

Alt-FEMP Executive Summary

Company	Program start	Program end	# of sites
Baytex Energy Corp.	June 21, 2023	December 31, 2024	185

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

Baytex Energy Corporation (Baytex) is an energy company based in Calgary, Alberta, which is engaged in the acquisition, development, and production of crude oil and natural gas in the Western Canadian Sedimentary Basin and in the Eagle Ford in the United States. Under *Directive 060*, Baytex owns and operates 184 facilities in Alberta, located on 153 legal subdivisions (LSDs). Baytex also has 21 additional facilities that will be activated in early 2023 for a total of 205 facilities on 174 LSDs. Under *Directive 084*, Baytex has 148 facilities located within the company's Peace River operating area with monthly fugitive scan requirements in place that are not included in this alternative fugitive emissions management program (alt-FEMP). This alt-FEMP is specific to Baytex's 205 facilities under *Directive 060*.

A representative control region encompassing 20 facilities (10% of total facilities) was omitted from the scope of the modelling with alternative technologies. In the control region, OGI surveys in accordance with *Directive 060* will occur, providing data that will be compared with the performance data of the selected alternative program.

The selected alternative program for this proposal involves deploying aerial-based gas mapping LiDAR (a-LiDAR) screenings in Q2 2023 and Q1 2024 and truck-based screenings in Q3 2023 and Q3 2024 throughout the program. Fugitive emissions reductions will occur at a top fraction of sites ranked by emissions, and it is estimated that the selected alternative program will achieve equivalent emissions reductions compared to the *Directive 060* default approach at an equivalent cost.

The alt-FEMP methodology is as follows:

Step 1	Screen	Conduct site-level screening. The selected alternative program will deploy four screening campaigns over the course of the program: 1) a-LiDAR screening (Q2 2023) 2) Truck-based screening (Q3 2023)
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		<p>3) a-LiDAR screening (Q1 2024) 4) Truck-based screening (Q3 2024)</p> <p>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.</p>
Step 2	Rank	<p>Following each a-LiDAR and truck-based 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 (Q2, 2023): 30% follow-up • Screening campaign 2 (Q3, 2023): 30% follow-up • Screening campaign 3 (Q1, 2024): 30% follow-up • Screening campaign 4 (Q3, 2024): 30% follow-up
Step 3	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 4	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>