

Air Quality Permitting

Air Quality Workshop 2016

Phil Martin

February 4, 2016

Tulsa, OK

Key Questions

- *Do I need a permit?
- *Who needs a permit?
- *Who does not need a permit?

De Minimis Facility

- * All the air pollutant emitting activities at the facility are on the de minimis list contained in Appendix H or the facility meets all of the following de minimis criteria:
 - * Has actual emissions that are less than 5 TPY of each regulated pollutant
 - * Not defined as a major source
 - * Operating in conjunction with another facility or source is subject to air quality permitting
 - * Not subject to a Federal NSPS or NESHAP

Permit Exempt Facility

- * Has actual emissions in every calendar year that are less than 40 TPY of each criteria pollutant
- * Not defined as a major source
- * Operating in conjunction with another facility or source is subject to air quality permitting
- * Not subject to an emission standard, equipment standard or work practice standard in Federal NSPS or NESHAP

Potential to Emit (PTE)

* **"Potential to emit"**

means the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation is enforceable by the Administrator. This term does not alter or affect the use of this term for any other purposes under the Act, or the term "capacity factor" as used in Title IV of the Act or the regulations promulgated thereunder.

Applicability Determination

- * Upon written request along with the required fee and any relevant information needed, the DEQ will make a determination of whether a permit is required.
- * The fee for an applicability determination is \$500, to be credited against the construction or operating permit application fee, if a permit is required. If no permit is required, the fee will be retained to cover the cost of making the determination.

Facilities Covered By AQ Permits

- * Permit only stationary sources.
(Mobile sources are not part of our program.)
- * Permit a variety of industries and facilities.
- * There are about 8,800 facilities that are currently permitted.
(That number was about 4,000 six years ago.)
- * About 320 of those are Major Sources.
(That number was 330 six years ago.)

Breakdown of Facilities by Type

Number of Active Facilities	Type of Permit
43	Prevention of Significant Deterioration (PSD)
320	Major Source (Title V)
2,951	Synthetic Minor Source (Includes GP-OGF)
5,517	True Minor Source

Minor Source Facilities

- * OAC 252:100-7, Subchapter 7
- * Facility not defined as a Part 70 source
 - * < 100 Tons per Year (TPY) of Criteria Pollutant
NO_x, CO, Ozone (VOC), SO₂, PM, and Lead
 - * < 10 TPY of any Individual Hazardous Air Pollutants
(HAP)
 - * < 25 TPY of all HAP's Combined

True Minor vs. Synthetic Minor

- * True Minor

- * Facility that has the potential to emit, without controls, less than major source levels.

- * Synthetic Minor

- * Facility that has a potential to emit over major source levels of any regulated air pollutant, but with controlled or limited actual emissions below major source levels.

Minor Source Permit Program

- * Dual Permitting System
 - * **Construction Permit**
 - * Is required to “commence construction”
 - * Valid for 18 months
 - * Provides the Authority of Operate
 - * **Operating Permit**
 - * Operating Permit Application must be submitted within 180 days of operation

Application Advice

- * Things that could slow the permitting process
 - * Incorrect or no fees
 - * No Landowner Affidavit
 - * Need for Regulatory Review
 - * Absence of a good explanation of the project
 - * Slow response to deficiencies or information requests

Types of Minor Permits

- *Permit by Rule
- *General Permits
- *Minor Source Individual Permits

Permit by Rule

- * OAC 252:100-7-60
- * Actual emissions of 40 TPY or less of a criteria pollutant and PTE of 100 TPY or less.
- * PTE of less than 10 TPY for each individual HAP and 25 TPY for combination of HAP's
- * Not collocated with any other air permitted facility
- * Not defined as Major Source

Permit by Rule (PBR)

- * Currently Five Types
 - * Cotton Gins
 - * Grain Elevators
 - * Particulate Matter Emissions
 - * VOC Storage and Loading Facilities
 - * Oil and Natural Gas (O&NG) facilities (New)
 - * Emergency Generators (September 2016)

PBR Requirements

- * Certification to DEQ
- * Minimal recordkeeping and Reporting
 - * Only if required by NSPS or NESHAP
- * Modification notification only required if result in a change in permit status
- * Emissions inventories for PBR facilities normally required every 3rd or 6th year (to be explained later today)

PBR – O&NG

- * Minor sources and area sources in the oil and natural gas sector
 - Production, gathering, processing, storage, or transportation of crude oil, refined petroleum products, natural gas, and natural gas liquids (NGL), including condensate
- * NSPS Subparts IIII, JJJJ, and OOOO
 - * Ability to request Federally Enforceable Limits (FEL) for < 6 TPY for OOOO
- * NESHAP Subparts HH and ZZZZ

General Permit

* Nine Types

[http://www.deq.state.ok.us/aqdnew/
permitting/genperm.htm](http://www.deq.state.ok.us/aqdnew/permitting/genperm.htm)

General Permit

- * General Permit for Oil & Natural Gas Facility (GP-OGF)
 - * Specific to the oil and natural gas sector
 - * Facility must qualify as a true minor or synthetic minor
 - * Allows for engines, tanks, dehydrators, heaters, loading, and fugitives
 - * Covers most wellheads and compressor/booster stations
 - * In the process of being updated to include amine units

General Permit

- * Area Source NESHAP & Small NSPS Facilities (GP-ASNF/SNF)
 - * Facility must qualify as a true minor
 - * Actual emissions less than 40 TPY and PTE less than 100 TPY
 - * Facility/equipment must be subject to a federal standard (NSPS and/or NESHAP)

General Permit

- * Construction permit for General Permits/PBR
 - * Use “Notice of Intent” (NOI) process
 - * Obligates the facility to construction per the GP
 - * Construction authority granted upon receipt of NOI
 - * Date receipt from carrier or
 - * USPS postmark or
 - * DEQ date stamped application

Minor Source Individual Permit

- * Not industry specific
- * No specific requirements except facility must qualify as:
 - * True Minor
 - * Synthetic Minor

Modification of Existing Facilities

- * General Permits

- * Facility must submit modification forms for certain changes within 10 days of operation/change

- * Individual

- * Change subject to new federal rules/regulation

- * Physical change causing change in emission > 5 TPY

General Permit vs. Individual Permit

Advantages	Disadvantages
Quick Construction Authority	Possible higher violation level if limits exceeded
Pre-approval modification	Additional recordkeeping
Lower application fees	Permit not specific to site
	More complicated

Minor/Synthetic Minor Permit Fees

Permit Type	PBR	General Permit	Individual
Applicability Determination	--	--	\$500
Construction	\$250	\$500	\$2,000
Operation	\$100	\$500	\$750
Modification	--	No fee	\$750

Permit Structure

- * Transmittal Letter
- * Permit Memorandum
- * The Permit Page
- * Specific Conditions
- * Standard Conditions

Permit Memorandum

- * Includes
 - * Facility description
 - * History
 - * Emission Data
 - * Rule Applicability/Non-Applicability
- * Not enforceable
- * Provides baseline for future permitting activity

Specific/Standard Conditions

- * Specific Conditions

- * Site specific

- * Emission Limitations/Throughputs

- * Hours of Operation

- * Testing Requirements

- * Operating Parameters

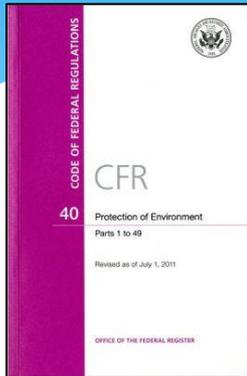
- * Monitoring, Recordkeeping & Reporting Requirements

- * State and Federal requirements

- * Standard Conditions

- * General requirements applicable to all minor sources

Federal and State Rules are Incorporated into the Permit Package



Federal Rules

Codification through the 2014 legislative session.
 Subchapters 5, 7, Appendix F
 Board adoption - August 10, 2013
 Governor's approval on September 10, 2013
 Subchapters 2, 11, Appendix Q
 Board adoption - February 21, 2014
 Approved by Governor's Declaration on June 19, 2014
 Effective date - September 12, 2014

TITLE 252. DEPARTMENT OF ENVIRONMENTAL QUALITY CHAPTER 100. AIR POLLUTION CONTROL

Subchapter	Section
1. General Provisions	252-100-1
2. Incorporation by Reference	252-100-2
3. Air Quality Standards and Increments	252-100-3
4. New Source Performance Standards [REVOKED]	252-100-4
5. Registration, Emission Inventory and Annual Operating Fees	252-100-5
6. Permitting [REVOKED]	252-100-6
7. Permits for Minor Facilities	252-100-7
8. Permits for Part 70 Sources and Major New Source Review (NSR) Sources	252-100-8
9. Excess Emission Reporting Requirements	252-100-9
11. Alternative Emissions Reduction Plans and Authorizations	252-100-11
13. Open Burning	252-100-13
15. Motor Vehicle Pollution Control Devices [REVOKED]	252-100-15
17. Incinerators	252-100-17
19. Control of Emission of Particulate Matter	252-100-19
21. Particulate Matter Emissions From Wood-Waste Burning Equipment [REVOKED]	252-100-21
23. Control of Emissions From Cotton Gins	252-100-23
24. Particulate Matter Emissions From Grain Feed or Seed Operations	252-100-24
25. Visible Emissions and Particulates	252-100-25
27. Particulate Matter Emissions From Industrial and Other Processes and Operations [REVOKED]	252-100-27
29. Control of Fugitive Dust	252-100-29
31. Control of Emission of Sulfur Compounds	252-100-31
33. Control of Emission of Nitrogen Oxides	252-100-33
35. Control of Emission of Carbon Monoxide	252-100-35
37. Control of Emission of Volatile Organic Compounds (VOCs)	252-100-37
39. Emission of Volatile Organic Compounds (VOCs) in Nonattainment Areas and Former Nonattainment Areas	252-100-39
40. Control of Emission of Friable Asbestos During Demolition and Renovation Operations	252-100-40
41. Control of Emission of Hazardous Air Pollutants and Toxic Air Contaminants [REVOKED]	252-100-41
42. Control of Toxic Air Contaminants	252-100-42
43. Testing, Monitoring and Recordkeeping	252-100-43

State Rules

PERMIT MEMORANDUM NO. 2011-144-C (M-1) DRAFT/PROPOSED Page 15

SECTION VII. FEDERAL REGULATIONS

PSD, 40 CFR Part 52 [Not Applicable]
 The facility was previously classified as a PSD major source of NO_x and CO. This project will reduce facility-wide emissions to below PSD major source levels.

NSPS, 40 CFR Part 60 [Subparts IIII and OOOO Applicable]
 Subpart IIII, VOC Storage Vessels: This subpart regulates hydrocarbon storage tanks larger than 19,511-gal capacity and built after July 23, 1994. The tanks are not subject to RB since their capacities are less than the smallest threshold level (19,511 gallons) of this subpart.

Subpart GG, Stationary Gas Turbines: There are no turbines at this facility.

Subpart VV, Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry: This facility is not a SOCMCI plant.

Subpart KKK, Equipment Leaks of VOC from Onshore Natural Gas Processing Plants: The facility does not engage in natural gas processing.

Subpart LLL, Onshore Natural Gas Processing: SO_x Emissions: There is no natural gas sweetening operation at this site.

Subpart IIIII, Stationary Compression Ignition Internal Combustion Engines: This subpart affects stationary compression ignition (CI) internal combustion engines (ICE) based on power and displacement ratings, depending on date of construction, beginning with those constructed after July 11, 2005. There are no stationary CI engines located at the facility.

Subpart IIIII, Stationary Spark Ignition Internal Combustion Engines (SI-ICE): This subpart promulgates emission standards for all new SI engines ordered after June 11, 2004 and all SI engines modified or reconstructed after June 11, 2006, regardless of size. Stationary SI internal combustion engine manufacturers who choose to certify their stationary SI-ICE with a maximum engine power greater than or equal to 100-hp under the voluntary manufacturer certification program must certify those engines to the emission standards in Table 1 to this subpart. Owners and operators of stationary SI-ICE with a maximum engine power greater than or equal to 100hp must comply with the emission standards in Table 1 to this subpart for their stationary SI-ICE.

Emission Standards from Table 1, Subpart IIIII, g/hp-hr (ppmv @ 15%O ₂)					
Engine Type & Fuel	Max Power (hp)	MP Date	NO _x	CO	VOC
VOC-Emergency	hp >= 500	7/1/2009	1.0 (150)	1.0 (750)	1.0 (250)
SI Natural Gas	hp >= 500	7/1/2010	1.0 (80)	2.0 (250)	0.7 (60)

↳ Engine less than 100 g HP < 1,130

An initial notification is required only for owners and operators of engines greater than 500 HP that are non-certified. Owners or operators must demonstrate compliance with the applicable emissions limits according to one of the following methods:

Permit Memorandum

PERMIT MEMORANDUM NO. 2011-144-C (M-1) DRAFT/PROPOSED Page 11

SECTION V. INSIGNIFICANT ACTIVITIES

The insignificant activities identified and justified in the application are duplicated below. Appropriate recordkeeping of activities modified with an asterisk (*) is specified in the Specific Conditions.

1. * Activities having the potential to emit no more than 5 TPY (actual) of any criteria pollutant. The 210-lb methanol tank falls into this category.

SECTION VI. OKLAHOMA AIR POLLUTION CONTROL RULES

OAC 252-100-1 (General Provisions) [Applicable]
 Subchapter 5 includes definitions but there are no regulatory requirements.

OAC 252-100-2 (Incorporation by Reference) [Applicable]
 This subchapter incorporates by reference applicable provisions of Title 40 of the Code of Federal Regulations. These requirements are addressed in the "Federal Regulations" section.

OAC 252-100-3 (Air Quality Standards and Increments) [Applicable]
 Primary Standards are in Appendix E and Secondary Standards are in Appendix F of the Air Pollution Control Rules. At this time, all of Oklahoma's is attainment of these standards.

OAC 252-100-5 (Registration, Emissions Inventory and Annual Operating Fees) [Applicable]
 Subchapter 5 requires sources of air contaminants to register with Air Quality, file emissions inventories annually, and pay annual operating fees based upon total annual emissions of regulated pollutants. The owner-operator will be required to continue to submit emissions inventories and pay the appropriate fees.

OAC 252-100-8 (Permits for Part 70 Sources) [Applicable]
 Part 5 includes the general administrative requirements for part 70 permits. Any planned changes in the operation of the facility which result in emissions not authorized in the permit and which exceed the "Insignificant Activities" or "Trivial Activities" thresholds require prior notification to AQD and may require a permit modification. Insignificant activities means individual emission units that either are on the list in Appendix I (OAC 252-100-1) or whose actual calendar year emissions do not exceed the following limits:

- 2 TPY of any one criteria pollutant; and
- 2 TPY of any one hazardous air pollutant (HAP) or 5 TPY of multiple HAPs or 20% of any threshold less than 10 TPY for a HAP that the EPA may establish by rule.

Emission limitations and operational requirements necessary to assure compliance with all applicable requirements for all sources are based on information in the application and the current operating permit or developed from the applicable requirements.

OAC 252-100-9 (Excess Emission Reporting Requirements) [Applicable]
 Except as provided in OAC 252-100-9-7(a)(1), the owner or operator of a source of excess emissions shall notify the Director as soon as possible but no later than 4:30 p.m. the following

PERMIT TO OPERATE
 AIR POLLUTION CONTROL FACILITY
 SPECIFIC CONDITIONS

DRAFT
 PROPOSED

ONEOK Field Services Company, L.L.C. Permit No. 2011-144-TVR1
 Antioch Booster Station

The permittee is authorized to operate in conformity with the specifications submitted to Air Quality on August 6, 2014 and a addenda submitted after that date. The Evaluation Memorandum dated February 23, 2015, explains the derivation of applicable permit requirements and estimates of emissions; however, it does not contain operating limitations or permit requirements. Continuing operations under this permit constitutes acceptance of, and consent to, the conditions contained herein.

1. Points of emission and emissions limitations for each point: [OAC 252-100-5-6(a)(3)]

ENG. 1. Natural Gas-Fired Reciprocating Internal Combustion Engines: Emission limitations have been established for emission units (EU) C-1.1, C-2.1, C-3.1, C-4.1, and C-5.1; these limits include startup, shutdown, and maintenance (SSM).

EU	Point	Engine Make/Model	NO _x	CO	VOC	Formal Schedule			
C-1.1	P-1.1	700-hp Caterpillar 05601LE 1A Engine with Oxidation Catalyst	3.91	17.14	3.93	17.20	2.74	12.00	1.78
C-2.1	P-2.1	700-hp Caterpillar 05601LE 1A Engine with Oxidation Catalyst	3.91	17.14	3.93	17.20	2.74	12.00	1.78
C-3.1	P-3.1	700-hp Caterpillar 05601LE 1A Engine with Oxidation Catalyst	3.91	17.14	3.93	17.20	2.74	12.00	1.78
C-4.1	P-4.1	700-hp Caterpillar 05601LE 1A Engine with Oxidation Catalyst	3.91	17.14	3.93	17.20	2.74	12.00	1.78
C-5.1	P-5.1	700-hp Caterpillar 05601LE 1A Engine with Oxidation Catalyst	3.91	17.14	3.93	17.20	2.74	12.00	1.78

- Each of the nine 600-hp Cooper-Bessemer GMV-6 engines (C-1, C-2, C-3, C-4, C-5, C-6, C-7, C-8, and C-9) shall be permanently removed from service prior to the startup of any of the engines (C-1, C-2, C-3, C-4, C-5, C-6, C-7, C-8, and C-9) whose installation is authorized by this construction permit.
- The engines shall only be fired with natural gas having a maximum sulfur content of 0.2 grains or less of total sulfur (as hydrogen sulfide) per 100 standard cubic feet (4 ppmv). Compliance can be shown by the following method: for gaseous fuel, a current gas company bill, lab analysis, man-tube analysis, gas contract, tariff sheet or other approved methods. Compliance shall be demonstrated at least once every calendar year. [OAC 252-100-51]
- Each engine shall be equipped with a properly functioning oxidation catalyst. [OAC 252-100-56(a)(1)]
- Each engine shall have a permanent identification plate attached that shows the engine model number, and serial number. [OAC 252-100-43]

Permit Specific Conditions

Forms

* The DEQ website is located at:

<http://www.deq.state.ok.us>

What's New
Permitting
Emissions Inventory
Compliance & Enforcement
Monitoring
Toxics
Lead-Based Paint
Asbestos
Rules & Planning
Council Meetings

Oklahoma Department of Environmental Quality

Environmental Complaints Form
or call 800-522-0206

Storm Cleanup Information

Annual Report 2015

Drought and Water Conservation Information

Healthy Fish Consumption Information

Scenic Rivers Joint Study Committee

Experiencing Permitting Obstacles?
(Send a message to Agency Chief Engineer)



[DEQ Board & Council Meeting Schedules](#)



This page was last updated on January 5, 2016

No Ozone or PM Watch In Effect



Permitting

New! General Permit for Air Curtain Incinerators. A new [general permit](#) has been posted for Air Curtain Incinerators, along with a corresponding [application form \(#100-365\)](#). The general permit streamlines permitting for this type of incinerator, which may be particularly useful to municipalities through the winter storm season.

Updated December 8, 2015

New! 2016 Air Quality Workshop: Our annual free emissions inventory workshops have been expanded to a full day and will include the participation of managers and staff from the AQD Permitting and Compliance & Enforcement Groups. The workshop is an opportunity for our customers to gain knowledge on navigating the AQ permitting process and how to remain in compliance with the Oklahoma Air Pollution Control Rules. Our first workshop is scheduled for January 21, 2016 in Norman and again on February 4, 2016 in Tulsa. [Details and how to register](#). Updated December 8, 2015

The AQD has implemented the agency's Permit Continuum concept, which uses different types of permits for different facilities, depending on size, complexity and environmental risk. Under this program no permit is required for the smallest sources of air contaminant emissions, known as "de minimis facilities." In addition, most facilities that emit less than 40 tpy are "permit exempt", unless they are subject to Federal Standards such as the New Source Performance Standards (NSPS) or National Emissions Standards for Hazardous Air Pollutants (NESHAPs). [General Permits](#) have been issued to cover several categories of minor facilities that are more complex or have somewhat greater emissions. Many of the facilities covered by these General Permits are also subject to one or more NSPS or NESHAPs. A Permit by Rule (PBR) has been promulgated in [OAC 252:100-7-60.5](#) for minor oil and natural gas (O&NG) facilities. Individual permits are issued for minor facilities that do not fall into one of the other continuum categories.

[Fact sheets](#) are available which describe AQD's permitting program in more depth, including descriptions of who needs a permit, and which permit category a facility may be eligible for under the Permit Continuum. Because air quality permitting issues can be quite complex, the AQD offers a service called an Applicability Determination. If the determination concludes that a permit is required, the fee charged for the Applicability Determination is applied toward the permit



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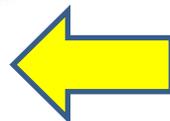
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[Asbestos Form](#)

[Lead-Based Paint Forms](#)

GENERAL AIR [Back to Top](#)

#100-600	NSPS Modification Form	MS Word	PDF
EXAMPLE: NSPS Modification Asphalt Plant		MS Word	PDF
#100-221	Zero Emissions Determination Forms	MS Word	PDF
#100-950	Notification of Open Burning for Fire Training	MS Word	PDF
#100-222	Determination Request For Gasoline or Diesel Fuel Desulfurization Facilities	MS Word	PDF

EMISSIONS INVENTORY [Back to Top](#)

#100-730	Turn-Around Document and Instructions	Follow hyperlink to the left	
#100-750	Emissions Inventory Reporting Form for Dry Cleaners	MS Word	PDF
#100-882	Designation of Responsible Official	MS Word	PDF

Minor Source Forms Back to Top			
#100-105	Minor Facility Application Guide	MS Word	PDF
#100-360	Area Source NESHAP & Small NSPS Facilities General Permit Application	MS Word	PDF
n/a	Checklist for the Non-Title V Application	MS Word	PDF
#100-886	Minor Source Relocation Application	MS Word	PDF
#100-888	Notice of Intent to Construct	MS Word	PDF
#100-889	Notice of Intent to Operate	MS Word	PDF
#100-220	Permit By Rule Registration Form	MS Word	PDF
Industry-Specific Forms Back to Top			
#100-340	Hot Mix Asphalt Plants General Permit Application	MS Word	PDF
Oil & Gas Industry			
#100-223	Permit By Rule Oil and Natural Gas Sector Application Forms	MS Word	PDF
#100-401	40 CFR Part 63; Subparts HH & HHH Facility Registration Form	MS Word	PDF
#100-100	Natural Gas Compressor Station Application	MS Word	PDF
#100-305	Oil & Gas Facilities - Minor Source General Permit Application	MS Word	PDF



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Permitting Advice & Guidelines

Permit Application Advice Documents

These documents are intended to help applicants prepare permit applications and certifications with a reduced amount of effort, yielding clearer and more accurate applications. We hope to steer new applicants around some common points of confusion and mistakes, allowing them to prepare applications which are complete on their first try.

We assume that the reader has a moderate level of knowledge in air pollution regulation procedures before they commence in writing a permit application. Taking the time to go over these guides should pay great dividends in time savings later on.

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- Compressor Station Advice [.doc/.pdf](#)
- Permit Application Guide for Facilities with Coating/Painting Operations [.doc/.pdf](#)
- Permit Application Guidance for Non-Metallic Mineral Processing Facilities (NMPF-GP) [.doc/.pdf](#)
- Major Construction Permit Advice [.doc/.pdf](#)
- Minor Source General Permit for Oil and Gas Facilities (GP-OGF) [.doc/.pdf](#)
- Rock Crusher Advice [.doc/.pdf](#)
- Storage Tank Advice [.doc/.pdf](#)



(Image courtesy of Texas A&M University.)

Emissions Estimates

How much pollution is being emitted by the facility?

Facility-Wide Emissions

- * Applications require unit level emission estimates
- * Each facility is required to calculate short term (lb/hr) and annual (TPY) emission rates in most cases.
- * Emission source data must be included (AP-42, manufacturer's, & industry)
- * If a facility has a PTE greater than 100 tons per year of any criteria pollutant, they must obtain a major source or synthetic minor permit.

Estimating Emissions

- * Computer tools are helpful.
 - * Excel – Engine Emissions
 - * Tanks
 - * GRI GLYCalc
 - * Process Simulator
- * In many cases, a pencil and a calculator are the tools of choice.



Emissions Factors & AP 42

An **emissions factor** is a representative value that attempts to relate the quantity of a pollutant released to the atmosphere with an activity associated with the release of that pollutant. These factors are usually expressed as the weight of pollutant divided by a unit weight, volume, distance, or duration of the activity emitting the pollutant (e.g., kilograms of particulate emitted per megagram of coal burned). Such factors facilitate estimation of emissions from various sources of air pollution. In most cases, these factors are simply averages of all available data of acceptable quality, and are generally assumed to be representative of long-term averages for all facilities in the source category (i.e., a population average).

The general equation for emissions estimation is:

$$E = A \times EF \times (1-ER/100)$$

where:

- E = emissions;
- A = activity rate;
- EF = emission factor, and
- ER = overall emission reduction efficiency, %

Emission Factors are often used to estimate the amount of pollutants emitted by a facility. The EPA document referred to as “AP-42” provides a framework and methodology for performing emission estimates.

Major Source Facilities

- * OAC 252:100-8,
Subchapter 8
- * Facility is defined as a Part 70 source, If
 - * > 100 Tons per Year (TPY) of Criteria Pollutant
-NO_x, CO, Ozone (VOC), SO₂, PM, and Lead, or
 - * > 10 TPY of any Individual Hazardous Air Pollutants
(HAP), or
 - * > 25 TPY of all HAP's Combined

Major Source Permit Program

- * Dual Permitting System
 - * **Construction Permit**
 - * Is required to “commence construction”
 - * Valid for 18 months
 - * Provides the Authority of Operate
 - * **Operating Permit**
 - * Operating Permit Application must be submitted within 180 days of operation

Types of Major Permits

- * General Permits (Air Curtain Incinerators)
- * Major Source Permits
- * PSD Major

Modifications

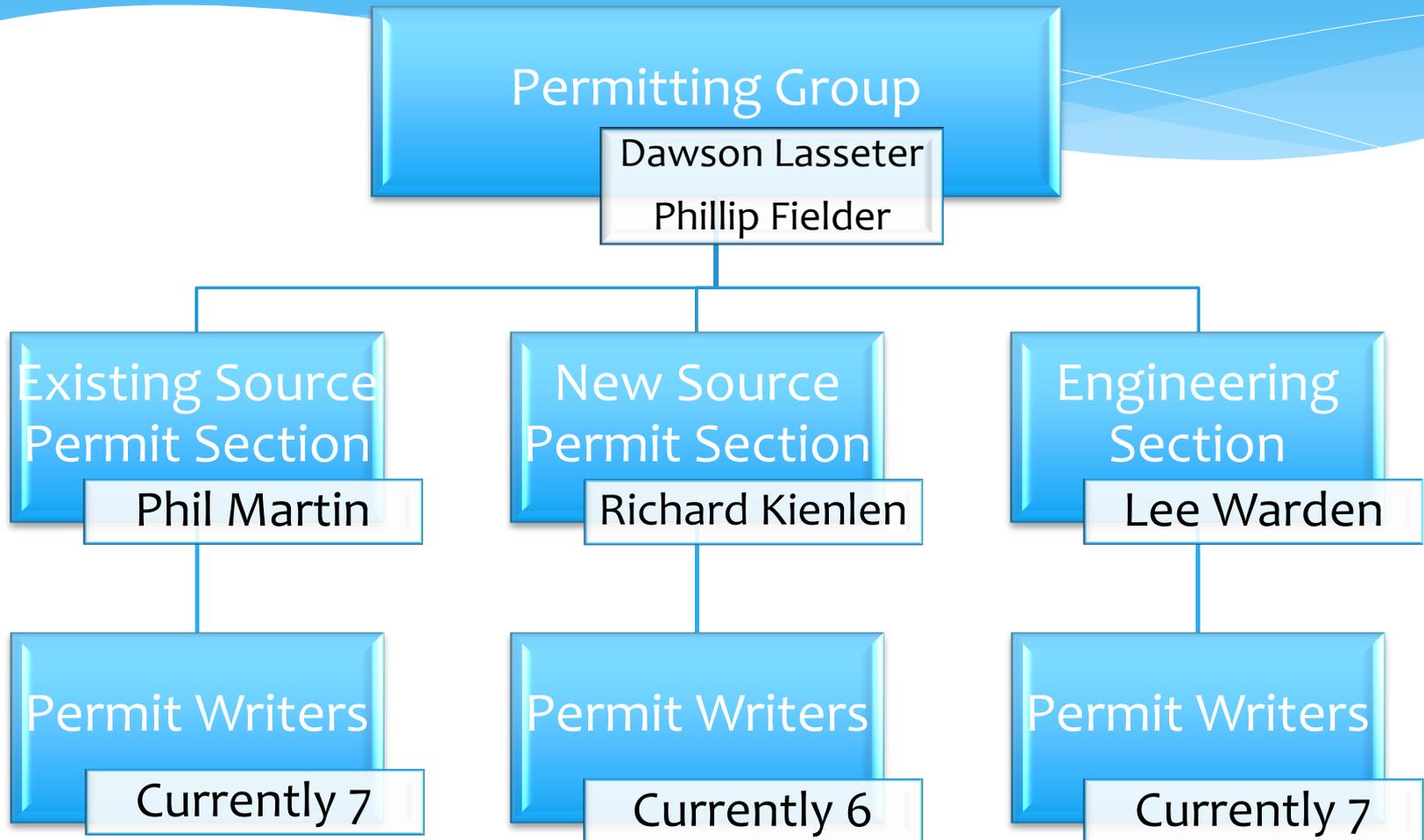
- * **Tier Determinations, Tier I, II, or III**
- * **Minor Modification** (see 252:100-8-7.2(b)(1))
 - * Tier I
- * **Significant Modification**
 - * Tier II or III – Usually a construction permit
 - * If the increase is greater than 100 TPY, then BACT and modeling is required.
- * **PSD majors** – Use a good consultant

SSM

Startup, Shutdown, & Maintenance

- * Emission limits are applicable at all times
- * Some facilities may require an alternate scenario for SSM
- * Facilities can include blowdowns for maintenance purposes in their permit
- * Large turbines with dry low NOx burners include SUSD emissions in their permits
- * SSM emissions are included in the permit so they do not have to be reported as excess emissions

Permitting Organizational Chart



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Questions?

Questions Received

- How will the OOOO updates impact O&G sites especially the ¼ mile colocation proposal?
 - The OOOO update is proposed now and we do not know what the result of that rulemaking will be. The ¼ mile colocation is proposed as an option and we do not know what the final rule will be.
- Will the new OOOO methane rules be retroactive?
 - No. NSPS rules are applicable for the affected unit from the proposed rule date.

Questions Received

- Do we expect Oklahoma to have any non-attainment zones after the new NO_x NAAQS were released?
 - No, not at this time.
- What is the difference between series and parallel tanks under OOOO?
 - With series tanks all the throughput has to go through tank #1, where all flashing occurs, and then it goes to tank #2 or another tank. With parallel tanks, the operator can select which tank the throughput goes to and the flashing will occur at the tank in use. All parallel tanks can potentially have flash emissions.

Questions Received

- If you install a JJJJ engine or a ZZZZ engine do you have to get a permit such as the PBR?
 - Yes, if you install a piece of equipment subject to a NSPS or NESHAP you have to get a permit.
- If you had an existing facility with a pre JJJJ engine that was operating when the engine became subject to ZZZZ (October 2013) do they have to get a permit?
 - No, they have not triggered the requirement for a permit by installing equipment since the equipment was not subject to a federal standard when installed.