Project Profile

Project Name:	Performance of Enclosed Combustors (SRC)
Project Number:	ER-Meth-2019-01
Proponent:	Saskatchewan Research Council (SRC) Energy Division
Funding Envelope:	Environmental Research—Methane and Green House Gases (GHG)
Timeframe:	January 1, 2019, to September 31, 2019

Project objectives

The objectives of this project are to obtain third party independent emissions and performance data on enclosed combustors used in oil and gas operations.

Project description

The project aims to collect data on the performance of enclosed combustors for oil and gas operations. The project will focus on the Black Gold Rush (BGR) Industries 36 LP Combustor. These combustors are designed to destroy volatile hydrocarbons (casing gas, storage tank vapours, or dehydrator vents) using an enclosed high-efficiency burner system (with no visible flame). Conversion of methane should be nearly complete.

Independent third-party emissions testing on the BGR 36 LP Combustor will be undertaken by the Saskatchewan Research Council (SRC) Energy Division. The testing will be performed on a heavy oil site in Western Canada. Emissions and performance testing includes the following:

- Stack testing of the following parameters:
  - Methane; non-methane hydrocarbons (NMHC); total reduced sulphur (TRS); nitrogen oxides (NOx); benzene, toluene, ethylbenzene, xylene (BTEX); carbon monoxide; carbon dioxide.
  - Temperature, volumetric flows and moisture.
- Noise monitoring.
- Light monitoring at night using a visual record.
- Process monitoring of combustor inputs and outputs to collect data for the mass and energy balance.

Project approach

The project involves the following six phases:

1. Field site selection and assessment.
2. Validation plan development and review.
3. On-site field testing.
4. Dispersion modelling.
5. Data analysis.
6. Reporting.

Project deliverables

The deliverables from this project include the following:

1. Final report containing the results of the independent third-party testing.