

Development of a Highly Repeatable and Auditable, Cost-effective Monitoring System to Locate and Quantify Emissions via Small Unmanned Aerial Systems (sUASs)

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The key objective of this project is to utilize the agility and vertical measurement capability of small unmanned aerial systems (sUASs) to localize and quantify emission sources of methane, NO₂, SO₂, VOCs, and PM. Two novel technologies namely the Open Path Laser Spectrometer and the Non-Dispersive Infra-Red sensors will be used on the (sUASs) in this project. The sUAS measurements will be compared to simultaneous ground truth measurements. The project will be conducted at two well sites in Drayton Valley, Alberta provided by their Clean Energy Technology Centre, (CETC), who work with companies such as ARC Resources, Penn West, COP, Bellatrix and Pembina.

Final Report