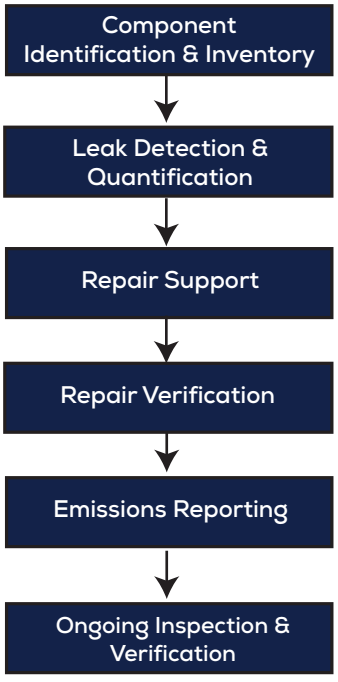
FUGITIVE EMISSIONS MANAGEMENT

Vertex provides fugitive emissions management and leak detection & repair (LDAR) solutions using optical gas imaging (OGI) technology (FLIR GFX320 OGI Camera) to spot leaks in piping, tanks, flanges, connections and other facility assets. Utilizing the latest in leak detection and thermography technologies, Vertex can efficiently scan large areas including difficult to access locations and pinpoint leaks without interrupting facility processes. Once identified, emissions are quantified using QOGI technology and facility repairs can be made and those repairs visually confirmed with a subsequent scan of the area.

Fugitive Emissions Management Services Include:

- Fugitive Emissions Surveys
- Leak Detection & Repair (LDAR)
- Fugitive Emissions Management Plan (FEMP) Development
- Emission Detection & Quantification
- Methane Reduction Retrofit Compliance Plan (MRRCP)
- Regulatory Compliance Management: AER, OGC, BC WCI GHG and Sask ER
- Annual Reporting for Methane Emissions Compliance

Elements of a Fugitive Emissions Management Program



PROGRAM BENEFITS

- **Regulatory Compliance & Environmental Stewardship**
  Emission standards are increasing as a national focus and updated provincial regulations require fugitive emissions management.

- **Increased Safety for Facility Workers & Surrounding Communities**
  Reducing emissions from leaking equipment has the direct benefit of reducing occupational exposure to hazardous compounds. Prolonged exposure is linked to chronic negative health effects.

- **Potential Reduction in Emission Fees**
  Some jurisdictions charge annual fees that are based on total facility emissions. A facility with an effective program can potentially reduce these fees.

- **Reduced Product Loss**
  In the petrochemical industry, salable products are lost whenever emissions escape from process equipment. Lost product translates into lost revenue.

  - Estimated petroleum refineries could reduce emissions from equipment leaks by 63% with the implementation of a facility LDAR program. [1]

  - Estimated chemical facilities could reduce VOC emissions by 56% with the implementation of a facility LDAR program. [1]

1. Report published by the Environmental Protection Agency Office of Compliance https://www.epa.gov/sites/production/files/2014-02/documents/ldarguide.pdf