

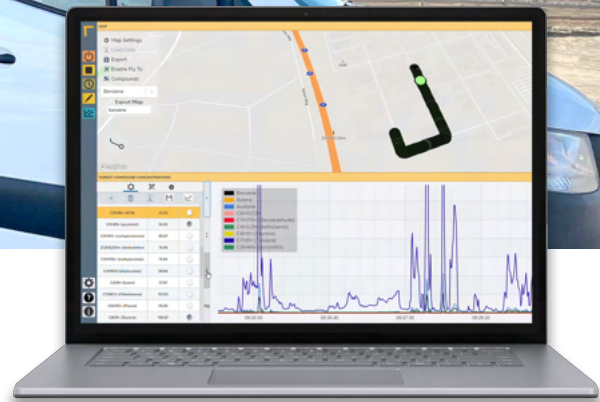


## Colorado State Mobile Lab

TOFWERK mobile labs equipped to monitor local emissions and air quality



Comprehensively measure a wide variety of VOCs and VICs in real time, simultaneously, from anywhere.



### Features

In January 2023, TOFWERK delivered a mobile lab to Colorado's Department of Public Health and Environment (CDPHE).

In addition to this lab, TOFWERK has built and deployed similar fenceline monitoring labs all over the world, including in China and Europe. The trace gas measurement capabilities of Vocus mass spectrometers make them the ideal solution for a wide variety of air measurement applications. Combining consideration for its performance and compact size, Vocus is quickly gaining prominence in mobile lab applications.

- Robust, sensitive, fast, mobile trace gas analysis inclusive of VOCs and VICs
- Independent power system for continuous operation without shore power
- Integration of multiple sensors into a universal data stream
- Comprehensive workspace for infield operations; cockpit, workstation, gas cylinder storage, tools, cabinets



**Using Vocus mobile air monitoring labs, regulators and researchers can assure that they are adequately equipped for emissions monitoring campaigns.**

Conventional fenceline monitoring systems fall short in their speed, sensitivity, and range of compounds they are capable of measuring. With fast speed and high sensitivity, the Vocus measures a wide range of VOCs and VICs. The Vocus tracks known hazardous compounds in real-time while simultaneously measuring 1000s of other compounds, many of which are hazardous. Software streamlines data from multiple sensors into a single visualization and data file.



*Mobile lab cockpit for observing real time data stream infield.*



Read the full CDPHE story



Learn more about Vocus Air Monitoring Applications

**Compound Coverage and Lab Specifications**

Select List of Monitored Compounds (Typical pptV LOD 1 minute)	HCN <20	Formic Acid <20	A-pinene <20	Tomuene <20	Nitric Acic <100	Xylene <20	Cl2 <10	Br2 <10	Cino2 <10
Power	(4) 400AH lithium batteries. Three hours independent run time possible (minimum, including AC). More than 10 hours independent run time without AC. No generator required. (2) 3500 watt pure sine inverter/charger to provide 2 separate 120V circuits Additional 400W total solar panels with circuit breaker. Dedicated outlets for all instruments. Sufficient power beyond instruments and HVAC to provide 1800 W for inlet heaters, laptops, future additional analyzers, etc.								
HVAC	13.5 BTU fan roof mounted air conditioner. Insulated walls with birch liner.								
Racks	Structural mounts for 2 Vocus mass spectrometers (shock-absorbing) and Picarro monitor. 2 working desks with electrical lift; overhead cabinet; gas cylinder.								
Sampling of Outside Air	Three anodized aluminum interior->exterior ports for sampling inlets, weather station, instrument exhaust. Aluminum flat-bed roof system with ladder. Teflon inlet with additional pumping, temperature regulation.								
Integrated H2S Data Stream	Picarro model G2204 combined CH4 and H2S analyzer with associated consumables and support relevant for mobile lab (LOD 3 ppb).								
Met Data, GPS	Gill MaxiMet GMX500.								
Data processing and upload	TOFWERK Tweb and Vocus Mobile software.								
Training and Support	Provided by technical staff from TOFWERK USA's Boulder, Colorado facility (1 hour from CDPHE Aurora location).								
2-year warranty	Provided with scope specified by CDPHE.								