



Innovative Solutions. Global Reach.

Air Quality Compliance

We help our clients navigate rapidly evolving air quality guidelines and cope with new requirements to consider a wider range of stakeholders in their environmental decision making

We Don't Use Canaries

Our air quality teams have extensive experience assessing, remediating, and permitting large and small air-related projects across the country.

Whether large scale power, complex chemical facilities, or simple manufacturing processes, we always deliver our clients a custom solution that meets their needs and satisfies all regulatory compliance obligations.

Regulatory Compliance



Our Air Quality Management teams have a comprehensive understanding of current regulations and strong relationships with regulatory authorities at all levels of government, and will quickly step in to guide and assist our clients in new or ongoing regulatory compliance challenges.

As a member of your team, we deliver the most accurate and timely information available so you can

make informed decisions to manage your project goals and regulatory needs.

Our consultants are expert in the preparation of thorough permitting, compliance, regulatory analysis, supportable documentation, regulatory negotiation, reporting, and ongoing permit management at the local, county, state, and federal levels of government.

Regulatory Compliance Touchpoints

Air Permit Compliance

Major sources (Title V facilities) and some minor specialty sources must operate according to strict permit control and monitoring conditions.

Air Permit Compliance Auditing

Does the air permit accurately reflect facility operations and is the facility managing all necessary permit conditions?

Compliance Reporting

Does the facility have to report any exceedances, and if so what are the causes and corrective actions taken?

Emission Statements

Accurately reporting facility emissions from applicable sources from the previous calendar year.

Greenhouse Gas Emissions Reports (Part 98)

For sites emitting greater than 25,000 tons per year (tpy) of carbon dioxide equivalents (CO₂e).

Threshold Sensitivity Analysis

Can your facility apply as a synthetic minor and avoid some major source requirements?

Emissions Control Project Management

If the project calls for new or additional emissions control technology to reach compliance, ESI's engineers and Project Managers, along with our design, fabrication, and construction partners, deliver comprehensive solutions that are appropriate to the site and the compliance goals.

Environmental Justice



The USEPA defines Environmental Justice as the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.

ESI consultants are familiar with state and federal regulatory frameworks and have been at the forefront of this issue for years.

Air Dispersion Modeling

One of the many “regulatory activities” associated with the permitting process involves the computer simulation of air pollutant emissions from a source to predict air pollution concentrations and dispersion in the area downwind from the source’s location.

National Ambient Air Quality Standards (NAAQS) are established by USEPA for the criteria pollutants and recognized by state and local air quality agencies as the maximum air pollutant concentrations which can be measured or predicted in a community before the community is designated a Non-Attainment Area (NAA).

This process is often referred to as dispersion modeling or permit modeling, and predicted concentrations are usually referred to as “ambient impacts” (pollutant concentrations in the area surrounding the facility where the source is located). Pre-construction permitting under the Clean Air Act often requires air dispersion models to estimate the air quality impact from proposed new and modified sources.

Air Modeling Services

<i>System Design, Engineering, & Deployment</i>	<i>Mobile Source Modeling</i>
<i>Compliance Monitoring & Reporting</i>	<i>Accidental Release Modeling</i>
<i>AB 2588 Toxics Modeling</i>	<i>Odor Modeling</i>
<i>Ambient Air Quality Impact Analyses</i>	<i>Modeling for In-House Engineering Evaluations</i>
<i>Air Quality Permit-Based Modeling</i>	<i>Air District Rule-Based Modeling</i>
<i>Project Decommissioning & Regulatory Closure</i>	

Stack Testing



Stack testing is often required to verify emissions limits in relation to operating permit compliance and potential impact assessments.

In a quickly changing regulatory environment, it’s important for corporations to take steps to ensure their ongoing regulatory compliance. Our full suite of permitting, engineering, testing, and reporting services ensure that our clients remain in compliance with all applicable regulations.

Our team of experts work closely with our clients to provide timely and actionable information and offer guidance throughout the process.

Stack Testing Services

<i>Permit Review</i>	<i>Testing Protocol Development & Design</i>
<i>Regulatory Negotiations & Submittals</i>	<i>Expert Testimony & Litigation Support</i>
<i>Compliance Report Review & Submittal</i>	

About ESI

Every day, ESI’s team of scientists, engineers, environmental professionals, and field personnel are providing comprehensive professional and field services to identify, prevent, and resolve environmental issues related to water, soil, air quality, and facilities. With innovative technical skills and clear understanding of our clients’ goals, we effectively reduce or eliminate environmental impacts.

Contact us to learn how we can leverage our skills and experience to provide a custom solution to meet your unique needs.

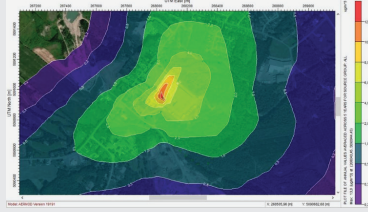
781 Rt. 15 South, 2nd Floor
Lake Hopatcong, NJ 07849
Ph: 973 398-8183 Fax: 973 398-8037
info@esienv.com
www.esienv.com



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The resulting Air Dispersion model is a sophisticated mathematical simulation of how air pollutants disperse in the atmosphere.

The process uses advanced sampling and analysis techniques and complex computer programs to calculate and predict the ambient impact of air pollutants emitted from sources such as industrial plants, combustion sources, vehicle traffic, or accidental chemical releases.

Typical Pollutants

Acid Gases (HCl, HF, H₂SO₄/SO₃)

Aldehyde Compounds
(CH₂O, CH₃CHO, C₆H₅OH)

Criteria Contaminants
NOX, SO₂, CO, VOC, PM, Pb

**Air Toxic Contaminants/
Hazardous Air Pollutants**

Metals (including Mercury)

Particulate Matter
PM10/PM2.5

PCDD/PCDF, PCB, PAH

Sulfur Compounds
(H₂S, COS, CS₂, CH₄S)