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## **Acronyms**

**AER** Alberta Energy Regulator

**AMEL** approved instrument monitoring method alternative means of emissions limitation

AMOC alternative method of compliance
APCD Air Pollution Control Division
AQCC Air Quality Control Commission

ARB Air Resources Board

**ARPA-E** Advanced Research Projects Agency - Energy

**AVO** audio, visual, and olfactory

**AWP** alternative work plan area wide planning

**BBL** barrel

**BLM** Bureau of Land Management

**BOE** barrel of oil equivalent

**BOEM** Bureau of Ocean Energy Management Enforcement

**BP** best practices

**BMP** best management practice

**BSER** best system of emission reduction

BT baseline technologyBTU British thermal unit

**C** Carbon

CAA Clean Air Act

**CAPP** Canadian Association of Petroleum Producers

CAMMS-ES coded aperture miniature mass spectrometer environmental sensor

C-H coalbed methane carbon hydrogen bond

**CH**₄ methane

CI chemical ionization
CNG compressed natural gas

CNT carbon nanotubeCO carbon monoxideCO<sub>2</sub> carbon dioxide

**CRDS** cavity ring down spectroscopy

**CSG** coal seam gas

**DCS** dual frequency-comb spectroscopy

**DIAL** differential absorption light detection and ranging

**DEP** Department of Environmental Protection

DOE
 U.S. Department of Energy
 DOI
 U.S. Department of the Interior
 DOT
 U.S. Department of Transportation
 DPHE
 Department of Public Health and Safety

**EI** electron impact

**EMD** Eagle II Methane Detector

EPA Environmental Protection Agency
ESD emergency shutdown events

**FEAST** Fugitive Emissions Abatement Simulation Toolkit

FID flame ionization detector

**FLIR** forward looking infrared camera

**FTIR** fourier transform infrared

**g/h** grams per hour

**GAO** general approval order

**GAO** U.S. Government Accountability Office

**GC** gas chromatography

**GC/MS** gas chromatography/mass spectrometer

**GFCR** gas-filter correlation radiometer

GHG greenhouse gas

**GHGI** Greenhouse Gas Inventory

GHGRP Greenhouse Gas Reporting ProgramGOADS Gulfwide Offshore Activity Data System

**GRI** Gas Research Institute **GWP** global warming potential

**H** hydrogen

**H₂S** hydrogen sulfide

HAP hazardous air pollutantHNLF highly nonlinear fiber

**HOH** hot oil heaters

**HRDL** High-Resolution Doppler Lidar

**HVS** high volume sampler

**Hz** hertz

**ICOS** integrated cavity output spectroscopy

**ICP-MS** inductively coupled plasma – mass spectrometry

IM integrity managementInSb indium antimonideIP intellectual property

**IPCC** Intergovernmental Panel on Climate Change

**IR** infrared

IR OGI infrared optical gas imaging

JT Joule-Thomson

kg kilogramkHz kilohertz

LAS laser absorption spectroscopy

**LCA** lifecycle analysis

LDC leak detection and repair local distribution company

**LDRL** leak detection with large-scale optical imaging technology

**LDRO** leak detection with optical imaging technology

**LDRS** leak detection with sampling

LMA large mode area
LNG liquified natural gas

**m** meter

**M&R** metering and regulations stations

m/z mass-to-charge ratio

MACT maximum achievable control technology

MAL minimal action leak

Mcf one thousand standard cubic feet of natural gas

MDC methane detectors challengeMDL minimal detectable leak

**METEC** methane emissions technology evaluation center

MMT million metric tons

MONITOR Methane Observation Networks with Innovative Technology to Obtain Reductions program

MOS metal oxide semi-conductorM&R metering and regulatingMS mass spectrometry

MT metric ton

**ug/m³** microgram per cubic meter

MW molecular weightN/A not applicable

NAMA Nationally Appropriate Mitigation Actions

**NESHAP** National Emission Standard for Hazardous Air Pollutants

NGL natural gas liquids

**NOAA** National Oceanic and Atmospheric Administration

**NSPS** New Source Performance Standards

**O&G** oil and gas

OGI optical gas imaging
OMI optical modulation index

**OP-FTIR** Open Path Fourier Transform Infrared

OTM other test method
PEMEX Petróleos Mexicanos

**PFP** programmable flask package

PHMSA Pipeline and Hazardous Materials Safety Administration

**PIG** pipeline inspection gauge

**POC** point of contact

ppbv parts per billion by volume

**ppm** parts per million

ppm-m part per million per meterppmv parts per million by volumePUC public utility commission

QOGI quantitative optical gas imaging
R&D research and development

RMLD remote methane leak detector

SCFH standard cubic feet per hour

SCFM standard cubic feet per minute

SLPM standard liters per minute

SLPM State Implementation Plan

**SNR** signal-to-noise ratio **Solar FTIR** Solar Occultation Flux

**STEM** storage tank emission management

TC thermal conductivity

TDL tunable diode laser

**TDLAS** tunable diode laser absorption spectroscopy

**TDS** total dissolved solids

**TDTS** transmission-distribution transfer stations

**TILDAS** tunable infrared laser direct absorption spectroscopy

TOC total organic compound
TRL technology readiness level
TUT technology under test
TVA toxic vapor analyzer

**TVOC** total volatile organic compounds

**USB** Universal Serial Bus

**USEPA** United States Environmental Protection Agency

**V/V** volume to volume

**VOC** volatile organic compound

VRU vapor recovery unit

WY DEQ Wyoming Department of Environmental Quality

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