

# **Development of Improved Emission Factors and Speciation Data for Heated Heavy Oil Storage Tanks**

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GL 09-9150-50

This report presents the results of measurements performed to quantify and characterize atmospheric emissions from heated heavy oil storage tank vents at cold heavy oil production (CHOP) facilities. Additionally, samples of the casing gas at each site were collected and analyzed for comparison purposes. While some companies have conducted limited testing to better understand the amount and composition of the venting emissions from their cold heavy oil operations, there is relatively little public information available on the matter.

Measurements were performed at 6 cold heavy oil batteries: 3 in the Peace River region of northwest Alberta (Sites 1 to 3), and 3 in the Cold Lake region in northeast Alberta (Sites 4 to 6). The tank vapours from these two regions are both very lean, containing high concentrations of methane (e.g., generally 95%

and greater), but the production from the Peace River area contains noteworthy concentrations of reduced sulphur compounds which has contributed to odour issues in the that region.

The sites were selected to cover the potential range in production characteristics and activity levels in each of the two target regions.

Final Report

2012 Presentation

Presentation at Global Methane