

## **Executive Summary**

### **UGIES Bethlehem LNG Facility**

#### **Category K**

In November 2020, UGI Energy Services, LLC (UGIES) commissioned their new \$60 million liquefied natural gas (LNG) facility in Bethlehem, Pennsylvania. LNG is produced by chilling natural gas to approximately 260 degrees below zero. During periods of extremely cold weather, the demand for natural gas to heat homes and businesses can increase dramatically in a short period. A natural gas peak shaving facility delivers an off-pipeline supply of natural gas to satisfy these spikes in demand.

This specialized storage tank is 80' tall and holds two million gallons of LNG. The facility is located on 99 acres and the property was constrained with multiple natural resources; including wetlands, streams, floodplains, steep slopes, wooded areas and varying depths of bedrock and karst. Intense regulatory permitting was required prior to construction for erosion and sediment pollution controls, flood impacts and temporary stream impacts for crossing of the East Branch Saucon Creek. Additional permitting included a stream restoration for approximately 1,000 linear feet of an unstable and highly eroded stream section of an unnamed tributary to East Branch Saucon Creek. The restoration stabilized the stream bank, reduced the streambed's steep slope and velocity in the channel to help limit future scour and erosion, thus protecting the tank and the site.

Langan Engineering and Environmental Services, Inc. provided multi-disciplined services from the initial planning phase through land development design and regulatory permitting, and through sitework construction. Langan Engineering and Environmental Services, Inc. worked with UGI staff to develop the ultimate design that achieved project goals while maintaining the required operational site components.