# VOLUNTARY CLEANUP PROGRAM
# DECISION DOCUMENT

**Little Falls Former MGP site**
**Little Falls, Herkimer County, New York**
**Site Number V00470-6**
**March 2008**

## Statement of Purpose and Basis

This Voluntary Cleanup Program (VCP) Decision Document presents the remedy identified by the Department of Environmental Conservation (Department) for the Little Falls Former MGP site..

## Description of the Site

The Little Falls former manufactured gas plant (MGP) site is located on the western portion of an approximately 6.5-acre property currently owned by Feldmeier Equipment, Inc. The site is located on the south side of East Mill Street (see Figure 1), and is bordered by East Mill Street to the north, George Lumber and Building Materials Company to the west, the Mohawk River to the south, and Feldmeier Equipment's tank manufacturing building to the east. Adjacent and surrounding properties are used for industrial and commercial purposes.

Historic MGP operations at the site were primarily located within a small (approximately 0.56-acre) area on the western portion of the Feldmeier property from about 1853 to 1907. Buildings and structures associated with the former MGP operation included a coal storage shed, horizontal retorts, gas purifiers, maintenance shops, a warehouse, and several smaller buildings/structures. These buildings and structures were primarily located within the western portion of the footprint of the current tank manufacturing building. A 50,000-cubic-foot gas holder (the former onsite gas holder) was located adjacent to the Mohawk River, south of the gas works. Approximately 60% of the former onsite gas holder is located beneath the southwest corner of the current tank manufacturing building. A second gas holder (the former offsite gas holder) was constructed between 1884 and 1891 in the southeast corner of the current George Lumber Property.

## Nature and Extent of Contamination

Contamination was identified by the Remedial Investigation of this site, which represents a threat to public health and the environment, requiring a remedial program for the site to address the contamination identified below.

Nature of contamination: The MGP-related contaminants present in site media (subsurface soils and groundwater) are benzene, toluene, ethylbenzene, and xylenes (BTEX), and polynuclear aromatic hydrocarbons (PAHs). These contaminants appear to be localized to the vicinity of the former onsite

gas holder and the area immediately south and west of the tank manufacturing building.

Extent of contamination - Visible MGP impacts, ( i.e. staining, tar-saturated soils, and sheens) were encountered in subsurface soil in the vicinity of the former onsite gas holder in a narrow strip of land between the Feldmeier building and the Mohawk River (see Figure 1). No visual impacts were observed in the off-site holder area.

MGP Tars - A measurable thickness of dense non-aqueous phase liquid (DNAPL) was encountered in one bedrock monitoring well, MW-101R . Other indications of DNAPL in soil were found within or adjacent to the onsite holder. MGP tars were not identified in samples collected within or adjacent to the offsite holder.

Surface soil - The majority of the site is covered by an asphalt parking lot and a large building. There is a relatively narrow strip of vegetated soil located along the southern boundary of the site, adjacent to the Mohawk River. Concentrations of BTEX and PAHs detected in the surface soil samples were below Part 375 Soil Cleanup Objectives for unrestricted use.

Subsurface soil - The highest concentrations of BTEX and PAHs were detected in soil samples collected in the vicinity of the former onsite gas holder. Elevated BTEX and PAH concentrations (above Part 375 Soil Cleanup Objectives for unrestricted use) have also been identified in soil borings completed within and immediately west of the tank manufacturing building. PAH soil concentrations in and near the off-site holder were similar to site background, and are not considered to be related to historic MGP operations.

Groundwater - The highest concentrations of BTEX and PAHs were detected in groundwater samples collected in the vicinity of the former onsite gas holder and in bedrock monitoring wells installed south to southwest of the onsite holder. Several chlorinated volatile organic compounds (chlorinated VOCs), which are not believed to be related to historical MGP operations at the site, were also identified in groundwater samples collected from bedrock monitoring wells. Groundwater in the vicinity of the off-site holder only slightly exceeded the applicable standard for benzene.

Sediment - Minimal impacts to the Mohawk River were found. PAHs were detected in sediments at concentrations which slightly exceeded NYSDEC sediment screening levels, however due to the lack of sediment deposits in this portion of the river, no remediation is warranted.

The remedy will address surface and subsurface soil contamination due to the Little Falls Former MGP site as well as the resulting groundwater impacts.

## Description of the Remedy

Based on the results of the Alternatives Analysis and the criteria identified for evaluation of alternatives, the NYSDEC has selected a remedy for this VCP site. The components of the remedy set forth in the Remedial Work Plan and shown on the attached Figure 1, are as follows:

Because most of the former gas holder is located beneath the Feldmeier building, and there is limited space available between the Feldmeier building and the Mohawk River, excavation of MGP-contaminated soils is not feasible at this site. Only the former MGP pipe gallery area is accessible for excavation. Therefore the Department has selected a remedy that relies on in-situ stabilization for soils that cannot be excavated, as outlined below:

1. Impacted subsurface soils (defined in TAGM 4046 as > 10ppm total BTEX and > 500ppm total PAH) located between the Feldmeier Building and the Mohawk river will be treated by in-situ soil stabilization (ISS). Portland cement and additional additives or reagent materials may be used during the in-situ mixing activities, as determined by a bench scale test performed during the remedial design phase. Jet grouting, or other appropriate methods, will also be used to treat soil located immediately adjacent to subsurface structures and underground utilities. The approximate ISS treatment area will encompass approximately 600 cubic yards of soil at depths ranging from approximately 13 to 26.5 feet, including accessible areas inside the former gas holder structure (see Figure 1). ISS treatment will be performed in a manner that avoids potential damage to the integrity of the existing building, and other critical infrastructure, such as the sanitary sewer that crosses the treatment area. The solidified area will be covered by a minimum 12-inch layer of clean soil capable of supporting vegetation. The soil cover will be underlain by an indicator such as orange plastic snow fence to demarcate the cover soil from the solidified area.

2. The former MGP pipe gallery will be excavated, along with grossly contaminated soil, if any, in close proximity to these pipes. Excavated soil will be transported off-site and treated or disposed in accordance with applicable regulations.

3. Passive recovery wells will be installed upgradient and downgradient of the ISS treatment area to recover DNAPL downgradient of the former onsite gas holder. The recovery wells will be constructed in the area south of the former onsite gas holder where DNAPL was previously observed near the bedrock interface and in upper bedrock fractures during (i.e., near monitoring well MW-101R). The recovery well locations may be adjusted in the field, as necessary, based on site conditions encountered during the remediation activities. DNAPL will be periodically measured in and removed from these wells until recovery is no longer feasible.

4. An environmental easement will be implemented that will (a) limit the use and development of site property to commercial and industrial use; (b) require compliance with an approved site management plan; (c) restrict the use of groundwater as a source of drinking water or industrial supply without necessary water quality treatment as determined by the New York State Health Department; (d) require National Grid to prepare and submit to the NYSDEC a periodic certification of institutional and engineering controls.

5. A site management plan will be developed which will include the following institutional and engineering controls: (a) management of the final cover system to restrict excavation below the soil cover, pavement, or buildings. Excavated soil will be tested, properly handled to protect the health and safety of workers and the nearby community, and will be properly

managed in a manner acceptable to the Department; (b) continued evaluation of the potential for vapor intrusion for any buildings developed on the site, including provision for mitigation of any impacts identified; (c) NAPL recovery and groundwater monitoring; (d) identification of any use restrictions on the site; and (e) provisions for the continued proper operation and maintenance of the components of the remedy.

**Declaration**

The selected remedy is protective of human health and the environment, complies with State and Federal requirements that are legally applicable or relevant and appropriate to the remedial action and will allow for the identified use of the site. This remedy utilizes permanent solutions and alternative treatment to the maximum extent practicable, and satisfies the preference for remedies that reduce remove or otherwise treat or contain sources of contamination and protection of groundwater.

3/18/08
Date

Robert W. Schick, P.E.,
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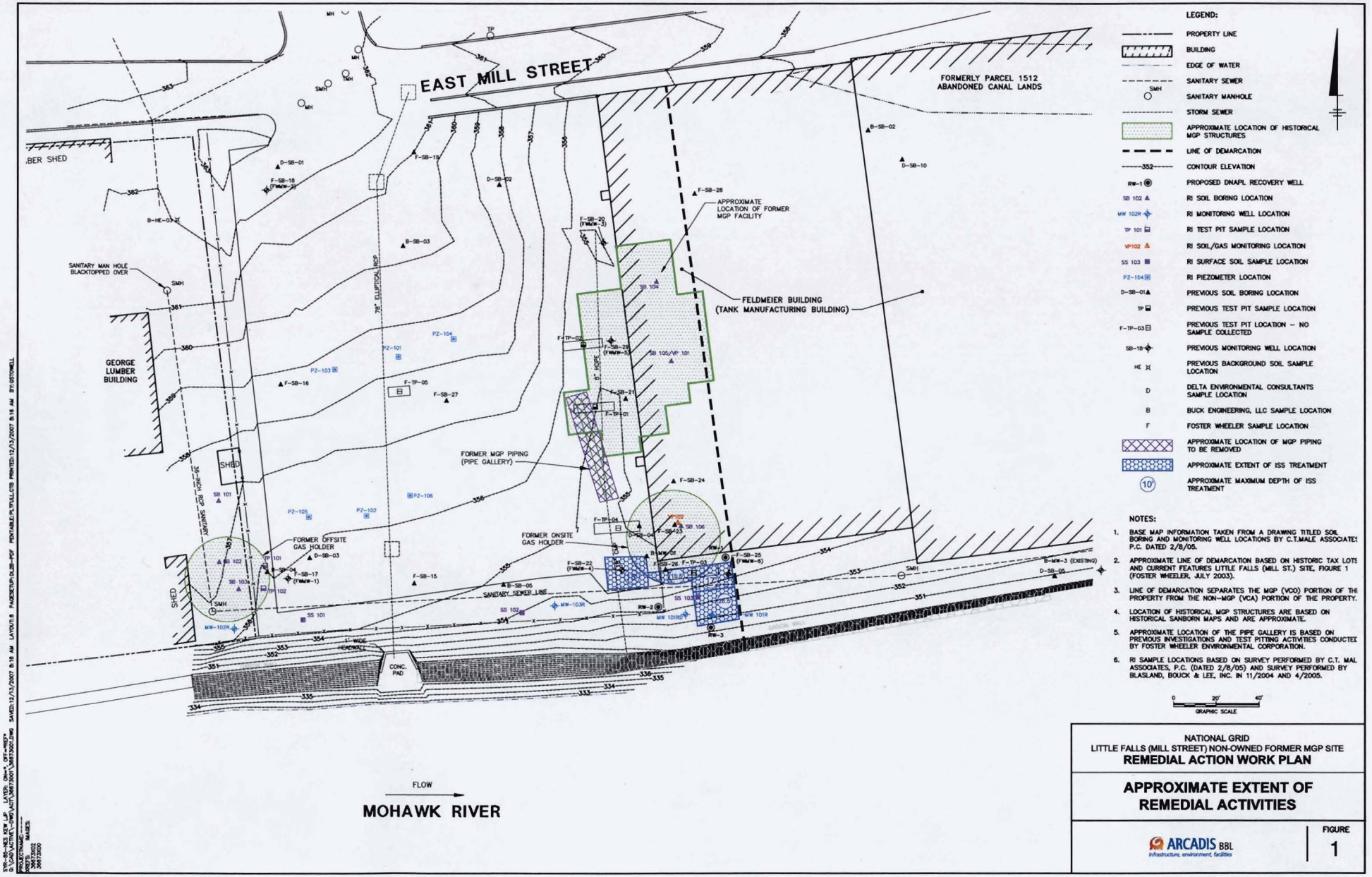
Division of Environmental Remediation




LEGEND:

- PROPERTY LINE
- BUILDING
- EDGE OF WATER
- SANITARY SEWER
- SANITARY MANHOLE
- STORM SEWER
- APPROXIMATE LOCATION OF HISTORICAL MGP STRUCTURES
- LINE OF DEMARCATION
- 352 CONTOUR ELEVATION
- RW-1 PROPOSED DNAPL RECOVERY WELL
- SB 102 RI SOIL BORING LOCATION
- MW 102R RI MONITORING WELL LOCATION
- TP 101 RI TEST PIT SAMPLE LOCATION
- VP102 RI SOIL/GAS MONITORING LOCATION
- SS 103 RI SURFACE SOIL SAMPLE LOCATION
- PZ-104 RI PIEZOMETER LOCATION
- D-SB-01 PREVIOUS SOIL BORING LOCATION
- TP PREVIOUS TEST PIT SAMPLE LOCATION
- F-TP-03 PREVIOUS TEST PIT LOCATION – NO SAMPLE COLLECTED
- SB-18 PREVIOUS MONITORING WELL LOCATION
- HE PREVIOUS BACKGROUND SOIL SAMPLE LOCATION
- D DELTA ENVIRONMENTAL CONSULTANTS SAMPLE LOCATION
- B BUCK ENGINEERING, LLC SAMPLE LOCATION
- F FOSTER WHEELER SAMPLE LOCATION
- APPROXIMATE LOCATION OF MGP PIPING TO BE REMOVED
- APPROXIMATE EXTENT OF ISS TREATMENT
- 10' APPROXIMATE MAXIMUM DEPTH OF ISS TREATMENT

NOTES:

1. BASE MAP INFORMATION TAKEN FROM A DRAWING TITLED SOIL BORING AND MONITORING WELL LOCATIONS BY C.T.MALE ASSOCIATES P.C. DATED 2/8/05.
2. APPROXIMATE LINE OF DEMARCATION BASED ON HISTORIC TAX LOTS AND CURRENT FEATURES LITTLE FALLS (MILL ST.) SITE, FIGURE 1 (FOSTER WHEELER, JULY 2003).
3. LINE OF DEMARCATION SEPARATES THE MGP (VCO) PORTION OF THE PROPERTY FROM THE NON-MGP (VCA) PORTION OF THE PROPERTY.
4. LOCATION OF HISTORICAL MGP STRUCTURES ARE BASED ON HISTORICAL SANBORN MAPS AND ARE APPROXIMATE.
5. APPROXIMATE LOCATION OF THE PIPE GALLERY IS BASED ON PREVIOUS INVESTIGATIONS AND TEST PITTING ACTIVITIES CONDUCTED BY FOSTER WHEELER ENVIRONMENTAL CORPORATION.
6. RI SAMPLE LOCATIONS BASED ON SURVEY PERFORMED BY C.T. MAL ASSOCIATES, P.C. (DATED 2/8/05) AND SURVEY PERFORMED BY BLASLAND, BOUCK & LEE, INC. IN 11/2004 AND 4/2005.

0 20' 40'
GRAPHIC SCALE

NATIONAL GRID
LITTLE FALLS (MILL STREET) NON-OWNED FORMER MGP SITE
**REMEDIAL ACTION WORK PLAN**

# APPROXIMATE EXTENT OF REMEDIAL ACTIVITIES

ARCADIS BBL
Infrastructure, environment, facilities

FIGURE 1