

Increase Liquids Production with EcoVapor Solutions

Published study quantifies the ZerO₂ impact.

The ZerO₂ Solution helps increase oil and liquids production while lowering emissions.

Flash gas is generated in surface storage tanks and mixes with oxygen, making even the best engineered production systems vulnerable. Pipelines will reject gas that contains oxygen above their specifications, requiring the operator to flare or combust it on site, resulting in lost liquids production and profits.

The ZerO₂ Solution

The EcoVapor ZerO₂ solution is a rugged, reliable and compact piece of equipment that helps operators capture up to 100% of rich tank vapor gas and sell it instead of burning it.

The ZerO₂ can treat a compressed gas stream to reliably remove O₂ to concentrations well below pipeline limits. It is capable of treating a gas stream containing up to 25% air (~50,000 ppm O₂) and reducing it to a typical outgoing concentration of less than 3 ppm. At these low levels, a vapor stream from atmospheric storage tanks can be compressed and reliably meet pipeline O₂ specifications. The result is a consistent incremental revenue stream and elimination of process upsets associated unplanned shut-ins and shifting to flare until O₂ concentration returns to acceptable levels.

ECOVAPOR
ZER₂O



FACT

In a controlled study the ZerO₂ Solution increased oil production by 12%. Stop burning profits!

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ZerO₂ Put to the Test in a Controlled Study

Two major E&P companies partnered with EcoVapor to conduct a controlled study for assessing the efficiency, effectiveness and economics of using the latest vapor recovery technology available to operators today. This multi-site test provides a true head-to-head comparison of production sites equipped with the EcoVapor ZerO₂ solution and those using only VRUs or VRTs.

LINK: READ THE COMPLETE STUDY

The study *“Capturing” the Tank Vapor Opportunity: Removing Oxygen From the Production Stream Reduces Emissions and Generates Incremental Economics* was published and then presented by EcoVapor at the Laurance Reid Gas Conditioning Conference on February 25-28, 2019 in Norman, Oklahoma.

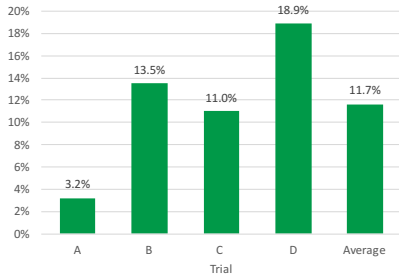
Incremental Production			BOPD Increase		MCF/Day Increase		O ₂ Equipment Uptime
	Trial	Days Operated	BOPD	%	MCF/Day	%	
This table summarizes the incremental production achieved by bringing tank flash gas into pipeline specification and selling it. On average and across all four trials, production of oil and natural gas increased by 12% and 22%, respectively.	A	77	24.1	3.2%	51.0	37.2%	98.7%
	B	128	4.3	13.5%	46.8	15.1%	99.2%
	C	124	6.8	11.0%	46.0	14.6%	98.4%
	D	67	15.7	18.9%	29.6	19.7%	99.2%
	Average	99	12.7	11.7%	43.4	21.7%	98.9%

Tank Vapor Recovery with ZerO₂ Beats VRT Economics

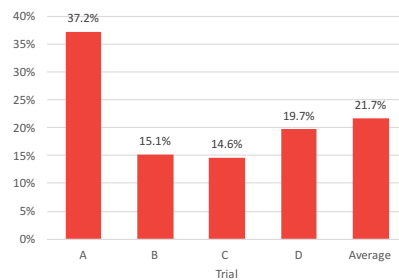
Vapor Recovery Towers (VRTs) are often the first line of defense for recovering or reducing tank vapor gas at the wellsite. Even the most effective units, however, allow for flash gas to produce in oil storage tanks due to a pressure drop and retention time in the tanks. In the controlled study, tank vapor recovery with a ZerO₂ was compared to a VRT configuration. In every instance, the ZerO₂ set-up produced increased liquids and gas recovery, lowered site emissions, all at the same or better up-time. Simply put, tank vapor recovery with a ZerO₂ beats a VRT installation.

Increase Liquids Production with EcoVapor Solutions

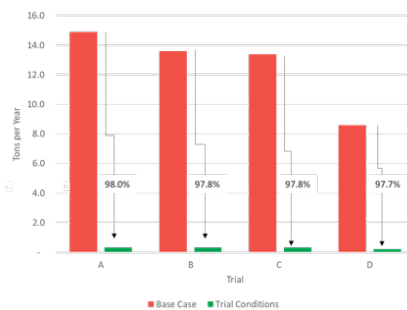
Oil Production Increase



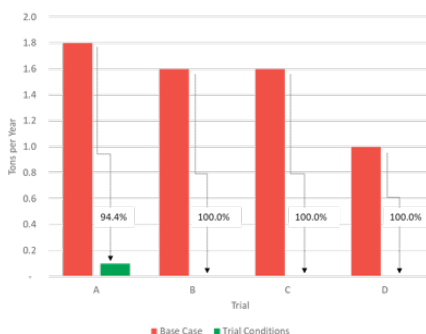
Gas Production Increase



VOC Emissions Reduction



NOx Emissions Reduction



More Profits

The table below summarizes the incremental revenue and Net Present Value (NPV) of using the ZerO₂ solution to bring tank flash gas into pipeline specification and sell the resulting NGL, instead of flaring or combusting it.

Trial	Incremental Revenue (\$/Year)	NPV of Incremental Improvement Using O ₂ Equipment (1 Year, 10%)
A	\$544,250	\$429,545
B	\$156,485	\$109,079
C	\$74,200	\$41,074
D	\$255,605	\$190,996

High Uptime

ZerO₂ units delivered an average uptime of 98.9% across all four trials, resulting in no unplanned shut-ins and a consistent source of incremental revenue.

Reduced Emissions

Reducing flaring also decreases emissions of VOC and NO_x from production operations. Across all four trials, using the ZerO₂ solution reduced VOC and NO_x emissions by an average of 97.8% and 98.3%, respectively.

Operational Benefits and Improved Safety Profile

ZerO₂ solution also provides additional operational and safety benefits:

- Inherently safer production sites by reduced / controlled tank pressures.
- A streamlined permitting process.
- Greater ability to co-locate more wells on a future pad without concern about permitting limits, conserving capital resources and improving operating efficiency and cost.

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ECOVAPOR ZER₀₂

SUMMARY

In each trial, using the ZerO₂ equipment and removing the VRT from service, while retaining the VRU, produced significant benefits:

- Improved profitability and return on investment through additional liquids production and incremental vapor gas sales.
- Substantial reductions in emissions of VOC.
- Reduction / elimination of flaring and generation of NOX.
- Enhanced wellsite safety profile.
- De-risked the production sites, both environmentally and through flow assurance.

ZerO₂ units are working today in all major U.S. oil and gas producing basins and have accumulated millions of hours of reliable runtime operation.

**Contact EcoVapor today at 1-844-NO-FLARE (844-663-5273)
or Info@EcoVaporRS.com to schedule a free evaluation and site tour.**

