Ms. Greta White, P.G.
Assistant Geologist
New York State Department of Environmental Conservation
625 Broadway
Albany, NY 12233-7017

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Date: March 23, 2022
Our Ref: 30084582
Subject: National Grid
North Albany Former MGP
NYSDEC Site No. 401040
Proposed Focused Investigation for Building 2-4 Alterations

Dear Ms. White,

On behalf of National Grid, this letter presents a work plan for a focused investigation to evaluate conditions within the footprint of proposed alterations (upgrades) to Building 2-4 at the National Grid North Albany Service Center (see Figure 1 for site location). Building 2-4 is located south of the former manufactured gas plant (MGP), but within the boundaries of New York State Department of Environmental Conservation (NYSDEC) Site No. 401040 (see Figure 2). The proposed Building 2-4 alterations include a new roof, siding, and insulation on the building, new concrete aprons inside and outside the building, new natural gas service connecting to the building, and new stormwater drainage piping around the building. The proposed insulation to be installed around the building foundation wall, the new gas service (main) connecting to the building, and the new storm sewer piping to be installed around the building require the removal of existing concrete/asphalt immediately outside the building and soil excavation (trenching) to depths between approximately 2 and 5 feet below ground surface (bgs). Limited soil characterization data are available for this portion of the Site.

The proposed focused investigation described herein includes characterizing soil, concrete, and asphalt within the construction limits for disposal purposes. Findings from the investigation will be used to assess environmental requirements, including material handling and air monitoring for National Grid's contractors that will be performing the alterations.

Relevant background information, including an overview of the proposed alterations and findings from previous investigation nearby, is presented below, followed by details of the proposed focused investigation, reporting, and schedule.

I. BACKGROUND INFORMATION

A site plan prepared by Nelson Associates Architectural Engineering showing Building 2-4 and the approximate removal limits for the proposed alterations is provided in Attachment 1. Details of the ground-intrusive work planned for the Building 2-4 alterations are provided below:

- ***Concrete Removal:*** Concrete will be removed from three areas, including: (1) two approximately 12-foot long by 10-foot wide aprons on the north side of Building 2-4 for installation of new storm sewer piping and foundation insulation; (2) an approximately 20-foot long by 5-foot wide area inside the north wall of Building 2-4 to replace cracked/deteriorated concrete; and (3) an approximately 40-foot long by 3-foot wide area along

the east side of Building 2-4 for installation of foundation installation. Assuming the concrete is 12-inches thick, approximately 13 cubic yards (CY) of concrete debris will be generated by the concrete removal.

- ***Asphalt Removal:*** Asphalt pavement and underlying subbase soil will be removed from three areas along the north side of Building 2-4 for installation of the new storm sewer piping and foundation insulation. Each removal area is 10 feet wide, the total length of the removal is 96 feet, and the removal depth is 1.5 feet, for a total of 53 CY of asphalt/soil.
- ***Soil Excavation:*** Trenches will be excavated around Building 2-4 for the installation of new natural gas service to the building, new storm sewer piping to convey storm water runoff from the building roof and ground surface away from the building, and insulation around the subgrade building foundation, as described below:
  - *Natural Gas Main:* Approximately 225 lineal feet (LF) of trench will be excavated for a new low-pressure gas main that will extend from an existing gas main that is located along the east edge of the railroad tracks (i.e., the tie-in will be directly west of the southwest corner of Building 2-3) and extend to the southwest corner of Building 2-4. Assuming the trench is 3 feet wide and 2 feet deep, the trench excavation will generate approximately 50 CY of spoils.
  - *Storm Sewer Pipe:* Approximately 300 LF of trench will be excavated for new storm sewer pipe to convey roof drainage to an existing manhole northwest of Building 2-4. The new storm sewer pipe will extend around the northern, southern, and western sides of Building 2-4. Assuming the trench is 3 feet wide and an average of 5 feet deep, the trench excavation will generate approximately 167 CY of spoils.
  - *Foundation Insulation:* The design drawings show installation of subsurface insulation around all four sides of Building 2-4. The base of the insulation is shown at a depth of 2 feet bgs. The northern, southern, and western foundation walls will be exposed by the excavation for the proposed new storm sewer pipe. The eastern foundation wall will be exposed by a trench that is assumed to be 2 feet wide, 2 feet deep, and 40 feet long, resulting in the generation of approximately 6 CY of excavation spoils (1.5 CY of concrete and 4.5 CY of soil).

Based on the estimates above, the Building 2-4 alterations are anticipated to generate approximately 15 CY of concrete debris and 275 CY of excavation spoils (asphalt and soil) that will need to be properly managed. The excavated soil may be reused as subsurface fill (for trenches that are within areas covered by crushed stone, depending on visual characterization and laboratory analytical data) and/or transported for offsite disposal (for trenches that are within areas to be covered by concrete or asphalt pavement where engineered/structural fill is required).

Based on review of historical site investigation reports and data, soil within the footprint of the proposed construction has not previously been characterized. Previous sampling locations closest to the proposed construction area include soil borings SB-116 and SB-118 and monitoring well MW-10, which are shown on Feasibility Study Report Figure 1-16 (included in Attachment 2). As indicated on the figure and soil boring logs (see Attachment 3), no coal tar dense non-aqueous phase liquid (DNAPL) was encountered in the soil samples recovered from the two soil borings. A slight sheen was identified in both borings but well below the planned excavation depth (greater than 12 feet bgs). Possible DNAPL stringers were identified in the boring drilled at MW-10 from 12 to 14 feet bgs and 16 to 18 feet bgs, but these depths are also well below the planned excavation depth. The concentrations of benzene, toluene, ethylbenzene, and xylenes (BTEX) and polycyclic aromatic hydrocarbons (PAHs) detected in soil samples collected from the borings drilled at locations SB-116, SB-118, and

MW-10 are well-below the 10 part per million (ppm) and 500 ppm soil cleanup objectives (SCOs), respectively, presented in the NYSDEC Record of Decision for the Site, dated March 2016, with one minor exception. Total BTEX was identified in the soil sample collected from MW-10 (14-16') at a concentration of 17.6 ppm, slightly exceeding the SCO. The BTEX and total PAH analytical results for the soil samples collected from these borings are summarized in the table below:

Soil Boring ID	Sample Depth (feet bgs)	Concentration (ppm)	
		BTEX	Total PAHs
SB-116	12-14	0.22 J	1.23J
SB-118	14-16	ND	1.79 J
	26-28	0.01 J	0.26 J
MW-10	2-4	ND [0.03]	0.68 [1.25]
	6-8	0.04	6.8
	10-12	0.93	313
	14-16	17.6	18.5
	20-22	0.06	1.98

Notes:
1. ND = not detected at concentration exceeding laboratory detection limits
2. Duplicate results are presented in brackets.

Although the potential for encountering NAPL-impacted soil within the proposed excavation limits for the proposed Building 2-4 alterations is low, further investigation will be performed as described below to assess the potential presence and extent of impacts in the immediate construction area and provide data to evaluate material handling/treatment/disposal requirements for the soil, concrete, and asphalt materials to be generated during construction.

II. PROPOSED FOCUSED INVESTIGATION

Dig-Safely New York will be contacted by National Grid's drilling subcontractor, NRC Environmental Services, Inc. of Albany, New York (NRC), a minimum of three days before the start of the proposed focused investigation. NRC and Arcadis are scheduled to be onsite on March 29, 2022 to complete the investigation as described below.

- ***Concrete Sampling:*** Pulverized concrete samples will be collected to a depth of 3-inches below the concrete slab surface and through the full-depth of the concrete slab (or limit of the hammer drill) at each of the four locations described below and shown on the figure in Attachment 1.

Concrete Core ID	Coring Location	Discrete Sample (0- to 3-inches)	Composite Sample (full depth of concrete)
B2-4 CONC-1	Concrete pad north of building, approximately 45 feet east of west wall	X	X
B2-4 CONC-2	Concrete pad north of building, approximately 85 feet east of west wall	X	
B2-4 CONC-3	Interior cracked/deteriorated concrete pad	X	X
B2-4 CONC-4	Concrete apron adjacent to the eastern side of building	X	

The four discrete concrete samples will be submitted to Eurofins TestAmerica of Buffalo, New York (TestAmerica) for laboratory analysis for polychlorinated biphenyls (PCBs) using United States Environmental Protection Agency (USEPA) SW-846 Method 8082. The four full-depth pulverized concrete samples will be composited into two samples (using the compositing strategy in the table above) and submitted to TestAmerica for laboratory analysis for the following:

- Toxicity characteristic leaching procedure (TCLP) volatile organic compounds (VOCs) using USEPA SW-846 Methods 1311 and 8260
- TCLP semi-volatile organic compounds (SVOCs) using USEPA SW-846 Methods 1311 and 8270
- TCLP metals using USEPA SW-846 Methods 1311, 6010, and 7470/7471
- Ignitability using USEPA SW-846 Method 1010A
- Reactive cyanide using USEPA SW-846 Method 9012
- Reactive sulfide using USEPA SW-846 Method 9030A
- Asbestos using New York Environmental Laboratory Approval Program (ELAP) Method 198.1 (polarized light microscopy)

- ***Asphalt Pavement Sampling:*** Asphalt samples will be collected to a depth of 3-inches below the asphalt pavement surface (chisel or hammer drill) at each of the three locations described below and shown on the figure in Attachment 1.

Concrete Core ID	Coring Location	Discrete Sample (0- to 3-inches)
B2-4 PVMT-1	Asphalt pavement north of building, approximately 25 feet east of west wall	X
B2-4 PVMT-2	Asphalt pavement north of building, approximately 70 feet east of west wall	X
B2-4 PVMT-3	Asphalt pavement north of building, approximately 110 feet east of west wall	X

The three discrete asphalt samples will be submitted to TestAmerica for laboratory analysis for PCBs using USEPA SW-846 Method 8082. A portion of the asphalt collected from each of the three locations (equal parts from each location) will be composited into one sample and submitted to TestAmerica for laboratory analysis for TCLP VOCs, TCLP SVOCs, TCLP metals, ignitability, and reactivity using the methods identified above.

- ***Soil Sampling:*** Soil borings will be completed via vacuum excavation techniques at the 11 locations identified below and shown on the figure in Attachment 1. Vacuum excavation is proposed in lieu of direct-push drilling given the shallow depth of the borings (5 feet or less) and potential to encounter unmarked utilities/debris.

Boring ID	Boring Location	Boring Depth (feet bgs)
SB-301, SB-302	Proposed natural gas main alignment. SB-303 (listed below) is also within the proposed natural gas main alignment but will be installed deeper as it overlaps the proposed storm sewer alignment.	2
SB-303 through SB-306	Proposed storm sewer alignment and foundation installation area (SB-303 through SB-306)	5
SB-307	Proposed foundation insulation installation	2
SB-308	Proposed interior concrete pad replacement	2
SB-309 through SB-311	Proposed asphalt pavement/subbase removal and replacement	1.5

Concrete and asphalt pavement will be saw-cut and removed (1-foot squares) at proposed soil boring locations (as necessary) or borings will be offset to the edge of the concrete pads to facilitate the soil boring work. Soil samples will be collected from each boring at approximately one-foot depth intervals for visual characterization to assess the potential presence of MGP impacts. One discrete grab sample from each boring will be submitted for laboratory analysis for PCBs using USEPA SW-846 Method 8082A. In addition, a total of six grab samples from the eight borings (e.g., one sample each from borings SB-301, SB-303, SB-304, SB-306, SB-307, and SB-309 unless there are visual impacts that need to be characterized at other boring locations) will be submitted to TestAmerica for laboratory analysis for the waste characterization parameters (besides PCBs) required for offsite thermal treatment/disposal at the ESMI facility in Fort Edward, New York, including:

- Target Compound List (TCL) VOCs using USEPA SW-846 Method 8260C
- TCL SVOCs using USEPA SW-846 Method 8270D
- Inorganic constituents (arsenic, barium, cadmium, chromium, mercury, lead, selenium, silver) using USEPA SW-846 Methods 6010C/7471B
- Total cyanide using USEPA SW-846 Method 9012B
- Percent sulfur using method American Society for Testing and Materials (ASTM) D4239
- British thermal units using method ASTM D240-87
- Total petroleum hydrocarbons (TPH) diesel range organics (DRO) using USEPA SW-846 Method 8015D
- TPH gasoline range organics (GRO) using USEPA SW-846 Method 8015D

The soil samples designated for analysis will be biased toward locations and intervals exhibiting the greatest impact (if any). In the absence of obvious impacts, the soil samples will be collected from the first 0.5-foot interval below the surface cover (gravel, concrete, asphalt). Up to two additional samples will be collected, if needed, to further characterize impacted materials.

Arcadis will take photographs and prepare boring logs to document the soil recovered at each sampling location and the presence or absence of coal tar DNAPL or obvious odors. The borings will be backfilled using material removed from the borings, assuming it contains no DNAPL and does not exhibit an obvious odor. If coal tar DNAPL or obvious odors were to be encountered, the soil removed from the boring will be

placed in 55-gallon drums for offsite transportation and disposal. In that case, the boring would be restored with commercially available clean gravel. We have assumed that groundwater will not be encountered in the vacuum borings. For borings that are within concrete paved areas, the concrete surface will be restored using gravel to match the surrounding grade (to limit a potential trip hazard until the entire slabs are removed shortly after sample results are received and a summary report is sent to the NYSDEC).

Community air monitoring will be performed during the outdoor drilling/sampling in accordance with the New York State Department of Health (NYSDOH) Generic Community Air Monitoring Plan (CAMP) included in Appendix 1A to the NYSDEC's Program Policy Document titled, DER-10 / Technical Guidance for Site Investigation and Remediation, dated May 3, 2010. This will involve monitoring for VOC vapors and particulates at one upwind and one downwind monitoring station. The air monitoring stations will be adjusted in the morning and afternoon, as needed, based on changes in prevailing wind direction. The monitoring equipment will calculate 15-minute running average concentrations, which will be compared to the action levels specified in the CAMP.

III. INVESTIGATION REPORT

Arcadis will prepare a letter report to the NYSDEC summarizing the fieldwork, findings, and proposed environmental requirements for the Building 2-4 alterations construction work. The letter will address the following aspects of the planned construction: health and safety, dust/vapor/emissions controls, community air monitoring, excavation/material handling, water management, imported fill, demarcation, and decontamination, similar to what was provided in the September 27, 2019 and October 23, 2020 letter reports to the NYSDEC summarizing the investigation work performed in support of the Versaire building drainage improvements and guard station relocation. The letter report will be supported by the following:

- Data tables presenting the analytical results compared to commercial- and industrial-use SCOs presented in Title 6 of the New York Codes, Rules and Regulations (6 NYCRR) Part 375-6.8(b), ESMI acceptance criteria, and 6 NYCRR Part 371 TCLP criteria, as applicable.
- Figures showing the site location, site layout, Building 2-4 location with proposed new utilities (natural gas, storm sewer) and new concrete pads/asphalt pavement around the building, the concrete/soil sampling locations within the proposed Building 2-4 alterations construction limits, and analytical results for constituents exceeding SCOs.
- Soil boring logs.
- Laboratory analytical data reports (electronic attachment only).

Because the analytical data are intended primarily for waste characterization purposes, data validation is not proposed.

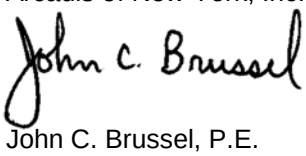
IV. SCHEDULE

The focused investigation work is scheduled to begin on March 29, 2022 and anticipated to take one to two days to complete. The schedule for the fieldwork is subject to change based on weather conditions (e.g., heavy rain) or unexpected field conditions during the vacuum excavation/sampling. Laboratory analysis of the proposed soil, concrete, and asphalt samples will be performed on a standard turnaround with results available approximately three weeks following sampling (late April 2022). We anticipate sending the investigation summary letter report to the NYSDEC within approximately four to five weeks following receipt of laboratory analytical results (by end of May 2022).

We await any NYSDEC comments or approval of the work plan presented above. Let us know if you would like to visit the site during the investigation, and we can arrange to meet you there. Please note that standard personal protective equipment (hard hat, safety glasses, reflective vest, and steel-toe boots) will be required for this work.

Please do not hesitate to contact Matt Root (National Grid Environmental Compliance at 518.227.7508), Garry Cummins (National Grid Site Investigation and Remediation at 315.440.5825), or the undersigned at 315.671.9441 if you have any questions or need additional information.

Sincerely,
Arcadis of New York, Inc.



John C. Brussel, P.E.
Principal Engineer/Certified Project Manager

Email: John.Brussel@arcadis.com
Direct Line: 315.671.9441

CC:
Matthew Root, National Grid
Brian Key, National Grid
Gerald P. Cummins, National Grid
Mark W. Lawlor, Nelson Associates Architectural Engineering
Matthew S. Hysell, P.E., Arcadis of New York, Inc.

Enclosures:

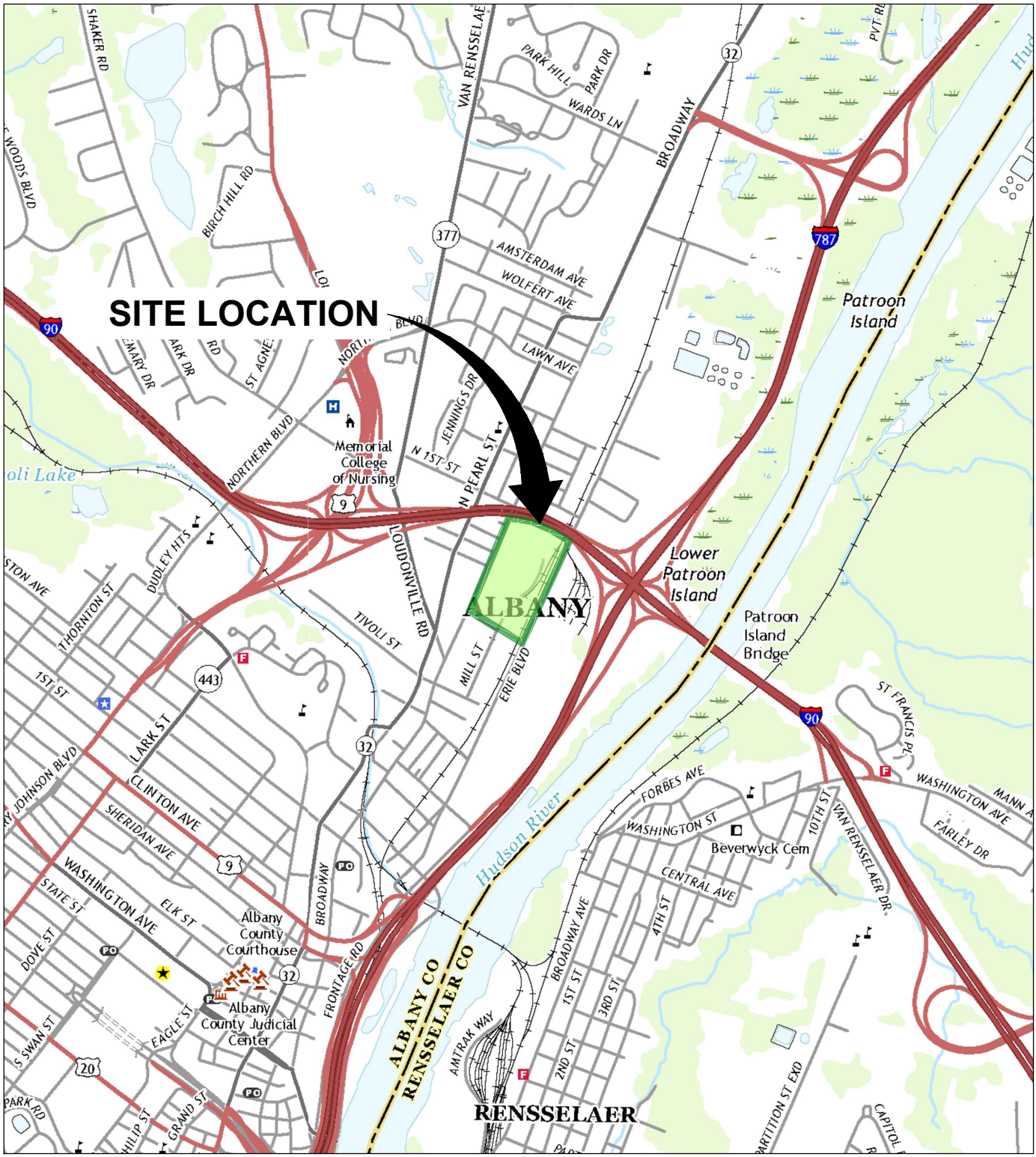
Figures

1 Site Location Map
2 Site Layout and Proposed Soil Investigation Area

Attachments

1 Building 2-4 Alterations Design Drawing and Proposed Investigation Locations
2 Total BTEX/PAHs in Soil
3 Soil Boring Logs

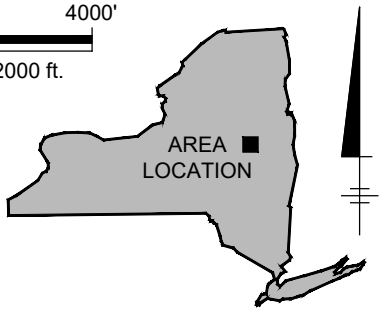
FIGURES



REFERENCE: BASE MAP USGS 7.5. MIN. TOPO. QUAD., ALBANY & TROY SOUTH, NY, 2019.

0 2000' 4000'

Approximate Scale: 1 in. = 2000 ft.



NATIONAL GRID
NORTH ALBANY FORMER MGP SITE
ALBANY, NEW YORK

SITE LOCATION MAP

ARCADIS Design & Consultancy for natural and built assets

FIGURE 1

CITY: SYRACUSE NY DIV/GROUP: ENVCAD DB: E. KRAHMER PIC: PM: TM: TR: LYR:(Opt)ON=*;OFF=*REF*
C:\Users\EKrahmer\BIM 360\Arcadis\ANA - National Grid\Project Files\NORTH ALBANY MGP SITE\2020\300314431\01-DWG\N_ALB_MGP_Fig 01_SLM.dwg LAYOUT: 1 SAVED: 7/8/2020 1:45 PM ACADVER: 23.1S (LMS TECH) PAGESETUP: ---- PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 7/8/2020 1:48 PM BY: KRAHMER, ERIC
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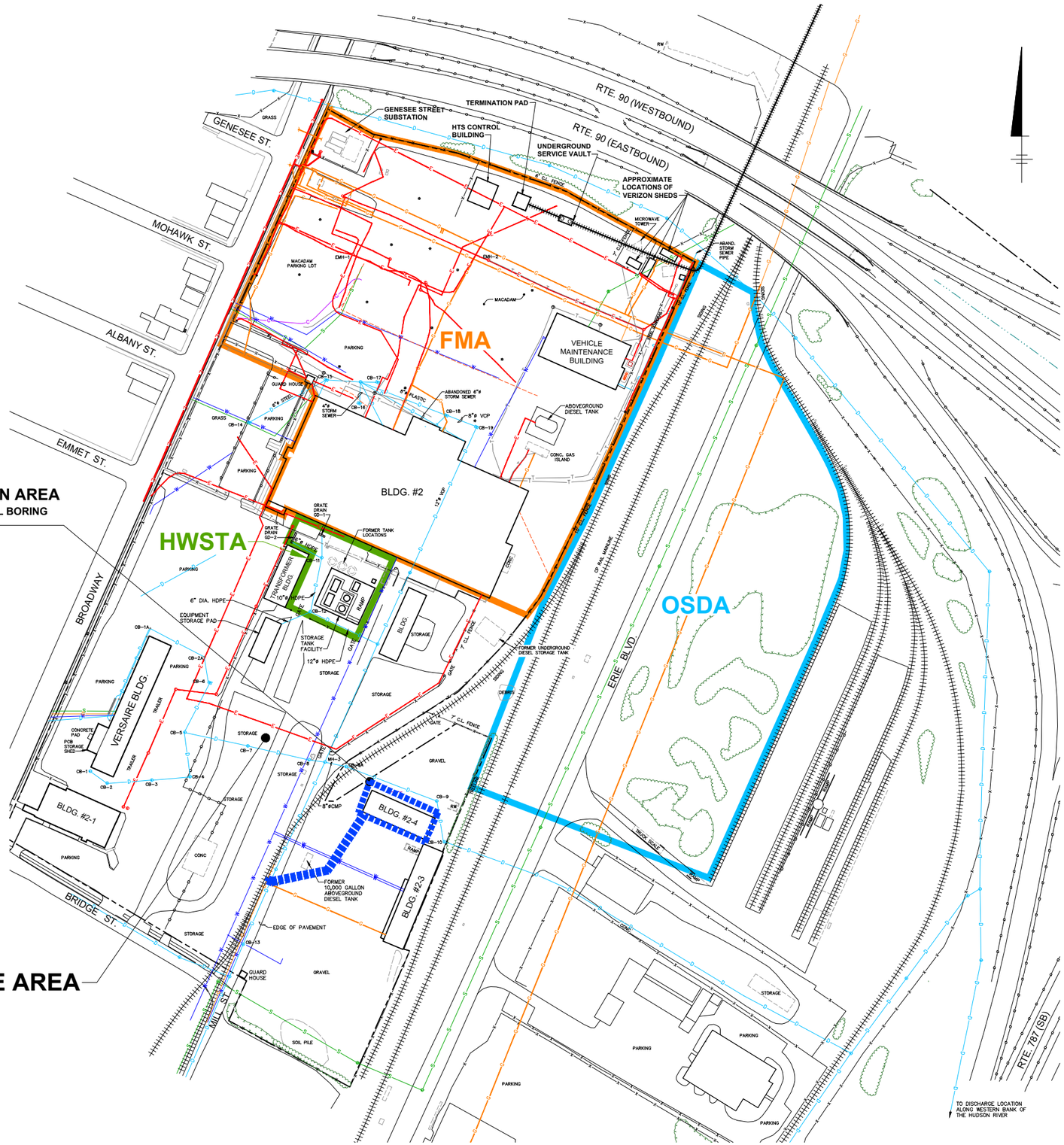


PROPOSED SOIL INVESTIGATION AREA
(REFER TO ATTACHMENT 1 FOR PROPOSED SOIL BORING LOCATIONS OVERLAID ON DESIGN DRAWING)

YARD STORAGE AREA

LEGEND:

- APPROXIMATE LOCATION OF HIGH TEMPERATURE SUPERCONDUCTIVE CABLE
- GUARD RAIL
- FENCE
- EXISTING RAILROAD
- APPROXIMATE PROPERTY LINE
- UTILITY POLE
- EXISTING CATCH BASIN
- EXISTING STORM SEWER MANHOLE
- EXISTING SANITARY MANHOLE
- EXISTING ELECTRICAL MANHOLE
- EXISTING TELEPHONE MANHOLE
- EXISTING UNKNOWN UTILITY MANHOLE
- STORM SEWER
- SANITARY SEWER
- TELEPHONE LINE
- ELECTRICAL LINE
- GAS LINE
- WATER LINE
- CABLE LINE
- UNKNOWN UTILITY
- FORMER MGP AREA
- OFF-SITE DOWNGRADIENT AREA
- HAZARDOUS WASTE STORAGE TANK AREA
- APPROXIMATE MATERIAL STAGING AREA
- PROPOSED SOIL INVESTIGATION AREA

NOTES:

1. BASE MAP (INCLUDING BUILDING LOCATIONS) DEVELOPED FROM ELECTRONIC FILE OF NIAGARA MOHAWK POWER CORPORATION (NMPC) DRAWING NO. C-29736-C, DATED JULY 1994, ENTITLED NORTH ALBANY SERVICE CENTER HAZARDOUS WASTE MANAGEMENT PERMIT APPLICATION, TOPOGRAPHIC MAP – INDEX SHEET.
2. LOCATIONS OF UNDERGROUND UTILITIES (INCLUDING ON-SITE STORM SEWERS, SANITARY SEWERS, TELEPHONE LINES, ELECTRICAL LINES, GAS LINES, WATER LINES, AND CABLE) WERE DIGITIZED FROM NMPC DRAWING NO. D-29734-E, FILE INDEX NO. 20.3-A1.1-B2, DATED JUNE 27, 1994, ENTITLED NORTH ALBANY SERVICE CENTER SITE PLAN – PAVING (OUTSIDE FENCE). LOCATION OF UNDERGROUND TELEPHONE LINES, ELECTRICAL LINES, GAS LINES, AND CABLE LINES WERE UPDATED BASED ON ELECTROMAGNETIC UTILITY SURVEY CONDUCTED BY UNDERGROUND SERVICES, INC. DURING OCTOBER 2012. ACTUAL LOCATIONS OF UNDERGROUND UTILITIES MUST BE DETERMINED/CONFIRMED PRIOR TO IMPLEMENTING SUBSURFACE WORK ACTIVITIES.
3. LOCATIONS OF MANHOLES AND CATCH BASINS WERE OBTAINED FROM SURVEYS CONDUCTED BY NMPC DURING JULY/AUGUST 1997 AND NATIONAL GRID DURING OCTOBER 2012.
4. LOCATIONS OF OFF-SITE STORM AND SANITARY SEWERS WERE DIGITIZED FROM CITY OF ALBANY DRAWINGS AND ARE APPROXIMATE.
5. FMA = FORMER MANUFACTURED GAS (MGP) PLANT AREA.
6. OSDA = OFF-SITE DOWNGRADIENT AREA.
7. HWSTA = HAZARDOUS WASTE STORAGE TANK AREA.

0 100' 200'
GRAPHIC SCALE

NATIONAL GRID
NORTH ALBANY FORMER MGP SITE
ALBANY, NEW YORK
BUILDING 2-4 ALTERATIONS

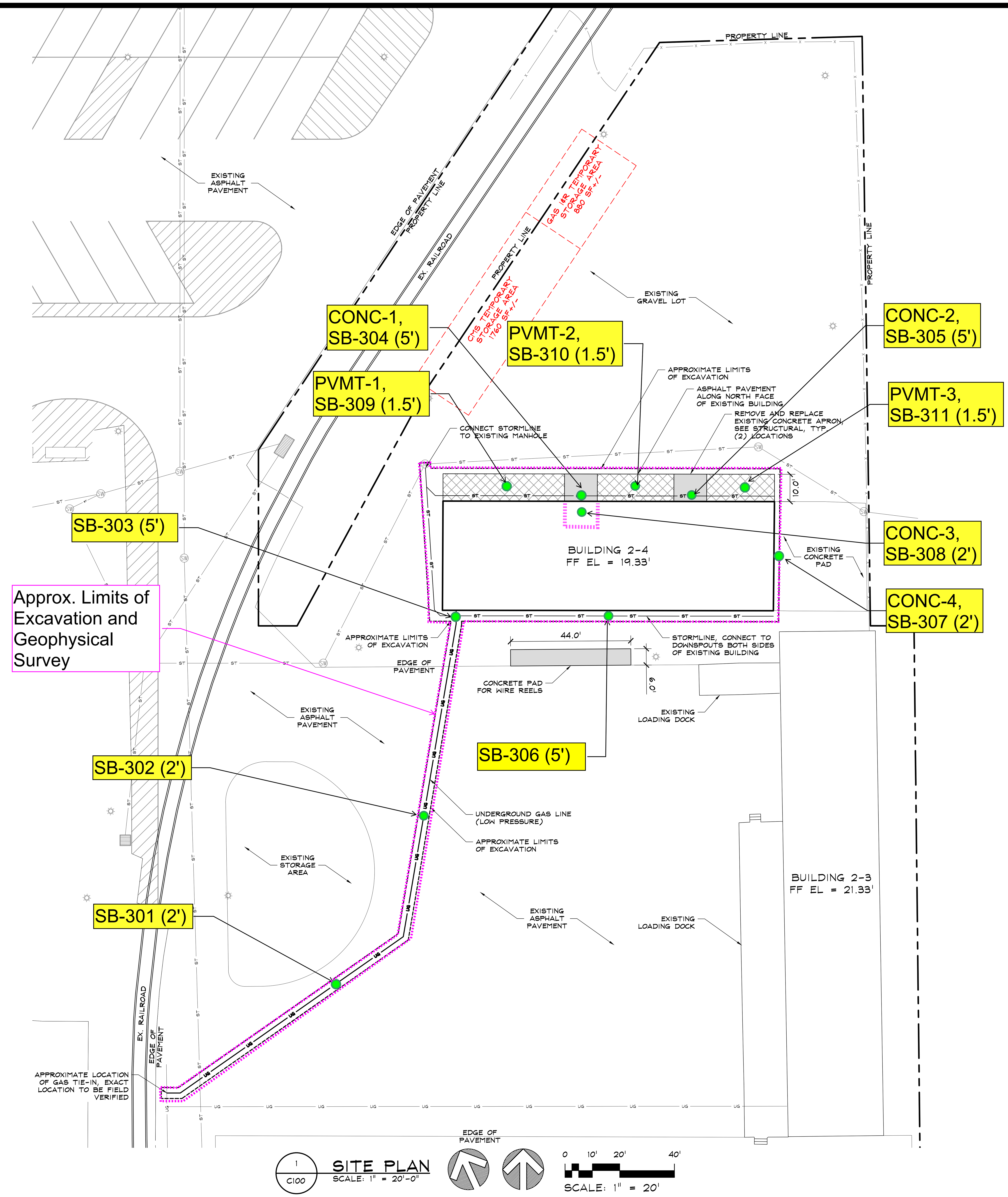
SITE LAYOUT AND PROPOSED SOIL INVESTIGATION AREA

ARCADIS

FIGURE
2

ATTACHMENT 1

Building 2-4 Alterations Design Drawing and Proposed Investigation Locations



LEGEND

NEW	EXISTING	
		LIGHT POLE(S)
		CATCH BASIN
		DRAINAGE (STORMWATER) MANHOLE
—x—x—	—x—x—	FENCE LINE
—ST—	—ST—	STORM SEWER
—UE—	—UE—	UNDERGROUND ELECTRIC
—W—	—W—	WATER
—UG—	—UG—	UNDERGROUND GAS
		PARKING STRIPING
—448—		GRADING CONTOURS
		CONCRETE SLAB ON GRADE
		ASPHALT PAVEMENT

GENERAL NOTES

1. DESIGNED IN ACCORDANCE WITH THE 2020 BUILDING CODE OF NEW YORK STATE.
2. DIMENSIONS AND EXISTING CONDITIONS SHALL BE VERIFIED IN FIELD BY CONTRACTOR.
3. DO NOT SCALE DRAWINGS. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES IN DIMENSIONS BETWEEN EXISTING CONDITIONS AND/OR ARCHITECTURAL DRAWINGS AND THE STRUCTURAL DRAWINGS.
4. DO NOT CHANGE SIZE OR SPACING OF STRUCTURAL ELEMENTS.
5. DETAILS SHOWN ARE TYPICAL; SIMILAR DETAILS APPLY TO SIMILAR CONDITIONS UNLESS OTHERWISE INDICATED.
6. THE NOTES ON THIS DRAWING ARE TYPICAL UNLESS OTHERWISE INDICATED.
7. CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING OF PURPOSED DEVIATIONS OR SUBSTITUTIONS FROM DIMENSIONS, MATERIALS, OR EQUIPMENT SHOWN ON THE DRAWINGS AND MAKE ONLY THOSE DEVIATIONS OR SUBSTITUTIONS ACCEPTED BY ENGINEER.
8. CONTRACTOR SHALL DETERMINE EXACT LOCATION OF EXISTING UTILITIES BEFORE COMMENCING WORK. CONTRACTOR AGREES TO BE FULLY RESPONSIBLE FOR DAMAGES WHICH MIGHT BE OCCASIONED BY FAILURE TO EXACTLY LOCATE AND PRESERVE EXISTING UTILITIES.
9. COORDINATE NUMBER AND LOCATION OF ROOF OPENINGS WITH ARCHITECTURAL AND MECHANICAL DRAWINGS.
10. THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CONSTRUCTION SAFETY AND FOR COMPLIANCE WITH ALL OSHA REGULATIONS DURING CONSTRUCTION.
11. SEE ARCHITECTURAL SHEETS FOR ELEVATION CHANGE BETWEEN FINISHED FLOOR OF EXIST. BUILDING AND FINISHED GRADE ON THE EXTERIOR OF THE BUILDING. ALWAYS SLOPE FINISHED GRADE AWAY FROM BUILDING TO CREATE POSITIVE DRAINAGE.
12. ALL SITE WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE NEW YORK STATE STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL (NYS SSESC).
13. ALL CONSTRUCTION WORK SHALL BE EXECUTED IN A CAREFUL AND ORDERLY MANNER WITH THE LEAST POSSIBLE NOISE, DUST, AND DISTURBANCE.

KEYED NOTES

1. REFER TO DETAIL 5/C500 WHERE NEW ASPHALT PAVEMENT IS ABUTTING A STRUCTURE.
2. REFER TO DETAIL 3/C500 WHERE NEW ASPHALT PAVEMENT IS ABUTTING CONCRETE SLABS.
3. REFER TO DETAIL 6/C500 FOR THE TRANSITION BETWEEN NEW FULL DEPTH PAVEMENT TO GRAVEL LOT. PROVIDE GRAVEL FILL AS NEEDED AT NEW PAVEMENT EDGE TO FACILITATE SMOOTH TRANSITION AND TO AVOID STANDING WATER.
4. REFER TO DETAIL 4/C500 FOR TYPICAL UTILITY TRENCHING WHERE NEW BELOW GRADE UTILITIES ARE TO BE INSTALLED.
5. PROVIDE NEW SANITARY MANHOLE FOR NEW SANITARY PIPING. REFER TO DETAIL 1/C501 FOR TYPICAL SANITARY MANHOLES.
6. REFER TO PLUMBING DRAWINGS FOR CONTINUATION INSIDE BUILDING.
7. REFER TO MECHANICAL DRAWINGS FOR CONTINUATION OF GAS.
8. REFER TO STRUCTURAL DRAWINGS FOR COORDINATION WITH CONCRETE APRON AND BOLLARDS.
9. PROVIDE RIGID INSULATION BOARD ABOVE NEW SANITARY LINE WHEN UNABLE TO ACHIEVE A MINIMUM OF 3' OF COVER. REFER TO DETAIL 7/C500 FOR INSULATED UTILITY TRENCHING DETAIL.
10. REFER TO ELECTRICAL DRAWINGS FOR CONTINUATION INSIDE BUILDING.
11. REFER TO DETAIL 11/C500 FOR TYPICAL UTILITY CROSSING DETAIL.
12. INSTALL NEW 8x8x4 TEE ON TO EXISTING 8" PRIVATE FIRE LOOP TO BRING NEW 4" FIRE WATER LINE TO BUILDING.
13. PROVIDE AND INSTALL REQUIRED THRUST BLOCKS. REFER TO DETAIL 2/C501.

NELSON ASSOCIATES
ARCHITECTURAL ENGINEERING
1 North Park Row • Clinton, NY 13323-1536

PROJECT TITLE
N. ALBANY SERVICE CENTER
BUILDING 2-4 ALTERATIONS
1125 BROADWAY
MENANDS, NEW YORK 12204

nationalgrid

PROJECT NO. 20-2056

REVISION	DATE	BY

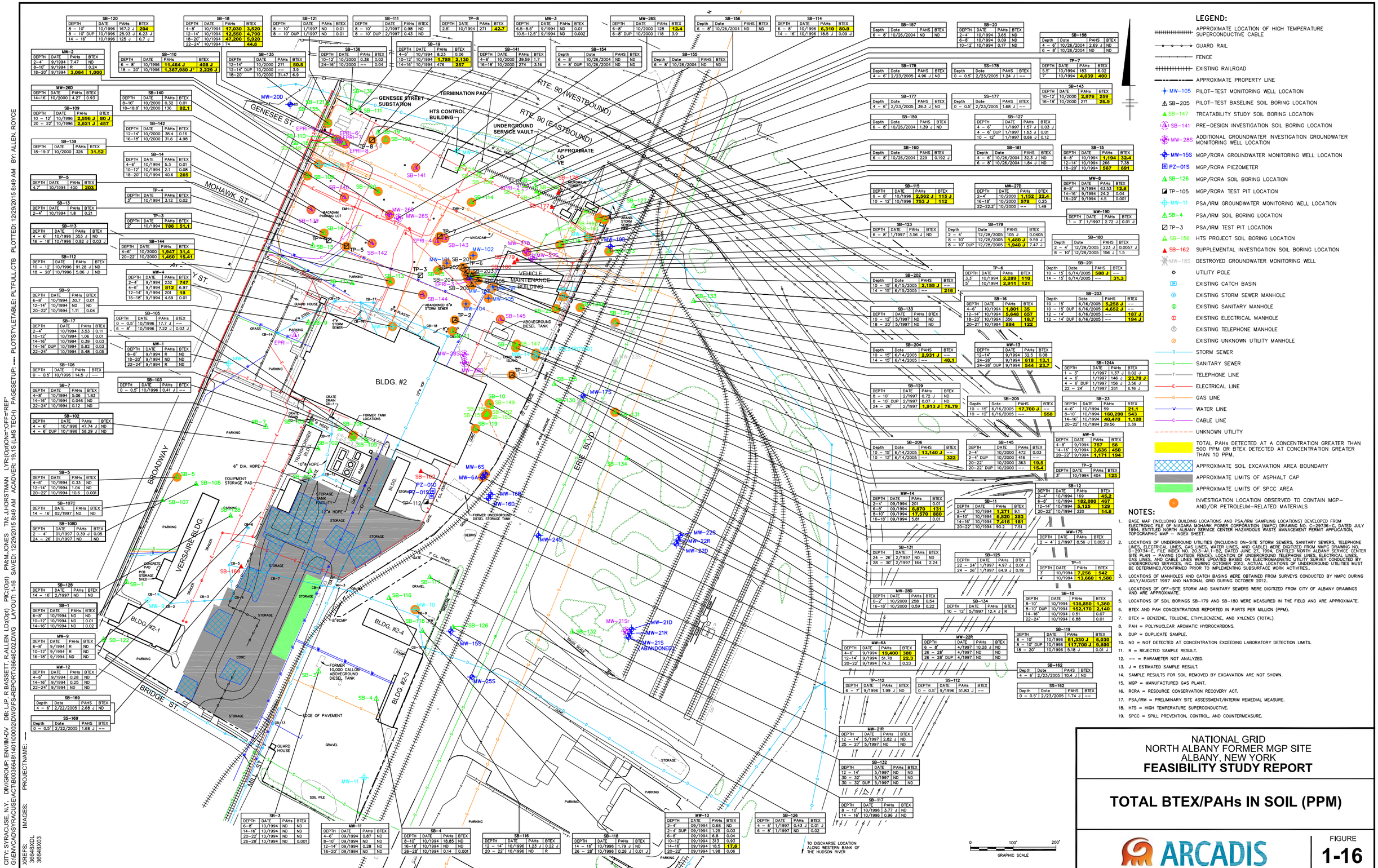
DATE	3/3/21
DRAWN BY	MSB
CHECKED BY	DRK
APPROVED BY	PNN
SCALE	AS NOTED

SHEET TITLE
SITE PLAN

SHEET NO.
C100

ATTACHMENT 2

Total BTEX/PAHs in Soil



LEGEND:

- APPROXIMATE LOCATION OF HIGH TEMPERATURE SUPERCONDUCTIVE CABLE
- GUARD RAIL
- FENCE
- EXISTING RAILROAD
- APPROXIMATE PROPERTY LINE
- MW-105 PILOT-TEST MONITORING WELL LOCATION
- SB-205 PILOT-TEST BASELINE SOIL BORING LOCATION
- SB-147 TREATABILITY STUDY SOIL BORING LOCATION
- SB-141 PRE-DESIGN INVESTIGATION SOIL BORING LOCATION
- MW-28S ADDITIONAL GROUNDWATER INVESTIGATION GROUNDWATER MONITORING WELL LOCATION
- MW-15S MGP/RCRA GROUNDWATER MONITORING WELL LOCATION
- PZ-01S MGP/RCRA PIEZOMETER
- SB-126 MGP/RCRA SOIL BORING LOCATION
- TP-105 MGP/RCRA TEST PIT LOCATION
- MW-11 PSA/IRM GROUNDWATER MONITORING WELL LOCATION
- SB-4 PSA/IRM SOIL BORING LOCATION
- TP-3 PSA/IRM TEST PIT LOCATION
- SB-156 HTS PROJECT SOIL BORING LOCATION
- SB-162 SUPPLEMENTAL INVESTIGATION SOIL BORING LOCATION
- MW-18S DESTROYED GROUNDWATER MONITORING WELL
- UTILITY POLE
- EXISTING CATCH BASIN
- EXISTING STORM SEWER MANHOLE
- EXISTING SANITARY MANHOLE
- EXISTING ELECTRICAL MANHOLE
- EXISTING TELEPHONE MANHOLE
- EXISTING UNKNOWN UTILITY MANHOLE
- STORM SEWER
- SANITARY SEWER
- TELEPHONE LINE
- ELECTRICAL LINE
- GAS LINE
- WATER LINE
- CABLE LINE
- UNKNOWN UTILITY
- TOTAL PAHs DETECTED AT A CONCENTRATION GREATER THAN 500 PPM OR BTEX DETECTED AT CONCENTRATION GREATER THAN 10 PPM.
- APPROXIMATE SOIL EXCAVATION AREA BOUNDARY
- APPROXIMATE LIMITS OF ASPHALT CAP
- APPROXIMATE LIMITS OF SPCC AREA
- INVESTIGATION LOCATION OBSERVED TO CONTAIN MGP- AND/OR PETROLEUM-RELATED MATERIALS

NOTES:

1. BASE MAP (INCLUDING BUILDING LOCATIONS AND PSA/IRM SAMPLING LOCATIONS) DEVELOPED FROM ELECTRONIC FILE OF NIAGARA MOHAWK POWER CORPORATION (NMPC) DRAWING NO. C-29736-C, DATED JULY 1994, ENTITLED NORTH ALBANY SERVICE CENTER HAZARDOUS WASTE MANAGEMENT PERMIT APPLICATION, TOPOGRAPHIC MAP - INDEX SHEET.
2. LOCATIONS OF UNDERGROUND UTILITIES (INCLUDING ON-SITE STORM SEWERS, SANITARY SEWERS, TELEPHONE LINES, ELECTRICAL LINES, GAS LINES, WATER LINES, AND CABLE) WERE DIGITIZED FROM NMPC DRAWING NO. D-29734-E, FILE INDEX NO. 20.3-A11-B2, DATED JUNE 27, 1994, ENTITLED NORTH ALBANY SERVICE CENTER SITE PLAN - PAVING (OUTSIDE FENCE). LOCATION OF UNDERGROUND TELEPHONE LINES, ELECTRICAL LINES, GAS LINES, AND CABLE LINES WERE UPDATED BASED ON ELECTROMAGNETIC UTILITY SURVEY CONDUCTED BY UNDERGROUND SERVICES, INC. DURING OCTOBER 2012. ACTUAL LOCATIONS OF UNDERGROUND UTILITIES MUST BE DETERMINED/CONFIRMED PRIOR TO IMPLEMENTING SUBSURFACE WORK ACTIVITIES.
3. LOCATIONS OF MANHOLES AND CATCH BASINS WERE OBTAINED FROM SURVEYS CONDUCTED BY NMPC DURING JULY/AUGUST 1997 AND NATIONAL GRID DURING OCTOBER 2012..
4. LOCATIONS OF OFF-SITE STORM AND SANITARY SEWERS WERE DIGITIZED FROM CITY OF ALBANY DRAWINGS AND ARE APPROXIMATE.
5. LOCATIONS OF SOIL BORINGS SB-179 AND SB-180 WERE MEASURED IN THE FIELD AND ARE APPROXIMATE.
6. BTEX AND PAH CONCENTRATIONS REPORTED IN PARTS PER MILLION (PPM).
7. BTEX = BENZENE, TOLUENE, ETHYLBENZENE, AND XYLENES (TOTAL).
8. PAH = POLYNUCLEAR AROMATIC HYDROCARBONS.
9. DUP = DUPLICATE SAMPLE.
10. ND = NOT DETECTED AT CONCENTRATION EXCEEDING LABORATORY DETECTION LIMITS.
11. R = REJECTED SAMPLE RESULT.
12. --- = PARAMETER NOT ANALYZED.
13. J = ESTIMATED SAMPLE RESULT.
14. SAMPLE RESULTS FOR SOIL REMOVED BY EXCAVATION ARE NOT SHOWN.
15. MGP = MANUFACTURED GAS PLANT.
16. RCRA = RESOURCE CONSERVATION RECOVERY ACT.
17. PSA/IRM = PRELIMINARY SITE ASSESSMENT/INTERIM REMEDIAL MEASURE.
18. HTS = HIGH TEMPERATURE SUPERCONDUCTIVE.
19. SPCC = SPILL PREVENTION, CONTROL, AND COUNTERMEASURE.

NATIONAL GRID
NORTH ALBANY FORMER MGP SITE
ALBANY, NEW YORK

FEASIBILITY STUDY REPORT

TOTAL BTEX/PAHs IN SOIL (PPM)

ARCADIS

FIGURE
1-16

CITY: SYRACUSE, N.Y. DIV/GROUP: ENV/IM-DV DB: LJP, R BASSETT, R.ALLEN LDs:(Opt) PICs:(Opt) PM:M.JONES TM: J.HORSTMAN LYR:(Opt)ON=*;OFF=*REF*
G:\ENVCAD\SYRACUSE\ACTIB00369481140100002\DWG\FS-REPORT\369480C02.DWG LAYOUT: 1-16 SAVED: 12/29/2015 8:49 AM ACADVER: 19.1S (LMS TECH) PAGESETUP: ---- PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 12/29/2015 8:49 AM BY: ALLEN, ROYCE
XREFS: 369480XDL 369480X03 IMAGES: PROJECTNAME: ---

ATTACHMENT 3

Soil Boring Logs (SB-116, SB-118, and MW-10)

Date Start/Finish: 10/02/96 - 10/02/96 **Drilling Company:** SJB **Driller's Name:** Jim Lamm **Drilling Method:** Hollow Stem Auger **Bit Size:** **Auger Size :** 4.25" ID **Rig Type:** CME 550 ATV **Spoon Size:** 2" and 3" OD **Hammer Weight:** 140-lb **Height of Fall:** 30-in.	**Northing:** **Easting:** **Borehole Depth:** 27.5 ft. **Ground Surface Elev.:** ft. **Descriptions by:** Ronald D. Kuhn	**Boring No.** SB-118 **Client:** Niagara Mohawk Power Corporation **Site:** 1125 Broadway Albany, New York

DEPTH	ELEVATION	Sample Interval	Spoon Size (in,OD)	Blows/6 In.	N	Recovery (ft.)	PID (ppm) Headspace	USCS Code	Geologic Column	Stratigraphic Description	Boring Construction
gs elevation ft.											
0										**GROUND SURFACE**	
		(0-2')	2"	29 28 25 10	53	1.6	1.1	SW		Brown fine to medium SAND and fine to medium GRAVEL, dry (SW/GW).	
		(2-4')	2"	9 8 10 9	18	1.4	24.7			Dark brown and black fine to medium SAND, trace slag, glass, and porcelain, damp.	
5	-5	(4-6')	2"	6 4 4 6	8	1.6	8.7	ML		Brown SILT, little Clay, medium stiff, damp.	Type I portland cement/5% bentonite grout 0' to 27.5' bgs
		(6-8')	2"	7 6 5 6	11	0.8	3.1				
		(8-10')	2"	4 4 5 6	9	1.2	8.1			Trace dark gray Shale fragments.	
10	-10	(10-12')	3"	6 11 11 12	22	NR	NA				
		(12-14')	3"	5 16 32 19	48	0.7	888.3	SM		Dark gray fine to coarse SAND, little Silt, trace fine to medium Gravel, sheen, odor, saturated.	
15	-15	(14-16')	3"	5 18	38	1.4	94.3				

BBL
BLASLAND, BOUCK & LEE, INC.
engineers & scientists

Remarks:
Submitted soil sample intervals (12-14') and (20-22') to Galson Laboratories for analysis of PCBs, BTEX, PAHs, TAL Inorganics, and TPH. Ref. = Split-spoon refusal.

Saturated Zones

Date / Time	Elevation	Depth

Site:
1125 Broadway
Albany, New York

Client:
Niagara Mohawk Power Corporation

Boring No. SB-118

Total Depth = 27.5 ft.

DEPTH	ELEVATION	Sample Interval	Spoon Size (in,OD)	Blows/6 In.	N	Recovery (ft.)	PID (ppm) Headspace	USCS Code	Geologic Column	Stratigraphic Description
		(14-16')	3"	20 15	38	1.4	94.3			Dark gray fine to coarse SAND, little Silt, trace fine to medium Gravel, sheen, odor, saturated.
		(16-18')	3"	11 27 37 43	64	1.6	519.7			Trace dark gray Shale fragments.
		(18-20')	3"	16 45 50/0.2	Ref	1.3	30.4			
20	-20	(20-22')	3"	29 50/0.3	Ref	1.0	18.8	SM		Trace coarse Gravel.
		(22-24')	3"	47 50/0.3	Ref	0.4	92.8			
25	-25	(24-26')	3"	20 50/0.4	Ref	0.3	36.8			
		(26-28')	3"	50/0.2	Ref	0.2	6.6			Split-spoon refusal at 26.4.
										Auger refusal at 27.5' bgs.
30	-30									
35	-35									

Boring Construction

Type 1 portland cement/5% bentonite grout 0' to 27.5' bgs

BBL
BLASLAND, BOUCK & LEE, INC.
engineers & scientists

Remarks:
Boring grouted to grade using Type 1 portland cement/5% bentonite.

Saturated Zones

Date / Time	Elevation	Depth

Date Start/Finish: 10/01/96 - 10/01/96 **Drilling Company:** SJB **Driller's Name:** Jim Lamm **Drilling Method:** Hollow Stem Auger **Bit Size:** **Auger Size :** 4.25" ID **Rig Type:** CME 550 ATV **Spoon Size:** 2" and 3" OD **Hammer Weight:** 140-lb **Height of Fall:** 30-in.	**Northing:** 1397288.8092 **Easting:** 696865.2539 **Borehole Depth:** 30 ft. **Ground Surface Elev.:** 18.02 ft. **Descriptions by:** Ronald D. Kuhn	**Boring No.** SB-118 **Client:** Niagara Mohawk Power Corporation **Site:** 1125 Broadway Albany, New York

DEPTH	ELEVATION	Sample Interval	Spoon Size (in,OD)	Blows/6 In.	N	Recovery (ft.)	PID (ppm) Headspace	USCS Code	Geologic Column	Stratigraphic Description	Boring Construction
gs elevation 18.02 ft.										**GROUND SURFACE**	
		(0-2')	2"	8 12 12 12	24	2.0	19.1	SW		Dark brown fine to medium SAND, trace Silt, fine to medium Gravel, and slag, damp.	Type 1 portland cement/5% bentonite grout 0' to 30.0' bgs
	15	(2-4')	2"	8 8 8 6	16	0.4	2.8				
5		(4-6')	2"	5 2 3 3	5	1.2	1.0			Dark brown fine to medium SAND, trace Silt, little slag, damp.	
		(6-8')	2"	5 5 6 6	11	1.3	1.2	ML		Brown SILT, trace Clay and natural organic material, orange mottling, damp.	
	10	(8-10')	2"	6 4 8 13	12	1.2	0.4				
10		(10-12')	3"	14 17 17 17	34	1.6	1.3			Brown SILT, litttle Clay and fine to medium Sand, trace natural organic material, damp.	
	5	(12-14')	3"	11 14 15 11	29	1.2	523.0	SM		Dark brown fine to coarse SAND, little Silt, trace black Shale fragments, odor, sheen, saturated.	
15		(14-16')	3"	11 18	43	1.2	>2000				

BBL
BLASLAND, BOUCK & LEE, INC.
engineers & scientists

Remarks:
Submitted soil sample interval (14-16') to Galson Laboratories for analysis of PCBs, BTEX, PAHs, TAL Inorganics, and TPH. Ref. = Split-spoon refusal. NR = No recovery. NA = Not available.

Saturated Zones

Date / Time	Elevation	Depth

Site:
1125 Broadway
Albany, New York

Client:
Niagara Mohawk Power Corporation

Boring No. SB-118

Total Depth = 30 ft.

DEPTH	ELEVATION	Sample Interval	Spoon Size (in,OD)	Blows/6 In.	N	Recovery (ft.)	PID (ppm) Headspace	USCS Code	Geologic Column	Stratigraphic Description
		(14-16')	3"	25 23	43	1.2	>2000	SM		
		(16-18')	3"	16 16 23 50	39	1.4	>2000	SH		Dark gray weathered SHALE, odor, sheen, saturated.
0		(18-20')	3"	29 50/0.4	Ref	NR	NA			No Recovery.
20		(20-22')	3"	15 16 15 12	31	1.4	329.5			Dark gray fine to coarse SAND, little Silt, trace black Shale fragments and fine to medium Gravel, slight sheen, saturated.
-5		(22-24')	3"	17 17 25 50/0.4	42	1.3	145.4	SM		
25		(24-26')	3"	25 32 22 37	54	1.2	17.5			
		(26-28')	3"	25 42 50 50/0.4	Ref	2.0	10.5	SW		Dark gray fine to coarse SAND, trace Silt, fine to medium Gravel, and black Shale fragments, saturated.
-10		(28-30')	3"	15 50/0.4	Ref	0.5	28.0	SH		Dark gray weathered SHALE, saturated.
30		(30-32')	3"	50/0.1	Ref	NR	NA			Split-spoon and auger refusal at 30.1' bgs.
-15										
35										

Boring Construction

Type 1 portland cement/5% bentonite grout 0' to 30.0' bgs

BBL
BLASLAND, BOUCK & LEE, INC.
engineers & scientists

Remarks:
Boring grouted to grade using Type I portland cement/5% bentonite.

Saturated Zones

Date / Time	Elevation	Depth

LOG OF BORING

PROJECT: NMFC - No. Albany Fm. MGP Site
PROJECT NO:
LOCATION:
GEOLOGIST: P. Anderson
DRILLER: B. Steffy, SJB Services
DRILLING/SAMPLING METHOD: HSA / split spoon.

BORING NUMBER: MW10
DATE STARTED: 9-20-94
DATE COMPLETED: 9-20-94
GROUNDWATER DEPTH: 11.5 ft.
ELEVATION:

SAMPLE ID	DEPTH (feet)	BLOWS per 6"	RECOVERY	PROFILE	USCS CLASS	MATERIAL DESCRIPTION	COLLECTION Time	COLLECTION Date	OVM/CGI (%) ~~HNU~~ ppm	COMMENTS
	0									
01	1	15 17 17 15	18"		FILL	angular to subround, med. to fine gravel; increasing tan/lt. grey fine sand and silt w/ depth, dense, dry	0812	9-20-94	NAB / —	2" split spoon geotech
02	3	13 18 12 11	16"		FILL	kiln brick, red brick; dark brown, med. to fine sand last 4", dense, dry	0827	"	3.8 augers / 16%LEL 18%O_2	3" split spoon indicators/MS/MSD (01, 02)
03	5	5 3 3 5	14"		FILL / ML	3" grey angular gravel, coal, fly ash contacting 11" grey stained silt and fine sand w/trace clay, soft, sl. moist.	0837	"	46 spoon / —	2" spoon geotech
04	7	3 2 3 4	16"		CL	grey clay w/some silt, med. plasticity, soft; grading to clay, silt and fine sand; black stained; soft, sl. moist.	0856	"	108 spoon / 19%O_2 12%LEL	2" spoon Indicator sample (03) strong petroleum odor
05	9	4 4 8 9	17"		CL / SP	similar to above; some gold/brown med. sand and fine subround gravel; moist	0901	"	110 spoon / —	2" spoon geotech
06	11	2 2 3 5	15"		CL / SP	grey/brown clay w/some fine sand and clay shale (11") contacting 4" med. to coarse sand, dark grey, saturated	0911	"	720 spoon / 22%LEL 19.5%O_2	2" spoon TCL/TAL (04)
07	13	6 6 6 6	23"		ML	grey silt, fine sand and shale w/some saturated stringers of cse. sand otherwise sl. moist, med. dense 4.5 ppm BZ (OVM)	0925	"	35 auger 715 spoon / 25%LEL 19.5%O_2	3" spoon Benzene drager tube 1-2 ppm.
08	15	3 3	12"		SP	med. to cse. grey sand w/some brown/tan fine sand and	0937	"	212 auger 525 spoon	Indicator at lithology change (05)

NOTES: HSA: hollow stem auger
NAB: Not Above Background

PROJECT: NMPC-No. Albany Fmr. MGP Site
PROJECT NO:
LOCATION:
GEOLOGIST: P. Anderson
DRILLER: B. Steffy, SJB Services
DRILLING/SAMPLING METHOD: HSA / split spoon

BORING NUMBER: MW10 (cont.)
DATE STARTED: 9-20-94
DATE COMPLETED: 9-20-94
GROUNDWATER DEPTH: 11.5 ft.
ELEVATION:

SAMPLE ID	DEPTH (feet)	BLOWS per 6"	RECOVERY	PROFILE	USCS CLASS	MATERIAL DESCRIPTION	COLLECTION Time	COLLECTION Date	~~HNU~~ OVM/CGI (%) ppm	COMMENTS
08 (cont.)	15 16	4 3				silt; loose, saturated.			70% LEL 19% O2	let vent then add water to lower LEL
09	17 18	8 8 11 12	18"		SP	dark grey (stained) and lt. brown med. to fine sand w/ some med to fine, subrnd. gravel, cobbles; 1" blk. silt and clay layers loose, moist but w/ saturated stringers	1051	9-20-94	200 spoon / —	3" spoon Grain Size (06)
10	19 20	4 9 14 16	24"		SP	20" as above contacting 4" med. grey sand, well sorted (end of spoon)	1101	"	5 spoon / 16.5% O2 10% LEL*	2" spoon geotech
11	21 22	8 15 33 40	19"		SP	dark grey fine sand w/ little; angular black shale and trace subround, med. to fine gravel, dense, wet	1123	"	3 spoon / 20% O2 20% LEL	2" spoon Indicators and duplicate (07)
12	23 24	13 33 50/.4 (full spoon?)	6"		SP (fill)	dark grey fine sand, dense, well sorted	1133	"	3 spoon / —	2" spoon geotech
13	25 26	49 50/.4	2"		BED-ROCK	angular rock fragments of sandstone and shale	1158	"	NAB / 40% LEL (peak value)	"
	27 28 29 30					Boring Terminated @ 24.5 ft.				

NOTES: * reading taken above water in augers
NAB: Not Above Background

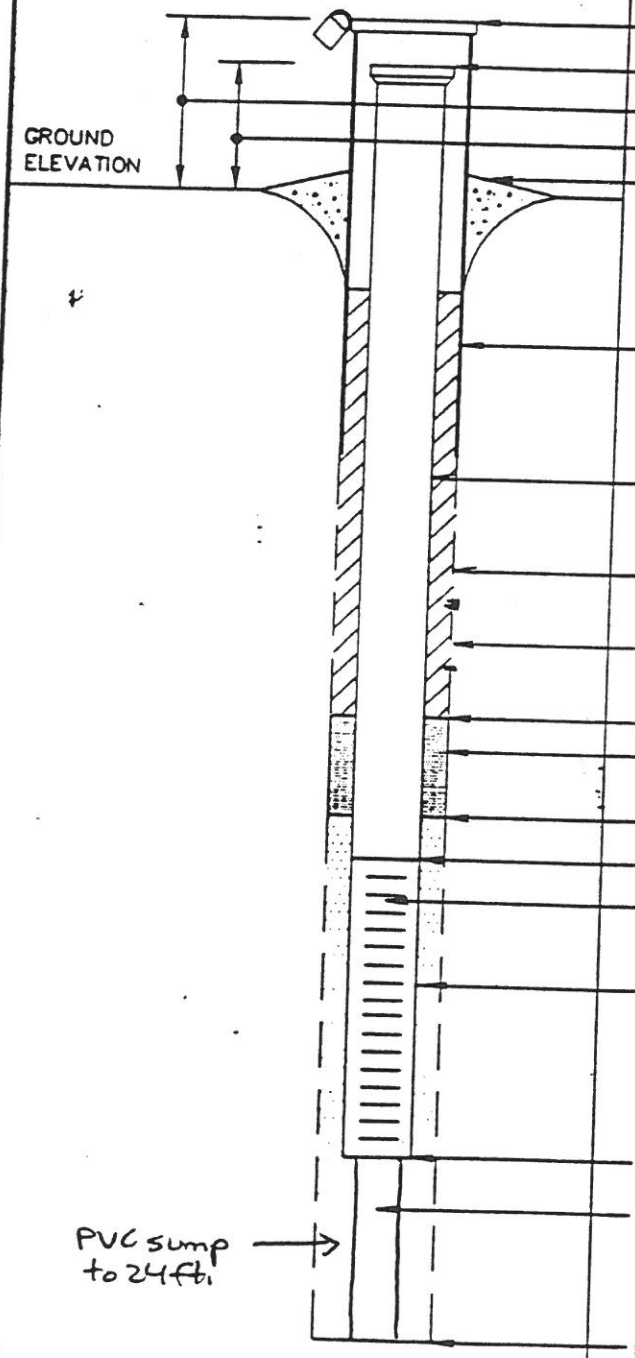
PAGE 2 OF 2

OVERBURDEN MONITORING WELL SHEET

WELL NO. MW-10

PROJECT NMPC-N. Albany Fmr. MGP Site
PROJECT NO. _____ BORING NO. MW10
ELEVATION _____ DATE 9-20-94
FIELD GEOLOGIST Paul Anderson

DRILLER B. Steffy, SJB Services
DRILLING METHOD hollow stem auger
DEVELOPMENT METHOD pump/surge



ELEVATION OF TOP OF SURFACE CASING: _____
ELEVATION OF TOP OF RISER PIPE: _____
STICK-UP-TOP OF SURFACE CASING: NA
STICK-UP-RISER PIPE: NA Flush
TYPE OF SURFACE SEAL: concrete

I.D. OF SURFACE CASING: 8"
TYPE OF SURFACE CASING: flush mount gate box

RISER PIPE I.D. 2"
TYPE OF RISER PIPE: sch. 40 PVC

BOREHOLE DIAMETER: 7 3/4"

TYPE OF BACKFILL: N.A

ELEVATION/DEPTH TOP OF SEAL: 1.0 ft.
TYPE OF SEAL: bentonite pellets

DEPTH TOP OF SAND PACK: 3.5 ft.
ELEVATION/DEPTH TOP OF SCREEN: 6 ft.
TYPE OF SCREEN: 2", sch. 40 PVC
SLOT SIZE X LENGTH: .020 x 15 ft.
TYPE OF SAND PACK: Morie #0

ELEVATION/DEPTH BOTTOM OF SCREEN: 21.2 ft.
ELEVATION/DEPTH BOTTOM OF SAND PACK: 24 ft.
TYPE OF BACKFILL BELOW OBSERVATION WELL: bedrock

ELEVATION/DEPTH OF HOLE 24 ft.

NOT TO SCALE

OVBDMW.DWG