the thickness of the part and can be seen on both the inner diameter and outer diameter of the front forward fillet radius.

(h) Credit for Previous Actions

(1) If you performed an ECI of the second-stage HPT air seal before the effective date of this AD, using PW ASB No. PW4G–112–A72–330, Revision 1, dated February 14, 2013, or earlier version, you have met the requirements of paragraph (e)(2)(i) of this AD.

(2) If you performed an in-shop FPI of the second-stage HPT air seal before the effective date of this AD, you have met the requirements of paragraph (e)(2)(i) of this AD.

(i) Alternative Methods of Compliance (AMOCs)

The Manager, Engine Certification Office, FAA, may approve AMOCs for this AD. Use the procedures found in 14 CFR 39.19 to make your request.

(j) Related Information

(1) For more information about this AD, contact James Gray, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; phone: (781) 238–7742; fax: (781) 238–7199; email: *james.e.gray@faa.gov.*

(2) For service information identified in this AD, contact Pratt & Whitney Division, 400 Main St., East Hartford, CT 06108; phone: (860) 565–8770; fax: (860) 565–4503.

(3) You may view this service information at the FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA. For information on the availability of this material at the FAA, call (781) 238–7125.

Issued in Burlington, Massachusetts, on May 28, 2014.

Colleen M. D'Alessandro,

Assistant Directorate Manager, Engine & Propeller Directorate, Aircraft Certification Service.

[FR Doc. 2014–13024 Filed 6–4–14; 8:45 am]

BILLING CODE 4910–13–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 49

[EPA–HQ–OAR–2011–0151; FRL–9910–71–OAR]

RIN 2060–AS27

Managing Emissions From Oil and Natural Gas Production in Indian Country

AGENCY: Environmental Protection Agency (EPA).

ACTION: Advance notice of proposed rulemaking.

SUMMARY: The purpose of this Advance Notice of Proposed Rulemaking (ANPR) is to solicit broad feedback on the most effective and efficient means of implementing the Environmental Protection Agency's (EPA) Indian Country Minor New Source Review program for sources in the oil and natural gas production segment of the oil and natural gas sector. In particular, this ANPR discusses potential new source permitting approaches to address emissions from proposed new and modified oil and natural gas production activities. One approach is a general permit, which could serve as a streamlined permitting approach for addressing emissions from new and modified minor sources and minor modifications at major sources under the Indian Country Minor NSR rule. Another approach is a Federal Implementation Plan, which could address emissions from new and modified minor sources and minor modifications at major sources. Other possible approaches include a permit by rule, which is another streamlined permitting approach. The EPA is requesting comments on all available new source permitting approaches and will take this feedback into consideration in developing a notice of proposed rulemaking for this sector under the Indian Country Minor NSR program.

In addition, while the focus of this ANPR is on permitting approaches for proposed new oil and natural gas production activities, the EPA believes that managing emissions from existing oil and natural gas sources in Indian country would result in greater consistency with surrounding state requirements. Addressing existing sources may be particularly important given the significant activity associated with the sector in Indian country and the resultant need to protect public health, balanced with tribes' inherent sovereignty and interest in promoting economic development. If the EPA decides to address existing oil and natural gas production sources, then we will be interested in considering comments regarding whether a FIP should be the mechanism used to establish permitting requirements for new and existing sources, especially in areas where surrounding states regulate existing sources.

DATES: Comments must be received on or before July 21, 2014.

ADDRESSES: Submit your comments, identified by Docket ID No. EPA–HQ–OAR–2011–0151, by one of the following methods:

- *www.regulations.gov:* Follow the on-line instructions for submitting comments.
- Email: *a-and-r-docket@epa.gov.* Include Docket ID No. EPA–HQ–OAR–2011–0151 in the subject line of the message.

Fax: (202) 566–9744, attention Docket ID No. EPA–HQ–OAR–2011–0151.

Mail: Attention Docket ID No. EPA–HQ–OAR–2011–0151, EPA, Mailcode: 6102T, 1200 Pennsylvania Ave. NW., Washington, DC 20460. Please include a total of two copies.

Hand Delivery: The EPA Docket Center, Public Reading Room, EPA West, Room 3334, 1301 Constitution Ave. NW., Washington, DC 20460, Attention Docket ID No. EPA–HQ–OAR–2011–0151. Such deliveries are only accepted during the Docket's normal hours of operation, and special arrangements should be made for deliveries of boxed information.

Instructions: Direct your comments to Docket ID No. EPA–HQ–OAR–2011–0151. The EPA's policy is that all comments received will be included in the public docket without change and may be made available online at *www.regulations.gov,* including any personal information provided, unless the comment includes information claimed to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Do not submit information that you consider to be CBI or otherwise protected through *www.regulations.gov* or email. The *www.regulations.gov* Web site is an ''anonymous access'' system, which means the EPA will not know your identity or contact information unless you provide it in the body of your comment. If you send an email comment directly to the EPA without going through *www.regulations.gov,* your email address will be automatically captured and included as part of the comment that is placed in the public docket and made available on the internet. If you submit an electronic comment, the EPA recommends that you include your name and other contact information in the body of your comment and with any disk or CD–ROM you submit. If the EPA cannot read your comment due to technical difficulties and cannot contact you for clarification, the EPA may not be able to consider your comment. Electronic files should avoid the use of special characters, any form of encryption, and be free of any defects or viruses. For additional instructions on submitting comments, go to Section I.C of the **SUPPLEMENTARY INFORMATION** section of this document.

Docket: The EPA has established a docket for this action under Docket ID Number EPA–HQ–OAR–2011–0151. All documents in the docket are listed in the *www.regulations.gov* index. Although listed in the index, some information is not publicly available, e.g., CBI or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, will be publicly available only in hard copy. Publicly available docket materials are available either electronically in *www.regulations.gov* or under Docket ID Number EPA–HQ–OAR–2011–0151, EPA/DC, EPA West, Room 3334, 1301 Constitution Ave. NW., Washington, DC. The Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566–1744, and the telephone number for the Air Docket is (202) 564–1742.

FOR FURTHER INFORMATION CONTACT:
Christopher Stoneman, Outreach and Information Division, Office of Air Quality Planning and Standards, (C304–01), Environmental Protection Agency, Research Triangle Park, North Carolina, 27711, telephone number (919) 541–0823, facsimile number (919) 541–0072, email address: *stoneman.chris@epa.gov.*

SUPPLEMENTARY INFORMATION:
Throughout this document, ''reviewing authority,'' ''we,'' ''us'' and ''our'' refer to the EPA.

I. General Information

A. Does this action apply to me?

Entities potentially affected by this proposed action include owners and operators of facilities located or planning to locate in Indian country as defined in 18 U.S.C. 1151 and as provided in the Indian Country Minor NSR rule if the facilities are from oil and natural gas source categories such as the following:

TABLE 1—EXAMPLE OIL AND NATURAL GAS PRODUCTION SOURCE CATEGORIES

Industry category	North American Industry Classification System
Crude Petroleum and Natural Gas (SIC 1311).	211111—Crude Petroleum and Natural Gas Extraction
Natural Gas Liquids (SIC 1321).	211112—Natural Gas Liquid Extraction
Drilling Oil and Gas Wells (SIC 1381).	213111—Drilling Oil and Gas Wells
Oil and Gas Field Services (SIC 1389).	213112—Support Activities for Oil and Gas Operations

This list is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be potentially affected by this action. If you have any questions regarding the applicability of this action to a particular entity, contact the person listed in the preceding section.

B. What should I consider as I prepare my comments to the EPA?

1. Submitting CBI

Do not submit CBI information to the EPA through www.regulations.gov or email. Clearly mark the part or all of the information that you claim to be CBI. For CBI information in a disk or CD–ROM that you mail to the EPA, mark the outside of the disk or CD–ROM as CBI and then identify electronically within the disk or CD–ROM the specific information that is claimed as CBI. In addition to one complete version of the comment that includes information claimed as CBI, a copy of the comment that does not contain the information claimed as CBI must be submitted for inclusion in the public docket. Information so marked will not be disclosed except in accordance with procedures set forth in 40 Code of Federal Regulations (CFR) Part 2.

Send or deliver information identified as CBI only to the following address: Roberto Morales, OAQPS Document Control Officer (C404–02), Office of Air Quality Planning and Standards, EPA, Research Triangle Park, North Carolina 27711, Attention Docket ID No. EPA–HQ–OAR–2011–0151.

2. Tips for preparing comments

When submitting comments, remember to:

- Identify the action by docket number and other identifying information (subject heading, **Federal Register** date and page number).
- Follow directions—The agency may ask you to respond to specific questions or organize comments by referencing a CFR part or section number.
- Explain why you agree or disagree, suggest alternatives, and substitute language for your requested changes.
- Describe any assumptions and provide any technical information and/or data that you used.
- If you estimate potential costs or burdens, explain how you arrived at your estimate in sufficient detail to allow for it to be reproduced.
- Provide specific examples to illustrate your concerns and suggest alternatives.
- Explain your views as clearly as possible, avoiding the use of profanity or personal threats.
- Make sure to submit your comments by the comment period deadline identified.

C. Where can I get a copy of this document and other related information?

In addition to being available in the docket, an electronic copy of this ANPR will also be available on the World Wide Web. Following signature by the EPA Administrator, a copy of this notice will be posted in the regulations and standards section of our NSR home page located at *http://www.epa.gov/nsr* and on the tribal NSR page at *http://www.epa.gov/air/tribal/tribalnsr.html.*

II. Purpose of This Advance Notice of Proposed Rulemaking

The primary purpose of this ANPR is to solicit broad feedback on the most effective and efficient means of implementing the EPA's Indian Country Minor NSR program for proposed new and modified sources in the oil and natural gas production segment of the oil and natural gas sector in Indian country. The ANPR seeks input on approaches that may be used to manage emissions from oil and natural gas production in Indian country and solicits comment on a variety of issues, including: (1) Whether the approach should address emissions from new and modified units only or (as discussed below) existing source emissions as well; (2) the advantages and disadvantages of available approaches to manage emissions impacts from the oil and natural gas sector in Indian country; (3) the activities and pollutants that warrant regulation; (4) the coordination of compliance between any approach selected and the Indian Country Minor NSR program; and (5) appropriate emission control requirements. We are considering the following new source permitting approaches for managing oil and natural gas emissions from proposed new and modified sources in Indian country: (1) A CAA minor NSR general permit; (2) a FIP; and (3) other available approaches such as a permit by rule. The EPA seeks feedback on all aspects of available approaches and will take the comments into consideration in developing a notice of proposed rulemaking for this sector under the Indian country Minor NSR program.

In July 2011, the EPA finalized a rule that includes, among other things, a minor NSR permitting program that applies in Indian country and, beginning on September 2, 2014,[1] that requires new minor sources, and minor and major sources that undertake a minor modification to obtain a pre-construction permit. We call this

[1] EPA has proposed to extend this deadline with respect to true minor sources in the oil and natural gas sector. 79 FR 2546, Jan. 14, 2014.

regulation the ''Federal Minor New Source Review Program in Indian Country.'' 76 FR 38748, July 1, 2011. We call a permit issued under this program a minor NSR permit. Minor NSR permits address emissions from new and modified units at permitted sources.

In an effort to streamline minor source permitting under this program, the EPA plans to issue general permits for new true minor sources for certain source categories. A general permit is a type of permit that contains standardized requirements that can apply to one or more sources in a given source category. One of the categories for which the EPA is considering issuing a general permit is the oil and natural gas production segment of the oil and natural gas sector. Specifically, the oil and natural gas production segment includes natural gas production that occurs prior to the natural gas entering natural gas processing plants or prior to the natural gas entering the transmission and storage segment when there is no natural gas processing plant, and crude oil production operations that generally occur prior to the oil entering crude oil storage and transmission terminals where the oil is loaded for transport to refineries. The EPA believes that the creation and issuance of a general permit may be appropriate because it simplifies the permit issuance process for minor sources so that reviewing authorities and others (interested public, regulated source) can ensure environmental protection without expending resources unnecessarily by developing numerous site specific permits that include substantially similar permit requirements. The general permit approach was proposed recently for a number of source categories as part of the Indian Country Minor NSR program. 79 FR 2546, Jan. 14, 2014.

While we believe that a general permit is a possible streamlining mechanism for issuing permits to new and modified oil and natural gas production facilities, we are also exploring the possibility of alternate mechanisms to regulate emissions from this segment. One approach is a FIP, which could be used to establish regulatory requirements for emissions from new and modified minor sources and minor modifications at major sources within the oil and natural gas production segment. This ANPR is the first instance in which the EPA is raising the possibility of promulgating a FIP to implement its minor NSR program with respect to oil and natural gas production activities in Indian country. A FIP was promulgated in 2013 for oil and natural gas sources located in the Fort Berthold Indian Reservation (located in North Dakota, within the Williston Basin), and the approach has largely been viewed as successful in that instance. One difference between a FIP and a general permit is that a FIP would not require the submission of applications by sources and the review and approval of these applications by a reviewing authority prior to construction. Instead, the requirements would directly apply to sources subject to the regulation. A FIP could obviate the need for new or modified individual minor sources to obtain permits because the FIP could directly establish regulatory requirements like those established under a permit (or general permit) for those sources and would be federally enforceable.

Other new source permitting approaches may be available as well, including the possibility of a permit by rule approach for true minor oil and natural gas sources. The permit by rule approach would address emissions from new and modified units at the permitted source. A permit by rule is a standard set of requirements that can apply to multiple sources with similar emissions and other characteristics. It is very similar to a general permit. Unlike a general permit, however, permit by rule requirements are promulgated using a rulemaking process (i.e., the requirements are included in the Code of Federal Regulations), rather than establishing the requirements through a general permit document that undergoes notice and comment (i.e., the requirements are included in the general permit document). The permit by rule mechanism is simpler than a site-specific permit or a general permit because it further reduces the time permitting authorities must devote to reviewing permit applications and issuing permits for source categories or emissions generating activities that pose a lower environmental concern. Site-specific permit applications and permit applications under a general permit must be reviewed and approved by a reviewing authority prior to construction or modification. Under a permit by rule, a reviewing authority would receive notification from an individual source that it meets all eligibility criteria for coverage by the permit, but would not need to approve the source's notice prior to the source beginning to construct or modify. This approach simplifies the permitting process but would not allow the public the opportunity (as would be available under a site-specific or a general permit) to object, except by judicial challenge, to a particular source receiving coverage under the permit by rule. Further discussion of the proposed permit by rule approach is available in the recent action entitled ''General Permits and Permits by Rule for the Federal Minor New Source Review Program in Indian Country,'' 79 FR 2546 at 2566–67, Jan. 14, 2014.

While the focus of this ANPR is on permitting approaches for new oil and natural gas sources, the EPA believes that managing emissions from existing oil and natural gas sources also may be important given the significant activity associated with the sector in Indian country and the resultant need to protect public health and the environment, balanced with tribes' inherent sovereignty and interest in promoting economic development. Although NSR general permits and permits by rule are not approaches that can be used to address existing sources, a FIP could extend to existing sources; this is a key distinction between general permits and permits by rule versus a FIP. Addressing existing sources through a FIP could be especially useful in areas for which surrounding state requirements apply to existing oil and natural gas sources located on lands that are within a state's jurisdiction. Concerns related to the air quality impacts from existing oil and natural gas sources in Indian country are discussed further in Section IV. of this notice. Given these concerns, the EPA is requesting comments on whether a FIP, if that is determined to be an appropriate approach for new source permitting for oil and natural gas sources, should also be used to establish requirements for existing oil and natural gas sources. A FIP would effectively function as a permit by rule, however unlike the permit by rule and general permit approaches which are limited to addressing new and modified sources in the NSR context, a FIP could also address existing sources.

Although the Indian Country Minor NSR rule does not include greenhouse gases, actions taken to reduce volatile organic compound (VOC) emissions—whether through a general permit, a FIP, or other approaches—also likely will reduce methane as a co-benefit. Methane, the primary constituent of natural gas, is a potent greenhouse gas—more than 20 times as potent as carbon dioxide when emitted directly to the atmosphere. In 2012, 28 percent of methane emissions nationwide were attributed to sources in the oil and natural gas sector. On March 28, 2014, the Obama Administration released a key element called for in the President's Climate Action Plan: A Strategy to Reduce Methane Emissions. The strategy summarizes the sources of methane emissions, commits to new steps to cut emissions of this potent greenhouse gas, and outlines the Administration's efforts to improve the measurement of these emissions. The strategy builds on progress to date and takes steps to further cut methane emissions from several sectors, including the oil and natural gas sector.

III. Background on the Oil and Natural Gas Sector

A. What is the oil and natural gas sector?

The oil and natural gas sector includes operations involved in the extraction and production of oil and natural gas, as well as the processing, transmission and distribution of natural gas. Specifically for oil, the sector includes all operations from the well to the point of custody transfer at a petroleum refinery. For natural gas, the sector includes all operations from the well to the final end user. The oil and natural gas sector can generally be separated into four segments: (1) Oil and natural gas production; (2) natural gas processing; (3) natural gas transmission and storage; and (4) natural gas distribution. Each of these segments is briefly discussed below.

This ANPR is focused on the first segment (oil and natural gas production), because this is the segment we believe would constitute the majority of the minor sources that would need a minor source permit in Indian Country. If, following the review of comments received via this ANPR, we decide that the general permit approach is preferable to a FIP, then we anticipate that the bulk of the oil and natural gas sources that we would permit would be from the production segment (generally, sources in other segments tend to be larger, potentially major sources such as gas processing plants). Because the FIP would be intended to replace the minor source program for oil and natural gas sources, we believe that it makes the most sense to focus on the production segment for both the general permit approach and the FIP approach. We welcome comment on this rationale.

The oil and natural gas production segment includes the wells and all related processes used in the extraction, production, recovery, lifting, stabilization, and separation or treatment of oil and/or natural gas (including condensate). Production components may include, but are not limited to, wells and related casing head, tubing head and ''Christmas tree'' piping, as well as pumps, compressors, heater treaters, separators, storage vessels, pneumatic devices and dehydrators. Production operations also include the well drilling, completion and workover processes and include all the portable non-self-propelled apparatus associated with those operations. Production sites include not only the sites where the wells themselves are located, but also include stand-alone ''pads'' where oil, condensate, produced water, and natural gas from several wells may be separated, stored, and treated. The production segment also includes the low to medium pressure, smaller diameter, gathering pipelines and related components that collect and transport the oil, natural gas and other materials and wastes from the wells or well pads.

The natural gas production segment ends where the natural gas enters a processing plant. In situations where there is no processing plant, the natural gas production segment ends at the point where the natural gas enters the transmission segment for long-line transport. The crude oil production segment ends at the storage and load-out terminal which is used for transport of the crude oil to a petroleum refinery via trucks or railcars. The petroleum refinery is not considered a part of the oil and natural gas sector. Thus, with respect to crude oil, the oil and natural gas sector ends where crude oil enters the petroleum refinery.

The second segment, natural gas processing, consists of separating certain hydrocarbons and fluids from the natural gas to produce ''pipeline quality'' dry natural gas. While some of the processing can be accomplished in the production segment, the complete processing of natural gas takes place in the natural gas processing segment. Natural gas processing operations separate and recover natural gas liquids (NGL) or other non-methane gases and liquids from a stream of produced natural gas through components performing one or more of the following processes: Oil and condensate separation, water removal, separation of NGL, sulfur and carbon dioxide removal, fractionation of natural gas liquid and other processes, such as the capture of carbon dioxide separated from natural gas streams for delivery outside the facility.

The pipeline quality natural gas leaves the natural gas processing segment and enters the third segment, natural gas transmission and storage. Pipelines in the natural gas transmission and storage segment can be interstate pipelines that carry natural gas across state boundaries or intrastate pipelines, which transport the natural gas within a single state. While interstate pipelines may be of a larger diameter and operated at a higher pressure, the basic components are the same. To ensure that the natural gas flowing through any pipeline remains pressurized, compression of the natural gas is required periodically along the pipeline. This is accomplished by compressor stations usually placed at between 40- and 100-mile intervals along the pipeline. At a compressor station, the natural gas enters the station, where it is compressed by reciprocating or centrifugal compressors. In addition to the pipelines and compressor stations, the natural gas transmission and storage segment includes underground storage facilities.

The fourth segment, natural gas distribution, is the final step in delivering natural gas to customers. The natural gas enters the distribution segment from delivery points located on interstate and intrastate transmission pipelines to business and household customers. The delivery point where the natural gas leaves the transmission and storage segment and enters the distribution segment is often called the ''city gate.'' Typically, natural gas supply companies take ownership of the natural gas at the city gate.

Natural gas distribution systems consist of thousands of miles of piping, including mains and service pipelines to the customers. Distribution systems sometimes include compressor stations, although they are considerably smaller than transmission compressor stations. Distribution systems include metering stations, which allow distribution companies to monitor the natural gas in the system. Essentially, these metering stations measure flow rates and allow distribution companies to track natural gas as it flows through the system.

Emissions can occur from a variety of processes and points throughout the oil and natural gas production segment. In Section III.B., we explain these processes and pollutant emissions points in more detail. In sum, emission sources include, but are not necessarily limited to, drilling and completion with the associated flowback activities; extraction operations; and road, pipeline and well pad construction. Also, significant emissions can be released from the operation of reciprocating internal combustion engines and combustion turbines that power compressors or provide electricity throughout the oil and natural gas production segment. Pollutants emitted from these activities that we regulate through the Indian Country Minor NSR permitting program (regulated NSR pollutants) include VOC, NO_X, sulfur dioxide (SO_2), particulate matter (PM, PM_{10}, $PM_{2.5}$), hydrogen sulfide, carbon monoxide (CO) and various sulfur compounds. Hydrogen sulfide and SO_2 are emitted from production and processing operations that handle and treat sour gas.[2] In Section VII. we request comment on the pollutant-emitting activities and the pollutants that might warrant regulation through a general permit, FIP, or other approach.

B. What equipment is used for exploration and production and what emissions are associated with the use of this equipment?

1. Drill Rig Emissions

Air pollution from oil and natural gas drilling rigs originates from the combustion of diesel fuel in diesel engines used to drive electrical generators that power the drilling equipment. Diesel engines emit NO_X, SO_2, CO, and PM. The amount of emissions generated from an engine can vary greatly depending on factors such as the age of the engine, the drilling cycle, and the amount of energy required to penetrate a rock formation while drilling. The engine may be run through different activity modes including standby, drilling, tripping, back reaming, casing running, and cementing. The drilling and back reaming modes are the most power intensive operational modes.[3]

2. Natural gas Wellhead and Field Gathering Compressor Engines

In production operations, compressors assist in increasing the pressure and moving the natural gas from the well site downstream to a gathering facility and beyond for further processing. Two types of compressor designs are commonly used: Reciprocating and centrifugal.

In a reciprocating compressor, natural gas enters a suction manifold, and then flows into a compression cylinder. The natural gas is compressed in the cylinder by a crankshaft that runs a reciprocal motion piston and is powered by an internal combustion engine. Reciprocating compressors are designed with a rod packing seal system. The compressor rod packing system consists of a series of flexible rings that create a seal around the piston rod to prevent natural gas from escaping between the rod and the inboard cylinder head. All such packing systems vent natural gas under normal conditions, but the leakage rate will increase over time as the rings become worn. When this occurs, the packing system will need to be replaced to prevent excessive leaking from the compression cylinder.

Centrifugal compressors use a rotating disk or impeller to increase the velocity of the natural gas which is directed to a divergent duct section that converts the velocity energy to pressure energy. Centrifugal compressors require seals around the rotating shaft to prevent gases from escaping where the shaft exits the compressor casing. Although dry seals are used in most new centrifugal compressors, some compressors use high-pressure wet seals (comprised of oil) as a barrier against escaping natural gas. The circulated oil entrains and absorbs some compressed natural gas. VOC emissions occur when the oil is stripped of natural gas that it absorbed at the high-pressure seal face. This process is known as degassing and is a normal function of the seal oil recirculation process.

3. Liquids Unloading

As a well ages, the reservoir's pressure declines and the velocity of fluid through the tubing that conveys the natural gas to the surface also decreases. As velocity decreases, liquids can accumulate on the walls of the tubing. Eventually, the natural gas velocity in the tubing may not be sufficient to lift liquids to the surface. When liquids accumulate in the bottom of the well tube, natural gas flow is restricted or stops.

A common approach operators use to restore the flow of the well is to perform a "blowdown." To perform a blowdown, the operator shuts in the well temporarily to allow the bottom hole pressure to increase as natural gas migrates from the formation to the well. When the pressure has increased sufficiently, the operator releases the pressure in the well rapidly by venting it to the atmosphere until it reaches atmospheric pressure. The pressure drop blows the liquid out of the well. Releases of VOC occur as the well is vented to the atmosphere. This process does not provide a permanent solution, and operators will likely need to repeat the process over various intervals of time as fluids re-accumulate in the well tubing. These intervals vary from well to well and generally decrease as the well continues to age and requires more frequent unloading. Each time, the process releases additional VOC to the air.

4. Glycol Dehydration

Natural gas is often produced with a mixture of water and other hydrocarbons. A glycol dehydrator is used to remove the water vapor from the natural gas stream. In the first stage, the natural gas mixture is passed through an absorber where water vapor is absorbed. Most dehydration units use triethylene glycol as the absorbent. Following the preliminary dehydration stage, the glycol mixture either first moves to a flash tank where some gases are removed by reducing the pressure, or moves directly to a regenerator, where the triethylene glycol is heated to remove absorbed water from the glycol fluid. During this process, VOC, carbon dioxide, nitrogen, and hydrogen sulfide are boiled off and vented to the atmosphere along with the water vapor being removed.[4]

5. Oil, Condensate, and Produced Water Storage Tanks

Storage tanks or vessels are used at well production sites to store crude oil, produced water, and condensate (hydrocarbon liquids) extracted from the well. Storage tanks are typically installed as a group of similar or identical vessels known as a tank battery.

VOC emissions are released from a storage tank due to flashing losses, working losses, or breathing losses. Flashing losses occur when liquids from a higher pressure wellhead or separator are introduced into a lower pressure storage tank, usually operating at atmospheric pressure. In this situation, the pressure of the liquid drops, causing the entrained gas or some of the liquid to vaporize (flash). If the gas is not captured, it is released to the air. Typically, the larger the pressure drop (i.e. the higher the separator pressure compared to the storage tank pressure), the more flash emissions will occur in the storage tank. The temperature of the liquid may also influence the amount of flash emissions. Working losses occur when vapors in the headspace of a fixed roof tank are displaced to the air when the operator fills or empties the tank.

[2] Sour gas is natural gas with more than 5.7 milligrams of hydrogen sulfide per normal cubic meters (0.25 grains/100 standard cubic feet), see AP–42 Compilation of Air Pollutant Emission Factors, Chapter 5.0 Introduction to Petroleum Industry, Section 5.3 Natural Gas Processing, available at *http://www.epa.gov/ttnchie1/ap42/ch05/final/c05s03.pdf.*

[3] E. Quinlan, R. van Kuilenberg, T. Williams, and G. Thonhauser, "The Impact of Rig Design and Drilling Methods on the Environmental Impact of Drilling Operations," Conference of American Assn. of Drilling Engineers, April 12–14, 2011, available at *www.aade.org/app/download/6858447204/AADE-11-NTCE-61.pdf.*

[4] See, e.g., Anadarko Petroleum Corp. and the Domestic Petroleum Council, "Natural Gas Dehydration: Lessons Learned from the Natural Gas STAR Program," Producers Technology Transfer Workshop, College Station, TX, May 17, 2007, available at *http://epa.gov/gasstar/documents/workshops/college-station-2007/8-dehydrations.pdf.*

Breathing losses occur due to normal evaporation of liquid in the tank in response to temperature changes or other equilibrium effects. In the oil and natural gas production sector, flash emissions are much greater than the working and breathing losses.

The volume of emissions from a storage tank depends on many factors. Lighter crude oils flash more hydrocarbons than heavier crude oils. In storage tanks where the oil is frequently cycled and the overall throughput is high, working losses are higher. Additionally, the operating temperature and pressure of oil as it moves from a separator to a storage tank affects the volume of flashed gases coming out of the oil. VOCs are the predominant emissions from storage tanks.

6. Truck Loadout

Oil and natural gas condensate are transported from production operations to natural gas processing plants and/or crude oil transport terminals. VOC emissions from the storage tanks occur during the load out (withdrawal) process. Loading losses occur as hydrocarbon vapors in ''empty'' cargo tanks are displaced to the atmosphere by the liquid being loaded into the tanks. These vapors are a composite of (1) vapors formed in the empty tank by evaporation of residual product from previous loads, (2) vapors transferred to the tank in vapor balance systems as product is being unloaded, and (3) vapors generated in the tank as the new product is being loaded.

7. Pneumatic Devices

The oil and natural gas production segment uses a variety of process control devices to moderate temperature, pressure, flow rate, and fluid volume. These devices operate pneumatically, electrically, or mechanically. Electrical and mechanical devices do not generate emissions. Most devices in the industry are pneumatic controllers.

Pneumatic controllers are automated instruments that use differences in the pneumatic pressure of a gas to transmit a process signal or adjust position. In the vast majority of applications, the oil and natural gas production segment uses pneumatic controllers that make use of readily available high-pressure natural gas to provide the required energy and control signals.

Pneumatic devices can release a significant amount of VOC emissions during normal operations. In these ''gas-driven'' pneumatic controllers, natural gas may be released with every valve movement, and/or continuously from the valve control pilot. The rate at which the continuous release occurs is referred to as the bleed rate. Bleed rates are dependent on the design and operating characteristics of the device. Similar designs will have similar steady-state rates when operated under similar conditions. There are three basic designs with emissions varying from each: (1) Continuous bleed devices are used to modulate flow, liquid level, or pressure, and gas is vented continuously at a rate that may vary over time; (2) snap-acting devices release gas only when they open or close a valve or as they throttle the gas flow; and (3) self-contained devices release gas to a downstream pipeline instead of to the atmosphere.[5]

Continuous bleed pneumatic controllers can be classified into two types based on their emissions rates: (1) High-bleed controllers; and (2) low-bleed controllers. A high-bleed controller has a bleed rate in excess of 6 standard cubic feet per hour (scfh), while low-bleed devices bleed at a rate less than or equal to 6 scfh.[6]

8. Phase Separation

Underground crude oil and natural gas can contain many lighter hydrocarbons in solution. When the hydrocarbon product is brought to the surface and processed, many of the dissolved lighter hydrocarbons (as well as water) are removed through a series of high-pressure and low-pressure separators. Crude oil and natural gas under high pressure conditions are passed through either a two phase separator (where the associated gas is removed and any oil and water remain together) or a three phase separator (where the associated gas is removed and the oil and water are also separated). At the separator, low pressure gas is physically separated from the high pressure oil. The remaining low pressure oil is then injected into a gathering pipeline or directed to a storage vessel where it is stored for a period of time before being shipped off-site. The remaining hydrocarbons in the oil may be released from the oil as vapors in the storage vessels.

A heater-treater is a device used to break up emulsions and facilitate removal of unwanted hydrocarbons, contaminants and water from the well stream before oil and natural gas are sent to the gathering pipeline or tank battery. A heater-treater warms the well stream and prevents the formation of ice and natural gas hydrates that may slow or stop production.

During phase separation, a blend of hydrocarbon gases, including methane gas, may be produced as a by-product. The optimal way to manage by-product gas is for the operator to capture the gas, process it into a commercially sellable product, and then direct it to a pipeline where it can be distributed for sale. When the sale of the by-product gas is not viable, then an operator will (1) vent the gas emissions directly to the atmosphere; (2) re-inject the gas back into the reservoir; or (3) combust the gas to destroy it. Combustion devices predominantly used to control VOC emissions from low pressure gas streams in oil and natural gas production operations are ''enclosed combustors.'' ''Candlestick flares'' are typically used to control higher pressure waste gas streams.

9. Leaks

As produced natural gas moves through equipment and pipes under elevated pressure within an oil or natural gas production facility, leaks can occur at various locations. Fluctuations in pressure, temperature and mechanical stresses increase the number of opportunities for leaks from various components. Sources of fugitive leaks include pumps, threaded and flanged connections, pressure relief valves, open-ended lines such as vents and drains, blowdown lines, and sampling points. Leaks can also occur due to malfunctions and pipeline ruptures. VOC is the main criteria pollutant released during equipment leaks.

10. Compressor Engines

Reciprocating internal combustion engines are typically used to run reciprocating compressors, whereas combustion turbines generally power centrifugal compressors. In some instances, an electric motor is used. The size and horsepower of engines used at a well site vary extensively based on the size of the field and characteristics of the natural gas. The compressor engines typically run at full capacity for 24 hours, 7 days a week, and can emit CO, NO_X, SO_2, PM and VOCs. Electric motors are not a direct source of emissions, but other motors are.

11. External Combustion Units

External combustion units are used to generate industrial power and produce industrial process steam and heat.

[5] EC/R, Inc., prepared for U.S. EPA, Office of Air Quality Planning and Standards, Sector Policies and Programs Division, ''Background Technical Support Document for Proposed Standards—Oil and Natural Gas Sector: Standards of Performance for Crude Oil and Natural Gas Production, Transmission and Distribution,'' July 2011, EPA–453/R–11–002 at 5–2, available at *http://www.epa.gov/airquality/oilandgas/pdfs/20110728tsd.pdf.*

[6] *Id.*

Examples of external combustion units in the oil and natural gas production segment include storage tank heaters, line heaters, and glycol reboilers. These units are typically fueled by natural gas from the field, but they can use other gaseous and oil-based fuels, such as propane and fuel oil #2. Primary combustion emissions are CO and NO_X, and the size and power of such units varies widely based on the size of the field and the characteristics of the oil and/or natural gas being produced. Electric heaters are sometimes used when they are solar powered or when there is access to a power grid, but they are not a direct source of emissions.

IV. Oil and Natural Gas Sector in Indian Country

A. Why are we concerned about air quality impacts from oil and natural gas production in Indian country?

In the past few years, technological advances in oil and natural gas extraction methods have made extraction of oil and/or natural gas from shale, coal-bed methane and tight sandstone resources more technologically and economically feasible than before. While conventional oil and natural gas extraction is ongoing in some areas of Indian country, there has been a sizeable increase in recent years in production volume in these areas from unconventional oil and natural gas extraction methods.[7] Many areas of Indian country are located in shale basins with potentially recoverable reserves including, but not limited to, areas in North Dakota, Montana, South Dakota, Nebraska, Kansas, Oklahoma, Texas, New York, Michigan and Wisconsin. Areas of Indian country in western North Dakota, eastern Montana, Oklahoma and Texas lie within tight sandstone basins with recoverable resources, and coal bed methane reserves may exist under Indian country located in the Northeastern and Southwestern United States.

Indian country comprises much of the Uinta and North San Juan Basins (in Utah and the Four Corners region, respectively). According to a Western Regional Air Partnership (WRAP) emissions inventory report focusing on a region spanning New Mexico, Colorado, Utah, Wyoming, Montana, and North Dakota, oil and natural gas production sources contribute the majority of the emissions of NO_X and a large portion of the VOC emissions in both the Uinta Basin and Northern San Juan Basin.[8 9] A significant number of oil and natural gas production sources also exist in the South San Juan, Wind River, and Williston Basins, all of which encompass areas of Indian country. Although the WRAP report included limited areas of Indian country within the United States, we believe that the level of activity in these areas could represent the kind of emissions we can expect in Indian country in other areas across the United States. Furthermore, as discussed in Section IV.B, Indian country lands that contain commercially viable oil and natural gas reserves are currently experiencing widespread growth in the oil and natural gas production segment, which could lead to increased emissions of air pollutants and adverse air quality.

For example, during the development of the FIP for oil and natural gas production sources located on the Fort Berthold Indian Reservation (located in North Dakota, within the Williston Basin), the EPA determined that hundreds of oil and natural gas production facilities had been operating on the Reservation since 2007 and estimated that up to an additional 2,000 wells could result from future development (see further description of this FIP in Section V.B.).[10] Another area of increasing oil and natural gas development in Indian country is the Uintah and Ouray Indian Reservation in northeast Utah, within the Uinta Basin. According to recent National Environmental Policy Act (NEPA) documents for oil and natural gas development in the Uinta Basin, the Bureau of Land Management (BLM) has approved the construction of more than 5,000 new wells, and even more projects are anticipated for future NEPA review.[11] This increase in development has the potential to adversely impact air quality and will result in an increased permitting burden for sources and reviewing authorities under the Indian Country Minor NSR rule that is scheduled to take effect on September 2, 2014.[12]

Although rapid increases in oil and natural gas production have occurred in some areas of Indian country in recent years, uncertainties about the extent of environmental impacts from this production in Indian country persist despite developing policy initiatives, programs, and industry practices to address the environmental implications of the emissions associated with this growth. These uncertainties are due in part to the scarcity of ambient air monitoring in some areas of Indian country, as discussed below. Additionally, there is incomplete emissions information for this sector in Indian country and improvements in emissions methodologies are still evolving. See Section IV.B. for further discussion of these issues.

At the same time, the EPA remains committed to supporting tribes' right to self-governance and protecting their inherent sovereignty. Uncertainties surrounding the regulation of oil and natural gas production sources in Indian country have resulted in an ''uneven playing field'' in some areas between Indian country and surrounding states (i.e., sources in areas with similar air quality are not subject to the same requirements). The EPA continues to actively reach out to oil and natural gas organizations and other stakeholders to improve our understanding of the potential environmental implications of oil and natural gas production operations, and we strive to provide greater regulatory certainty and consistency in the regulation of these operations through enhanced data

[7] Conventional oil and natural gas resources occur in permeable sandstone and carbonate deposits, while unconventional resources exist in shale and sedimentary rock formations. Unconventional resources are also referred to as ''tight formations'' because their lack of permeability make them resistant to hydrocarbon flow unless the formation is fractured. M. Ratner and M. Tiemann, Congressional Research Service, ''An Overview of Unconventional Oil and Natural Gas: Resources and Federal Actions,'' July 15 2013, available at *http://www.fas.org/sgp/crs/misc/R43148.pdf.*

[8] A. Bar-Ilan, J. Grant, R. Parikh, A. Pollack, and R. Morris, ENVIRON International Corp., D. Henderer, Buys & Assocs., Inc., and K. Sgamma, Western Energy Alliance, ''A Comprehensive Emissions Inventory of Upstream Oil and Gas Activities in the Rocky Mountain States,'' prepared for the Western Regional Air Partnership, July 2013, available at *http://www.epa.gov/ttnchie1/conference/ei19/session8/barilan.pdf.*

[9] D. Helmig, C. Thompson, J. Evans, P. Boylan, J. Hueber, and J.-H. Park, Institute of Arctic and Alpine Research (INSTAAR), University of Colorado, Boulder, ''Highly Elevated Atmospheric Levels of Volatile Organic Compounds in the Uintah Basin, Utah,'' Environ. Sci. Technol. (accepted for publication), March 13, 2014, available at *http://pubs.acs.org/doi/pdf/10.1021/es405046r.*

[10] ''Approval and Promulgation of Federal Implementation Plan for Oil and Natural Gas Well Production Facilities: Fort Berthold Indian Reservation (Mandan, Hidatsa, and Arikara Nation), North Dakota,'' 78 FR 17836, March 22, 2013. The Technical Support Document for the Fort Berthold FIP includes a more detailed explanation of the rule development; this document is available in the docket for the FIP, i.e., Docket ID: EPA–R08–OAR–2012–0479, see *www.regulations.gov.*

[11] See, e.g., U.S. Dept. of the Interior, Bureau of Land Management, ''Record of Decision for the Gasco Energy Inc. Uinta Basin Natural Gas Development Project,'' June 18, 2012, available at *http://www.blm.gov/ut/st/en/fo/vernal/planning/nepa_.html;* U.S. Dept. of the Interior, Bureau of Land Management, ''Greater Natural Buttes Record of Decision,'' May 8, 2012, available at *http://www.blm.gov/ut/st/en/fo/vernal/planning/nepa_html.*

[12] The EPA has proposed to extend this deadline to a date within a range between September 2, 2015 to March 2, 2016 for oil and natural gas production sources. 79 FR 2546, Jan. 14, 2014.

collection and analysis, improved information sharing and partnerships, and focused compliance assistance and enforcement. The EPA must address these considerations while also meeting our trust responsibilities regarding protection of air quality and public health in Indian country. We believe that it is appropriate to explore measures that reduce the administrative burden associated with regulating new minor sources and minor modifications of existing stationary sources in a way that: (1) Ensures the timely implementation of environmental protections; (2) maximizes the efficient use of resources; (3) minimizes preventable delays in economic development; and (4) proactively mitigates potential adverse air-quality-related environmental and public health impacts that could result from the rapid growth in emissions from oil and natural gas production operations.

The Indian Country Minor NSR rule allows us to manage minor source emissions increases in Indian country and ensure that new emissions do not cause or contribute to a National Ambient Air Quality Standard (NAAQS) or Prevention of Significant Deterioration (PSD) increment violation. However, industry and tribal governments have expressed concerns that EPA Regional Office reviewing authorities may not be able to keep pace with the volume of oil and natural gas-related permit applications the offices may receive, and a lag in permit issuance rates could place sources in Indian country at a competitive disadvantage compared to similar sources located in the surrounding state-managed lands. We are cognizant of this concern, especially in light of the approximately 6,400 existing minor source registrations received in the EPA Region 8 Office for facilities in the oil and natural gas production segment.[13]

A general permit, a permit by rule (more rapid permit issuance than a general permit), and a FIP (essentially a permit by rule, but with the potential to additionally address existing sources) would each allow more expeditious implementation of the minor NSR program compared to requiring site-specific permits. Establishing requirements for appropriate mitigation measures for a general permit or permit by rule in areas where emissions from existing oil and natural gas production activities are an issue could be challenging, given that these approaches would not address existing sources.

Accordingly, today we seek comment on the appropriateness of any available permitting or other approaches as a means for managing emissions impacts from the growth of oil and natural gas production emissions in Indian country through either regulation of the construction and modification of proposed new minor sources and minor modifications at major sources within the oil and natural gas production segment (the permitting approach) or direct regulation of proposed oil and natural gas sources (the FIP approach). We also seek comment on whether and how a potential FIP should regulate emissions from existing sources in the oil and natural gas industry to balance economic growth with appropriate environmental protections.

B. What information do we have regarding emissions and air quality associated with oil and natural gas production in Indian country?

Federal and state government agencies have accumulated substantial data characterizing oil and natural gas sector activity in Indian country. But there are still gaps in our knowledge regarding the extent of oil and natural gas activity in Indian country and its impacts. The EPA is making a concerted effort to improve our understanding of oil and natural gas emissions generally, as well as improving estimates of emissions from oil and natural gas production activity in Indian country.

1. Federal and State Government Emissions and Other Data

According to the Office of Indian Energy and Economic Development (IEED) at the Department of the Interior (DOI), significant oil and natural gas production in Indian country has already occurred and there is even greater potential for future development. As of 2012, more than 2 million acres of Indian lands accounting for about 10 percent of the oil and natural gas production from federally regulated onshore acreage had been leased for oil and natural gas development.[14] The DOI estimates that ''since 2002, annual income from energy mineral production increased by more than 113 percent and this trend is expected to continue for the foreseeable future.'' [15] As of April 2014, over 6,400 minor sources in the oil and natural gas production sector have registered with the EPA's Region 8 Office in response to the registration requirement in the Indian Country Minor NSR rule.

By comparing maps of Indian country in the U.S. to maps of known conventional and unconventional oil and natural gas reserves, it is evident that many areas of Indian country are in regions that are rich in mineral resources. The IEED has been providing technical assistance to various tribes to identify numerous prospects for drilling, ''by purchasing, reprocessing and interpreting thousands of miles of 2D [two dimensional] seismic data as well as hundreds of square miles of 3D [three dimensional] data.'' [16] The DOI's Indian Affairs Office maintains an Atlas of Oil and Gas Plays on American Indian Lands as well as information sheets on the status of oil and natural gas reserves and drilling on a limited set of specific reservation lands.[17]

Growth in oil and natural gas production in Indian country is occurring or is expected in many areas. For example, the Jicarilla Apache Nation reports that it has almost 3,000 active and plugged oil and natural gas wells, and 2,000 miles of natural gas-gathering pipelines and roads, while the Ute Tribal Business Committee reports that the Ute reservation currently has 7,000 wells, and plans to open up an additional 150,000 acres to mineral leases.[18] The U.S. Energy Information Administration (EIA) reports that sales of crude oil produced on Indian lands located primarily in North Dakota and Utah increased 56 percent from 2003 to 2012, which is the highest recorded level.[19] Detailed drilling rig activity reported by EIA projects almost a doubling of new oil production from rigs at the Bakken formation, which underlies the Fort Berthold Indian Reservation, from December 2012 to December 2013.[20] The Bakken oil field covers about 200,000 square miles of the

[13] In the Indian Country Minor NSR rule, EPA established a registration program that required owners and operators of existing true minor sources to file a one-time registration with the appropriate reviewing authority by March 1, 2013. EPA's Region 8 Office has received more than 6,400 registrations from true minor sources in the oil and natural gas sector. This far exceeded the amount received from sources in any other category.

[14] ''Energy Development in Indian Country,'' Testimony Before the Senate Committee on Indian Affairs, J. Gillette, Deputy Asst. Secretary Indian Affairs, U.S. Dept. of the Interior, Feb. 16 2012, available at *http://www.doi.gov/ocl/hearings/112/IndianCountryEnergyDevelopment_021612.cfm.*

[15] *Id.*

[16] *Id.*

[17] For more information, see: *http://www.bia.gov/WhoWeAre/AS-IA/IEED/DEMD/oilgas/index.htm.*

[18] J. Kemp, Reuters Daily Online Publications, ''Tribes call for faster drilling on Indian lands,'' Feb. 5, 2013, available at *http://www.reuters.com/article/2013/02/05/column-kemp-oilgas-indian-lands-idUSL5N0B5A9W20130205.*

[19] U.S. EIA, ''Sales of Fossil Fuels Produced from Federal and Indian Lands, FY 2003 through FY 2012,'' May 30, 2013, available at *http://www.eia.gov/analysis/requests/federallands/.*

[20] U.S. EIA, ''Drilling Productivity Report for Key Tight Oil and Shale Gas Regions,'' March 2014, available at *http://www.eia.gov/petroleum/drilling/pdf/dpr-full.pdf.*

subsurface of the Williston Basin that lies under parts of the States of Montana, South Dakota, North Dakota and Montana in the United States, and the provinces of Manitoba and Saskatchewan in Canada.

Declines in air quality in states such as Wyoming and Utah have been attributed to oil and natural gas development. In a technical support document for its ozone nonattainment designation recommendation for the Upper Green River Basin, Wyoming indicated that oil and natural gas development was a ''pertinent factor'' in ozone concentrations found in Sublette County. In the Upper Green River Basin area, Wyoming attributed 94 percent of VOC emissions and 60 percent of the NO_X emissions in that area to oil and natural gas sources, and indicated that speciated data from elevated ozone events carried a characteristic oil and natural gas signature.[21]

Utah, which was ranked 11th in the nation in crude oil production in December 2013 [22] and 10th in the nation in natural gas marketed production in 2012,[23] has also experienced adverse air quality impacts from growth in oil and natural gas development. In June 2010, the Utah Department of Environmental Quality reported that 2009 winter-time ozone levels in the Uinta Basin reached a high-hour value of 0.137 ppm, a level that is well above the level of the current 8-hour ozone NAAQS of 0.075 ppm. They also reported that values of $PM_{2.5}$ in the winters of 2007, 2008, and 2009 were at concentrations at or above the $PM_{2.5}$ NAAQS.[24] Beginning in the winter of 2012, Utah undertook a multi-year, comprehensive study of emissions in the Uinta Basin, including areas of the Uintah and Ouray Indian Reservation. Based on data collected during the study, Utah concluded that 98–99 percent of VOC emissions and 57–61 percent of NO_X emissions in the area originated from oil and natural gas operations.[25]

In the United States, 418 counties are entirely or partly Indian country.[26] Table 1 summarizes the current status (as of August 2013) of existing air quality designations and design values (DVs) (2010–2012) of counties that are entirely or partly Indian country.[27] It includes information for the 8-hour 2008 ozone NAAQS, the 1997 $PM_{2.5}$ annual NAAQS,[28] 2006 $PM_{2.5}$ 24-hour NAAQS and the 1987 PM_{10} NAAQS. Although the total percentage of counties in Indian country which are known to be exceeding the NAAQS is not large, the potential exists for others to exceed the NAAQS as oil and natural gas production activities continue to grow.

TABLE 1—THE CURRENT STATUS OF DESIGNATIONS AND DVS (2010–2012) OF COUNTIES THAT ARE ENTIRELY OR PARTLY INDIAN COUNTRY

Designation	Counties where Indian country exists	Counties where Indian country and 2010–12 DVs exist	Counties where Indian country exists and that are exceeding NAAQS based on 2010–12 DVs
1997 $PM_{2.5}$ Annual NAAQS:			
Unclassifiable/Attainment	411	72	2
Maintenance	1	1	0
Nonattainment	6	6	6
Totals	418	79	8
2006 $PM_{2.5}$ 24 Hour NAAQS:			
Unclassifiable/Attainment	400	63	0
Maintenance	1	1	0

[21] Wyoming Dept. of Environmental Quality, ''State of Wyoming Technical Support Document I For Recommended 8-Hour Ozone Designation for the Upper Green River Basin, WY,'' March 2009, available at *http://www.epa.gov/groundlevelozone/designations/2008standards/rec/letters/08_WY_rec.pdf.*

[22] U.S. Energy Information Administration, ''Rankings: Crude Oil Production,'' Dec. 2013, available at *http://www.eia.gov/state/rankings/?sid=US#/series/46.*

[23] U.S. Energy Information Administration, ''Rankings: Natural Gas Marketed Production,'' 2012, available at *http://www.eia.gov/state/rankings/?sid=US#/series/47.*

[24] See Utah Dept. of Environmental Quality, ''Rural Air Quality and Oil/Gas in Utah Fact Sheet,'' June 2010, available at *http://www.tricountyhealth.com/June2010-%20Air%20Issues%20with%20Oil%20and%20Gas.pdf.*

[25] See Utah Dept. of Environmental Quality, ''Ozone in the Uintah Basin,'' Sept. 2013, available at *http://www.deq.utah.gov/locations/uintahbasin/docs/2013/09Sep/ozone2013.pdf.*

[26] Limitations of use: The EPA makes no claims regarding the accuracy or precision of data concerning Indian Country locations or boundaries on the EnviroFacts Web site (*http://www.epa.gov/enviro/*). The EPA has simply attempted to collect certain readily available information relating to Indian Country locations. Questions concerning data should be referred to the originating program or Agency which can be identified in the EnviroFacts tribal query metadata files for tribal areas in the lower 48 states (*https://edg.epa.gov/metadata/rest/document?id=%7B8077CD55-74FB-4107-8047-3DEC0D55966A%7D&xsl=metadata_to_html_full*), Alaska Reservations (*https://edg.epa.gov/metadata/rest/document?id=%7BE37B0B2-EB0B-436C-B993-C18D8895E522%7D&xsl=metadata_to_html_full*), Alaska Native Villages (*https://edg.epa.gov/metadata/rest/document?id=%7BE4341D1B-656F-4E76-86DB-9216E8A968EA%7D&xsl=metadata_to_html_full*), or Alaska Native Allotments (*https://edg.epa.gov/metadata/rest/document?id=%7B15FEB09B-752E-4B48-B01B D9F2D360623A%7D&xsl=metadata_to_html_full*). The Indian Country locations shown in these files are suitable only for general spatial reference and do not necessarily reflect the EPA's position on any Indian Country locations or boundaries or the land status of any specific location. The inclusion of Indian Country information on the EnviroFacts Web site does not represent any final EPA action addressing Indian Country locations or boundaries. This information cannot be relied upon to create any rights, substantive or procedural, enforceable by any party in litigation with the United States or third parties. The EPA reserves the right to change information on EnviroFacts at any time without public notice. The EPA uses the U.S. Census Bureau 2010 tribal boundary layer data when developing environmental data query responses for tribes in the lower 48 United States and information from the Bureau of Land Management Alaska State Office when developing environmental data query responses for tribes in Alaska. The tribal boundary locations identified are suitable only for general spatial reference and do not necessarily reflect the EPA's position on any Indian Country locations or boundaries, or the land status of any specific location. The EPA seeks to use the best available national Federal data and may refine the tribal boundary layer in the future as more accurate national Federal data become available.

[27] Information for those NAAQS for which the EPA has designated nonattainment areas in Indian Country are available online at *http://www.epa.gov/air/tribal/tribalnsr.html* and Docket ID No. EPA–HQ–OAR–2011–0151. NAAQS for which the EPA has designated nonattainment areas in Indian Country are: ozone (2008 NAAQS), PM_{10} (1987 NAAQS), $PM_{2.5}$ 24-Hour (2006 NAAQS), and $PM_{2.5}$ annual (1997 NAAQS). No tribal lands are currently designated nonattainment for SO_2 (2010 NAAQS), NO_2, lead (2008 NAAQS), or CO.

[28] Designations under the 2012 $PM_{2.5}$ annual standard (12.0 µg/m³) have not yet occurred.

TABLE 1—THE CURRENT STATUS OF DESIGNATIONS AND DVS (2010–2012) OF COUNTIES THAT ARE ENTIRELY OR PARTLY INDIAN COUNTRY—Continued

Designation	Counties where Indian country exists	Counties where Indian country and 2010–12 DVs exist	Counties where Indian country exists and that are exceeding NAAQS based on 2010–12 DVs
Nonattainment	17	16	6
Totals	418	80	6
2008 Ozone NAAQS:			
Unclassifiable/Attainment	395	100	18
Unclassifiable	2		
Nonattainment	21	21	18
Totals	418	121	36
1987 PM_{10} NAAQS:			
Unclassifiable/Attainment	384	35	3
Maintenance	13	4	1
Both Nonattainment and Maintenance Areas	6	5	2
Nonattainment	15	13	8
Totals	418	57	14

A map displaying the areas of Indian country for which we have ozone and $PM_{2.5}$ monitors is available in the docket for this ANPR (EPA–HQ–OAR–2011–0151), which is available at *www.regulations.gov.* As shown by the map, a number of areas of Indian country lack a robust monitoring network for these pollutants. Consequently, there are uncertainties about the extent of environmental impacts from oil and natural gas production in Indian country. Given the environmental impacts from oil and natural gas production in various states, as discussed above, air quality in Indian country may likewise be at risk of reaching unhealthy levels due to impacts from oil and natural gas production in Indian country.

2. Efforts To Improve Oil and Natural Gas Production Emissions and Other Data

The EPA is working to improve our understanding of emissions from oil and natural gas generating activity. We recently developed an Oil and Gas Emission Estimation Tool that uses a methodology designed to estimate county-level emissions for the oil and natural gas production sector.[29] Tool development started in April 2012 and has been performed in collaboration with a national workgroup, which includes state and regional emissions inventory developers. The draft tool produces county-level emissions estimates for many of the processes associated with oil and natural gas exploration and production for calendar year 2011. For criteria pollutants and hazardous air pollutants (HAP), this methodology is being used by the EPA to estimate emissions for use in the National Emissions Inventory (NEI) for field exploration, production, and gathering activities. The tool allows for subtracting out point source emissions from the tool's nonpoint source emission estimates to avoid double counted emissions. The tool estimates emissions from the following oil and natural gas production processes:

Drill rigs;
Workover rigs;
Well completions (flaring/venting for both conventional and green completions);
Well hydraulic fracturing and completion engines;
Heaters (separator, line, tank, reboilers);
Storage tanks (condensate, black oil, produced water);
Mud degassing;
Dehydration units;
Pneumatics (pumps, all other devices);
Well venting/blow downs (liquid unloading);
Fugitives;
Truck loading;
Wellhead engines;
Pipeline compressor engines;
Flaring;
Artificial lifts; and
Gas actuated pumps.

In addition, we recently completed a draft estimate of emissions from oil and natural gas production activity in Indian country (except for Alaska).[30] The analysis uses outputs from the Oil and Natural Gas Emissions Estimation Tool, as well as point source data submitted by states and tribes to the 2011 NEI. Because tribes have only submitted limited oil and natural gas emissions data to the NEI, we have developed a methodology that relies heavily on state-submitted data to develop draft emissions estimates for sources in Indian country. We welcome feedback on our analysis and its assumptions and how to continue to improve these estimates in the future.

Also, the EPA's Greenhouse Gas Reporting Program, which was required by Congress in the FY2008 Consolidated Appropriations Act, collects activity and emissions data annually from petroleum and natural gas systems facilities that are above the 25,000 metric ton carbon dioxide equivalent reporting threshold. The data are reported by facilities located across the United States, including facilities that operate in areas of Indian Country.

Further, due to the cooperative efforts of states, the oil and natural gas industry, multi-state organizations (e.g., Central States Air Resources Agencies

[29] A description of the tool, how it was developed, and its intended use is available at *http://www.epa.gov/ttn/chief/net/2011inventory.html* under ''2011 NEI Version 1 Documentation,'' see Nonpoint Emission Tools and Methods.

[30] The draft analysis is available in the docket for this ANPR, EPA–HQ–OAR–2011–0151, *www.regulations.gov*. The analysis does not include an estimate of the emissions that may occur for tribal lands adjacent to Alaska because the underlying spatial allocation done for the county-based data is not readily available for Alaska.

(CenSARA) and WRAP) and environmental organizations, improvements have been made in the development of emissions estimation methodologies and in the submission of data to the 2011 NEI. These efforts have substantially improved the quantity and quality of state emissions information in the inventory, and, to a lesser but still helpful extent, Indian country emissions information. This increase in information has improved our understanding of the emissions impacts of the oil and natural gas exploration and production sector. The following summary describes some of these efforts.

EPA Region 8: In 2008, the EPA's Region 8 Office (for Montana, North and South Dakota, Wyoming, Colorado, and Utah) assessed the environmental impacts of oil and natural gas production in that region, including areas of Indian country. The assessment concluded that VOC emissions from activities associated with oil and natural gas production comprised over 40 percent of the total criteria pollutant emissions in the EPA Region 8 states in 2002, while emissions of NO_X, CO and SO_2 contributed approximately 15 percent, 9 percent and 4 percent of total criteria pollutant emissions in the Region, respectively. While the study found that PM emissions from oil and natural gas production activity constituted a comparatively small fraction of total regional criteria pollutant emissions, the study, nonetheless, expressed concern about the potential impacts of PM emissions from this sector in the future given expected industry growth rates.[31]

Texas: While there are limited areas of Indian country in Texas, information about the emissions from oil and natural gas production in the State may be indicative of the types of emissions in certain areas of Indian country. In 2010, Texas released a comprehensive report characterizing emissions from oil and natural gas production in the State. The report concluded that emissions from ''area source oil and gas production sites on a state-wide basis are significant with over 200,000 tons of NO_X, 1,500,000 tons of VOC, and 30,000 tons of HAP emitted in 2008.'' [32] Even larger contributions of VOC emissions originated from storage tanks and pneumatic pumps. The report indicated that compressor engines and artificial lift engines were the main sources of NO_X emissions.[33]

WRAP: The WRAP began efforts to improve emissions estimation methodologies and inventories in 2005. In Phase III and IV of its study, WRAP developed a comprehensive base year inventory for several basins in the Rocky Mountain area that encompass areas of Indian country. The Phase III inventory showed that VOC emissions varied widely between basins, with pneumatic devices, dehydrators, and tanks being significant sources of VOC in non-coal methane basins. The Williston Basin had significantly higher VOC emissions from oil and natural gas activity than any other basin at over 350,000 tons/year. Three other basins had VOC emissions that neared 100,000 tons/year.

The WRAP emissions inventory effort also found that emissions of NO_X per wellhead have remained relatively stable with differences explainable by the amount of centralized versus well pad compression used.[34] Estimated emissions of SO_2 were comparatively less significant, and the predominant source of SO_2 emissions from oil and natural gas occurs downstream from oil and natural gas production in gas processing plants.[35]

In July 2011, the WRAP published the first emissions inventory report that attempts to quantify the contribution of oil and natural gas mobile source emissions to total emissions inventories. Results of this limited study showed that mobile sources did not contribute significantly to total VOC, CO, and NO_X emissions, but did comprise a significant proportion of total PM_{10} emissions due to vehicle traffic on unpaved roads.[36]

CenSARA: In 2012, CenSARA released an oil and natural gas emissions study that included such area source emission points as hydraulic fracturing pumps, casing gas venting, produced water storage tanks, gas-actuated pneumatic pumps, fugitive emissions from compressor seals, mud degassing, and hydrocarbon liquids loading. Emissions estimates for these sources, however, contain some uncertainties due to data gaps on equipment usage and size, local gas compositions, usage of control methods, and venting rates for particular sources. The CenSARA study concluded that major sources of VOC emissions vary greatly by basin, and that pneumatic devices and storage tank emissions consistently remained significant sources of VOC emissions in all basins. For NO_X emissions, the report identified wellhead compressor engines as the ''largest source of NO_X emissions across the CenSARA domain, representing on average at least 50 percent of the total basin-level NO_X emissions in some of the basins such as Permian, Western Gulf, Anadarko, Bend Arch Fort Worth and East Texas.'' The report also identified heaters as a major source of NO_X emissions, especially in oil producing basins. Notably, the report did not specifically highlight NO_X emissions from flaring, but instead included these emissions within its estimates for different source types such as well completions, condensate tanks, crude oil tanks, blow downs and dehydrators.[37]

Efforts to improve emission estimation and measurement methodologies and characterize air quality impacts from oil and natural gas production operations are ongoing. While the quantity and quality of our NO_X and VOC inventories are getting better, we cannot combine prior and current information to form emission trends for oil and natural gas production because of the lack of quality data regarding these sources in earlier inventories. Also, non-ozone precursors and other criteria pollutants are not as well studied and characterized, although the WRAP emissions inventory project suggests that the primary source of SO_2 emissions is natural gas processing plants.[38]

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[31] U.S. EPA Region 8, ''An Assessment of the Environmental Implications of Oil and Gas Production: A Regional Case Study,'' Working Draft, Sept. 2008, available at *http://www.epa.gov/sectors/pdf/oil-gas-report.pdf.*

[32] M Pring, D. Hudson, J. Renzaglia, B. Smith and S. Treimel, Eastern Research Group, Inc., ''Characterization of Oil and Gas Production Equipment and Develop a Methodology to Estimate Statewide Emissions,'' final report for Texas Commission on Environmental Quality, Air Quality Division, Nov. 24, 2010, available at *http://www.tceq.texas.gov/assets/public/implementation/air/am/contracts/reports/ei/5820784003FY1026-20101124-ergi-oilGasEmissionsInventory.pdf.*

[33] *Id.*

[34] A. Bar-Ilan, ENVIRON International Corp. and T. Moore, WRAP/Western States Air Resources Council (WESTAR), ''Upstream Oil and Gas Emission Inventories: Regulatory and Technical Considerations,'' Oct. 21, 2013, available at *http://www.wrapair2.org/pdf/Moore_Barilan_OandG_Inventories_10_20_13.pdf.*

[35] L. Gribovicz, WRAP, ''Analysis of States' and EPA Oil & Gas Air Emissions Control Requirements for Selected Basins in the Western United States (2013 Update), Nov. 8, 2013, available at *http://www.wrapair2.org/Analysis.aspx.*

[36] A. Bar-Ilan, J. Grant, R. Parikh, R. Morris, ENVIRON International Corp. and D. Henderer, Kleinfelder/Buys and Assos., ''Oil and Gas Mobile Sources Pilot Study,'' U.S. EPA work assignment report 4–08, July 2011, available at *http://www.wrapair2.org/pdf/2011-07_P3%20Study%20Report%20(Final%20July-2011).pdf.*

[37] ENVIRON and Eastern Research Group, Inc., prepared for CenSARA, ''2011 Oil and Gas Emission Inventory Enhancement Project for CenSARA States,'' Dec. 21, 2012, available at: *www.censara.org/html/presentations.php?mode=download&id=200.*

[38] L. Gribovicz, WRAP, ''Analysis of States' and EPA Oil & Gas Air Emissions Control Requirements

We also recognize that VOC emissions information from sources located within one geological formation may not be representative of the type of emissions expected from other formations. Different geological formations produce different types of fluids and gases which affect the pollutant concentrations in emissions from those gases and liquids. VOC emissions rates at a single well tend to decline after the time the well is drilled and becomes productive. These rates can also change due to operational variances resulting from declines in flow rates and temperature fluctuations. Pollutant concentrations from the same well site also change as production draws liquids and gas from deeper within the formation.

3. Summary Conclusions on the State of Oil and Natural Gas Production Emissions and Associated Air Quality Information in Indian Country

When the Agency reviews the information available to characterize the emissions impact of ongoing oil and natural gas production activity in Indian country, we reach two main conclusions. First, we recognize the need to continue improving our understanding of oil and natural gas production emissions and activity in Indian country. Second, despite the need for additional information and associated uncertainties, we believe enough information is available that it is appropriate to seek comment on the need to establish requirements for existing sources to protect air resources and public health in Indian country from the impacts of oil and natural gas production activity, especially in cases where adjoining state requirements address existing sources in those states. Available evidence indicates that cumulative emissions from existing sources in the oil and natural gas production industry are causing elevated ambient ozone levels in areas outside of Indian country. We believe that air quality in Indian country may be similarly at risk of reaching unhealthy levels from the cumulative impacts of oil and natural gas production sources. Although at this time, we cannot quantify the magnitude of that risk, we believe that there is the possibility that air quality levels may violate the 8-hour ozone NAAQS in some areas currently classified as unclassifiable/attainment, and also may cause increases in ozone concentrations in areas already violating the 8-hour ozone NAAQS.

for Selected Basins in the Western United States (2013 Update),'' Nov. 8, 2013, available at *http://www.wrapair2.org/Analysis.aspx.*

This second conclusion is based on best available information on oil and gas emissions and associated air quality, including: Data provided to EPA through efforts led by individual states or multi-state organizations to improve our understanding of oil and natural gas emissions and associated air quality information for areas with oil and natural gas production operations; state emissions inventories for, and studies of, the oil and natural gas production industry that provide us with information on the predominant sources of VOC and NO_X emissions in the oil and natural gas sector; and state and EPA regulatory efforts [39] to control emissions from new and existing sources in the oil and natural gas industry that indicate that cost-effective emissions reductions are likely available to control emissions from these VOC and NO_X emissions sources. Given these factors, we believe it is appropriate to seek comment on regulating existing oil and natural gas production emission sources, as well as new and modified minor sources and minor modifications at major sources located in Indian country through a FIP or other approach to ensure air quality resources are protected in Indian country.

V. Federal Implementation Plan Approach

A. What is a FIP?

Under section 302(y) of the Act, the term ''Federal implementation plan'' means ''. . . a plan (or portion thereof) promulgated by the Administrator to fill all or a portion of a gap or otherwise correct all or a portion of an inadequacy in a State implementation plan, and which includes enforceable emission limitations or other control measures, means or techniques (including economic incentives, such as marketable permits or auctions of emissions allowances), and provides for attainment of the relevant national ambient air quality standard.'' 42 U.S.C. 7602.

While the definition refers only to an inadequacy in a state plan, we also use this term to describe actions we take to regulate emissions in Indian country pursuant to our authority under CAA section 301(d) which authorizes us to treat Indian tribes as states and, in appropriate circumstances, to issue regulations establishing applicable requirements. 42 U.S.C. 7601(d).

[39] See, e.g., L. Gribovicz, WRAP, ''Analysis of States' and EPA Oil & Gas Air Emissions Control Requirements for Selected Basins in the Western United States (2013 Update),'' Nov. 8, 2013, available at *http://www.wrapair2.org/Analysis.aspx;* NSPS 40 CFR Part 60, Subpart OOOO; and B. Finley, Denver Post, ''Colorado takes up details in push to cut oil and gas air pollution,'' Nov. 22, 2013, available at *http://www.denverpost.com/environment/ci_24575958/colorado-takes-up-details-push-cut-oil-and.*

The Indian country minor NSR rule is an example of a FIP. In that rule, we identified a regulatory gap that could have the effect of adversely impacting air quality due to the lack of approved minor NSR permit programs to regulate construction of new and modified minor sources and minor modifications of major sources in Indian country. The EPA promulgated the FIP to ensure that air resources in Indian county are protected by establishing a preconstruction permitting program to regulate emissions increases resulting from construction and modification activities that are not already regulated by the major NSR permitting programs.

B. What is the EPA's authority for issuing a FIP regulating sources in Indian country?

Section 301(d) of the CAA, 42 U.S.C. 7601(d), directs us to promulgate regulations specifying the provisions of the Act for which it is appropriate for us to treat Indian tribes in the same manner as states. Pursuant to this statutory directive, the EPA promulgated regulations entitled ''Indian Tribes: Air Quality Planning and Management'' [Tribal Air Rule (TAR)] 63 FR 7254 (February 12, 1998). This regulation delineates the CAA provisions for which we will treat tribes in the same manner as states. *See* 40 CFR 49.3, 49.4. In this regulation, we determined that we would not treat tribes as states with respect to CAA section 110(a)(1) (State Implementation Plan (SIP) submittal) and CAA section 110(c)(1) (directing the EPA to promulgate a FIP ''within 2 years'' after we find that a state has failed to submit a required plan, or has submitted an incomplete plan, or within 2 years after we disapproved all or a portion of a plan), among other provisions. See 40 CFR 49.4(a), (d); 63 FR at 7262–66 (February 12, 1998).

The TAR preamble clarified that by including CAA section 110(c)(1) on the § 49.4 list, ''EPA is not relieved of its general obligation under the CAA to ensure the protection of air quality throughout the nation, including throughout Indian country. In the absence of an express statutory requirement, EPA may act to protect air quality pursuant to its 'gap-filling' authority under the Act as a whole. *See, e.g.* CAA section 301(a).'' 63 FR at 7265, Feb. 12, 1998. The preamble confirmed that ''EPA will continue to be subject to the basic requirement to issue a FIP for affected tribal areas within some reasonable time.'' *Id.* (referencing § 49.11(a) which provides that the Agency will promulgate a FIP as necessary or appropriate to protect tribal air quality within a reasonable time if tribal efforts do not result in adoption and approval of tribal plans or programs).[40]

The preamble to the TAR also set forth our view that, based on the ''general purpose and scope of the CAA, the requirements of which apply nationally, and on the specific language of sections 301(a) and 301(d)(4), Congress intended to give to the Agency broad authority to protect tribal air resources.'' *Id.* at 7262. It further discussed the EPA's intent to ''use its authority under the CAA 'to protect air quality throughout Indian Country' by directly implementing the Act's requirements in instances where tribes choose not to develop a program, fail to adopt an adequate program or fail to adequately implement an air program.'' *Id.*

In this action, we are soliciting comment on the concept of using a FIP to regulate new and modified emissions units at facilities in the oil and natural gas production segment that operate in Indian country. Additionally, we are soliciting comments on whether a FIP, if that is determined to be an appropriate permitting approach for new oil and natural gas production sources, should also be used to regulate existing sources. If we determine that it is ''necessary or appropriate'' to exercise our discretionary authority under sections 301(a) and 301(d)(4) of the CAA and 40 CFR 49.11(a) of our implementing regulations, we will publish a proposed rule that provides an opportunity for full public review and comment.

The EPA has already promulgated a FIP regulating new, modified and existing oil and natural gas production operations[41] on the Fort Berthold Indian Reservation (78 FR 17836, March 22, 2013). The FIP requires owners and operators of new, modified and existing oil and natural gas production facilities to reduce VOC emissions from certain equipment. The rule is aimed at addressing significant emissions of VOC that could potentially threaten public health and the environment, while minimizing the regulatory burden (i.e., under the FIP, there is no source-by-source review of permit applications) and disruption to economic development on the reservation. The rule also provides improved consistency between what oil and natural gas production sources located on the reservation must do to control emissions and the requirements applicable to oil and natural gas production sources located on neighboring lands within State jurisdiction in North Dakota.

C. Would an oil and natural gas FIP apply in addition to the Indian Country Minor NSR permitting program and would compliance with the FIP be mandatory?

We envision that a source that complies with appropriate requirements for construction and modification under the FIP would not cause or contribute to a NAAQS or increment violation. Accordingly, the oil and natural gas FIP would serve the purpose for which the EPA promulgated the Indian Country Minor NSR permitting program, and, thus, it would be unnecessary to require a facility complying with the requirements for modification and construction activities in the FIP to also comply with requirements in the Indian Country Minor NSR permitting program.

The Indian Country Minor NSR permitting program established general requirements to regulate construction and modification of minor sources and minor modifications at major sources from all types of pollutant-emitting source categories. Because a FIP would establish requirements tailored only for facilities in the oil and natural gas production segment, the EPA could specify control technology requirements that ensure that emissions increases from construction or modification of a minor source or minor modifications of a major source would not cause or contribute to a NAAQS or increment violation. In Section VII.A., we request comment on how we might coordinate compliance between the two programs if we were to pursue a FIP approach.

D. Could a FIP be used to satisfy major source NSR requirements?

A FIP would not replace the requirement for major sources to obtain a preconstruction permit and comply with Best Available Control Technology (BACT) emission limitations (in attainment and unclassifiable areas) or Lowest Achievable Emission Rates (LAER) (in nonattainment areas) before beginning actual construction of a new major source, or undertaking a major modification. However, if the enforceable requirements of the FIP limited the potential to emit of a new major source or the emissions increase of a major source undergoing a modification to less than major source levels, those sources could avoid the requirements for new major sources or major modifications. Both sections 165 and 172 of the CAA explicitly require major sources to obtain permits for the construction and operation of new or modified major stationary sources. 42 U.S.C. 7475 and 7502. We have already promulgated FIPs to carry out the major source permitting requirements of the Act for these areas (40 CFR 49.166–49.173, 52.21, and 52.24).

An oil and natural gas production FIP for minor sources, or minor modifications at major sources, could assist in providing a more streamlined major NSR permit issuance process in the event a new major source locates in Indian country, or an existing source undergoes a major modification. This likely could occur if the emissions controls required in the FIP were subsequently determined to constitute BACT or LAER controls, or because the emission reductions from the FIP help preserve the PSD increment in a given area. The development of the FIP will also provide interested parties the opportunity for full comment and review of the regulatory provisions.

VI. General Permit Approach

A. What is a general permit?

Under a CAA general permit approach, the EPA would use its permitting authority, established pursuant to 40 CFR 49.156, to issue a permit document (i.e., a general permit) that contains emissions limitations, monitoring, recordkeeping, and reporting requirements for a particular category of sources. The general permit would address emissions from new and modified units at the permitted source. To obtain coverage under the general permit, a minor source would submit an application for coverage to the reviewing authority. The application would demonstrate that the source qualifies as part of the relevant source category and also contains information on the nature of the construction or modification activity, including the type of sources involved and the magnitude of the proposed emissions increase. The reviewing authority would review the application once it was complete to verify that the source qualifies for coverage under the general permit and that it can meet the requirements of the

[40] 40 CFR 49.11(a) states that the EPA ''[s]hall promulgate without unreasonable delay such Federal implementation plan provisions as are necessary or appropriate to protect air quality, consistent with the provisions of sections 301(a) and 301(d)(4), if a tribe does not submit a tribal implementation plan meeting the completeness criteria of 40 CFR part 51, appendix V, or does not receive EPA approval of a submitted tribal implementation plan.''

[41] The FIP defined existing sources as sources constructed or modified on or after August 12, 2007 but before April 22, 2013 (April 22, 2013 is the effective date of the FIP). Sources constructed or modified on or after April 22, 2013 are new and modified under the FIP.

permit. Following this review period, which includes the opportunity for the public to comment on the appropriateness of a source receiving coverage under a general permit, the reviewing authority would issue a notice of approval or would deny the request for coverage. This process can take as long as 90 days. The public would have an opportunity to comment on the terms and conditions of the general permit itself that would apply to the sources gaining coverage under the permit only during the time the EPA is developing the permit and within that process. Once the EPA issues the permit, the public may only challenge whether a particular source qualifies for coverage under the established permit.

B. How would a general permit compare to a FIP?

As discussed previously, although NSR general permits cannot be used to address existing sources, a FIP could extend to existing sources; this is a key distinction between general permits versus a FIP.

Another distinction between a general permit and a FIP relates to the ability of the public to comment on and appeal a source's commencement of construction. To inform the public of the proposed construction project under a general permit or a FIP, we envision that the process could require the reviewing authority to make the source's advance notice available to the public, probably by posting it on the internet. Unlike the procedures for issuing and appealing a general permit, however, there would be no process for a citizen to comment on or appeal the right of a source to begin construction under the authority of an oil and natural gas production FIP. Nonetheless, an oil and natural gas production FIP would require a source to meet emission control requirements intended to avoid an increase in emissions that could cause or contribute to a NAAQS or PSD increment violation.

With respect to compliance and enforcement, the EPA (or a tribe with implementing authority) would be responsible for compliance and enforcement on a regular basis. In addition, any citizen could enforce the provisions of a general permit or a FIP, as it would the requirements of any other implementation plan or CAA requirement by commencing a civil action in the district court in the judicial district in which the source is located. Citizens retain the right under CAA section 304(a)(1) to commence a civil action ''against any person . . . who is alleged to have violated . . . or to be in violation of (A) an emission standard or limitation under this [Act]. . . .'' 42 U.S.C. 7604(a)(1). The Administrator also would retain the ability to enforce the requirements of a FIP under section 113(a)(1) of the Act, and in some cases, section 167 of the Act. 42 U.S.C. 7413 and 7477.

Both a general permit and an oil and natural gas production FIP provide a more streamlined approach for authorizing construction and modification of a source compared to site-specific permitting. Because an oil and natural gas production FIP would not require a source to initiate advance review and approval of coverage from the reviewing authority (similar to a permit by rule approach), it would reduce the resource burden on reviewing authorities associated with processing the potentially large volume of requests from true minor sources in the oil and natural gas production segment for coverage under a general permit. However, a FIP would provide less upfront scrutiny of an individual construction or modification project, and, unlike under a general permit, a citizen would not have the ability to object to a permit or a specific project gaining coverage and proceeding with construction under a FIP. The FIP would rely on the overall strength of the emissions control requirements and the compliance monitoring and reporting provisions (including potentially regulating both new and existing emissions generating activities) in the FIP to ensure that a new or modified source does not cause or contribute to a NAAQS or PSD increment violation.

Unlike a site-specific permit, both a general permit and a FIP would require a pre-defined, standardized level of control that would not provide flexibility to adapt applicable requirements to the specific needs of individual areas of Indian country. A FIP could, however, be designed to address such needs in a broad way by requiring differing levels of control in areas with differing air quality concerns. Under the Indian Country Minor NSR rule, a reviewing authority could deny a source's request for coverage under the general permit and instead issue a site-specific permit to address the unique needs of the area or source. This option can be available if we retain applicability of the Indian Country Minor NSR rule and use the FIP only as an optional, alternative mechanism. (See Section VII.A.)

One potential advantage of not retaining an option for site-specific permitting along with the FIP (discussed in Section VII.F.) is that regulated sources operating throughout Indian country would be subject to a ''level playing field,'' (i.e., all sources, or at least those located in or planning to locate in areas with similar air quality, would be subject to the same requirements). This would ensure that all oil and natural gas production sources in areas of Indian country with similar air quality are subject to the same level of emissions control. Neither a FIP nor a general permit could guarantee a ''level playing field'' in relation to sources in surrounding areas where states may have more or less stringent requirements than those that apply under the FIP or general permit in Indian country. Another approach would be for the FIP itself to provide a source the ability to seek a site-specific limit through a site-specific permit or FIP. We request comment on whether the inclusion of such a provision would be advisable.

The EPA seeks comment on the advantages and disadvantages associated with using a FIP approach versus a general permit approach or other potential approaches such as a permit by rule that could be taken to manage air quality impacts from oil and natural gas production sources located in Indian country. We note that a permit by rule approach and a FIP approach would function in much the same manner, however a FIP could be used to address existing sources whereas an NSR permit by rule would be limited to new and modified sources.

VII. Areas Where the EPA Is Requesting Comment

A. How would an oil and natural gas FIP or general permit relate to the Indian Country Minor NSR rule?

We envision designing any proposed FIP or general permit such that the emissions from a source that complies with the requirements for construction and modification likely would be protective of the NAAQS. Accordingly, we believe it is unnecessary to require a source to comply with both programs (i.e., the FIP or general permit and the Indian Country Minor NSR rule). We request comment on this approach.

In concert with promulgation of a FIP or issuance of a general permit, we could amend the Indian Country Minor NSR permitting program to provide a blanket exemption for all sources in the oil and natural gas production segment subject to the FIP or general permit. As a result, a minor source that constructs, or a minor or major source that undertakes a minor modification in Indian country, would need to comply only with the requirements in an oil and natural gas production FIP or general permit.[42] Alternatively, we could exempt from the Indian Country Minor NSR permitting program only those sources that choose to comply with the requirements of an oil and natural gas production FIP or general permit in lieu of going through the permitting process from the minor NSR permitting program. This would mean that a source would have an option of choosing which program to comply with: (1) The FIP or general permit or (2) a site-specific alternative requirement. This may be appropriate if a particular source faces unique circumstances and it believes that permitting under a site-specific permit would result in different control requirements than required under the FIP or general permit. The resources required for reviewing and processing site-specific permits could increase the resource burden on reviewing authorities and thereby reduce some of the benefits of a FIP or general permit, but would provide flexibility to the industry. It would also increase the burden on the reviewing authorities as they would need to do more checking on actual growth and changes in air quality because of lack of full coverage of the FIP or general permit.

Under the first approach, all sources would be required to comply with the oil and natural gas production FIP or general permit, and would not be able to avail themselves of a site-specific permit. Non-compliance with the FIP or general permit provisions could result in an enforcement action. Under the second approach, a source would have to specifically request coverage under the Indian Country Minor NSR regulation, and failure to do so could result in an enforcement action. We request comment on the best means for coordinating compliance between a FIP or general permit and the Indian Country Minor NSR permitting program, and whether we should allow individual sources a choice as to the program with which they will comply.

B. Should we regulate existing emission units at a source under a FIP?

We are concerned that the rapid growth of the oil and natural gas production segment in combination with existing exploration and production activities could result, or in some cases already has resulted, in adverse air quality impacts. We also believe that a number of cost-effective emission reduction measures could be applied to existing emissions units to balance new growth by mitigating the potential for adverse air quality impacts from overall increases in emissions. A number of state air pollution control agencies already regulate some existing emissions from this segment.[43] For example, in February 2014 Colorado adopted additional regulations for oil and natural gas production operations that include such requirements as expanding nonattainment area pneumatic control requirements statewide and reducing venting and flaring of gas streams at well sites, among other control strategies.[44] Colorado's proposed revisions indicate that operators could install flares and controls on existing, uncontrolled storage tank batteries with VOC emissions of 6 tons per year (tpy) or higher at an average cost effectiveness value of $716 per ton of VOC reduced, and could install flares on existing produced water storage tanks with VOC emissions of 6 tpy or higher at an average cost effectiveness value of $715 per ton of VOC reduced.[45] In addition, the regulations determined leak detection and repair monitoring to be cost effective at oil and natural gas production facilities. Some technologies may even provide the industry with cost savings due to recovered product. For example, the EPA's Natural Gas Star program estimates that adding a vapor recovery unit to a storage tank could pay for itself in 3 to 37 months, and thereafter result in cost savings.[46]

In view of the availability of cost-effective emission reductions, and the impact of these existing emission sources on air quality, we are requesting comment on whether to require emission controls for existing oil and natural gas production sources in Indian country to create a growth margin that will allow further development in the oil and natural gas production segment in a manner that is protective of the environment. We are concerned about the impact existing sources have already had on air quality in some areas of Indian country. The EPA seeks comment on whether, if the EPA were to promulgate a FIP, the FIP should impose control requirements on new and modified minor sources and minor modifications at major sources, as well as on existing sources. We also request comment on the specific emissions units we should include or exclude in such a proposed regulation addressing existing source emissions.

Some state air rules also contain setback requirements that ensure that new oil and natural gas production activities occur outside a set distance from certain types of structures, such as schools, hospitals or residential dwellings. We request comment on the concept of including a setback requirement in a FIP, as well as the distances we might consider for any such setback requirement, and on the type of structures for which a setback requirement might be appropriate.

Existing sources would not be addressed by a general permit or a permit by rule for oil and natural gas sources locating in Indian country because NSR general permits and permits by rule cannot apply to existing sources given that the EPA's authority under the CAA new source review provisions relates to new sources. If the EPA were to develop a general permit or a permit by rule rather than a FIP to manage emissions impacts in Indian country due to oil and natural gas production activities, then we request comment on how could we best ensure protection of the NAAQS.

C. Would a FIP or general permit apply uniformly or would the requirements vary depending on a source's location?

The EPA is also interested in receiving comments on the question of whether, if a FIP were promulgated or a general permit were issued, the FIP or general permit should apply uniformly across all of Indian country (including existing sources, regardless of whether they have undergone modifications) or whether the requirements should vary according to CAA designation status or based on other criteria.

In conjunction with considering whether we should regulate existing emissions units in a national FIP or general permit, we will consider whether we should create uniform standards that apply in all areas, or have the requirements vary in different oil

[42] A major source may also have certain recordkeeping/reporting obligations under the reasonable possibility provisions of the major source program.

[43] See, e.g., L. Gribovicz, WRAP, ''Analysis of States' and EPA Oil and Gas Air Emissions Control Requirements for Oil and Gas Emissions Control Requirements for Selected Basins in the Western United States (2013 Update),'' Nov. 8, 2013, available at *http://www.wrapair2.org/pdf/2013-11x_O&G%20Analysis%20(master%20w%20State%20Changes%2011-08).pdf.*

[44] See Colorado Dept. of Public Health and Environment, Air Quality Control Commission Web site at *http://www.colorado.gov/cs/Satellite/CDPHE-AQCC/CBON/1251647985820.*

[45] Colorado Dept. of Public Health and Environment, Air Quality Control Commission, ''Cost-Benefit Analysis Submitted Per § 24–4–103(2.5), C.R.S.,'' February 19, 2014, available at *ftp://ft.dphe.state.co.us/apc/aqcc/COST%20BENEFIT%20ANALYSIS%20%26%20EXHIBITS/CDPHE%20Cost-Benefit%20Analysis_Final.pdf.*

[46] See ''Lessons Learned from Natural Gas STAR Partners; Installing Vapor Recovery Units on Storage Tanks,'' available at *http://epa.gov/gasstar/documents/ll_final_vap.pdf* on the EPA's Natural Gas Star Web site: *http://epa.gov/gasstar/index.html.*

and natural gas basins or air quality control regions. If we were to vary the requirements depending on a source's location, we would consider the areas of Indian country for which it may be appropriate or necessary to regulate existing emissions units. Potential options for a national FIP or general permit include:

1. Uniform requirements across all areas of Indian country;
2. Uniform requirements only in nonattainment areas for a particular pollutant;
3. Uniform requirements in nonattainment areas and in certain attainment areas that are approaching nonattainment based on an area's design value(s);
4. Uniform requirements across oil and natural gas basins or air quality control regions that exceed a certain density of well pad sites;
5. Requirements that vary by basin based on air quality needs; or
6. Requirements that vary by basin based on information or requirements from surrounding states.

In considering these options, we would consider factors such as the resources and time necessary to develop and implement the standards, a desire to foster a ''level playing field'' between sources located in different areas, the availability and cost-effectiveness of various control technologies, and our existing knowledge related to air quality in different areas of Indian country.

In general, uniform standards that apply to all sources are less complex to establish and implement than requirements that vary. If, in a national FIP or general permit, we vary requirements in different oil and natural gas basins or air quality control regions, then the rule would likely take additional time to develop and implement. Compliance would be correspondingly delayed and emissions reduction benefits realized more slowly. Inconsistent regulations could also be more difficult and complicated for the regulated community to understand and comply with, especially for companies with operations in multiple areas. In comparison, the benefits from uniform standards could be realized sooner and the requirements could be more easily understood, but uniform standards would need to ensure a sufficient level of protection for all areas in which they would apply despite differences in air quality issues in different areas.

During the comment period for the Indian Country Minor NSR rule, we received comments suggesting that requiring a single set of controls for all minor sources across Indian country does not provide the needed flexibility to adapt regulations to the needs of individual areas of Indian country or take into account the benefit of a ''level playing field'' with surrounding areas. Conversely, other commenters expressed concern that if a federal program varies requirements across Indian country, then sources within certain areas of Indian country may be placed at a competitive disadvantage compared to sources located in other areas of Indian country. 76 FR 38748, 38760–61, July 1, 2011. For example, if we regulate existing units at a source by mirroring appropriate requirements found in surrounding state jurisdictions, then many emission units at a source in the same area may be subject to similar requirements, but sources in different areas of Indian country would be subject to different requirements because the requirements can vary from state to state. We request comment on the best manner for considering or reconciling these opposing views in the context of determining the manner, and the areas in which, we might regulate existing emissions units.

Using design values or attainment status to identify areas in need of enhanced environmental protection may yield results that are not equitable and/or fully protective of air quality, due to the scarcity of air monitoring in Indian country. For example, we might require more stringent controls in a tribal area designated as nonattainment, while an unmonitored unclassifiable/attainment area might be subject to lesser controls.

We request comment on whether and how it would be appropriate to use information from nearby states as a surrogate to address the lack of air quality monitoring data in neighboring areas of Indian country. This information could include actual air monitoring data, attainment status based on actual monitoring data, or even oil and natural gas regulatory provisions. Referencing state requirements as the basis for requirements in surrounding areas under Federal jurisdiction is not without precedent. In adopting requirements for sources locating on the Outer Continental Shelf, Congress amended the CAA to add section 328, which requires sources locating on the Outer Continental Shelf to comply with requirements that apply on nearby state land in some circumstances. We specifically request comments from tribal governing bodies on the appropriateness of using state information or regulations in this manner.

In sum, as we consider whether it is appropriate or necessary to reduce emissions from existing emissions units in the oil and natural gas production segment to balance new source growth with environmental protection, we must also consider the appropriate scope of those requirements in terms of the areas in which the requirements apply, the stringency of the requirements, and the manner in which we might apply them. We request comment on all aspects of this issue.

D. What applicability threshold should apply if we regulate existing sources, and should we create exemptions?

If we regulate existing sources, then we would specify an applicability threshold to identify which sources are subject to control requirements. In the NSR permitting program, we distinguish applicability of regulations to sources based on whether they are ''major'' versus ''minor.'' For example, under the provisions of the PSD program, an oil and natural gas source located in an ozone attainment or unclassifiable area would be a major source if it emits or has the potential to emit (PTE) 250 tpy of any regulated pollutant. Sources that are ''major'' are subject to permitting and emissions control requirements, among other requirements. Certain minor sources are subject to only recordkeeping requirements. Under the provisions of the Indian Country Minor NSR permitting program, an oil and natural gas source located in an ozone unclassifiable/attainment or unclassifiable area would be a minor source if it emits or has the PTE below 250 tpy of all regulated pollutants, but VOC or NO_X above the minor source regulatory thresholds for these pollutants. *See* 40 CFR 49.153. Minor sources and major sources undergoing minor modifications must comply with the provisions of the Indian Country Minor NSR permitting program, while sources with a PTE that is less than the regulatory threshold are exempt from the rule.

In regulating emissions from existing emission units at a source, we could incorporate these commonly understood regulatory thresholds in a number of ways. We could apply requirements to only existing major sources, as defined under the NSR program. Alternatively, we could apply the requirements to both major and minor existing sources. If we apply requirements to both minor and major sources, then we would have to determine whether the regulations would regulate these sources equally, or whether we would establish different requirements based on the size of the source. We request comment on whether following a traditional applicability approach that would make a distinction between ''major'' or ''minor'' source is a desirable way to manage air quality from oil and natural gas production sources in Indian country and, if so, then at which existing sources should we impose control requirements. We also seek comment on what specific pieces of oil and natural gas production equipment should be regulated, and how and to what degree.

In considering this issue, it is prudent to take into account the potential air quality impacts from oil and natural gas production activities. As explained in Section IV.B., the oil and natural gas production industry is comprised of numerous, geographically dispersed emissions points. The contribution of any individual emission point to the total emissions inventory may be comparatively small. But, collectively, the cumulative emissions of numerous existing emissions points could exceed that of large, new major sources, and result in adverse air quality impacts. If we were to regulate emissions only from existing major sources, then we would be ignoring the cumulative air quality impacts from existing minor sources. Regulating existing emissions units at both major and minor sources (or at some lower level) would afford the greatest level of environmental protection and, if sufficiently controlled, would create more room for growth.

Another consideration relates to the complexity of making stationary source determinations. Determining whether one or more emissions points are part of the same stationary source can require an owner or operator, as well as the permitting authority, to undertake an in-depth analysis of the inter-relationships between two or more emissions points.[47] It is not uncommon for disputes to arise regarding the boundaries of a stationary source, whether the source qualifies as a ''minor'' or ''major'' source, and where a source's actual or potential emissions stand with respect to the minor source PTE thresholds.

Rather than following traditional permitting tons per year applicability thresholds in determining what sources to regulate and how to regulate them, we could identify cost-effective emissions reduction strategies and apply these requirements regardless of the cumulative total emissions from any given stationary source. Nevertheless, sources that are subject to major source NSR and/or Title V would still need to comply with those requirements. By applying emissions reduction measures without regard to cumulative emissions from each source, we could ensure that all existing sources meet cost-effective emissions reduction requirements, and avoid potential disputes related to stationary source boundaries. We request comment on using such an approach for establishing emission control requirements for existing sources, in lieu of following a traditional approach that distinguishes sources based on their size. Such an approach would be consistent with control requirements established in the majority of New Source Performance Standards (NSPS) and could incorporate unit specific size thresholds.

We are also seeking comment on whether we should include certain exemptions within the applicability provisions of any potential FIP to prevent regulatory redundancy. For example, should we exempt any emissions producing activity or emissions unit at a source that might otherwise be required to comply with requirements in a FIP, if we already require control of emissions from that activity or emissions unit under a Federal NSPS or a National Emissions Standard for Hazardous Air Pollutants (NESHAP) (77 FR 49490, Aug. 16, 2012) that has either the goal or effect of reducing criteria pollutant emissions? The Oil and Gas Sector NSPS and NESHAP apply nationally, including in Indian country, but the requirements in a FIP could go beyond those in the NSPS or NESHAP, if it is deemed necessary. This is similar to the approach in minor source NSR programs in some states.

Another question we would consider is whether we should exempt existing emissions units at a source that obtained a major NSR permit within some recent time period if they are complying with BACT or LAER for a particular pollutant. If so, then how far in the past should we recognize BACT or LAER requirements? Are there other regulatory provisions with which oil and natural gas sources must comply that we should consider when crafting the applicability provisions of a potential oil and natural gas FIP? We note that if we create such exemptions, it would minimize the possibility of creating conflicting provisions, although we could potentially require that the more stringent provisions would apply where a conflict occurs. On the other hand, it could result in emission units at different sources being subject to requirements that are not of equal stringency. We request comment on this issue.

Finally, based on our experience with the Fort Berthold FIP, there may be numerous sources that would be major based on their PTE, but whose actual emissions are below the major source threshold. We are requesting comment on whether a FIP should address these sources, and how that might be accomplished.

E. Which pollutants would we regulate?

Sources in the oil and natural gas production segment emit a number of different air pollutants. Section IV. provides a general overview of the exploratory and production processes and their associated emissions. To function as an appropriate substitute for the minor NSR permitting program, an oil and natural gas FIP or general permit would need to regulate emissions of all ''regulated NSR pollutants'' from minor sources that construct, or major or minor sources that undertake a minor modification. This would mean that an oil and natural gas FIP or general permit could regulate all criteria pollutants and all PSD pollutants emitted or potentially emitted by activities at minor sources that would construct, or minor or major sources that would undertake a minor modification. We are not aware of an advantage to regulating only a portion of the regulated NSR pollutants through a FIP or general permit and allowing other pollutants to remain subject to site-specific permitting through the Indian Country Minor NSR rule. If we do not regulate all pollutants under a FIP or general permit, then we would continue to require sources to obtain minor NSR permits for the pollutants not covered by the FIP or general permit through the minor NSR permitting program.

Based on existing air quality information, including area designations, which indicates that attainment of the 2008 8-hour ozone NAAQS may pose the biggest concern from the expansion of the oil and natural gas production segment, the pollutants of interest include NO_X and VOC. Because our objective in regulating existing emissions units would be to address emerging ozone concerns and provide for economic growth in Indian country in a manner that avoids such degradation, we might consider only regulating emissions related to ozone. We request comment on which criteria pollutants and/or precursors should be regulated for oil and natural gas sources in Indian country.

[47] The exact nature of the analysis required and the specific sources of emissions that must undertake that analysis has been a topic of recent litigation. See *Summit Petroleum* v. *EPA,* 690 F.3d 733 (6th Cir. 2012) and *National Environmental Development Association's Clean Air Project* v. *EPA,* No. 13.1035 (D.C. Cir.). To the extent the source determination requirements change as a result of this litigation, either as a general matter or with specific regard to application to oil and gas emissions, EPA will address those changes in future actions related to this ANPR.

F. How would we determine the appropriate control requirements for new and modified sources and existing sources?

The EPA seeks input on the types of emission control requirements that would be appropriate for new and modified minor sources and minor modifications at major sources. The EPA also seeks input on the types of emission control requirements that would be appropriate for existing sources, if we were to propose a FIP for new sources as well as for existing sources.

The Indian Country Minor NSR rule requires a reviewing authority to undertake a case-specific control technology review to determine the appropriate level of emissions control for a new or modified emission unit. As part of that control technology review, the reviewing authority considers local air quality needs, typical control technology used by similar sources in surrounding areas, anticipated economic growth in the area, and cost-effective control alternatives (76 FR 38760, July 1, 2011). If we establish a uniform set of control technology requirements for new, modified and existing sources under an oil and natural gas production FIP, then we envision undertaking a similar, but not identical, control technology review to establish the requirements. Specifically, we envision that we would develop a list of potential control technology options by reviewing requirements that are currently applicable or under consideration by state and local air pollution agencies. We also might consider requirements in the FIP that applies to the Fort Berthold Indian Reservation (78 FR 17836, March 22, 2013), performance standards (including work practice standards) in NSPS regulations, and recommendations in control techniques guidelines (CTG), alternative control techniques (ACT), and in the EPA's Natural Gas Star program. We may also consult other sources of outside information. We request comment on specific relevant sources of information.

In evaluating the relative merits of various potential control technology options, we would follow a process that considers factors used in the EPA's BACT approach of weighing energy, environmental, and economic impacts, and other costs; however, we would not be bound to selecting controls based on the maximum achievable level of control, but instead could consider the degree of enhanced protection appropriate or necessary on a nationwide basis. If we tailor requirements to the needs of individual air basins or air quality control regions, then we may follow a similar approach for identifying control technology options in a FIP or general permit, or look to mirror requirements applying in surrounding states.

We request comment on these approaches for establishing emissions control requirements in a FIP or general permit. We specifically seek comment on whether any particular state regulation could serve as a good model for constructing requirements that would apply in a specific area, or on a nationwide basis.

G. Should we require sources to install and collect data from ambient air quality monitors?

As discussed in Section IV.B., our understanding of the oil and natural gas sector's impact on ambient air quality in Indian country is incomplete at this time given the absence of ambient air quality monitoring sites in many areas of Indian country. At the same time, with the prospect of continued significant growth in emissions from the oil and natural gas sector, it may be necessary or appropriate to impose emissions control requirements on existing emissions units. More detailed information on the air quality in a region would help us better understand whether emission reductions from existing sources are necessary or appropriate to accommodate emissions growth while still protecting public health.

We seek comment on whether and how we might use our CAA section 114 or other CAA authority to require oil and natural gas sources in Indian country to install and operate ambient air monitors. For example, should we require emission controls on existing oil and natural gas sources in all areas of Indian country unless ambient air quality monitors demonstrate that there is not a need for such requirements? In lieu of including specific ambient monitoring requirements, we seek comment on whether and how we might encourage sources to voluntarily install and maintain air quality monitors that meet Federal reference monitoring (FRM) requirements.

H. Next Generation Compliance

Enforcing regulatory requirements imposed on the oil and natural gas production segment in Indian country poses unique challenges for regulators. In states, sources face compliance oversight by both Federal and state regulators. While tribes and the Federal government are actively building tribal capacity to accept delegation of implementation programs, this capacity is still developing in many areas. Consequently, EPA Regional Office personnel may provide the sole resource for compliance oversight, and they will likely face resource challenges with regard to enforcement.

The nature of the oil and natural gas production segment in Indian country compounds this potential problem. The industry includes numerous, geographically dispersed pollutant-emitting activities. Unlike a power plant, for example, that emits large amounts of criteria pollutants from a few, specific, well-defined emission points (i.e., smoke stacks), the oil and natural gas production segment may produce emissions from multiple, diverse, geographically-dispersed sources in relatively lower amounts. Collectively, however, these smaller sources can have adverse air impacts. But, the sheer numbers of well pads and the nature of the pollutant-emitting activities pose challenges for developing a strategically effective enforcement program for Indian country. We may not be able to rely on the traditional single-facility inspection and enforcement approach to ensure widespread compliance. Accordingly, we are requesting comment on ways the EPA can use Next Generation Compliance methods to promote compliance with a FIP, general permit, or other approach such as a permit by rule.

Next Generation Compliance is a multi-facet concept that encompasses (1) Using advances in emissions monitoring and information technology to readily detect violations and allow rapid corrective action by regulated entities or regulators; (2) using electronic reporting (e-reporting) systems to provide more timely and transparent emissions information to regulators and the public; and (3) building compliance management and incentive programs within regulations to promote compliance. Through Next Generation Compliance, the EPA can leverage motivational factors, market forces, technologies, and public accountability to drive higher compliance rates.

We are interested in gaining feedback on existing or emerging monitoring and information technologies that can be used by the oil and natural gas production segment to promote compliance. For example, would infrared monitoring systems provide a cost effective method for either detecting fugitive emissions at remote well pads, or hidden mechanical or electrical problems that could lead to process-upset emissions events? Are there any monitoring systems used by the industry to comply with Occupational Safety and Health Act regulations and other safety laws (e.g. photoionization detectors) that might be used in tandem with protocols under a FIP or general permit to ensure compliance? Are there any process-based monitoring systems already in use by the industry that could serve as an effective predictive or surrogate monitoring system in lieu of monitoring emissions directly? Are any immediate feedback technologies available or emerging that would provide the operator with real time measures of, or information on, their compliance status?

With regard to advances in reporting and transparency, we would intend to make e-reporting the default method of reporting information under a future permitting program for oil and natural gas production sources in Indian country. E-reporting is a standardized, internet-based, electronic reporting system. E-reporting reduces the cost of complying with reporting requirements compared to paper reporting systems. Also, with e-reporting, the EPA and public gain more timely access to compliance information and industry perceives a greater incentive to comply, because data are more readily available and transparent to the public. Although we would intend to rely on e-reporting as the default reporting method in a future permitting program for the oil and natural gas production segment in Indian country, we request comment on whether the segment faces any unique challenges that we should consider relative to the type of information collected, the frequency of collection, or the database system used to store information.

We also request comment on the feasibility of using third-party compliance verification as a means for demonstrating compliance. Third-party compliance verification relies on a party external to a facility,[48] such as a private auditor or inspector, to verify and report a facility's compliance status. Third-party compliance verification can enhance accountability, improve compliance, and produce more and better compliance data.

A successful third-party compliance system relies on the availability of competent and independent third parties. This means that the person conducting the compliance verification possesses the technical expertise and professional judgement to properly verify compliance. For purposes of an oil and natural gas FIP or general permit, what minimum level of education, experience, or training is appropriate? Should we require third parties to meet certain accreditation standards, and/or meet a minimum set of requirements to demonstrate independence? For example, the Food and Drug Administration (FDA) specifies requirements for independence and lack of a financial conflict of interest for persons carrying out section 510(k) of the FDA Modernization Act of 1997.[49] Other requirements we could consider might be prohibiting the auditor from consulting with the clients on corrective actions to ensure financial independence; assigning verifiers to facilities randomly rather than allowing a company to select their verifier; limiting the number of occasions a company can rely on the same verifier; and barring the company from hiring a verifier for an established waiting period.

One criticism that people have regarding third-party verification programs is that outside parties lack the specialized knowledge and understanding of standard business practices for a particular organization to most effectively audit company records. One recommendation that flows from this complaint is that companies that use an internal audit system in conjunction with an ISO 14001 environmental management system should be permitted to rely on their internal, but sufficiently independent, auditing departments. Because of familiarity with standard business practices, internal auditors may have a higher level of understanding of the business' activities and, therefore, be able to conduct more thorough audits then external auditors. We request comment on the use of independent internal audit systems for compliance verification. Should the EPA allow such an approach for compliance with a future permitting program for oil and natural gas sources in Indian country? If so, then what measures should the EPA impose to ensure an absence of a conflict of interest? Should a company be required to rely on an external third party for some demonstration period, after which a company could transition to an internal auditing department?

We request comment on all aspects of using an independent compliance verification system to enhance and promote compliance. We specifically request comment on the issues we raise above, and on whether such a system should be mandatory for all sources regulated under a potential FIP, general permit, or other approach, or only for those who choose a flexible, alternative method of compliance.

In addition to the use of an independent compliance verification system, we request comment on two compliance incentive programs: (1) An automatic, pre-set penalty system, and (2) use of modified monitoring, recordkeeping and/or reporting requirements. With an automatic, pre-set penalty system, the regulation could specify a set monetary penalty for certain non-compliance events. This penalty would be payable upon disclosure of an excess emissions event without notice or issuance of a demand for payment. The sum of the penalty could vary based on whether non-compliance was self-disclosed, disclosed by a third-party auditor, or discovered by EPA enforcement. Importantly, we would design an automatic penalty provision to encourage compliance by making the path to compliance easier than non-compliance. For example, the EPA's Acid Rain Program assesses an excess emissions penalty set at $2,000/ton (adjusted annually for inflation). This penalty exceeds the cost of complying with the program and serves as an effective deterrent against non-compliance.[50]

A modified monitoring, recordkeeping and reporting program would reward facilities for demonstrating a continued commitment to compliance by adjusting the frequency or type of monitoring, recordkeeping and reporting that is required based on the particular facility's compliance record. It may also incorporate substitute emission data requirements that become increasingly more conservative when the facility experiences repeated data collection failures. This provides an incentive for operators to properly maintain and operate monitoring systems.

In sum, we request comment on any manner in which the Agency can use

[48] ''External to the facility'' means that the party is neither the regulated entity nor a customer, supplier or purchaser of the facility's goods or services.

[49] See U.S. Dept. of Health and Human Services, Food and Drug Admin., ''Implementation of Third Party Programs under the FDA Modernization Act of 1997: Final Guidance for Staff, Industry and Third Parties,'' Feb. 2, 2001, available at *http://www.fda.gov/MedicalDevices/DeviceRegulationandGuidance/GuidanceDocuments/ucm094450.htm.*

[50] For example, in 2004, four sources were assessed a penalty of approximately $1.4 million for excess SO_2 emissions. These sources would have spent only $139,500 to comply with the program. See J. Schakenbach, R. Vollaro and R. Forte, U.S. EPA, Office of Atmospheric Programs, ''Fundamentals of Successful Monitoring, Reporting, and Verification under a Cap-and-Trade Program,'' Journal of the Air & Waste Management Assoc., vol 56, p 1576, Nov. 2006, available at *http://www.epa.gov/airmarkets/cap-trade/docs/fundamentals.pdf.*

principles of Next Generation Compliance to promote higher rates of compliance with requirements we may include in a FIP, general permit, or other permitting approach for oil and natural gas production sources located in Indian country. Our objective is to promote high rates of compliance through cost-effective, incentive-based approaches that capitalize on existing systems used by the industry, and that ensure the availability and transparency of compliance information to the public and the EPA.

VIII. Statutory and Executive Order Reviews

Under Executive Order 12866 *Regulatory Planning and Review* (58 FR 51735, October 4, 1993) and Executive Order 13563 *Improving Regulation and Regulatory Review* (76 FR 3821, January 21, 2011), this is not a ''significant regulatory action.'' Because this action does not propose or impose any requirements, the various statutes and Executive Orders that normally apply to rulemaking do not apply. Should the EPA subsequently determine to pursue a rulemaking, the EPA will address the statutes and Executive Orders as applicable to that rulemaking.

Because this document does not impose or propose any requirements, and instead seeks comments and suggestions for the Agency to consider in possibly developing a subsequent proposed rule, the various other review requirements that apply when an agency imposes requirements do not apply to this action.

The EPA seeks any comments or information that would help the Agency ultimately to assess the potential impact of a rule on small entities pursuant to the Regulatory Flexibility Act (RFA) (5 U.S.C. 601 *et seq.*); to consider voluntary consensus standards pursuant to section 12(d) of the National Technology Transfer and Advancement Act of 1995 (NTTAA) (15 U.S.C. 272 note); to consider environmental health or safety effects on children pursuant to Executive Order 13045, entitled ''Protection of Children from Environmental Health Risks and Safety Risks'' (62 FR 19885, April 23, 1997); or to consider human health or environmental effects on minority or low-income populations pursuant to Executive Order 12898, entitled ''Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations'' (59 FR 7629, February 16, 1994).

The Agency will consider such comments during the development of any subsequent proposed rule.

List of Subjects in 40 CFR Part 49

Environmental protection, Administrative practices and procedures, Air pollution control, Indians, Indians-law, Indians-tribal government, Intergovernmental relations, Reporting and recordkeeping requirements.

Dated: May 22, 2014.

Gina McCarthy,

Administrator.

[FR Doc. 2014–12951 Filed 6–4–14; 8:45 am]

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ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 190

[EPA–HQ–OAR–2013–0689; FRL 9911–65–OAR]

RIN 2060–AR12

Environmental Radiation Protection Standards for Nuclear Power Operations

AGENCY: Environmental Protection Agency (EPA).

ACTION: Advance notice of proposed rulemaking; extension of comment period.

SUMMARY: The U.S. Environmental Protection Agency is announcing an extension of the public comment period for the Advance Notice of Proposed Rulemaking (ANPR) requesting public comment and information on potential approaches to updating the EPA's ''Environmental Radiation Protection Standards for Nuclear Power Operations''. The EPA published the ANPR on February 4, 2014 in the **Federal Register**, which included a request for comments on or before June 4, 2014. The purpose of this action is to extend the public comment period an additional 60 days.

DATES: The comment period for the advanced notice of proposed rulemaking published on February 4, 2014 (79 FR 6509), is extended. Written comments must be received on or before August 3, 2014.

ADDRESSES: Submit your comments, identified by Docket ID No. EPA–HQ–OAR–2013–0689, by one of the following methods:

- *www.regulations.gov:* Follow the on-line instructions for submitting comments.
- *Email: a-and-r-docket@epa.gov.*
- *Fax:* (202) 566–9744.
- *Mail:* U.S. Postal Service, send comments to: EPA Docket Center, Environmental Radiation Protection Standards for Nuclear Power Operations—Advance Notice of Proposed Rulemaking Docket, Docket ID No. EPA–HQ–OAR–2013–0689, 1200 Pennsylvania Ave. NW., Washington, DC 20460. Please include a total of two copies.

Hand Delivery: In person or by courier, deliver comments to: EPA Docket Center, Environmental Radiation Protection Standards for Nuclear Power Operations—Advance Notice of Proposed Rulemaking Docket, Docket ID No. EPA–HQ–OAR–2013–0689, EPA West, Room 3334, 1301 Constitution Avenue NW., Washington, DC 20004. Such deliveries are only accepted during the Docket's normal hours of operation, and special arrangements should be made for deliveries of boxed information. Please include a total of two copies.

Instructions: Direct your comments to Docket ID No. EPA–HQ–OAR–2013–0689. The Agency's policy is that all comments received will be included in the public docket without change and may be made available online at *www.regulations.gov*, including any personal information provided, unless the comment includes information claimed to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Do not submit information that you consider to be CBI or otherwise protected through *www.regulations.gov* or email. The *www.regulations.gov* Web site is an ''anonymous access'' system, which means EPA will not know your identity or contact information unless you provide it in the body of your comment. If you send an email comment directly to EPA without going through *www.regulations.gov* your email address will be automatically captured and included as part of the comment that is placed in the public docket and made available on the Internet. If you submit an electronic comment, EPA recommends that you include your name and other contact information in the body of your comment and with any disk or CD–ROM you submit. If EPA cannot read your comment due to technical difficulties and cannot contact you for clarification, EPA may not be able to consider your comment. Electronic files should avoid the use of special characters, any form of encryption, and be free of any defects or viruses. For additional information about the EPA's public docket, visit the EPA Docket Center homepage at *www.epa.gov/epahome/dockets.htm.*

Docket: All documents in the docket are listed in the *www.regulations.gov* index. Although listed in the index, some information is not publicly