METHANE CAPTURE & EMISSION REDUCTION

Sentry

Header-Mounted, Real-Time Landfill Gas Analysis

The LoCI Sentry measurement device is installed along landfill header infrastructure, dividing the wellfield into sections to monitor overall gas quality to the flare or beneficial use project. Data from the Sentry empowers management teams with comprehensive insights into regional wellfield performance, helping to inform and support daily operations.

The LoCI Sentry remotely monitors:

- Methane %
- Oxygen %
- Carbon dioxide %
- Balance gas %
- Landfill gas temperature
- System pressure
- Barometric pressure
- Additional capabilities:
  - Liquid levels
  - External signal integration (flow meters, gas chromatographs)

As part of the LoCI real-time data and control system, the Sentry increases visibility for the entire gas collection system to support both landfill and beneficial use operations. Operations teams can strategically place Sentry devices to divide the wellfield into sections for more active management, allowing for faster response times when conditions change or leaks occur.

By using Sentrys to monitor system vacuum distribution, landfill teams are immediately informed if a header is compromised and can take action when a section of the wellfield is underserved.

The Sentry can also take control signals as inputs, reading gas composition and flow measurements from customer equipment, such as a gas chromatograph (GC) or flow meter. This provides high-level process control that is based on the same data and instrumentation used by gas processing plant operators.



MEASUREMENT	RANGE	TOLERANCE*
Methane	0 – 100%	±0.50% (vol)
Carbon Dioxide	0 – 100%	±0.50% (vol)
Oxygen	0 – 25%	±0.1% (vol)
Balance Gas (Nitrogen and trace)	0 – 100%	±1.1% (vol)
System Pressure	-138.5 – 0" of H_20	±0.50"
Landfill Gas Temperature	Up to 140°F (60°C)	±2°F

*When following manufacturer-recommended calibration procedures



Additional Technical Specifications:

Calibration: Gas sensors are initially calibrated during manufacturing and auto-calibrated every 14 days unless otherwise specified, minimum annually.

Power: Solar with rechargeable battery or optional AC power

Battery Capacity: >3 weeks at default measurement frequency

Default Measurement Frequency: 3 hours

Minimum Measurement Frequency: 15 minutes (uses AC power)

Rated Temperatures: Operating range of -40°F to 122°F (-40°C to 50°C); maximum process temperature of 140°F (60°C)

Connectivity: Cellular communication or wireless gateway

External Signal Compatibility: 4–20 mA, digital

Install Location: Header or other piping infrastructure with two sample ports, minimum 12" apart

Installations at LoCI's Discretion: Corrosive locations with >10,000 ppm H_2S; locations with solvent concentrations >10,000 ppb; not intended for locations with standing liquids

To learn more and contact us, visit locicontrols.com.

Why LoCI Controls?

With financial, operational, and environmental, health, and safety (EHS) benefits, LoCI Controls' real-time data and control system optimizes facility management and gas collection for operators and landfill owners alike.

Increase ROI

- Maximize methane flow
- Control nitrogen in the wellfield
- Improve collection system efficiency
- Increase plant uptime and productivity

Empower On-Site Teams

- Troubleshoot wellfield and gas collection systems faster
- Reduce EHS risks

Improve Relationships with Surrounding Communities

- Reduce potential odors and off-site gas migration

Support Sustainability & Climate Action Goals

- Reduce greenhouse gas emissions