

Imperial Oil Resources Limited

Alt-FEMP Pilot Program 2025 Final Performance Report

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Submitted by:

Leanne Young

Upstream Environment & Regulatory Air Advisor, Imperial

Dan Steeves

Senior Emissions Analyst, Arolytics

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Executive Summary

Imperial Oil Resources Limited (Imperial) was granted approval on June 6, 2024, to implement a pilot alternative Fugitive Emissions Management Program (alt-FEMP) across their operated facilities around Cold Lake, Alberta. The alt-FEMP was designed to achieve greater fugitive emissions reductions than a default program under the Alberta Energy Regulator’s (AER) Directive 060, and was approved until December 31, 2025.

Each year, the alt-FEMP involves performing two aerial screening surveys with follow-up ground surveys utilizing an optical gas imaging (OGI) camera conducted at 30% of the screened sites after each screening. In addition, a selection of Imperial sites were designated as part of a representative Control Region where default OGI surveys in accordance with Directive 060, would occur.

Execution of the program in 2025 was pushed back later in the year due to findings from an internal aviation audit of the alt-FEMP screening contractor which resulted in delays to both screening campaigns. The program was re-modelled with the revised timing of the screening campaigns and was found to still generate equivalent fugitive emission reductions as a default FEMP under Directive 060 and approval of the timing change was granted by the AER.

The schedule of the program was as follows:

Timing	Site-Level Screening	OGI Surveys	Status
Q2 2024	Aerial-based screening by Bridger Photonics (Bridger)	Follow-up OGI surveys by Stuart Olson at the top 30% of screened sites upon ranking all screened sites by total emission rate.	Completed
Q3 2024	Aerial-based screening by Bridger	Follow-up OGI surveys by Stuart Olson at the top 30% of screened sites upon ranking all screened sites by total emission rate.	Completed
Q3 2025	Aerial-based screening by Bridger	Follow-up OGI surveys by Stuart Olson at the top 30% of screened sites upon ranking all screened sites by total emission rate.	Completed
Q4 2025	Aerial-based screening by Bridger	Follow-up OGI surveys by Stuart Olson at the top 30% of screened sites upon ranking all screened sites by total emission rate.	Completed

This report summarizes data collected during Imperial’s 2024-2025 alt-FEMP screening and OGI survey campaigns.

1. Screening Data

Table 1 summarizes various statistics regarding the screening campaigns across the alt-FEMP. Please note emissions detected during the screenings can be a combination of fugitive, vented and sporadic operations-related emissions. The detailed screening data is provided in an Excel attachment with this report, and the tables summarizing each site's total and individual emissions detected during each screening are provided in Appendix B and C, respectively.

Table 1. Combined summary of screening data for 2024 and 2025.

<u>Parameter</u>	<u>2024</u>	<u>2025</u>
Number of sites screened	332	346
Number of screened sites with detections	28	24
Number of detections during screenings	86	63
Percentage of screened sites with detections (%)	8%	7%
Average emissions per screened site with a detection (m ³ /day)	274.68	184.5
Total emission rate identified (m ³ /day)	21150.7	11437.2
Number of sites followed-up on	90	56
Percentage of sites followed-up on vs. screened (%)	27%	16%
Number of follow-up sites with no screening detections	64	35
Number of follow-up emissions with emission source not detected by the screening technology	0	0
Average time between detection and follow-up to site (days)	74	23.4
Percentage of follow-up sites that are recurring (%)	25%	39%
Number of emissions from the screenings that were followed-up on	85	63
Number of emissions from the screenings that were followed-up and identified as fugitive emissions	71	40
Total rate of fugitives identified and fixed for the calendar year (m ³ /day)	2575	2201

2. Follow-up Data

Table 2 summarizes statistics regarding the OGI follow-up surveys of the alt-FEMP region conducted after a screening campaign. The raw detailed follow-up data is provided in an Excel attachment with this report.

OGI has the capability to localize emissions to a source-level. Also, the OGI operator can normally determine the emission type. Table 3 shows the emission source equipment types for all identified fugitive emissions including the number and volume of emissions for each equipment type.

Table 2. Summary of OGI follow-up data.

Year		2024	2025
Number of sites followed-up on for the year		90	56
Percentage of screened sites followed-up on (%)		27%	16%
Percentage of sites with screening detections followed-up on (%)		96%	100%
Number of follow-up surveys where no emissions were found		73	42
Average time between detection and follow-up to site (days)		74	23.4
Percentage of follow-up sites that are recurring (for the calendar year – following-up on a site more than once)		25	39
Identified emission source types per follow-up per screening campaign (vent, fugitive, methane slip, other)		Fugitive, Vent, Methane Slip	Fugitive, Vent, Methane Slip
Number of detections by emission source type (n)	Fugitives	30	40
	Vents	1	6
	Methane Slip	9	6
	Total	40	52
Volume of detections by emission source type (m ³ /day)	Fugitives	7834	6672
	Vents	240	363
	Methane Slip	2538	1327
	Total	10612	8363
Average emissions per follow-up site (m ³ /day)		113.9	139.4
Identified emission source equipment types per follow-up per screening campaign (e.g., tank, compressor seal)		See Table 3	See Table 3
Number of recurring leaks observed (if the leak occurred more than once per year)		8	12
Total emission rate of fugitives identified and fixed for the calendar year (m ³ /day)		2575	2201

Table 3. Number and volume (m³/d) of emission detections by equipment type.

Identified emission source equipment types	2024		2025	
	Number of detections by equipment type	Volume of detections by equipment type (m ³ /d)	Number of detections by equipment type	Volume of detections by equipment type (m ³ /d)
controlled tank	14	4442.5	18	4174.0
dehydrator	0	0	0	0
flare stack	7	2311.8	6	1327.0
header	0	0	0	0
heater	0	0	0	0
meter	0	0	0	0
other	11	2532.0	22	2530.3
pig sender/receiver	0	0	0	0
pipeline - aboveground	0	0	0	0
pipeline - buried	0	0	0	0
pneumatic instrument	0	0	0	0
pneumatic pump	0	0	0	0
reciprocating compressor	1	240.2	2	95.6
screw compressor	0	0	0	0
separator	0	0	0	0
surface casing vent	0	0	0	0
sweetening process	0	0	0	0
treater	0	0	0	0
uncontrolled tank	4	724.6	3	218.8
vent stack	0	0	0	0
wellhead	3	361.3	1	17.0
Total	40	10612.4	52	8362.7

3. Emissions Summary

3.1 Screening Summary

Figure 1 shows the distribution for site-total methane emission rates detected during the 2024 and 2025 screening campaigns, capturing all types of methane emissions (fugitives, vents, methane slip and others). The graph allows one to discern how many site-total emission measurements reported emission rates within a certain range (e.g. emissions with rates between 0 and 100 m³/day where individual emissions on a single site from one screening are summed).

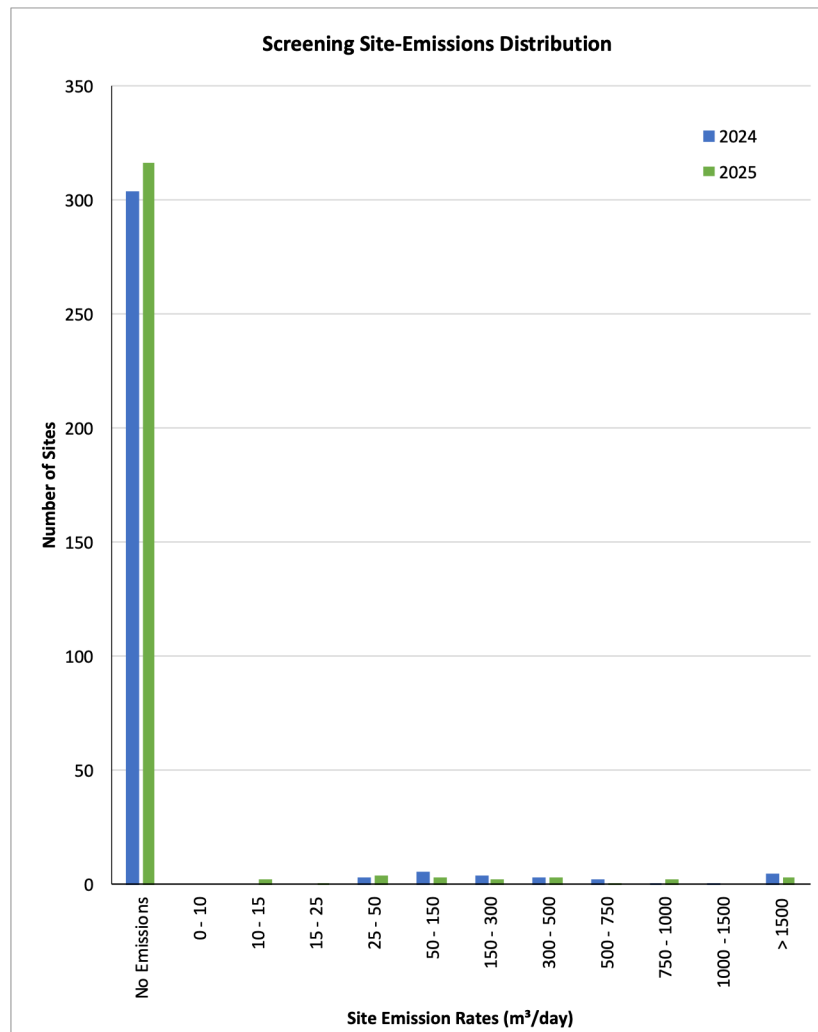


Figure 1: Distribution of site-total emission rates measured during screening campaigns.

Figure 2 shows the distribution for individual emission rates detected during the 2024 and 2025 screening campaigns. Screening technologies are generally unable to determine the type of methane emission measured (fugitives, vents, methane slip and others). The graph allows one to discern how many individual emission measurements had an emission rate within a certain range (e.g., emissions with rates between 0 and 100 m³/day).

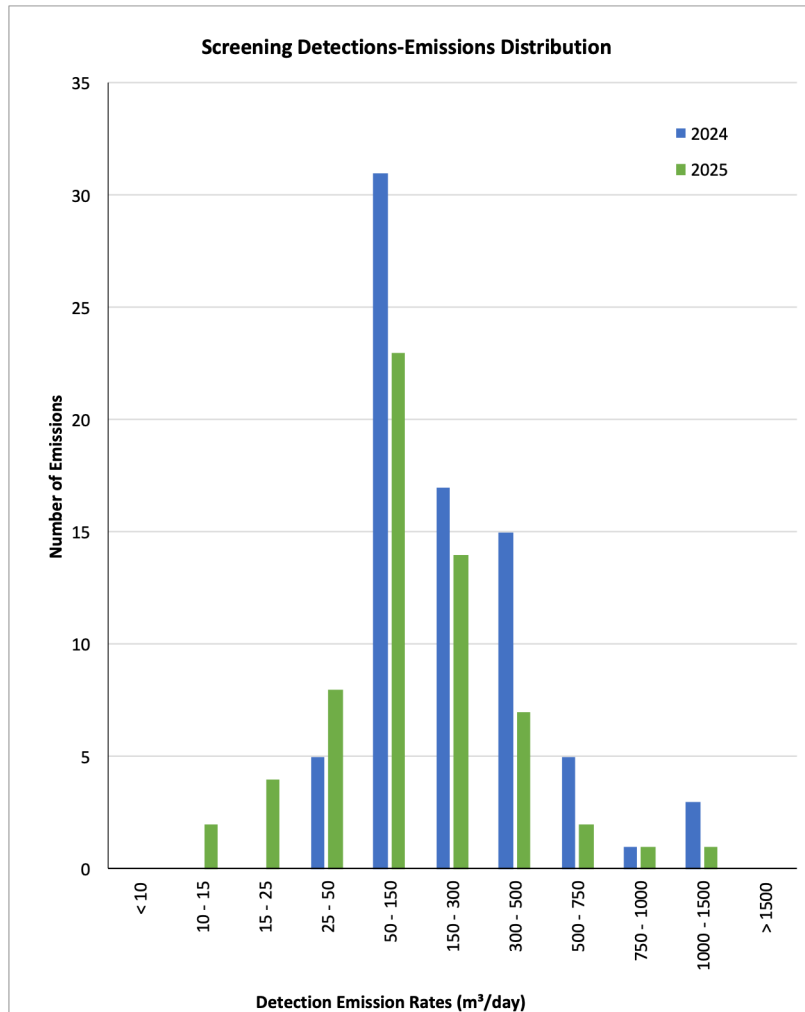


Figure 2: Distribution of individual emissions, by rate, measured during screening campaigns.

In general, screening technologies cannot discern fugitive emissions from other emission types, thus a graph depicting the emissions distribution specifically for fugitives detected during screenings could not be generated.



3.2 OGI Survey Summary

Figure 3 shows the emission rate distribution for site-total emissions detected during the 2024 and 2025 OGI survey campaigns of the alt-FEMP region, aggregating all methane emissions measured during that OGI campaign. The graph allows one to discern how many site-total emission measurements, by OGI, reported an emission rate within a certain range.

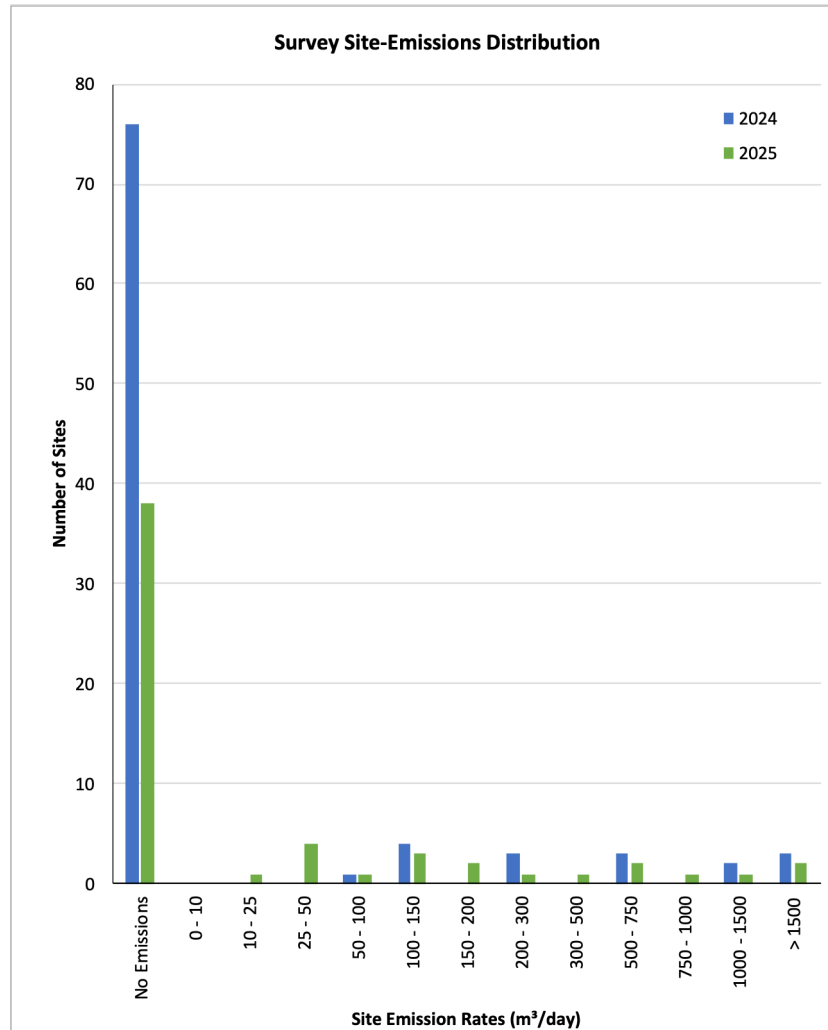


Figure 3: Distribution of site-total emission rates measured during alt-FEMP OGI survey campaigns.



Figure 4 below shows the emission rate distribution for individual emissions detected during the 2024 and 2025 OGI survey campaigns. The graph allows one to discern how many individual OGI measurements had an emission rate within a certain range.

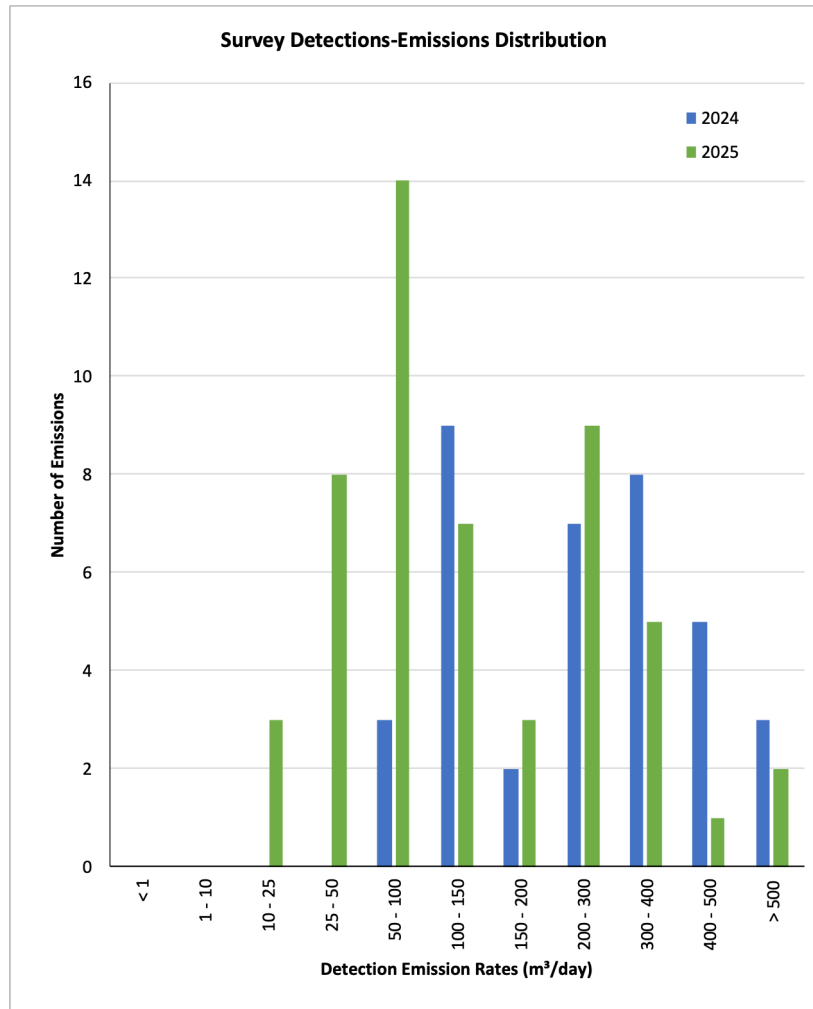


Figure 4: Distribution of individual emissions, by rate, measured during alt-FEMP OGI survey campaigns.

Figure 5 below shows the emission rate distribution for individual fugitive emissions detected during 2024 and 2025 OGI survey campaigns. The graph allows one to discern how many individual fugitive emission measurements reported an emission rate within a certain range.

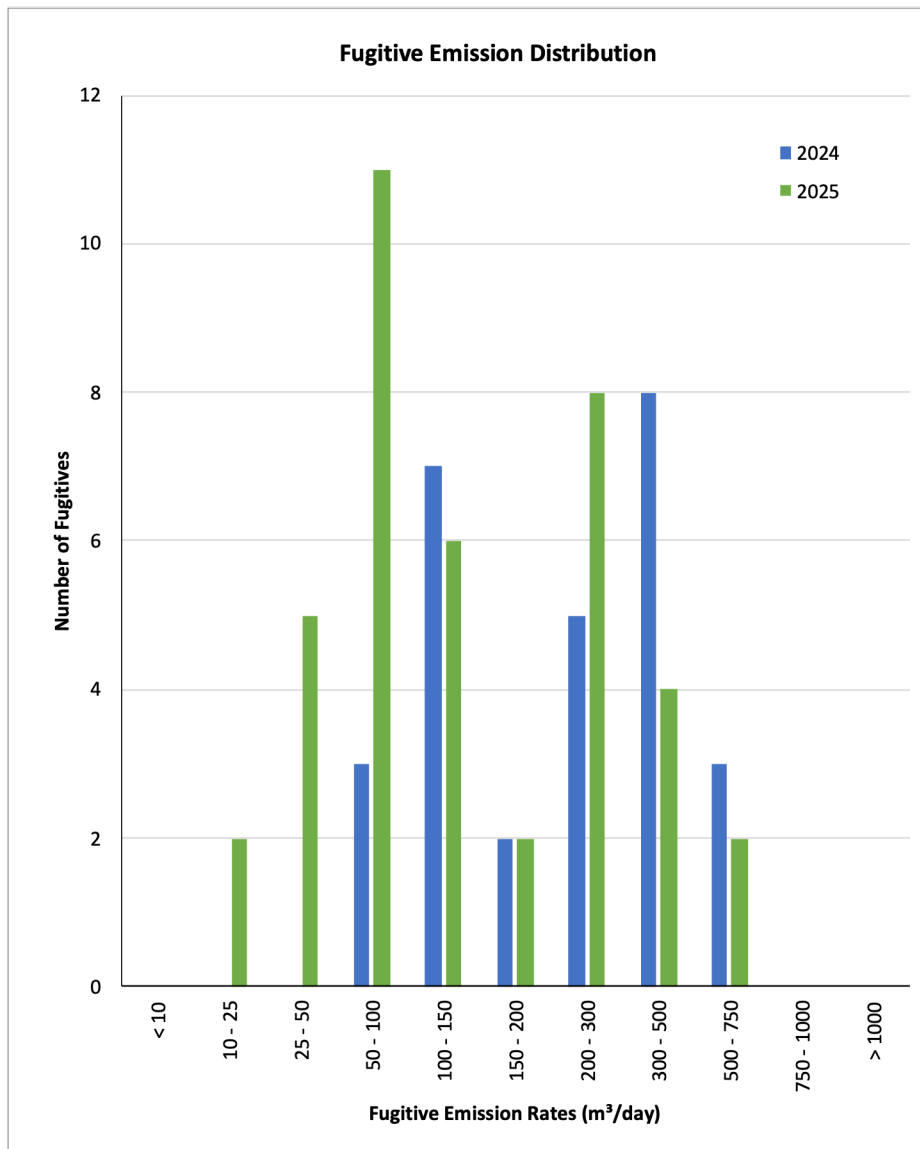


Figure 5: Distribution of fugitive emissions, by rate, measured during OGI survey campaigns (e.g. follow-up) of the alt-FEMP region.

3.3 Control vs. alt-FEMP Summary

Table 4 compares several metrics related to the sites surveyed and emissions detected via OGI surveys in the alt-FEMP vs. Control regions for the duration of the program.

Table 4. Comparison of the alt-FEMP and Control regions.

	alt-FEMP Region	Control Region
Number of Sites Surveyed	146	97
Number of Surveyed Sites with Emissions Detected	35	2
Percentage of Surveyed Sites with Emissions Detected (%)	24%	2%
Number of Emissions Detected at Surveyed Sites	92	2
Number of Surveyed Sites with Fugitive Emissions Detected	33	2
Percentage of Surveyed Sites with Fugitive Emissions Detected (%)	23%	2%
Number of Fugitive Emissions Detected	70	2
Number of Vent Emissions Detected	7	0
Number of Methane Slip Emissions Detected	15	0
Total Rate of Emissions Detected (m ³ /day)	18975	148.7
Total Rate of Fugitive Emissions Detected (m ³ /day)	14506	148.7
Total Rate of Vent Emissions Detected (m ³ /day)	603	0
Total Rate of Methane Slip Emissions Detected (m ³ /day)	3865	0
Average Fugitive Rate per Site with Fugitive Emissions Detected (m ³ /day)	439.6	74.3
Average Fugitive Rate for all Fugitive Emissions Detected (m ³ /day)	207.2	74.3
Number of Fugitive Emissions Repaired	37	1
Percentage of Fugitives Repaired (%)	53%	50%

4. Emission Reduction Summary

The fugitive emission data collected during the alt-FEMP was used to generate the as-found “measured fugitive emission distribution”. This consisted of all fugitive emissions recorded during surveys of both the alt-FEMP and Control regions. Figure 6 shows a comparison of the as-found “measured fugitive emission distribution” to the “assumed fugitive emission distribution” employed in the modelling initially used to design the approved alt-FEMP. Additionally, the minimum detection limit (MDL) at 90% probability of detection (PoD) for the screening technology is displayed for reference.

The originally modelled default Directive 060 FEMP and alt-FEMP programs from Imperial’s approved alt-FEMP proposal were re-modelled using the as-found fugitive emission distribution observed during the execution of the alt-FEMP, with the AroFEMP modelling software (Arolytics). Based on the re-modelling, the default FEMP was estimated to emit 3,889,414 m³ of fugitive methane emissions, compared to 2,857,360 m³ for the alt-FEMP program. It should be noted that total fugitive emissions from the re-modelling are higher for both the default FEMP and alt-FEMP due to the as-found fugitive distribution being skewed toward higher rates, as seen in Figure 6. Despite this, the results indicate that the alt-FEMP should still achieve equivalency with the default FEMP when using the as-found fugitive emission distribution.

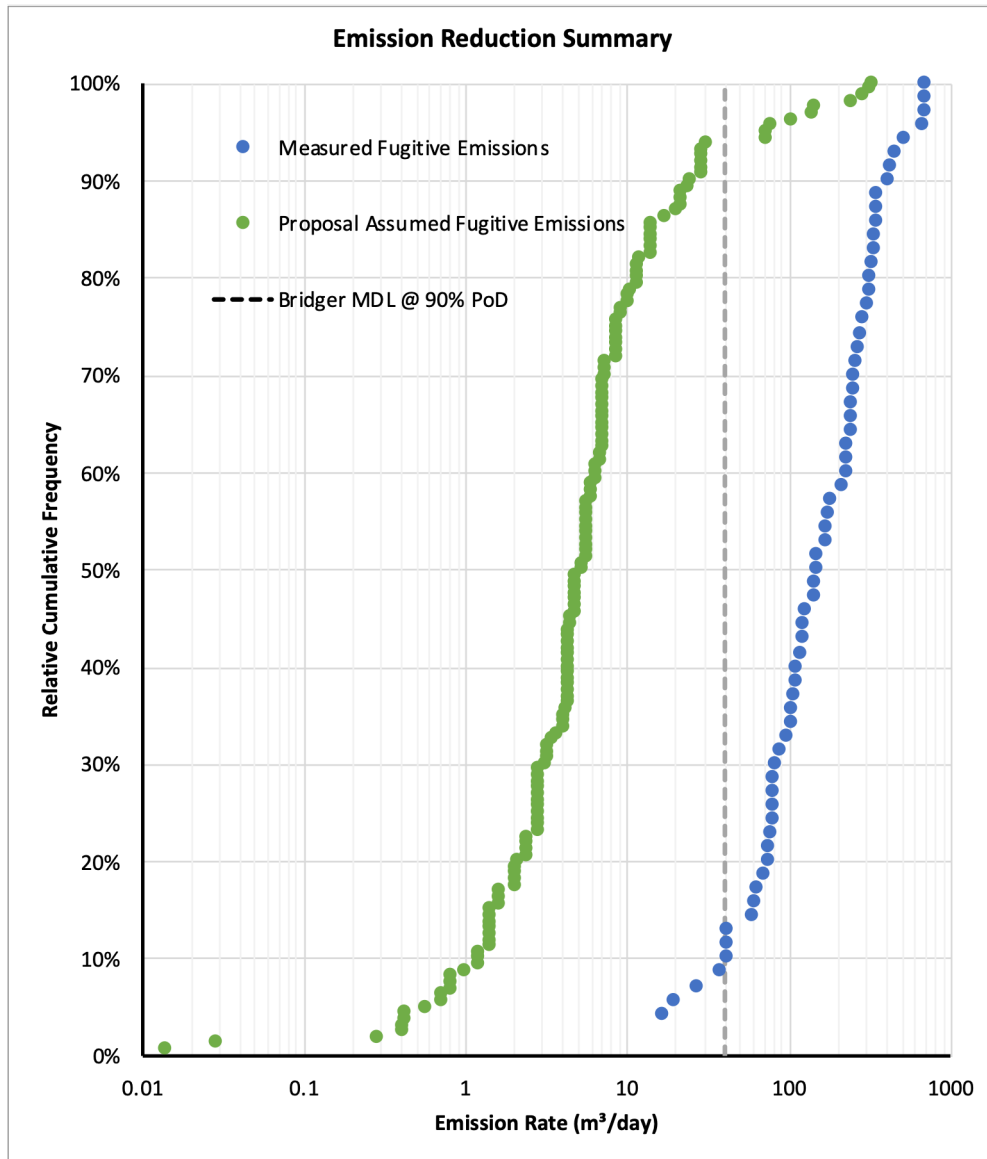


Figure 6. Comparison of relative cumulative frequencies for the “as-found” measured fugitive emissions versus the proposal-assumed fugitive emissions.

5. Technology Limitations

Bridger's detection sensitivity depends on factors including flight speed, flight altitude, measurement swath width, and wind speed. Many of these factors can be controlled by Bridger to tighten or loosen the sensitivity as required. Bridger's Gas Mapping LiDAR (GML) is an active, laser-based system, rather than a passive remote sensor that relies on the environment, so conditions such as cloud cover or shadows that can impair other aerial sensor technologies do not negatively impact GML. Regarding operations at northern latitudes, Bridger's GML has historically been limited by snow cover and standing water. Hardware and software advancements with the latest generation sensor has allowed the technology to maintain its standard detection sensitivity in most snow and wind conditions. With standing water, Bridger's laser 'bounces' off and, as a result, no measurement is made. In several areas of Alberta, the muskeg landscape holds pockets of water in the warmer months. Based on testing and commercial projects completed in Alberta, the muskeg landscape has not negatively impacted Bridger's GML measurements. As a result of high winds rapidly dispersing emissions, Bridger limits its survey operations to ground wind speeds less than or equal to 25 mph. Bridger also implements a wind speed protocol to detect emissions at the lower end of GML's detection sensitivity.

6. Success of the alt-FEMP

The alt-FEMP was designed to meet methane emission equivalency to a default FEMP using alternative site screening technologies combined with OGI surveys. While emissions were detected at only a small percentage of sites when screened using alternative technologies, follow-up OGI surveys only detected emissions at sites with screening detections and did not identify any emissions at sites which had no screening detections. Imperial was able to successfully implement alternative technologies to detect fugitive emissions in a more efficient manner than using default methods while achieving equivalent emission reductions.

7. Nonperforming Program Elements

Sites which were screened and found to have methane emission detections were all followed-up with OGI surveys after the screenings were completed. When the screenings did not show sufficient sites with detections to make up the full follow-up threshold percentage, non-emitting sites were selected for additional follow-up after the screenings. While selecting these additional sites, some Control Region sites were selected, resulting in fewer follow-up OGI surveys of alt-FEMP sites and more OGI surveys at Control Region sites than expected.

8. Additional Control Measures

N/A

9. Additional Information

Execution of the alt-FEMP program in 2025 was pushed back later in the year due to findings from an internal aviation audit of the alt-FEMP screening contractor which resulted in delays to executing both screening campaigns. The program was re-modelled with the revised timing of the screening campaigns and was found to still generate equivalent fugitive emission reductions as a default FEMP under Directive 060 and approval of the timing change was granted by the AER.

10. Key Performance Indicators

- Imperial has been successful in implementing alternative technologies to conduct LDAR screening, where emissions were detected at 52 of the 678 screened sites, and follow-up OGI surveys were completed at 146 sites.
- Follow-up OGI surveys identified 92 individual detections, of which 70 were classified as fugitive emissions. Fugitive emissions accounted for a total rate of 14,506 m³/day out of the 18,795 m³/day of all emissions identified.
- Approximately 53% of all fugitive emissions were repaired during the calendar year the emissions were detected. All other fugitive repairs were delayed waiting on replacement parts or until scheduled facility maintenance shutdowns are completed.
- See Table 6 for additional key performance indicators for both the alt-FEMP and control regions.

Appendix A: Raw Detailed Data

Please refer to the attached excel file of the raw data collected during the screening and follow-up surveys titled “Imperial AER Data Template.xlsx”.

Appendix B: Screening Data – Site-total Emissions by Campaign

Site Name	Year	Campaign	Site-Total Emission Rate (m ³ /d)
LEMING PLANT	2025	Bridger 1	1519
MAHIHKAN PLANT	2025	Bridger 1	871
MASKWA PLANT	2025	Bridger 1	616
MAHKESES PLANT	2025	Bridger 1	340
H34 PAD	2025	Bridger 1	212
C2 PAD	2025	Bridger 1	142
A2 PAD	2025	Bridger 1	113
CSP PAD	2025	Bridger 1	67
H14 PAD	2025	Bridger 1	39
J21 PAD	2025	Bridger 1	32
J25 PAD	2025	Bridger 1	32
D64 PAD	2025	Bridger 1	25
D39 PAD	2025	Bridger 1	14
L07 PAD	2025	Bridger 1	14
14-07-065-03W4	2025	Bridger 1	0
A1 PAD	2025	Bridger 1	0
A3 PAD	2025	Bridger 1	0
A4 PAD	2025	Bridger 1	0
A5 PAD	2025	Bridger 1	0
A6 PAD	2025	Bridger 1	0
AAH PAD	2025	Bridger 1	0
B1 PAD	2025	Bridger 1	0
B2 PAD EXTENSION	2025	Bridger 1	0
B4 PAD	2025	Bridger 1	0
B5 PAD EXTENSION	2025	Bridger 1	0
B6 PAD	2025	Bridger 1	0
C1 PAD	2025	Bridger 1	0
C3 PAD	2025	Bridger 1	0
C5 PAD	2025	Bridger 1	0
D1 PAD	2025	Bridger 1	0

Site Name	Year	Campaign	Site-Total Emission Rate (m ³ /d)
LEMING PLANT	2025	Bridger 2	2793
MASKWA PLANT	2025	Bridger 2	2623
MAHIHKAN PLANT	2025	Bridger 2	977
MAHKESES PLANT	2025	Bridger 2	358
C2 PAD	2025	Bridger 2	354
CSP PAD	2025	Bridger 2	265
T04 PAD	2025	Bridger 2	32
14-07-065-03W4	2025	Bridger 2	0
A1 PAD	2025	Bridger 2	0
A2 PAD	2025	Bridger 2	0
A3 PAD	2025	Bridger 2	0
A4 PAD	2025	Bridger 2	0
A5 PAD	2025	Bridger 2	0
A6 PAD	2025	Bridger 2	0
AAH PAD	2025	Bridger 2	0
B1 PAD	2025	Bridger 2	0
B2 PAD EXTENSION	2025	Bridger 2	0
B4 PAD	2025	Bridger 2	0
B5 PAD EXTENSION	2025	Bridger 2	0
B6 PAD	2025	Bridger 2	0
C1 PAD	2025	Bridger 2	0
C3 PAD	2025	Bridger 2	0
C5 PAD	2025	Bridger 2	0
D1 PAD	2025	Bridger 2	0
D10 PAD	2025	Bridger 2	0
D12 PAD	2025	Bridger 2	0
D2 PAD	2025	Bridger 2	0
D21 PAD	2025	Bridger 2	0
D22 PAD	2025	Bridger 2	0
D23 PAD	2025	Bridger 2	0

Site Name	Year	Campaign	Site-Total Emission Rate (m ³ /d)
D10 PAD	2025	Bridger 1	0
D12 PAD	2025	Bridger 1	0
D2 PAD	2025	Bridger 1	0
D21 PAD	2025	Bridger 1	0
D22 PAD	2025	Bridger 1	0
D23 PAD	2025	Bridger 1	0
D24 PAD	2025	Bridger 1	0
D26 PAD	2025	Bridger 1	0
D27 PAD	2025	Bridger 1	0
D28 PAD	2025	Bridger 1	0
D3 PAD	2025	Bridger 1	0
D31 PAD	2025	Bridger 1	0
D33 PAD	2025	Bridger 1	0
D35 PAD	2025	Bridger 1	0
D4 INFILL PAD	2025	Bridger 1	0
D51 PAD	2025	Bridger 1	0
D52 PAD	2025	Bridger 1	0
D53 INFILL PAD	2025	Bridger 1	0
D54 PAD	2025	Bridger 1	0
D55 PAD	2025	Bridger 1	0
D6 INFILL PAD	2025	Bridger 1	0
D62 PAD	2025	Bridger 1	0
D63 PAD	2025	Bridger 1	0
D65 PAD	2025	Bridger 1	0
D67 PAD	2025	Bridger 1	0
D7 INFILL PAD	2025	Bridger 1	0
D7 PAD	2025	Bridger 1	0
D9 PAD	2025	Bridger 1	0
E01 PAD	2025	Bridger 1	0
E02 PAD	2025	Bridger 1	0
E03 PAD	2025	Bridger 1	0
E04 PAD	2025	Bridger 1	0

Site Name	Year	Campaign	Site-Total Emission Rate (m ³ /d)
D24 PAD	2025	Bridger 2	0
D26 PAD	2025	Bridger 2	0
D27 PAD	2025	Bridger 2	0
D28 PAD	2025	Bridger 2	0
D3 PAD	2025	Bridger 2	0
D31 PAD	2025	Bridger 2	0
D33 PAD	2025	Bridger 2	0
D35 PAD	2025	Bridger 2	0
D39 PAD	2025	Bridger 2	0
D4 INFILL PAD	2025	Bridger 2	0
D51 PAD	2025	Bridger 2	0
D52 PAD	2025	Bridger 2	0
D53 INFILL PAD	2025	Bridger 2	0
D54 PAD	2025	Bridger 2	0
D55 PAD	2025	Bridger 2	0
D6 INFILL PAD	2025	Bridger 2	0
D62 PAD	2025	Bridger 2	0
D63 PAD	2025	Bridger 2	0
D64 PAD	2025	Bridger 2	0
D65 PAD	2025	Bridger 2	0
D67 PAD	2025	Bridger 2	0
D7 INFILL PAD	2025	Bridger 2	0
D7 PAD	2025	Bridger 2	0
D9 PAD	2025	Bridger 2	0
E01 PAD	2025	Bridger 2	0
E02 PAD	2025	Bridger 2	0
E03 PAD	2025	Bridger 2	0
E04 PAD	2025	Bridger 2	0
E05 PAD	2025	Bridger 2	0
E07 PAD	2025	Bridger 2	0
E08 INFILL PAD	2025	Bridger 2	0
E09 PAD	2025	Bridger 2	0



Site Name	Year	Campaign	Site-Total Emission Rate (m ³ /d)
E05 PAD	2025	Bridger 1	0
E07 PAD	2025	Bridger 1	0
E08 INFILL PAD	2025	Bridger 1	0
E09 PAD	2025	Bridger 1	0
E10 PAD	2025	Bridger 1	0
E12 INFILL PAD	2025	Bridger 1	0
F01 PAD	2025	Bridger 1	0
F02 INFILL PAD	2025	Bridger 1	0
F03 PAD	2025	Bridger 1	0
F04 PAD	2025	Bridger 1	0
F05 PAD	2025	Bridger 1	0
F06 PAD	2025	Bridger 1	0
F07 PAD	2025	Bridger 1	0
F08 PAD	2025	Bridger 1	0
H1 PAD	2025	Bridger 1	0
H10 PAD	2025	Bridger 1	0
H11 PAD	2025	Bridger 1	0
H15 PAD	2025	Bridger 1	0
H16 PAD	2025	Bridger 1	0
H17 PAD	2025	Bridger 1	0
H18 PAD	2025	Bridger 1	0
H19 PAD	2025	Bridger 1	0
H2 PAD	2025	Bridger 1	0
H21 PAD	2025	Bridger 1	0
H22 PAD	2025	Bridger 1	0
H23 PAD	2025	Bridger 1	0
H24 PAD	2025	Bridger 1	0
H25 PAD	2025	Bridger 1	0
H26 PAD	2025	Bridger 1	0
H27 PAD	2025	Bridger 1	0
H3 PAD	2025	Bridger 1	0
H31 PAD	2025	Bridger 1	0

Site Name	Year	Campaign	Site-Total Emission Rate (m ³ /d)
E10 PAD	2025	Bridger 2	0
E12 INFILL PAD	2025	Bridger 2	0
F01 PAD	2025	Bridger 2	0
F02 INFILL PAD	2025	Bridger 2	0
F03 PAD	2025	Bridger 2	0
F04 PAD	2025	Bridger 2	0
F05 PAD	2025	Bridger 2	0
F06 PAD	2025	Bridger 2	0
F07 PAD	2025	Bridger 2	0
F08 PAD	2025	Bridger 2	0
H1 PAD	2025	Bridger 2	0
H10 PAD	2025	Bridger 2	0
H11 PAD	2025	Bridger 2	0
H14 PAD	2025	Bridger 2	0
H15 PAD	2025	Bridger 2	0
H16 PAD	2025	Bridger 2	0
H17 PAD	2025	Bridger 2	0
H18 PAD	2025	Bridger 2	0
H19 PAD	2025	Bridger 2	0
H2 PAD	2025	Bridger 2	0
H21 PAD	2025	Bridger 2	0
H22 PAD	2025	Bridger 2	0
H23 PAD	2025	Bridger 2	0
H24 PAD	2025	Bridger 2	0
H25 PAD	2025	Bridger 2	0
H26 PAD	2025	Bridger 2	0
H27 PAD	2025	Bridger 2	0
H3 PAD	2025	Bridger 2	0
H31 PAD	2025	Bridger 2	0
H32 PAD	2025	Bridger 2	0
H33 PAD	2025	Bridger 2	0
H34 PAD	2025	Bridger 2	0



Site Name	Year	Campaign	Site-Total Emission Rate (m ³ /d)
H32 PAD	2025	Bridger 1	0
H33 PAD	2025	Bridger 1	0
H35 PAD	2025	Bridger 1	0
H36 PAD	2025	Bridger 1	0
H39 PAD	2025	Bridger 1	0
H4 PAD	2025	Bridger 1	0
H46 PAD	2025	Bridger 1	0
H47 PAD	2025	Bridger 1	0
H5 PAD	2025	Bridger 1	0
H51 PAD	2025	Bridger 1	0
H87 H37 INFILL	2025	Bridger 1	0
H92 HIP	2025	Bridger 1	0
J1 INFILL PAD	2025	Bridger 1	0
J10 INFILL PAD	2025	Bridger 1	0
J11 PAD	2025	Bridger 1	0
J12 PAD	2025	Bridger 1	0
J13 PAD	2025	Bridger 1	0
J14 PAD	2025	Bridger 1	0
J15 PAD	2025	Bridger 1	0
J16 PAD	2025	Bridger 1	0
J2 PAD	2025	Bridger 1	0
J27 PAD	2025	Bridger 1	0
J3 PAD	2025	Bridger 1	0
J4 PAD	2025	Bridger 1	0
J5 PAD	2025	Bridger 1	0
J6 PAD	2025	Bridger 1	0
J7 INFILL PAD	2025	Bridger 1	0
J8 PAD	2025	Bridger 1	0
K23 PAD	2025	Bridger 1	0
K24 PAD	2025	Bridger 1	0
K26 PAD	2025	Bridger 1	0
L05 PAD	2025	Bridger 1	0

Site Name	Year	Campaign	Site-Total Emission Rate (m ³ /d)
H35 PAD	2025	Bridger 2	0
H36 PAD	2025	Bridger 2	0
H39 PAD	2025	Bridger 2	0
H4 PAD	2025	Bridger 2	0
H46 PAD	2025	Bridger 2	0
H47 PAD	2025	Bridger 2	0
H5 PAD	2025	Bridger 2	0
H51 PAD	2025	Bridger 2	0
H87 H37 INFILL	2025	Bridger 2	0
H92 HIP	2025	Bridger 2	0
J1 INFILL PAD	2025	Bridger 2	0
J10 INFILL PAD	2025	Bridger 2	0
J11 PAD	2025	Bridger 2	0
J12 PAD	2025	Bridger 2	0
J13 PAD	2025	Bridger 2	0
J14 PAD	2025	Bridger 2	0
J15 PAD	2025	Bridger 2	0
J16 PAD	2025	Bridger 2	0
J2 PAD	2025	Bridger 2	0
J21 PAD	2025	Bridger 2	0
J25 PAD	2025	Bridger 2	0
J27 PAD	2025	Bridger 2	0
J3 PAD	2025	Bridger 2	0
J4 PAD	2025	Bridger 2	0
J5 PAD	2025	Bridger 2	0
J6 PAD	2025	Bridger 2	0
J7 INFILL PAD	2025	Bridger 2	0
J8 PAD	2025	Bridger 2	0
K23 PAD	2025	Bridger 2	0
K24 PAD	2025	Bridger 2	0
K26 PAD	2025	Bridger 2	0
L05 PAD	2025	Bridger 2	0

Site Name	Year	Campaign	Site-Total Emission Rate (m ³ /d)
L06 PAD	2025	Bridger 1	0
L08 PAD	2025	Bridger 1	0
L11 PAD	2025	Bridger 1	0
M3 PAD	2025	Bridger 1	0
M4 PAD	2025	Bridger 1	0
M5 PAD	2025	Bridger 1	0
M7 PAD	2025	Bridger 1	0
P02 PAD	2025	Bridger 1	0
P3 PAD	2025	Bridger 1	0
R1 PAD	2025	Bridger 1	0
R2 PAD	2025	Bridger 1	0
R3 PAD	2025	Bridger 1	0
R4 PAD	2025	Bridger 1	0
R5 PAD	2025	Bridger 1	0
R6 PAD	2025	Bridger 1	0
R7 PAD	2025	Bridger 1	0
T01 PAD	2025	Bridger 1	0
T02 PAD	2025	Bridger 1	0
T03 PAD	2025	Bridger 1	0
T04 PAD	2025	Bridger 1	0
T05 PAD	2025	Bridger 1	0
T06 PAD	2025	Bridger 1	0
T07 PAD	2025	Bridger 1	0
T08 PAD	2025	Bridger 1	0
T09 PAD	2025	Bridger 1	0
T11 PAD	2025	Bridger 1	0
T12 PAD	2025	Bridger 1	0
T13 SAGD PAD	2025	Bridger 1	0
T14 PAD	2025	Bridger 1	0
T15 PAD	2025	Bridger 1	0
U01 INFILL PAD	2025	Bridger 1	0
U02 PAD	2025	Bridger 1	0

Site Name	Year	Campaign	Site-Total Emission Rate (m ³ /d)
L06 PAD	2025	Bridger 2	0
L07 PAD	2025	Bridger 2	0
L08 PAD	2025	Bridger 2	0
L11 PAD	2025	Bridger 2	0
M3 PAD	2025	Bridger 2	0
M4 PAD	2025	Bridger 2	0
M5 PAD	2025	Bridger 2	0
M7 PAD	2025	Bridger 2	0
P02 PAD	2025	Bridger 2	0
P3 PAD	2025	Bridger 2	0
R1 PAD	2025	Bridger 2	0
R2 PAD	2025	Bridger 2	0
R3 PAD	2025	Bridger 2	0
R4 PAD	2025	Bridger 2	0
R5 PAD	2025	Bridger 2	0
R6 PAD	2025	Bridger 2	0
R7 PAD	2025	Bridger 2	0
T01 PAD	2025	Bridger 2	0
T02 PAD	2025	Bridger 2	0
T03 PAD	2025	Bridger 2	0
T05 PAD	2025	Bridger 2	0
T06 PAD	2025	Bridger 2	0
T07 PAD	2025	Bridger 2	0
T08 PAD	2025	Bridger 2	0
T09 PAD	2025	Bridger 2	0
T11 PAD	2025	Bridger 2	0
T12 PAD	2025	Bridger 2	0
T13 SAGD PAD	2025	Bridger 2	0
T14 PAD	2025	Bridger 2	0
T15 PAD	2025	Bridger 2	0
U01 INFILL PAD	2025	Bridger 2	0
U02 PAD	2025	Bridger 2	0



Site Name	Year	Campaign	Site-Total Emission Rate (m ³ /d)
U03 PAD	2025	Bridger 1	0
U04 PAD	2025	Bridger 1	0
U05 INFILL PAD	2025	Bridger 1	0
U06 REDRILL PAD	2025	Bridger 1	0
U07 PAD	2025	Bridger 1	0
U09 PAD	2025	Bridger 1	0
V01 PAD	2025	Bridger 1	0
V02 PAD	2025	Bridger 1	0
V03 PAD	2025	Bridger 1	0
V04 PAD	2025	Bridger 1	0
V05 PAD	2025	Bridger 1	0
V08 PAD	2025	Bridger 1	0
V09 PAD	2025	Bridger 1	0
V10 PAD	2025	Bridger 1	0
Y32 PAD	2025	Bridger 1	0

Site Name	Year	Campaign	Site-Total Emission Rate (m ³ /d)
U03 PAD	2025	Bridger 2	0
U04 PAD	2025	Bridger 2	0
U05 INFILL PAD	2025	Bridger 2	0
U06 REDRILL PAD	2025	Bridger 2	0
U07 PAD	2025	Bridger 2	0
U09 PAD	2025	Bridger 2	0
V01 PAD	2025	Bridger 2	0
V02 PAD	2025	Bridger 2	0
V03 PAD	2025	Bridger 2	
V04 PAD	2025	Bridger 2	
V05 PAD	2025	Bridger 2	
V08 PAD,	2025	Bridger 2	
V09 PAD	2025	Bridger 2	
V10 PAD	2025	Bridger 2	
Y32 PAD	2025	Bridger 2	

Appendix C: Screening Data – Individual Emissions

Site Name	Year	Campaign	Emission Rate (m ³ /d)
H34 PAD	2025	Bridger 1	191.2
H34 PAD	2025	Bridger 1	21.2
D64 PAD	2025	Bridger 1	24.8
J21 PAD	2025	Bridger 1	31.9
C2 PAD	2025	Bridger 1	141.6
CSP PAD	2025	Bridger 1	21.2
CSP PAD	2025	Bridger 1	46.0
LEMING PLANT	2025	Bridger 1	173.5
LEMING PLANT	2025	Bridger 1	247.8
LEMING PLANT	2025	Bridger 1	247.8
LEMING PLANT	2025	Bridger 1	247.8
LEMING PLANT	2025	Bridger 1	354.0
LEMING PLANT	2025	Bridger 1	247.8
MASKWA PLANT	2025	Bridger 1	17.7
MASKWA PLANT	2025	Bridger 1	74.3
MASKWA PLANT	2025	Bridger 1	99.1
MASKWA PLANT	2025	Bridger 1	81.4
MASKWA PLANT	2025	Bridger 1	244.2
MASKWA PLANT	2025	Bridger 1	99.1
H14 PAD	2025	Bridger 1	38.9
MAHIHKAN PLANT	2025	Bridger 1	63.7
MAHIHKAN PLANT	2025	Bridger 1	70.8
MAHIHKAN PLANT	2025	Bridger 1	60.2
MAHIHKAN PLANT	2025	Bridger 1	113.3
MAHIHKAN PLANT	2025	Bridger 1	311.5
MAHIHKAN PLANT	2025	Bridger 1	123.9
MAHIHKAN PLANT	2025	Bridger 1	127.4
L07 PAD	2025	Bridger 1	14.2
MAHKESES PLANT	2025	Bridger 1	60.2
MAHKESES PLANT	2025	Bridger 1	148.7
MAHKESES PLANT	2025	Bridger 1	131.0
A2 PAD	2025	Bridger 1	113.3

Site Name	Year	Campaign	Emission Rate (m ³ /d)
J25 PAD	2025	Bridger 1	31.9
D39 PAD	2025	Bridger 1	14.2
C2 PAD	2025	Bridger 2	354.0
MAHIHKAN PLANT	2025	Bridger 2	261.9
MAHIHKAN PLANT	2025	Bridger 2	166.4
MAHIHKAN PLANT	2025	Bridger 2	113.3
MAHIHKAN PLANT	2025	Bridger 2	63.7
MAHIHKAN PLANT	2025	Bridger 2	371.7
MASKWA PLANT	2025	Bridger 2	102.7
MASKWA PLANT	2025	Bridger 2	85.0
MASKWA PLANT	2025	Bridger 2	38.9
MASKWA PLANT	2025	Bridger 2	502.7
MASKWA PLANT	2025	Bridger 2	385.8
MASKWA PLANT	2025	Bridger 2	297.3
MASKWA PLANT	2025	Bridger 2	77.9
MASKWA PLANT	2025	Bridger 2	364.6
MASKWA PLANT	2025	Bridger 2	626.5
MASKWA PLANT	2025	Bridger 2	95.6
MASKWA PLANT	2025	Bridger 2	46.0
CSP PAD	2025	Bridger 2	265.5
LEMING PLANT	2025	Bridger 2	286.7
LEMING PLANT	2025	Bridger 2	329.2
LEMING PLANT	2025	Bridger 2	67.3
LEMING PLANT	2025	Bridger 2	42.5
LEMING PLANT	2025	Bridger 2	201.8
LEMING PLANT	2025	Bridger 2	764.6
LEMING PLANT	2025	Bridger 2	1100.9
T04 PAD	2025	Bridger 2	31.9
MAHKESES PLANT	2025	Bridger 2	120.4
MAHKESES PLANT	2025	Bridger 2	237.2