

- Air Toxics Monitoring
- Criteria Pollutants
- PM₁₀, PM_{2.5}
- Meteorological Stations
- Remote Sensing
- Real-Time Web-Based Reporting
- Doppler SODAR
- Soil Vapor Intrusion
- Wind Energy Studies and Forecasting

AMBIENT AIR MONITORING SERVICES

Ambient air monitoring is essential to addressing many of the environmental and regulatory issues faced by industrial facilities:

- Complying with Ambient Air Quality Standards (AAQS) and Air Toxics guidelines
- Providing receptor-specific data for input to Health Risk Assessments
- Providing baseline and incremental impact data for Environmental Impact Statements
- Investigating ambient air impacts (e.g., particulates, metals, toxic pollutants) due to specific sources, such as incinerators or manufacturing plants
- Minimizing off-site or community exposures using fence-line monitoring techniques



To maintain compliance, WESTON harnesses proven technologies such as this Rooftop Pollutant and Meteorological Monitoring Station

Data analysis and interpretation from air quality monitoring programs are crucial to developing air quality management plans and determining compliance strategies. Ambient air concentration data can be combined with meteorological data to identify patterns that may be attributable to particular sources.

Weston Solutions, Inc. (WESTON®) has performed the planning, installation, operation, and oversight of numerous ambient air monitoring projects for more than 20 years. Our reputation for providing accurate, reliable data utilizing state-of-the-art technologies has made WESTON a leader in the ambient air monitoring field. WESTON's monitoring staff has conducted sampling programs for a wide range of pollutants and sampling methods.

Pollutants Quantified

Criteria Pollutants (NO_x, SO₂, O₃)
 Particulate Matter (total PM, PM_{2.5}, and PM₁₀)
 Dioxins and Furans
 Polychlorinated Biphenyls (PCBs)
 Polycyclic Aromatic Hydrocarbons (PAHs)
 Trace Metals
 Volatile Organic Compounds (VOCs)
 Formaldehyde
 Mercury
 Inorganic Aerosols (ammonia, sulfate, nitrate)

Sampling Methods Utilized

U.S. EPA TO-Series Methods
 Continuous Analyzers
 Dichotomous Particulate Samplers
 High-Vol Samplers
 Modified NIOSH and OSHA Methods
 Annular Denuders

WESTON can provide assistance with meteorological monitoring programs to fill needs ranging from short-term, on-site field measurements to long-term projects utilizing remote sensing technology. WESTON can perform all phases of the project: site selection and planning, preparation of a monitoring protocol, installation, operation, data quality assurance, auditing, oversight, and reporting. The data from these programs can be archived for later use or used in real-time presentations.

Ambient Air Monitoring Services



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SODAR installations offer a quick and economical alternative to conventional MET towers for wind measurements

Challenging Installations and Real-Time Reporting are Routine Requirements

WESTON has installed and/or operates multiple meteorological stations—including SODAR—in complex terrain. WESTON staff meteorologists have performed more than 100 installations, audits, and individual monitoring projects at numerous locations across the country and internationally.

WESTON maintains daily communications with several monitoring stations via modem and the Internet. Retrieved data are quality assured daily to ensure validity and capture rate, and identify and remediate system problems in a timely fashion. In addition to routine data archiving and reporting, WESTON uses meteorological data for real-time displays and air dispersion modeling, including automatically updating Web sites featuring GIS-generated maps of modeling results.

Installation Types

Standard 10-meter Meteorological Towers
Multi-level Tall (60–100 m) Towers
Portable Tripods
Doppler SODARs

Meteorological Monitoring Programs are Designed to Meet a Wide Range of Client Needs

Clients depend on WESTON's meteorological programs to support mission-critical decisions including:

- Characterizing on-site conditions during ambient sampling and monitoring
- Collecting PSD-quality data for air dispersion modeling
- Obtaining data for use in real-time management of accidental releases
- Supporting various operations including real-time perimeter air monitoring during site remediations
- Feasibility studies for wind energy production operations

Clients Look to WESTON for Meteorological Program Audits

WESTON also has meteorological auditing equipment with calibrations traceable to National Institute of Standards and Technology (NIST) standards. This equipment is used to perform periodic performance audits of single- and multi-level towers as required in PSD monitoring guidance. Our staff have performed meteorological audits across the United States and internationally, including facilities in Atsugi, Japan; Hamilton, Bermuda; and County Cork, Ireland. WESTON staff members have developed procedures for auditing SODAR units, and have audited SODARs using tethered balloons and collocated SODAR units.

WESTON Brings Almost Three Decades of Experience to the Emerging Vapor Intrusion Field

WESTON has more than 25 years of experience using soil gas probes and flux chambers for the collection, identification, and quantification of soil gas vapors. We routinely performs soil gas sampling programs as part of an overall soil vapor intrusion evaluation or compliance program.

For More Information, Contact:

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