in April 2004. Groundwater was encountered under unconfined conditions within the unconsolidated sand deposits at depths ranging from approximately 5 to 29 feet bgs at the White Plains Substation and 12 Water Street properties. Groundwater was consistently observed in the soil borings at depths ranging from 20 to 23 feet bgs beneath the St John's School building and approximately 29 to 30 feet at borings outside the school building on the St. John's Property. The range in groundwater depths is due to varying surface elevations of the Site area. Groundwater flow between the central portion of the former MGP areas and across the St. John's Property is from the northeast to the southwest,

which is consistent with the presumed regional groundwater flow direction based on local topography and with earlier groundwater maps generated for the MGP areas [Parsons, 2004].

1.5 SUMMARY OF PREVIOUS INVESTIGATIONS AND REMEDIATION AT OU-1

1.5.1 OU-1 Interim Remedial Measures

In accordance with the VCA, a NYSDEC-approved IRM was conducted in conjunction with Phase II of the White Plains Substation modernization and improvement project between July 2004 and January 2005. The removal of electrical equipment associated with improvement/modernization construction activities allowed temporary access to the former southern relief gasholder area and associated MGP-impacted materials beneath this section of the substation. The IRM addressed, to the extent technically feasible, the impacted materials associated with the former MGP's southernmost relief gasholder. Thus, IRM activities included removal of the remnant former southern relief gasholder and associated impacted soils, installation of a non-aqueous phase liquid (NAPL) cut-off wall, and the installation of seven recovery wells and four piezometers. Activities conducted at the site during the IRM are documented in the IRM Report for Phase II Construction Activities [Parsons, 2005].

1.5.2 Remedial Investigation at St. John's Property

Previous investigative work at the St. John's property includes the advancement of two soil borings south and west of the St. John's School building in 2001. Results of the data collected from these borings are provided in the MGP Site Investigation Report [Parsons, 2004]. In addition, RETEC performed an evaluation of the potential for sub-surface vapor intrusion at the St. John's property in February 2003. This work included the collection of several ambient and indoor air samples and soil gas samples collected from beneath or adjacent to the rectory, school, and gymnasium buildings. Results of this work are presented in the Report on Evaluation of Subsurface Vapor Intrusion [RETEC, 2003]. As a follow-up to the 2001 investigation work and the February 2003 sub-surface vapor intrusion evaluation, RETEC performed a Remedial Investigation (RI) on behalf of Con Edison at the St. John's property to thoroughly evaluate the potential for sub-surface vapor intrusion into buildings and to understand the nature and extent of possible sub-surface soil impacts and groundwater impacts at the Site. The RI was comprised of two major phases. The first phase was performed in April 2004 to augment the initial evaluation of potential sub-surface vapor intrusion performed by RETEC in February 2003. This work was centered within the footprints of the school building and the gymnasium building. A post investigation air sampling program was also performed following this phase of work to evaluate whether the intrusive sampling activities themselves had the potential to impact indoor air.

A second remedial investigation phase was performed in July 2004, south and west of the school and gymnasium buildings to delineate the extent of deep soil impacts noted during the April 2004 work. A deep groundwater monitoring well (MW-9) was installed and sampled in September 2004. The overall goals of the RI were to: (1) determine whether the air quality within the school, rectory, and gymnasium buildings was being adversely affected by the MGP sub-surface impacts located at depth beneath the St. John's Property; and (2) to delineate the horizontal and vertical extent of the MGP impacts beneath the St. John's Property. The results of the RI are presented in the RI Report [RETEC, 2005]. Figures 3 through 5_summarize the extent

of visible NAPL, soil and groundwater impacts identified beneath the St. John's Property during the RI.

In summary, the data collected from the RI at the St. John's Property indicate that:

- MGP-related NAPL is limited laterally and vertically to a discrete zone, ranging in thickness from a few feet at the northern end of the property to typically only a few inches thick along the eastern edge of the gymnasium building;
- The MGP NAPL is located beneath the water table ranging from approximately 39 to 53 feet below the ground surface of the property;
- MGP Impacts beneath the St. John's Property do not represent a source to groundwater impacts at the water table;
- The deep MGP-related soil impacts are not adversely affecting soil gas or indoor air within the school or gymnasium buildings located above the deep soil impact zone; and
- Geochemical data indicate that biodegradation of dissolved MGP constituents of concern is occurring to some degree.

Based on the above findings, a Remedial Alternative Report [Parsons and RETEC, 2005] for the St. John's Property was submitted to the NYSDEC and NYSDOH, which summarized the investigative findings and outlined several possible solutions to remediate the St. John's Property. The NYSDEC replied on April 25, 2007 that Alternative 1 from the RAR, Monitoring and Institutional Controls, is the most appropriate remedy for the St. John's Property [NYSDEC, 2007].

1.6 CONTEMPLATED USE AND EXPOSURE

The St. John's School has been closed, but the school building is still used for a variety of activities and functions involving the presence of children and adults within the school building. St. John the Evangelist remains an active parish. St. John's Church is used for the celebration of mass and other religious services, such as baptisms, funerals, and weddings. St. John's Rectory contains offices and serves as the residence of the clergy for St. John Parish. During the typical day-to-day operations carried out on the property, there is no pathway for human exposure to subsurface MGP-related impacts in the subsurface. Under these circumstances, there is little to no risk of exposure to the public during future remedial activities specified in this Remedial Action Work Plan.

1.7 REMEDIAL OBJECTIVES

The remedial action objectives for the St. John's Property, which were developed as part of the RAR, include:

- Prevent the ingestion/direct contact with impacted soil and groundwater;
- To the extent feasible and consistent with safety and other concerns identified above, undertake the treatment and/or removal of MGP source materials; and
- Prevent the inhalation of volatiles from impacted soil or groundwater.

1.8 SUMMARY OF REMEDY

Based on the comparative analysis of remedial alternatives presented in the RAR (Parsons, 2005), Monitoring and Institutional Controls is the proposed remedy for addressing the potential influence of the subsurface MGP source materials present on the St. John's Property. The major components of this alternative include:

- Long-term groundwater monitoring; and
- Institutional controls.

As documented in the RAR, groundwater monitoring and institutional controls will provide the best overall long-term protection to human health and the environment, while posing only moderate short-term impacts which can be easily addressed during implementation.

1.9 RAWP ORGANIZATION

The purpose of this RAWP is to provide a scope of work for implementing the Monitoring and Institutional Controls alternative for the St. John's Property, including the remedial design, field work, health and safety, and quality assurance/quality control (QA/QC). To achieve this goal, this RAWP has been organized as follows:

- Section 1 – Introduction
- Section 2 – Remedy Implementation
- Section 3 – Institutional Controls
- Section 4 – Health and Safety
- Section 5 – QA/QC
- Section 6 – Reporting
- Section 7 – Schedule
- Section 8 – Project Management and Organization
- Section 9 - References

SECTION 2

REMEDY IMPLEMENTATION

2.1 INTRODUCTION

The remedial action for the St. John's Property includes the following major components:

Long-term groundwater monitoring; and

- Institutional controls.

Details regarding the groundwater monitoring program, including the proposed monitoring well network, groundwater sampling survey, monitoring well installation, and sampling are presented in the following subsections.

2.2 PROPOSED MONITORING WELL NETWORK

The purpose of the groundwater monitoring program is to demonstrate that the layer of clean groundwater beneath the St. John's Property continues to be present. To achieve this goal, the monitoring well network will include:

- An upgradient well;
- Source area well(s);
- An in-plume (dissolved-phase) well; and
- A sentinel well (or wells) located beyond the downgradient extent of the dissolved-phase plume.

Additionally, as requested by the NYSDEC in its April 25, 2007 letter, groundwater will be monitored in the contaminated zone, above the contaminated zone, and at the top of the water table.

Based on the consistent southwestern groundwater flow direction and the extent of soil and groundwater impacts identified beneath the St. John's Property, 10 monitoring wells (one existing well and nine new wells) have been selected for inclusion in the groundwater monitoring program. The proposed locations for these wells are shown on Figure 6. The rationale for the selection of each monitoring well and their proposed screen depths is summarized on Table 1. The proposed number of monitoring wells and their locations may be modified based on the results of the groundwater sampling survey described below.

2.3 GROUNDWATER SAMPLING SURVEY

Prior to the installation of the new monitoring wells proposed in Section 2.2, a groundwater sampling survey will be conducted to ensure that the proposed wells are adequately positioned and screened to achieve the goals of the groundwater monitoring program. The sample designation, sample rationale, sample depth, and laboratory analyses proposed for each

groundwater sample is summarized in Table 2. The groundwater sampling survey will be conducted in accordance with the HASP (Appendix A), FSP (Appendix B), and QAPP (Appendix C).

Groundwater samples will be collected using direct push drilling techniques at the proposed locations shown on Figure 7. Once the direct push borehole reaches the desired depth, groundwater samples will be collected by inserting a stainless steel temporary screen point inside the borehole. The screen-point will be exposed to allow groundwater to enter the tooling and new polyethylene tubing connected to a peristaltic pump will be inserted into the screen point. Once in place, the temporary screen points will be purged until relatively free of sediment. Water quality parameters including dissolved oxygen, oxidation-reduction potential, temperature, pH, conductivity, and turbidity will be recorded and when stable, the well points will be sampled. Upon completion, the screen points will be removed and the soil borehole will be filled with bentonite to the surface.

In addition to confirming groundwater conditions at each of the proposed groundwater sampling survey locations shown on Figure 7, existing monitoring well MW-9 will be sampled to determine whether groundwater conditions have changed at this location since it was last sampled during the RI in 2004. Groundwater sampling at MW-9 will be conducted as described in Section 2.6.

During the groundwater sampling survey, a comprehensive round of groundwater levels will also be obtained from all accessible monitoring wells at both OU-1 and OU-2.

Following receipt of the analytical results, a Groundwater Sampling Survey Report will be prepared as described in Section 6.

2.4 MONITORING WELL INSTALLATION

2.4.1 Utility Clearance

Prior to sampling point or well installation, the New York State One-Call Center will be contacted for a Code 753 utility mark-out. No drilling will be conducted until the following minimum requirements have been met:

- The Project Manager and/or field team leader have thoroughly inspected the drilling location and surrounding area for the Code 753 mark-out and the location is clear of marked utilities;
- All drilling locations have been M-scoped by Con Edison, or a private utility locating contractor has performed a below-ground (e.g., ground penetrating radar) survey for utility location;
- All drilling locations have been cleared with a metal detector;
- Utility (gas and electric) plates for the site and surrounding area have been provided to Parsons by Con Edison's Construction Management staff and reviewed;
- Parsons has met with and reviewed all of the drilling locations with a facility representative, a Con Edison Construction Management representative, and/or Con

Edison's Project Manager, and verified that all drilling locations have been marked; and

- Each drilling location has either been hand-augered to a minimum depth of 5 feet, or a 4-foot by 4-foot test pit has been hand-dug to a minimum depth of 5 feet, as determined by Con Edison during the site inspection.

Additional utility clearance measures may be required based on the site inspection and/or Con Edison requirements.

2.4.2 Air Monitoring

The proposed well installation activities may generate fugitive dust or organic vapors. Worker breathing zone air monitoring and a community air monitoring program will be implemented as described below.

2.4.2.1 Worker Air Monitoring

Air monitoring of the worker breathing zone will be conducted continuously during all drilling and sampling activities to assure proper health and safety protection for the team and any occupants of the facilities. Initially, air monitoring will be conducted at the site of the investigation (potential source area). If air monitoring identifies the presence of volatile organic compounds in the worker breathing zone, guidelines in the HASP (Appendix A) will be followed regarding action levels, permissible exposure limits, engineering controls, and personal protective equipment. The following equipment will be used to conduct air monitoring:

- A PID (RaeSystems MiniRae 2000 or equivalent) will be used to monitor for organic vapors and benzene;
- A MiniRAM Portable Aerosol Monitor will be used to monitor particulate dust and aerosolized vapors; and
- Cyanide color detector tubes will be used to monitor for hydrogen cyanide.

Air monitoring results will be recorded in the field book during investigation activities and made available for NYSDEC and New York State Department of Health (NYSDOH) review.

2.4.2.2 Community Air Monitoring

Community air monitoring will be conducted in compliance with the NYSDOH's Generic Community Air Monitoring Plan (NYSDOH, 2000). Real-time air monitoring for volatile compounds and particulates at the perimeter of the hot zone will be performed as described below.

Organic Vapor Monitoring

Periodic monitoring for VOCs will be conducted during the collection of groundwater samples. Periodic monitoring will include obtaining measurements upon arrival at a location, while opening a monitoring well cap, when bailing and purging a well, and upon leaving the location. In some instances, depending on the proximity of exposed individuals, continuous monitoring may be conducted during these activities.

Continuous monitoring for VOCs will be conducted during all ground intrusive activities (i.e., soil boring installation and monitoring well installation). Upwind concentrations will be measured at the start of each workday and periodically thereafter to establish background concentrations. VOCs will be monitored continuously at the downwind perimeter of the hot zone. Monitoring will be conducted with a PID equipped with a 10.6 eV lamp capable of calculating 15-minute running average concentrations. The following actions will be taken based on organic vapor levels measured:

- If total organic vapor levels exceed 5 ppm above background levels or concentrations during the 15-minute average 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 of the hot zone 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 perimeter of the hot zone, activities will be shutdown.

All 15-minute readings will be recorded and available for NYSDEC and NYSDOH personnel to review. Instantaneous readings, if any, will also be recorded.

Particulate Monitoring

During ground intrusive activities, particulate concentrations will be monitored continuously at the downwind perimeter of the hot zone with a portable real-time particulate monitor capable of measuring particulate matter less than 10 micrometers in size and capable of integrating over a period of 15 minutes (or less). The equipment will include an audible alarm to indicate exceedence of the action level. Upwind concentrations will be measured at the start of each workday and periodically thereafter to establish background concentrations. The following actions will be taken based on particulate concentrations measured:

- If the measured downwind particulate level is 100 micrograms per cubic meter ($\mu g/m^3$) or more above background for the 15-minute period 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.

2.4.3 Well Installation/Construction

Nine new monitoring wells will be installed at the proposed locations shown on Figure 6. All drilling locations are subject to change based on accessibility, utility clearance, and site conditions encountered. Additionally, the proposed new well locations may be modified based on the results of the groundwater sampling survey described in Section 2.3.

Monitoring well borings will be advanced to total depth with 4.25-inch inner diameter (ID) hollow stem augers. The monitoring wells will be constructed with two-inch ID, threaded, flush-joint, PVC casing and 0.01-inch slot screens. Monitoring wells screens will be installed at the depths specified in Table 1, which are subject to modification based on the results of the groundwater sampling survey and subsurface conditions encountered. The wells will be contained in flush-mounted vaults to maintain accessibility to the area after completion.

After a minimum of 24 hours, the monitoring wells will be developed until the well is reasonably free of sediment (50 NTU if possible) or until the pH, temperature and conductivity stabilize. Monitoring well installation, construction, development, decontamination, and investigation-derived waste handling procedures are specified in the FSP (Appendix B).

2.5 SITE SURVEY

The locations and elevations of the new monitoring wells will be surveyed following installation. A map will be prepared showing the locations for each monitoring well and soil boring location. Vertical control of elevations for soil borings and monitoring wells will be established to the nearest 0.01-foot and will be based on a USGS datum and benchmarks established onsite. Horizontal control will be based on a site-specific coordinate system with established and referenced control points.

2.6 MONITORING WELL SAMPLING AND ANALYSIS

Groundwater samples will be collected from each new monitoring well and existing monitoring well MW-9 on a semi-annual basis (i.e., approximately every six months). Following four sampling rounds (a period of two years), the data will be evaluated and a recommendation will be made for future monitoring activities. If appropriate based on the data obtained, site conditions, and site use, Con Edison may request from the NYSDEC and NYSDOH that the monitoring frequency be modified.

Prior to sampling, the headspace within each well will be measured with a PID. An oil/water level interface probe and/or a water level indicator will be used to measure the depths to the water table and thickness of any free product in the wells. The monitoring wells will be purged by removing a minimum of three times the volume of standing water in the well to allow for collection of a representative sample. Groundwater samples will then be collected.

Prior to filling the sample bottles, the turbidity, pH, temperature, and conductivity of the sample will be measured and recorded. The groundwater samples will be analyzed for TCL

VOCs and SVOCs. Sampling procedures are described in detail in the FSP (Appendix B). QA/QC procedures are described in the QAPP (Appendix C).

During each groundwater monitoring event, a comprehensive round of groundwater levels will also be obtained from all accessible monitoring wells at both OU-1 and OU-2

2.7 WASTE MANAGEMENT

All investigation-derived wastes (IDW) generated during the remedial action will be containerized. Soils will be segregated by boring or location and placed in 55-gallon NYSDOT approved drums which are labeled appropriately. Plastic sheeting and personal protective equipment will be consolidated in NYSDOT-approved drum(s). Fluids will be placed in NYSDOT-approved fluid drums with closed tops. The drums will be staged in a secure area on site as determined by Con Edison and St. John's representatives prior to proper characterization and disposal.

2.8 EQUIPMENT DECONTAMINATION PROCEDURES

Heavy equipment used for intrusive activities (e.g., drilling) will be decontaminated prior to leaving the Site. Primary decontamination methods will include pressure washing/steam cleaning of vehicle tires, augers, and bits. Personnel decontamination procedures are outlined in the HASP (Appendix A).

2.9 LABORATORY ANALYSIS AND DATA VALIDATION

Laboratory analyses of groundwater samples will be conducted by a New York State Department of Health Environmental Laboratory Analysis Program (ELAP) approved laboratory certified for analyses using the most recent Analytical Services Protocol (ASP). Laboratory analyses will be conducted in accordance with USEPA SW-846 methods and standard deliverable format.

Table 3 summarizes the anticipated analytical methods and quality control samples that will be required during each sampling event. QA/QC procedures required by the SW-846 methods will be followed, including initial and continuing instrument calibrations, standard compound spikes, surrogate compound spikes, and analysis of other samples (blanks, laboratory control samples, matrix spikes/matrix spike duplicates, etc.). The laboratory will provide sample bottles, which have been pre-cleaned and preserved in accordance with the SW-846 methods. NYSDEC ASP holding times will be adhered to. Where there are differences in the SW-846 and NYSDEC ASP requirements, the NYSDEC ASP shall take precedence.

Data validation will be performed in accordance with USEPA validation guidelines for organic and inorganic data review. Validation will include the following:

- Verification of 100% of all QC sample results (both qualitative and quantitative);
- Verification of the identification of 100% of all sample results (both positive hits and non-detects);
- Recalculation of 10% of all investigative sample results; and

- Preparation of a Data Usability Summary Report (DUSR).

Data reduction, validation, and reporting procedures are provided in the QAPP (Appendix C).

SECTION 3

INSTITUTIONAL CONTROLS

3.1 SITE MANAGEMENT PLAN

A Site Management Plan (SMP) will be required by the NYSDEC. The SMP will include provisions to control any future development, remediation, or maintenance activities requiring subsurface excavation at depths greater than 20 feet bgs or the extraction of groundwater. For new redevelopment of the property, the property owner at the time that any such proposed plans are developed will notify the NYSDEC and obtain the NYSDEC's consent prior to proceeding with its proposed redevelopment plans. Residual contaminated soils could potentially be excavated from the St. John's Property during future redevelopment activities that involve excavation at depths greater than 20 feet bgs. The SMP will specify that soil excavated on the property at depths greater than 20 feet bgs will be characterized for contamination, segregated, and either reused on-site or disposed off-site depending on the presence of NAPL. The SMP will also address the appropriate procedures for performing intrusive work at depths greater than 20 feet bgs, including health and safety guidelines requiring that construction workers involved in this work have appropriate Occupational Safety and Health Administration (OSHA) training and medical monitoring as required in 29 CFR 1910.120 (Hazardous Waste Operation and Emergency Response). These guidelines will also specify appropriate worker and community air monitoring required. The SMP will require evaluation of the potential for vapor intrusion for any buildings developed on the site, including provision for mitigation of any impacts identified.

3.2 MONITORING, MAINTENANCE, AND ANNUAL INSPECTION

The monitoring wells, protective casings and covers, and surrounding surface areas will be inspected on an annual basis to determine if maintenance activities are required to maintain the integrity of the groundwater monitoring well system. The inspections will be performed to confirm that the system is present, functioning properly, and has not been damaged so as to compromise its effectiveness. Maintenance activities will be performed, as appropriate, based on the findings of the inspections. The frequency of the monitoring and inspection may be adjusted in the future, based on monitoring results, site conditions, and current use of the property.

3.3 ANNUAL CERTIFICATION

Once the groundwater monitoring well system is installed and is functioning, Con Edison will begin filing annual certifications with the NYSDEC and NYSDOH. In the annual certifications, the following information will be provided concerning the engineering and institutional controls for the St. John's Property:

- Documentation that the inspection and maintenance activities described in Section 3.2 have been completed; and

- Notification of any excavation/disturbance activities at depths greater than 20 feet bgs within the restricted area and certification that any such excavations/disturbances do not or did not present an unacceptable risk to the health and safety of site workers or the surrounding community.

The annual certification will be prepared and signed by a New York State-licensed professional engineer and will indicate whether the institutional controls employed at the St. Johns property are unchanged from the previous certification or that any changes made to the controls were approved by the NYSDEC, and that nothing has occurred that would impair the ability of such controls to protect the public health and the environment.

SECTION 4

HEALTH AND SAFETY

A Health and Safety Plan (HASP) has been prepared to provide guidance for field activities required to complete the remedial action. The HASP is included in Appendix A.

The HASP assigns responsibilities; establish standard operating procedures, personnel protection standards and mandatory safety practices; and provide for contingencies that may arise during the remedial action.

The primary field activities to be performed during the remedial action include, but are not limited to: well installation, well development, and groundwater sampling.

Field staff may also be exposed to other hazards that are encountered during field activities including slips, trips, falls, automobiles, traffic, heavy equipment, drill rigs, winches, and marine hazards. Depending upon the time of season, field staff may be exposed to biological hazards such as insect bites, stings, and ticks. Meteorological hazards such as lightning, wind, rain, extreme hot or cold temperatures, and ultraviolet radiation may also be present. These issues are each addressed in the HASP.

Field staff may be exposed to hazards associated with NAPL, with BTEX and PAHs being the primary chemicals of concern. Field staff will be required to use personal protective equipment (PPE) suitable for the level of contaminants present. Monitoring (e.g., VOC and dust monitoring) will be conducted to verify contamination levels and ensure proper PPE upgrade is implemented if necessary. The HASP also includes a site-specific community air monitoring plan (CAMP) in compliance with the NYSDOH Generic Community Air Monitoring Plan.

SECTION 5

QUALITY ASSURANCE/QUALITY CONTROL

A QAPP has been prepared to use as a guide for all field and laboratory sampling, analysis and measurement conducted as part of the remedial action. The QAPP is included in Appendix C. The QAPP specifies analytical methods to be used to ensure that data generated during the remedial action are precise, accurate, representative, comparable, and complete.

SECTION 6

REPORTING AND CONTINGENCY MEASURES

This section describes the project deliverables associated with documenting the remedial action and groundwater monitoring results. Contingency measures that may be implemented by Con Edison in consultation with the NYSDEC based on the results of the groundwater monitoring activities are also discussed below.

6.1 MONTHLY REPORTS

Monthly Progress Reports will continue to be prepared in accordance with the VCA. The Monthly Progress Reports will include the following information:

- Remedial Action tasks completed in the past month;
- Testing and sampling results;
- Anticipated Remedial Action tasks for next month;
- Remedial Action task schedule issues and delays, if any;
- Modifications to the RAWP and/or plans as approved by Con Edison and the NYSDEC; and
- Citizen Participation Plan-related activities.

6.2 GROUNDWATER SAMPLING SURVEY REPORT

Following receipt of the analytical results generated during the Groundwater Sampling Survey (Section 2.3), a Groundwater Sampling Survey (GSS) Report will be prepared. The GSS Report will document the groundwater sampling activities performed, present and summarize the field observations, water level data, and groundwater analytical results in tabular form and on site figures. Based on the results of the GSS, the monitoring well network proposed in Section 2.2 of this RAWP will be evaluated and any modifications will be proposed in the GSS Report, if necessary, to best achieve the goals of the long-term groundwater monitoring program. Modifications may include the relocation of monitoring wells currently proposed, and/or proposing the installation of additional monitoring wells, if appropriate, based on the results of the evaluation.

6.3 GROUNDWATER MONITORING REPORTS

Following receipt of analytical data from each round of groundwater monitoring, a Groundwater Monitoring Report (GMR) will be prepared. The GMR will document the sampling activities and present and summarize the analytical data in tabular form and on site figures. Each GMR will also include a groundwater contour map, a DUSR, and groundwater sampling records. The first GMR will also document the new monitoring well installation activities and will include monitoring well construction logs for the new wells.

6.4 CONTINGENCY MEASURES

As discussed in Section 1.5.2, the results of the RI indicate that the deep soil MGP impacts present beneath the St. John's Property are not adversely affecting soil gas or indoor air within the St. John's school or gymnasium buildings. For this reason, and with the NYSDEC's and NYSDOH's concurrence [NYSDEC, 2007], the selected remedial action does not include installation of a sub-slab depressurization system or further monitoring of soil gas or indoor air. However, should results obtained during the groundwater monitoring program indicate that groundwater conditions beneath the buildings have deteriorated (e.g., MGP impacted groundwater is encountered in samples collected from the shallow source area wells), Con Edison will evaluate and, if necessary, recommend additional measures. Such measures would likely first involve the collection and analysis of soil gas and/or indoor air samples. Based on the sample results, additional investigation and remediation measures may be warranted

Given the completed IRM at the White Plains Substation and the planned remedial action for OU-2 of the Former White Plains MGP Site, it is unlikely that subsurface conditions at the St. John's Property will change in a negative manner. However, the proposed groundwater monitoring program for the St. John's Property will effectively monitor subsurface conditions to demonstrate that a layer of clean groundwater continues to be present beneath the buildings on that property, to identify changes in the extent of groundwater impacts, and to evaluate whether further measures are necessary to demonstrate and ensure the continued protection of human health.

SECTION 7

PROJECT SCHEDULE

The anticipated dates for key project milestones for the OU-1 remedial action are outlined on Figure 8.

SECTION 8

PROJECT MANAGEMENT AND ORGANIZATION

8.1 PROJECT TEAM

Several organizations will be directly involved in the performance and review of this project. These organizations have specific project functions and relate to each other in various ways according to their project responsibilities.

The key project team members are described below and presented on the organizational chart (Figure 9). A project contact list is provided at the end of this section.

8.1.1 New York State Department of Environmental Conservation

Con Edison has entered into a VCA with the NYSDEC to investigate and remediate the Former White Plains MGP Site. The NYSDEC is the lead agency and will review and approve plans, drawings, reports, and schedules submitted for the remedial design and remedial action as specified in the VCA. The NYSDEC has designated Mr. William Ottoway as its key contact. The NYSDOH will also review and provide input to the NYSDEC on the foregoing submittals. The NYSDOH has designated Mr. Joe Crua as its key contact.

8.1.2 Con Edison

Con Edison is ultimately responsible for the design and implementation of the selected remedy specified for the OU-2 area. Con Edison has designated Ms. Yelena Skorobogatov as its Project Manager and primary contact for this project. Mr. Eddy Louie will serve as the Remediation Programs Manager for Con Edison.

8.1.3 Parsons

Parsons was retained by Con Edison to provide remedial services for the St. John's property. Parsons has designated Ms. Megan Miller as the Project Manager and primary contact for this project. Ms. Miller is responsible for preparation of the design documents, the RA bid package, the Construction Certification Report, and monthly progress reports. Ms. Miller is also responsible for arranging project meetings, ensuring proper staffing and resources for completing the RD/RA activities in accordance with this approved RAWP, and serving as Con Edison's designated technical point of contact with the NYSDEC, other agencies, contractors, and subcontractors.

Mr. Steve Rossello will serve as the Technical Director for this project. As Technical Director, Mr. Rossello's responsibilities are to (1) provide innovative and sophisticated input to various technical questions as they arise; (2) ensure compliance with regulatory guidelines; (3) ensure overall quality assurance of the work; and (4) provide senior review of the work at key points.

Mr. Shane Blauvelt will be the Project Engineer for this project. Mr. Blauvelt will provide support to the Project Manager in the preparation of the reports.

Mr. Gregory Beck will serve as the Health and Safety Officer for this project. Mr. Beck will ensure that the HASP is properly prepared and implemented and that all Parsons and subcontractor site personnel are trained in the site-specific project health and safety requirements. Mr. Beck will have authority to stop work if unsafe conditions are observed during RD/RA activities.

Project Contact List

NYSDEC/NYSDOH	
NYSDEC William Ottoway, Project Manager Remedial Bureau C, 11th Floor 625 Broadway Albany, NY 12233-7017 (P) 518-402-9686 (F) 518-402-9679 (E) wsottawa@gw.dec.state.ny.us	NYSDOH Bureau of Env. Exposure Investigation Joe Crua Flanigan Square 547 River Street Troy, NY 12180-2216 (E) jpc04@health.state.ny.us
Con Edison	
Con Edison Yelena Skorobogatov, Project Manager 31-01 20th Avenue, Bldg. 136 Long Island City, NY 11105 (P) 718-204-4205 (F) 718-932-2687 (E) skorobogatovy@coned.com	Con Edison Eddy Louie MGP Program Manager 31-01 20th Avenue, Bldg. 136 Astoria, NY 11105 (P) 718-204-4262 (F) 718-932-2687 (E) louiee@coned.com
Parsons	
Parsons Megan Miller, P.E., Project Manager 290 Elwood Davis Road, Suite 312 Liverpool, NY 13088 (P) 315-451-9560 (F) 315-451-9570 (E) megan.miller@parsons.com	Parsons Gregory Beck, Health and Safety Officer 200 Cottontail Lane Somerset, NJ 08873 (P) 732-537-3502 (F) 732-537-0353 (E) gregory.beck@parsons.com
Parsons Steve Rossello, Technical Director Senior Hydrogeologist Rochester, MN (P) 507-285-1163 (E) steve.rossello@parsons.com	Parsons Shane Blauvelt, Project Engineer 290 Elwood Davis Road, Suite 312 Liverpool, NY 13088 (P) 315-451-9560 (F) 315-451-9570 (E) shane.blauvelt@parsons.com

SECTION 9

REFERENCES

NYSDEC. 2007. Letter to Con Edison dated April 25, 2007.

Parsons. 2004. *Site Investigation Report, White Plains Former MGP Site.* Prepared by Parsons for Consolidated Edison Company of New York. February 2004.

Parsons. 2005. *Interim Remedial Measures Report for Phase II Construction Activities, White Plains Former MGP Site.* Prepared by Parsons for Consolidated Edison Company of New York. August 2005.

Parsons and the RETEC Group, Inc. 2005. *Remedial Alternatives Report Saint John the Evangelist R.C. Church and Elementary School*. Prepared by Parsons and The RETEC Group, Inc. for Consolidated Edison Company of New York. December 2005.

The RETEC Group, Inc. 2003. *Report on Evaluation of Sub-Surface Vapor Intrusion, St. John's School and rectory, 148 Hamilton Avenue, White Plains, New York.* Prepared by RETEC for Consolidated Edison Company of New York. August 5, 2003.

The RETEC Group, Inc. 2005. *Remedial Investigation Report, St. John the Evangelist R.C. Church and Elementary School.* Prepared by The RETEC Group, Inc. for Consolidated Edison Company of New York. November 2005.

USEPA. 2002. *OSWER Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils*. November 29, 2002.

Table 1

White Plains Former MGP Site Operable Unit 1
Remedial Action
Proposed Monitoring Wells and Rationale

Well ID	Location	Screen Depth[(1)]	Purpose	Rationale
MW-10	Southeast corner of Substation Property	35 - 45'	Upgradient monitoring	Upgradient location near previous monitoring well MW-4 that had no visible NAPL in soil and non-detect BTEX and PAH concentration in groundwater. Screened across approximate elevation of deep impacts based on NAPL observed at MW-8 (35-39'), SB-24 (36-38') and B-102 (39-40').
MW-11A	North of school building at location of SB-24	20 - 25'	Source Area Monitoring (Top of Water Table)	Located within NAPL plume area. Screened to straddle top of water table (observed at 22.5' bgs during SB-24 installation).
MW-11B	North of school building at location of SB-24	28 - 33'	Source Area Monitoring (Above Impacted Zone)	Located within NAPL plume area. Screened above NAPL impacted zone (observed at 36-38' bgs during SB-24 installation).
MW-11C	North of school building at location of SB-24	36 - 41'	Source Area Monitoring (Within Impacted Zone)	Located within NAPL plume area. Screened within NAPL impacted zone (observed at 36-38' bgs during SB-24 installation).
MW-12A	South of school building at location of B-109	28 - 33'	Source Area Monitoring (Top of Water Table)	Located within NAPL plume area. Screened to straddle top of water table (approximated at 30' bgs).
MW-12B	South of school building at location of B-109	40 – 45'	Source Area Monitoring (Above Impacted Zone)	Located within NAPL plume area. Screened above NAPL impacted zone (observed at 50-51.5' during B-109 installation).
MW-12C	South of school building at location of B-109	48 – 53'	Source Area Monitoring (Within Impacted Zone)	Located within NAPL plume area. Screened within NAPL impacted zone (observed at 50-51.5' during B-109 installation).

PARSONS

Table 1

White Plains Former MGP Site Operable Unit 1
Remedial Action
Proposed Monitoring Wells and Rationale

Well ID	Location	Screen Depth	Purpose	Rationale
MW-9	Existing Well	52 – 62’	In-Plume (dissolved-phase) monitoring	Downgradient of NAPL plume. Previously sampled during RI. Dissolved phase VOCs and SVOCs present. No visible NAPL observed during installation.
MW-13	At location of B-115	50 – 60'	In-Plume (dissolved-phase) monitoring	Downgradient of NAPL plume. No visible NAPL observed during installation. Screened across NAPL impacted zone observed at upgradient locations B-109 (50-51.5’), B-113 (52.5-53.5’), and B-114 (52-53’).
MW-14	Southwest of St. John's School Gymnasium	57 – 67'	Downgradient Sentinel Well	Farthest location downgradient of NAPL plume, centered across projected depth of plume

(1) Screen depth intervals may be modified in the field based on subsurface conditions observed during well installation.

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Table 2

White Plains Former MGP Site Operable Unit 1
Remedial Action
Proposed Sampling Points and Rationale

Sample Location ID	Location	Sample Depth[(1)]	Purpose	Sample Analyses
GW-10	Proposed MW-10 location	40'	Confirm upgradient well location.	VOCs and SVOCs
GW-11	Proposed MW-11A, MW-11B, and MW-11C location	22.5’	Confirm clean top of water table in source area	VOCs and SVOCs
		29.5’	Confirm clean zone above impacts in source area	VOCs and SVOCs
		38’	Confirm impacted zone in source area	VOCs and SVOCs
GW-12	Proposed MW-12A, MW-12B, and MW-12C location	32’	Confirm clean top of water table in source area	VOCs and SVOCs
		42’	Confirm clean zone above impacts in source area	VOCs and SVOCs
		52’	Confirm impacted zone in source area	VOCs and SVOCs
MW-9	Existing MW-9	57’	Confirm in-plume (dissolved-phase) well location	VOCs and SVOCs
GW-13	Proposed MW-13 location	55'	Confirm in-plume (dissolved-phase) well location	VOCs and SVOCs
GW-14	Proposed MW-14 location	62’	Confirm downgradient sentinel well location	VOCs and SVOCs
GW-15	Grassy Lawn Area	55’	Provide additional information regarding groundwater conditions and identify appropriate monitoring locations in grassy lawn area	VOCs and SVOCs
GW-20	Grassy Lawn Area	53’	Provide additional information regarding groundwater conditions and identify appropriate monitoring locations in grassy lawn area	VOCs and SVOCs
GW-16 and GW-17	New Street Sidewalk	36’	Provide additional groundwater data in the areas east and west of the proposed MW-11 wells.	VOCs and SVOCs

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Table 2

White Plains Former MGP Site Operable Unit 1
Remedial Action
Proposed Sampling Points and Rationale

Sample Location ID	Location	Sample Depth[(1)]	Purpose	Sample Analyses
GW-18	North Lexington Ave Sidewalk	60’	Provide additional groundwater data in the area west of existing well MW-9.	VOCs and SVOCs
GW-19	Previous SB-29 location	45’	Provide additional groundwater data in the area north of existing well MW-9.	VOCs and SVOCs

[(1)] Sample depth intervals may be modified in the field based on subsurface conditions observed during direct push sampling.

Table 3

White Plains Former MGP Site Operable Unit 1
Remedial Action
Summary of Samples and Analyses

Matrix	Parameter	Analytical Method	Field Samples				QC Blanks		Total
			Field Samples	Field Duplicate	MS/MSD[(a)] (Total)	Sub-Total	Trip Blank	Rinse Blank[(b)]	
Groundwater Sampling Survey - Groundwater Samples	TCL VOCs TCL SVOCs	EPA SW 8260 EPA SW 8270	12 12	1 1	1/1 1/1	15 15	1 -	0 0	16 15
Groundwater Monitoring Event - Groundwater Samples	TCL VOCs TCL SVOCs	EPA SW 8260 EPA SW 8270	10 10	1 1	1/1 1/1	13 13	1 -	0 0	14 13

(a) Matrix spike / matrix spike duplicate for organic analyses.

(b) Rinse blanks will be collected for each day non-disposable sampling equipment is used.

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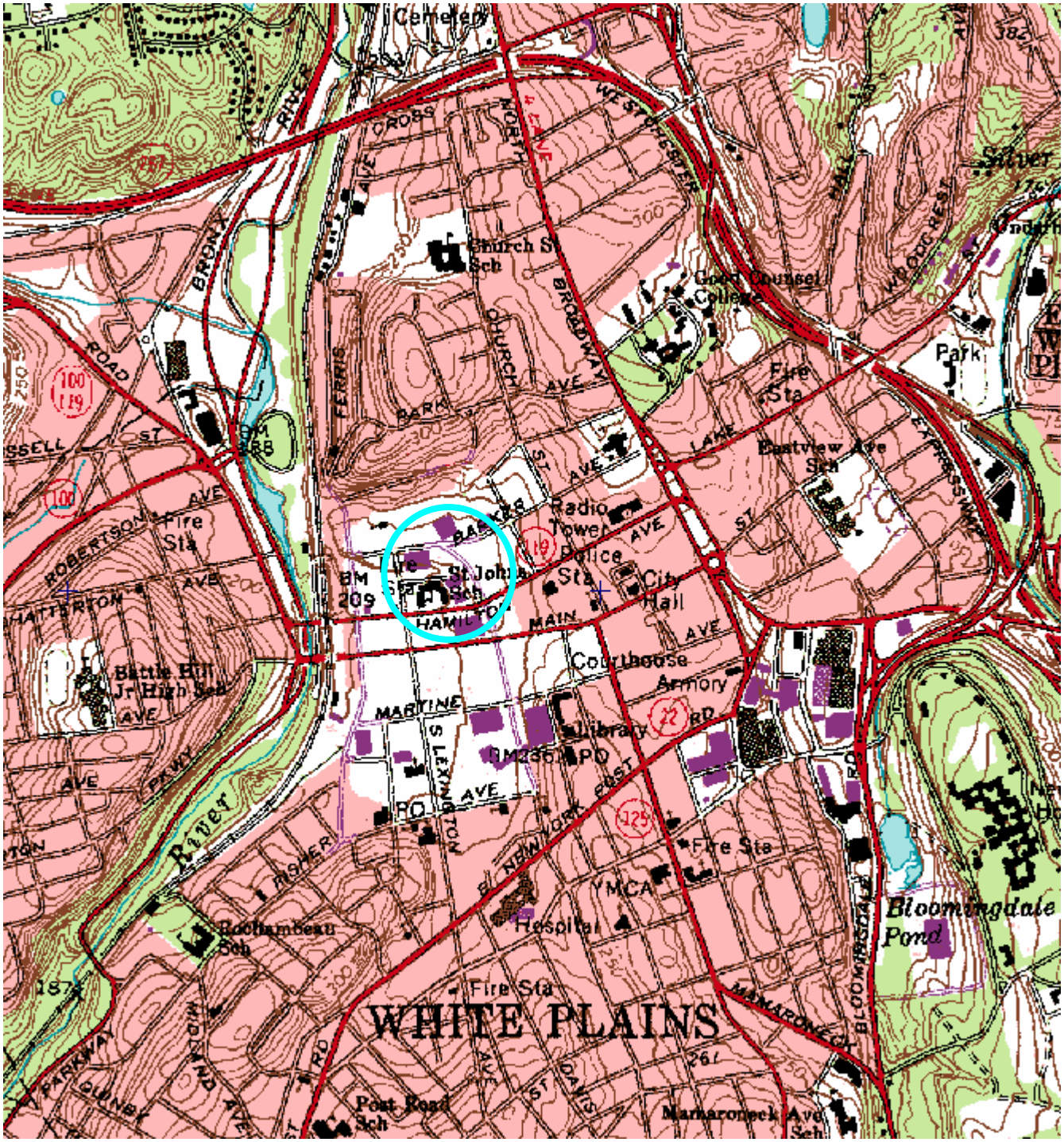

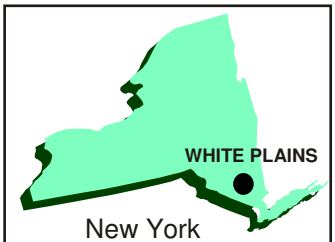

New York
Quadrangle

LATITUDE: N42° 02' 00"
LONGITUDE: W73° 46' 16"

N

Not to Scale

SOURC: DeLORME 3-D
TOPOQUAD PROGRAM

FIGURE 1

White Plains Former MGP Site
White Plains, New York

SITE LOCATION MAP

PARSONS
290 ELWOOD DAVIS ROAD, SUITE 312, LIVERPOOL, NY 13088 PHONE: (315) 451-9560

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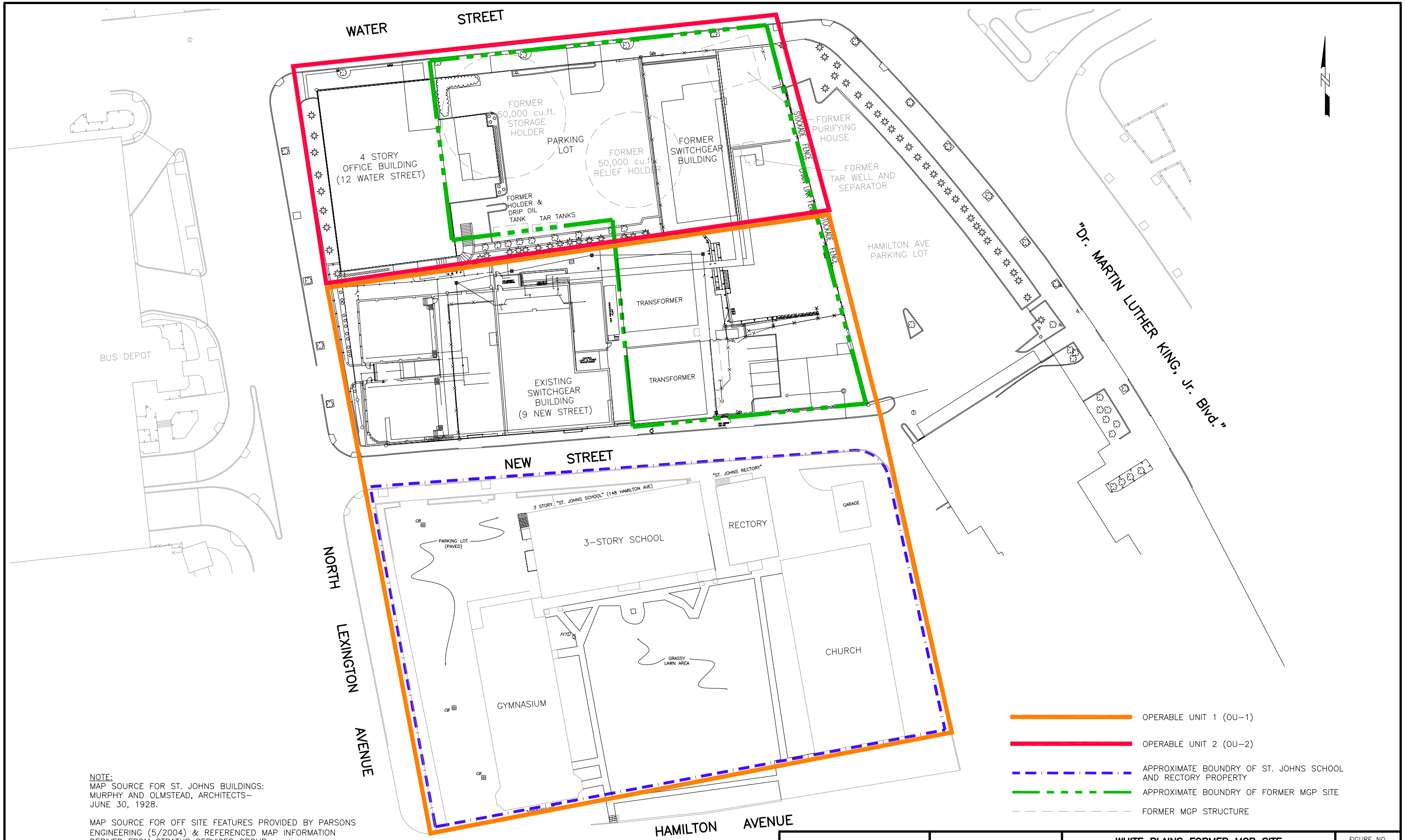

NOTE:
MAP SOURCE FOR ST. JOHNS BUILDINGS:
MURPHY AND OLMSTEAD, ARCHITECTS–
JUNE 30, 1928.

MAP SOURCE FOR OFF SITE FEATURES PROVIDED BY PARSONS ENGINEERING (5/2004) & REFERENCED MAP INFORMATION DERIVED FROM STRATUS SERVICES GROUP, ENGINEERING DIVISION, INC., CRANBURY, NEW JERSEY.

30' 0 60'
GRAPHIC SCALE1"=60'

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

SITE LAYOUT

FIGURE NO. 2

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LEGEND:

VISABLE NAPL IN SOILS AT DEPTHS > 20 FT.

SOIL BORING (2004) ● B–

MONITORING WELL ⊕ MW–8

SOIL BORING ● SB–28

GEOTECHNICAL BORING (1999) ● GT–9

NO IMPACTS NOTED

DNAPL IMPACTED SOILS NOTED

NO LONGER ACCESSIBLE (NA)

40 20 0 40 80

SCALE: 1"=40'

MAP SOURCE FROM FIG 5–2 OF THE RETEC GROUP, INC. REMEDIAL INVESTIGATION REPORT, ST. JOHN THE EVANGELIST R.C. CHURCH AND ELEMENTARY SCHOOL (NOVEMBER 2005)

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WHITE PLAINS FORMER MGP SITE
WHITE PLAINS, NEW YORK
OPERABLE UNIT 1

INTERPRETED EXTENT OF DEEP SOIL IMPACTS
ST. JOHNS SCHOOL & RECTORY PROPERTY

FIGURE NO. 3

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DEPTH	16–20'	39–40.5'	55.5–56'
VOCs	ND	2.72	ND
SVOCs	ND	10.41	0.11

DEPTH	3–4'	23–24'	37–38'	47–48'
VOCs	0.012	0.01	0.009	0.01
SVOCs	0.09	ND	2.5	ND

SB–25	3–4'	21–22'	22.5–23.5'	43–44'
VOCs	0.015	0.01	0.011	0.01
SVOCs	0.03	ND	ND	ND

SB–24	2–3'	10–11'	21–22'	36–38'	51–52'
VOCs	0.008	0.004	0.01	37.28	0.371
SVOCs	0.48	ND	ND	5,021	4.61

DEPTH	16–20'	36–40'
VOCs	ND	ND
SVOCs	ND	ND

B–101	16–20'	36–40'	60–64'
VOCs	ND	ND	ND
SVOCs	ND	ND	ND

B–102	16–20'	36–40'
VOCs	ND	33.7
SVOCs	ND	2,143

B–107	40–42'	44–48'
VOCs	712	ND
SVOCs	8,545	2.0

B–106	40–43'	50–52'
VOCs	762	0.084
SVOCs	6,075	2.76

B–111	51–52'	50–56'
VOCs	14.2	0.0008
SVOCs	694	0.05

B–112	51–52'	50–56'
VOCs	0.06	0.04
SVOCs	0.03	0.06

B–110	52'	60–64'	84–88'
VOCs	18.4	ND	ND
SVOCs	510	ND	0.07

B–118	52–56'
VOCs	ND
SVOCs	ND

B–117	52–53'	56–60'
VOCs	0.03	ND
SVOCs	55.8	0.20

SB–28	2–4'	10–11'	27–28'	50–52'	68–75'	75–77'
VOCs	ND	ND	ND	ND	ND	ND
SVOCs	0.02	0.08	0.09	0.18	0.02	0.17

B–109	50–51.5	59–60'
VOCs	347	0.007
SVOCs	7,865	0.46

B–113	52.5–53.5'	56–60'	DUP
VOCs	52.8	ND	ND
SVOCs	1,273	0.24	0.64

B–114	52–53'	58–60'
VOCs	14.5	0.02
SVOCs	1,535	0.23

B–116	54–56'
VOCs	ND
SVOCs	0.07

B–115	54–56'	62–64'
VOCs	ND	ND
SVOCs	0.25	0.14

DEPTH	3–4'	28–30'	38–40'	56–58'	68–72'
VOCs	0.003	ND	ND	0.05	0.01
SVOCs	0.04	ND	0.06	0.27	0.28

B–119	56–60'	60–64'
VOCs	0.003	ND
SVOCs	0.15	ND

B–120	56–60'	60–64'
VOCs	ND	0.003
SVOCs	0.23	0.29

NEW STREET

LEXINGTON AVENUE

NORTH

"ST. JOHNS RECTORY"

3 STORY. "ST. JOHNS SCHOOL" (148 HAMILTON AVE)

BOILER ROOM

CAFETERIA

KITCHEN

DOOR

STORE ROOM

PLAY ROOM

STORAGE

LAUNDRY ROOM

BOILER ROOM

BOARD ROOM

PARKING LOT (PAVED)

GRASSY LAWN AREA

HYD

CB

SB–23

SB–25

SB–24

SB–29

SB–28

B–101

B–102

B–103

B–104

B–107

B–108

B–109

B–110

B–111

B–112

B–113

B–114

B–115

B–116

B–117

B–118

B–119

B–120

MW–9

30 15 0 30 60

SCALE: 1"=30'

AREA OF SOILS CONTAINING RSCO EXCEEDENCES AT DEPTH (>35' BGS) DASHED WHERE INFERRED.

SOIL BORING (2004) ● B–

MONITORING WELL ✚ MW–8

SOIL BORING (2001) △ SB–ID

MAP SOURCE FROM FIG 5–1 OF THE RETEC GROUP, INC. REMEDIAL INVESTIGATION REPORT, ST. JOHN THE EVANGELIST R.C. CHURCH AND ELEMENTARY SCHOOL (NOVEMBER 2005)

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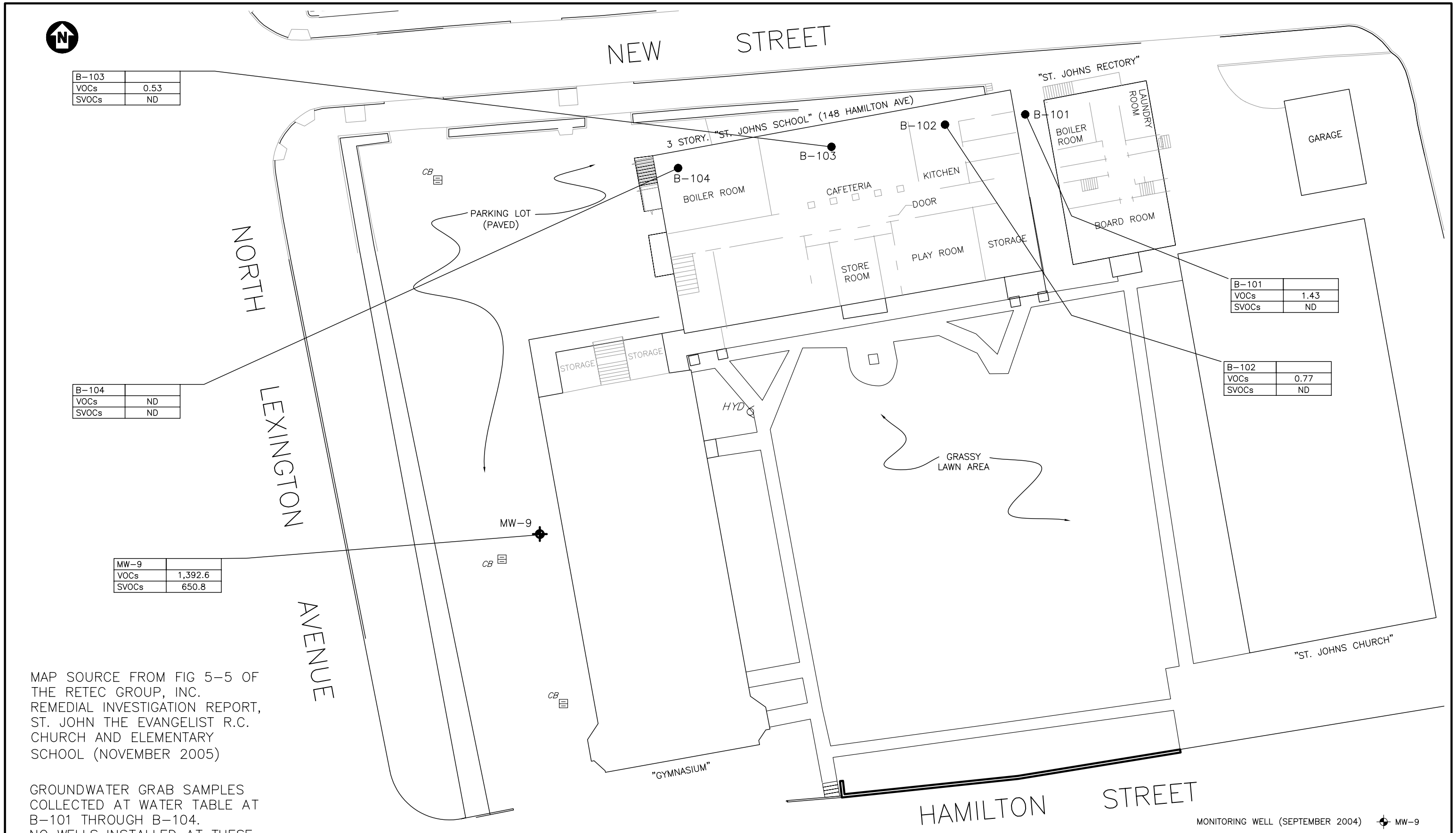
FAX: (315) 451–9570

Con Edison

WHITE PLAINS FORMER MGP SITE
WHITE PLAINS, NEW YORK
OPERABLE UNIT 1

DISTRIBUTION OF TOTAL VOCs AND SVOCs IN SUBSURFACE SOILS (mg/Kg)
ST. JOHNS SCHOOL & RECTORY PROPERTY

FIGURE NO. 4



MAP SOURCE FROM FIG 5-5 OF THE RETEC GROUP, INC. REMEDIAL INVESTIGATION REPORT, ST. JOHN THE EVANGELIST R.C. CHURCH AND ELEMENTARY SCHOOL (NOVEMBER 2005)

GROUNDWATER GRAB SAMPLES COLLECTED AT WATER TABLE AT B-101 THROUGH B-104. NO WELLS INSTALLED AT THESE LOCATIONS.

ND INDICATES NONE DETECTED

30 15 0 30 60

SCALE: 1"=30'

MONITORING WELL (SEPTEMBER 2004) MW-9

SOIL BORING (APRIL 2004) B-107

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

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WHITE PLAINS FORMER MGP SITE
WHITE PLAINS, NEW YORK
OPERABLE UNIT 1

DISTRIBUTION OF VOCs AND SVOCs IN GROUNDWATER (ug/L)
ST. JOHNS SCHOOL & RECTORY PROPERTY

FIGURE NO. 5

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LEGEND:

VISABLE NAPL IN SOILS AT DEPTHS > 20 FT.

SOIL BORING (2004) ● B-120

MONITORING WELL ⊕ MW-8

SOIL BORING ● SB-28

GEOTECHNICAL BORING (1999) ● GT-9

PROPOSED NEW MONITORING WELL ⊕ MW-14

NO LONGER ACCESSIBLE (NA)

40 20 0 40 80

SCALE: 1"=40'

MAP SOURCE FROM FIG 5-2 OF THE RETEC GROUP, INC. REMEDIAL INVESTIGATION REPORT, ST. JOHN THE EVANGELIST R.C. CHURCH AND ELEMENTARY SCHOOL (NOVEMBER 2005)

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FAX: (315) 451-9570

Con Edison

WHITE PLAINS FORMER MGP SITE
WHITE PLAINS, NEW YORK
OPERABLE UNIT 1

PROPOSED MONITORING WELL LOCATIONS

FIGURE NO. 6

No XREFs
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LEGEND:

VISABLE NAPL IN SOILS AT DEPTHS > 20 FT.

SOIL BORING (2004) ● B-120

MONITORING WELL ⊕ MW-8

SOIL BORING ● SB-28

GEOTECHNICAL BORING (1999) ● GT-9

PROPOSED GROUNDWATER SAMPLING POINT ⊕ GW-14

NO LONGER ACCESSIBLE (NA)

MAP SOURCE FROM FIG 5-2 OF THE RETEC GROUP, INC. REMEDIAL INVESTIGATION REPORT, ST. JOHN THE EVANGELIST R.C. CHURCH AND ELEMENTARY SCHOOL (NOVEMBER 2005)

40 20 0 40 80

SCALE: 1"=40'

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
OPERABLE UNIT 1

PROPOSED GROUNDWATER SAMPLING POINT LOCATIONS

FIGURE NO. 7

No XREFs
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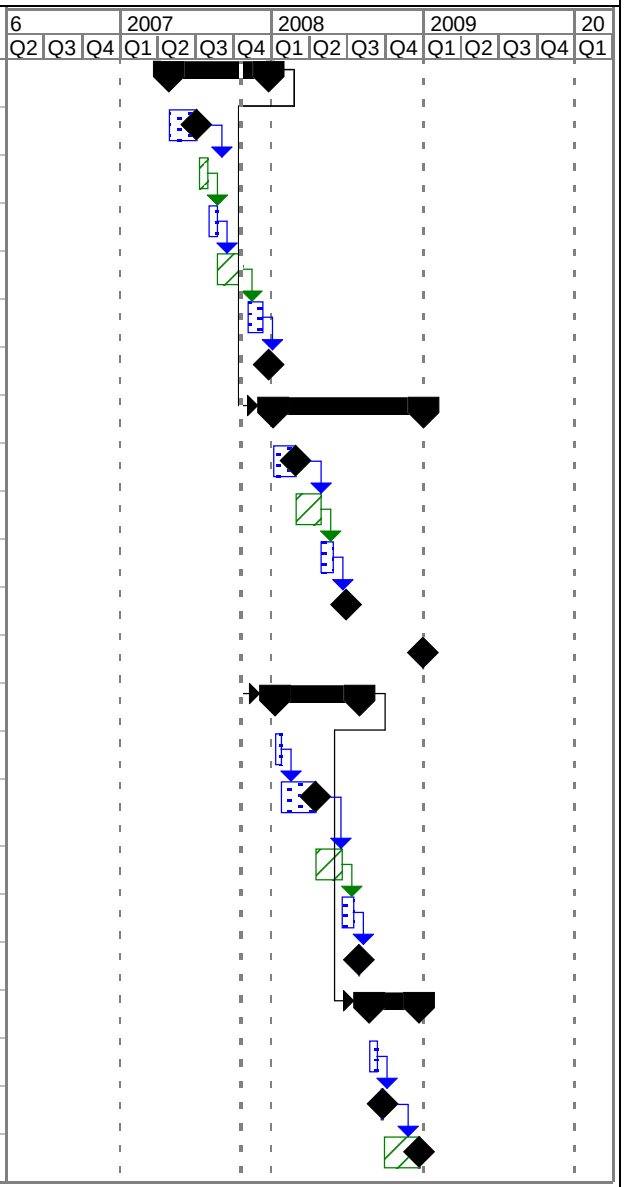
FIGURE 8
White Plains Former MGP Site OU-1
Remedial Action (RA) Schedule

ID	Task Name	Start	Finish	Duration
1	**Remedial Action Work Plan (RAWP)**	**Mon 4/30/07**	**Wed 12/26/07**	**167 days**
2	Con Edison preparation and submittal of draft RAWP to DEC	Mon 4/30/07	Thu 7/5/07	48 days
3	DEC review/comment on draft RAWP	Wed 7/11/07	Tue 7/31/07	15 days
4	Con Edison response to DEC comments on RAWP	Fri 8/3/07	Thu 8/23/07	15 days
5	DEC review/preliminary approval of RAWP	Fri 8/24/07	Mon 10/22/07	41 days
6	Public notice of draft RAWP and 30-day public comment period	Tue 11/6/07	Mon 12/10/07	23 days
7	DEC approval of RAWP	Wed 12/26/07	Wed 12/26/07	0 days
8	**Institutional Controls**	**Mon 1/7/08**	**Fri 1/2/09**	**253 days**
9	Con Edison preparation and submittal of draft SMP to DEC	Mon 1/7/08	Thu 2/28/08	39 days
10	DEC review/comment on draft SMP	Fri 2/29/08	Mon 4/28/08	42 days
11	Con Edison response to DEC comments on draft SMP	Tue 4/29/08	Wed 5/28/08	21 days
12	DEC approval of SMP	Tue 7/1/08	Tue 7/1/08	1 day
13	First Annual Site Inspection/Certification	Fri 1/2/09	Fri 1/2/09	1 day
14	**Groundwater Sampling Survey**	**Fri 1/11/08**	**Fri 8/1/08**	**144 days**
15	Field Program	Fri 1/11/08	Thu 1/24/08	10 days
16	Con Edison preparation and submittal of draft Groundwater Sampling Survey (GSS) Report to DEC	Fri 1/25/08	Thu 4/17/08	60 days
17	DEC review/comment on draft GSS Report	Fri 4/18/08	Wed 6/18/08	43 days
18	Con Edison response to DEC comments on GSS Report	Thu 6/19/08	Thu 7/17/08	20 days
19	DEC approval of GSS Report	Fri 8/1/08	Fri 8/1/08	1 day
20	**Groundwater Monitoring**	**Mon 8/25/08**	**Tue 12/23/08**	**84 days**
21	Monitoring Well Installation	Mon 8/25/08	Fri 9/12/08	14 days
22	Initial Round of Groundwater Monitoring	Mon 9/22/08	Fri 9/26/08	5 days
23	Con Edison Preparation and Submittal of Groundwater Monitoring Report	Mon 9/29/08	Tue 12/23/08	60 days



Project: White Plains Former MGP Site RA
Date: Wed 10/17/07

Non-RA Task
Con Edison Task
DEC Task
Progress
Milestone
Summary

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