

APTIM integrates environmental compliance with operational issues, ensuring business needs are considered. Our knowledge of local, regional, state, and federal regulations enhances our clients' compliance activities.

## **ENVIRONMENTAL MONITORING SERVICES**

APTIM offers a comprehensive range of environmental monitoring services to verify compliance with local, regional, state, and federal regulations. Our team of environmental scientists, civil engineers, environmental chemists, and geologists provide the following services.

- We conduct thorough groundwater sampling, testing, evaluation, and reporting to monitor and manage groundwater quality. Our chemists evaluate the sample collection for precision and accuracy, perform laboratory quality control, and ensure adherence to laboratory control samples.
- Our team performs surface water sampling, testing, evaluation, and reporting to help protect surface water resources.
- We prepare checklists during stormwater evaluations and field sampling to verify compliance with environment regulations, documenting sampling procedures and maintaining quality control throughout the process.
- We provide leachate sampling, testing, evaluation, and reporting to manage and mitigate the impact of leachate on the environment.
- Our vadose zone sampling, testing, evaluation, and reporting services help monitor and manage the unsaturated zone above the groundwater table.
- Our team provides on-site surface emission monitoring, landfill gas extraction well field balancing, landfill gas extraction system performance monitoring, and regulatory agency reporting.
- We develop and obtain approval for water quality protection standard reports and site cleanup action plans.
- We create and implement corrective action plans to address identified issues.
- We perform engineering evaluations and develop and implement environmental control systems.
- We install groundwater dewatering wells to remove groundwater beneath unlined sections of the landfill.

APTIM prepares quarterly, semiannual, and/or annual monitoring reports containing the information required by each respective site's monitoring requirements. These reports may include the following items:

- Site conditions
- Review and consideration of previous monitoring data
- Discussion of the monitoring event results
- Tabulated analytical results
- Time-concentration graphs of data
- Statistical analyses
- Groundwater contour maps
- Groundwater flow velocity calculations
- Evaluation of field and laboratory quality control data
- Drainage system inspections
- Rainfall data and storm event response information
- Pollution control system inspections
- Pertinent landfill gas monitoring data obtained by others
- Backup data (e.g, field data sheets, chain-of-custody documentation, and certified laboratory analytical reports)



## HYDROGEOLOGY AND GROUNDWATER MANAGEMENT

APTIM offers comprehensive hydrogeologic services for solid waste facilities, focusing on gathering and analyzing site-specific data to support system design and monitoring.

- Site Characterizations: Detailed assessments of site conditions to inform design and monitoring strategies
- Conceptual Site Models: Development of models to represent site conditions and processes
- Monitoring Network Design and Installation:
  Planning and setting up networks for ongoing environmental monitoring
- Quarterly Sampling: Regular sampling to track environmental conditions and changes over time
- Potentiometric Mapping: Creating maps to visualize groundwater flow and pressure
- Groundwater Impact Assessments: Evaluating the effects of site activities on groundwater quality and quantity
- APTIM

- Sampling and Analysis Plans: Developing plans to guide the collection and analysis of environmental samples
- Aquifer Investigations: Studying aquifers to understand their properties and behavior
- Regulatory Compliance Services: Confirming activities meet relevant regulatory requirements.
- Alternate Source Demonstrations: Identifying and demonstrating alternative sources of contamination
- Groundwater Management Zones and Corrective Actions: Establishing zones for groundwater management and implementing corrective measures
- Contaminant Migration Investigations: Investigating the movement of contaminants through the environment
- Remediation System Design and Maintenance:
  Designing and maintaining systems to remediate contaminated sites

## CONTACT

Connect with our Solid Waste team: Info@APTIM.com

