METHANE CAPTURE & EMISSION REDUCTION

Gas Composition Performance Standards

for the LoCI Controls System & Measurement Devices

The LoCI Controls real-time data and control system, used across landfills — on wellheads, header lines, and for aggregate gas collection measurement — empowers operations teams with actionable data and insights about the wellfield, gas collection system, and plant performance while maintaining performance standards on all projects.

LoCI's System & Measurement Device Standards

System Gas Composition Performance

Aggregate gas composition goals are based on two key factors:

1. Customer-defined gas quality specifications
2. Gas quality stability

MEASUREMENT	TOLERANCE*
Oxygen	±0.1% (vol)
Balance Gas (Nitrogen and trace)	±1.0% (vol)

*Under normal project operating conditions

Controller & Sentry Gas Composition Performance

LoCI verifies its device tolerances with both lab tests and in-field reference studies. LoCI's Controller and Sentry devices measure gas composition with the following tolerances:

MEASUREMENT	RANGE	TOLERANCE*
Methane	0 – 100%	±0.50% (vol)
Carbon Dioxide	0 – 100%	±0.50% (vol)
Oxygen	0 – 25%	±0.25% (vol)
Balance Gas (Nitrogen and trace)	0 – 100%	±1.25% (vol)

*When following LoCI/manufacturer-recommended calibration procedures

Findings from the Wellfield

At the project with the tightest tuning parameters in LoCI's portfolio, LoCI met gas quality specifications during 100% of the project's normal operations. Deviations occurred only when there were leaks in the gas collection system — a circumstance unrelated to wellhead tuning.

LoCI's Impact

One of the major challenges in controlling aggregate gas quality is unwanted air intrusion. Leaks — which can stem from aboveground wellheads (due to loose couplings, hoses, orifice plates, sample ports, etc.), compromised cover, or surface and sub-surface infrastructure — can introduce oxygen and nitrogen for which automated tuning can't fully compensate. Real-time data, captured from LoCI's measurement devices and immediately available on the WellWatcher® platform, can be used to quickly identify points of air intrusion, remediate the issue, and get projects back on track.

Across the LoCI project portfolio, LoCI continues to meet or exceed customer-defined specifications for project durations. When landfill teams leverage and act on real-time data, historical trends, and recommendations from LoCI's *Daily Action Report* via WellWatcher®, gas quality stability greatly improves. Customers have seen over 90% improvements in oxygen stability and over 30% in nitrogen stability.

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
- Automate well tuning strategy
- 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