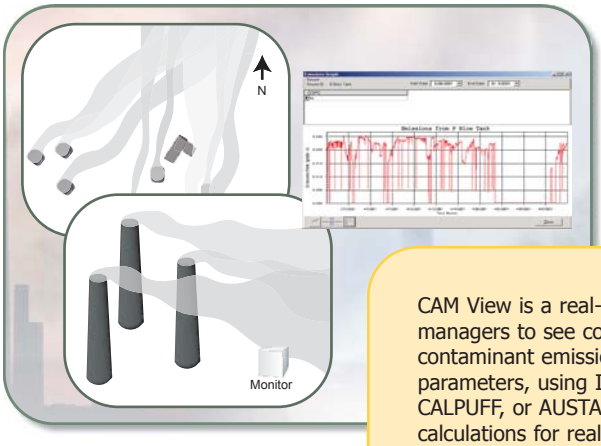
CAM View

Compliance Assurance Monitoring Model



CAM View enables proactive air quality management - actions are taken before release occurs in order to avoid regulatory limits.

CAM View is a real-time model that allows managers to see correlations between contaminant emission rates and process parameters, using ISCST3, AERMOD, CALPUFF, or AUSTAL2000 dispersion calculations for real-time model results.

Users

- Nuclear Industry
- Pulp & Paper
- Odor Control
- Cement Plant
- Hazardous Waste Combustion
- Refineries

Demand for CAM View

Regulatory and community pressures require continuous assurances that permitted emissions are not adversely impacting surrounding receptors. This is the case, for example, of the Compliance Certification requirement in Part 70 of the Operating Permits Program and Title VII of the U.S. 1990 Clean Air Act Amendments.

To satisfy the above requirements these facilities have an air monitoring station that costs roughly US $ 60,000/yr to operate. This station usually misses emissions for a significant number of hours, as it is a point on a two-dimensional space.

A ring of air monitors is therefore necessary to assess emissions impacts, which are dependent on wind flowing from all directions. Furthermore, emissions are released from different heights and an air monitor would not be able to capture impacts from ground-level and stack releases. Even when the air monitor station is hit by emissions it is unknown from which source the pollutants originated.

- CAM View reduces or eliminates the need for expensive CEMS.
- Incorporates data from your continuous emission monitoring system.

Data Integration

An accurate emissions estimate is crucial to a pollution and nuisance impact analysis. Once the physical site and stack parameters are added, emissions estimates are the most significant input to the real-time model. Emission estimation methods supported include:

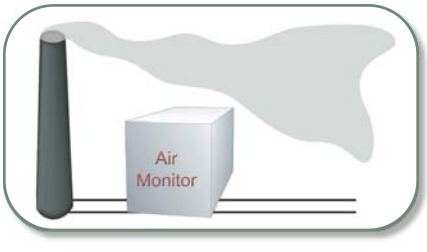
- Crude mass balances
- Stack testing - measured data
- Continuous Emissions Monitoring Systems (CEMS)
- Emission Factors
- Emission Profiling

Maintenance

Are you scheduling major maintenance on days when the wind blows the plume into the city, upsetting the residents?

- Schedule maintenance according to forecast data
- Know where your emissions will impact and schedule production accordingly

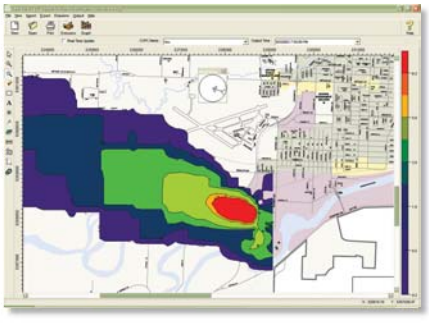
Plan Your Operations to Suit Your Environmental Needs!



Meteorology

- Quickly and easily import meteorological data acquired from on-site stations, online weather stations, or meteorological model results
- Meteorological data requirements and treatment calculations depend on the model chosen to drive the system.
- CAM View supports state-of-the-art multi-source models such as ISCST3, AERMOD, CALPUFF, and AUSTAL2000
- Data requirements will differ if using the integrated AERMET or CALMET pre-processors, increasing in complexity to support increasingly sophisticated models.

Interactive interface provides real-time and forecast impacts



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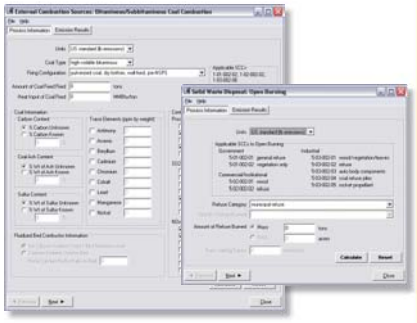
Dynamic Emissions Calculations

Customization will improve your emissions predictions dynamically, as your process load changes.



Customized Professional Reporting

CAM View automatically generates reports using the data in your real-time database. Lakes Environmental can customize your reports to meet the standard of your governing body and of your organization internal guidelines.

Real-Time Benefits

CAM View represents an integration of proven technologies to predict current and future air-quality changes using real-time meteorological and stack emissions data.

Benefits of real time modeling include:

- Realistic representation of the location and extent of a potentially affected area
- Assistance to decision-makers when issuing air quality advisories
- Improved siting of mobile and stationary ambient air quality monitors
- Use of forecast weather data allows preventive maintenance on air pollution control equipment.

CAM View gives you complete control over your modeling, allowing you to:

- Renew your site maps when a facility is upgraded
- Compare different terrain resolutions used when modeling meteorological flows
- Update surface parameters seasonally
- Increase the distance from source modeled
- Switch dynamically between near-field and long-range impacts, depending on the model used.

Sources

- Logs an unlimited number of sources and chemicals
- Logging and reporting of all emission sources
- Tracks point, volume, area, and line source emissions
- Supports fugitive emissions calculations.

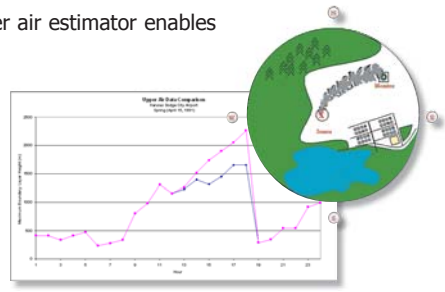
System Integrity

- Operates on your existing IT infrastructures.
- Supports the most common SQL database interchangeably - ORACLE, MS-SQL, INTERBASE, MYSQL, and others.
- Comes with high performance SQL server, free of charge (Optional)

Upper Air Estimation

Reliable integrated upper air estimator enables real-time modeling.

A monitor is a point in a 2D plane. CAM View tracks your emissions in a 3D space for 360 degrees.



Compatibility & Customization

The CAM View model is completely customizable to integrate seamlessly into your existing infrastructure. You can request customization for:

- data input system
- project management system
- dispersion model used
- reporting formats