



General Permits and Permits by Rule for the Indian Country Minor New Source Review Program

Chris Stoneman

EPA/OAQPS

January 11, 2016



Overview

- Background on the Federal Indian Country Minor NSR rule and general permits/permits by rule
- Three rulemakings that the EPA has issued to implement the Federal Indian Country Minor NSR rule
- Implementation documents and tools
- Types of equipment covered by the permits
- Addressing impacts on threatened and endangered species and historic properties
- How to use the permits
- Appendix:
 - How to use the engines general permits
 - Resources



General Permits and Permits by Rule for Indian Country

Background on the Federal Indian Country Minor NSR rule and general permits/permits by rule

- Federal Indian Country Minor NSR rule of July 2011 created a mandate that minor sources in Indian country wishing to construct after Sep. 2, 2014 must obtain a minor source permit
- To streamline the minor source permitting process, we initially developed a general permit program (2011) and later a permit by rule program (2015)
 - Both programs are intended to make it easier for minor sources to comply with the rule and to obtain a pre-construction permit
- Initially, we developed a lengthy list of source categories as potential candidates for general permits/permits by rule
- Subsequently, we winnowed the list down to 12 source categories by eliminating and combining them



General Permits and Permits by Rule for Indian Country

Three rulemakings that the EPA has issued to implement the Federal Indian Country Minor NSR rule

- **Bundle #1** (proposed 12/13, final 4/15)
 - Gas dispensing facilities (*permit by rule*)
 - Auto body repair and miscellaneous surface coating operations (*permit by rule*)
 - Petroleum dry cleaners (*permit by rule*)
 - Stone quarrying, crushing and screening facilities (*general permit*)
 - Hot mix asphalt plants (*general permit*)
- **Bundle #2** (proposed 7/14, final 9/16)
 - Boilers and emergency engines (*general permit*)
 - Spark ignition engines (*general permit*)
 - Compression ignition engines (*general permit*)
 - Graphic arts and printing operations (*general permit*)
 - Concrete batch plants (*general permit*)
 - Sawmill facilities (*general permit*)
- **Bundle #3** (proposed 8/15, final 5/16)
 - Oil and natural gas sector (*Federal Implementation Plan or FIP*)



General Permits and Permits by Rule for Indian Country

We provided several implementation documents and tools for all of the permits to assist sources in seeking coverage under the permits

- Questionnaires
- Instructions
- Potential to emit (PTE) calculators
- Background documents
- Request for Coverage Forms (general permit applications)
- Notification of Coverage Forms (permits by rule)
- All implementation tools and documents are available at either:
 - <https://www.epa.gov/tribal-air/tribal-minor-new-source-review> or
 - Docket ID No. EPA-HQ-OAR-2011-0151



General Permits and Permits by Rule for Indian Country

Types of equipment/activities covered by the general permits in Bundle #1

- Hot mix asphalt plants
 - Dryers/mixers
 - Fuels
 - Process heaters
 - Non-emergency engines
 - Material storage handling and transfer systems
 - Storage piles
 - Site roadways and plant yard
- Stone quarrying, crushing, and screening facilities
 - Rock crushers
 - Grinding mills
 - Screening operations
 - Non-emergency engines
 - Truck loading
 - Storage piles
 - Site roadways and plant yard



General Permits and Permits by Rule for Indian Country

Types of equipment/activities covered by the general permits in Bundle #1

- Auto body repair and miscellaneous surface coating operations
 - Spray booths
 - Combustion units
 - Volatile liquid storage vessels
- Gasoline dispensing facilities
 - Storage tanks
 - Cargo tank unloading
 - Emergency engines
- Petroleum dry cleaning facilities
 - Fuel combustion units
 - Dry cleaning units



General Permits and Permits by Rule for Indian Country

Types of equipment/activities covered by the general permits in Bundle #2

- Boilers and emergency engines
 - Boilers
 - Heaters
 - Emergency engines
 - Storage tanks
- Spark ignition engines
 - Non-emergency prime power spark ignition engines
 - Exempt emergency engines
 - Auxiliary heaters
- Compression ignition engines
 - Non-emergency prime power compression ignition engines
 - Exempt emergency engines
 - Auxiliary heaters



General Permits and Permits by Rule for Indian Country

Types of equipment/activities covered by the general permits in Bundle #2

- Graphic arts and printing operations
 - Printing lines
 - Boilers
 - Process heaters
 - Emergency engines
 - Volatile liquid storage vessels
- Concrete batch plants
 - Facility equipment (e.g., mixer, hopper, silo, bin)
 - Non-emergency engines
 - Emergency engines
 - Metal degreasing parts washers
- Sawmill facilities
 - Fuel combustion units
 - Sawmill and planer mill equipment (e.g., debarker, head saw, chipper)
 - Wood drying kilns
 - Surface coating operations
 - Emergency engines



General Permits and Permits by Rule for Indian Country

Types of equipment/activities covered by the oil and natural gas FIP

- Compression ignition and spark ignition engines
- Process heaters
- Combustion turbines
- Fuel storage tanks
- Glycol dehydrators
- Completion of hydraulically fractured oil and natural gas wells
- Reciprocating and centrifugal compressors (except those located at well sites)
- Pneumatic controllers
- Pneumatic pumps
- Storage vessels
- Fugitive emissions from well sites, compressor stations and natural gas processing plants



General Permits and Permits by Rule for Indian Country

Addressing impacts on threatened and endangered species and historic properties

- Endangered Species Act requires federal agencies to ensure that any action they authorize, fund, or carry out will not likely jeopardize the existence of threatened or endangered species, or destroy or adversely modify critical habitat
- National Historic Preservation Act requires federal agencies to take into account the effects of their undertakings on historic properties and to provide the Advisory Council on Historic Preservation an opportunity to comment
- To ensure appropriate consideration of listed species and historic properties, screening processes are:
 - In the Request for Coverage Forms for the general permits
 - In a procedures document for the permits by rule
- Sources must successfully address those processes:
 - To gain general permit approval from EPA
 - Prior to submitting a notification for coverage under a permit by rule
 - Under the oil and natural gas FIP



Do I Need a Permit?

Example: Boilers and Emergency Engines General Permit

- Step 1:
 - Where is the source proposing to expand or locate?
- Step 2:
 - What is the combined maximum power rating of the proposed engine(s)?
 - What is the combined maximum heat input rating of the proposed heater(s) and boiler(s)?
- Step 3:
 - What is the PTE of your proposed source?
- Step 4:
 - Can the source comply with the emission limitations and other requirements in the general permit?
 - Can the source satisfactorily complete the procedures to address threatened and endangered species and historic properties?



How to Use the Permits: Step 1

Where is the source proposing to expand or locate?

- The source needs to determine whether it is proposing to expand or locate in a/an:
 - Attainment area
 - Unclassifiable area
 - Attainment/unclassifiable area
 - Nonattainment area
- EPA provides online resources to help answer that question at:
 - <https://www.epa.gov/green-book>
- The website provides area listings by pollutant – e.g., ozone, particulate matter, sulfur dioxide
- Consult the list of nonattainment areas under “Nonattainment Area Selections”
 - If your area does not appear on this list, then it is not a nonattainment area
 - Instead it must be an attainment, unclassifiable or attainment/unclassifiable area



How to Use the Permits: Step 2

What is the combined maximum power rating of the proposed engines? What is the combined maximum heat input rating?

- You need to figure out whether the engine(s) and boiler(s) at your proposed source are exempt from the Indian Country Minor NSR Program
- To do that you need to determine:
 - The combined maximum power rating for all of your proposed engines
 - The combined maximum heat input rating for all of your proposed boilers and heaters
- If you proposed source is expanding or locating in an attainment, attainment/unclassifiable or unclassifiable area, for your units to be exempt:
 - The combined maximum power rating for all of your proposed engines must be less than 1,000 hp
 - The combined maximum heat input rating for all of your proposed boilers and heaters must less than 10 MMBtu/hr



How to Use the Permits: Step 2

What is the combined maximum power rating of the proposed engines? What is the combined maximum heat input rating?

- If your proposed source is expanding or locating in an ozone nonattainment area, for your units to be exempt:
 - The combined maximum power rating for all of your proposed engines must be less than 500 hp (for areas classified as marginal, moderate or serious)
 - The combined maximum heat input rating for all of your proposed boilers and heaters must be less than 5 MMBtu/hr (for areas classified as marginal, moderate or serious)
 - The combined maximum heat input rating for all of your proposed boilers and heaters must be less than 2 MMBtu/hr (for areas classified as severe or extreme)



How to Use the Permits: Step 3

What is the PTE of your proposed source?

- The next step is to determine the potential emissions or PTE of your proposed source
 - PTE is the maximum capacity of a source to emit under its physical and operational design
- If the PTE is above the minor source thresholds but below the major source levels, then the source is minor and must obtain a minor source permit
 - If the source is a major source, it can still seek a *synthetic* minor source permit
- For sources expanding or locating in attainment, unclassifiable and attainment/unclassifiable areas, minor source NO_x emissions must be:
 - Equal to or greater than 10 tpy AND
 - Less than 250 tpy



How to Use the Permits: Step 3

What is the PTE of your proposed source?

- For sources expanding or locating in ozone nonattainment areas, minor source NO_x emissions must be:
 - Equal to or greater than 5 tpy AND
 - Less than the nonattainment major source thresholds (for ozone nonattainment areas 10 to 100 tpy, depending on the area's classification)
- We have provided PTE calculators to assist with this task:
 - <https://www.epa.gov/tribal-air/6-source-categories-boilers-and-emergency-engines-final-action>



How to Use the Permits: Step 4

Can the source comply with the emission limitations and other requirements in the General Permit? Can the source satisfactorily complete the procedures to address threatened and endangered species and historic properties?

- The general permit for boilers and emergency engines contains requirements in a number of areas, including:
 - Emission limitations and standards
 - Monitoring
 - Recordkeeping
 - Reporting
- In addition, proposed sources must assess their potential impacts on threatened and endangered species and historic properties



How to Use the Permits: Step 4

Meeting emission limitations and standards: capacity limits

- Maximum rated capacity of any individual boiler at the facility must be less than 100 MMBtu/hr
- Maximum rated capacity of any individual process heater at the facility must be:
 - Less than 10 MMBtu/hr if located in an ozone attainment, unclassifiable or attainment/unclassifiable area
 - Less than 10 MMBtu/hr if located in a marginal, moderate or serious ozone nonattainment area
 - Less than 2 MMBtu/hr if located in a severe or extreme ozone nonattainment area
 - A process heater may exceed the above size limitations if it meets the emission limitations applicable to boilers



How to Use the Permits: Step 4

Meeting emission limitations and standards: capacity limits

- The combined maximum rated capacity of all boilers, process heaters, and engines at the permitted source shall not exceed the following parameters in attainment, unclassifiable and attainment/unclassifiable ozone areas and marginal and moderate ozone nonattainment areas:

Permitted Source Using Gaseous and/or Liquid Fuels in Boilers and Process Heaters and All Fuel Types in Engines	
Type of Emission Units	Maximum Combined Capacity
All boilers rated ≥ 10.0 MMBtu/hr	200 MMBtu/hr
All small boilers and process heaters rated < 10.0 MMBtu/hr	30 MMBtu/hr
All emergency generators (any fuel)	1,500 horsepower (hp)

- Permit also provides separate capacity limits for serious and above ozone nonattainment areas



How to Use the Permits: Step 4

Meeting emission limitations and standards: other limits

- Boilers covered under the permit must also:
 - Meet emission limits for NO_x and CO
 - Undergo tune-ups on a biennial basis
- Boilers and process heaters are subject to fuel use limits
- Emergency engines covered under the permit must meet certain standards, depending date of manufacture or model year
- Boilers, heaters, or engines covered under the permit burning liquid fuels must use diesel or biodiesel that does not exceed 0.0015 ppm sulfur content
- Boilers or heaters covered under the permit must not:
 - Discharge into the atmosphere any gases that exhibit 5 percent opacity or greater averaged over any six consecutive minute period



How to Use the Permits: Step 4

Assessing impacts on threatened and endangered species

- You must complete the screening procedure and meet one of the following eligibility criteria:
 - Criterion A: No federally-listed threatened or endangered species or designated critical habitat(s) of such species are likely to occur within the action area for your project
 - Criterion B: Source not likely to adversely affect listed threatened or endangered species or critical habitat that is in the same area
 - Criterion C: Coordination has occurred and addressed effects of source on federally-listed threatened or endangered species or designated critical habitat(s)
 - Criterion D: Consultation has occurred to address effects of source and the result properly documented
 - Criterion E: Incidental take permit has been issued under the Endangered Species Act
 - Permit addresses the effects of the source on relevant federally-listed species and federally-designated critical habitat



How to Use the Permits: Step 4

Assessing impacts on historic properties

- You must follow the following four steps to determine if your source has the potential to cause effects to historic properties, and whether or not you need to contact your State or Tribal Historic Preservation Officer or other tribal representative for further information:
 - Step 1 – Do historic properties exist in the area of your proposed source? Or, have prior earth disturbances precluded the existence of historic properties in the area of your proposed source?
 - Step 2 - If you are constructing, or modifying a minor source of air pollutants, you must determine if the construction, modification or operation of the minor source will have an effect on historic properties.
 - Step 3 - If you are constructing or modifying a minor source and you have not satisfied the conditions in Steps 1-2, you must contact and consult with the appropriate historic preservation authorities.
 - Step 4 - Consultation with your applicable State or Tribal Historic Preservation Officer or other tribal representative.



How to Use the Permits: PTE Calculators

An example walking through the PTE calculator

- **Example #1**

- Project: New casino needs to install boilers and heaters to provide heat/water as needed, as well as an emergency backup generator. The casino will be located in an ozone attainment area.

- **Equipment:**

- 12.5 MMBtu/hr natural gas-fired boiler
- 12.5 MMBtu/hr natural gas-fired boiler
- 12.5 MMBtu/hr natural gas-fired boiler
- 6.2 MMBtu/hr natural gas-fired heater
- 6.2 MMBtu/hr natural gas-fired heater
- 1200 hp emergency generator



How to Use the Permits: PTE Calculators

An example walking through the PTE calculator

- **Example #2**

- Project: Existing school wants to add a new boiler and water heater to accommodate additional demand. Located in a serious ozone nonattainment area.

- **New equipment:**

- 18 MMBtu/hr natural gas-fired boiler
- 3 MMbtu/hr natural gas-fired heater

- **Existing equipment:**

- 12.5 MMBtu/hr natural gas-fired boiler
- 12.5 MMBtu/hr natural gas-fired boiler
- 5 MMBtu/hr natural gas-fired heater
- 1000 hp emergency generator



Appendix



How to Use the Engines General Permits

Equipment Covered by a General Permit:	Corresponding General Permit Options		
	Boilers and Emergency Engines	Compression Ignition Engines	Spark Ignition Engines
Combination of Non-Emergency (Prime) Compression Ignition AND Spark Ignition Engines	General Permit Not Available – Apply for Site-Specific Permit		
Non-Emergency (Prime) Compression Ignition Engines		X	
Non-Emergency (Prime) Spark Ignition Engines			X
Exempt Emergency Generator Engines ^a	X	X	X
Exempt Boilers and Heaters ^b	X	X	X
Emergency Engines, Boilers and/or Heaters that are Not Exempt ^{a,b}	X ^c		

^aEmergency generator engines at a single source are ‘exempt’ if the combined maximum horsepower (hp) rating is below 1,000 hp in attainment areas or 500 hp in ozone nonattainment areas classified as serious or lower. If your source consists of only exempt equipment, then you are not required to obtain a minor NSR permit.

^bBoilers and heaters at a single source are ‘exempt’ if the combined maximum heat input rating is less than: 10 million British thermal units per hour (MMBtu/hr) in attainment areas; 5 MMBtu/hr in marginal, moderate, or serious ozone nonattainment areas; and 2 MMBtu/hr in severe or extreme ozone nonattainment areas. If your source consists of only exempt equipment, then you are not required to obtain a minor NSR permit.

^cSome sources may need site-specific permits depending on equipment size.



Resources

For **questions on general permits, permits by rule and the oil and natural gas FIP**, contact: Chris Stoneman, stoneman.chris@epa.gov, 919/541-0823

For **general questions on threatened and endangered species and historic properties**, contact: Greg Nizich, nizich.greg@epa.gov, 919/541-3078

For information on the **all of the general permits and permits by rule**, visit: <https://www.epa.gov/tribal-air/tribal-minor-new-source-review>

For information on the **oil and natural gas FIP**, visit: <https://www.epa.gov/tribal-air/oil-and-natural-gas-sources-federal-implementation-plan-rule-indian-country>