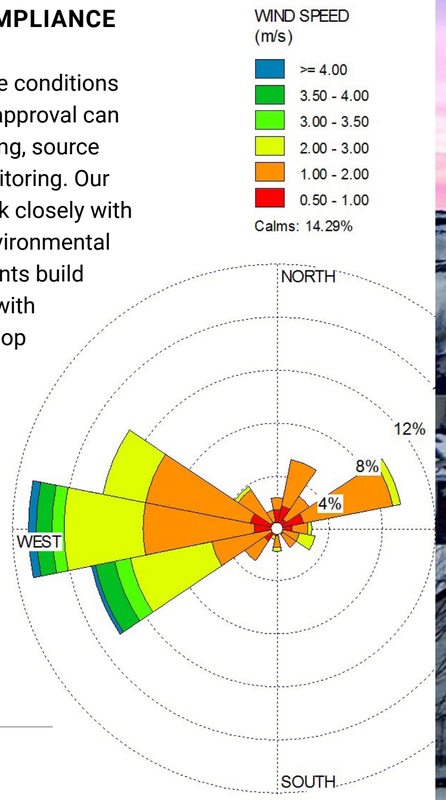
Air Quality Services

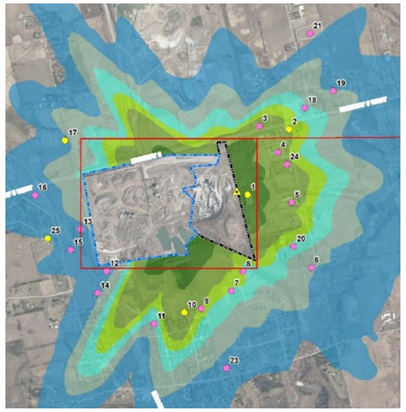
Rooted in reality, educated in natural sciences, our team of Atmospheric Sciences professionals focus on air quality, climate science, greenhouse gas (GHG), and ambient noise. Offering a full spectrum of services, we help clients identify, measure, and address air quality; regulatory compliance and permitting requirements; verify and quantify greenhouse gas (GHG) emissions, quantify criteria and toxic/hazardous pollutants, evaluate the impacts of climate, and assess noise. Spanning every sector, our services support both the public and private sectors across all aspects of atmospheric sciences.

PERMITTING AND COMPLIANCE

Obtaining and meeting the conditions of a regulatory permit or approval can involve air quality modelling, source testing, and ambient monitoring. Our air quality specialists work closely with other members of our environmental services team to help clients build successful relationships with local regulators. We develop applications, prepare emission inventories and assessment documentation, and produce compliance reports.

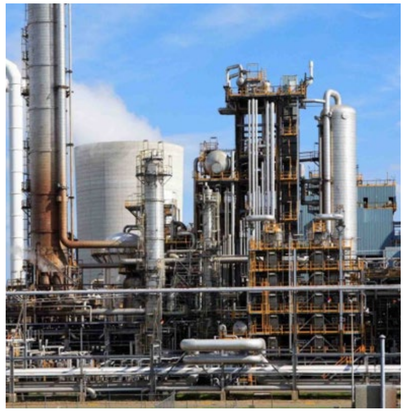


TOGETHER, WE CAN HELP YOU ADDRESS REGULATORY COMPLIANCE WHILE ACTIONING YOUR CLIMATE GOALS.



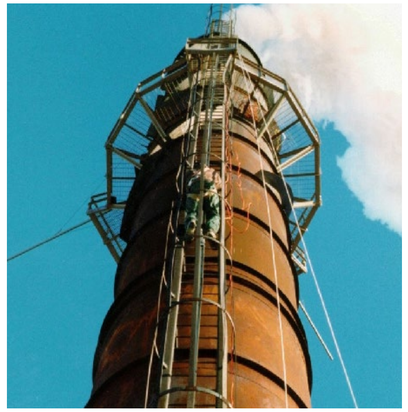
AIR QUALITY MODELING

Our air quality practitioners can tailor the right tools and services to meet your project and regulatory needs.Our team has extensive experience using AERMOD, CALPUFF, SLAB, and other well-known dispersion modeling systems accepted by provincial and state regulators. We also use advanced techniques such as computational fluid dynamics (CFD) to account for complexities associated with transient releases, complex geometries near the release points, and multi-phase physics of the release. We use CFD methods to model sources where conventional models are too conservative or are not applicable. Our high-performance computing cluster drastically reduces run-times for complex air dispersion modeling.



EMISSIONS INVENTORIES

Emission inventories are an accounting of air contaminants that may be released into the atmosphere from specified sources and activities over a period of time. These inventories help our clients better understand the effects that their operations could have on air quality, including smog, particulate matter, and toxic air contaminants. In turn, this helps identify achievable emissions reductions and targets to be in compliance with regulatory requirements. We can develop inventories for both existing facilities and proposed projects.



SOURCE TESTING

For existing operations, our mobile stack testing teams can measure emission rates and concentrations of air contaminants in the exhaust gases released to the environment through stacks, vents, or other source types. Our teams measure criteria air contaminants (e.g., nitrogen oxides, sulfur dioxide, particulate matter) and more demanding compounds (e.g., polyaromatic hydrocarbons, dioxins, furans). We also conduct Relative Accuracy Test Audits (RATAs) and Predictive Emission Monitoring (PEM) performance testing with near real-time output. Our testing procedures meet applicable Provincial, State, and Federal environmental regulations.

AMBIENT MONITORING

Ambient air quality monitoring is often required before project construction to determine baseline conditions– and during operation to determine your project's contribution to local air quality. We design programs and deploy monitoring equipment that range from simple, smaller projects in remote locations to more complex ones with continuous real-time data acquisition for particulate matter, criteria gases, and meteorological elements. Our summary reports identify trends and help interpret the results in the context of your regulatory needs.

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RELATED ITEMS

View some of our related materials:

NASA Ames Research Center

Fully aware: how to track air pollutants and GHG emissions with near real time data

City of Victoria GHG inventories

Elmbridge local air quality management

CONTACT US

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