

Alt-FEMP Executive Summary

Company	Program start	Program end	# of sites
West Lake Energy Corp.	May 18, 2023	December 31, 2024	149

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

West Lake Energy Corp. (West Lake) is a Western Canadian Sedimentary Basin upstream gas producer that owns and operates 149 facilities in Alberta, located on 136 legal subdivisions (LSDs). As of 2021, West Lake has implemented regular leak detection and repair (LDAR) programs in accordance with provincial regulations. The objective of this proposal is to receive the Alberta Energy Regulator’s approval for West Lake to implement a pilot alternative fugitive emissions management program (alt-FEMP) across all 149 facilities.

There will be a representative control region encompassing 18 West Lake facilities. In the control region, optical gas imaging (OGI) surveys in accordance with *Directive 060* will occur, 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) screenings in Q2 2023 and Q2 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. The selected alternative program is estimated to achieve similar emissions reductions to the *Directive 060* default approach at a significantly decreased cost. This will also decrease safety risks by limiting the number of subcontractor hours in the field, which is a priority for West Lake.

The two-year alt-FEMP methodology is as follows:

Step 1	Screen	<p>Conduct site-level screening. The selected alternative program will deploy four screening campaigns throughout the program:</p> <ol style="list-style-type: none"> 1) a-LiDAR, Q2 2023 2) Truck-based screening, Q3 2023 3) a-LiDAR, Q2 2024 4) Truck-based screening, Q3 2024 <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>
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Step 2	Survey	<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): 20% follow-up • Screening campaign 2 (Q3, 2023): 20% follow-up • Screening campaign 3 (Q2, 2024): 20% follow-up • Screening campaign 4 (Q3, 2024): 20% follow-up
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>