

30 TAC 106.352 Oil and Gas Handling and Production Facilities – Revised 2011

Applicability

- New projects and related facilities in the Barnett Shale on or after April 1, 2011

Definitions/Restrictions

- Oil and Gas Site (OGS) is defined as all facilities (stationary emissions sources) that are (1) located on contiguous or adjacent properties; (2) under common control; and (3) designated under the same two digit SIC code
- Facility is defined as a discrete or identifiable structure, device, item, equipment, or enclosure that constitutes or contains a stationary emission source, excluding drilling operations and well tests lasting less than 72 hours
- Emissions must be based on representative worst-case operations and planned MSS activities
- Only one PBR authorization is allowed per OGS
- Each PBR authorization must include all OGS facilities (stationary emissions sources) within ¼ mile that are operationally dependent on the project
- If piping or fugitive components are the only connection between facilities and the distance between facilities exceeds ¼ mile, then the facilities are considered separate for purposes of registration

Existing OGS – No Project

- Unregistered OGS must submit Core Data and basic identifying information through the ePermits “APD OGS Historical Notification” by January 1, 2013 with no fee
- Registered OGS need only submit hardcopy Core Data as needed
- Meet MSS requirements by January 5, 2012
- Emissions increases or new construction will subject facilities to full registration and new requirements with limited exceptions

Existing OGS – New Project

- Existing authorized facilities, or groups of facilities, at an OGS with a new project which are not changing certified character or quantity of emissions must meet Protectiveness Review and planned MSS requirements and be included in the new project registration but otherwise retain their existing authorization
- Existing authorized facilities, or groups of facilities that change the certified character or quantity of emissions must fully comply with the new requirements and obtain a new authorization

Table A: Level 0 Criteria									
Group	Product	Engines	Piping and Fugitive Components					Produced Water Separators*	Produced Water Tanks
			Open-ended Lines	Valves	Connectors & Flanges	Pump Seals	All Others		
1	Sweet Gas	≤ 450 HP	---	---	---	---	---	---	---
	Sour Gas (H ₂ S ≤ 10,000 ppm)	≤ 100 HP	---	---	---	---	---	---	---
	Sour Gas (H ₂ S > 10,000 ppm, ≤ 50,000 ppm)	≤ 20 HP	---	---	---	---	---	---	---
2	Natural Gas	---	≤ 135	≤ 135	≤ 2,000	---	≤ 135	---	---
	Liquids or Natural Gas	---	≤ 25	≤ 25	≤ 2,000	---	≤ 25	---	---
	Liquids or Natural Gas	---	≤ 4	≤ 225		≤ 4	---	---	---
	Crude, Condensate and/or Natural Gas	---	≤ 5	≤ 150 (VOC service) & ≤ 500 (water service)		≤ 5	---	No limit	≤ 1,205 bbl/day
	Crude, Condensate and/or Natural Gas	---	≤ 2	≤ 230 (VOC service) & ≤ 500 (water service)		≤ 2	---	No limit	≤ 580 bbl/day

* routed directly to sales pipeline

New OGS Project

- Level 0 projects with site wide combinations from Group 1 and/or Group 2 (see *Table A*) need only comply with applicable BMPs and recordkeeping and require no notification or registration
- Prior to construction for Level 1 and Level 2 projects, submit notification with Core Data and project description through the ePermits “APD OGS New Project Notification”; \$50 fee (\$25 for small businesses)
- Post-construction for Level 1 and Level 2 projects, register through ePermits “APD OGS PBR Level 1 and Level 2 Registration” per *Table B*

Emissions Limits*		Level 1	Level 2
Pollutant	Units		
Total crude oil or condensate VOC	lb/hr**	100	100
Total natural gas VOC	lb/hr	204	356
Total VOC	TPY	15	25
Benzene	lb/hr	1.95	3.35
	TPY	2.8	4.8
H ₂ S	lb/hr	4.7	6
	TPY	20.6	25
SO ₂	lb/hr	47	63
	TPY	25	25
NO _x	lb/hr	43.2	54.4
	TPY	100	250
CO	lb/hr	45	57
	TPY	100	250
PM _{2.5}	lb/hr	10	12.7
	TPY	5	10
PM ₁₀	lb/hr	10	12.7
	TPY	5	15
Registration		Within 180 days after start of operation or implemented change(s)	Within 90 days after start of operation or implemented change(s)
Fees		\$175 (\$25 for small businesses)	\$400 (\$75 for small businesses)

*Emissions after recovery or controls **Steady state, with separate periodic limits

Impacts Evaluation/Protectiveness Review

- Receptors include residential buildings (permanent dwellings), schools, day cares, hospitals, businesses (occupied 8 hours/day, 5 days/week) and places of worship present at the time of registration
- Receptors exclude structures used solely by the OGS owner, OGS operator, and mineral rights owners
- Impacts evaluations must be done on a contaminant-by-contaminant basis for net emissions increases
- Must include all OGS facility emissions within ¼ mile of the project in the impact evaluation
- Must demonstrate compliance with NO_x, SO₂, and H₂S ambient air standards at any property line within ¼ mile of a Level 1 project or ½ mile of a Level 2 project
- No further review required if a contaminant’s maximum predicted concentration ~~is~~ the significant impact level (de minimis impact)
- Must demonstrate compliance with benzene hourly (170 µ/m³) and annual (4.5 µ/m³) ESLs at the nearest receptor within ¼ mile of a Level 1 project or ½ mile of a Level 2 project
- No further review required if the benzene maximum predicted concentration ~~is~~ 10% of the applicable ESL
- No ambient air compliance demonstration necessary if emissions are below these limits: 4 lb/hr NO_x, 0.025 lb/hr H₂S, 2 lb/hr SO₂, 0.039 lb/hr benzene
- Can use screening or refined dispersion modeling so long as TCEQ modeling protocols are met
- TCEQ Generic Modeling reference tables and usage guidelines provided as an alternative

Best Management Practices

- Each site must have a maintenance program with the following minimum requirements: (1) manufacturer's specifications and recommended programs applicable to equipment performance and effect on emissions; (2) cleaning and routine inspection of all equipment; and (3) replacement and repair of equipment on schedules which prevent equipment failures and maintain performance
- New facilities must operate at least 50 feet from any property line or receptor (present at the time of registration), whichever is closer
- Engines must meet applicable emissions limits per manufacture date, engine type (spark or compression ignition, lean or rich burn), and horsepower rating with stack testing if > 500 HP
- Open-topped tanks/ponds containing are allowed up to a PTE of 1.0 TPY VOC and 0.1 TPY H₂S
- Fugitive components must be physically inspected quarterly for leaks
- Leaks must be repaired within 30 days at manned sites and within 60 days at unmanned sites
- Tank hatches, not designed to be completely sealed, must remain closed (but not completely sealed in order to maintain safe design functionality) except for sampling, gauging, loading, unloading, or planned maintenance activities
- To the extent that good engineering practices will permit, new and reworked valves and piping connections must be located in a place that is reasonably accessible for leak checking
- No buried valves with underground pipelines such that emission monitoring is rendered impractical
- Additional BMPs for (1) Leak detection and repair (LDAR) fugitive monitoring, (2) Tank/vessel paint color, (3) Process reboilers, heaters, and furnaces used for control of waste gas streams, (4) Vapor Recovery Units (VRU), (5) Flares, and (6) Thermal oxidation and vapor combustion control devices applicable only if the equipment/control device is chosen by the operator to comply with the PBR

Maintenance, Startup, and Shutdown (MSS)

- Voluntary inclusion of planned MSS prior to January 5, 2012, if included must meet emission limits
- After January 5, 2012, all emissions from planned MSS activities must be considered for compliance with applicable emissions limits
- MSS requiring emissions quantification and recordkeeping:
 - alternate operational scenarios or redirection of vent streams
 - pigging, purging, and blowdowns
 - temporary facilities if used for degassing or purging of tanks, vessels, or other facilities
 - degassing or purging of tanks, vessels, or other facilities
 - management of sludge from pits, ponds, sumps, and water conveyances
- MSS activities requiring only recordkeeping:
 - routine engine component maintenance
 - boiler refractory replacements and cleanings
 - heater and heat exchanger cleanings
 - turbine hot section swaps
 - pressure relief valve testing, calibration of analytical equipment; instrumentation/analyzer maintenance; replacement of analyzer filters and screens
- Engine/compressor startups associated with preventative system shutdown activities can be authorized as part of typical operations if shutdowns will emit < 4 lb/hr of natural gas emissions and subsequent startup emissions are controlled to a minimum of 98% efficiency for VOC and H₂S

Records

- Detailed production records
- Site specific/representative laboratory analysis
- Accurate and detailed plot plan with enough detail to justify the impacts evaluation results
- Maintenance plan
- Other sampling and monitoring records for demonstrations of compliance for optional controls or methods used for emission reductions