NYSEG

New York State Electric & Gas Corporation

Bridge Street Former Manufactured Gas Plant
Plattsburgh, New York

OPERATION, MAINTENANCE, & MONITORING PLAN

AUGUST 17, 2004 **REVISED August 27, 2024**

Prepared For:
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1.0 INTRODUCTION

On behalf of NYSEG (New York State Electric and Gas Corporation), URS Corporation – New York (URS) has prepared this *Operation, Maintenance & Monitoring Plan (OM&M Plan)* for NYSEG's former Manufactured Gas Plant (MGP), which is located on Bridge Street in the City of Plattsburgh, Clinton County, New York (site ID #5-10-016).

The New York State Department of Environmental Conservation (NYSDEC) and NYSEG entered into an Order on Consent (D0-0002-9309) on March 30, 1994 (the Order). Under this Order, NYSEG agreed to investigate and remediate 33 former MGP sites in New York State. The remedial investigation of the Plattsburgh-Bridge Street former MGP site has been completed under the Order. The *Remedial Investigation Report (RIR)*, dated January 15, 2004 presented the findings of the remedial investigation (RI). In 2001, during the RI, NYSEG conducted an interim remedial measure (IRM) to locate the former gas holder and remove it and impacted soil at and near the site. The NYSDEC approved the *RIR* on January 20, 2004 and prepared a *Proposed Remedial Action Plan (PRAP)* for public review and comment. Following the public comment period, the NYSDEC issued its *Record of Decision (ROD)* in March 2004 that outlined the remedial plan for the site. This *OM&M Plan* has been prepared as required by the *ROD.*

The *ROD* required the establishment of an environmental easement which will require compliance with the approved site management plan, limit the use and development of the property to commercial or industrial use, restrict the use of groundwater as a source of potable or process water, and require the property owner to complete and submit to the NYSDEC an annual certification. The activities in this *OM&M Plan* will comply with the requirements of the easement.

The NYSDEC will be the author of the environmental easement, and at this time that document is still being prepared. Once the environmental easement is implemented this *OM&M Plan* may be modified to comply with the easement, if needed.

This *OM&M Plan* has six sections. Background information is in Section 2.0. Descriptions of the components of the monitoring plan are in Section 3.0. A summary of the reporting procedure is in Section 4.0. The schedule for the implementation of this *GMP* is summarized in Section 5.0. Section 6.0 list the references used to prepare this *GMP*.

2.0 BACKGROUND

This Section summarizes site background information. A full site description can be found in the *RIR.*

2.1 SITE DESCRIPTION

The Plattsburgh-Bridge Street Former MGP Site (the site) is situated on an approximately 0.5-acre lot at 140 Bridge Street in the City of Plattsburgh, New York (Figure 1). The property is near the outlet of the Saranac River, which flows eastward and discharges to the Cumberland Bay of Lake Champlain. The topography in the area is generally flat. The nearest surface water body, Cumberland Bay, is approximately 1,000 feet east of the site.

The site is bounded by Bridge Street on the north, an apartment building on the east, residences to the west, and a warehouse facility to the southwest. There are residences southeast of the site. The site is currently vacant and covered with grass. Currently, the access to the property is unrestricted. The adjacent properties are primarily residential with some nearby commercial and industrial development.

2.2 OPERATIONAL HISTORY

A former gas plant operated at the site from 1860 to 1896. The plant consisted of one main building with a gas holder and a coal shed. The plant was destroyed by fire and rebuilt on at least two occasions. Over the 36 years of operation, the gas plant was either rebuilt or converted to as many as four different processes to manufacture the coal gas. In 1896, the Bridge Street gas plant was abandoned and the operations were moved to the Saranac Street site, which is approximately one half mile southwest of the Bridge Street site.

2.3 SUMMARY OF REMEDIAL INVESTIGATION

A total of 19 surface soil samples, five near surface soil samples, 45 subsurface soil samples, nine overburden groundwater samples from five monitoring wells, 12 bedrock groundwater samples from 12 bedrock monitoring wells, and seven air samples were collected as part of the remedial investigation.

2.3.1 Soil Investigation

Prior to the 2001 IRM, subsurface soil samples were collected from soil borings that were advanced to locate the former holder and evaluate the soil quality at and near the site. The subsurface soil samples indicated that there were polycyclic aromatic hydrocarbons (PAHs) and metals at concentrations that exceed NYSDEC's recommended soil cleanup objectives (RSCOs) beneath most of the former apartment building at the former MGP site and near the southern property boundary. The greatest concentration of PAHs were at a depth of eight to ten feet near the base of the former gas holder. In addition, the surface soil and near surface soil samples contained PAHs. In general, the PAHs are most concentrated around the eastern and western sides of the former gas holder and approximately 75 feet offsite to the southeast. Furthermore, it appeared that some of the PAHs may have migrated downgradient of the former gas holder and down the slope of the bedrock (to the northeast).

2.3.2 Interim Remedial Measure

The former gas holder, its contents, and site soils were removed during the 2001 IRM. Post-excavation sampling indicated that the majority of the soils that remain at the site meet the site-specific cleanup objectives, which were based on total benzene and PAH concentrations. The primary exception was at the north side of the site along Bridge Street where further soil removal was not possible because of the proximity of the excavation to Bridge Street and the associated subsurface infrastructure. Post-excavation samples of the material on the bedrock surface and within fractures showed that residual MGP-related material was in the upper weathered portion of the bedrock. NYSEG's *Interim Remedial Measures Final Engineering Report*, dated March 2002, indicated that no other MGP-related structures were found during the IRM.

There was some NAPL observed on the bedrock surface and in fractures in the weathered bedrock during the IRM. The most significant impacts were reported to be near the suspected valve box area where NAPL was observed in bedrock fractures. It was uncertain whether the NAPL was coming from the bedrock or was from soil that had been excavated from the holder bottom and placed on the bedrock shelf prior to removal from the site.

2.3.3 Shallow Groundwater Investigation

In July 1999, URS installed five overburden monitoring wells to investigate the groundwater. All five monitoring wells are screened in the clayey silty sand unit that is above bedrock. The upgradient monitoring well (MW-99-01) was dry. The two on-site monitoring wells (MW-99-01 and MW-99-02) were removed during the 2001 IRM because they were in the targeted excavation area. The remaining three overburden monitoring wells were decommissioned in September 2003. The monitoring well locations are shown of Figure 2.

The depth to groundwater in the four wells ranges from approximately 4.4 feet to 7.7 feet. The overburden shallow groundwater flows generally to the north. Based upon field observations, the shallow unconsolidated soils above the bedrock south and west of the site are dry.

All of the shallow groundwater samples results were below NYSDEC's groundwater standards for BTEX and PAHs, with the exception of MW-99-05. This well was located north of Bridge Street. Based on physical observations (i.e. odor and temperature) and other detected compounds, MW-99-05 appeared to have been impacted by a leaking sanitary sewer.

2.3.4 Indoor Air Evaluation

In July 1999 the air samples that were collected to evaluate the crawl space on the former apartment building. In February 2000, five additional indoor air samples were collected at the site. The VOCs detected in the air samples were less than NYSDOH's levels of concern. Furthermore, the apartment building and site soils were removed during the 2001 IRM, reducing the potential for exposures.

2.3.5 Bedrock Investigation

The bedrock beneath the site was found to be very competent, with the exception of a weathered zone at the surface and some vertical and horizontal fractures. A near horizontal bedding plane fracture zone that generally slopes to the northeast was found beneath the site at a depth of about 35 feet beneath the holder. This fracture and the weathered bedrock surface are the primary pathway for MGP-related NAPL and dissolved contaminants to migrate in the bedrock beneath the site. Benzene, PAHs, phenols, and cyanide were detected at concentrations that exceed the NYSDEC's groundwater standards in bedrock groundwater samples from the onsite bedrock monitoring wells. Benzene, phenol, and cyanide were detected at concentrations that exceed the NYSDEC's groundwater standards in groundwater samples from at least one off-site bedrock monitoring well. Traces of NAPL were found in on-site bedrock monitoring wells that either intersect the bedding plane fracture or the upper weathered bedrock zone. The area in which NAPL was observed was limited to the east and northeast of the former gas holder. None of the wells have recoverable amounts of NAPL.

3.0 MONITORING PLAN

This section describes the components of the *GMP* that will be implemented at the site in accordance with the requirement of the March 2004 *ROD*. The four components of the *GMP* include:

- Soil Vapor Sampling
- Annual NAPL Monitoring
- Annual Groundwater Monitoring
- Monitoring Well Decommissioning

The following subsections describe each of these components. Copies of the field forms to be used are in Appendix A.

3.1 SOIL VAPOR SAMPLING

NYSEG will assess whether MGP-related contaminants are present in soil vapor at or near the site by conducting a passive soil gas survey using GORE-SORBER® screening modules. The proposed passive soil vapor sampling locations are shown on Figure 3.

A GORE-SORBER® module consists of three GORE-SORBER® Passive Sorbent Collection Devices (sorbers). Each sorber contains 40 milligrams (mg) of a granular adsorbent material. The three sorbers are sheathed in the bottom of a four-foot long vapor-permeable insert. The device is attached to a retrieval cord. Both the retrieval cord and the sorbent container are constructed solely of inert, hydrophobic, micro-porous GORE-TEX® expanded polytetrafluoroethylene (ePTFE). The ePTFE membranes are hydrophobic and exclude soil moisture. The membranes do not retard vapor transfer, so VOC and SVOC vapors can freely penetrate the module and collect on the adsorbent material. The ability of the modules to protect the sorbent media from water without retarding soil vapor diffusion increases the sensitivity of the probes.

URS will install ten passive soil vapor survey modules at the locations shown on Figure 3. A pilot hole will be advanced by driving a one-inch diameter steel rod. The modules will then be attached to a new nylon cord and installed at the water table or top of bedrock, whichever is most shallow, using the stainless steel insertion rod supplied by GORE. The cord will be attached to a cork, which will be tamped flush to the ground, to assist with locating and retrieval of the modules. The installation date and time will be noted on the chain-of-custody (COC).

The sampling modules will be left in the ground for two weeks. The modules will be removed, placed in their respective designated shipping vials supplied by GORE, and shipped in coolers to the W.L. Gore analytical laboratory. The retrieval date and time will be noted on the COC. The modules will be analyzed for VOCs and SVOCs by GORE's expanded target compound list (A4) using modified EPA Methods 8260 and 8270. The proposed analyte list is included in Appendix B.

The results of the analyses will be reported (by parameter) in micrograms per sorber (µg). The mass of compounds detected in the sample modules is indicative of the concentrations of the compounds in the soil gas. However, the mass of compounds detected in the modules tend to

correlate favorably with detected soil or groundwater concentrations, and generally reflect previously established trends of soil and/or groundwater contamination.

The results of the passive soil vapor sampling will be used to assess whether further active soil vapor sampling is necessary to quantify concentrations of BTEX or PAHs. If BTEX and PAHs are detected only in the passive soil vapor samples near the former gas holder (PSV-04-01, PSV- 04-03 and PSV-04-04), then no further monitoring will be proposed. If additional soil vapor sampling is necessary, NYSEG will prepare a separate workplan for NYSDEC's review and approval.

3.2 ANNUAL NAPL MONITORING

Water levels in each well will be measured annually using an electronic water level indicator. In wells in which NAPL has not been previously observed, NAPL checks will be conducted using a weighted line to evaluate whether either LNAPL or DNAPL is present. In wells in which NAPL has been observed, water levels and NAPL levels will be checked using an oil-water interface probe. If NAPL is found, then an attempt will be made to collect and quantify the accumulated amount. The observations will be recorded on the Water Level/NAPL Check Field Data Sheet included in Appendix A.

3.3 ANNUAL GROUNDWATER MONITORING

NYSEG will collect groundwater samples from nine bedrock groundwater monitoring wells (MW-1B, MW-2B, MW-3B, MW-6B, MW-7BS, MW-7BD, MW-9B, MW-10B, and MW-11B) at the site annually. The purpose of the samples will be to assess the effectiveness of the remedial program. The bedrock groundwater monitoring well construction details are summarized on Table 1. The remainder of this section describes the groundwater sampling procedures. At the time of the annual groundwater sampling events, the general site conditions will be inspected and evaluated, and any necessary actions will be taken to ensure the site is safe and in good appearance.

3.3.1 Bedrock Monitoring Well Purging and Sampling Procedures

The wells will be purged and sampled using low-flow sampling techniques. Sampling will be completed using dedicated/disposable tubing and a sampling pump such as a peristaltic or bladder pump.

Field parameters, including pH, specific conductivity, temperature, and turbidity, will be monitored and recorded on a sampling log (Appendix A). The monitoring wells will be purged until dry or the field parameters have stabilized as follows:

- Temperature ± 3% of measurement
- pH ± 0.1 pH units
- Specific conductance + 3% of measurement
- Redox ± 10 mV
- Dissolved oxygen ± 10% of measurement
- Turbidity ± 10% of measurement, or under 5 NTUs

The sample will be collected immediately following purging by disconnecting the tubing from water quality meter flow through cell. The sample tubing will then be used to fill the bottleware.t If the well is purged dry, then the water level will be allowed to recover until sufficient volume is available to collect a sample. Samples will be collected within 24 hours of purging.

The sample will be placed into laboratory provided sampling containers in the following order: benzene,

toluene ethylbenzene, and xylenes (BTEX and polycyclic aromatic hydrocarbons (PAHs), The samples will be placed in coolers with sufficient ice or icepacks to maintain a temperature of 4°C.

3.3.2 Groundwater Analytical Parameters

As shown on Table 2, each groundwater sample will be analyzed for BTEX by USEPA SW-846 Method 8021 andPAHs by USEPA SW-846 Method 8270, The contracted laboratory will provide standard analytical summary deliverable package.

3.3.3 Quality Assurance/Quality Control Procedures

All samples will be collected and handled in a manner such that sample agitation, cross-contamination, and contact with the atmosphere is reduced or kept to minimum. Field personnel will wear new disposable gloves when collecting and handling samples, and will change gloves between sampling locations.

Equipment used to measure field parameters will be calibrated daily following the manufacturers instruction manual and recorded on the Field Parameter Meter Calibration Sheet (Appendix A). Equipment that report erratic readings during use will be recalibrated. If the erratic readings persist after recalibration, the equipment will be replaced.

In addition, quality assurance/quality control (QA/QC) samples will be prepared and collected to provide control over the collection of environmental measurements and interpretation of the analytical data. Three types of QA samples will be prepared or collected: 1) field duplicate samples; 2) field (equipment rinseate) blanks; and 3) trip blanks. Duplicate samples and field blanks will be prepared for all sampling parameters. Trip blanks will only be analyzed for BTEX.

Duplicates groundwater samples will be obtained by alternately filling the sample and duplicate containers with aliquots of liquid collected with the same sampling device. BTEX samples and duplicates will be collected first in order to minimize the potential for loss of BTEX. After the BTEX samples are collected, any liquid remaining in the sampling device will be equally apportioned among all the sample containers. Upon retrieval of the next aliquot of liquid, the order in which the sample bottles are filled will change by one increment.

Equipment rinseate blanks are prepared by passing laboratory-supplied analyte-free water (or the distilled/deionized water that is used for decontamination) through decontaminated sampling equipment and collecting it in an empty sample container for analysis. Note that it may be necessary for the lab to provide extra, full VOA vials to ensure sufficient volume of blank water to eliminate headspace. Rinseate blanks will be denoted with a “RB” followed by the eight-digit date (i.e.: RBYYYYMMDD).

A trip blank consists of a set of sample bottles filled at the laboratory with analyte-free water. The trip blank and laboratory method blank water must originate from one common source and physical location within the laboratory. Trip blanks will be handled, transported, and analyzed in the same manner as the other analytical samples, except that the sample containers for the trip blanks will not be opened in the field. Trip blanks must return to the lab with the same set of bottles they accompanied to the field.

The trip blanks will be shipped and analyzed at a frequency of one trip blank per cooler per shipment of aqueous samples for BTEX analysis. Trip blank sample identification consists of a “TB” followed by the eight-digit date (i.e.: TBYYYYMMDD).

3.3.4 Chain of Custody Procedures

A Chain of Custody (COC) form (Appendix A) will accompany the sample from initial sample container selection and preparation commencing at the laboratory, to the field for sample containment and preservation, through its return to the laboratory.

The Project Manager will notify the laboratory of upcoming field sampling activities and the subsequent transfer of samples to the laboratory. This notification will include information concerning the number and type of samples to be shipped as well as the anticipated date of arrival. Sample shipping containers (coolers or "shuttles") will be provided by the laboratory. The shipping containers will be insulated. All sample bottles within each shipping container will be individually labeled for identification.

The labels will include the following information:

- Site name;
- Sample identification;
- Name of collector;
- Date and time of collection;
- Place of collection;
- Type of sample;
- Sample volume;
- Analyses required; and
- Preservative (if used).

If a sample shipping container has been assigned a unique identification number by the laboratory, then this number will be recorded on the COC.

Personnel receiving the sample containers will check each cooler for the integrity of the seals. Coolers or shuttles with broken seals will be returned to the laboratory, and the sample containers will not be used. The receiving personnel will break the seal, inspect the contents for breakage, and record and sign on the COC form that the sample containers have been received. A temporary seal will be affixed to each cooler until the sample containers are filled.

3.3.5 Decontamination Procedures

Sampling equipment will be decontaminated in the laboratory or the field prior to site use and between sampling locations. The sampling device and equipment decontamination method will involve a non-phosphate detergent wash, tap water rinse, distilled/deionized water rinse, air drying, and a second distilled/deionized water rinse.

3.4 MONITORING WELL DECOMMISSIONING

NYSEG will decommission the angled boring and three bedrock monitoring wells at the site. The *ROD* required that the angled boring beneath the former gas holder and monitoring wells that are not part of the long-term monitoring program be decommissioned. All five overburden groundwater monitoring wells have been decommissioned. Bedrock groundwater monitoring wells MW-7DD, MW-8B, and MW-8BD are not included in the long-term monitoring plan because they do not produce sufficient groundwater to provide representative samples.

Prior to decommissioning, the angled boring and the three bedrock monitoring wells will be checked for the presence of accumulated NAPL. The concrete pad and well covers will be removed. The packer will also be removed from the angled boring. Water that has accumulated in the borings will be removed. The boring will then be pressure grouted with a cement-bentonite grout mixture to two feet below the ground surface using a tremie pipe. The casings will be cut off to a depth of approximately two-feet below the ground surface. Once the grout has cured for at least 24 hours, the remaining portion of the boring will be filled with topsoil, graded, and seeded.

4.0 REPORTING

Site inspection and sampling activity summary reports will be prepared for submittal to the NYSDEC. The summary reports will include a description of field activities, a description of the general site conditions, a discussion of the laboratory analytical results, a summary groundwater elevation, and a summary of observations. The summary report will be submitted to the NYSDEC approximately 60 days after the completion of each annual monitoring event. The first annual report will also include the soil vapor sampling analytical results and documentation of the monitoring well decommissioning.

5.0 SCHEDULE

Implementation of this *OM&M Plan* is contingent on NYSDEC approval. Site inspections, groundwater sampling, and NAPL checks will be conducted annually in the month of September. The soil vapor samples will be collected and monitoring wells decommissioned concurrently with the first annual sampling event in September 2004. Annual reports will be submitted to the NYSDEC as described in Section 4.0.

After the completion of the third annual sampling event, NYSEG and the NYSDEC will review the results to determine the effectiveness of the remedial program. At that time, the *OM&M Plan* may be modified.

6.0 REFERENCES

Comprehensive Environmental Response Compensation and Liability Act (CERCLA) Quality Assurance Manual, Final Copy , Revision I, October 1989.

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TABLES

TABLE 1
SUMMARY OF MONITORING WELL INFORMATION

NYESEG FORMER MGP SITE
BRIDGE STREET PLATTSBURGH, NEW YORK

Well	Ground Surface Elevation (feet msl[1])	Measuring Point Elevation (feet msl)	Coordinate[2]		Installation Date	Casing Diameter (inches)	Casing Material	Screen Diameter (inches)	Open Hole Interval (feet bgs)[3]		Open Hole Interval (feet msl)		Comments
			Northing	Easting					Top	Bottom	Top	Bottom	
Angled Boring	122.00	121.57	2137864.48	766362.83	9/1/2002	4	PVC	3 7/8	9.6	106.1	113.7	30.1	Screen elevation adjusted for drillling angle of 60° from horizontal. Boring to be decommissioned.
MW-10B	122.60	122.15	2137830.66	766564.59	9/1/2002	4	PVC	3 7/8	24.9	62.0	97.7	60.6	
MW-11B	120.36	119.81	2137941.43	766469.23	1/9/2002	4	Steel	3 7/8	15.5	41.5	104.9	78.9	
MW-1B	123.30	122.80	2137777.03	766373.30	12/3/2001	4	Steel	3 7/8	13.0	38.5	110.3	84.8	
MW-2B	122.72	122.32	2137830.36	766426.33	12/7/2001	4	Steel	3 7/8	16.0	40.0	106.7	82.7	
MW-3B	120.14	120.11	2137926.23	766514.87	9/1/2002	4	PVC	3 7/8	17.5	61.0	102.6	59.1	
MW-6B	122.47	121.90	2137867.07	766380.10	12/5/2001	4	Steel	3 7/8	13.2	38.5	109.3	84.0	
MW-7BD	121.30	121.06	2137889.92	766431.68	1/9/2002	4	Steel	3 7/8	40.0	50.0	81.3	71.3	
MW-7BS	120.86	120.72	2137897.80	766435.76	12/13/2001	4	Steel	3 7/8	9.5	14.5	111.4	106.4	
MW-7DD	122.72	121.33	2137866.37	766431.68	9/1/2002	4	PVC	3 7/8	70.5	85.5	52.2	37.2	Well to be decommissioned
MW-8B	121.32	120.55	2137903.83	766406.69	12/12/2001	4	Steel	3 7/8	7.9	40.0	113.4	81.3	Well to be decommissioned
MW-8BD	121.32	120.74	2137903.69	766401.14	12/12/2001	4	Steel	3 7/8	28.0	38.0	93.3	83.3	Well to be decommissioned
MW-9B	121.72	121.06	2137865.69	766341.94	12/19/2001	4	Steel	3 7/8	9.9	36.0	111.8	85.7	

Notes:
1 - Feet above mean sea level. National geodetic vertcal datum of 1929 (NGVD29)
2 - New York State Plane - East. North American Datum 1927 (NAD27).
3 - Feet below ground surface.

TABLE 2
SAMPLE CONTAINERS, PERSERVATION, AND HOLDING TIME REQUIREMENTS

NYSEG FORMER MGP SITE
BRIDGE STREET PLATTSBURGH, NEW YORK

Analysis	Container	Preservation	Holding time
FIELD MEASUREMENTS			
Field pH	N/A	N/A	Immediate
Temperature	N/A	N/A	Immediate
Specific conductivity	N/A	N/A	Immediate
Turbidity	N/A	N/A	Immediate
LABORATORY ANALYSES			
BTEX (EPA Method 8021)	Two (2) 40 milliliter septa vials, Glass	HCl to pH < 2.0, Cool 4 °C	Analyze within 10 days.
PAHs (EPA Method 8270C)	1 Liter Glass	Cool 4 °C	Extract within five days; analyze within 40 days

Notes:
N/A - Not applicable
BTEX - benzene, toluene, ethylbenzene, and xylenes
PAHs - polynuclear aromatic hydrocarbons

FIGURES

N

GRAPHIC SCALE

0 30 60 90 Feet

SCALE 1:24,000

SOURCE USGS, 1966

FIGURE 1	SITE LOCATION MAP
NYSEG	NEW YORK STATE ELECTRIC AND GAS BRIDGE STREET FORMER MGP SITE PLATTSBURGH, NEW YORK
URS	URS CORPORATION - NEW YORK 28 CORPORATE DRIVE, SUITE 200 CLIFTON PARK, NEW YORK 12065

p:\database\nyseg\bridge street\arcview\bridge st - gmp.apr/Fig. 1 - Site Location Map

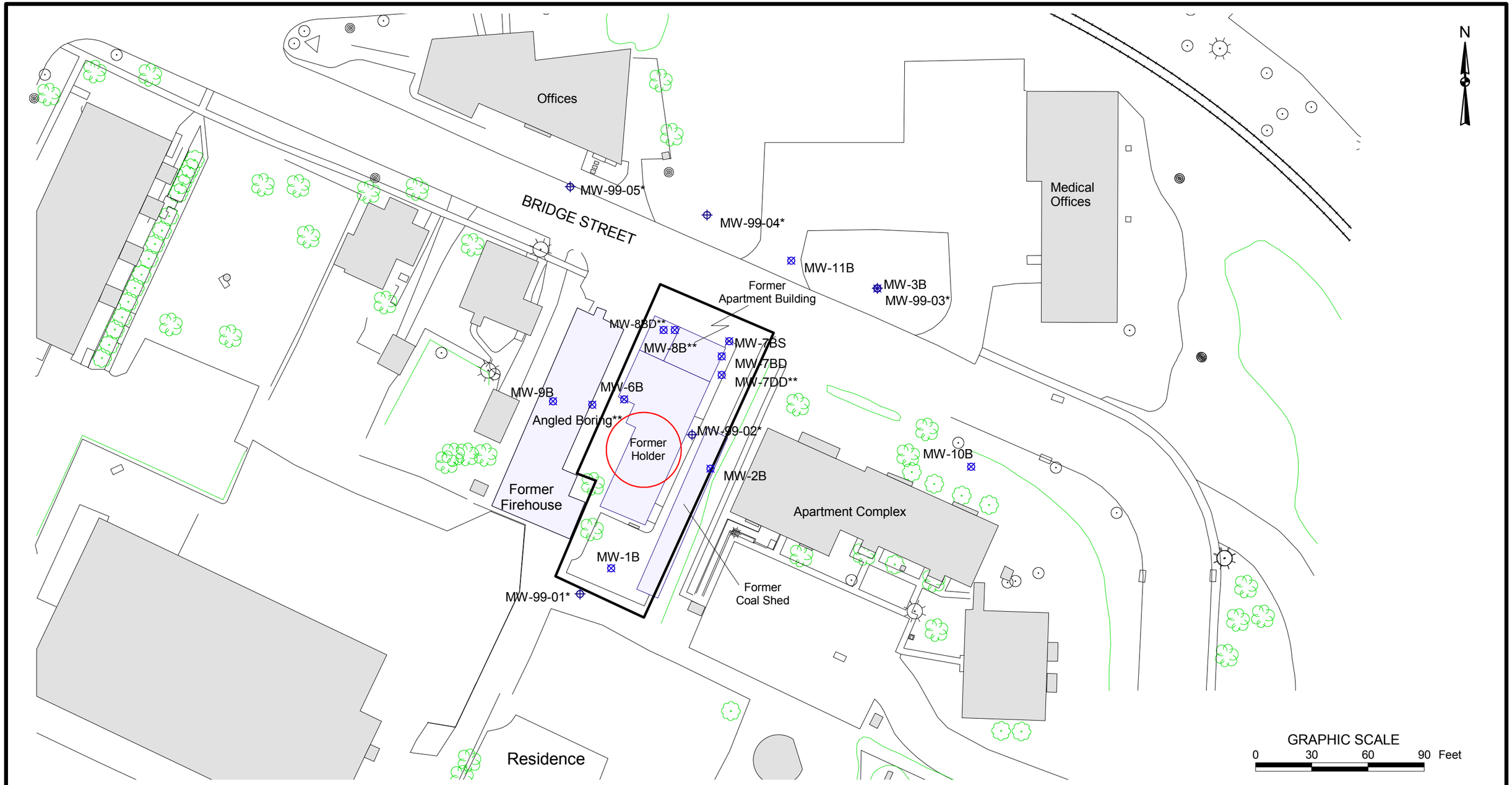


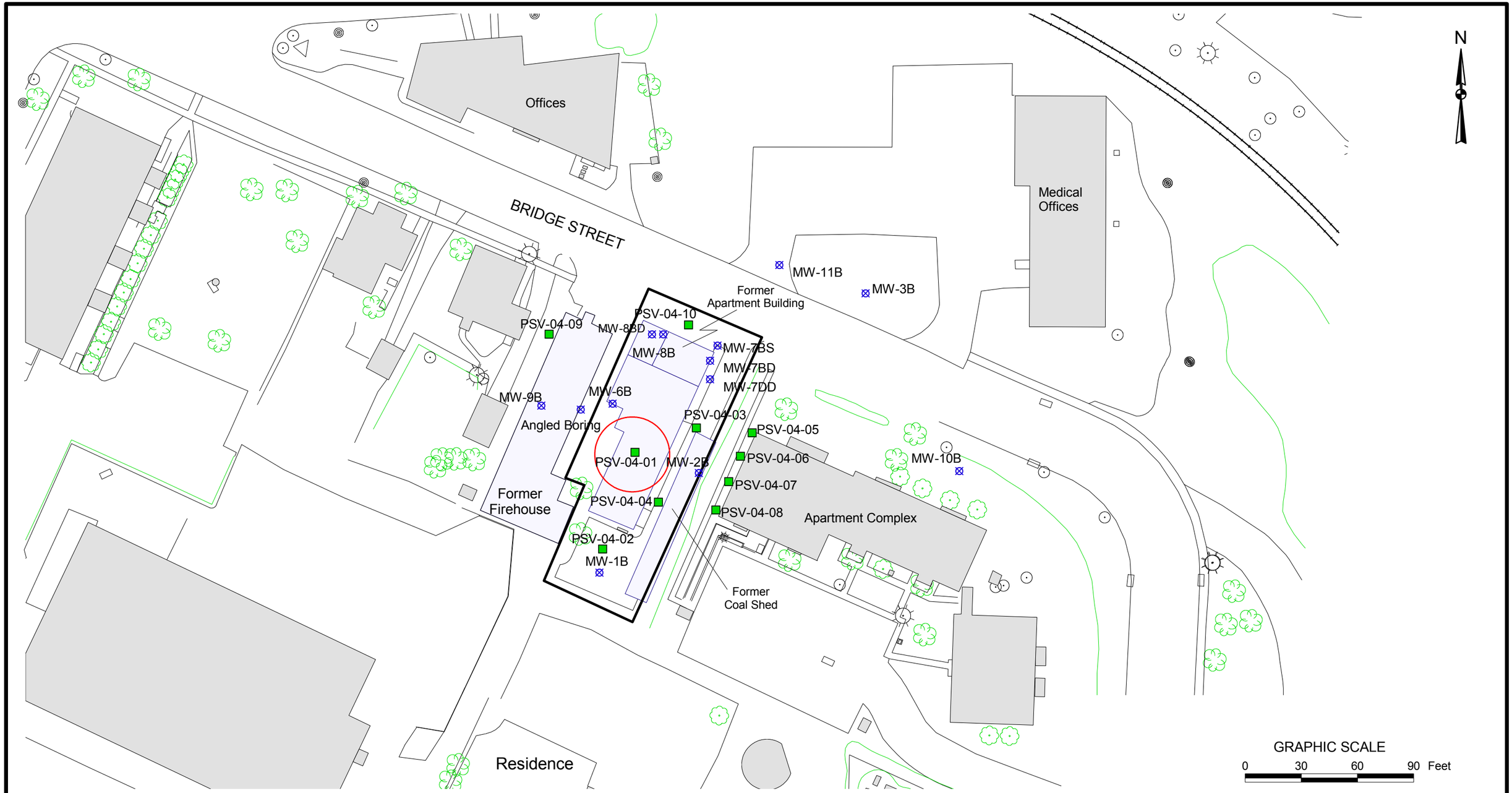
FIGURE 2

MONITORING WELL LOCATIONS

NEW YORK STATE ELECTRIC AND GAS
BRIDGE STREET FORMER MGP SITE
PLATTSBURGH, NEW YORK

URS CORPORATION - NEW YORK
28 CORPORATE DRIVE, SUITE 200
CLIFTON PARK, NEW YORK 12065

p:\database\nyseg\bridge street\arcview\bridge st - gmp.apr/Fig. 2 - Well Locations



GRAPHIC SCALE

0 30 60 90 Feet

LEGEND

- Proposed Passive Soil Vapor Sampling Location
- Bedrock Monitoring Well
- Property Boundary (approx.)
- Former Gas Holder
- Former Structures (approx.)
- Buildings

FIGURE 3

PROPOSED PASSIVE SOIL VAPOR SAMPLING LOCATIONS

NEW YORK STATE ELECTRIC AND GAS
BRIDGE STREET FORMER MGP SITE
PLATTSBURGH, NEW YORK

URS CORPORATION - NEW YORK
28 CORPORATE DRIVE, SUITE 200
CLIFTON PARK, NEW YORK 12065

p:\database\nyseg\bridge street\arcview\bridge st - gmp.apr/Fig. 3 - Proposed Soil Gas

APPENDIX A
FIELD FORMS

WATER LEVEL/NAPL CHECK FIELD DATA SHEET

Project: _____

Date: _____

Field Personnel

_____

Well Number	Time	Depth to Water	LNAPL Observations	DNAPL Observations	Comments

GROUNDWATER SAMPLING DATA SHEET

WELL NO: _____

Field Personnel:

_____

_____

Date: _____

Job No.: _____

Location: _____

Total Well Depth (from top of casing): _____ feet

Depth to Water Surface Before Purging (from top of casing): - _____ feet

Height of Water Column: = _____ feet

Well Diameter (d): _____ inches Gals per ft: $(d^2 \times 0.0408) =$ x _____

One Well Volume of Water Before Purging: = _____ gallons or _____ liters

Volume of Water Equal to three well volumes: _____ gallons or _____ liters

Purging Method: Bladder Pump/Waterra Pump/Peristaltic Pump/Bailer **Meter #**_____

Time	Volume Purged (Gallons / Liters)	Depth to Water (feet)	SC (mmhos/cm or µmhos)	Temp. (°F or °C)	pH (SU)	Turbidity (NTU)
Stabilization Criteria			+/- 10%	+/-0.2 °C	+/- 0.1 SU	+/- 10%

Total Volume of Water Purged: _____ gallons/liters

Sampling Data:

- Sampling Method: Bailer or Pump
- Depth of Pump intake or bailer: _____ feet

- Color/Odor: Sheen/Appearance:

Notes:

_____

_____

_____

_____

_____

_____

_____

FIELD PARAMETER METER CALIBRATION SHEET

Instrument Model__________________ Equipment #___________________

Project#____________________ Project Name________________________

Date	Initials	Battery	pH	Conductivity	Dissolved Oxygen	ORP	Turbidity	Comments
			1 2 3 Point List Standards	1 2 3 Point List Standards	Barometer Zero Check (Y/N)	Checked (Y/N) Reading______ Calibrated (Y/N)	Standard Used:	
			1 2 3 Point List Standards	1 2 3 Point List Standards	Barometer Zero Check (Y/N)	Checked (Y/N) Reading______ Calibrated (Y/N)	Standard Used:	
			1 2 3 Point List Standards	1 2 3 Point List Standards	Barometer Zero Check (Y/N)	Checked (Y/N) Reading______ Calibrated (Y/N)	Standard Used:	
			1 2 3 Point List Standards	1 2 3 Point List Standards	Barometer Zero Check (Y/N)	Checked (Y/N) Reading______ Calibrated (Y/N)	Standard Used:	
			1 2 3 Point List Standards	1 2 3 Point List Standards	Barometer Zero Check (Y/N)	Checked (Y/N) Reading______ Calibrated (Y/N)	Standard Used:	
			1 2 3 Point List Standards	1 2 3 Point List Standards	Barometer Zero Check (Y/N)	Checked (Y/N) Reading______ Calibrated (Y/N)	Standard Used:	
			1 2 3 Point List Standards	1 2 3 Point List Standards	Barometer Zero Check (Y/N)	Checked (Y/N) Reading______ Calibrated (Y/N)	Standard Used:	
			1 2 3 Point List Standards	1 2 3 Point List Standards	Barometer Zero Check (Y/N)	Checked (Y/N) Reading______ Calibrated (Y/N)	Standard Used:	
			1 2 3 Point List Standards	1 2 3 Point List Standards	Barometer Zero Check (Y/N)	Checked (Y/N) Reading______ Calibrated (Y/N)	Standard Used:	

APPENDIX B
PROPOSED PASSIVE SOIL VBAPOR SAMPLE ANALYTE LIST

A4 Gore Standard VOCs/SVOCs (A1) plus Additional PAHs

- Methyl t-butyl ether
- trans-1,2-Dichloroethene
- 1,1-Dichloroethane
- cis-1,2-Dichloroethene
- Chloroform
- 1,1,1-Trichloroethane
- Benzene
- Carbon tetrachloride
- 1,2-Dichloroethane
- Trichloroethene
- Toluene
- Octane
- Tetrachloroethene
- Chlorobenzene
- Ethylbenzene
- m,p-Xylene
- o-Xylene
- 1,3,5-Trimethylbenzene
- 1,2,4-Trimethylbenzene
- 1,4-Dichlorobenzene
- Undecane
- Naphthalene
- Tridecane
- 2-Methyl naphthalene
- Pentadecane
- Acenaphthylene
- Acenaphthene
- Fluorene
- Phenanthrene
- Anthracene
- Fluoranthene
- Pyrene