



FREQUENTLY ASKED QUESTIONS

General Permit-5 ([GP-5](#)) and [Exemption Category No. 38](#)

GP-5 is a General Plan Approval and/or General Operating Permit for mid-stream natural gas gathering, compression and/or processing facilities that are minor air contamination facilities. Exemption Category No. 38 of the Air Quality Permit Exemption List applies to sources located at a well pad.

GP-5 Applicability:

1. **Question:** *If a compressor engine(s) (located at a well pad) is compressing/conveying gas from multiple well pads, would the engine(s) and well pad facility be considered a compressor station and potentially be authorized via a GP-5?*
2. **Question:** *Please explain the circumstances under which it would be appropriate to apply for a GP-5 at a well site.*

Department Response: GP-5 may be authorized for engines located at a well pad provided the well pad is aggregated as a single facility with mid-stream natural gas compression sources. The gases must be collected and compressed from multiple well pads by the engine(s) located at a well pad.

GP-5 is applicable only to natural gas compression and/or processing facilities that are not major sources. GP-5 requirements, including quarterly leak detection and repair (LDAR), will be applicable to the entire facility, including sources located at the well pad. Exemption Category No. 38 criteria will not be applicable to sources located at the well pad. All emissions, including leaks from the facility, must be summed on a monthly basis to document that the facility continues to be a minor facility on a 12-month rolling basis.

GP-5 LDAR Requirements:

3. **Question:** *What is the definition of a leak?*
4. **Question:** *What alternatives are allowed to the camera?*

Department Response: DEP considers a “leak” as any release of gaseous hydrocarbons that is determined by Audible, Visual, and Olfactory (“AVO”) inspection, which is required to be performed on a monthly basis by GP-5. DEP also considers a “leak” as any release of gaseous hydrocarbons that will be detected by a Forward looking infrared (FLIR) camera or any gas leak detection device, which is required to be used on a quarterly basis under GP-5.

The owner or operator may use any gas detection device approved by the department to detect leaks. At this time, the department is not aware of any alternative device that can replace a FLIR camera. However, condition H.2 in GP-5 would authorize the use of any technology for leak detection as an alternate to FLIR provided it is approved by DEP following a case-by-case evaluation of the device or technology.

5. Question: *Will the leaks need to be included in any annual emissions reporting?*

Department Response: As required by 25 Pa. Code Section 135.3, the owner or operator is required to report emissions from leaks in the annual source report. The annual source report must be submitted to DEP by March 1st each calendar year for the previous year's emissions. All emissions, including leaks from the facility, must be summed on a monthly basis to document that the facility continues to be a minor facility on a 12-month rolling basis.

6. Question: *What is the definition of the term "repair?"*

7. Question: *Will the same device that detected the leak be needed to confirm the repair (e.g., If a camera IDs the leak, will a camera be required to confirm the repair?)?*

Department Response: Repair means that equipment is adjusted or otherwise altered to eliminate a leak so that the leak can no longer be detected.

If the leak is detected by AVO inspection, which is required to be performed on a monthly basis by GP-5, then the leak will be considered repaired when the leak can no longer be detected by AVO inspection after the leak has been repaired.

If the leak is detected using a FLIR camera, which is required to be used on a quarterly basis by GP-5, then the leak will be considered repaired when the leak can no longer be detected by a FLIR camera after the leak has been repaired.

The same device that detected the leak must be used to confirm that the detected leak is repaired.

8. Question: *Is leak repair required within 15 calendar days or 15 business days?*

Department Response: As required by GP-5, if any leak is detected, the owner or operator of the facility must repair the leak as expeditiously as practicable but no later than 15 calendar days after the leak is detected except as provided by 40 CFR § 60.482-9.

Turbines:

9. Question: *Is the GP-5 applicable to the installation and operation of a natural gas-fired turbine used in conjunction with a waste heat recovery system?*

Department Response: The turbine(s) with heat recovery can be authorized under GP-5 if the turbine(s) meet the conditions/requirements specified in Section C (Requirements for Natural Gas-fired Simple Cycle Gas Turbines) of GP-5.

Engines:

10. Question: *Is GP-5 applicable to natural gas-fired emergency engines?*

Department Response: As indicated in the Applicability/Scope Section (Section A, Condition 2) of GP-5, the conditions in GP-5 are applicable to any natural gas-fired spark ignition internal combustion engine installed at a

natural gas compression and/or processing minor facility. The exceptions to this condition are engines used as a “peak shaving engine generator,” a source participating in an Emergency and Economic Load Response Program, and engines installed at natural gas transmission stations. The engines used as a “peak shaving engine generator” or a source participating in an Emergency and Economic Load Response Program, and engines installed at natural gas transmission stations need a plan approval (See Section A, Condition 4: Prohibited Use of GP-5) unless exempted under Air Quality Permit Exemption List (Document No. 275-2101-003), Section 127.14(a)(8) Exemptions, Category No. 6. All emissions including leaks from the facility must be summed on a monthly basis to document that the facility continues to be a minor facility on a 12-month rolling basis.

11. Question: *Does the company need a certification from the engine manufacturer?*

Department Response: Conditions in GP-5 do not require the owner or operator to obtain a certification from the engine manufacturer. However, the owner or operator must demonstrate compliance with applicable requirements within 180 days after initial startup of the engine (Section A, Condition 22 of GP-5). In addition to GP-5 requirements, the company is required to meet all applicable federal requirements for the engine (Section A, Condition 23). All emissions, including leaks from the facility, must be summed on a monthly basis to document that the facility continues to be a minor facility on a 12-month rolling basis.

12. Question: *Is periodic monitoring using a portable gas analyzer required if the engine is operated less than 2500 hours?*

Department Response: Section B, Condition 4 of GP-5 delineates the performance testing requirements for engines. If the engine is rated less than or equal to 500 brake horsepower (bhp) (Condition 4.a), vendor guarantees or data from department-approved testing conducted within 12 months on an identical engine for Oxides of Nitrogen (NO_x), Carbon Monoxides (CO), and Non-Methane Hydrocarbon (NMHC) or Non-Methane, Non-Ethane Hydrocarbon (NMNEHC) shall be sufficient to verify emissions rates. However, the department may require additional information to verify emission rates. If the engine is rated greater than 500 bhp, then initial testing is required within 180 days after initial startup (Section 4.b) and subsequent testing is required after every 2500 hours of operations (Condition 4.c), not 2500 hours of operations per year. Therefore, the engine is not required to be tested for NO_x and CO emissions using a portable gas analyzer if it operates less than 2500 hours. Periodic monitoring using a portable gas analyzer is required after the engine has operated for 2500 hours cumulatively.

13. Question: *If a compressor station is previously authorized under an earlier versions of the GP-5 and is located at a well pad, can the renewal application be authorized under the February 2013 GP-5 (current GP-5)? If the renewal cannot be authorized under the new GP-5, would a plan approval be required if the engine and other sources do not meet the Exemption 38 criteria?*

Department Response: An engine or a dehydrator that is located at a well pad and authorized under a previous GP-5 is not eligible to be re-authorized under the current GP-5 if it is not used for mid-stream natural gas operations. Such sources may either be exempted under Exemption Category No. 38 or may need to apply for a State-only Operating Permit. In either case, a plan approval is not needed.

GP-5 may be authorized provided the well pad is aggregated as a single facility with mid-stream natural gas compression sources. The gases must be collected and compressed from multiple well pads by the engine located at a well pad.

GP-5 is applicable only to natural gas compression and/or processing facilities that are not major sources. GP-5 requirements, including quarterly leak detection and repair (LDAR), will be applicable to the entire facility including sources located at the well pad. Exemption Category No. 38 criteria will not be applicable to sources located at the well pad because they are covered by GP-5. All emissions, including leaks from the facility, must be summed, on a monthly basis, to document that the facility continues to be a minor facility on a 12-month rolling basis.

Process Heaters:

14. Question: *Are natural gas-fired process heaters less than 10 mm BTU/hour eligible for authorization under the GP-5?*

Department Response: Yes. Process heaters that are an integral part of the natural gas fractionation and separation process units can be authorized under GP-5. The emissions from all sources including process heaters at the facility must be summed on a monthly basis to document that the facility continues to be a minor facility on a 12-month rolling basis.

Tanks:

15. Question: *Are tanks with Volatile Organic Compounds (VOC) emissions less than 3 tpy but less than 6 tpy without a flare/combustor as a control eligible for authorization under the GP-5?*

Department Response: Yes. The tanks are authorized under GP-5 so long as the tanks meet the control requirements of 40 CFR Subpart OOOO (as well as the requirements of 25 Pa. Code § 127.56 and § 127.57).

Dehydrators:

16. Question: *What is the department's interpretation of "not subject to the requirements established in 40 CFR Part 63, Subpart HH" in Conditions 3 and 4, of Section F of GP-5?*

Department Response: The department interprets Conditions F.3 and F.4 of GP-5 to mean that the owner or operator of a new glycol dehydrator is not subject to the add-on volatile organic compound (VOC) control requirements established in 40 CFR Part 63, Subpart HH. In the case of an owner or operator of a new glycol dehydrator that is not subject to the add-on control requirements under 40 CFR Part 63, Subpart HH and has a total uncontrolled potential emission rate of VOC in excess of five tons per year (tpy), the glycol dehydrator shall be controlled either by at least 95 percent with a condenser, a flare or other air cleaning device, or any alternative methods as approved by the Department. The owner or operator of the new glycol dehydrator must also comply with the requirements in Condition 2 (b) through (j) of this section. Similarly, the owner or operator of a new glycol dehydrator that is not subject to the add-on control requirements established in 40 CFR Part 63, Subpart HH and has a total uncontrolled potential VOC emission rate of equal to or less than five tpy must comply with the requirements in Condition 2 (d), (e), and (j) of Section F.

Plan Approval and Best Available Technology (BAT):

- 17. Question:** *Would the GP-5 limits for the proposed turbines represent BAT or would the plan approval potentially contain limits more stringent than the GP-5 limits?*
- 18. Question:** *If the GP-5 limits could conceptually be accepted as BAT, would the BAT analysis required for the plan approval be a full top down analysis or a simpler analysis proposing the GP-5 limits as BAT?*
- 19. Question:** *Would the tanks included in Plan Approval application be subject to a full top down BAT analysis and potentially require controls such as a flare/combustor?*

Department Response: The BAT requirements for the sources included in a Plan Approval Application are determined on a case-by-case basis, which may include a top-down analysis. The analysis would include turbines, tanks, or any other emission source if the department determined that they were subject to the plan approval requirements. The BAT requirements included in GP-5 generally serve as a “floor” for subsequent case-by-case BAT determinations. Consequently, BAT established through the plan approval process could be more stringent than GP-5 limits.

Exemption Category No. 38:

- 20. Question:** *The department seems to use the terms “well head” and “well pad” interchangeably. Are these terms the same or are they different?*

Department Response: The terms “well head” and “well pad” are different terms and are not used interchangeably by DEP. The “well head” refers exclusively to the structural and pressure-containing interface for the drilling and production equipment. It is the “Christmas tree” or assembly of valves, spools and fittings used for a gas well. The “well pad” area not only includes the well head, but also any well pad-specific associated equipment such as dehydration units, storage tanks and booster stations.

- 21. Question:** *What is the definition of a site: a single well or a well pad?*

Department Response: The department doesn’t use the term “site,” but uses the term “facility.” A facility may be a single well and associated equipment or multiple wells and associated equipment located at a single well pad or multiple well pads and the associated equipment. Single facility (source) determinations are made on a case-by-case basis using the department’s “Guidance for Performing Single Stationary Source Determination for Oil and Gas Industries.” Emissions thresholds included in the Exemption Category No. 38 are applicable to the facility.

- 22. Question:** *What is the definition of a leak?*

Department Response: For purposes of Exemption Category No. 38, a leak is any gaseous hydrocarbons that can be detected by an optical gas imaging camera such as a FLIR camera or any other approved gas leak detection device.

However, any equipment or component that is designed to protect the equipment or safety of personnel is not considered a “leak.” A release from any equipment or component designed by the manufacturer to protect the equipment, controller, personnel, to prevent ground water contamination, gas migration, or an emergency situation is also not considered a leak.

23. Question: *Is leak repair required within 15 calendar days or 15 business days?*

Department Response: As required by Air Quality Exemption Category No. 38, leaks are to be repaired no later than 15 calendar days after detection unless facility shutdowns or ordering of replacement parts are necessary for repair of the leaks.

24. Question: *If the wet gas wells do not meet the Exemption Category No. 38, 2.7 tpy VOC emission limit, would a Plan Approval prior to drilling and completing wells be required or will the plan approval be only required for our production equipment, such as tanks, engines, heaters, etc.?*

Department Response: If the VOC emissions from other sources at the facility such as heaters, dehydrators and engines will exceed the exemption threshold of 2.7 tpy (or any other exemption criteria are not achieved), a plan approval will be needed prior to commencement of construction of any production equipment.

No authorization is needed for well drilling, completion and work-over activities. No authorization is required if a storage tank or other equipment at the well pad is equipped with VOC emissions controls achieving 95 percent or greater reduction.

In accordance with Exemption Category No. 38 (b) on the Air Quality Permit Exemption List, well drilling, completion and work-over activities are exempted from permitting requirements. VOC exemption criteria do not include emissions from sources that are approved by the department in plan approvals, or the general plan approvals/general operating permits at the facility and the emissions from sources meeting the exemption criteria in Subparagraphs i, ii and iv.

25. Question: *Are the emissions from pneumatic devices and venting from annular spaces included in the 2.7 tons of VOCs/yr?*

Department Response: A release from any equipment or component designed by the manufacturer to protect the equipment, controller, or personnel or to prevent ground water contamination, gas migration, or an emergency situation is not required to be included for the VOC emissions threshold of 2.7 tpy. However, these emissions must be included in the annual source report. The annual source report must be submitted to DEP by March 1st each calendar year for the previous year emissions.

26. Question: *If the applicant demonstrates that engines located at the well pad meet the criteria under Exemption Category No. 38, are they exempt from plan approval and permitting requirements?*

Department Response: Sources meeting the permit Exemption Category No. 38 are exempted from both plan approval and operating permit requirements. Although a source may be exempt from the plan approval and operating permit requirements of Chapter 127, the source is subject to all other applicable air quality regulations including federal requirements such as New Source Performance Standards (NSPS) and National Emission Standards for Hazardous Air Pollutants (NESHAPs).

27. Question: *If the applicant cannot demonstrate that engines located at the well pad meet the exemption criteria under Exemption Category No. 38 or prefer authorization for engines at a well pad under GP-5, can authorization be granted under the GP-5?*

Department Response: If the applicant cannot demonstrate that engines located at the well pad meet the exemption criteria under Exemption Category 38, they must comply with the plan approval and operating permit process under 25 Pa. Code Chapter 127 Subchapter B (relating to plan approval requirements) and/or Subchapter F (relating to operating permit requirements). GP-5 may be authorized for affected engines located on a well pad if the well pad is aggregated as a single facility with a natural gas compression and/or processing facility. GP-5 is applicable only to natural gas compression and/or processing facilities that are not major sources.

28. Question: *Under the current Exemption Category No. 38, is there any limit/threshold for emissions from sources at the well pad that are not engines?*

Department Response: Under the previous Exemption Category No. 38, there was no limit/threshold for emissions for sources at the well pad (excluding engines) in order to qualify for exemption. All sources and operations that include wells and associated equipment and processes that are located at oil and gas exploration and production facilities, regardless of emissions, are exempted. However, the revised Exemption Category No. 38 specifies criteria and limits the amount of emissions.

For example, combined VOC emissions from all sources at the facility must be less than 2.7 tons on a 12-month rolling basis. Further, combined NO_x emissions from the stationary internal combustion engines at wells and wellheads must be less than 100 lbs/hr, 1000 lbs./day, 2.75 tons per ozone season (the period beginning May 1 of each year and ending on Sept. 30 the same year), and 6.6 tpy on a 12-month rolling basis. And, combined hazardous air pollutant (HAP) emissions at the facility must be less than 1,000 lbs of a single HAP or one ton of a combination of HAPs in any consecutive 12-month period.

The exemption emission thresholds do not include emissions from sources that are approved by the department in plan approvals or general plan approvals/general operating permits at the facility, nor do they include emissions from sources meeting the criteria specified in Subparagraphs i, ii and iv in Exemption Category No. 38.

As required by 25 Pa. Code Section 135.3, the owner or operator is required to report emissions from all sources, including exempted sources, located at the facility in the annual source report, which must be submitted to DEP by March 1st each calendar year.

29. Question: *If you have an engine that meets the NO_x requirements under exemption #38, but has CO emissions above 20 tpy, is this engine still exempt from plan approval? Is this engine exempt from operating permits?*

30. Question: *Please confirm that a facility that qualifies for the exemption is not required to apply for and obtain an operating permit if emissions exceed the thresholds (in particular CO) on page 16 of the guidance concerning state only operating permits.*

Department Response: Sources meeting the established permit Exemption Category No. 38 emission thresholds are exempted from both plan approval and operating permit requirements. This exemption would include CO emissions above 20 tpy so long as the established threshold levels are not exceeded. Although a source may be exempt from the plan approval and operating permit requirements of Chapter 127, the source is subject to all other applicable air quality regulations, including federal requirements such as NSPS and NESHAPs and other applicable state regulatory requirements.

31. Question: Will the Bureau of Air Quality inspectors handle field enforcement of the exemption or will it be handled by oil and gas inspectors?

Department Response: Regional air program staff will handle field enforcement of exemption criteria. However, oil and gas inspectors may gather information for air program staff, which may prompt an investigation.

32. Question: *Should fugitive emissions be included as part of the 2.7 tpy of VOC if the facility is in an LDAR program?*

Department Response: Fugitive emissions are not required to be included as part of 2.7 tpy of VOC emissions threshold so long as the facility meets the specified LDAR exemption criteria.

33. Question: *What activity triggers a site to be in the Exemption 38 bucket – wells drilled after Aug. 10, 2013, or “well TIL’ed” after Aug.10, 2013?*

Department Response: The Air Quality Permit Exemption List revisions are applicable prospectively. The Category No. 38 exemption was revised on Aug. 10, 2013. The revised criteria for Exemption Category No. 38 are applicable to any sources that commenced construction on or after Aug. 10, 2013.

34. Question: *Please clarify the following reference to 60.18: “Enclosed combustion device including enclosed flare will be used for all permanent flaring operations at a wellhead or facility. These flaring operations will be designed and operated in accordance with the requirements of 40 CFR § 60.18.”*

Department Response: Temporary flares used as completion combustion devices are not required to meet 40 CFR § 60.18. All permanent enclosed flaring operations must be designed and operated in accordance with the requirements of 40 CFR § 60.18. As an alternative, a control device equipped with VOC emission controls achieving emissions reduction of 95 percent or greater may be installed. Compliance will be demonstrated consistent with 40 CFR Part 60, Subpart OOOO or an alternative test method approved by the department.

35. Question: *“Within 60 days after the well is put into production, and annually thereafter, the owner/operator will perform a leak detection and repair (LDAR) program.” Please define the term “into production.”*

Department Response: No well will be considered to be put “into production” unless gas is flowing into a sales line. For any well which is selling gas through temporary equipment designed for flowback, the well shall not be considered to be placed “into production” until the earlier of: (1) 30 days after first gas sales through temporary flowback separator(s), if sales through such temporary equipment continue for more than 30 days; or (2) commencement of gas sales through permanent production separators.

Miscellaneous Questions:

36. Question: *Please provide some guidance on the following circumstance: An existing, single gas compressor, located on a separate pad (i.e., not on a well pad), requiring renewal of GP-5.*

Department Response: An engine that is located at a separate pad and is authorized under a previous GP-5 is not eligible to be re-authorized under the current GP-5 if it is not used for mid-stream natural gas operations. Such an engine may either be exempted under Exemption Category No. 38 or apply for a State-only Operating Permit. In any event, a plan approval is not needed. Any engine associated with a conventional well is exempted from permitting requirements.

GP-5 may be authorized for engines located at a well pad provided the well pad is aggregated as a single facility with a mid-stream natural gas compression source. The gases must be collected and compressed from multiple well pads by the engine located at a well pad.

As indicated in the response to Questions 1 and 2, GP-5 is applicable only to natural gas compression and/or processing facilities that are not major sources. GP-5 requirements, including quarterly leak detection and repair (LDAR), will be applicable to the entire facility, including sources located at the well pad. Exemption Category No. 38 criteria will not be applicable to sources located at the well pad because the sources are covered by GP-5. All emissions including leaks from the facility must be summed on a monthly basis to document that the facility continues to be a minor facility on a 12-month rolling basis.

37. Question: *What are the permitting requirements for NO_x emissions from a compressor located at a well pad that exceeds 6.6 TPY?*

Department Response: If NO_x emissions from a compressor located at a well pad exceed the threshold for Exemption Category No. 38 and the application of the subject compressor is for compression of gases from various well sites, the applicant may apply for authorization to use GP-5. If it is not eligible to be authorized under GP-5, the applicant should apply for a plan approval and a State-only Operating Permit.

GP-5 may be authorized for affected sources located on a well site if the well pad is aggregated as a single facility with a natural gas compression and/or processing facility. GP-5 is applicable only to natural gas compression and/or processing facilities that are not major sources. All the actual emissions from the facility must be summed to document that the facility continues to be a minor facility on a 12-month rolling basis.

38. Question: *Please provide some guidance on single facility (source) determinations for the following circumstances:*

- a. *A compressor, wells and gathering lines are all owned and operated by the same company. Gas is being compressed from 100+ conventional gas wells in the area, ranging in distance from 500 feet to 2 miles from compressor.*
- b. *Is this a correct interpretation of the department's policy that department would aggregate emissions from the compressor with any wells located within ¼ mile of the compressor for purposes of a GP-5 permit?*

Department Response: Single facility (source) determinations are made on a case-by-case basis using DEP's "Guidance for Performing Single Stationary Source Determination for Oil and Gas Industries." As per the guidance, properties located ¼ mile or less apart are considered contiguous or adjacent properties for applicability determinations. Properties located beyond a ¼-mile range may only be considered contiguous or adjacent on a case-by-case basis.