MALONE (AMSDEN ST.) NON-OWNED FORMER MGP SITE
MALONE, NEW YORK

Site-Specific Work Plan
For
Site Characterization

Prepared for:

Niagara Mohawk
A National Grid Company

Niagara Mohawk
300 Erie Boulevard West
Syracuse, New York

Prepared by:

FOSTER WHEELER

One Park Place
300 South Street, Suite 620
Syracuse, New York

NOVEMBER 2002

MALONE (AMSDEN ST.) NON-OWNED FORMER MGP SITE
MALONE, NEW YORK

SITE-SPECIFIC WORK PLAN FOR SITE CHARACTERIZATION

TABLE OF CONTENTS

Section	Title	Page No.
1.0	**INTRODUCTION**	**1**
2.0	**SITE DESCRIPTION**	**1**
2.1	Site History	2
2.2	Current Conditions	4
3.0	**SCOPE OF INVESTIGATION**	**4**
4.0	**HEALTH AND SAFETY INFORMATION**	**9**
5.0	**PROJECT SCHEDULE**	**9**
6.0	**REFERENCES**	**9**

Figures

Figure 1	Site Location Map	1
Figure 2	1898 Sanborn Map	3
Figure 3	1923 Sanborn Map	4
Figure 4	Site Characterization Sampling and Test Pit Locations	5
Figure 5	Project Schedule	10

Tables

Table 1	Summary of Laboratory Analyses for Site Characterization	8

Attachments

Attachment A	Hospital Route Map
Attachment B	Emergency and Site Contacts
Attachment C	Malone Specific Data from "Survey of Town Gas and By-Product Production and Locations in the U.S. (1880-1950)"

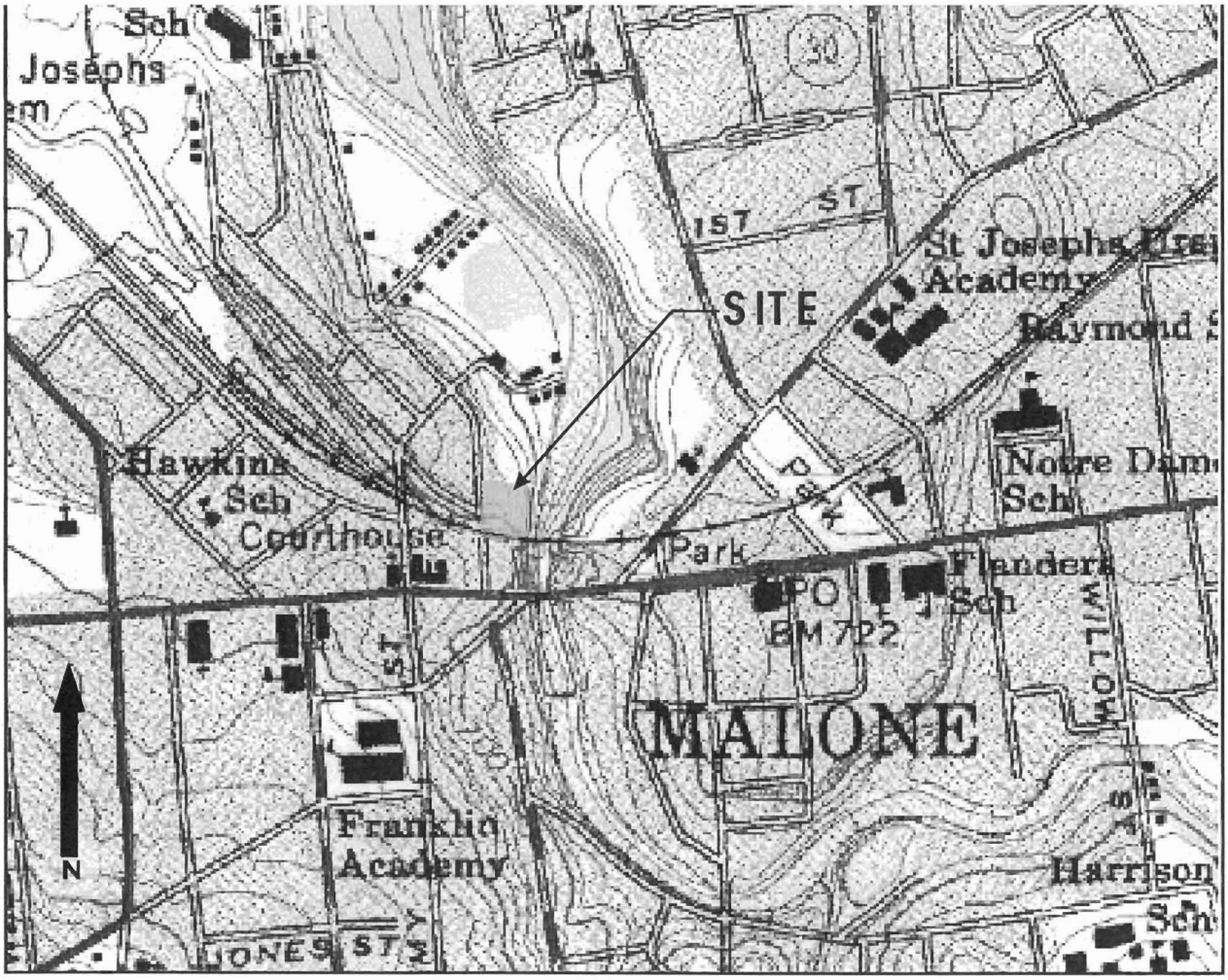
1.0 INTRODUCTION

This Work Plan presents the Site-specific scope of investigation activities and health and safety considerations for the Malone (Amsden St.) Non-owned Former Manufactured Gas Plant (MGP) Site. The purpose and objectives of the investigation, rationale for the investigation approach, data quality objectives, field investigation procedures, quality assurance/quality control (QA/QC) requirements, and generic health and safety requirements are presented in the Generic Work Plan for Non-owned Former MGP Sites (Volume II).

2.0 SITE DESCRIPTION

The Malone (Amsden St.) Site is a former MGP located at 25 Amsden Street, Franklin County, Malone, New York and comprises approximately 0.76 acres. Figure 1 illustrates the location of the property on the USGS 7.5 minute Malone Quadrangle map.

Figure 1. Site Location Map



Scale ~ 1:10,000

2.1 SITE HISTORY

Foster Wheeler Environmental performed a review of nine Sanborn Fire Insurance maps (1884, 1892, 1898, 1903, 1908, 1914, 1923, 1950, and 1965), illustrating the property on Amsden Street. Sanborn maps and other third party documentation are provided for informational purposes only and Niagara Mohawk (NM) does not warrant the accuracy of such information. The results of the review are presented, by year, below.

1884 The facility is located at 404 Amsden Street. The property is bound by the Salmon River to the east and the Ogdensburg & Lake Champlain railroad tracks to the south. Several buildings are shown on the property. On the southwest corner of the property is the purifying house, storage sheds, coal shed, and coal pocket. It appears the coal is delivered via rail as noted by the chute into the coal pocket from the railroad tracks. An office, work room, and retorts are in a building located along the west-central portion of the property. An additional building is shown further to the north. East of the retorts is a circular holder (approximately 40 ft. in diameter) with an outer seven-sided shell.

1892 The Site appears the same as noted in the 1884 Sanborn map.

1898 The facility is named the Malone Light, Heat, Power, & Coal Co. Expansion has taken place on the property since the 1892 Sanborn map. A set of scales has been added north of the purifying house. The building west of the gas holder has been expanded to connect to the holder. A railroad spur has been constructed onto the property, parallel with the existing railroad tracks. A chute from the railroad spur leading to a wood house built in the southeast corner of the property, adjacent to the Salmon River, has been built. North of the wood house and adjacent to the Salmon River, a potential engine building was constructed with five dynamos (generators) noted and a coal shed has been added (see Figure 2).

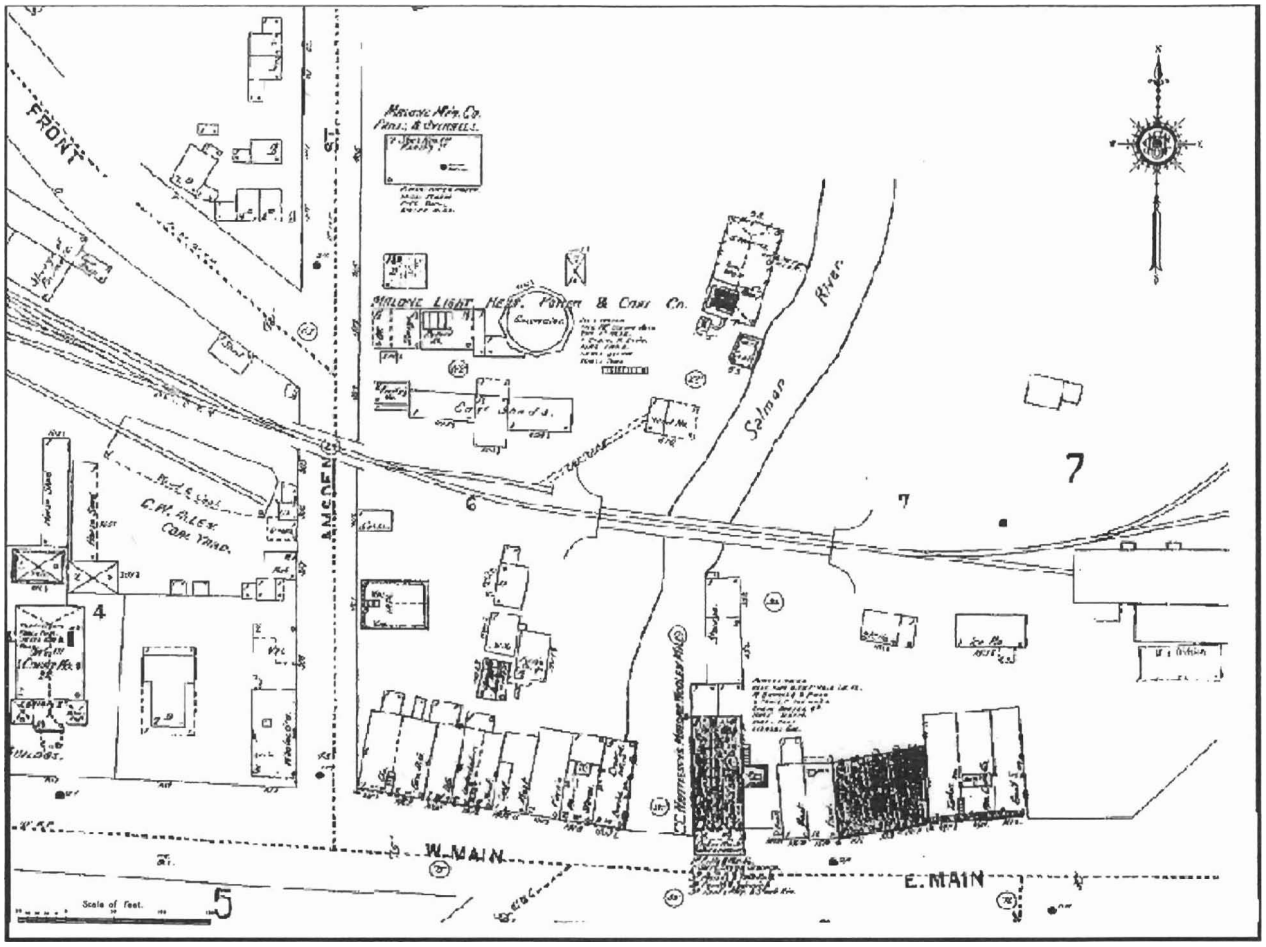
1903 The facility name is now shown as the Malone Light and Power Co. The street numbers have been changed. The facility's address is now 25 Amsden Street. The facility appears to be the same as shown on the 1898 Sanborn map, with some exceptions. An underground tar tank is noted north of the retort house. The building along the river has been expanded to include an attached dynamo house. The wood house is no longer shown on the map.

1908 The facility appears to be the same as shown on the 1903 Sanborn map. An addition was built between the two main buildings along Amsden Street, to connect them. The coal shed capacity was increased by adding another coal shed adjacent to the railroad spur.

1914 The facility appears to be the same as shown on the 1908 Sanborn map. The building northwest of the retort house is labeled the switchboard and has been connected to the main building.

1923 The facility has been upgraded from the previous map. The holder has been changed into a coal shed and a chute is extended into the coal sheds (see Figure 3). The inner circular gas holder is not shown on the map, only the outer octagonal shell. Four circular structures appear to have been added in the vicinity of the coal sheds and a chute-like structure connects the circular structures to the railroad. Northeast of the former holder, an iron gasometer (approximately 45 ft. in diameter) has been added. A coal shed was added north of the switchboard. The engine room is labeled as containing transformers.

Figure 2. 1898 Sanborn Map

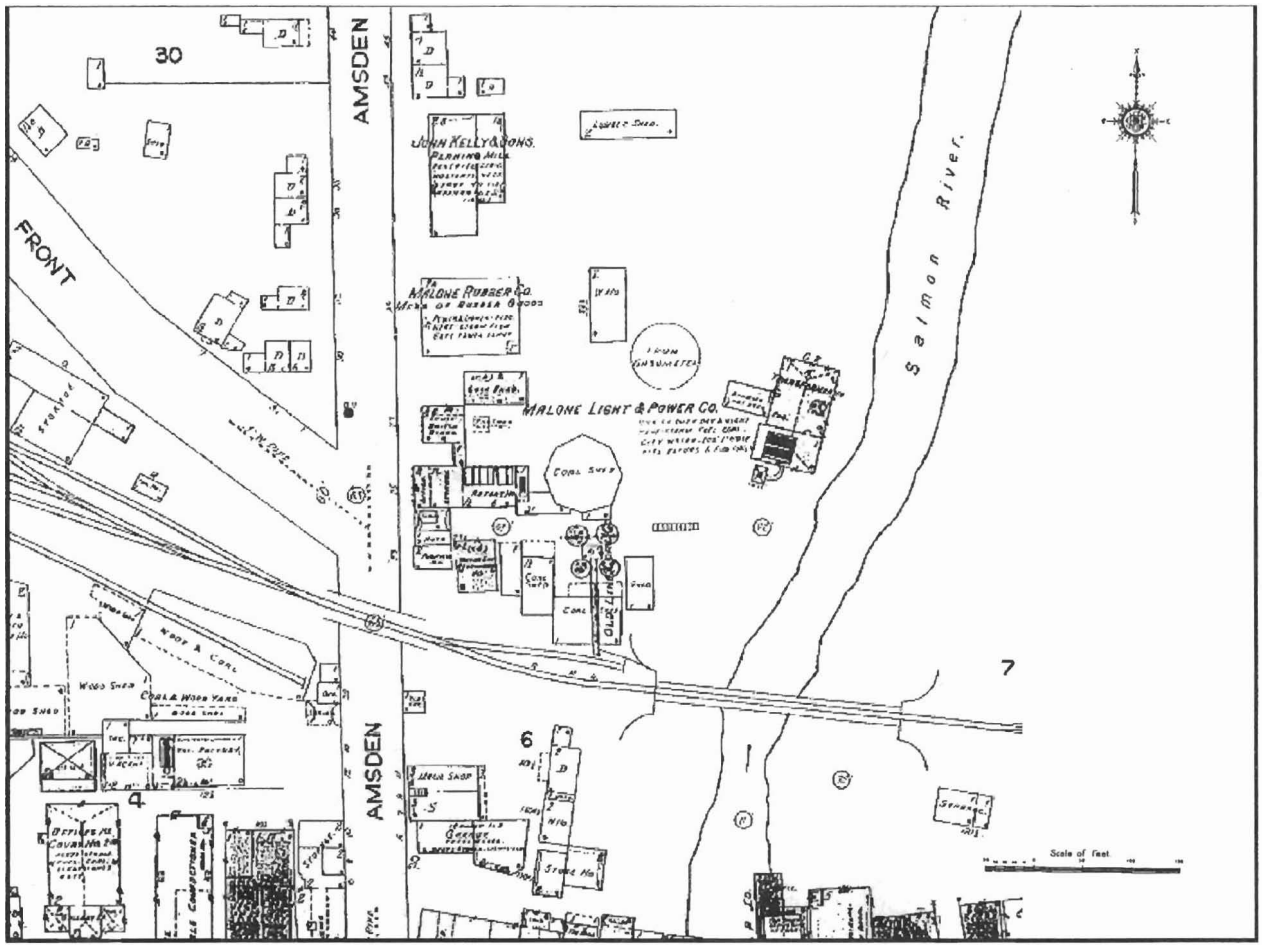


1950 NM now owns the property. The coal sheds, holder and iron gasometer, engine building, retort house, chute from the railroad tracks, and underground tar tank are no longer shown on the map. A substation is now located where the former switchboard was located. An office, workshop, and gas warehouse are now present in the location of the former purifier house. Behind the building in the location of the former coal sheds is a gas mixer and two propane tanks.

1965 The facility appears the same as noted in the 1950 Sanborn map.

Detailed information is given for the Malone Site in Table B-1 of the "Survey of Town Gas and By-product Production and Locations in the U.S (1880-1950)" (see Appendix C). Coal gas was manufactured between 1890 and 1940 as confirmed by the MGP structures on the Sanborn map; however, no data were reported for 1950.

Figure 3. 1923 Sanborn Map



2.2 CURRENT CONDITIONS

The Malone (Amsden St.) Non-owned Former MGP Site is located in a mixed commercial and residential portion of the Village of Malone. The Site is currently utilized as a warehouse for a local furniture store that is owned by the Kriff Furniture Company. A portion of the property along the Salmon River contains thick vegetation and trees. Evidence of the former relief holder was identified behind the warehouse and adjacent to the river during a NM Site visit on October 22, 1999.

3.0 SCOPE OF INVESTIGATION

The scope of the Site Characterization of the Malone Non-owned Former MGP Site is described below. Preliminary sample locations are shown on Figure 4. Field activities will be performed in accordance with the Generic Plans (Volume II).

Niagara Mohawk
A National Grid Company

Malone (Amsden St.) Non-Owned Former MGP Site
Site-Specific Work Plan

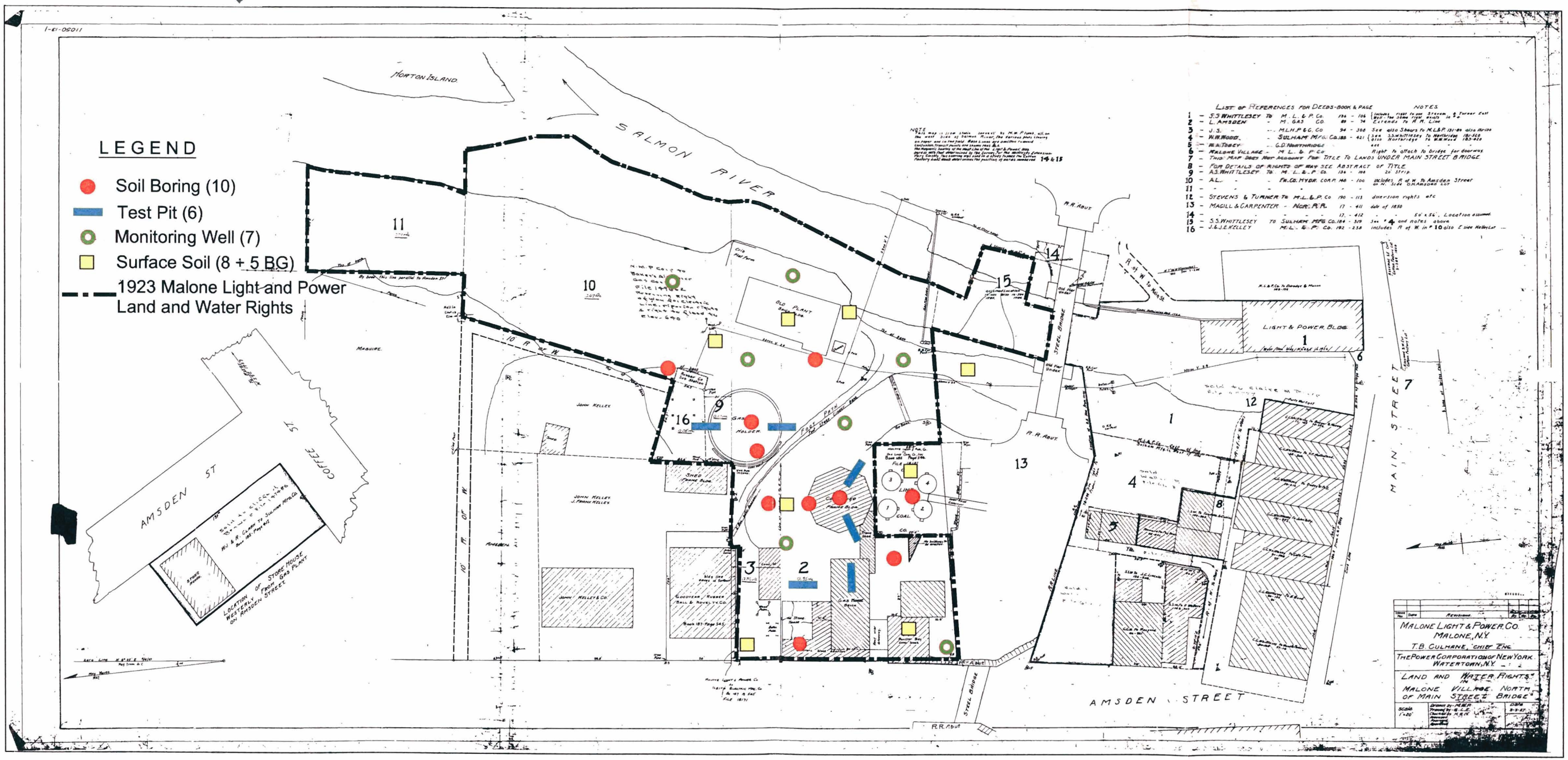


Figure 4
Site Characterization Sampling and Test Pit Locations

The Site Characterization at the Malone Site will include the following:

1 Advancement of seventeen (17) soil borings of which thirteen (13) will be advanced to a target depth of 30 feet below ground surface (bgs) and at least 5 feet below the bottom of any MGP-related structures. Four (4) borings inside the holders will be advanced to a target depth of 20 feet bgs or 5 feet below the bottom of the holder, whichever is deeper, to assess subsurface conditions. If soil samples indicate the presence of MGP impacts, the soil borings will be advanced deeper until there is reasonable assurance we are beyond the zone of impact. The locations of the borings are in a modified grid, biased toward areas suspected to contain former MGP structures and to document background conditions. Soil boring locations will be biased towards the tar-tank, and the holder areas, including borings inside the holders (center) to determine the presence of DNAPL or impacted material in the holder and the configuration/construction material of the holder foundation (e.g., sloped, cone, etc.). Boring locations may be modified in the field based on test pit results. A background boring location has been selected in an area upgradient of potential Site impacts.

2. Seven (7) of the borings will be converted into monitoring wells. The position of six (6) of these borings will be downslope of the holder areas to detect impacts in groundwater, if any, from these former structures and on-site operations. One of the monitoring wells will be positioned upslope of the Site to provide background data. The wells will be oriented for the collection of water level measurements to ascertain groundwater flow direction and to obtain representative groundwater samples. The wells will be constructed of 2-inch PVC screen and riser and with a target depth of 30 feet. If any of the other ten (10) borings encounter mobile tar, they will be completed as wells, including a sump to collect mobile tar, and the overall number and positioning of monitoring wells will be re-evaluated.

3. Excavation of six (6) test pits, two (2) located across opposite walls of each of the two (2) gas holders, one (1) in the vicinity of the former production building, and one (1) in the vicinity of the tar tank to determine the location, dimensions, and construction of these former MGP structures, and whether MGP impacts are still present.

4. A total of thirteen (13) surface soil samples will be collected (0 to 2 inches bgs) from locations across the property. Included will be the collection of five (5) off-site background locations to be determined in the field in consultation with NM and NYSDEC.

5. Analytical samples will be collected from specific sample locations/intervals at the following frequency: 1) six (6) soil samples per hole collected every five (5) feet from each soil boring and monitoring well location analyzed for BTEX, PAHs and CN. Soil samples collected from the soil boring in the vicinity of the former building, adjacent to the river will also be analyzed for PCBs; ten percent of the samples will be designated for TCL/TAC analyses; 2) one soil sample will be collected from each borehole and analyzed for TOC; 3) based on field observations, samples from the holder borings and others may be designated for GC fingerprint analysis, particularly if non-MGP impacts are suspected; 4) two (2) rounds of groundwater samples from each of the wells analyzed for full TCL/TAL; 5) two (2) Shelby tube samples will be collected for analysis of geotechnical parameters (i.e., porosity, permeability, bulk density, grain size, Atterberg limits, percent moisture, specific gravity); and 6) thirteen (13) surface soil samples including five (5) background samples will be analyzed for TCL/TAL parameters and TOC. See Table 1 for analytical testing details.

6. A baseline ground survey of the Site will be performed to develop a base map of the Site for development of the Site GIS and for presentation of data. This baseline survey will encompass surveying surface features, elevations (2-foot contours), underground utilities, structures, materials of construction, easements, property lines, and other relevant information located within the survey limits identified by Foster Wheeler Environmental for the Site. The second phase, Post Investigation Survey, will be conducted after Foster Wheeler Environmental conducts Site Characterization at the Site. Upon completion of the field investigation activities, a Post Investigation Survey will be performed and will include the survey of wells installed, soil borings drilled, test pits excavated, and sampling locations.
7. Analytical data from the Site Characterization will be obtained from the laboratories in GIS-compatible format and imported into GIS\Key™ for data tracking, analysis and presentation. Within the GIS, data will be compared to regulatory limits (e.g., TAGM 4046 for soils, etc.). Maps depicting the groundwater flow direction and the soil and groundwater analytical data will be developed in the GIS for incorporation into the Site Characterization Report; the figures will provide a summary of the data as well as highlighting regulatory exceedances. Boring logs and cross sections will also be developed in the GIS based on the field data for presentation in the Site Characterization Report. In the event upon review of the data generated, additional investigation is needed at the Site, we will negotiate with the NM PM a reduced deliverable (Data Deliverable) to the NYSDEC.
8. The analytical data generated from the field activities will undergo data validation. A Data Usability Summary Report (DUSR) will be prepared following completion of the data validation task.

4.0 HEALTH AND SAFETY INFORMATION

Health and safety requirements for Site Characterization activities are provided in the Generic Health and Safety Plan (Volume II). The Site-specific Hospital Route Map and Emergency and Site Contacts are provided as Attachments A and B, respectively, to this Work Plan.

TABLE 1
Summary of Laboratory Analyses for Site Characterization
Malone (Amsden St.) Non-owned Former MGP Site

			Field QC Samples			Laboratory QC Samples			
Subtask	Sample Matrix	Laboratory Analysis	No. of Samples	Trip Blanks[3]	Field Duplicates	Equipment/ Field Blanks	MS/MSD[1]	MSB/LCS[2]	Total
Surface Soil	Soil	TCL VOCs, SVOCs, TAL metals, TOC	11	0	1	1	1/1	1/1	17
Subsurface Soil	Soil	BTEX, PAHs, CN^-	91	0	5	5	5/5	5/5	121
		PCBs	6	0	1	1	1/1	1/1	12
		TOC	17	0	0	0	0	0	17
		TCL, VOCs, SVOCs, TAL metals	11	0	1	1	1/1	1/1	17
		GC Fingerprint	1	0	0	0	0	0	1
		Geotechnical parameters[4]	2	0	0	0	0	0	2
Groundwater	Water	TCL VOCs, SVOCs, TAL metals	14[5]	6	2	2	2/2	2/2	32

NOTES:

1 MS/MSD: matrix spike/matrix spike duplicate.
2 MSB/LCS: matrix spike blank/laboratory control sample.
3 Trip blanks will be analyzed for TCL VOC parameters only.
4 Porosity, permeability, bulk density, grain size, Atterberg Limits, % moisture and specific gravity.
5 Based on two rounds of groundwater sampling.

5.0 PROJECT SCHEDULE

The schedule for implementation of the Malone (Amsden St.) Non-owned Former MGP Site Characterization activities is provided in Figure 5. This conceptual project schedule identifies major milestones for the overall Site Characterization for the Malone (Amsden St.) Non-owned Former MGP Site. Under the Voluntary Cleanup Order, NM is concurrently performing Site Characterization activities at a number of Sites. In order to complete these investigations as efficiently as possible, NM may adjust the schedule of the intermediate activities (e.g., field investigation, survey, etc.) at the Malone (Amsden St.) Non-owned Former MGP Site to allow these activities to be performed sequentially with other sites in the proximity to the Malone (Amsden St.) Non-owned Former MGP Site.

6.0 REFERENCES

Radian, 1985: Survey of Town Gas and By-Product Productions and Locations in the U.S. (1880-1950), Robert Eng, Radian Corporation for USEPA (EPA/600/7-85/004), February 1985.

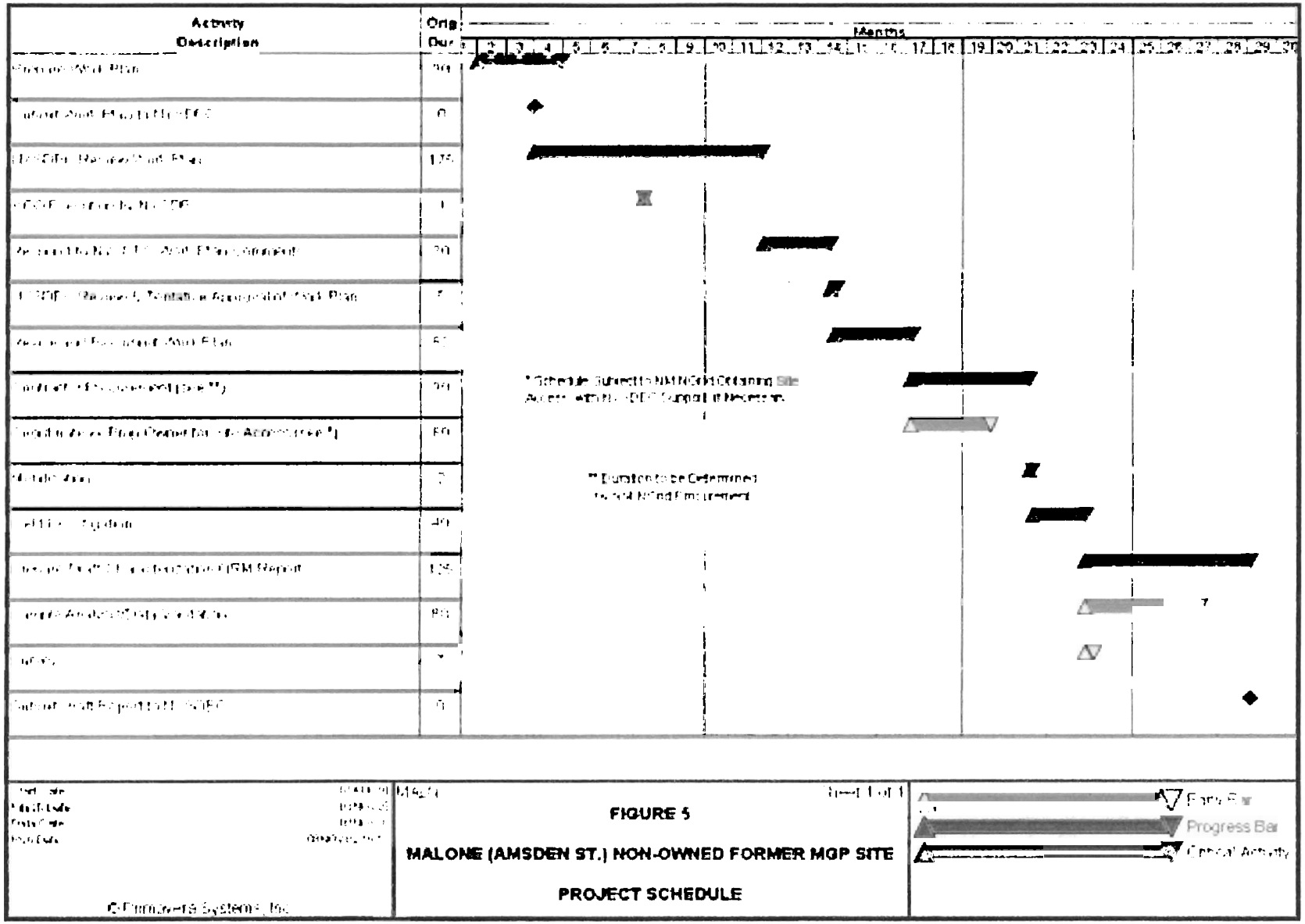


FIGURE 5

MALONE (AMSDEN ST.) NON-OWNED FORMER MGP SITE

PROJECT SCHEDULE

ATTACHMENT A

HOSPITAL ROUTE MAP

ALICE HYDE MEDICAL CENTER
115 PARK ST
MALONE, NY 12953
518-483-3000

DIRECTIONS:

1: Start out going East on US-11 towards NY-30 by turning left. 0.1 miles
2: Turn SLIGHT LEFT onto NY-30. 0.2 miles
3: Turn LEFT onto Park St. 0.25 miles

ATTACHMENT B

EMERGENCY AND SITE CONTACTS

EMERGENCY AND SITE CONTACTS

CONTACT	FIRM OR AGENCY	TELEPHONE NUMBER
Police		911
Fire		911
Hospital	ALICE HYDE MEDICAL CENTER 115 PARK ST MALONE, NY 12953	*518-483-3000*
Ambulance		911
NM Project Manager Jean-Pierre Moreau	Niagara Mohawk	315-428-6808
NM Safety Department William Todeschini	Niagara Mohawk	315-460-1303
Foster Wheeler Environmental Project Manager John Ponton	Foster Wheeler Environmental Corp.	215-702-4105
Foster Wheeler Environmental Project Environmental and Safety Manager Grey Coppi	Foster Wheeler Environmental Corp.	215-702-4079
Foster Wheeler Environmental FOL TBD*	Foster Wheeler Environmental Corp.	973-452-4279 (Field Cell Phone)
Chemtrec		800-424-9300
National Response Center		800-424-8802
NYSDEC Spill Hotline	NYSDEC	800-457-7362 518 457-7362
Poison Control Center		800-336-6997
Underground Facility Protective Organization	UFPO	800-962-7962
Utility Emergencies (Electric & Gas)	Niagara Mohawk	800-932-0301

The Emergency Phone Numbers listed are preliminary. Upon mobilization, the FOL will verify all numbers, and document the changes in the Site Logbook. Any changes will also be documented with a field change request form and appended to this Site-Specific Work Plan.

*TBD - To Be Determined - The FOL has not been selected for this project at this time.

ATTACHMENT C

MALONE SPECIFIC DATA
from
"SURVEY OF TOWN GAS AND BY-PRODUCT PRODUCTION AND LOCATIONS IN THE U.S. (1880-1950)"

TABLE B-1 (continued)

STATE: NEW YORK

NO.	CITY		YEAR	STATUS	GAS TYPE	GAS PRODUCTION RATE (MM cu.ft./YR) Coal	Water	Oil	Coke	Total	GASIFIER/ PROCESS	BY-PRODUCTS Coke	for Ammonia	Other	MISCELLANEOUS INFORMATION
69	Malone	* O L Co	1870	O	C	2				2					
			1900	O	C	(4)									
			1910	O	C	4				8					
			1920	O	C	15				15		(-)	(2)		
			1930	O	C	22				22		(1)	2		
			1940	O	C	13				13		1	0		
			1950	O											
			AVERAGED:			11				11		1	0		
70	Medina	* O L Co	1890	O	?										
			1900	O											
			1910	O	C	5				5					
			1920	O	C	7				7					
			1930	O											
			1940	O											
			1950	-											
			AVERAGED:			6				6					
71	Middletown	* O & E1 Co	1890	O	C	14				14					
			1900	O	C	14				14					
			1910	O	O			35		35					
			1920	O	O			93		93					
			1930	O											
			1940	O											
			1950	-											
			AVERAGED			14		65		10					
72	Milton	Ballston Spa O L Co	1890	O	W			2		2	W-L				
			1900	O											
			1910	O											
			1920	-											
			1930	-											
			1940	-											
			1950	-											
			AVERAGED:					2		2					

(continued)

LEGEND FOR TABLE B-1

STATUS

* - Manufactured gas for that year
X - Discontinued/Out of business that year
O - Not found for that year
C - Consolidated with another company (see comments)
N - Natural gas supplier for that year
P - Gas purchased from another firm that year

COMPANY

" - "City name"
G - Gas
E - Electric
F - Fuel
L - Light
H - Heat
P - Power
Mfg - Manufacturing
Co - Company

GAS TYPE

C - Coal gas
W - Water gas
CW- Carburetted water gas
O - Oil gas
N - Natural

GAS PRODUCTION RATE

\# - Production rate of gas in million standard cubic feet (MM scf)
(#) - Population served in 1,000 (reported when production unavailable)
[#] - Production rate estimated from 1/2 of maximum output (MM scf)

GASIFIER/PROCESS

F - Flannery
G - Granger
H-L - Hanlon
J - Jermanowski
J(B) - Jermanowski (baby)
J-L - Janeway-Logan (Oil)
K - Kendall (Oil)

LEGEND FOR TABLE B-1 (continued)

GASIFIER/PROCESS (Continued)

M-C - McKay-Critchelow
P - Patton (Oil)
S - Springer
S-G - Smith-Goldthorpe
V-Si - Van Sickel (Oil)
V-St - Van Steenburgh
W - Wilkinson

BY-PRODUCT PRODUCTION RATE

Coke - a x 10^3 tons of coke produced that year;
(a)x 10^3 tons of coke unaccounted for that year
(calculated as coke made minus coke sold).

Tar - b x 10^3 gallons of tar produced that year.

Ammonia - c x 10^3 lbs of ammonia produced that year.

Other - Amount of by-products, other than above, produced and reported that year (see MISCELLANEOUS INFORMATION for more details).