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COURSE BROCHURE

Methane Emission Measurement and Mitigation Training Course

22 – 26 August 2027
Muscat

Methane Emission Measurement and Mitigation Training Course

Ref: 3194_121454 **Date:** 22 – 26 August 2027 **Location:** Muscat **Fees:** 5500 GBP

Methane Emission Measurement and Mitigation is a 1-week training course for environmental, operations and asset integrity staff in oil, gas and energy facilities, who leave with a site methane source inventory and abatement register. Buyers, investors and authorities now expect measured rather than estimated methane figures, and every tonne avoided keeps saleable gas in the pipe. Jupiter Prime Training runs this course on methane emission measurement and mitigation.

Why Methane Emission Measurement and Mitigation Matters Now

Three pressures meet on methane today. Gas buyers and lenders ask for evidence of low methane intensity before signing supply or finance agreements. Satellites and aircraft now spot large plumes from space and the air, so an unreported release can become public before the operator knows of it. Sites that move from generic emission factors to measured, reconciled figures gain credible reporting and a clear repair queue; those that do not face disputed numbers and reputational exposure.

Who Gains Most from Methane Emission Measurement and Mitigation

- Environmental staff who compile emission inventories and prepare methane disclosures
- Operations staff who run compressors, tanks, dehydrators and flare systems day to day
- Asset integrity staff who plan leak surveys, repairs and equipment replacement
- Maintenance planners who schedule repair work and track repeat leaking components
- Gas measurement technicians who look after meters, analysers and sampling points

Facility teams gain most when environmental, operations and integrity members attend together.

Methane Emission Measurement and Mitigation Capabilities

Participants move from finding methane releases to deciding which to measure, fix or design out.

- Map vented, flared, fugitive and combustion slip sources across a facility — inventory owners
- Select component, site-level and aerial measurement methods for each source type — survey budgets
- Calculate source and site totals and reconcile bottom-up and top-down figures — disclosure sign-off
- Design a leak detection and repair schedule with survey frequency and repair deadlines — maintenance planners
- Weigh abatement options by tonnes avoided, gas recovered and cost — capital approval

- Communicate methane intensity and reduction progress to buyers and lenders — commercial teams

Key Methane Emission Measurement and Mitigation Terms

- Fugitive emission — An unintended release of gas from valves, flanges, seals or connectors that should be gas-tight.
- Venting — A deliberate release of unburned gas to the atmosphere from tanks, pneumatic devices or blowdowns.
- Combustion slip — Methane that passes unburned through an engine, turbine or flare instead of being combusted.
- Methane intensity — Methane emitted divided by gas produced or handled, used to compare facilities and suppliers.
- Reconciliation — Comparing source-by-source estimates with site-level measurements and explaining the gap between them.
- Super-emitter — A small number of sources releasing a large share of total methane, often from abnormal operation.

Methane Emission Measurement and Mitigation Day by Day

Day 1: Where Methane Escapes

- Methane Properties and Warming Effect — Why Short-Lived Gas Needs Priority
- Vented Sources From Tanks, Pneumatics and Blowdowns — Source Classification
- Fugitive Leaks From Seals, Valves and Connectors — Component Counts
- Flare Efficiency and Unlit Flares — Combustion Performance Questions
- Engine and Turbine Slip — Combustion Source Contribution to Totals

Day 2: Measuring at Component and Site Level

- Handheld Gas Detectors and Infrared Cameras — Component Survey Choices
- Bagging and High-Flow Sampling — Direct Rate Measurement at Leaks
- Fixed Continuous Sensors Around the Fence Line — Site Monitoring Coverage
- Vehicle and Drone Plume Surveys — Locating Unknown Large Releases
- Aircraft and Satellite Detection — Thresholds, Revisit Times and Follow-Up

Day 3: Quantifying and Reporting Methane

- Emission Factors Versus Measured Rates — Choosing the Estimation Route
- Source-Level Inventory Build — Equipment Lists, Operating Hours and Rates
- Bottom-Up and Top-Down Reconciliation — Explaining Gaps Between Estimates
- Uncertainty Ranges and Confidence Levels — Credibility of Reported Totals
- Methane Intensity Reporting — Buyer, Lender and Corporate Disclosure Needs

Day 4: Repair and Abatement Choices

- Leak Detection and Repair Schedules — Survey Frequency and Repair Deadlines
- Repair Verification and Repeat Leak Tracking — Maintenance Records
- Vapour Recovery Units and Zero-Bleed Pneumatics — Venting Abatement Options
- Flare Gas Recovery and Ignition Reliability — Reducing Flare Methane
- Abatement Cost Curves — Ranking Options by Cost per Tonne Avoided

Day 5: Practising the Methane Source Inventory and Abatement Register

- Facility Source Map for a Gas Plant — Applying Day 1 Source Types
- Measurement Campaign Design — Applying Day 2 Survey Methods to Sources
- Inventory Totals and Reconciliation Check — Applying Day 3 Quantification
- Repair and Abatement Prioritisation — Applying Day 4 Cost Curves
- Site Methane Source Inventory and Abatement Register — Peer Challenge and Final Version

Applying Methane Emission Measurement and Mitigation After the Course

- Lead a reconciliation of the site's estimated methane total against the latest fence-line or plume survey results and explain the largest gaps.
- Run an abatement cost curve session with operations and finance colleagues to rank vent, leak and flare fixes for the next maintenance window.

Methane Emission Measurement and Mitigation Questions FAQ

What is methane emission measurement and mitigation and why does it matter now?

Methane emission measurement and mitigation is the practice of finding, measuring and cutting methane releases at energy facilities. It matters now because buyers and lenders want measured figures, aerial detection exposes large plumes, and lost methane is lost saleable gas.

Which roles gain most from methane emission measurement and mitigation training?

Environmental, operations and asset integrity staff in oil, gas and power facilities gain most. Maintenance planners and measurement technicians also benefit.

How does methane emission measurement and mitigation training differ from a general carbon footprint course?

It concentrates on one gas and on the facility floor: vents, leaks, flares, measurement instruments and repair schedules. A carbon footprint course spreads across all greenhouse gases and the full value chain.

What do you bring back from methane emission measurement and mitigation training?

You bring back a source inventory and abatement register for your site that lists each methane source, its measurement method and rate, and the ranked repair or abatement action with its cost and owner.

Methane Emission Measurement and Mitigation: The Way Forward

The site methane source inventory and abatement register first informs which vents, leaks and flares receive repair money in the next maintenance window. Environmental, operations and integrity staff keep it current together. After its first use, the measurement choices are worth revisiting, since new survey results often reveal sources the original inventory missed or overstated.