

MGP Site Management



Areas of Expertise

- Historical Data Review
- Site Characterization
- Risk Assessment
- Cost Estimation/Probabilistic Cost Modeling
- Community Relations
- Sediment Management
- Remedy Selection & Remedial Design
- Site Remediation
- Perimeter Air Modeling
- Litigation & Cost Recovery Support

Key AECOM Attributes

- MGP market leader with more than 100 technical staff and experts and experience at 200+ sites.
- Leading the development of Green and Sustainable Remediation (GSR) approaches, AECOM works with the ASTM, Interstate Technology and Research Council (ITRC), Sustainable Remediation Forum (SuRF) and U.S. Air Force Center for Engineering Excellence to develop GSR guidance and tools.

Overview

The management of Manufactured Gas Plant (MGP) sites is an important focus area for gas and electric utility companies. Frequently located in “downtown” areas of cities and towns, MGP sites are often highly visible to the community. Utility companies and community stakeholders understand that risks from MGP residues, contaminated soils, groundwater and sediment must be properly managed.

As the industry leader in MGP site management, AECOM has identified a number of leading-edge MGP management solutions. AECOM developed the Probabilistic Cost Model for the Gas Research Institute (GRI) to estimate MGP cleanup costs, and we developed a leading edge approach to evaluate the bioavailability of polycyclic aromatic hydrocarbons (PAHs) in contaminated sediments.

Our Approach

AECOM’s goal is to reduce the risks and extinguish liability for the lowest reasonable cost, by satisfying regulatory requirements while balancing the needs of the community with those of the utility company. By defining the best reuse option for an MGP site, we believe that the community, the utility company and the regulatory agency can agree to an overall remediation approach to achieve that endpoint.

Defining the risks is critical to determining how best to address impacts. The risks, combined with the site reuse plan, drive the selection of the technologies and the optimal combination of removal, treatment and containment approaches. AECOM embeds Green and Sustainable Remediation methods throughout the site investigation, remedial planning and design and cleanup phases and uses innovative technologies and on-site and *in situ* containment and treatment strategies, to mitigate risks cost-effectively.

Areas of Expertise

AECOM has broad and deep experience with all aspects of MGP site management.

HISTORICAL DATA REVIEW. A complete understanding of operational history is critical to properly scope a site investigation, ensuring that all areas of the former MGP are evaluated. AECOM maintains more than 100 years of the Brown’s Directory of America Gas Companies, which we use to define the operational history of an MGP. We combine that information with historic maps – such as Sanborn™ maps and other historical information – to develop a complete “picture” of the MGP.

SITE CHARACTERIZATION. Comprehensive subsurface investigations are needed to define the extent of impacts, and to locate former MGP structures and the presence of any MGP residues. This definition of site conditions serves as the foundation for the risk assessment and the development of remedial actions. With our extensive knowledge of MGP process operations, AECOM is able to focus site investigations on the most important areas of the site, optimizing project resources. We use state-of-the-art tools and processes to determine the nature and extent of site contamination, and to collect, store and analyze data.

RISK ASSESSMENT. Defining the migration pathways, exposure point concentrations, and receptors are necessary to determine what risks need to be managed during a site cleanup. AECOM’s risk assessors are highly experienced with risk assessments at MGP sites, and have a strong track record of successfully supporting regulatory discussions and stakeholder dialogues to communicate risks and determine appropriate cleanup goals.

COST ESTIMATION/PROBABILISTIC COST MODELING. Understanding the cost to cleanup an MGP site or a portfolio of MGP sites is very important to utility companies. AECOM developed the probabilistic cost model used by many utility companies to estimate and manage their accruals, as well as disclose cost liabilities in public reports. AECOM also developed the RACERTM cost estimation tool used to determine site cleanup costs. Together, these tools provide AECOM with a strong framework to help utility companies understand and manage costs and cost projections.

COMMUNITY RELATIONS. An effective community relations and public involvement strategy is critical to successful MGP remediation, given the absolute necessity to build trust and create two-way communication with local citizens and other stakeholders. AECOM is skilled in preparing and implementing successful community relations and public involvement programs to help our clients work constructively with the public.



MGP Site Management



SEDIMENT MANAGEMENT. Sediment management has become an increasingly important aspect of the MGP site closure and environmental restoration process. We use our site-specific sediment risk and toxicity evaluations to establish favorable remedial cleanup goals that have resulted in lower remediation costs. We are a technical leader in the application of methods to assess contaminant bioavailability at MGP sites, and have successfully designed and managed a wide variety of sediment-focused programs at MGP sites.

REMEDY SELECTION AND REMEDIAL DESIGN. Selection and design of the remedy should result in the evaluation of all reasonable approaches and the documentation of the design process, including reviews by experienced professionals. AECOM develops remedial designs following our Engineering Design Process, which ensures that plans, specifications, and bid documents are properly prepared and reviewed so that projects are constructible and cost estimates are accurate and valuable to our client. We also 'carbon-footprint' remedial alternatives during the feasibility study to help guide the selection of the most sustainable approach.

SITE REMEDIATION. The cleanup of an MGP site requires the efficient implementation of the remedial design combined with the management of site safety, construction activities, costs, schedules, and community concerns. AECOM has successfully completed numerous MGP site cleanup projects, serving as the general contractor, owner/engineer, or construction manager supervising and documenting work conducted by contractors.

PERIMETER AIR MONITORING. The management of site remediation includes protection of workers and the surrounding community. AECOM designs and implements programs that help our clients address regulatory and community/public health concerns. Our ambient air and perimeter monitoring programs have consistently documented that site operations were conducted safely, resulting in no off-site impacts.

LITIGATION AND COST RECOVERY SUPPORT. Legal actions brought against utility companies and cost recovery actions have affected many MGP sites or utility MGP programs. AECOM provides experts in risk assessment and management, remedial action selection, cost estimation, and site cleanup methods to help utility companies successfully resolve legal actions.

Key Reference Material

EPA Method SW-8272 and ASTM Test Method D7363-07, developed by AECOM in collaboration with utility company and industry participants, allow for direct measurement of dissolved PAHs in sediment pore water, groundwater, and other media. These provide an innovative approach to determining impacts to benthic microorganisms and to site cleanup goals.

