



<h1>FACT SHEET</h1>	<h2>Manufactured Gas Plant (MGP) Program</h2>
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**Site Name:** NFG - Hornell MGP  
**DEC Site #:** 851032  
**Address:** 1 Canisteo Square  
 Hornell, NY 14843

Have questions?  
See  
“Who to Contact”  
Below

### Remedy Proposed for MGP Site; Public Comment Period and Public Meeting Announced

**Public Meeting, Tuesday, March 20, 2018 at 7:00 PM**  
**V.F.W. Post 2250, 245 Canisteo Street, Hornell, NY 14843**

NYSDEC invites you to a public meeting to discuss the remedy proposed for the site. You are encouraged to provide comments at the meeting, and during the 30-day comment period described in this fact sheet.

The public is invited to comment on a remedy proposed by the New York State Department of Environmental Conservation (NYSDEC) related to the NFG - Hornell MGP site (“site”) located at 1 Canisteo Square, Hornell, Steuben County. Please see the map for the site location.

Documents related to the cleanup of this site can be found at the location(s) identified below under “Where to Find Information.” The estimated cost to implement the remedy is:

<u>OU</u>	<u>RemCost</u>
01	\$4,210,000.00

Additional site details, including environmental and health assessment summaries, are available on NYSDEC’s website at:

<http://www.dec.ny.gov/cfm/xtapps/derexternal/haz/details.cfm?pageid=3&progno=851032>

#### **How to Comment**

NYSDEC is accepting written comments about the proposed plan for 30 days, from **February 28, 2018** through **March 30, 2018**. The proposed plan is available for review at the location(s) identified below under “Where to Find Information.” Please submit comments to the NYSDEC project manager listed under Project Related Questions in the “Who to Contact” area below.

#### **Proposed Remedial Action Plan**

The remedy proposed for the site includes:

**Excavation** - On-site soils will be excavated to a depth of approximately 10 feet, and disposed off-site. This excavation will create sufficient space to accommodate soils that undergo in-situ (in-place) solidification (ISS), as described below. Underground piping and other structures associated with a source of contamination, such as the foundation of the former MGP building and the foundation and contents of the western gas holder will also be excavated and removed. Any other obstructions or debris that would inhibit ISS will be removed and disposed of off-site. Off-site soils beneath a portion of Franklin Street which exceed 500 parts per million (ppm) of site-related total polycyclic aromatic hydrocarbons (PAHs) will be excavated to a maximum depth of 15 feet and disposed off-site. The upper one foot of soil on the off-site Gas Regulator parcel to the west of the site that exceed 500 ppm of site-related total PAHs will be excavated and disposed off-site. In total, approximately 6,500 cubic yards of contaminated soil will be removed.

**In-Situ Solidification (ISS)** - ISS will be implemented in an approximately 0.45-acre area. ISS is a process that binds the soil particles in place creating a low permeability mass. Following the removal of shallow obstructions, the contaminated soil will be mixed in place with solidifying agents (typically Portland cement) or other binding agents using an excavator or augers. This produces a solidified mass resulting in a low permeability monolith, isolating the contaminants and removing them as a source of groundwater contamination. The solidified mass will then be covered with a cover system as described below.

The ISS treatment zone will extend to approximately 21 ft below ground surface (bgs), with a few areas extending as deep as 23 and 26 ft bgs to address deeper contaminant sources.

**Cover System** – All areas will be restored to their existing grade following excavation and/or ISS treatment. Where the soil cover is required over the ISS treatment area, it will consist of a minimum of 4 feet of clean soil, to protect the ISS mass from freeze/thaw cycles in the future. Elsewhere, a 1-foot clean soil cover system and demarcation layer shall be placed in areas not already covered by buildings, sidewalks, and pavement to allow for continued commercial use of the site.

**Monitored Natural Attenuation** - Groundwater contamination (remaining after active remediation) will be addressed with monitored natural attenuation (MNA). Groundwater will be monitored for site-related contamination and also for MNA indicators which will provide an understanding of the biological activity breaking down the contamination. It is anticipated that contamination will decrease over the next 5-to-10-year period. Reports of the attenuation will be provided, and active remediation will be proposed if it appears that natural processes alone will not address the contamination.

**Institutional and Engineering Controls** - An environmental easement will be placed on the property. This easement will require preparation and submittal to NYSDEC a periodic certification of institutional and engineering controls; will allow the property to be used for commercial, and industrial uses; will restrict the use of groundwater; and will require compliance with the Department approved Site Management Plan (SMP). A SMP will be developed, which includes details for maintaining the cover system, and periodic review report submittals.

#### *Additional Details*

An odor and dust control plan will be in place during clean-up activities to prevent vapors, dust, and odors from escaping into the surrounding neighborhood. A community air monitoring plan (CAMP) will also be in place to conduct real-time monitoring for VOCs and particulates (i.e., dust) at the perimeter of the site during the clean-up. The CAMP is intended to provide a measure of protection for the surrounding community, with specific action levels requiring increased monitoring, corrective actions to abate emissions, and/or work shutdown.

### *Summary of the Investigation*

Nature and Extent of Contamination: Based upon investigations conducted to date, the primary contaminant of concern is coal tar. Surface soils were analyzed for BTEX (benzene, toluene, ethylbenzene, and xylenes), PAHs, metals, and total cyanide. Sub-surface soils were analyzed for VOCs (volatile organic compounds), SVOCs (semi-volatile organic compounds), metals, total cyanide, and free cyanide. One test pit sample was tested for PCBs (polychlorinated biphenyls). Groundwater was tested for VOCs, SVOCs, metals, total cyanide, and free cyanide. Soil vapor and indoor air was tested for VOCs.

Soil - On-site total PAH surface soil values ranged from 11 ppm to 41 ppm. Cyanide was not detected above the unrestricted SCO in any of the surface soil samples. BTEX was not detected in any of the surface soil samples.

Subsurface soil containing visible coal tar mixed in the soil matrix, and/or containing contaminant concentrations greater than Commercial Use Soil Cleanup Objectives (SCOs), is present in the central area of the site. The most visibly impacted interval was from 4 to 20 feet below ground surface (bgs). Some of the tar has moved downward to depths of approximately 30 feet. However, no contamination has been found at depths which would threaten to reach bedrock.

Coal tar identified in the subsurface appears to be migrating off-site in the deeper subsurface soils in one small location, south of the original gas works. A zone one-foot thick at depth 29 to 30 feet bgs was found to have tar coatings on sand and gravel grains. The impact was not found to extend further south to borings immediately adjacent to two residences on Albion Street.

Where detected, the total BTEX (benzene, toluene, ethylbenzene, and xylenes) concentrations ranged up to 1,060 ppm, with benzene exceeding commercial SCOs, for a subsurface sample located near the former retorts and purifier. Where detected, total PAH concentrations ranged to 39,000 ppm, exceeding the commercial SCO of 500 ppm total PAHs, in a sample of coal tar-impacted soil collected 4.5 ft bgs in the former purifier area. Six subsurface samples had total cyanide concentrations exceeding the commercial SCO of 27 ppm (highest concentration of 170 ppm in the former purifier area, 4.5 ft bgs).

Groundwater - Impacted groundwater is localized around the areas with observed coal tar impacted soil. The greatest concentrations of contaminants are in the central-western area of the site. Groundwater impacts extend to the south of the site boundary; however, groundwater impacts are not present near the residences along Albion Street. The highest concentrations of total BTEX and total PAHs detected were 5,980 parts per billion (ppb) and 1,630 ppb, respectively, located in the western area of the site within the former purifier area, to the west of former Gas Holder A.

Soil Vapor & Indoor Air – A soil vapor intrusion (SVI) investigation was conducted at the on-site hotel and at one off-site residential structure. Soil vapor and indoor air samples obtained from beneath and within the hotel and the off-site residential structure did not find impacts from the former MGP. No actions were needed to address soil vapor intrusion at the structures that were sampled.

NYSDEC developed the proposed remedy after reviewing the detailed investigation of the site and evaluating the remedial options in the “feasibility study” submitted under New York’s State Superfund Program by National Fuel Gas Distribution Corporation.

## **Next Steps**

NYSDEC will consider public comments as it finalizes the remedy for the site. The selected remedy will be described in a document called a “Record of Decision” that will explain why the remedy was selected and respond to public comments.

## **Background**

**Location:** The former Hornell MGP site is located along Franklin Street, near the corner of Canisteo and Franklin Streets at the southwest side of the downtown area of Hornell, New York.

**Site Features:** The site runs east-west along the south side of Franklin Street. The eastern-most edge abuts Canisteo Street. The site is generally flat-lying and does not have any surface water features present.

The eastern third of the site is currently developed as part of a hotel property, with a portion of the building and parking areas present on the property. The central and western portion of the site is a grassy vacant lot.

**Current Zoning and Land Use:** The site is zoned as commercial. The western side of the site is bordered by a parcel owned by the City of Hornell, which is used as a gas regulator station by National Fuel Gas.

To the north and east across Franklin and Canisteo Streets, respectively, the site is bordered by commercial properties. Single-family residential properties are found to the northwest, and directly bordering the site to the south.

**Past Use of the Site:** The site was used for the production of manufactured gas from approximately 1873 to 1932. The gas manufacturing processes involved the heating of coal and/or petroleum products to produce a gas mixture. Once cooled and purified, the gas was distributed through a local pipeline network throughout the city of Hornell. The gas was used for heating and cooking in much the same way that natural gas is used today. In the early years, the gas was also used for lighting in homes and in streetlights.

The availability of cheaper natural gas from nearby wells caused the plant to close for a lengthy period in the early 1900s. A second phase of gas manufacturing activity began in 1926, but only lasted a few years. By 1932, the plant was inactive, and the gas holders on the site were used only for storage of natural gas.

Thereafter, the site was used for natural gas storage and distribution until about the early 1950s, when the last gas holder was removed from the site.

The site has remained generally vacant. Circa 1947, the site was used for used truck sales. A hotel occupying a small portion of the site was built after the Hornell Industrial Development Agency acquired the property in 1993 for development.

During the December 2010 Remedial Investigation field work, the excavation of a test pit along the northwest side of the site was expanded to remove soil and small amounts of tar which was exposed at the ground surface. The surface soil was removed over an area of approximately 10 feet by 10 feet, and to a depth of 2 feet.

**Site Geology and Hydrogeology:** The surficial geology is made up of three subsurface soil units; man-made fill underlain by an alluvial unit of silt and clay, which is underlain by glacial outwash sand and gravel.

The fill unit is between 4 and 10 feet thick, and contains occasional brick, ash and cinders. Beneath the fill, but above the water table, is a mixed silt unit with some amounts of clay and sand approximately 5 to 8 feet thick. Beginning at 7 to 14 feet bgs and extending to the base of all site borings (generally 30 feet) is a sand and gravel unit. The sand and gravel unit is expected to extend downward to bedrock. Since no contamination was found at depth beneath the site, the depth to bedrock has not been verified, but it is estimated, from US Geological Survey (USGS) reports, to be at least 100 feet bgs at the site.

The site is located approximately 2,100 feet northwest of the Canisteo River. There are no natural surface water connections between the site and the river. The Canisteo River flows from north to south through the eastern side of the city of Hornell.

This site is located above a high permeability sand and gravel aquifer. The water table is present at approximately 14 feet bgs. One monitoring well within the westernmost former gas holder, found groundwater at approximately 10 feet bgs, which appears to be perched water based on water levels beneath the rest of the site. The direction of groundwater flow is to the south and east. No confining units were observed to separate multiple groundwater zones.

**About the Manufactured Gas Plant Program:** NYSDEC has one of the most aggressive Manufactured Gas Plant (MGP) site investigation and remediation programs in the country. Since the problems associated with the former MGP sites were identified, NYSDEC has been working with all the utilities on a state-wide basis to identify and address the issue of MGP sites for which they may have responsibility. This effort has resulted in approximately 220 sites identified for action by the eight utilities operating in New York State. Currently we have individual site or multi-site orders or agreements with all eight utilities, including National Fuel Gas, and several other individual site volunteers, to address 216 of these MGP sites.

In addition, there are 28 MGP sites that NYS is addressing or evaluating for action under the State Superfund. NYSDEC continues to seek to identify any other possible MGP sites throughout the State.

For more information about the NYSDEC's MGP Program, visit:

[www.dec.ny.gov/chemical/8430.html](http://www.dec.ny.gov/chemical/8430.html)

## FOR MORE INFORMATION

### Where to Find Information

Project documents are available at the following location(s) to help the public stay informed.

Hornell Public Library  
64 Genesee Street  
Hornell, NY 14843  
phone: (607) 324-1210

### Who to Contact

Comments and questions are always welcome and should be directed as follows:

#### Project Related Questions

William Wu  
Department of Environmental Conservation  
Division of Environmental Remediation  
625 Broadway Floor 11  
Albany, NY 12233-7014  
518-402-9662  
william.wu@dec.ny.gov

#### Site-Related Health Questions

Wendy S. Kuehner  
New York State Department of Health  
Corning Tower Room 1787 Empire State Plaza  
Albany, NY 12237  
(518) 402-7860  
BEEI@health.ny.gov

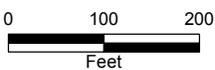
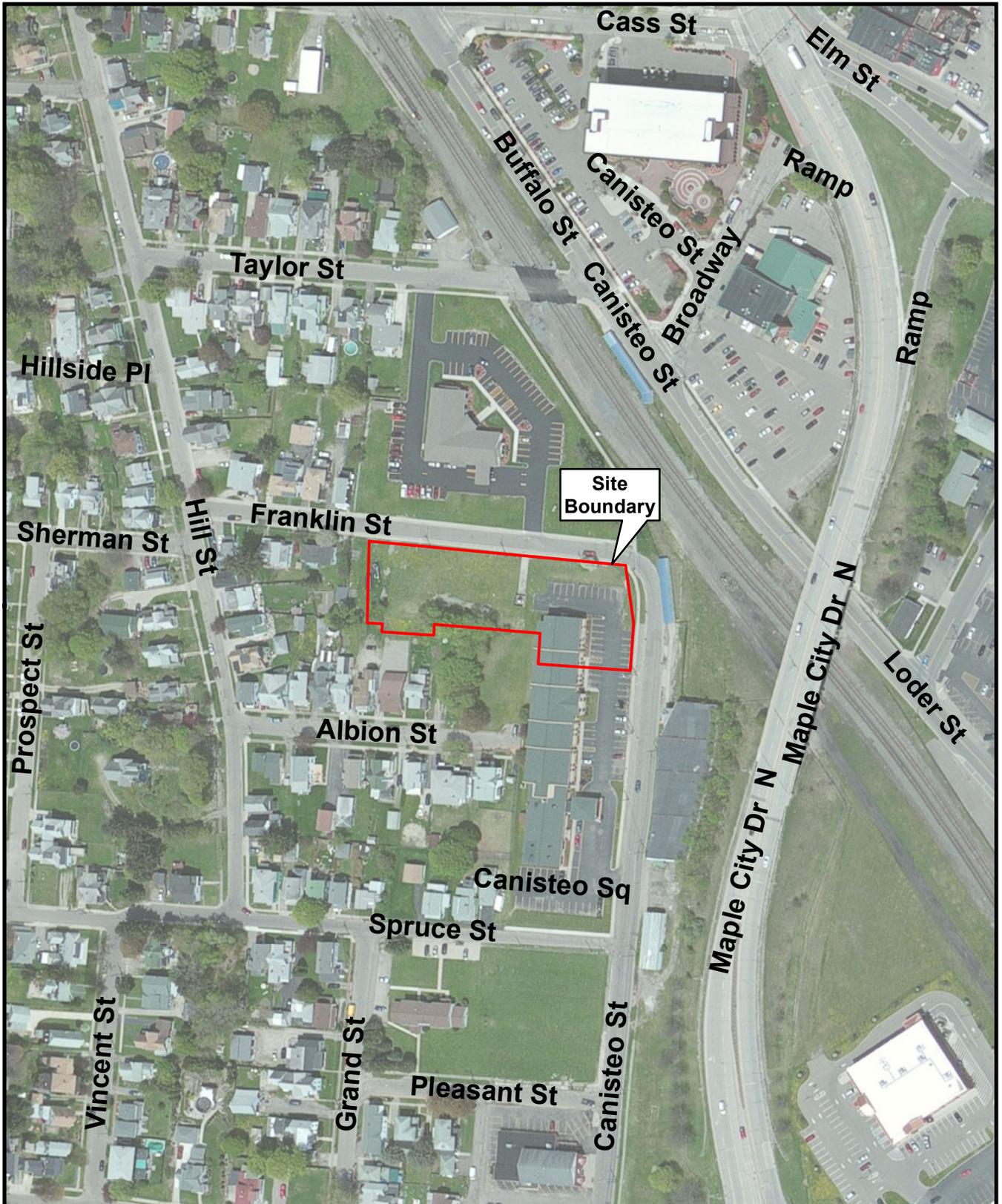
**We encourage you to share this fact sheet with neighbors and tenants, and/or post this fact sheet in a prominent area of your building for others to see.**

#### **Receive Site Fact Sheets by Email**

Have site information such as this fact sheet sent right to your email inbox. NYSDEC invites you to sign up with one or more contaminated sites county email listservs available at the following web page: <http://www.dec.ny.gov/chemical/61092.html>. It's quick, it's free, and it will help keep you *better informed*.



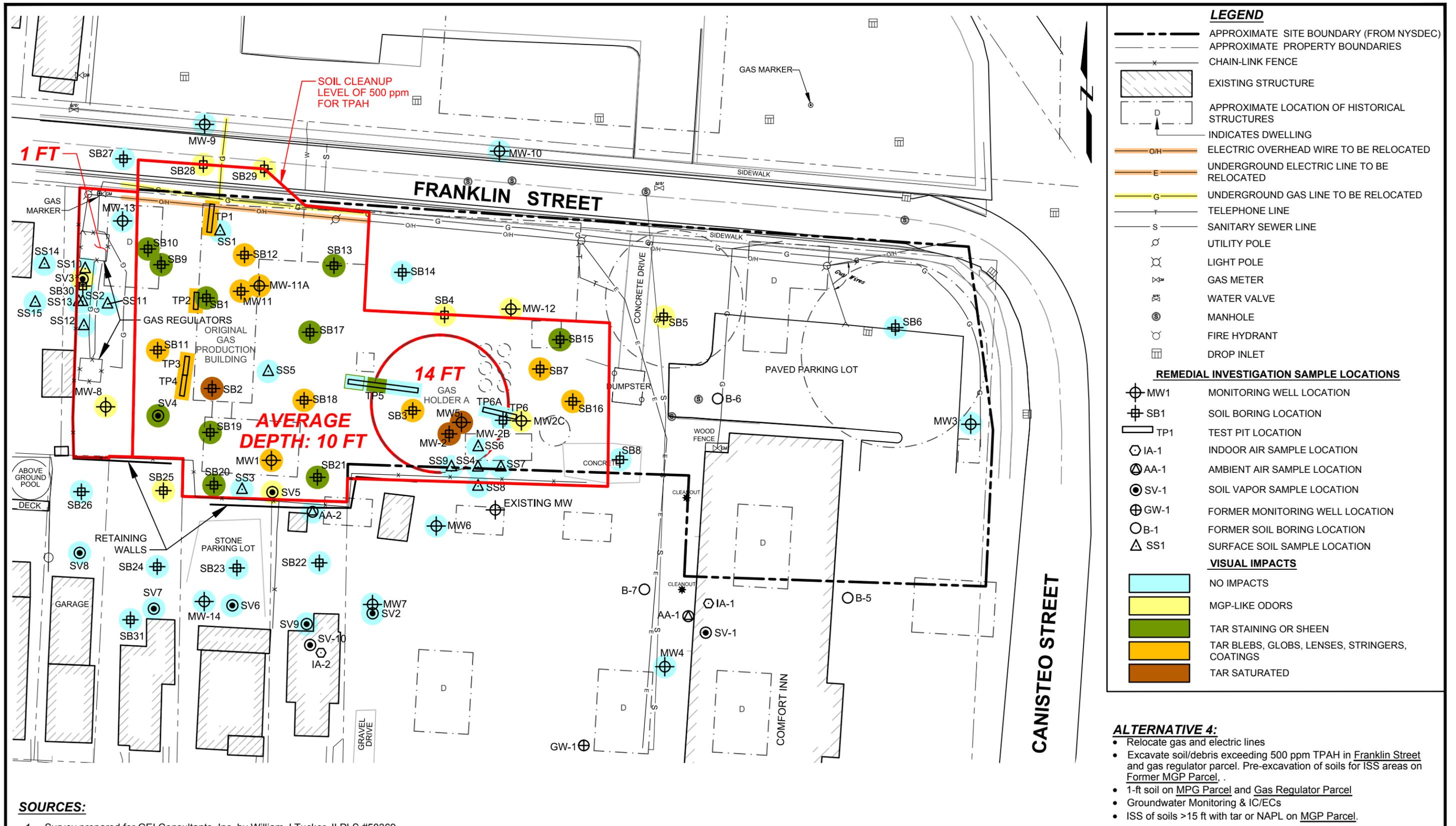
As a listserv member, you will periodically receive site-related information/announcements for all contaminated sites in the county(ies) you select.



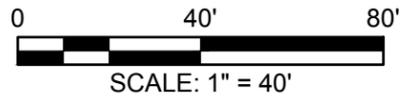
**Figure**  
**Site Map**  
 NFG - Hornell MGP  
 City of Hornell, Steuben County  
 Site No. 851032



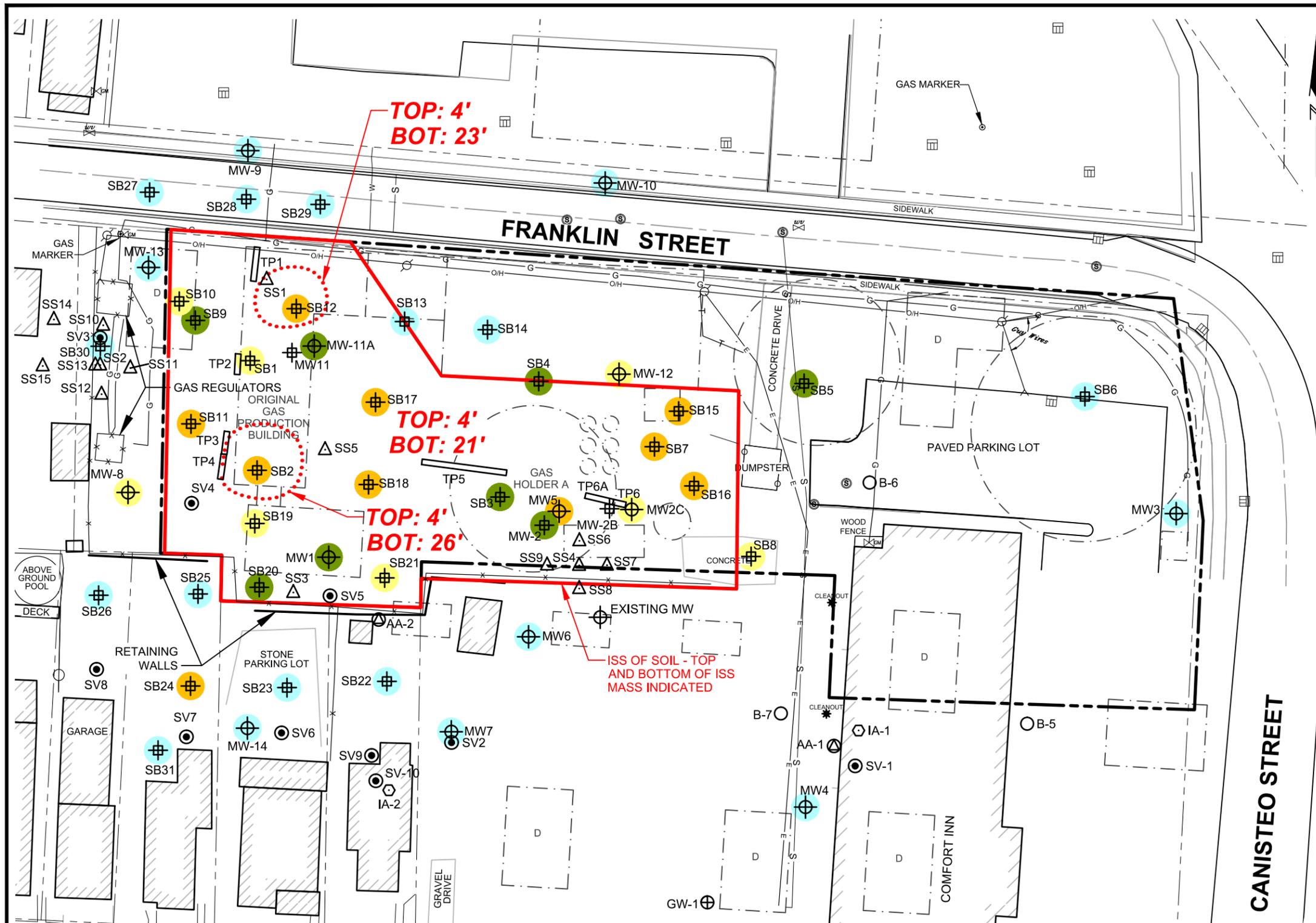
Department of  
 Environmental  
 Conservation



- SOURCES:**
1. Survey prepared for GEI Consultants, Inc. by William J Tucker, II PLS #50369, Clear Creek Land Surveying, L.L.C., Springville, N.Y. dated February 11, 2011.
  2. City of Hornell, Steuben County, NY Tax Map No. 166.06 dated Oct. 18, 2008.
  3. Modification to Order on Consent and Administrative Settlement, Attachment 1 between New York State Department of Environmental Conservation, Office of General Counsel, and National Fuel Gas dated Oct. 21, 2010.
  4. Sanborn Fire Insurance Maps from 1888 to 1961.



Feasibility Study Report Hornell Former MGP Site Hornell, New York			ALTERNATIVE 4 - PRE-ISS SOIL REMOVAL
National Fuel Gas Distribution Company			Project 1412830



**LEGEND**

- APPROXIMATE SITE BOUNDARY (FROM NYSDEC)
- - - APPROXIMATE PROPERTY BOUNDARIES
- x-x- CHAIN-LINK FENCE
- [Hatched Box] EXISTING STRUCTURE
- [Dashed Box] APPROXIMATE LOCATION OF HISTORICAL STRUCTURES
- [Circle with 'D'] INDICATES DWELLING
- o/h- ELECTRIC OVERHEAD WIRE
- E- UNDERGROUND ELECTRIC LINE
- G- UNDERGROUND GAS LINE
- T- TELEPHONE LINE
- S- SANITARY SEWER LINE
- ⊕ UTILITY POLE
- ⊙ LIGHT POLE
- ⊗ GAS METER
- ⊕ WATER VALVE
- ⊙ MANHOLE
- ⊙ FIRE HYDRANT
- ⊕ DROP INLET

**TOP: 4' BOT: 23'** TOP DEPTH (BGS) OF CURED ISS  
**TOP: 4' BOT: 21'** TOP DEPTH (BGS) OF CURED ISS  
**TOP: 4' BOT: 26'** TOP DEPTH (BGS) OF CURED ISS

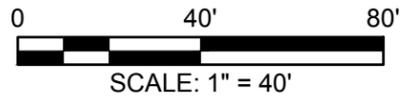
**REMEDIAL INVESTIGATION SAMPLE LOCATIONS**

- ⊕ MW1 MONITORING WELL LOCATION
- ⊕ SB1 SOIL BORING LOCATION
- TP1 TEST PIT LOCATION
- ⊙ IA-1 INDOOR AIR SAMPLE LOCATION
- ⊙ AA-1 AMBIENT AIR SAMPLE LOCATION
- ⊙ SV-1 SOIL VAPOR SAMPLE LOCATION
- ⊕ GW-1 FORMER MONITORING WELL LOCATION
- ⊙ B-1 FORMER SOIL BORING LOCATION
- △ SS1 SURFACE SOIL SAMPLE LOCATION

**VISUAL IMPACTS**

- [Light Blue Box] NO IMPACTS
- [Light Yellow Box] MGP-LIKE ODORS
- [Green Box] TAR STAINING OR SHEEN
- [Yellow Box] TAR BLEBS, GLOBS, LENSES, STRINGERS, COATINGS
- [Dark Yellow Box] TAR SATURATED

- SOURCES:**
- Survey prepared for GEI Consultants, Inc. by William J Tucker, II PLS #50369, Clear Creek Land Surveying, L.L.C., Springville, N.Y. dated February 11, 2011.
  - City of Hornell, Steuben County, NY Tax Map No. 166.06 dated Oct. 18, 2008.
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Feasibility Study Report  
 Hornell Former MGP Site  
 Hornell, New York

National Fuel Gas Distribution Company



ALTERNATIVE 4 -  
 DEPTHS OF TOP AND  
 BOTTOM OF ISS

Project 1412830 December 2017 Fig. 10b