

EFI USA / METHANE INSPECTION, REPAIR & SITE INTEGRITY PROGRAM

Your site, inspected end to end. Leaks found, valued, and fixed.

A single visit documents where methane is escaping, from the air and on the ground, what it is costing you, and which parts of your cover need attention next. EFI closes the quick fixes before leaving the site. One report. One clear picture. No guesswork.

FACILITY	INSPECTION DATE	SYSTEM	AREA SCANNED	METHODS
Sample Digester Site	00 / 00 / 2026	Covered anaerobic lagoon	6.4 acres cover	Aerial + ground, gas sample, repair

INSPECTION SUMMARY

The whole-site health check, on one page.

EFI flew your covered lagoon with a laser methane sensor and a thermal camera, walked the site with a portable methane analyzer, pulled a spot gas sample from the collection header, and took contact thickness readings on the cover. The quick fixes were closed on site during the visit. The result is the same kind of report you get when you bring a vehicle in for service: here is what is wrong, here is what we fixed, here is what it is costing you, and here is what to plan for. Every finding below is tied to a location, a number, and an action.

SECTION 1 • REGULATORY & LEAK FINDINGS



3 active methane releases located, 1 above reportable threshold

One lifted cover seam, one condensate trap, one degraded penetration. The trap and penetration were closed on site; the seam re-weld is scheduled.

ACTION NEEDED

SECTION 2 • ECONOMIC VALUE AT RISK



~15 scfm of methane escaping, roughly \$64K to \$190K per year

Lost gas value plus the environmental load you are carrying for it. Repairs pay back in weeks.

RECOVER IT

SECTION 3 • ASSET INTEGRITY & OUTLOOK



Cover sound overall, one zone thinning toward end of life

Northwest quadrant reading 44 mil against a 60 mil spec. Flag for planned repair in 18 to 24 months.

PLAN AHEAD

Bottom line. This site is producing well, but it is leaking roughly **15 scfm of methane** from three fixable points. That is gas you paid to make, walking off the cover. EFI closed the two quick fixes on the visit and scheduled the seam re-weld that recovers the large majority of the remaining loss, and the cover has one zone worth putting on the calendar before it becomes an emergency.

LOCATED METHANE RELEASES

Three active sources, mapped and ranked.

The laser sensor detects and quantifies methane in the air above the cover as the drone flies a grid, and a ground walk-down with a portable analyzer confirms each source and catches leaks the aerial pass cannot see. Each release below is a real location you can walk to, with an estimated leak rate and the action taken. The largest is a lifted cover seam, the kind of thing that is invisible from the ground but obvious from the air.

ID	LOCATION	SOURCE	EST. RATE	SEVERITY	ACTION
L-1	NW cover seam, panel 4	Lifted / unwelded seam	9.2 scfm	High	Seam re-weld scheduled. Above reportable threshold; repair documented.
L-2	Header condensate trap	Trap venting to atmosphere	3.8 scfm	Medium	Closed on site. Trap re-seated and routed to collection.
L-3	SE ballast tube boot	Penetration boot degraded	2.1 scfm	Medium	Closed on site. Penetration re-booted and clamped.
L-4	Flare pilot	Incomplete combustion at low flow	Trace	Monitor	Tune flare pilot. Confirm destruction efficiency.



SPOT GAS SAMPLE • COLLECTION HEADER

What your gas actually looks like today.

62.1 % vol Methane (CH ₄)	35.8 % vol Carbon dioxide	1,840 ppm Hydrogen sulfide	0.4 % vol Oxygen	Sat. RH Moisture
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Methane content is strong. The H₂S reading of 1,840 ppm is the number worth watching. It is corroding your equipment and, if you are heading toward pipeline gas, it is the load a downstream cleanup has to carry. EFI treats that at the source with biological O₂ injection, which is a separate conversation we are glad to have.

THE NUMBER THAT MATTERS

Roughly 15 scfm of methane, leaving every minute.

Add the located sources together and this site is releasing about 15 standard cubic feet of methane per minute. That is gas you already spent money to produce. Over a day it is 21,600 cubic feet. Over a year it is real money, and it is a carbon load you are carrying whether or not anyone is measuring it.

METHANE ESCAPING

~15 scfm

21.6 Mcf per day. Equivalent to venting roughly 12 to 35 tons of CO₂e per day, depending on the accounting basis.

ANNUALIZED VALUE AT RISK

\$64K-\$190K

Lost gas value per year. The range reflects fuel value at the low end and RNG-plus-environmental value at the high end.

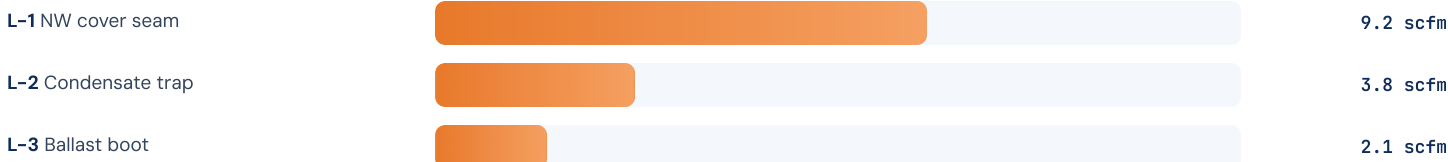
COST TO CLOSE THE SEAM

\$10K-\$20K

Re-weld the L-1 seam. The two quick fixes were already closed on the visit. Recovers the large majority of the remaining loss. Payback measured in weeks, not years.

WHERE THE LOSS COMES FROM

Most of it is one seam.



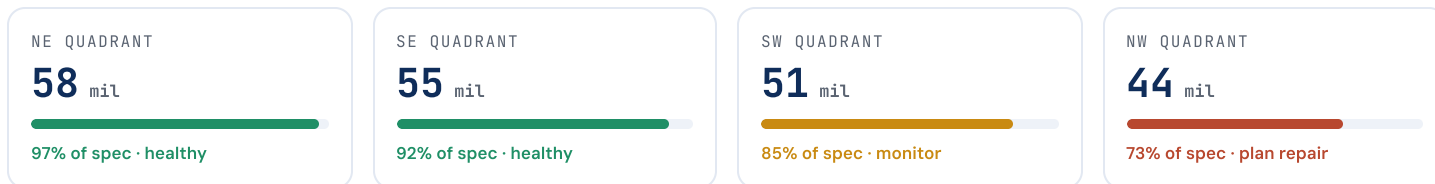
Read it this way. You are losing on the order of **\$175 to \$520 a day** across these three sources. EFI closed the two smaller ones on the visit at no added cost, stopping roughly 40 percent of that today, and the **L-1 seam re-weld, about \$10,000**, closes most of what is left. Once it is sealed, that value goes back into your gas stream, and the inspection and repair record shows a regulator or an auditor exactly when and how you fixed it.

This is the reason the inspection and repair pay for themselves. They do not just tell you that you have a leak. They put a dollar figure on the leak, a dollar figure on the fix, and the difference in your pocket, and every scfm closed is methane that never reaches the atmosphere.

COVER CONDITION

Your cover, measured, not guessed.

The thermal pass flags stressed and ponding areas from the air. On the ground, EFI takes ultrasonic thickness readings on the HDPE cover at set stations and compares them to the original specification. That tells you not just that the cover is aging, but where, by how much, and roughly when it will need attention.



Spec at install was 60 mil. The northwest quadrant, the same area as the L-1 seam leak, has thinned to 44 mil, a 27 percent loss. That is not a failure today, but it is the first place to fail, and it is where you should budget a planned repair rather than wait for an unplanned one.

This visit	L-2 and L-3 closed on site. Condensate trap re-seated and penetration re-booted, stopping about 6 scfm on the spot and removing two active sources.
Now	Schedule the L-1 seam re-weld and tune the flare. The re-weld recovers the large majority of the remaining loss and clears the reportable release. EFI documents the repair for the file.
18 to 24 mo	Planned NW quadrant repair. Budget a cover patch or panel replacement before the thinned zone drives an emergency shutdown. EFI can hold a re-inspection to track the trend.

RECOMMENDED NEXT STEPS

- **Authorize the L-1 seam re-weld.** The two quick fixes are already closed and captured roughly 40 percent of the \$64K to \$190K on the visit; about \$10K to \$20K on the seam recovers most of the rest and clears the reportable release.
- **Put the northwest quadrant on the capital calendar** for an 18 to 24 month planned repair.
- **Set an annual EFI inspection** so leaks, value, and cover condition are tracked and the quick fixes are closed, not discovered later.

SCHEDULE YOUR SITE INSPECTION

One visit tells you what your site is losing, fixes the quick ones, and shows what breaks next.

EFI already owns the cover expertise and the site relationships. The program adds the eyes in the air, the boots on the ground, and the crew to close the leak. Tell us your site and we will schedule the visit and deliver the report and video.

(307) 264-0309

EFI USA, LLC
85 Pascon Ct, Gaston, SC 29053
efiusa.com