NYSEG

NEW YORK STATE ELECTRIC & GAS CORPORATION
Corporate Drive, Kirkwood Industrial Park, P.O. Box 5224
Binghamton, New York 13902-5224

INTERIM REMEDIAL MEASURES

FINAL ENGINEERING REPORT

FOR ACTIVITIES AT

MECHANICVILLE CENTRAL AVENUE
FORMER MANUFACTURED GAS PLANT (MGP) SITE
City of Mechanicville, Saratoga County, New York

OCTOBER 2000

Prepared By:
NYSEG Licensing & Environmental Operations Department

Reviewed and Approved By:
New York State Department of Environmental Conservation

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H Modification to *Work Plan*
I Analytical Results for Field Test for NAPL
J Final Engineering Report - NYSDEC approval letter

List of Acronyms Referred to in the Document

ACGIH	American Congress of Government Industrial Hygienists
ALJ	Administrative Law Judge
ANSI	American National Standards Institute
AQMP	Air-Quality Monitoring Program
ASP	analytical service protocol
ASTM	American Society for Testing and Materials
AWQC	Ambient Water Quality Criteria
BTEX	benzene, toluene, ethylbenzene and xylene
BTU	British thermal unit
cPAH	Carcinogenic Polycyclic Aromatic Hydrocarbons
C	centigrade
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
COC	Chain-of-Custody
CPP	Citizen Participation Plan
CPR	cardiopulmonary resuscitation
CQAP	Construction Quality Assurance Plan
CTS	coal tar soils
DI	deionized
DUSR	Data Usability Summary Report
ECL	Environmental Conservation Law
EEI	Edison Electric Institute
ELAP	Environmental Laboratory Approval Program
EMS	Emergency Medical Services
EPA	Environmental Protection Agency
EPRI	Electric Power Research Institute
F	Fahrenheit
FS	feasibility study
GC	gas chromatograph
GCS-DN	gas chromatograph station downwind
GCS-UP	gas chromatograph station upwind
GHF	gas holder foundation
HASP	Health and Safety Plan
HEPA	high efficiency particulate air
HSM	Health & Safety Manager

IARC	International Agency for Research on Cancer
ID	identification
IRMs	interim remedial measures
Kg	kilogram
L	liter
LGAC	liquid-phase granular activated carbon
mg	milligram
MGP	manufactured gas plant
MS	matrix spike
MCD	matrix spike duplicate
MMBTU	million British thermal units
MSDS	material safety data sheet
NCP	National Contingency Plan
NIOSH	National Institute for Occupational Safety and Health
NYCRR	New York Codes, Rules and Regulations
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
NYSDOT	New York State Department of Transportation
NYSEG	New York State Electric & Gas Corporation
OSHA	Occupational Safety and Health Act or Administration
PAHs	polycyclic aromatic hydrocarbons
PC	personal computer
PCBs	polychlorinated biphenyls
PEL	permissible exposure limits
PHSC	Project Health and Safety Coordinator
PID	photo ionization detector
POTW	Public Owned Treatment Works
PM	Project Manager
ppb	part per billion
PPE	personal protective equipment
ppm	parts per million
PSA	preliminary site assessment
QA	quality assurance
QAPP	Quality Assurance Project Plan
QA/QC	quality assurance/quality control
QC	quality control
O&M	operation and maintenance

RCRA	Resource Conservation and Recovery Act
RI	Remedial Investigation
RI/FS	remedial investigation/feasibility study
ROD	record of decision
RTS1	Real-time Station 1
RTS4	Real-time Station 4
SAP	Sampling and Analysis Plan
SCGs	Standards, Criteria, and Guidance
SGC	short-term guideline concentrations
SHSO	Site Health & Safety Officer
SPL	sound pressure level
STEL	short-term exposure limits
SVOCs	semivolatile organic compounds
SW	solid waste
T & A	time and activity
TAGM	technical and administrative guidance memorandum
TCLP	toxicity characteristic leachate procedure
TLVs	threshold limit values
TPAH	total polycyclic aromatic hydrocarbons
UFPO	Underground Facility Protection Organization
USEPA	United States Environmental Protection Agency
VOCs	volatile organic compounds
VOA	volatile organic analysis

1.0 INTRODUCTION

This report documents the implementation of approved remedial measures at a NYSEG-owned coal tar contaminated site located in Mechanicville, New York. The remedial work can be substantially characterized as controlled excavation of contaminated soil and underground structural remnants of a former manufactured gas plant and approved disposal of excavated materials.

The remedial work as established in a document titled *Interim Remedial Measures (IRM) Work Plan (Work Plan)* was reviewed and approved by the NYSDEC in accordance with Section III of Order on Consent Index D0-0002-9309, conducted from October 18, 1999, through September 27, 2000.

1.1 Site History

The Site is located within the City of Mechanicville, Saratoga County, New York, as shown in Figure I of this report. The manufactured gas plant was initially owned and operated by the Halfmoon Light, Heat & Power Company founded in 1900 and began gas distribution in 1901. The 100,000 cubic foot capacity distribution gas holder was added in 1911. The Site layout in 1951 is shown in Figure 2. In 1924, the Halfmoon Light, Heat & Power Company was acquired by the Associated Gas and Electric System and in 1928 ownership of that company passed to NYSEG, the current owner. The manufactured gas plant discontinued production in 1955. The Site was subsequently used by NYSEG for regional service center activities and for storage of an inventory of natural gas equipment until it moved to a new location in 1990.

1.2 Executive Summary

This *IRM* was successfully completed in a safe and timely manner with essentially no impact to the ambient air quality as documented in the results of the community air monitoring plan. There were no complaints received for odor, traffic, noise, or dust.

The overall goal of the IRM was to eliminate any source of NAPL that is accessible by normal excavation techniques and remove any preferential pathways for site contaminants to the Anthony Kill. This was accomplished by (1) removing the

contents of the gas relief holder foundation, (2) removing the filter bed and (3) removing all associated piping encountered during excavation. A total of 7,264.33 tons of material was removed and either thermally treated, chemically treated or placed in a landfill. The installation of NAPL collection system was placed on top of the bedrock along the bank of the Anthony Kill.

1.3 Certification

I hereby certify that all activities that comprised the Interim Remedial Measures *(IRM) Work Plan* for activities at Mechanicville Central Avenue Former MGP Site, City of Mechanicville, Saratoga County, New York, dated October 1999 were performed in full accordance with the NYSDEC approved *IRM Work Plan* and Order on Consent Index No. D0-0002-9309.

Signature: _____

Name: Joseph M. Simone, P.E.
Title: Supervising Engineer
License Number: 073728

2.0 PROJECT OBJECTIVES

The overall goal of the proposed IRM was to eliminate any source of NAPL that is accessible by normal excavation techniques and remove any preferential pathways for site contaminants to the Anthony Kill. It is believed that there is a substantial mass of NAPL in the fractured bedrock that was inaccessible to excavation and this NAPL was not addressed during this IRM.

3.0 PROJECT EXECUTION

This project was completed in accordance with the *Work Plan*. Site setup and preparation began on October 18, 2000. Soil excavation began on October 25, 2000 following completion of site preparation. The majority of the IRM was completed by January 28, 2000 and the site was secured for the Winter. The project restarted on April 5, 2000 to excavate the remaining piping and a second attempt to locate the tar dehydrator. The IRM remediation was completed on April 18, 2000. Final demobilization and Site preparations for paving were completed June 23, 2000. On September 27, 2000, additional purifier waste was removed from the road embankment along Central Avenue. Appendix A contains a photographic log of the project.

3.1 Excavation Activities

3.1.1 Area 1 and Area 2

During this IRM, accessible soil and debris was excavated in and around the gas relief holder foundation (GHF), see Figure 4. The GHF has a convex shaped bottom that consist of bedrock and concrete. The circular wall of the GHF is concrete. It could not be determined what percentage of the GHF bottom was bedrock, since water continued to fill the GHF. During excavation the GHF wall was removed down to elevation 94.73'. The water outside the GHF at the time of excavation was at approximate elevation 92.5'. (Note: the ground surface above the GHF ranges between elevation 101' and elevation 103.5')

NYSEG attempted to dewater the GHF by pumping 9,100 gallons of water from the GHF on November 8, 1999. The next day the water level in the GHF return to the same elevation as the groundwater outside of the GHF. NYSEG consulted with the

NYSDEC and a decision was met that the water from inside the GHF would not be allowed to spill outside the GHF during backfilling.

The remaining wall of the GHF was cleaned by scraping the wall with the bucket of the excavator. The concrete wall of the GHF that was removed during excavation was cleaned with a power washer and placed back inside the southern portion of the foundation. Two (2) 15-inch diameter PVC standpipes were placed in the GHF for future boring. One (1) was placed in the center of the GHF and the other was placed just inside the northern portion of the GHF. The remainder of the GHF was filled with 4-6 inch cobblestones (see Appendix A, photos number 12 & 13).

An area approximately 10 feet wide around the circumference of the GHF was excavated. The bottom of this excavation was fractured shale bedrock and is estimated at elevation 89.0'. LNAPL was observed on the groundwater running from the fractured bedrock back into the excavated area outside of the GHF. The area outside of the GHF was filled with gravel.

3.1.2 Area 3

NYSEG attempted to locate an underground tar dehydrator in January 2000, see Figure 4. A second attempt to locate the tar dehydrator was performed in April 2000 by excavating a trench between the brick storage building and the foundation of the gas house, see Figure 4A. Again no tar dehydrator was found. It was surmised during the IRM that the tar dehydrator may have been an above ground structure. Since the IRM, NYSEG has found a photo dated April 1951 that supports the finding that the tar dehydrator was an above ground structure.

3.1.3 Area 4

Purifier waste was removed on the road embankment along Central Avenue per the *Work Plan,* see Figure 4. During a site visit in August 2000, additional purifier waste was observed from an eroded area on the road embankment along Central Avenue. A modification to the *Work Plan* to address purifier waste cleanup and embankment restoration was approved by the NYSDEC, see Appendix H. On September 27, 2000, additional excavation to remove the purifier waste was completed on the road embankment. Then geofabric and stone rip rap were placed on the embankment.

3.1.4 Area 5

Accessible soil and debris was also excavated in and around the filter bed area, see Figure 4. The filter bed, a wooden structure, was removed and disposed with the soil. On January 24, 2000, post excavation soil sample MSVCSW0718 from the west sidewall of the filter bed excavation exhibited high concentrations of total benzene and total PAHs. When the project restarted in April 2000, additional soil was removed from the west side of the original filter bed excavation and the remaining soil was sampled, see Figures 4A and Figure 6.

3.1.5 Test Trench and Pipe Removal

A test trench parallel to the Anthony Kill was excavated in an attempt to locate and remove piping that could be a preferential pathway of contaminants into the Anthony Kill. This trench was excavated along the top of the bank down to bedrock. All pipes and structures located during the test trench excavation were removed. A NAPL collection system was installed on top of the bedrock. The north side and bottom of the trench was lined with geofabric. Then two (2) 15-inch diameter slotted PVC pipes were placed vertically and connected horizontally by a 6-inch diameter perforated PVC pipe. The depth of the horizontal pipe is approximately five feet deep at the northwest vertical stand pipe and approximately seven feet deep at the northeast vertical stand pipe. The trench was first filled with # 1 stone and twelve inches of clay soil was placed above the stone. An additional 15-inch diameter PVC slotted pipe was placed as a vertically stand pipe in a well area found inside the building foundation that contained coal tar.

Piping that was encountered during excavation was removed and disposed. This included piping that interconnected the gas relief holder, gas distribution holder and plant buildings. In addition, piping on the north side of the boiler house that was encountered during the excavation along the top of the bank adjacent to the Anthony Kill was removed. A 24-inch drain pipe and catch basin under the east end of the boiler house and a 12-inch diameter drain pipe and catch basin on the west end of the boiler house was also removed.

3.2 Engineering Controls

Engineering controls for this project were successful in preventing fugitive emissions. The engineering controls consisted of covering the soil stockpiles and impacted soils with polyethylene as soon as possible after any activity and at the end of the work day. In addition, application of a light mist of BIO SOLVE® to impacted soil had the effect of controlling emissions during the soil removal operation.

3.3 Disposal Activities

Material that was classified as non-hazardous waste based upon the pre-remediation in situ sampling (see Appendix B) was loaded directly into dump trailers. The material was then transported to either (1) Clean Waters of America, Inc., Athens, New York and was chemically treated as cold batch asphalt and is being stored at the facility awaiting release approval by the NYSDEC, (2) ESMI of New York, Fort Edward, New York and was thermally treated and returned to the Site as subsurface fill, and (3) Seneca Meadows Landfill, Inc., Waterloo, New York and was placed in landfill.

Material that was classified as RCRA hazardous was transported to either (1) Casie/Mart to be thermally treated, (2) Safety-Kleen LTD, Corunna, Ontario, Canada and was placed in landfill, or (3) Horizon Environmental, Inc., Grandes-Piles Quebec, Canada and was placed in landfill.

The RCRA hazardous soil thermally treated by Casie/Mart was transported to Cumberland County Solid Waste Complex, Millville, New Jersey as non-hazardous waste and was placed in landfill.

Contaminated water from the gas relief holder foundation and waste water from equipment decontamination was pumped into tank trucks. The water was then transported to either (1) Clean Harbors Environmental Services Inc., Braintree, MA, (2) Clean Harbors of Baltimore Inc. Baltimore, MD for treatment, or (3) Industrial Oil Tank Service Corporation, Oriskany, New York for fuel blending. Table 3-1 summarizes the disposition of solid material and Table 3-2 summarizes the disposition of water for this project.

Table 3-1 Solid Material Disposition Summary

*Solid Material Disposition		Tonnage
Clean Waters of America Inc., Athens, NY	Chemically treated	1,035.08
ESMI, Fort Edward, NY and returned as subsurface fill)	**Thermally treated	716.71
Seneca Meadows Landfill, Waterloo, NY	Landfill	873.83
Casie/Mart, Vineland, NJ	Thermally treated	151.69
Safety-Kleen LTD, Corunna, Ontario, Canada	Landfill	53.29
Horizon Environmental, Inc., Grandes-Piles, Quebec, Canada	Landfill	3,714.57
*** Cumberland County Solid Waste Complex, Millville, NJ	Landfill	100.88
* For list of shipments by date see Appendix C ** 719.16 tons was returned and placed as subsurface fill *** Casie/ Mart non-hazardous thermally treated soil		

Table 3-2 Water Disposition Summary

Water Disposition	Gallons
Clean Harbors of Braintree Inc., Braintree, MA	13,798
Clean Harbors of Baltimore Inc., Baltimore, MD	24,573
Industrial Oil Tank Service Corp., Oriskany, NY	29,500
* For list of shipments by date see Appendix C	

3.4 Post Excavation Soil Sampling

The analytical results of all post excavation soil samples are shown on Figure 6 and are summarized in Appendix E along with a copy of the laboratory reports. A Data Usability Summary Report (DUSR) narrative for all post excavation soil samples collected is also included in Appendix F.

More than half of the post excavation soil samples collected exhibited relatively high concentrations of total benzene and total PAHs. While the primary objective of the

IRM was to eliminate sources of free phase NAPL, portions of the NAPL were inaccessible by normal excavation techniques (i.e., NAPL was significantly below the water table or in bedrock). The remaining NAPL and other contamination issues will be addressed in the upcoming remedial investigation/feasibility study where a final remedy for the Site will be determined.

3.5 Field Test for NAPL

During the course of the IRM, portions of four soil samples were used as test subjects to determine the usefulness of several field tests for estimating the presence of LNAPL in soil in reference to PAH concentration. The visual results of field tests were compared to laboratory PAH data of the same samples to determine whether a correlation between the field observations and the lab data existed. The three field tests evaluated included the following:

- Driller's Jar Test - Soil sample and water mixed in a jar with manual agitation for 30 seconds; sheen or LNAPL layer observed after settling.

- Centrifuge Test - Soil sample and water mixed in a test tube placed in a centrifuge for 10 minutes; sheen or LNAPL layer observed.

- Absorbent Pad Test - Soil sample placed on a hydrophobic absorbent pad; the pad is placed between two boards; the technician stands on the board for 15 seconds; staining on the pad is observed.

The observations from the field tests and the associated lab results are presented in Table 3.3. The laboratory reports for the soil samples are presented in Appendix J. In general, there appears to be a good correlation between the field test results and the PAH data generated by the laboratory. For example, the soil sample with the highest concentration of PAHs, MEVCBM1214, yielded the most pronounced LNAPL layers in the jar test and the centrifuge test and the most saturation in the pad test. In contrast, sample MEVCSW0710 which had a very low PAH concentration, produced no visible effect for any of the field tests. Samples MEVCSW0412 and MEVSPXX01 which had intermediate PAH concentrations yielded middle range visual effects for the field tests.

Based on the data presented, the field tests evaluated have potential for use as an LNAPL in soil indicator and may be valuable for guidance in meeting PAH remedial action objectives for future remedial excavation.

Table 3-3 Field Test for NAPL

FIELD TEST FOR NAPL				
	SAMPLE IDENTIFICATION			
	MEVSPXX01	MEVCSW0710	MEVCSW0412	MEVCBM1214
Date Sample	10/28/99	01/12/00	01/12/00	01/18/00
Location / Depth of sample	Soil Pile 1	7 ft. below grade	4 ft. below grade	12 ft. below grade
Visual (1) Appearance	Stained	Brown	Stained	Trace NAPL
Drillers Jar Test (2)	Heavy Sheen	No Sheen	Slight Sheen	LNAPL Layer (1/4")
Centrifuge Test (2)	Slight Sheen	No Sheen	Slight Sheen	LNAPL Layer (1/4")
Absorbent Pad Test (3)	Heavy Stain	No Stain	Slight Stain	Saturated
Total PAHs (mg/Kg)	6,980.0	0.758	46.95	11,860.0
Naphthalene	2,600.0	<0.370	6,400.0	4,200.0

1. After sample has been allowed to dry out, indicate if it is stained, trace NAPL or NAPL saturated.
2. No sheen, slight sheen, heavy sheen, LNAPL layer (approximate thickness), or DNAPL.
3. No stain, slight stain, heavy stain, or saturated.

3.6 Site Restoration

NYSEG placed the ESMI thermally treated soil in the bottom of the excavation in and around the gas relief holder foundation. Imported clean gravel was then used to fill the remaining excavations and to prepare the final site grades for proper rain runoff (see Figure 5). A stone rip rap spillway for rain runoff was constructed on the northeast corner of the Site. Also, geofabric and stone rip rap was placed on the embankment along Central Avenue. After NYSDEC approval, Clean Waters of America will place the cold batch asphalt (chemically treated soil) over the Site to function as a cap.

4.0 COMMUNITY AIR MONITORING

4.1 Real-Time Air Monitoring - Volatile Organic Compounds & Total Suspended Particulates

Real time air quality data were collected from the site perimeter using (1) a Mini-Rae™ photo ionization detector (PID) to monitor total volatile organic compound (VOC) releases; and (2) a Mini-Ram™ to monitor total airborne suspended particulates, in accordance with sections 5.3.2 and 5.3.3 of the *Work Plan*. The real-time measurements were taken hourly to determine if air quality at the site perimeter was being impacted by excavation activities and whether excavation activities should be suspended. The peak total VOC and total suspended particulate data are presented in Table 4-1. A complete summary of real-time air monitoring data can be found in Appendix D.

The results of the real-time community air monitoring indicate that the concentrations for total VOC and total suspended particulates, as measured during the project, did not exceed the action levels specified in the *Work Plan*. Hence, excavation activities were not interrupted due to unacceptable levels of total VOCs or total suspended particulates measured at the site perimeter.

Table 4-1 Summary of Results Real-Time Air Monitoring Program

Mechanicville Central Avenue FORMER MGP SITE
1999 IRM REMEDIATION PROJECT
Summary of Results
Real-Time Air Monitoring Program
October 26, 1999 through April 18, 2000

Parameter	Action Levels	Peak Concentration
Total VOC	5.0 ppm *	2.4 ppm***
Total Suspended Particulates	0.15 mg/M^3 **	0.07 mg/M^3****

Note: A summary of all Real-Time Air Monitoring results can be found in Appendix D.
* Note: The OSHA (1910.1028) Short-Term exposure limit is 5.0 ppm.
** NYSDEC TAGM HWR-89-4031
*** January 7, 2000 , 14:41, RTS-2
**** January 17, 2000, 08:36, RTS-1

4.2 Speciated Real-Time Air Monitoring (BTEX)

A significant effort in determining BTEX (benzene, toluene, ethylbenzene and xylene) compounds in ambient air was undertaken during the Mechanicville Central Avenue Former MGP Site 1999 Remediation Project. The purpose in generating these data was twofold: (1) to supplement total VOC real-time air measurements with a specific benzene measurement if the total VOC action level of 5 ppm was exceeded; and (2) to ensure that emissions of BTEX to the surrounding community during periods of construction activity potentially conducive to the airborne release of these compounds did not exceed acceptable levels.

Upwind and downwind air sampling stations were set up at the site perimeter based on meteorological data. Air samples were collected at the perimeter stations and analyzed on-site using a portable gas chromatograph (GC) in accordance with Section 5.3.4 of the *Work Plan*. The results of average and peak BTEX concentrations for the speciated real-time air monitoring program are summarized in Table 4-2. A complete summary of speciated BTEX air monitoring results can be found in Appendix D.

The results of the speciated real-time air monitoring indicate that the peak concentration for benzene exceeded the Short Term Guidance Concentration (SGC) as published in NYSDEC's Air Guide-1. However, the average (results averaged over the duration of the entire project) benzene result fell below the SGC. The peak and average concentrations for ethylbenzene, toluene and the xylenes were also below their respective SGCs.

Each week, one air sample was submitted to the laboratory for determination of BTEX compounds by EPA method TO-14 after it had been run by the on-site portable GC. Over the course of the IRM, a total of thirteen samples were submitted to the laboratory for BTEX determination. This was done to compare the results being generated by the on-site portable GC with more sensitive and sophisticated laboratory methodology. The results of the comparative study and the associated lab reports are presented in Appendix D. In general, the laboratory results were in agreement with the results generated by the portable GC. Notable exceptions included three samples where the toluene concentrations as measured by laboratory were 0.015 ppm , 0.062 ppm and 0.11 ppm, but no detectable toluene levels from the same samples were measured using the portable GC. It should be noted that

none of the toluene values as determined by the laboratory exceeded or approached the Air Guide -1 SGC of 24 ppm. The highest concentration of toluene as reported in laboratory data was 0.11 ppm. Further, the agreement between the lab and field results for benzene, the most sensitive air contaminant, were good to excellent in every sample.

It should be noted that all ambient air samples were collected in a grab sampling fashion over approximately thirty minute periods and at a frequency of every two hours as specified in Section 5.3.4 of the *Work Plan*. The Air Guide-1 SGCs are based on time-weighted average data which typically relate to the results of continuous sampling averaged over an eight to ten-hour period. While the SGCs may provide a reference point in considering the relative magnitude of BTEX compounds as collected at the grab sampling points, the fundamental difference between time-weighted average and grab sampling data should be taken into account. The average values calculated in Table 4-2 are the arithmetic mean values for all results of grab sampling for the entire project.

Table 4-2 Summary of Results Speciated BTEX Air Monitoring Program

Mechanicville Central Avenue MGP IRM
Speciated BTEX Air Monitoring Program
Summary of Results

Compound	Air Guide-1 SGCs (ppm)	Average* Concentration (ppm)	Peak Concentration (ppm)
Benzene	0.009	0.007	0.177
Toluene	24	0.003	0.057
Ethylbenzene	23	0.0002	0.022
m,p-Xylene	23**	0.00005	0.009
o-Xylene	23**	<0.02	<0.02

Note: A summary of all Speciated BTEX Community Air Monitoring results can be found in Appendix D.
* Note: Average of all readings for the duration of the entire project.
** SGC for Total Xylenes

FIGURES

FIGURE 1	SITE LOCATION MAP
FIGURE 2	FORMER OPERATIONS LAYOUT
FIGURE 3	IN SITU SAMPLING
FIGURE 4	PROJECT LAYOUT - FALL 1999
FIGURE 4A	PROJECT LAYOUT - SPRING 2000
FIGURE 5	RESTORATION PLAN
FIGURE 6	CONFIRMATION SAMPLING

FORMER MGP SITE LOCATION

CENTRAL AVENUE

NORTH

WILLIAM STREET

MAIN STREET

HOWLAND AVENUE

FRANCIS STREET

NORTH MAIN

ANTHONY KILL

RAILROAD STREET

BROADWAY

MABBETT STREET

PARK AVENUE

HILL STREET

HUDSON RIVER

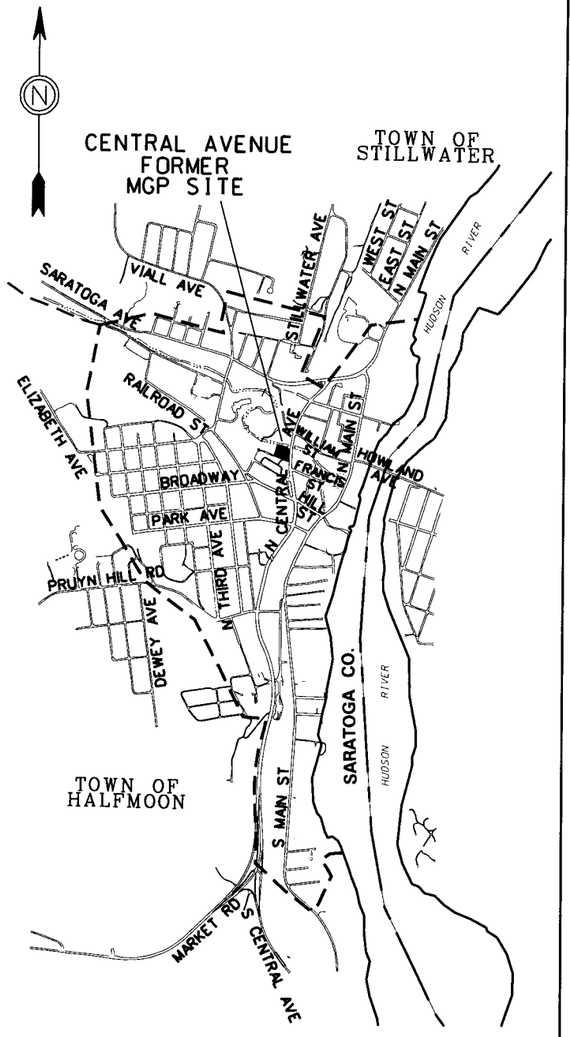
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Scale Feet

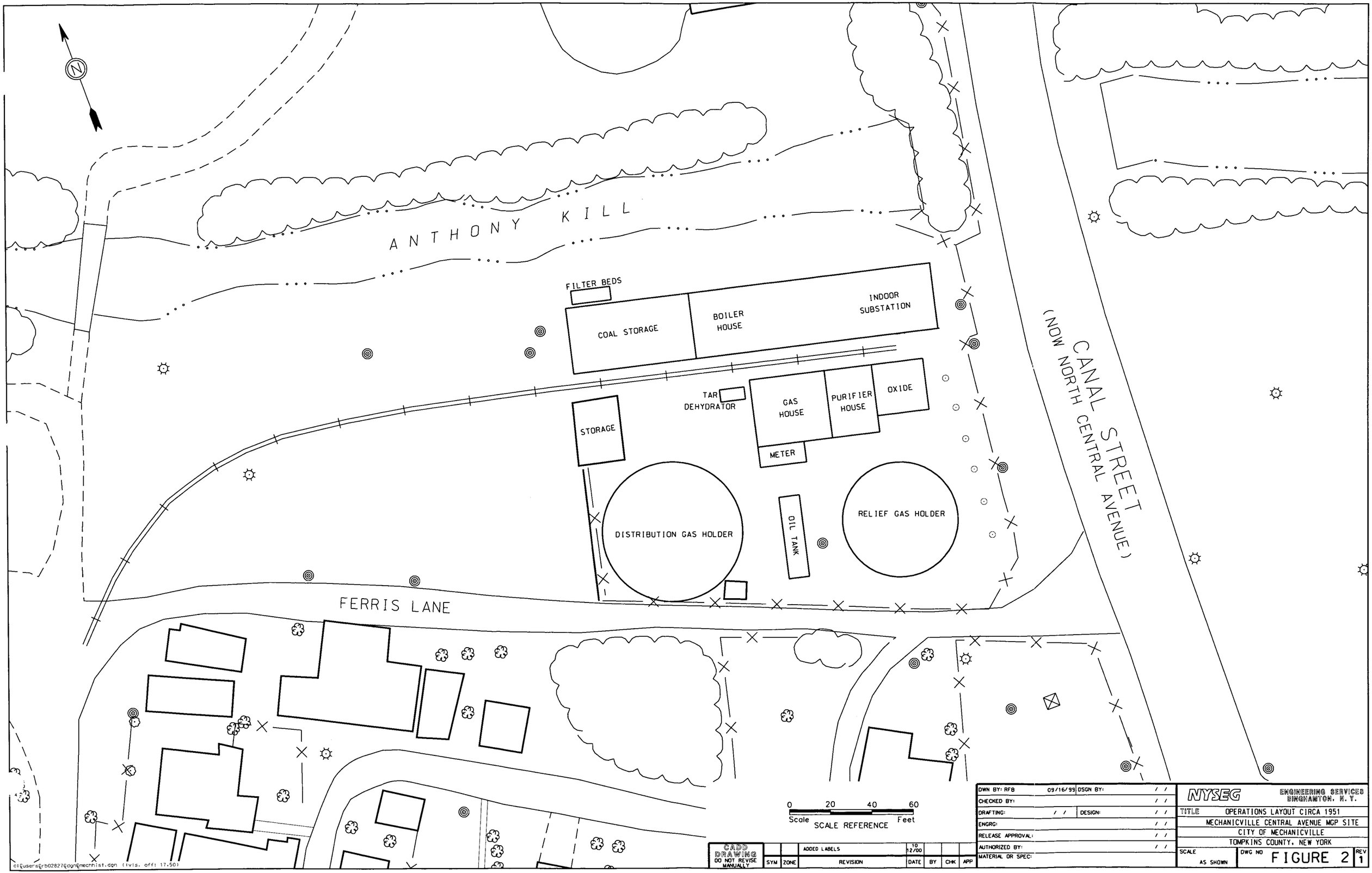
SCALE OF DETAIL

BASE MAP DIGITIZED FROM AERIAL PHOTOS DATED APRIL, 1993 BY PHOTO SCIENCE, INC. GAITHERSBURG, MD.

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NYSEG	ENGINEERING SERVICES BINGHAMTON, N.Y.	
TITLE	LOCATION MAP	
MECHANICVILLE CENTRAL AVENUE MGP SITE		
CITY OF MECHANICVILLE		
SARATOGA COUNTY, NEW YORK		
SCALE : AS SHOWN	DWG NO	REV
DATE : 08/12/99	FIGURE 1	



CADD DRAWING DO NOT REVISE MANUALLY			ADDED LABELS	10 12/00			
SYM	ZONE		REVISION	DATE	BY	CHK	APP

DWN BY: RFB	09/16/99	DSGN BY:	/ /
CHECKED BY:			/ /
DRAFTING:	/ /	DESIGN:	/ /
ENGRG:			/ /
RELEASE APPROVAL:			/ /
AUTHORIZED BY:			/ /
MATERIAL OR SPEC:			

NYSEG ENGINEERING SERVICES BINGHAMTON, N.Y.

TITLE: OPERATIONS LAYOUT CIRCA 1951
MECHANICVILLE CENTRAL AVENUE MGP SITE
CITY OF MECHANICVILLE
TOMPKINS COUNTY, NEW YORK

SCALE: AS SHOWN

DWG NO: FIGURE 2

REV: 1

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ANTHONY KILL

NORTH CENTRAL AVENUE

AREA 5

FILTER BEDS

COAL STORAGE

GARAGE/
BOILER HOUSE

OFFICES

STOREROOM/
INDOOR SUB

AREA 4

TAR
DEHYDRATOR

GAS
HOUSE

PURIFIER
HOUSE

OXIDE
HOUSE

AREA 3

METER

STORAGE

FORMER NYSEG MECHANICS
SHOP AND REPAIR BUILDING

DISTRIBUTION GAS HOLDER
FOUNDATION

OIL TANK

10 11 12

4 5 6

1 2 3

7 8 9

RELIEF GAS HOLDER
FOUNDATION

AREA 2

AREA 1

FERRIS LANE

GAS REGULATOR
BUILDING

NYSEG
SUBSTATION

LEGEND

● - IN SITU SAMPLING POINT
GRID SPACING = 10 FEET SQUARE

0 15 30 45
Scale Feet
SCALE REFERENCE

		ADDED LABELS. REVISED STOREROOM FOUNDATION	10 12/00				
SYM	ZONE	REVISION	DATE	BY	CHK	APP	

CADD DRAWING
DO NOT REVISE MANUALLY

DWN BY: RFB	07/30/99	DSGN BY: JJR	/ /
CHECKED BY:			/ /
DRAFTING:	/ /	DESIGN:	/ /
ENGRG:			/ /
RELEASE APPROVAL:			/ /
AUTHORIZED BY:			/ /
MATERIAL OR SPEC:			

NYSEG ENGINEERING SERVICES BINGHAMTON, N.Y.

TITLE IN SITU SAMPLING
MECHANICVILLE CENTRAL AVENUE MGP SITE
CITY OF MECHANICVILLE
SARATOGA COUNTY, NEW YORK

SCALE: AS SHOWN DWG NO FIGURE 3 REV 1

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ANTHONY KILL

NORTH CENTRAL AVENUE

ADDITIONAL SOIL REMOVAL
WEST END OF FILTER BEDS

AREA 5

RTS 2

STORM DRAIN REMOVAL

ROLL-OFF

FILTER BEDS

EQUIPMENT TRAILER 8 x 20

PERSONNEL SHED 8 x 10

BUILDING FOUNDATION

CONSTRUCTION OFFICE TRAILER 12 x 50

EQUIPMENT & PERSONNEL CONTAMINATION REDUCTION ZONE

TRENCH EXCAVATION

EXCLUSION ZONE

AREA 4

RTS 1

RTS 3

SUPPORT ZONE

STORAGE

EQUIPMENT CONTAMINATION REDUCTION PAD 20 x 40

DEHYDRATOR

BUILDING FOUNDATION

FORMER NYSEG MECHANICS SHOP AND REPAIR BUILDING

AREA 3

AREA 2

1500 GALLON WATER TANKS

6" DIAM. PIPE REMOVAL

DISTRIBUTION GAS HOLDER FOUNDATION

OIL TANK

RELIEF GAS HOLDER FOUNDATION

AREA 1

RTS 4

FERRIS LANE

GAS REGULATOR BUILDING

NYSEG SUBSTATION

- CONTAMINATION REDUCTION ZONE
- NEW FENCE
- SILTATION FENCING & HAY BALES
- ORANGE CONSTRUCTION FENCING

0 15 30 45
Scale SCALE REFERENCE Feet

CADD DRAWING DO NOT REVISE MANUALLY	SYM	ZONE	REVISION	DATE	BY	CHK	APP

DWN BY: RFB	02/07/00	DSGN BY: BWF	/ /
CHECKED BY:			/ /
DRAFTING:	/ /	DESIGN:	/ /
ENGRG:			/ /
RELEASE APPROVAL:			/ /
AUTHORIZED BY:			/ /
MATERIAL OR SPEC:			

NYSEG ENGINEERING SERVICES BINGHAMTON, N.Y.

TITLE PROJECT LAYOUT - SPRING 2000
MECHANICVILLE CENTRAL AVENUE MGP SITE
CITY OF MECHANICVILLE
SARATOGA COUNTY, NEW YORK

SCALE: AS SHOWN | DWG NO FIGURE 4A | REV

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ANTHONY KILL

NORTH CENTRAL AVENUE

AREA 5

RTS 2

ROLL-OFF

FILTER BEDS

BUILDING FOUNDATION

EQUIPMENT TRAILER 8 x 20

PERSONNEL SHED 8 x 10

EQUIPMENT & PERSONNEL CONTAMINATION REDUCTION ZONE

CONSTRUCTION OFFICE TRAILER 12 x 50

SUPPORT ZONE

RTS 1

STORAGE

EQUIPMENT CONTAMINATION REDUCTION PAD 20 x 40

FORMER NYSEG MECHANICS SHOP AND REPAIR BUILDING

1500 GALLON WATER TANKS

EXCLUSION ZONE

TAR DEHYDRATOR

BUILDING FOUNDATION

AREA 4

RTS 3

AREA 3

AREA 2

RELIEF GAS HOLDER FOUNDATION

DISTRIBUTION GAS HOLDER FOUNDATION

OIL TANK

AREA 1

RTS 4

GAS REGULATOR BUILDING

FERRIS LANE

NYSEG SUBSTATION

- CONTAMINATION REDUCTION ZONE
- SILTATION FENCING & HAY BALES
- NEW FENCE
- ORANGE CONSTRUCTION FENCING

0 15 30 45

Scale SCALE REFERENCE Feet

CADD DRAWING DO NOT REVISE MANUALLY

SYM	ZONE	REVISION	DATE	BY	CHK	APP
		REVISED TITLE	10 18/00	RFB		
		ADDED CONSTRUCTION & SILTATION FENCING & HIGHLIGHTED CONTAM. REDUCTION ZONE	10 05/99	RFB		

DWN BY: RFB	09/09/99	DSGN BY: BWF	/ /
CHECKED BY:			/ /
DRAFTING: / /		DESIGN:	/ /
ENGRG:			/ /
RELEASE APPROVAL:			/ /
AUTHORIZED BY:			/ /
MATERIAL OR SPEC:			

NYSEG ENGINEERING SERVICES BINGHAMTON, N.Y.

TITLE PROJECT LAYOUT - FALL 1999

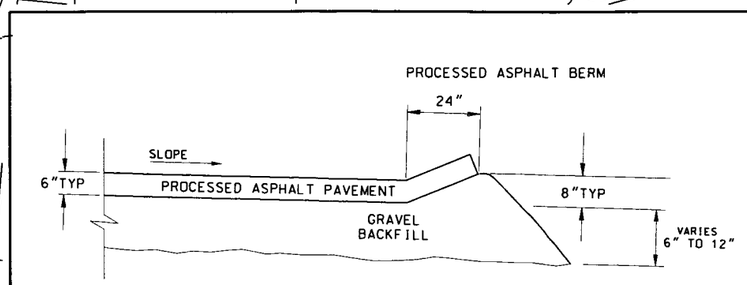
MECHANICVILLE CENTRAL AVENUE MGP SITE

CITY OF MECHANICVILLE

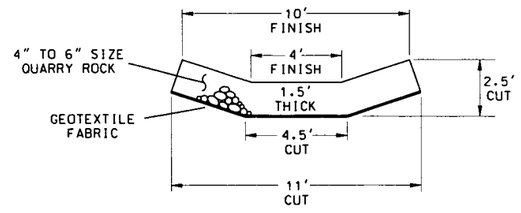
SARATOGA COUNTY, NEW YORK

SCALE: AS SHOWN DWG NO FIGURE 4 REV 2

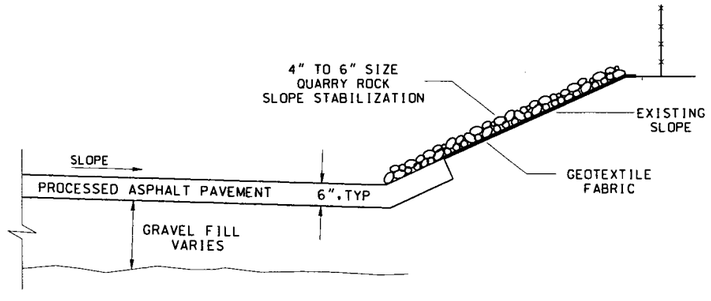
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SECTION A–A



SECTION B–B



SECTION C–C

CADD DRAWING DO NOT REVISE MANUALLY			RELOCATED DRIVEWAY & EDGE OF PAVEMENT. REVISED SECTION A-A.	10 11/00	RFB	
	SYM	ZONE	REVISION	DATE	BY	CHK APP

DWN BY: RFB	04/17/00	DSGN BY: BWF	04/14/00
CHECKED BY:			/ /
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ENGRG:			/ /
RELEASE APPROVAL:			/ /
AUTHORIZED BY:			/ /
MATERIAL OR SPEC:			

NYSEG ENGINEERING SERVICES BINGHAMTON, N. Y.

TITLE RESTORATION PLAN

MECHANICVILLE CENTRAL AVENUE MGP SITE

CITY OF MECHANICVILLE

SARATOGA COUNTY, NEW YORK

SCALE: AS SHOWN | DWG NO FIGURE 5 | REV 1

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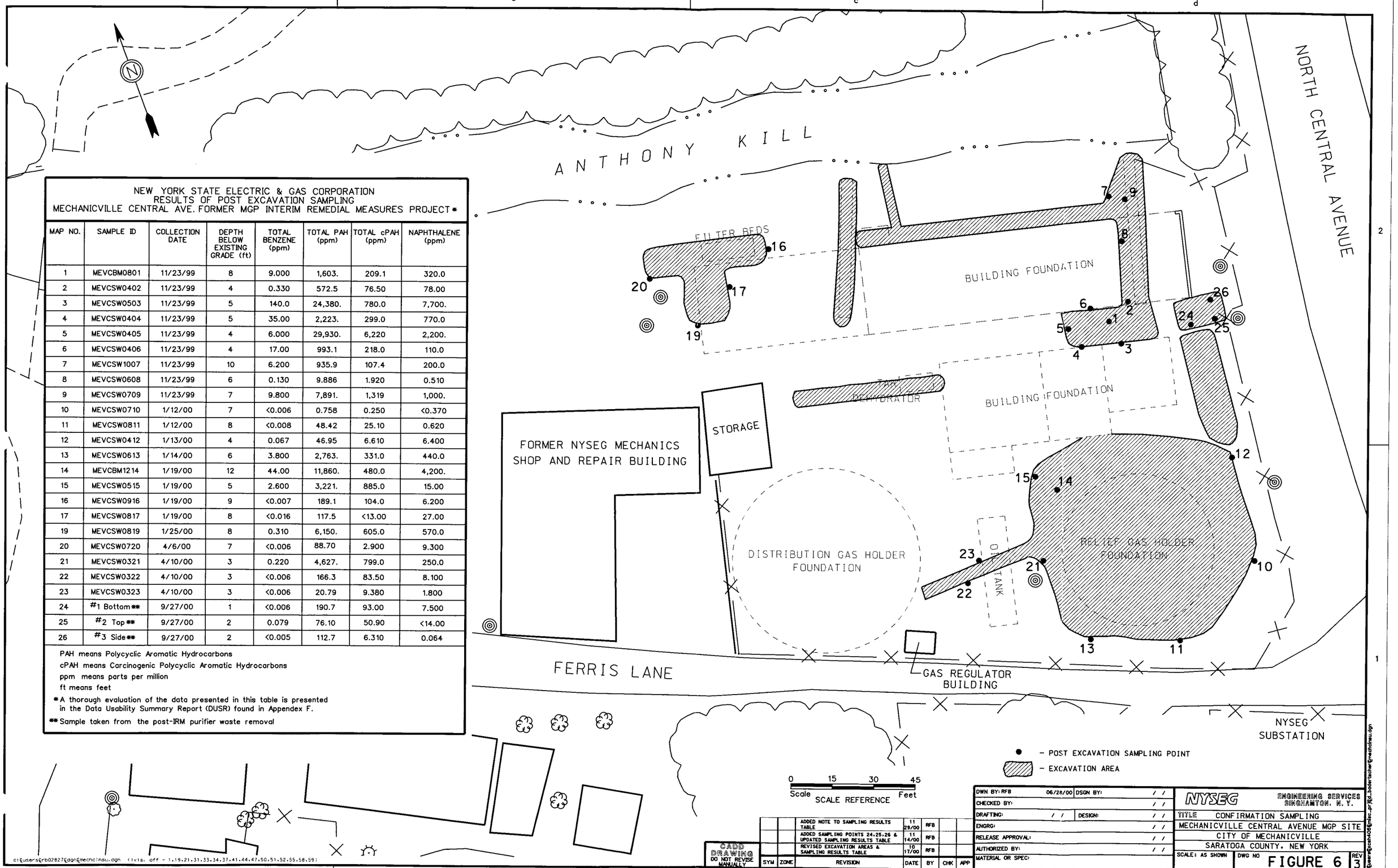
NEW YORK STATE ELECTRIC & GAS CORPORATION
RESULTS OF POST EXCAVATION SAMPLING
MECHANICVILLE CENTRAL AVE. FORMER MGP INTERIM REMEDIAL MEASURES PROJECT *

MAP NO.	SAMPLE ID	COLLECTION DATE	DEPTH BELOW EXISTING GRADE (ft)	TOTAL BENZENE (ppm)	TOTAL PAH (ppm)	TOTAL cPAH (ppm)	NAPHTHALENE (ppm)
1	MEVCBM0801	11/23/99	8	9.000	1,603.	209.1	320.0
2	MEVCSW0402	11/23/99	4	0.330	572.5	76.50	78.00
3	MEVCSW0503	11/23/99	5	140.0	24,380.	780.0	7,700.
4	MEVCSW0404	11/23/99	5	35.00	2,223.	299.0	770.0
5	MEVCSW0405	11/23/99	4	6.000	29,930.	6,220	2,200.
6	MEVCSW0406	11/23/99	4	17.00	993.1	218.0	110.0
7	MEVCSW1007	11/23/99	10	6.200	935.9	107.4	200.0
8	MEVCSW0608	11/23/99	6	0.130	9.886	1.920	0.510
9	MEVCSW0709	11/23/99	7	9.800	7,891.	1,319	1,000.
10	MEVCSW0710	1/12/00	7	<0.006	0.758	0.250	<0.370
11	MEVCSW0811	1/12/00	8	<0.008	48.42	25.10	0.620
12	MEVCSW0412	1/13/00	4	0.067	46.95	6.610	6.400
13	MEVCSW0613	1/14/00	6	3.800	2,763.	331.0	440.0
14	MEVCBM1214	1/19/00	12	44.00	11,860.	480.0	4,200.
15	MEVCSW0515	1/19/00	5	2.600	3,221.	885.0	15.00
16	MEVCSW0916	1/19/00	9	<0.007	189.1	104.0	6.200
17	MEVCSW0817	1/19/00	8	<0.016	117.5	<13.00	27.00
19	MEVCSW0819	1/25/00	8	0.310	6,150.	605.0	570.0
20	MEVCSW0720	4/6/00	7	<0.006	88.70	2.900	9.300
21	MEVCSW0321	4/10/00	3	0.220	4,627.	799.0	250.0
22	MEVCSW0322	4/10/00	3	<0.006	166.3	83.50	8.100
23	MEVCSW0323	4/10/00	3	<0.006	20.79	9.380	1.800
24	#1 Bottom**	9/27/00	1	<0.006	190.7	93.00	7.500
25	#2 Top**	9/27/00	2	0.079	76.10	50.90	<14.00
26	#3 Side**	9/27/00	2	<0.005	112.7	6.310	0.064

PAH means Polycyclic Aromatic Hydrocarbons
cPAH means Carcinogenic Polycyclic Aromatic Hydrocarbons
ppm means parts per million
ft means feet

* A thorough evaluation of the data presented in this table is presented in the Data Usability Summary Report (DUSR) found in Appendex F.

** Sample taken from the post-IRM purifier waste removal



SYM	ZONE	REVISION	DATE	BY	CHK	APP
		ADDED NOTE TO SAMPLING RESULTS TABLE	11 29/00	RFB		
		ADDED SAMPLING POINTS 24,25,26 & UPDATED SAMPLING RESULTS TABLE	11 14/00	RFB		
		REVISED EXCAVATION AREAS & SAMPLING RESULTS TABLE	10 17/00	RFB		

CADD DRAWING DO NOT REVISE MANUALLY

DWN BY: RFB	06/28/00	DSGN BY:	/ /
CHECKED BY:			/ /
DRAFTING:	/ /	DESIGN:	/ /
ENGRG:			/ /
RELEASE APPROVAL:			/ /
AUTHORIZED BY:			/ /
MATERIAL OR SPEC:			

NYSEG ENGINEERING SERVICES BINGHAMTON, N.Y.

TITLE CONFIRMATION SAMPLING
MECHANICVILLE CENTRAL AVENUE MGP SITE
CITY OF MECHANICVILLE
SARATOGA COUNTY, NEW YORK

SCALE: AS SHOWN | DWG NO FIGURE 6 | REV 3

Date/Time Plotted: 12-DEC-2000 10:30

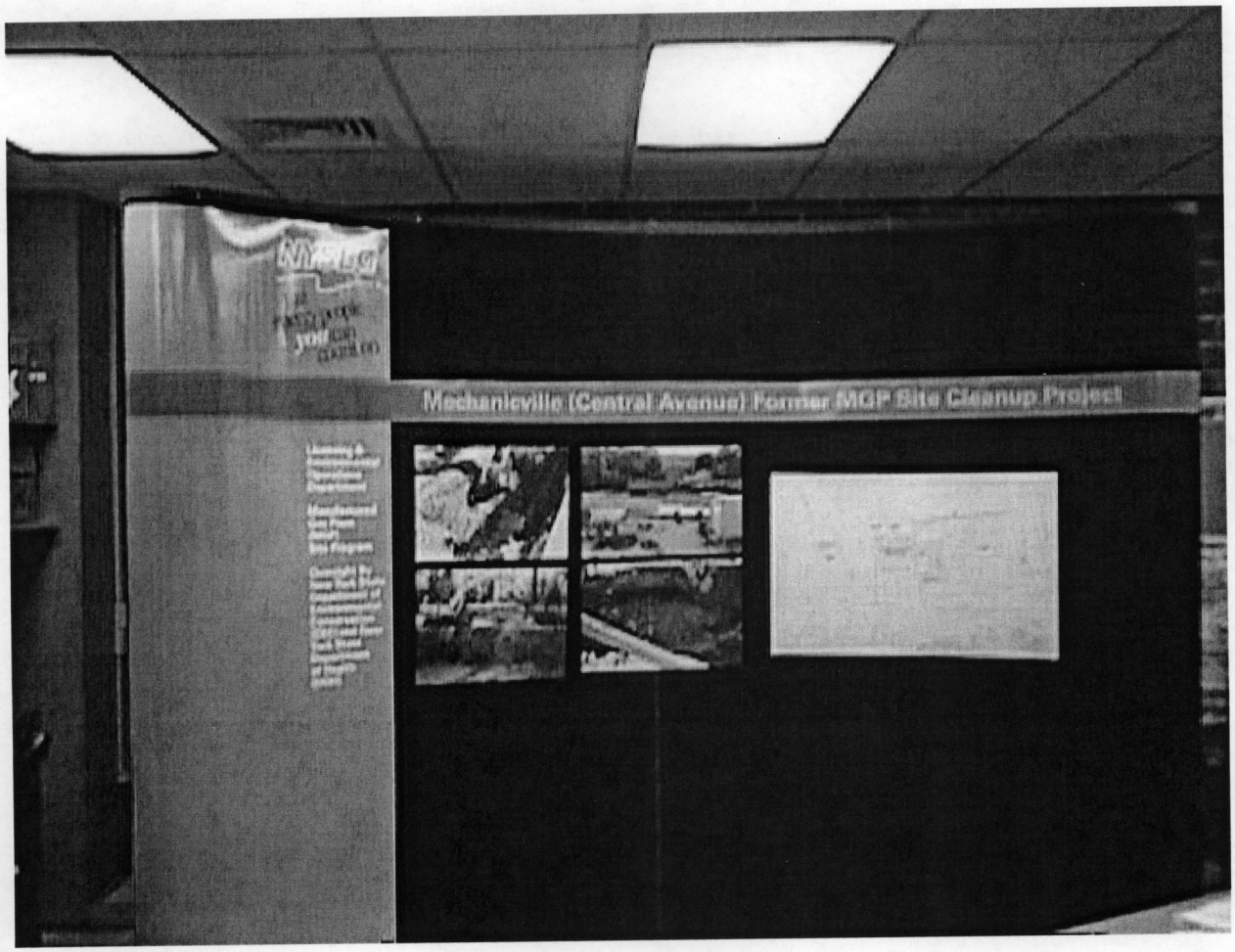
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APPENDIX A

PHOTOGRAPHIC LOG

NYSEG



MECHANICVILLE CENTRAL AVENUE
FORMER MANUFACTURED GAS PLANT SITE
1999-2000 REMEDIATION PROJECT
PHOTO NUMBER 1
OCTOBER 1999

On October 20, 1999, NYSEG,NYSDEC and NYSDOH held a Public Availability Session for the Mechanicville Central Avenue former manufactured gas plant site remediation project at the Mechanicville Community Services Center, South Main Street, Mechanicville.

NYSEG



MECHANICVILLE CENTRAL AVENUE
FORMER MANUFACTURED GAS PLANT SITE
1999-2000 REMEDIATION PROJECT
PHOTO NUMBER 2
OCTOBER 1999

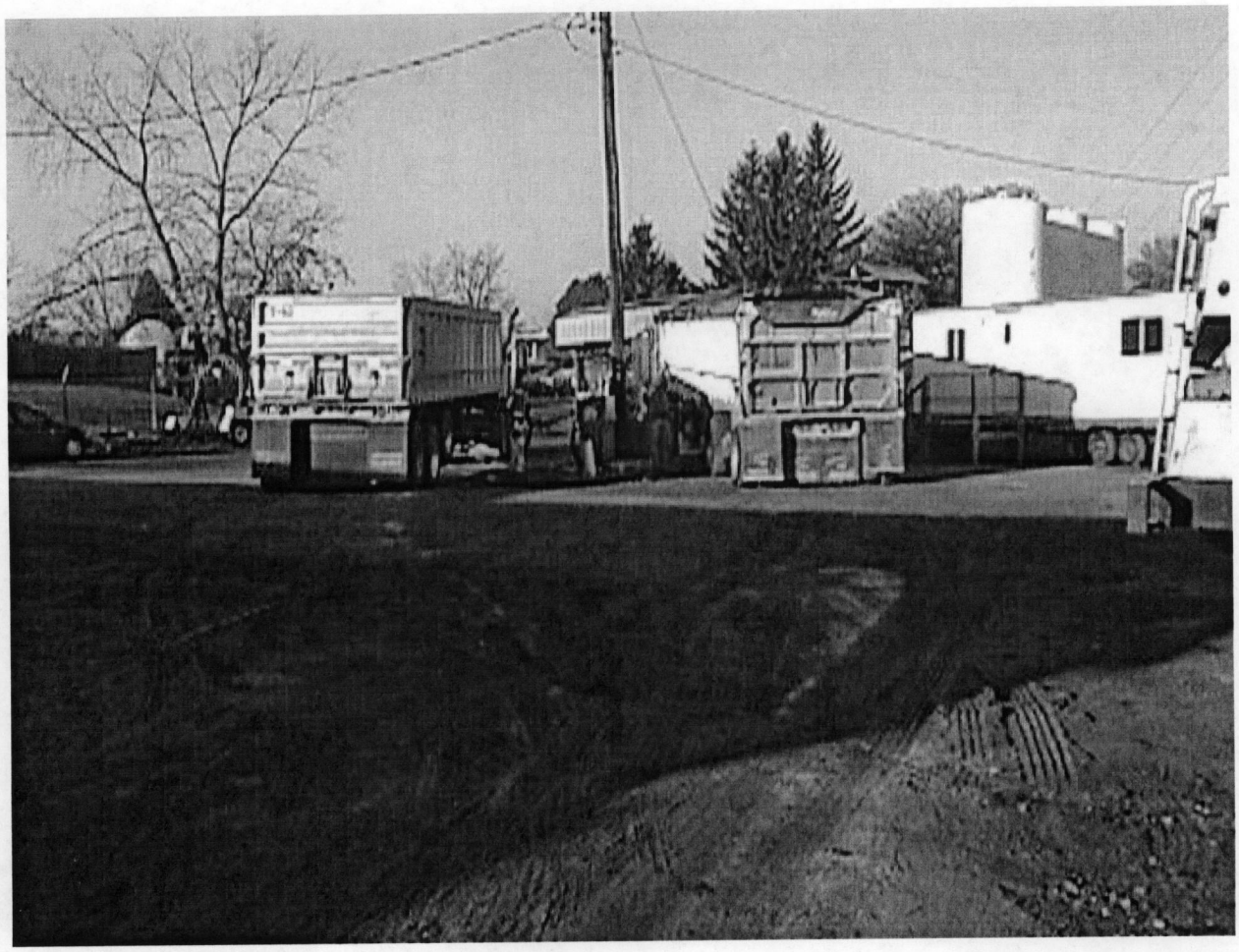
Looking west, ingress and egress of dumptrailers and roll offs was through G.A. Bove & Sons, Inc.. Roll offs were used to place piping and other debris. This material was transported to Casie/Mart, Vineland, NJ for recycling.

NYSEG



MECHANICVILLE CENTRAL AVENUE
FORMER MANUFACTURED GAS PLANT SITE
1999-2000 REMEDIATION PROJECT
PHOTO NUMBER 3
OCTOBER 1999

Looking south, The non hazardous soil above the former relief holder foundation was transported either to Clean Waters of America's (CWA) facility to be processed into cold mix asphalt or ESMI of New York's facility for thermal treatment. Thermal Treated soil from ESMI was returned to the site and used as subsurface fill. The Cold mix asphalt from CWA will be returned to the site and used for paving.



MECHANICVILLE CENTRAL AVENUE
FORMER MANUFACTURED GAS PLANT SITE
1999-2000 REMEDIATION PROJECT
PHOTO NUMBER 4
NOVEMBER 1999

Two trucks could be staged for ingress and egress to the loading area. All trucks leaving the site had either a Hazardous Waste Manifest or a Non-Hazardous Waste Manifest. All trucks were tarped prior to leaving the project site. All trucks transporting Hazardous waste were lined with polyethylene.

NYSEG



MECHANICVILLE CENTRAL AVENUE
FORMER MANUFACTURED GAS PLANT SITE
1999-2000 REMEDIATION PROJECT
PHOTO NUMBER 5
NOVEMBER 1999

Looking west, The relief holder foundation was a concrete structure with a concrete convex floor. The foundation was removed down to the the water table that was approximately five feet deep at the north end of the excavation. After all material was removed from the foundation the concrete was cleaned with a power washer and placed back in the foundation.

NYSEG



MECHANICVILLE CENTRAL AVENUE
FORMER MANUFACTURED GAS PLANT SITE
1999-2000 REMEDIATION PROJECT
PHOTO NUMBER 6
NOVEMBER 1999

Looking south, engineering controls for this project were successful in preventing fugitive emissions. The application of a light mist of Bio Solve® to impacted soil had the effect of controlling emissions during the soil removal operation. In addition, covering the soil stockpiles and impacted soil with polyethylene sheets as soon as possible after any activity and at the end of the work day.

NYSEG



MECHANICVILLE CENTRAL AVENUE
FORMER MANUFACTURED GAS PLANT SITE
1999-2000 REMEDIATION PROJECT
PHOTO NUMBER 7
NOVEMBER 1999

Looking southwest, RCRA hazardous water was removed from the relief holder foundation and either transported to (1) Industrial Oil Tank Service Corp., Oriskany, NY for fuel recovery and burned for energy recovery, (2) Clean Harbors, Braintree, MA for treatment, or (3) Clean Harbors, Baltimore, MD for treatment.

NYSEG



MECHANICVILLE CENTRAL AVENUE
FORMER MANUFACTURED GAS PLANT SITE
1999-2000 REMEDIATION PROJECT
PHOTO NUMBER 8
DECEMBER 1999

Looking east, the concrete pieces of the relief holder foundation was placed in one area of the relief holder prior to bringing in imported fill. The remaining area in the relief holder foundation was filled with clean fill.

NYSEG



MECHANICVILLE CENTRAL AVENUE
FORMER MANUFACTURED GAS PLANT SITE
1999-2000 REMEDIATION PROJECT
PHOTO NUMBER 9
NOVEMBER 1999

Looking west, In addition to using the Bio Solve® to control odors and fugitive vapors, the excavation was covered with polyethylene sheeting in inactive areas and overnight.

NYSEG



MECHANICVILLE CENTRAL AVENUE
FORMER MANUFACTURED GAS PLANT SITE
1999-2000 REMEDIATION PROJECT
PHOTO NUMBER 10
NOVEMBER 1999

Looking northwest, The RCRA hazardous soil from the relief holder foundation and other areas of the site was either transported to Casie/Mart Vineland, NJ for thermal treatment, transported and disposed at Sarnia landfill Ontario Canada, or transported and disposed at Horizon Environmental, Inc. Landfill, Grandes-Piles, Quebec, Canada.

NYSEG



MECHANICVILLE CENTRAL AVENUE
FORMER MANUFACTURED GAS PLANT SITE
1999-2000 REMEDIATION PROJECT
PHOTO NUMBER 11
NOVEMBER 1999

NYSEG designed and built a grizzly screen for sizing material to be processed at Casie/Mart in Vineland, NJ. The soil was screened down to less than three inches. NYSEG processed approximately three truck loads of soil through the screen before stopping the operation. The material from the relief holder was to wet to efficiently screen. All remaining RCRA hazardous material was transported and disposed of in Canada.

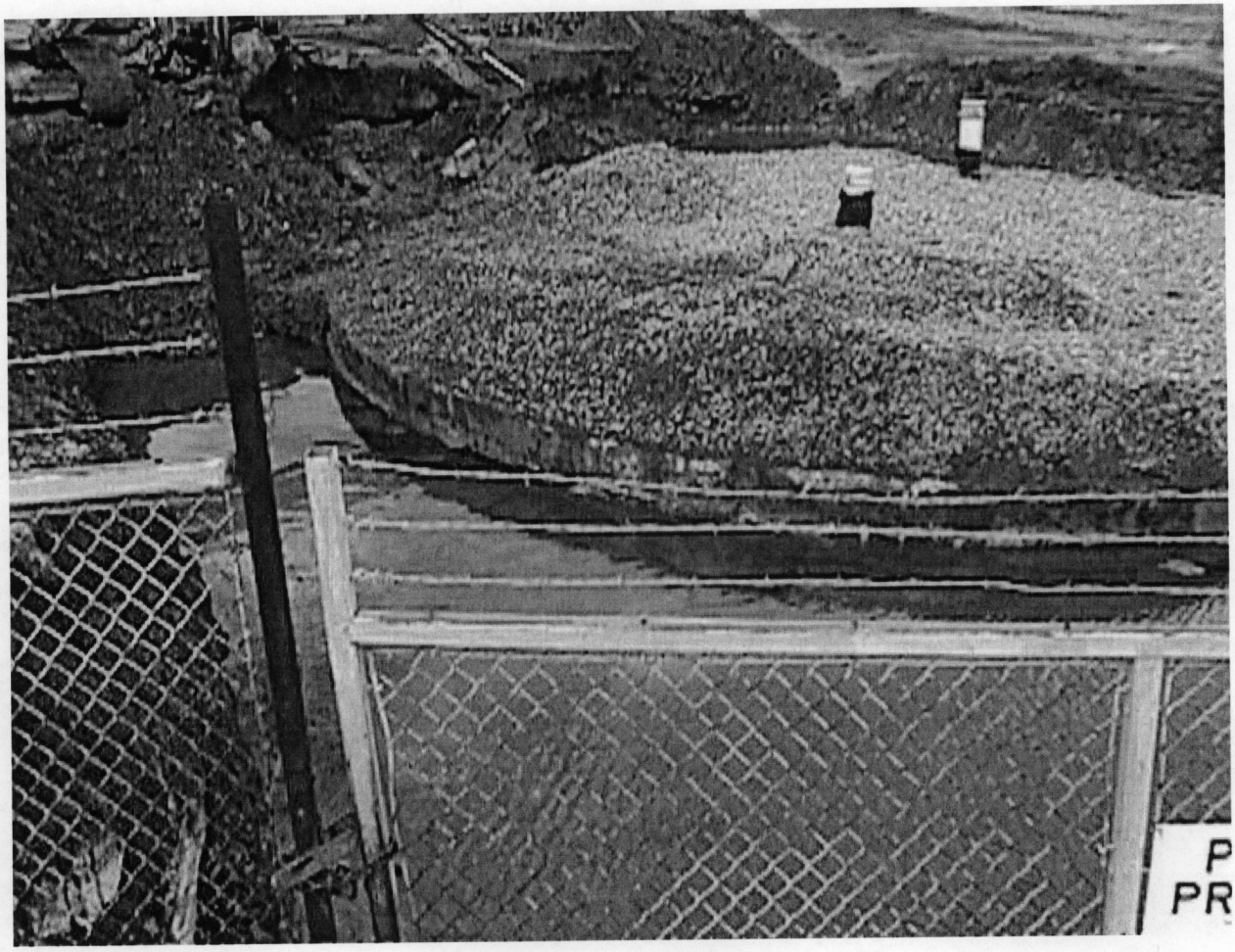
NYSEG



MECHANICVILLE CENTRAL AVENUE
FORMER MANUFACTURED GAS PLANT SITE
1999-2000 REMEDIATION PROJECT
PHOTO NUMBER 12
DECEMBER 1999

Looking north, soil was completely removed around the perimeter of the relief holder foundation to a depth of approximately three feet below the ground water. The sidewall of the excavation was fractured shale. There was a NAPL layer on the water. Two standpipes were placed in the foundation for future borings. One was placed in the center and the other was placed inside the north end of the foundation.

NYSEG



MECHANICVILLE CENTRAL AVENUE
FORMER MANUFACTURED GAS PLANT SITE
1999-2000 REMEDIATION PROJECT
PHOTO NUMBER 13
DECEMBER 1999

Looking west, soil was removed completely removed around the perimeter of the relief holder foundation to a depth of approximately three feet below the ground water. The sidewall of the excavation was fractured shale. There was a NAPL layer on the water.



MECHANICVILLE CENTRAL AVENUE
FORMER MANUFACTURED GAS PLANT SITE
1999-2000 REMEDIATION PROJECT
PHOTO NUMBER 14
DECEMBER 1999

Some of the Tractors were hauling double trailers and were able to back down to the loading area. The trucks transporting RCRA hazardous soil were lined with polyethylene and were covered with tarps. Soil was transported to and disposed at Horizon Environmental, Inc. Landfill,Grandes-Piles, Quebec, Canada.

NYSEG



MECHANICVILLE CENTRAL AVENUE
FORMER MANUFACTURED GAS PLANT SITE
1999-2000 REMEDIATION PROJECT
PHOTO NUMBER 15
NOVEMBER 1999

Looking west, interconnecting piping between the relief holder foundation, retort house and the distribution holder foundation were removed and placed in the roll offs. The roll offs were transported to Casie/Mart Vineland, NJ for recycling and disposal.

NYSEG



MECHANICVILLE CENTRAL AVENUE
FORMER MANUFACTURED GAS PLANT SITE
1999-2000 REMEDIATION PROJECT
PHOTO NUMBER 16
NOVEMBER 1999

Looking east, Mr. William Zeppetelli, NYSDEC oversight, and Mr. John Ruspantini, NYSEG project scientist, observed and monitored the removal of piping between the plant house and the Anthony Kill. NYSEG removed piping between the plant house and the Anthony Kill that may have been a conduit or preferential pathway for MGP contaminates to enter the Kill.

NYSEG



MECHANICVILLE CENTRAL AVENUE
FORMER MANUFACTURED GAS PLANT SITE
1999-2000 REMEDIATION PROJECT
PHOTO NUMBER 17
NOVEMBER 1999

Looking east, A layer of NAPL was discovered above the bed rock adjacent to the Anthony Kill. Absorbant pads were used to removed the NAPL.



MECHANICVILLE CENTRAL AVENUE
FORMER MANUFACTURED GAS PLANT SITE
1999-2000 REMEDIATION PROJECT
PHOTO NUMBER 18
NOVEMBER 1999

Looking southeast, a well was found within the building foundation. The well contained MGP residue. The well was removed.



MECHANICVILLE CENTRAL AVENUE
FORMER MANUFACTURED GAS PLANT SITE
1999-2000 REMEDIATION PROJECT
PHOTO NUMBER 19
NOVEMBER 1999

Piping that was encountered during excavation was removed and disposed. This included piping that interconnected the gas relief holder, gas distribution holder and plant buildings. In addition, piping on the north side of the boiler house. In addition piping on the north side of the boiler house encountered during the test trench along the top bank of the Anthonyt Kill was removed and disposed.

NYSEG



MECHANICVILLE CENTRAL AVENUE
FORMER MANUFACTURED GAS PLANT SITE
1999-2000 REMEDIATION PROJECT
PHOTO NUMBER 20
NOVEMBER 1999

Looking west, a test trench near the top bank parallel to the Anthony Kill was excavated down to bedrock. All pipes structures located during the test trench were removed. A NAPL collection system was installed on top of the bedrock.

NYSEG



MECHANICVILLE CENTRAL AVENUE
FORMER MANUFACTURED GAS PLANT SITE
1999-2000 REMEDIATION PROJECT
PHOTO NUMBER 21
NOVEMBER 1999

Looking west, prior to installing the NAPL collection system, geofabric was placed along the north side and bottom of the test trench along the bank of the Anthony Kill.

NYSEG



MECHANICVILLE CENTRAL AVENUE
FORMER MANUFACTURED GAS PLANT SITE
1999-2000 REMEDIATION PROJECT
PHOTO NUMBER 22
NOVEMBER 1999

Looking northeast, a NAPL collection system was installed in the test trench on top of the bedrock. The north side of the trench and bottom was lined with geofabric. Then two (2) 15-inch diameter slotted PVC pipes were placed vertically and connected horizontally by a 6-inch diameter perforated PVC pipe. The depth of the horizontal pipe is approximately five feet deep at the northwest vertical stand pipe and approximately seven feet deep at the northeast stand pipe. The trench was first filled with #1 stone and twelve inches of clay soil was placed above the stone.



MECHANICVILLE CENTRAL AVENUE
FORMER MANUFACTURED GAS PLANT SITE
1999-2000 REMEDIATION PROJECT
PHOTO NUMBER 23
NOVEMBER 1999

Looking east, in addition to the NAPL collection system installed along the top bank of the Anthony Kill, a 15-inch diameter slotted stand pipe was placed as a vertical stand pipe in a well area found inside the boiler house foundation. The well area then was filled with #1 stone.

NYSEG



MECHANICVILLE CENTRAL AVENUE
FORMER MANUFACTURED GAS PLANT SITE
1999-2000 REMEDIATION PROJECT
PHOTO NUMBER 24
NOVEMBER 1999

Looking northwest, the upper left and lower right standpipes are connected and are part of the NAPL collection system along the top bank of the Anthony Kill. The lower left standpipe is located in a well area found inside the boiler house foundation.

NYSEG



MECHANICVILLE CENTRAL AVENUE
FORMER MANUFACTURED GAS PLANT SITE
1999-2000 REMEDIATION PROJECT
PHOTO NUMBER 25
NOVEMBER 1999

Looking west, piping found during the test trench was removed down to the Anthony Kill. Some of the pipes did contain MGP residues.



MECHANICVILLE CENTRAL AVENUE
FORMER MANUFACTURED GAS PLANT SITE
1999-2000 REMEDIATION PROJECT
PHOTO NUMBER 26

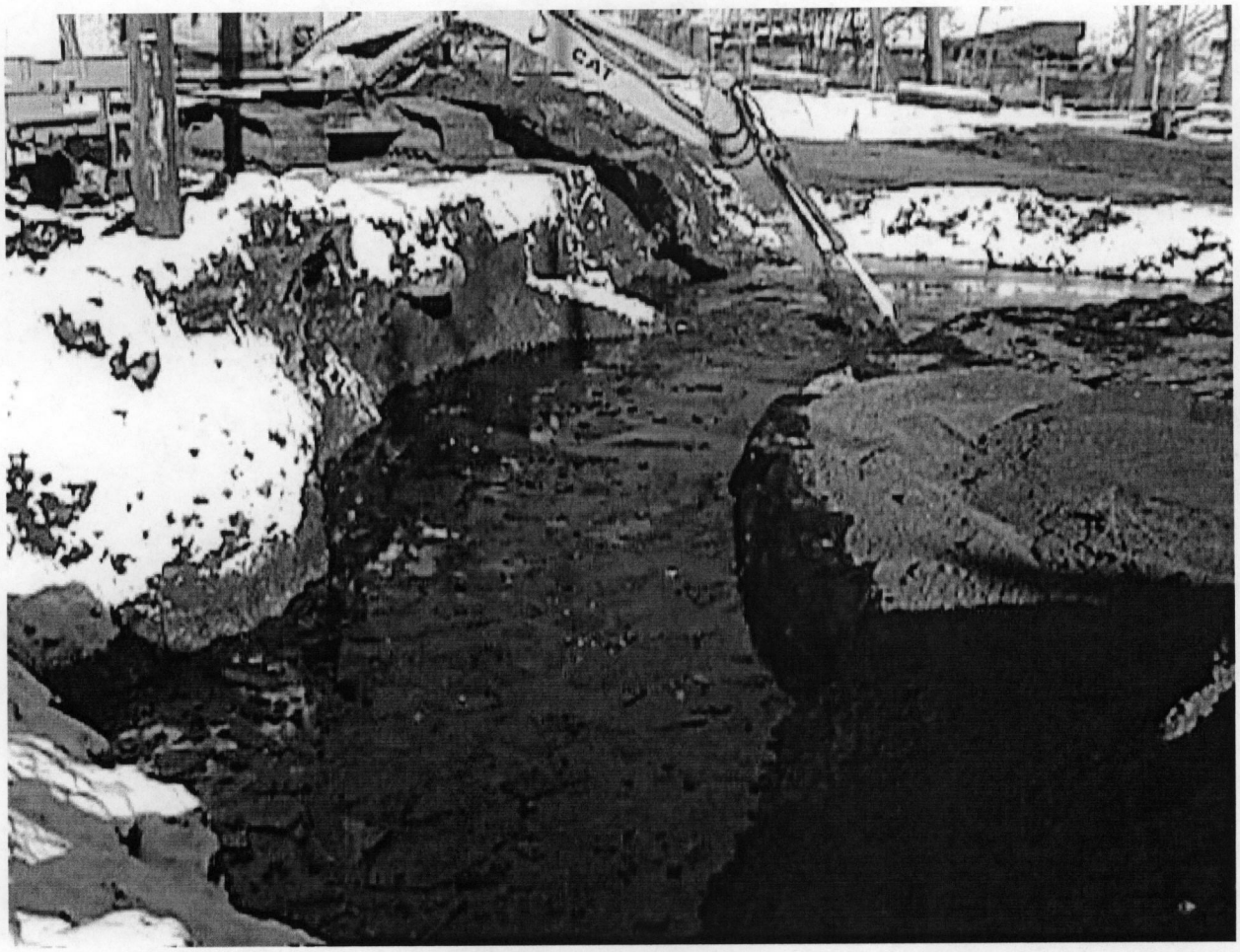
Looking south, additional stained soil was removed during pipe removal along the Anthony Kill.



MECHANICVILLE CENTRAL AVENUE
FORMER MANUFACTURED GAS PLANT SITE
1999-2000 REMEDIATION PROJECT
PHOTO NUMBER 27
JANUARY 2000

Looking west, soil was removed completely around the perimeter of the gas relief holder foundation to a depth approximately three feet below ground water. To the north of the gas relief holder foundation soil and piping was removed up to the retort house foundation (Note: retort house foundation wall just below the left track of the excavator).

NYSEG



MECHANICVILLE CENTRAL AVENUE
FORMER MANUFACTURED GAS PLANT SITE
1999-2000 REMEDIATION PROJECT
PHOTO NUMBER 28
JANUARY 2000

Looking northwest, soil was removed completely around the perimeter of the relief holder foundation to a depth of approximately three feet below the ground water. NAPL was observed running from the fractured bedrock back into the excavated area outside of the gas relief hounder foundation. A NAPL layer is noticeable on the water.



MECHANICVILLE CENTRAL AVENUE
FORMER MANUFACTURED GAS PLANT SITE
1999-2000 REMEDIATION PROJECT
PHOTO NUMBER 29
AUGUST 2000

Looking northwest, for site restoration item #4 gravel was used to prepare the site for paving of the CWA cold batch asphalt. The site is graded for poper rain runoff to the northeast corner of the site.

NYSEG



MECHANICVILLE CENTRAL AVENUE
FORMER MANUFACTURED GAS PLANT SITE
1999-2000 REMEDIATION PROJECT
PHOTO NUMBER 30
AUGUST 2000

Looking north, the Site surface is sloped to the spillway which is left of the green standpipe.

NYSEG



MECHANICVILLE CENTRAL AVENUE
FORMER MANUFACTURED GAS PLANT SITE
1999-2000 REMEDIATION PROJECT
PHOTO NUMBER 32
AUGUST 2000

Looking north, stone rip rap was placed in the area of the Site runoff spillway which is located on the northeast corner of the site.



MECHANICVILLE CENTRAL AVENUE
FORMER MANUFACTURED GAS PLANT SITE
1999-2000 REMEDIATION PROJECT
PHOTO NUMBER 32
AUGUST 2000

Looking northeast, for site restoration item #4 gravel was used prepare the site for paving of the CWA cold batch asphalt. The site as graded for proper rain runoff to the northeast corner on the site. Notice eroded area to the right (south) of the existing foundation wall. This is the area purifier waste was observed. NYSEG notified the NYSDEC and a modification to the *Work Plan* was prepared to remove the remaining purifier waste.

NYSEG



MECHANICVILLE CENTRAL AVENUE
FORMER MANUFACTURED GAS PLANT SITE
1999-2000 REMEDIATION PROJECT
PHOTO NUMBER 33
AUGUST 2000

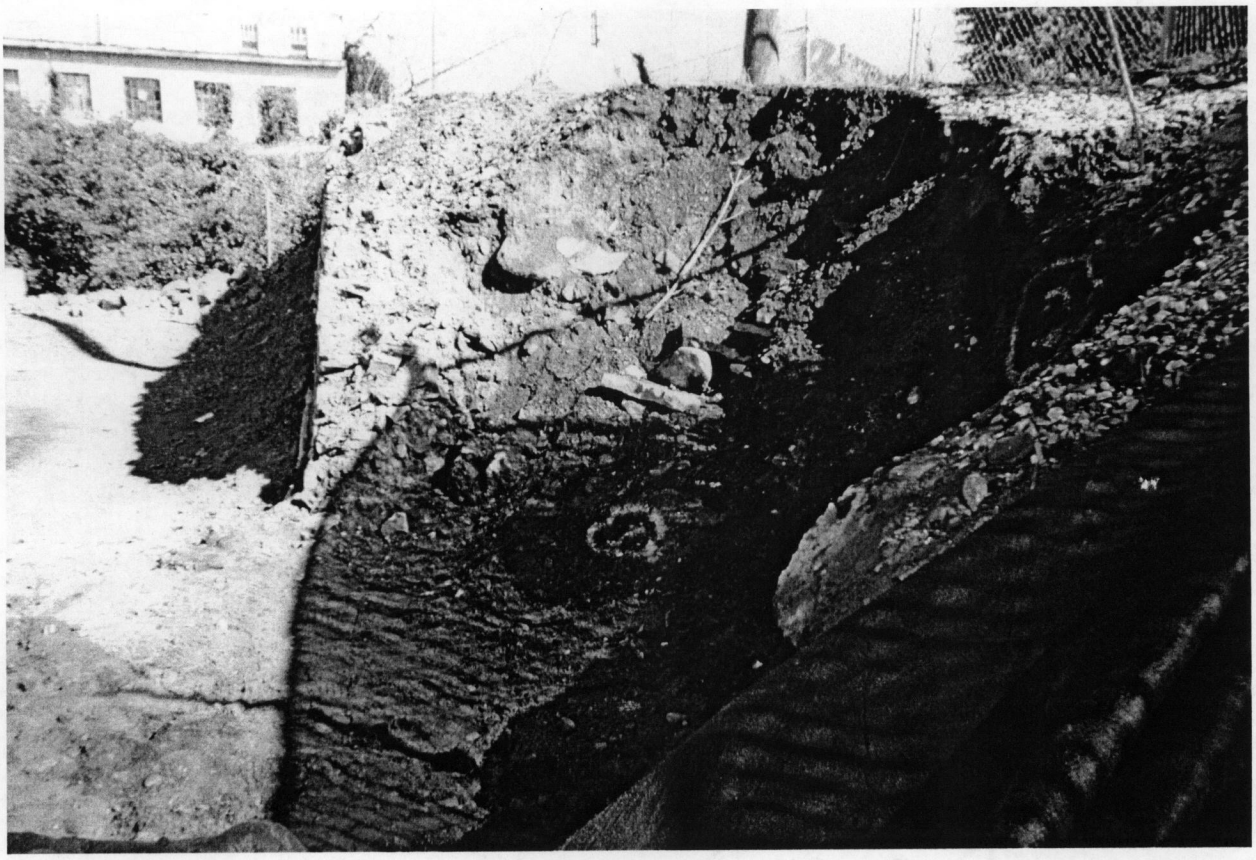
The blue staining is evidence of purifier waste observed from an eroded area on the road embankment along Central Avenue. A modification to the Work Plan to remove the purifier waste was approved by the NYSDEC.

NYSEG



MECHANICVILLE CENTRAL AVENUE
FORMER MANUFACTURED GAS PLANT SITE
1999-2000 REMEDIATION PROJECT
PHOTO NUMBER 34
SEPTEMBER 2000

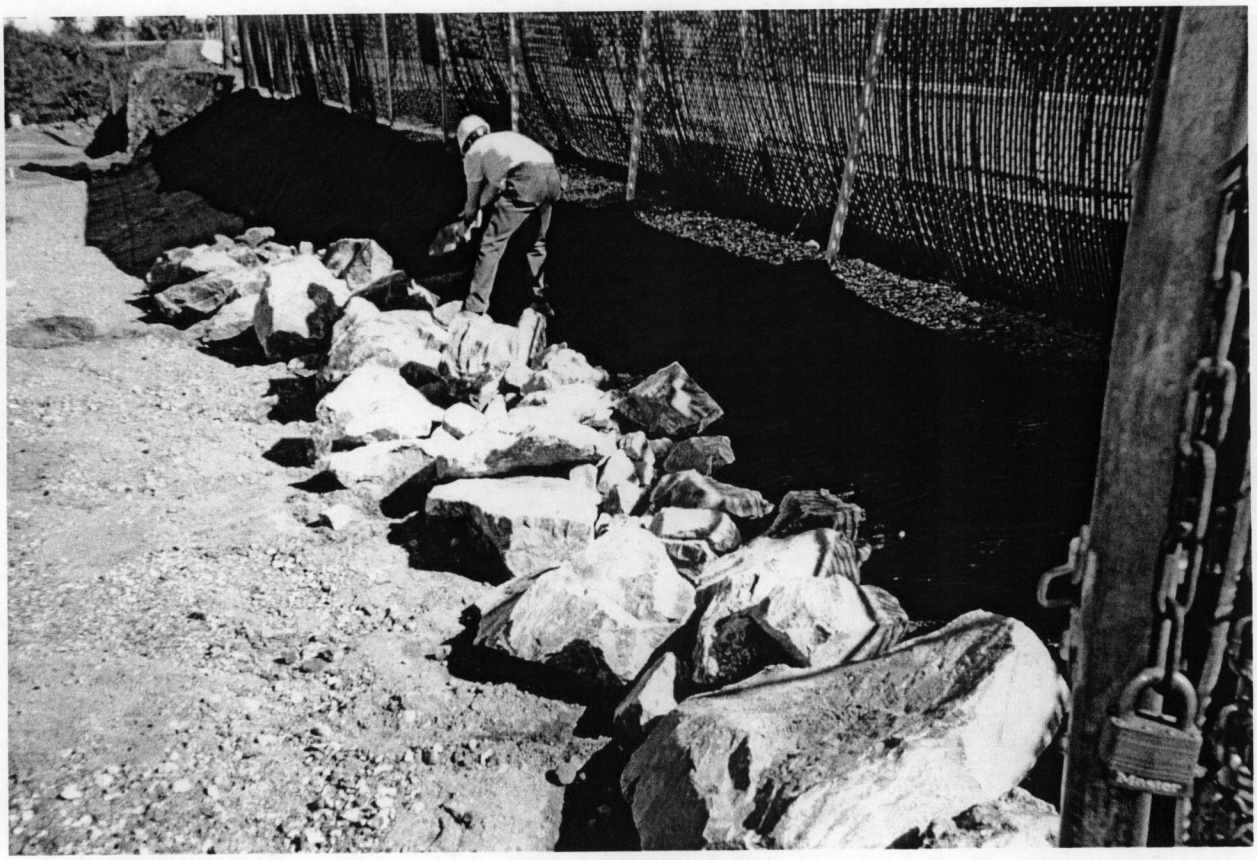
Looking east, 13.03 tons of purifier waste contaminated soil was removed and disposed in Seneca Meadows Landfill, Waterloo, NY. Two (2) post excavation samples were taken.



MECHANICVILLE CENTRAL AVENUE
FORMER MANUFACTURED GAS PLANT SITE
1999-2000 REMEDIATION PROJECT
PHOTO NUMBER 35
SEPTEMBER 2000

Looking north, 13.03 tons of purifier waste contaminated soil was removed and disposed in Seneca Meadows Landfill, Waterloo, NY. The area of contamination was next to the former boiler house foundation as shown in photo.

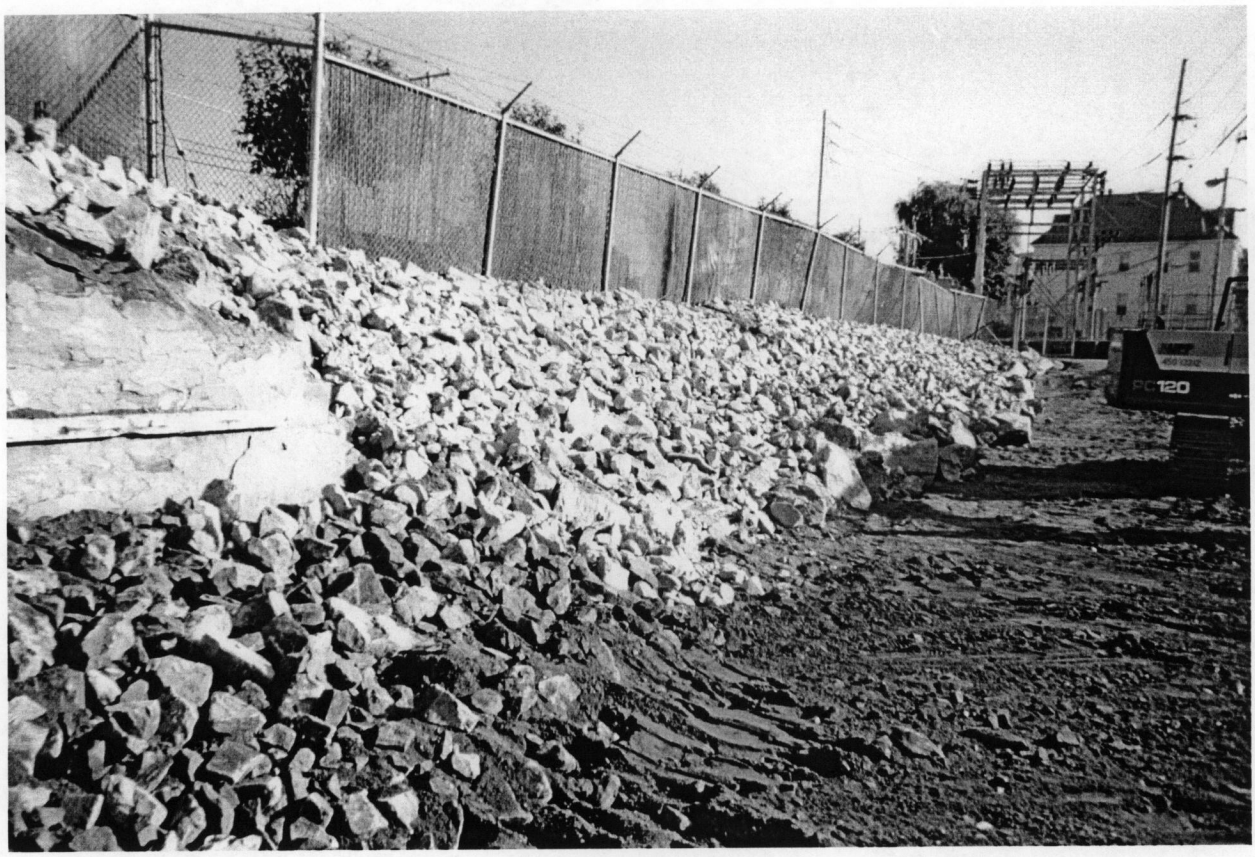
NYSEG



MECHANICVILLE CENTRAL AVENUE
FORMER MANUFACTURED GAS PLANT SITE
1999-2000 REMEDIATION PROJECT
PHOTO NUMBER 36
SEPTEMBER 2000

Looking north, to protect from future erosion along Central Avenue, geofabric and stone rip rap was placed on the embankment.

NYSEG



MECHANICVILLE CENTRAL AVENUE
FORMER MANUFACTURED GAS PLANT SITE
1999-2000 REMEDIATION PROJECT
PHOTO NUMBER 37
SEPTEMBER 2000

Looking south, shows finished stone rip rap on embankment along Central Avenue.



MECHANICVILLE CENTRAL AVENUE
FORMER MANUFACTURED GAS PLANT SITE
1999-2000 REMEDIATION PROJECT
PHOTO NUMBER 38
SEPTEMBER 2000

Looking east, stone rip rap was also placed on the south side of the Site adjacent to Ferris Lane to prevent erosion from runoff from Ferris Lane.