

Alt-FEMP Executive Summary

Company

End Date

of sites

Imperial Oil Resources Limited

December 31, 2025

173

Summary

Imperial Oil Resources Limited (Imperial) is a Canadian energy producer that owns and operates the Cold Lake operations near Cold Lake, Alberta. Imperial's Cold Lake operations are one of the largest thermal in situ operations.

The alternative program involves completing aerial gas mapping LiDAR (a-LiDAR) aerial surveys in Q2 2024, Q3 2024, Q2 2025, and Q3 2025 to screen the 173 sites in the alt-FEMP Region. 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 as compared to the Directive 060 default approach. The alt-FEMP methodology for 173 sites is as follows:

Step 1	Screen	<p>Conduct site-level screening. The selected alternative program will deploy four screening campaigns over the course of the program:</p> <ol style="list-style-type: none">1) a-LiDAR screening, Q2 2024,2) a-LiDAR screening, Q3 2024,3) a-LiDAR screening, Q2 2025,4) a-LiDAR screening, Q3 2025, <p>The screening technology will capture both vented and fugitive emissions. Screening campaigns will occur more than three months apart.</p>
Step 2	Rank	<p>Following each a-LiDAR 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, 2024) 30% of all sites follow-up• Screening campaign 2 (Q3, 2024) 30% of all sites follow-up• Screening campaign 3 (Q2, 2025) 30% of all sites follow-up• Screening campaign 4 (Q3, 2025) 30% of all sites 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 AER <i>Directive 060</i> timelines once a fugitive leak has been localized.</p>