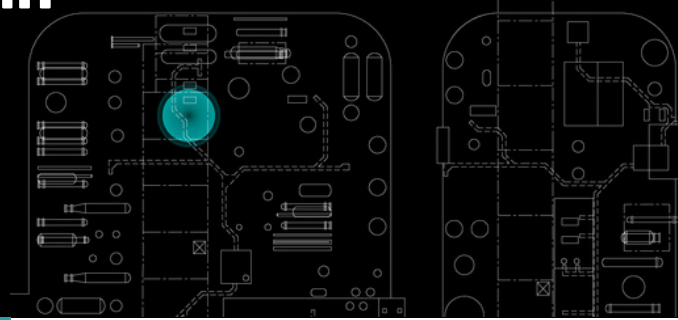




Early Detection of LPG Leaks in Heat Exchangers

Timely Insights for Quick Response and Enhanced Personnel Safety



PROBLEM

A leading US refinery struggled to efficiently detect Liquefied Petroleum Gas (LPG) leaks, relying on inconsistent manual inspections, posing safety risks and compromising operational efficiency.



ASSET

Identifying LPG leaks at heat exchangers traditionally relied on visual inspections and ignition source identification. These methods are often inefficient and ineffective, causing undetected leaks for hours or days, posing significant safety risks and compromising refinery operations.



ALERT

- The operations team received a Category 1 alert from the mRegz™ AirCompliance solution.
- The alert displayed a highlighted box on the site map, indicating a Category 1 emissions peak at 8143 PPBe.
- The team identified the highlighted box as the area near the process unit equipment/refining asset and decided to investigate based on the alert details.



INVESTIGATION

- During the investigation, a small LPG leak in the heat exchanger channel was identified.
- As the leak grew, the operations team alerted the Process Lead, who sounded the evacuation signal.
- The production team swiftly activated the Emergency Operations Center (EOC) to isolate the leak.
- Prompt action mitigated and resolved the leak within four hours.



RESULT

Early leak detection reduced explosion risk and streamlined operations. The operations team used insights from the mRegz™ AirCompliance solution to mitigate an LPG leak, preventing a catastrophic event. The flammable LPG near a roadway posed a vehicle-triggered explosion risk, neutralized by swift detection and responsive measures.



Emissions Peak Information Identified by the mRegz™ AirCompliance Solution



TRANSFORMATION

The mRegz™ AirCompliance solution provided uninterrupted insights to mitigate an LPG leak, preventing escalation into a catastrophic event. Early detection reduced the risk of explosion and streamlined operations by prioritizing safety.