

Alt-FEMP Executive Summary

Company	Program start	Program end	# of sites
Intricate Group Multi-Operator Pilot	July 8, 2023	December 31, 2024	692

Once an alternative fugitive emissions management program is approved, AER staff draft this executive summary. This is a summary only, published to help interested stakeholders understand what has been approved. These summaries are found on our website, www.aer.ca > Protecting What Matters > Holding Industry Accountable > Industry Performance > Methane Performance > [Alternative Fugitive Emission Management Program Approvals](#). For additional information on these approvals, contact methane.reduction@aer.ca.

Summary

Intricate Group Inc. (Intricate) is a Canadian energy services provider, providing regulatory consulting, regulatory reporting, field services, and software to the oil and gas industry. Intricate is managing an alternative fugitive emissions management program (alt-FEMP) pilot on behalf of several operator partners, including managing the budget, providing program updates, and submitting alt-FEMP performance reports.

The alt-FEMP will use aerial gas mapping LiDAR (a-LiDAR) leak detection technology to screen participating sites, identify sources of fugitive emissions, and prepare a prioritized response to target high-emitting sites. Intricate will analyze the resulting emissions detection and quantification reports provided by the a-LiDAR analytics team to determine the sites where site-level emissions exceed 350 m³/day. These sites will promptly receive close-range follow-up surveys to determine emissions sources and complete repairs. The top 35% of emitting sites will also receive close-range follow-up surveys with the intention of detecting emissions sources and executing repairs. This work practice is designed to maximize the large leak response efficiency.

The pilot alt-FEMP scope will cover 692 sites licensed under multiple operators across Alberta who have committed their assets to participate in the alt-FEMP under Intricate's management. All sites participating in this alt-FEMP are understood to be subject to current regulations under section 8 of *Directive 060*. Eighty-nine randomly chosen sites will continue to be managed under the base FEMP requirements, acting as a control group to facilitate evaluation of a-LiDAR capabilities and the effectiveness of the alt-FEMP work practice upon completion of the pilot program.

The proposed alt-FEMP methodology is as follows:

Step 1	Survey	Conduct OGI survey at all triannual facilities (as defined in <i>Directive 060</i> table 4) in Q2 2023. Fugitive emissions will be differentiated from vented emissions. Fugitive emissions will be tagged and recorded for repair, while vented emissions will be recorded for potential future reduction programs.
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		<p>Q4 2023:</p> <ul style="list-style-type: none"> • Survey all facilities in the proposal that require a triannual survey as per AER <i>Directive 060</i> table 4. • Sites that currently require annual surveys as per AER <i>Directive 060</i> table 4 have supplemental OGI surveys at 40% of sites in the proposal, which were selected using the following criteria: <ul style="list-style-type: none"> ○ Sites with detections by the Q3 2023 LiDAR screening, which did not require follow-up (as per the > 350 m³ CH₄/day and the top 35% of emitters requirements) to be surveyed. ○ An additional 28 sites were required to meet the 40% requirement. These 28 sites were spread across six operators.
Step 2	Screen	<p>Conduct site-level screening. The selected alternative program will deploy three screening campaigns throughout the program:</p> <ol style="list-style-type: none"> 1) a-LiDAR screening (Q3 2023) 2) a-LiDAR screening (Q2 2024) 3) a-LiDAR screening (Q3 2024) <p>The screening technology will capture both vented and fugitive emissions. Screening campaigns will occur more than three months apart. No a-LiDAR will be implemented in the snow months.</p>
Step 3	Rank	<p>Following each screening campaign, emissions will be attributed to an LSD and the LSDs will be ranked highest to lowest by their total emissions. The follow-up threshold percentage determines the top number of LSDs to be visited for emissions localization and repair. The selected program has the following follow-up requirements after each designated screening event:</p> <ul style="list-style-type: none"> • Screening campaign 1 (Q3 2023): >350 m³/d + 35% follow-up • Screening campaign 3 (Q2 2024): >350 m³/d + 35% follow-up • Screening campaign 4 (Q3 2024): >350 m³/d + 35% follow-up
Step 4	Follow-up	<p>Follow-up emissions localization will occur on the ground at the LSDs outlined in Step 2. Here, fugitive emissions will be differentiated from vented emissions. Fugitive emissions will be tagged and recorded for repair, while vented emissions will be recorded for potential future reduction programs.</p>
Step 5	Repair	<p>At the follow-up sites, all fugitive repairs will be made according to <i>Directive 060</i> timelines once a fugitive leak has been localized.</p>

Operator partners participating in this alt-FEMP:

#	Operator
1	Acquisition Oil Corp.
2	Astara Energy Corp.
3	Battle River Energy Ltd.
4	Barnwell of Canada Ltd.
5	Clearview Resources Ltd.
6	HWN Energy Ltd.
7	Clear North Energy Corp.
8	BTG Energy Corp.
9	Corse Energy Corp.
10	Convega Energy Ltd.
11	Long Run Exploration Ltd.
12	Eastend Energy Corp.
13	Freehold Royalties Ltd.
14	Ghost River Resources Inc.
15	Tenaz Energy Corp.
16	Lucky Strike Energy Services Ltd.
17	Rife Resources Ltd.
18	Signalta Resources Ltd.
19	ZYZYGY Resources Ltd.