Alt-FEMP Executive Summary

Company	Program start	Program end	# of sites
i3 Energy & Mancal Energy Inc.	April 13, 2023	December 31, 2024	438

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

i3 Energy Canada Ltd. (i3) and Mancal Energy Inc. (Mancal) are upstream gas producers operating in the Western Canadian Sedimentary Basin in Alberta. i3 and Mancal will jointly conduct an alternative fugitive emissions management program (alt-FEMP) involving 378 i3 sites and 60 Mancal facilities.

A representative control region encompassing 40 i3 facilities and 8 Mancal facilities was omitted from the alt-FEMP. Optical gas imaging (OGI) surveys in accordance with *Directive 060* will occur in the control region, providing data that will be compared with the performance data from the selected alternative program.

The selected alternative program for this proposal involves deploying aerial-based gas mapping LiDAR (a-LiDAR) surveys in Q3 2023, Q4 2023, Q1 2024, and Q3 2024 throughout the program. Fugitive emissions reductions will occur at a fraction of the highest-emitting sites.

The two-year (January 2023 – December 2024) alt-FEMP methodology is as follows:

Step 1	Screen	Conduct site-level screening. The selected alternative program will deploy three screening campaigns throughout the program: 1) a-LiDAR, Q4 2023 2) a-LiDAR, Q1 2024 3) a-LiDAR, Q3 2024 The screening technologies will capture both vented and fugitive emissions. Screening campaigns will occur more than three months apart, and a-LiDAR will be deployed in snow-free months.
Step 2	Rank	Following each screening campaign, all sites will be ranked according to site-level emissions to determine the highest-emitting sites. These will be followed-up with using OGI technology for leak localization and repair. The selected program has the following follow-up requirements after each screening event: • Screening campaign 1 (Q4 2023): 40% follow-up • Screening campaign 2 (Q2 2024): 20% follow-up • Screening campaign 3 (Q4 2024): 20% follow-up

Step 3	Follow-up	Follow-up emissions localization will occur on the ground at the emitting sites outlined in Step 2. Here, fugitive emissions will be differentiated from vented emissions. Fugitive emissions will then be tagged and recorded for repair, while vented emissions will be recorded for potential future reduction programs.
Step 4	Repair	At follow-up sites, all fugitive repairs will be made according to *Directive 060* timelines once a fugitive leak has been localized.