



**Private Equity  
Methane Solutions Summit**

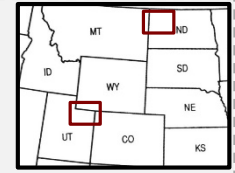
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September 30, 2020

# KODA Emissions Management Program



- Headquarters: Denver, CO
- Focused on the acquisition, development and exploitation of oil and natural gas properties in the Rockies
- ~150,000 net acres Uinta Basin in Utah; ~77,000 net acres in Williston Basin in North Dakota



- KODA’s sustainability strategy is centered around culture
  - Strategic change in mindset across all layers of the company from sponsors to executives to boots on the ground
    - We live where we work: Improvements in air quality directly impact their families and local communities
    - Emissions reduction impacts safety: Reducing potential for explosions or inhalation of harmful emissions
    - Run an emissions program like a business: Improve revenue (“product burnt / lost is product not sold”), reduce costs, and focus on continuous improvement
  - Provide ozone cause and effect training for local KODA employees and contractors

## KODA Emissions Management Journey

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>■ Conducted field-wide LDAR survey of all ~1,200 operating sites</li> </ul> | <ul style="list-style-type: none"> <li>■ Rolled out real-time situational awareness 4-gas monitors for all field personnel</li> <li>■ Field wide support for continued innovative approach</li> </ul> |
|--|---|

2017	2018	2019	2020
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- Moved to compressed instrument air and high efficiency pilotless boilers for all multi-well pad locations
- Replaced all high-bleed pneumatic valves with low/no-bleed valves
- Installed flame and gas detection on pad facilities (fire-eye and LEL monitor tied to ESD’s)
- Utilized dual fuel system for drilling operations replacing diesel with natural gas
- Hired SLR consulting for emissions accounting

- Recently received accolades for leadership on emissions management
  - 2019 Recipient of Leadership in Ozone Reduction Awareness Award by the TriCounty Health Department
  - 2020 Recipient of Environmental Excellence Award by the Utah Board of Oil, Gas and Mining

# Leak Detection & Repair (LDAR) Program



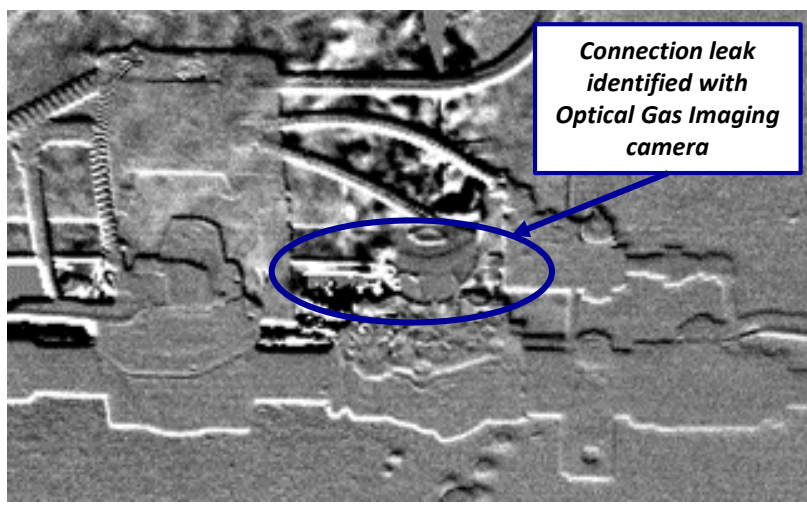
- LDAR done by certified HSE team members with company-owned optical gas imaging camera
- Semi-annual EPA OOOOa inspections on any well drilled after 9/18/2015
- Voluntary LDAR with field-wide spot checks

- Seek to repair identified leaks as quickly as possible, some of which are immediate (LTM avg ~5 days)
- Perform repair verification with FLIR camera, workorder process/emails

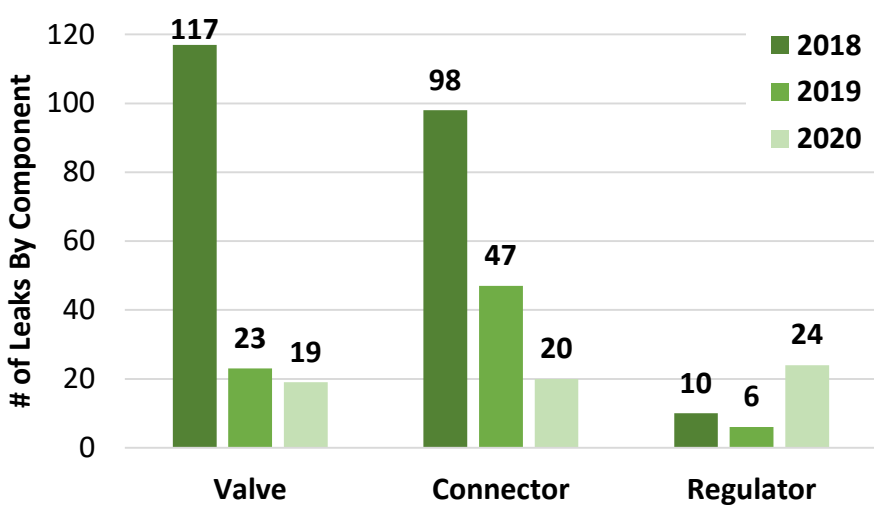
- Track data including location of leak, component leaking, date of leak, date of repair, and date of verification
- Data collected is compiled to ensure timely repair and to allow for trend analysis for more detailed root cause analysis

- Perform root cause analysis on every leak identified to determine if there is a viable solution to prevent similar leaks going forward

## LDAR inspections with owned FLIR OGI camera



## Tracking LDAR results enables trend analysis



# Reducing Emissions + Generating Returns



## Installation of Low/No-Bleed Pneumatic Valves

- Existing Snap heads were a continuous bleed emitting ~2 mcf/d/device
- MIZER No-Bleed Pilot Valve most cost-effective solution for converting high-bleed pneumatics to low-bleed which reduces emitted methane to ~0.5 mcf/d/device
- Replaced ~800 valves across the field over 6-8 months
- Total cost of \$280k (\$350/unit)
- **Reduced vented emission by 75% (1,200 Mcfpd) and generated annual savings of \$880k**



## Conversion to Compressed Instrument Air for All Pads + High Efficiency Boiler

- Conversion to compressed instrument air and high efficiency boilers allowed for derating facility classification which generated significant savings in facility design
- Compressed air provides affordable and reliable control and virtually eliminates maintenance on pneumatics
- One high efficiency boiler could replace 16 line heaters allowing for ~92% reduced footprint (120 ft<sup>2</sup> vs 1,280 ft<sup>2</sup>)
- KODA recently moved four pads with 40 wells to compressed instrument air and high efficiency boilers
- Total cost of \$90k (\$20k Compressed air pneumatics + \$70k boiler and equipment)
- **Reduced total emissions by 15.2 tons/yr and generated annual savings of \$300k**

## Conversion to Dual Fuel Drilling Rig Operations

- KODA has utilized dual fuel generators that replace diesel with natural gas for their drilling operations
- On average, 50% of diesel is replaced with natural gas saving ~\$2k/day savings in diesel fuel
- Existing Tier 2 generators can be retrofitted with dual fuel capability
- **Reduced NO<sub>x</sub> by 46.8 tons & CO<sub>2</sub> by 8.0 tons and generated savings of \$450k on multi well pad (~225 days)**

# Key Take-Aways



- 1** Sustainability strategy should be centered around culture and requires a strategic change in mindset across all layers of the company
- 2** Emissions management is a journey that requires a continuous improvement approach
- 3** Company run LDAR programs can be managed with minimal cost and allow for voluntary inspections and increased focus on data collection and root cause analysis
- 4** There are numerous projects that generate attractive returns while meaningfully reducing emissions