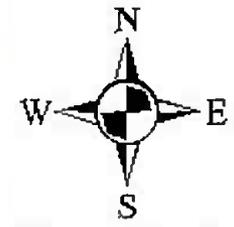


Legend

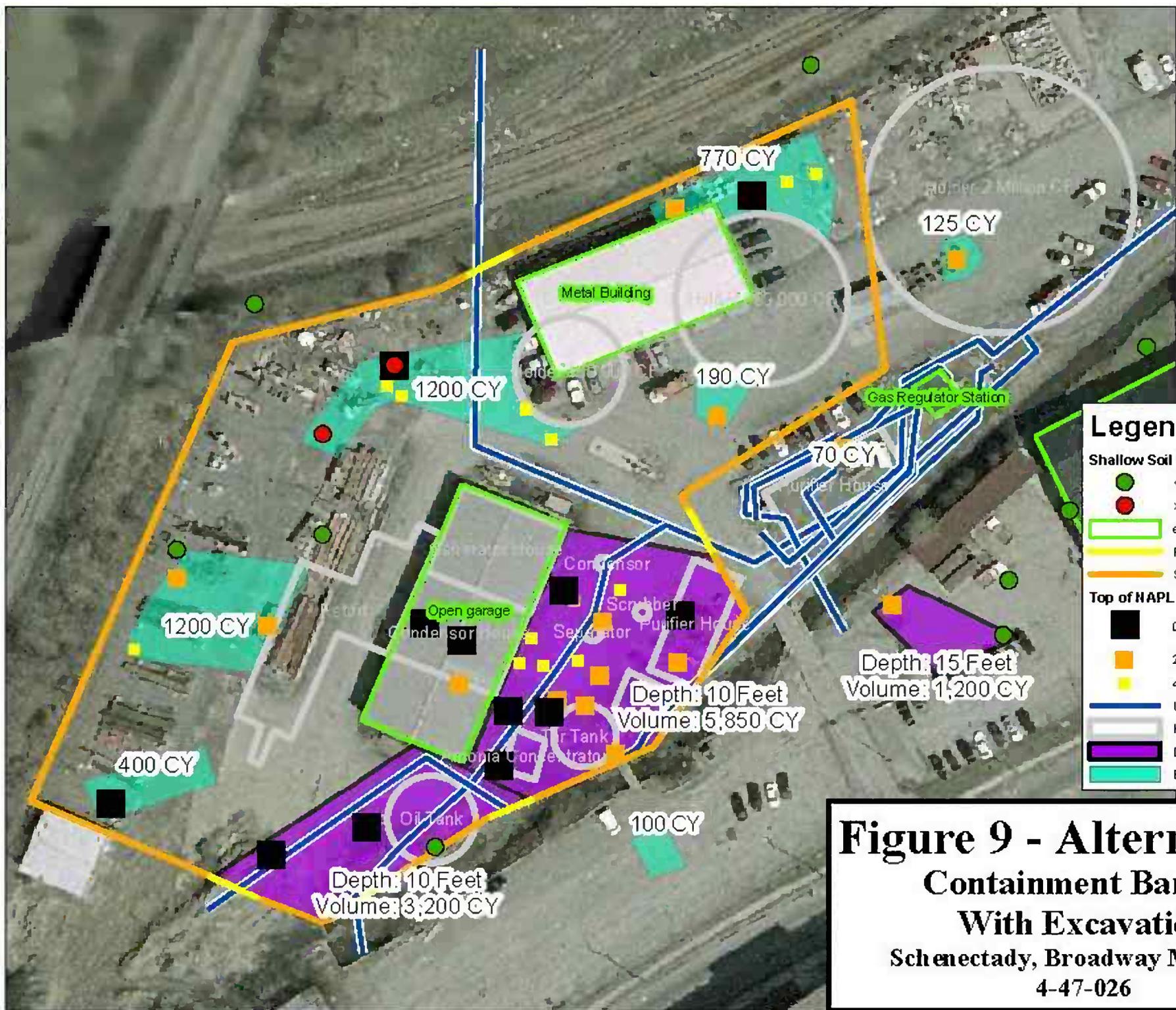
barrier_wall

- Pressure Grout
- Sheeting
- Utilities
- Excavation South of Creek
- Historic MGP Structures

Figure 8 - Alternative 3
Containment and NAPL Extraction
Schenectady, Broadway MGP Site
4-47-026



012.95 50 Feet



Legend

Shallow Soil PAHs

- < 400 ppm
- > 400 ppm

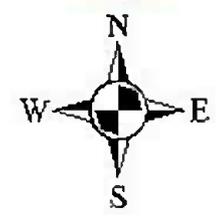
Top of NAPL

- 0 - 2.
- 2 - 4.
- 4 - 6.

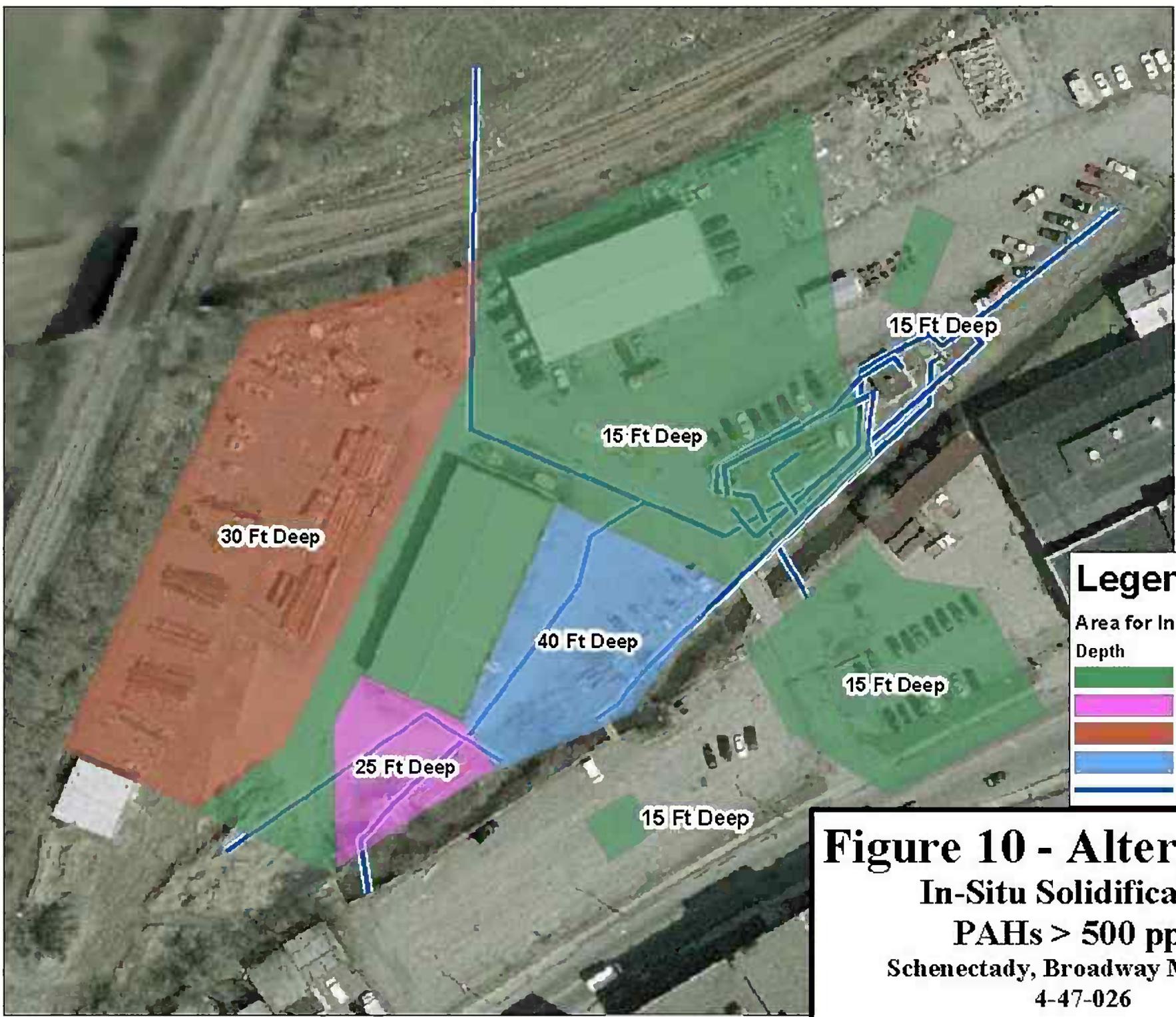
Other Features:

- ex_structures
- Pressure Grout Barrier Wall
- Sheet Piling Barrier Wall
- Utilities
- Historic MGP Structures
- Deep Excavation
- Excavation to Groundwater

**Figure 9 - Alternative 4
Containment Barrier
With Excavation
Schenectady, Broadway MGP Site
4-47-026**

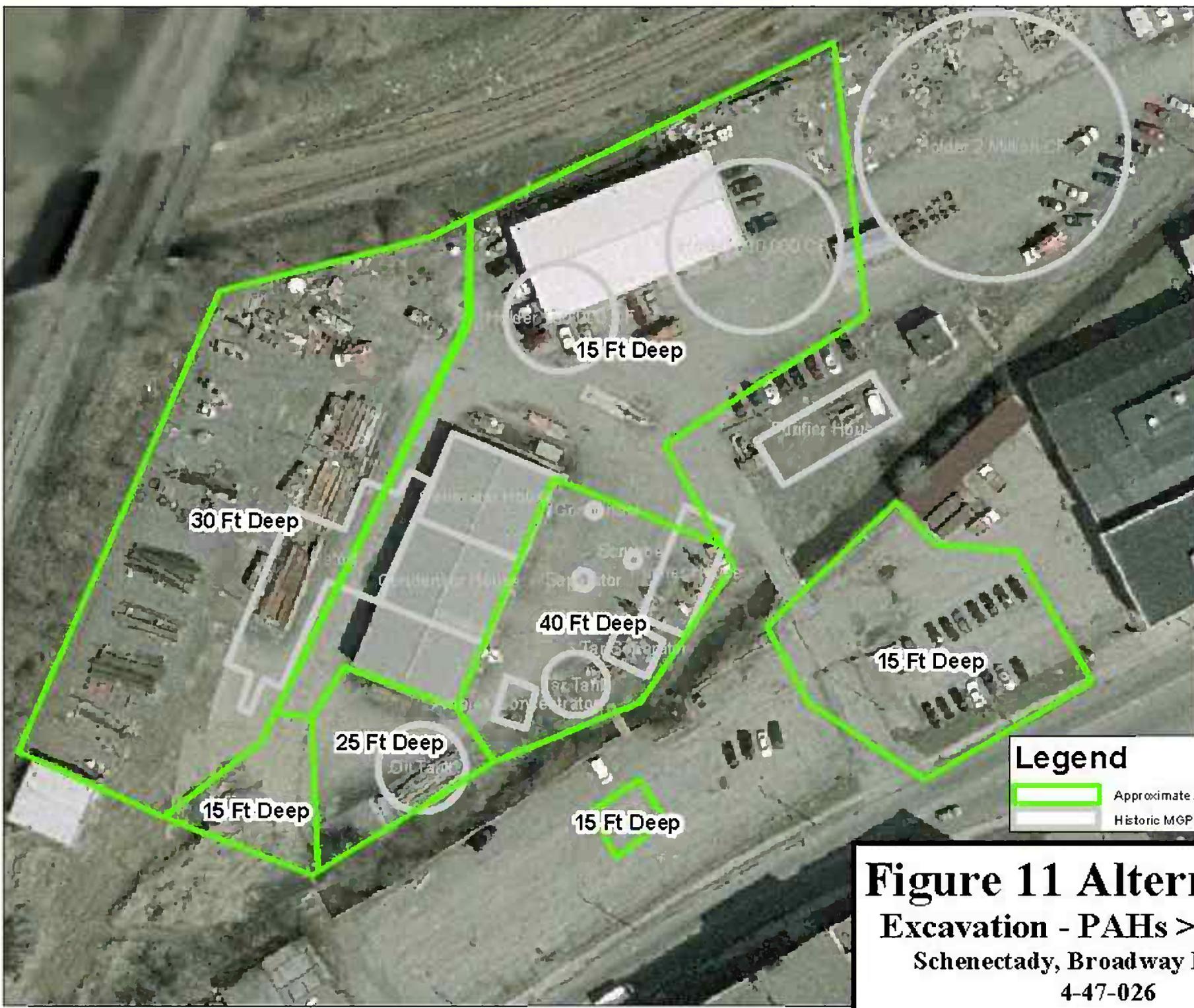
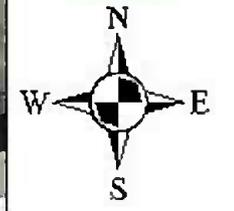


0 12.525 50 Feet



Legend	
Area for In-Situ Solidification	
Depth	
	15 Feet Deep
	25 Feet Deep
	30 Feet Deep
	40 Feet Deep
	Utilities

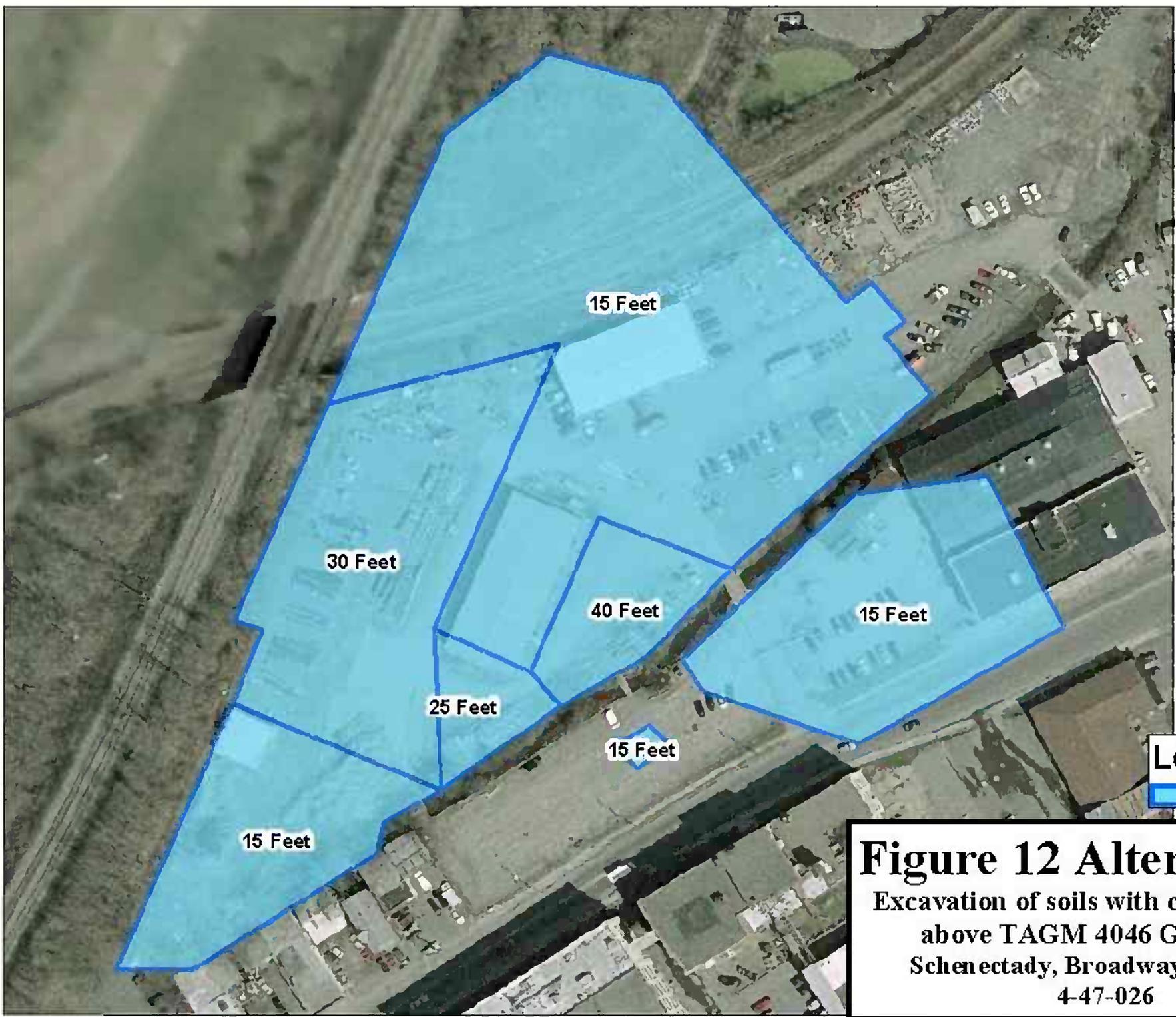
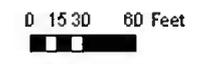
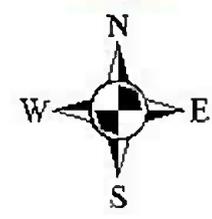
Figure 10 - Alternative 6
In-Situ Solidification
PAHs > 500 ppm
Schenectady, Broadway MGP Site
4-47-026



Legend

-  Approximate Areas/Depth of Excavation
-  Historic MGP Structures

Figure 11 Alternative 7
Excavation - PAHs > 500 ppm
Schenectady, Broadway MGP Site
4-47-026



Legend

 Soil Removal

Figure 12 Alternative 8
Excavation of soils with contaminants
above TAGM 4046 Guidelines
Schenectady, Broadway MGP Site
4-47-026

APPENDIX A

Responsiveness Summary

RESPONSIVENESS SUMMARY

Niagara Mohawk Broadway – Schenectady MGP Site Schenectady (C), Schenectady County, New York Site No. 4-47-026

The Proposed Remedial Action Plan (PRAP) for the Niagara Mohawk Broadway – Schenectady MGP site, was prepared by the New York State Department of Environmental Conservation (the Department) in consultation with the New York State Department of Health (NYSDOH) and was issued to the document repositories on February 15, 2008. The PRAP outlined the remedial measure proposed for the contaminated soil, sediment, and groundwater at the Niagara Mohawk Broadway – Schenectady MGP site.

The release of the PRAP was announced by sending a notice to the public contact list, informing the public of the opportunity to comment on the proposed remedy.

A public meeting was held on February 28, 2008, which included a presentation of the Remedial Investigation (RI) and the Feasibility Study (FS) as well as a discussion of the proposed remedy. The meeting provided an opportunity for citizens to discuss their concerns, ask questions and comment on the proposed remedy. These comments have become part of the Administrative Record for this site. The public comment period for the PRAP ended on March 17, 2008.

This responsiveness summary responds to all questions and comments raised during the public comment period. The following are the comments received, with the Department's responses:

COMMENT 1: What is the expected schedule for the remediation?

RESPONSE 1: The next step is to complete a remedial design. That is expected to take approximately one year. Once that is completed, we will present the design to the public and provide a detailed schedule at that time. If the remedial design is significantly delayed, we would expect to send out a fact sheet explaining the delay and presenting the new schedule. In general, we would expect construction to begin in 2010.

Brian M. Stearns, P. E. Lead Engineer, representing National Grid submitted a letter (dated March 17, 2008) which included the following comments:

COMMENT 2: The Fish and Wildlife Impact Analysis (FWIA) in the 1999 RI report concluded that the derivation of site-specific, ecology-based remedial objectives was not considered appropriate for the site. The biota in the creek was not tested or evaluated for ecological value as part of the RI.

RESPONSE 2: In 2006, National Grid's representative contacted us to let us know that NYSDEC Division of Water personnel were sampling the biota in Schermerhorn Creek. We followed up with the individual conducting the sampling, and a copy of the data has been included in the administrative

record for this site. Overall, the sampling showed the stream to be moderately impacted at this site, but some results (particularly good species richness for Chironomidae and Oligochaeta), demonstrate that there is some ecological value to this stream.

COMMENT 3: The Site Remedial Investigation Report also concluded that there is strong evidence that groundwater does not flow toward the Schenectady-Rotterdam municipal well fields, which is why migration is unlikely.

RESPONSE 3: This conclusion is well documented in a number of reports, and the Department concurs with the conclusion.

COMMENT 4: Tar is not known to be present under the tracks outside the containment barrier.

RESPONSE 4: It is reasonable to assume that some coal tar is present under the tracks, but this material has not been observed, and the extent can not be determined due to access limitations. No borings could be completed on the railroad embankment itself for safety reasons, but numerous borings were completed on both the east and west sides of the embankment. Borings on the west side found no tar contamination, and very little dissolved phase contamination. Borings on the east side, approximately where the wall will be placed, encountered significant coal tar contamination. Consequently, it is reasonable to conclude that some tar contamination is present beneath the tracks, and that this tar will not be included inside the containment barrier.

COMMENT 5: The excavation proposed below the water table in item 3 of the selected alternative is not justified because contact with that material would not be likely to occur.

RESPONSE 5: Physical removal of source materials is preferred wherever practicable, even in cases where containment measures are a component of the remedy. Although removal below the water table is more complicated and costly, it is justified when it represents a source area or if is in a location where contact is more likely (the site will remain an active National Grid service center). Structures are to be excavated to eliminate these sources of contamination. Deeper excavation in the vicinity of the Schermerhorn Creek is justified since construction and maintenance of the culvert (or barrier if a culvert is not constructed) would make future contact more likely.

COMMENT 6: Excavation of material near the gas regulator station (GRS) could require relocation of the GRS, which would not be cost effective and which could represent significant short term impacts and risks.

RESPONSE 6: It is not the intent of the remedy to require relocation of the GRS. During our meeting with National Grid site workers, eliminating shallow contamination in this area was identified by workers as being a particular concern due to the potential for direct contact exposures. Excavation in this area which can be accomplished by hand or by vacuum truck can be completed without relocating the GRS.

COMMENT 7: Working around active natural gas mains is a significant short term risk. Relocating them would involve cost and short term risks and impacts.

RESPONSE 7: Some amount of work around active mains is required, even under National Grid's preferred (containment only) remedy. The construction of the containment barrier will involve work in the immediate vicinity of these same gas lines. Minimizing or eliminating utilities crossing that barrier would be preferred.

The Department recognizes that the close proximity of natural gas lines to heavily contaminated soils presents some engineering challenges during remediation. However, this proximity also increases the need for this remediation to be performed. The pipes were clearly laid in heavily contaminated soil, so some degree of exposure is likely to have occurred in the past. Subsurface infrastructure such as this has a finite life span, so it is quite likely that repair or replacement of the subsurface structures will be required at some point in the future. Management of the contaminated soils would be required during such future work. It is far better to have this soil removed now, under planned, controlled conditions, than to address it in a piecemeal fashion at some future date, under urgent or emergency conditions. Relocating natural gas lines has been a component of a number of MGP remedies elsewhere, and the Department would support relocation if National Grid proposed to do so.

COMMENT 8: The excavation east of the open garage (between the garage and the Creek) could cause the temporary relocation and/or disruption of portions of an active service center.

RESPONSE 8: The Department believes the ROD allows flexibility to accommodate operations at the service center. Completing this work in smaller pieces would make it less disruptive, but could also take longer and make the project more expensive. There are numerous aspects of the implementation of this remedy which will be considered and addressed during the remedial design, including the one raised by the comment.

COMMENT 9: The proposed excavation in the selected alternative would cause an increase in the emission of greenhouse gases.

RESPONSE 9: The remedy selection process requires the Department to balance the cost of these short term impacts with the long term benefit of the remediation of the site, the public health and the environment. The selected remedy best satisfies the remedial selection criteria.

COMMENT 10: The Site Management Plan and the asphaltic cap would adequately protect the on-site workers from exposure to shallow contamination without the extra expense of removing this material.

RESPONSE 10: Institutional and engineering controls of this sort provide some protection, but removal is a more reliable protection. The preference to remove source material rather than manage it with controls is defined by statute.

COMMENT 11: There is no indication that flooding could mobilize or remobilize impacted materials (as discussed in section 8).

RESPONSE 11: In the current alignment of the stream, the impacted materials are isolated from the stream, so flooding would be unlikely to mobilize impacted materials. The referenced section specifically refers to removing contamination in the immediate vicinity of the proposed new alignment of the creek. It is anticipated that the new alignment will be deeper than the current Creek, and if

deeper, it could be in the immediate proximity of impacted materials which could be readily mobilized. Appropriate controls will be required to prevent contamination entering the realigned Creek.

COMMENT 12: As described in Appendix G of the Department-approved December 2006 Feasibility Study for the site, the City of Schenectady (the City) received funding from the Federal Emergency Management Agency (FEMA) in 1996 to implement drainage improvements to the creek. The planned drainage improvements consisted of enclosing a portion of the creek upstream from the Service Center property in a culvert and removing sediment upstream and downstream from the Service Center property. Further, in meetings with National Grid, the City of Schenectady has indicated they would support installation of a culvert for the on site reach of the Schermerhorn Creek. Based on the analysis presented in Appendix G of the December 2006 Feasibility Study the most effective barrier for the onsite portion of the Schermerhorn Creek would be the installation of a closed culvert. This culvert would be designed to meet environmental site needs; regulatory permit requirements; and the City of Schenectady's drainage needs.

RESPONSE 12: Enclosing the Creek in a culvert as described above would be fully consistent with this remedy. However, it is not required as part of the remedy.

COMMENT 13: Once construction of the NAPL barrier has commenced, extensive relocation of the barrier wall would be difficult because the barrier wall alignment will have been designed in consideration of surface and near-surface obstructions and utilities. Surface and near-surface obstructions will be addressed as part of the design and the pre-trench excavation. Pre-trenching would be conducted immediately prior to installing the NAPL barrier. If significant amounts of shallow NAPL are present within specific areas of the barrier wall alignment, these areas would be identified during the pre-design investigation or the pre-trench excavation and the wall alignment could be modified as practicable.

RESPONSE 13: The Department agrees that identifying any such problems during design would be preferable to encountering them during construction. However, the completion of the remedial design would not eliminate the need to address any contamination identified outside the containment wall if it were to be discovered during construction.

COMMENT 14: The design and construction of the groundwater pumping system would be to maintain inward hydraulic gradients such that the water table surface inside the barrier wall is slightly lower (e.g., by 0.1 foot) than the water table surface on the outside. As such, the pumping wells would be screened within the shallow water table (at depths approximately 5 to 10 feet bgs, above the residual DNAPL to remain). The wells would be located in strategic areas along the barrier wall perimeter which would readily facilitate maintaining and monitoring the required inward hydraulic gradients.

RESPONSE 14: The Department will not approve the design of a groundwater pumping system which would result in the containment system being less effective. The pumping system proposed in this comment could result in the movement of some remaining DNAPL closer to the surface and closer to the barrier wall and would need to be carefully evaluated and addressed.

COMMENT 15: The NYSDEC did not include up to an estimated additional \$3.4 Million (M) in their capital cost estimate. The following cost items do not appear to be included in their estimate:

- Removal and relocation of all affected utilities and the GRS (assuming relocation is selected rather than hand excavation of soils): up to \$2.0 Million (M)
- NYSDEC's calculation of additional costs for installation of sheet pile does not account for depth of sheeting (standard practice is that sheet pile installation unit cost is based on vertical square foot, not by linear feet as applied by NYSDEC). The additional cost for installing the sheeting is approximately \$1 M

The unit costs for the above-listed items were presented in the FS. Also, the NYSDEC's cost for additional soil disposal underestimates the weight of soil excavated. The conversion for soil (in the FS estimates) was 1.5 tons per cubic yard of soil plus an additional 10% for additional of drying agents for stabilization of wet soils. The NYSDEC's conversion is 1.4 tons per cubic yard and does not consider the need for stabilization following excavation. This represents an additional estimated cost of \$400,000.

RESPONSE 15: As stated in item #6, the relocation of the GRS is not anticipated. The cost of sheet piling was underestimated in Table 3 of the PRAP, and that has been corrected in the ROD. However, we do note that the use of sheet piling for the excavation east of the open garage is not required by the Department, and may not be necessary, since there is no requirement for confirmation samples or for the excavation to be completed in the dry. Also, it would be acceptable for any soil that is not visibly impacted to be placed back in the excavation, so the amount of disposal and backfill material could also be significantly reduced. The volume estimate for this excavation assumes an excavation 10' deep across the entire area, while the ROD calls for a maximum of 10' excavation. It is estimated that the savings from these 2 considerations could balance the added cost of the above referenced increase in weight of soil excavated. As such, that adjustment was not made.

APPENDIX B

Administrative Record

Administrative Record

Niagara Mohawk Broadway – Schenectady MGP Site Schenectady (C), Schenectady County, New York Site No. 4-47-026

1. Proposed Remedial Action Plan for the Niagara Mohawk Broadway – Schenectady MGP site, dated February 2008, prepared by the Department.
2. Order on Consent, Index No. A4-0473-0000, between the Department and Niagara Mohawk, executed on November 3, 2003.
3. “Final Preliminary Site Assessment/Interim Remedial Measure Study”, June 1993, Prepared by Atlantic.
4. “Remedial Investigation Report” Volume 1 - Main Report, January 1999, Prepared by Parsons.
5. “Remedial Investigation Report” Volume 2 - Appendixes A through I, January 1999, Prepared by Parsons.
6. “Remedial Investigation Report” Volume 3 - Appendixes J and K, January 1999, Prepared by Parsons.
7. “Remedial Investigation Report” Volume 4 - Appendixes K through P, January 1999, Prepared by Parsons.
8. “Feasibility Study for the Schenectady (Broadway) Service Center”, December February 2000, Prepared by Blasland ,Bouck, and Lee, Inc..
9. “Site Remedial Investigation Report”, November 2005, Prepared by Blasland ,Bouck, and Lee, Inc.
10. “Feasibility Study Report”, December 2006, Prepared by Blasland ,Bouck, and Lee, Inc., an Arcadis Company.
11. E-Mail Dated January 18, 2007 from Alexander Smith, NYSDEC, “re: Schermerhorn Creek Sampling.
12. Fact Sheet, “Site Remedial Investigation Complete,” April 2007
13. Fact Sheet, “Remedy Proposed for the Niagara Mohawk Schenectady, Broadway Former MGP Site,” February 2008.
14. Letter dated March 17, 2008 from Brian M. Stearns, P. E. Lead Engineer, representing National Grid .