

# Leveraging FTIR for Quantifying Methane Slip Emissions



*Montrose is your trusted partner for accurate and reliable emission measurements.*

## The Challenge

Addressing methane slip, the uncombusted methane emitted from combustion sources, is crucial for companies striving to meet regulatory requirements and decarbonization targets. As the need to quantify these emissions becomes increasingly urgent, operators must implement measurement techniques that provide accuracy, transparency, and industry-standard alignment. Successfully identifying and quantifying low-concentration methane in complex emission streams depends on advanced technology and experienced professionals.

## Why Montrose?

Montrose has assembled a team of experienced professionals, supported by our dedicated FTIR Division. Our team has successfully completed dozens of OGMP 2.0 projects.

We recognize that experience, education, and training are crucial to delivering effective and efficient support. Our in-house training ensures field and professional expertise through job-specific skill verification, rigorous Standard Operating Procedures (SOPs), Technical Operating Manuals, and Quality Assurance/Quality Control (QA/QC) protocols.

## Additionally, Our Training Covers:

- Safe work practices & operational proficiency
- Equipment calibration & maintenance
- Project management & issue resolution
- Continuous improvement

## Why FTIR?

Fourier transform infrared spectroscopy (FTIR) is a powerful, and accurate tool for quantifying methane slip emissions from combustion sources. Recognized in OGMP 2.0 Technical Guidance Documents (TGDs), FTIR is widely adopted as a best practice for methane slip measurement.

## How FTIR Works:

- Extractive system continuously transfers samples from the stack.
- Heated gas is scanned in the FTIR cell.
- Identifies gas concentrations in real time.
- Can quantify multiple analytes simultaneously.

## Key Advantages:

- High precision & sensitivity
- Real-time data collection
- Simultaneous multi-gas detection
- U.S. EPA-compliant methodologies
- Industry-preferred for OGMP 2.0 methane slip assessments

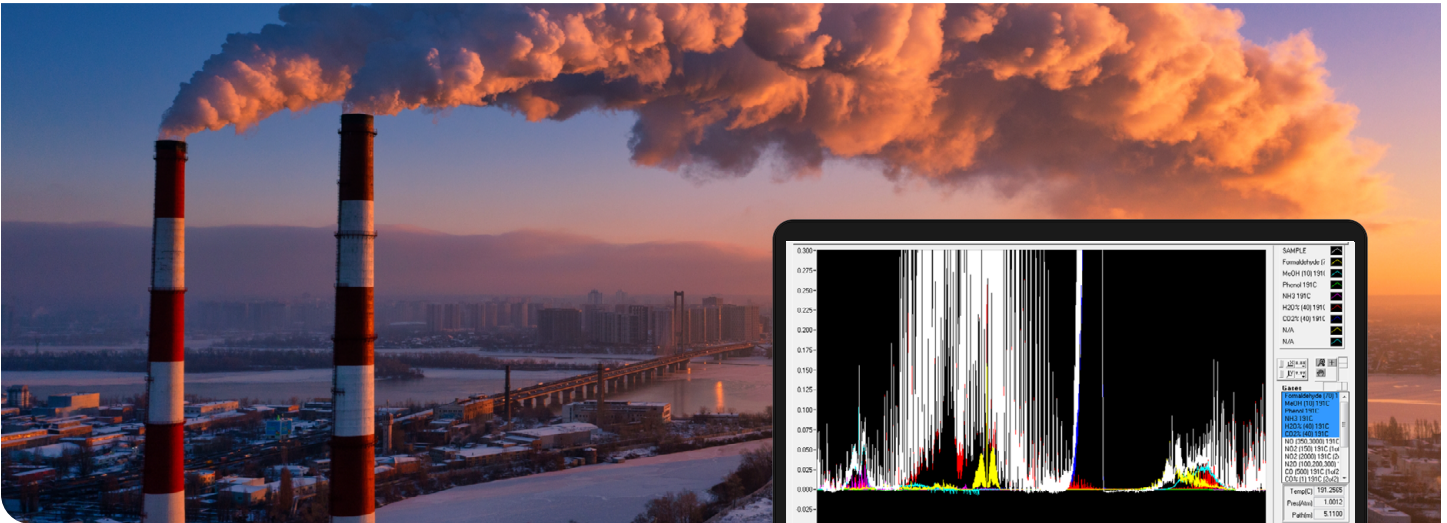
## Testing Overview

- **Pre-Project Planning:** Accurately understanding the emission source(s) and scope of work in order to execute the project efficiently.
- **Port Access:** Must be clear, safe, and appropriately sized for probe insertion.
- **Test Conditions:** Conducted within the normal operating range of emissions sources; may include multiple test conditions upon request.
- **Site Responsibilities:** Ensure safe access, identify operational parameters, and provide required utilities.



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## Emissions Test Protocol (ETP)

Each project includes a formalized Emissions Test Protocol (ETP), which outlines program objectives, testing methods, QA/QC procedures, and safety planning to ensure successful testing outcomes.

## Equipment Shipping & Logistical Planning

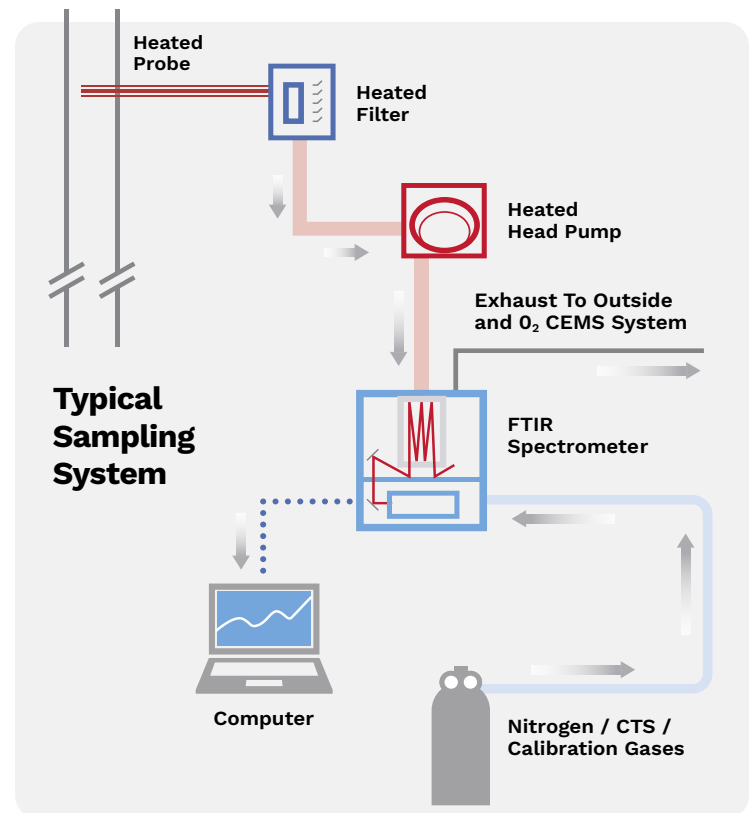
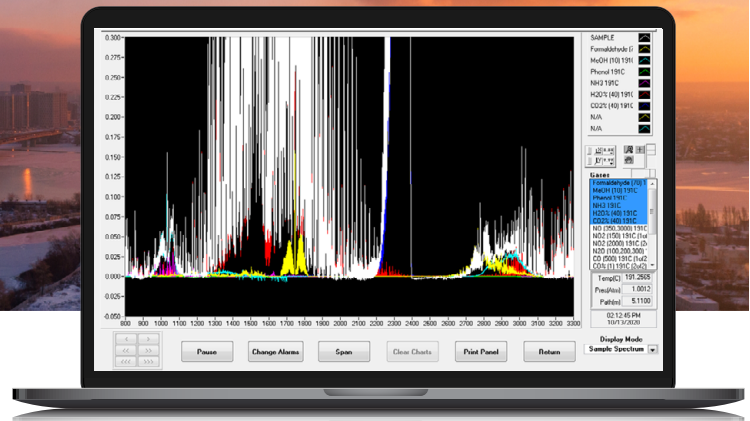
Projects may require advance planning for equipment shipping and site preparation. International projects typically require extended lead time for customs clearance and transportation.

## On-site Laboratory & Power Requirements

Ensure your site can support safe and accurate testing with a stable, temperature-controlled workspace and sufficient power. Our team will help define the specific needs during planning.

## Field Testing Workflow Example

- **Safety & Permits:** 1-4 hours
- **Setup:** 2-4 hours
- **System Heating:** 1 hour
- **Daily Diagnostics:** 1 hour
- **Testing:** Three 1-hour runs per condition (4-5 hours total with QA/QC)
- **Breakdown & Packing:** 4-6 hours



**Looking to Deepen Your Methane Mitigation Strategy?**

Scan to explore our OGMP 2.0 blog series and insights.