mPACT2WO a molex Business

CASE STUDY

SEGMENT: PETROLEUM REFINERIES

mRegz™ AirCompliance

Strengthening Compliance and Community Trust

Harnessing Early Detection to Reduce Emissions and Optimize Operational Efficiency

PROBLEM

A North American oil and gas operator faced community concerns over emissions and spill risks that blocked the expanded production permit. Misattributed emissions from neighboring facilities caused over-reporting, and outdated detection methods failed to meet EPA HON requirements.

ASSET

The terminal integrates crude storage, refining, and tanker loading of gasoline and other hydrocarbons, serving as a key hub for regional feedstock supply and product distribution that required a production permit.

ALERT

- mRegz™ AirCompliance continuously monitors emissions at the fenceline and high-risk points for early leak detection.
- Detected an AVO-invisible leak and instantly alerted operators.
- Transformed LDAR from manual sweeps to data-driven inspections.

INVESTIGATION

- mRegz™ AirCompliance spotted a transfer-hose leak missed by AVO checks.
- Precise location data and a handheld device enabled rapid repair.
- Real-time concentration and wind-direction readings confirmed off-site emissions.

RESULT

Early detection through the mRegz™ AirCompliance solution enabled the operator to catch leaks in real time, allowing immediate response and preventing emissions from reaching passive monitors. This proactive approach alleviated community concerns, secured EPA approval for the production permit, and ensured full compliance with HON regulations.

Figure 1: Site map of the mRegz™ AirCompliance solution monitoring emissions during loading and unloading operations along a waterway.

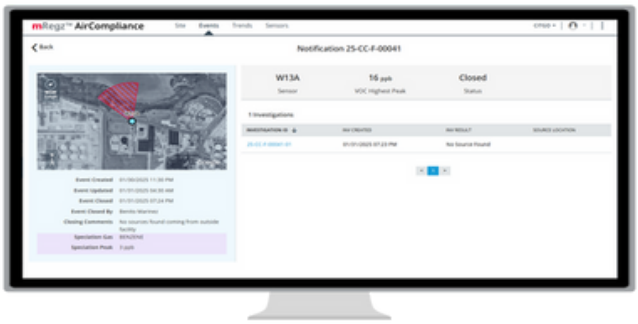

Figure 2: Alert indicating an emission detected just outside the facility boundary.

TRANSFORMATION

Implementing the mRegz™ AirCompliance solution's real-time monitoring, the operator transformed emissions management from reactive leak hunts to proactive, targeted compliance actions—reducing response times, strengthening community trust, and enhancing operational reliability.

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