



A Better Way to do LDAR:

Alternative Work Practice vs Method 21 Program

REDUCED TIME ON SITE

LESS BOOTS ON THE GROUND

MORE FREQUENT SURVEYS

BI-MONTHLY VS. ANNUALY/QUARTERLY

REDUCED EMISSIONS

WE FIND BIGGER LEAKS, FASTER

REDUCED OPERATIONS BURDEN

HIGHLY QUALIFIED TECHNICIANS
WORK INDEPENDENTLY & EFFICIENTLY

Leak Detection and Repair (LDAR) - most companies use antiquated strategies and seem reluctant to embrace newer methods despite continuing technological advancements in detection devices.

Method 21 (often called sniffing) is the most common LDAR method;V first developed by the EPA, it uses a hydrocarbon ionization detector connected to an aspirated wand to probe for emissions. This method, although considered 'tried and true', is flawed and pales in comparison to the optical gas imaging (OGI) techniques that we specialize in today.

1. Scale of Detection

Method 21: Slow detection – often compared to 'finding a needle in a haystack' with technicians inspecting every straw in the process! This method is tedious, repetitive, and costly. (Technician can monitor 500-600 components/day and find 'leaks' < 10ppm)

OGI: Rapid detection – think of 'using a magnet to find the needle'. This method focuses on efficiency, more scans can be completed in less time which results in larger leaks being found faster. (Technician can monitor around 10,000 components/day and find 'leaks' ~4,000ppm).

2. Efficiency of Cost

Method 21 spends a majority of the time on components that are not leaking and requires more technicians spending more time on site to monitor the same number of components. This monotonous monitoring style results in higher technician turnaround and inconsistency. It is hard to spend more than a few days doing this task without losing focus or wanting to cut corners.

1 day OGI tech = 10,000 components 15 days M21 tech = 7,500 – 9,000 components



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3. More Accurate

M21 Process – scanning numerous components to obtain each components screening value (SV) in ppmv, then applying correlations to estimate emission rates (ER). Both cases can result in errors with the predicted leak rates (-80% to 300%).

OGI Process – video shows the actual source of the leak and provides a qualitative read of leak size. This prevents ‘ghost leaks’ where a M21 device does not ‘show’ you the source and can pick up gas from an upstream or downstream component. This leads to maintenance wasting time repairing the wrong component only to find leak persisting at the next monitoring event.

4. Safer

Method 21: Difficult and unsafe to monitor components require scaffolding/man lifts which put technicians at heights and in unsafe scenarios. This adds time to assessments and wastes operators time all while compromising the safety of all involved.

OGI: Reduces number of technicians (less boots on the ground) and allows difficult and unsafe to monitor components to be surveyed from a safe location on a platform or on the ground.

5. Easier to Obtain Results

OGI allows for larger leaks to be detected sooner which, in turn, reduces annual emission rates. This is accomplished by increasing survey frequency (bi-monthly vs. quarterly/annual), but drastically reducing each survey time. That means components are checked more often while less time is spend on site overall. The leaks that OGI could potentially miss (< 4,000ppm) are more than made up for by finding the larger and potentially hazardous leaks more frequently.