

TEXAS GENERAL LAND OFFICE

Texas General Land Office and School Land Board Policy and Recommended Best Practices For Methane Emission Reduction

POLICY AND APPROACH

It is the policy of the Texas General Land Office (GLO) and the School Land Board (hereafter, collectively the GLO) that all lessees and producers of the mineral estate owned by the Permanent School Fund (PSF) should use all reasonable means to (i) minimize or prevent contamination of ambient air by any waste, pollutant, or contaminant, including methane, during exploration and production activities, and (ii) avoid the physical waste, flaring or venting of gas produced from the PSF's mineral estate.

The GLO manages the real assets of the PSF, including its mineral estate, the income from which is Constitutionally dedicated to the support of public education. The GLO is not a regulatory agency with regard to oil and gas operations or the PSF's mineral estate. Therefore, the GLO seeks to implement its stated policy through its contracts (mineral leases) and the rules it promulgates in support of its mineral estate management obligations.

State and Federal Law

It is the policy of the GLO that all of the lessees of PSF minerals must comply with all applicable State and federal laws and regulations, particularly as promulgated by the Railroad Commission of Texas (RRC) and the Texas Commission on Environmental Quality (TCEQ), with regard to the exploration for and production of the PSF's minerals. That policy is implemented by contracts and rules that state that a lessee's operations on State lands are subject to all applicable State and federal laws and regulations.

The regulation of oil and gas activities in Texas falls primarily under the jurisdiction of the RRC, while various environmental aspects, including air emissions, are regulated by the TCEQ. The TCEQ has regulatory and permitting oversight over air emissions after drilling operations are completed and at oil and gas facilities such as tank batteries and compressor stations. Air emissions, including methane, from these facilities must comply with all rules and regulations of the TCEQ and with the intent of the Texas Clean Air Act.

GLO Rules and Lease Requirements

It is the policy of the GLO that all operators and lessees must comply with RRC Statewide Rule 32 regarding venting and flaring, TCEQ air emission rules and regulations, and the GLO's rules in Title 31 Texas Administrative Code, Chapter 9, providing in part as follows:

§9.32(a)-Operations on state lands are subject to all applicable state and federal laws and regulations.



TEXAS GENERAL LAND OFFICE

§9.32(b)(1)-As expressly required in state leases, lessee shall use the highest degree of care in conducting operations on state leases and shall take all proper safeguards to prevent pollution.

It is the policy of the GLO that its lessees comply with GLO form leases, which in part provide:

"Lessee will use the highest degree of care and all reasonable safeguards to prevent contamination or pollution of any environmental medium, including soil, surface waters, groundwater, sediments, and surface or subsurface strata, ambient air or any other environmental medium in, on, or under the Leased Premises, by any waste, pollutant, or contaminant...Lessee shall clean up, remove, remedy and repair any soil or ground water contamination and damage caused by the presence or release of any hazardous materials...in conformance with the requirements of applicable law."

"Lessee Shall use all reasonable means to prevent the underground or above ground waste of Oil or Gas and to avoid the physical waste, flaring or venting of Gas produced from the Leased Premises."

Royalty Payments Required on All Gas Production, Including Vented and Flared

It is the policy of the GLO, the requirement of State law, and a lessee's obligation under GLO lease forms that the applicable contractual royalty be paid for all gas produced from State Lands, including vented gas, flared gas, and any other non-sales dispositions. GLO Royalty Audit staff ensures that the PSF receives its royalty on production, even on gas production that is vented or flared rather than sold to a third party.

Collaboration with Experts and Industry

It is the policy of the GLO to engage with experts, both in and out of industry, to advance efforts to reduce methane emissions. For example:

(i) The GLO is committed to regular dialogue, collaboration and sharing of best practices with scientists, engineers, and industry associations including the Texas Oil & Gas Association, the Independent Producers Association of America, the American Petroleum Institute, and the Permian Basin Petroleum Association, and to sharing the results of such dialogue with all State lessees.

(ii) The GLO supports the Environmental Partnership and its ambitious emissions reductions goals. Many of the GLO's largest lessees are involved with the Partnership. Continued operator engagement helps ensure that emissions from State lands will further decline as operators implement the Partnership's programs.



TEXAS GENERAL LAND OFFICE

RECOMMENDED BEST PRACTICES

Minimizing Emissions from Oil & Gas Operations

- The GLO recommends use of Leak Detection and Repair (LDAR) programs, which have become an important part of reducing air emissions by identifying equipment leaks from oil and gas production equipment, such as tank battery thief hatches and vent valves, pipe connections, compressor seals, flanges, compression fittings and mechanical seals. Successful LDAR programs provide scheduled routine surveillance and maintenance designed to identify and mitigate natural gas leaks early.
- 2. The GLO recommends conducting LDAR inspections and encourages inspection teams to review the air permit issued by the TCEQ for each facility prior to conducting the LDAR inspections.
- 3. The GLO encourages aerial flyover surveys using technology that can identify large air emission sources so that operators can more quickly detect and mitigate the most problematic emissions sites.
- 4. Where practicable, the GLO recommends the use of best emission management practices, typically including the utilization of Vapor Recovery Units, Vapor Recovery Towers, Thermal Oxidizers, and Flare Stacks to manage emissions from oil, condensate and produced water storage tanks.
- 5. The GLO encourages operators to purchase infrared cameras to improve emission inspection efforts across all assets on State Lands, regardless of facility age or production volumes.
- 6. The GLO supports the work of and recommends membership in The Environmental Partnership, an operator-driven organization committed to voluntary emission reduction programs, transparent reporting and sharing of best practices, learnings and new technologies.
- 7. The GLO routinely encourages operators to recomplete or plug abandoned marginally productive wells.
- 8. The GLO encourages operators to participate in the U.S. Department of Energy's study to quantify methane emissions from marginal wells.
- 9. The GLO requires that operators ensure that Flare Stacks are properly employed, maintained, and operational, including so that gas production that is sent to a Flare Stack (i) is authorized to be flared (rather than transported from the facility by pipeline), and (ii) is actually flared rather than merely vented.