

REGULATORY ASSISTANCE

Ambient Air Quality and Meteorological Monitoring Services

Founded in 1974, Trinity Consultants helps organizations overcome complex, mission-critical challenges in EHS, engineering, and science through expertise in consulting, technology, training, and staffing. We support clients in geographies worldwide and across a broad range of sectors including industrial, energy, manufacturing, mining, life sciences, and commercial/institutional.

Trinity provides comprehensive, turnkey ambient air quality, and meteorological monitoring services to our clients. Our monitoring staff have over 150 years of combined experience and have installed and operated approximately 1,000 meteorological and air quality sites nationwide. We offer solutions that are technically proven, cost-effective, regulatory compliant, and designed to meet your specific monitoring requirements.

Our solutions include customized software for data monitoring, retrieval, analysis, reporting, and presentation. Only instrumentation which has proven to be of the highest quality and reliability are recommended and installed by our professionals.

Trinity's quality assurance and quality control programs are designed to ensure that your monitoring data meet U.S. Environmental Protection Agency (EPA), local, and state requirements for completeness, representativeness, precision and accuracy. Our experienced auditors also conduct meteorological and



air quality performance and system audits using EPA and other applicable regulatory guideline methods and NIST-traceable reference standards. Our customized software for automated data evaluation and validation allows clients to quickly identify monitoring problems, minimizing data loss and enhancing data quality.

Trinity assists organizations with a full range of air quality and meteorological monitoring solutions including:

- ▶ Monitoring Services
 - Complete siting services
 - Agency negotiations
 - Monitoring and quality assurance plan development
 - Equipment installation and calibration
 - Multiple telemetry options including cellular and satellite
 - Automated 24/7 data retrieval every 5 minutes
 - Automated zero span and precision checks
 - Complete data management and validation
 - Official data reporting in State and EPA formats
 - Secure client access to real-time data with extensive plotting and analysis features
 - Iterative modeling site assessment
 - Automated data evaluation and validation
 - Complete data requirements rule (DRR) SO₂ monitoring services
- ▶ Monitoring Parameters
 - Continuous monitoring of all criteria pollutants (NO₂, ozone, SO₂, CO, PM₁₀, PM_{4.0}, PM_{2.5})
 - Meteorological towers from 2 meter tripods to 100 meter multi-level towers with solar powered option
 - Air toxics sampling of mobile, industrial and biogenic sources
 - Methane and non-methane hydrocarbon monitoring
 - Canister and DNPH sampling
 - Meteorological and air quality system and performance audits
 - EPA-approved monitoring methods
 - EPA, NIST and A2LA traceable reference standards

Ambient Air Quality Monitoring

Trinity provides complete turnkey ambient air quality monitoring services including site selection, equipment procurement and acceptance testing, equipment installation and integration, routine field operations, training of site personnel, calibration and maintenance, quality control checks, data management, data validation, data formatting and reporting, quality assurance



performance and systems audits, and emergency trips. Monitoring equipment is housed in temperature controlled shelters to ensure ongoing optimum performance.

Calibration and quality assurance performance and system audits are critical to determine the equipment's precision and accuracy. Automated zero, span, and precision checks are performed to verify the operational status of the monitoring system. Trinity has an EPA certified level II ozone reference standard.

Meteorological Monitoring Services

Trinity also provides turnkey meteorological monitoring services from project design to data validation and reporting. We install meteorological towers from 10 to 100 meters in height to collect multi-level measurements of horizontal and vertical wind direction and speed, temperature, delta-temperature, relative humidity, barometric pressure, solar radiation, net radiation, and precipitation. Meteorological towers can be completely powered with solar panels allowing for operation in remote locations and removing the logistics and costs associated with power drops.

The goal of these projects is to obtain meteorological measurements to be used in future EPA, state, and Nuclear Regulatory Commission (NRC) permitting, and dispersion modeling analyses. Calibration and quality assurance performance and system audits are provided to ensure the equipment's precision and accuracy.

Complete Data Quality Assurance and Management Solutions

To preserve data integrity and high data recovery, Trinity conducts continuous (24/7) interrogation and download of monitoring data and performs electronic and visual scanning of these data by trained meteorologists and air quality specialists. This approach allows us to identify problems quickly so that a site technician can be dispatched promptly, if necessary.

Quality-assured data sets are compiled and monthly data summaries prepared. Data validation is performed in accordance to established guidance. Quality assurance project monitoring plans are developed and provide the basis for the monitoring operations. These plans receive regulatory agency approval prior to the conduct of monitoring.

Performance audits are part of a comprehensive air monitoring quality assurance program to validate and document the measurement system data accuracy. Trinity auditors have performed hundreds of system and performance audits on every type of meteorological sensor and air quality analyzer being operated. Our auditors, some certified through EPA's PEP audit program, utilize NIST, A2LA, or EPA certified reference and transfer standards. All audits are an independent assessment and are performed in accordance with EPA guidance.

Ambient Monitoring Lab

Trinity operates a 1,200 square foot, state-of-the-art ambient and meteorological monitoring laboratory. The laboratory is used to bench check and integrate ambient and meteorological equipment and for site telemetry prior to deployment. It also contains our inventory of spare parts for ambient analyzers and meteorological instrumentation.

Why Choose Trinity

Trinity built its reputation for excellence on air quality expertise. Leveraging our 45+ years of experience addressing air quality regulatory issues, our presence nationwide and internationally, and our deep expertise in monitoring, Trinity is uniquely qualified to provide a monitoring solution that is robust, accurate, and appropriate for specific client needs.

For more information about how we can help your organization, please contact Trinity Consultants by calling 800.229.6655.

ISO 9001:2015 certified at our corporate office in Dallas, Texas