THIS NOTICE WAS TRANSMITTED TO THE OFFICE OF THE FEDERAL REGISTER. IT IS SUBJECT TO REVISIONS TO CONFORM TO ANY RULES AND GUIDELINES OF THE OFFICE OF FEDERAL REGISTER.

4310-MR-P

DEPARTMENT OF THE INTERIOR

Bureau of Ocean Energy Management

30 CFR Part 550

[Docket ID: BOEM-2013-0081]

RIN 1010-AD82

Air Quality Control, Reporting, and Compliance

AGENCY: Bureau of Ocean Energy Management (BOEM), Interior

ACTION: Proposed rule.

SUMMARY: This proposed rule would amend existing BOEM regulations related to air quality measurement, evaluation, and control with respect to oil, gas, and sulphur operations on the Outer Continental Shelf (OCS) of the United States (U.S.), in the Central and Western Gulf of Mexico (GOM) and the area offshore the North Slope Borough of the State of Alaska, as part of the BOEM approval process for offshore oil and gas exploration and development plans, right-of-use and easement (RUE), pipeline rights-of-way (ROW), and lease term pipeline applications. The proposed rule would 1) fulfill BOEM's statutory responsibility under section 5(a)(8) of Outer Continental Shelf Lands Act (OCSLA) by addressing all relevant criteria and major precursor air pollutants and by cross-referencing BOEM standards and benchmarks for those pollutants to those of the United States Environmental Protection Agency (USEPA); 2) change the manner in which lessees would evaluate and model vessel emissions attributed to OCS facilities; 3) change the methods for measuring and evaluating air emissions including measuring their impacts over State submerged lands; 4) provide a process by which exemption

thresholds are established and updated; 5) change the circumstances when emission reduction measure(s) (ERM), including Best Available Control Technology (BACT), are required, and establish new criteria for the application of ERM; 6) formalize requirements for the consolidation of emissions from multiple facilities; 7) consistent with BOEM's existing regulatory authority, articulate a schedule and requirements for ensuring that all plans, including those previously approved, will remain compliant on an ongoing basis with these updated regulations; and 8) include an air quality component in the submission of RUE, ROW, and lease term pipeline applications.

Key policy changes include the following: 1) aligning the list of pollutants that are subject to an air quality review with the current National Ambient Air Quality Standards (NAAQS) and cross-referencing the ambient air quality standards and benchmarks (AAQSB) for those pollutants to those of the USEPA; 2) formalizing the concept and application of the term "attributed emissions;" 3) changing the locations where air emissions will be measured and evaluated; and 4) modifying the process by which exemption thresholds are established and updated. This rule would be the first major re-write of the OCS air quality regulations in 35 years.

DATES: Submit comments on the substance of this rulemaking by [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]. Send your comments on the substance of the proposed rule to the Department as directed in the ADDRESSES section below. Submit comments on the information collection (IC) burden in this rulemaking to the Office of Management and Budget (OMB) by [INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may submit comments, identified by the number 1010–AD82, by any of the following methods:

- Federal rulemaking portal: http://www.regulations.gov. Follow the instruction for submitting comments.
- Mail: Department of the Interior, Bureau of Ocean Energy Management, Office of Policy, Regulation, and Analysis, Attention: Peter Meffert, 45600 Woodland Road, Sterling, Virginia 20166.
- Hand delivery: Front Desk, Department of the Interior, Bureau of Ocean Energy Management, Office of Policy, Regulation, and Analysis, Attention: Peter Meffert, 45600 Woodland Road, Sterling, Virginia 20166.

Please include your name, return address and phone number and/or email address, so we can contact you if we have questions regarding your submission.

Send comments on the IC of this rule to: Interior Desk Officer 1010-AD82, Office of Management and Budget; 202-395-5806 (fax); e-mail OIRA_Submission@eop.gov. Please also send a copy to BOEM at 45600 Woodland Road, Sterling, VA 20166.

PUBLIC AVAILABILITY OF COMMENTS: BOEM does not consider anonymous comments; please include your name and address as part of your submittal. Before including your name, address, phone number, email address, or other personal identifying information in your comment, you should be aware your entire comment – including your personal identifying information – may be made publicly available at any time. While you can ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee we will be able to do so.

FOR FURTHER INFORMATION CONTACT: Peter Meffert, Bureau of Ocean Energy Management, Office of Policy, Regulation, and Analysis, at Peter.Meffert@boem.gov or mail to 45600 Woodland Road, Sterling, Virginia 20166; or call (703) 787-1610.

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I. General Information

A. What Should I Consider as I Prepare My Comments for BOEM?

1. Submitting Confidential Business Information (CBI)

Do not submit CBI or proprietary information to BOEM through www.regulations.gov or email. Clearly mark the part or all of the information you claim to be CBI. For CBI information in a disk or CD ROM you mail to BOEM, 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, submit a copy of the comment that does not contain the information claimed as CBI for inclusion in the public docket. Information so marked will not be disclosed.

Any CD or data submitted to BOEM must be virus-free and usable, as submitted. BOEM will not attempt to correct, fix or amend any CD or other electronic media that is not readily accessible.

2. Tips for preparing your comments

When submitting comments, remember to:

- Identify the rulemaking by docket number and other identifying information (subject heading, *Federal Register* (FR) date and page number).
- Organize Comments – When your comments respond to specific provisions, organize your comments by referencing the relevant CFR part or section number in the proposed rule.
- 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 you used.

- Provide specific examples to illustrate your concerns.
- 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.

B. Availability of Related Information

A number of documents relevant to this air quality rulemaking, including past and planned environmental studies and analysis, are available on the BOEM web site at www.BOEM.gov. In addition, the economic and environmental analyses associated with this rulemaking are available for inspection and copying in the BOEM docket for this rulemaking, as identified above and are also available at www.BOEM.gov.

C. Abbreviations of Terms and Acronyms

The following are abbreviations of terms used in the preamble.

AAI	Ambient Air Increment
AAQSB	Ambient Air Quality Standards and Benchmarks
AEDT	Aviation Environmental Design Tool (Federal Aviation Administration)
AQCR	Air Quality Control Region
AQRP	Air Quality Regulatory Program
AQRV	Air Quality Related Value
AQS	Air Quality Subsystem (USEPA)
BACT	Best Available Control Technology
BC	Black Carbon (component of $PM_{2.5}$)
BLM	Bureau of Land Management

BOEM	Bureau of Ocean Energy Management
BSEE	Bureau of Safety and Environmental Enforcement
Btu IT	British Thermal Unit International Tables
CAA	Clean Air Act, as amended
CAMX	Comprehensive Air Quality Model with Extensions
CBI	Confidential Business Information
CEO	Chief Environmental Officer (BOEM)
CFR	Code of Federal Regulations
CH_4	Methane
CMAQ	Community Multi-scale Air Quality Model (USEPA)
CO	Carbon Monoxide
CO_2	Carbon Dioxide
CP	Criteria Pollutant
CSU	Column-Stabilized Units
DOCD	Development Operations Coordination Document
DOI	Department of the Interior
DPP	Development and Production Plan
EC	Elemental Carbon
ECE	Emission Control Efficiency
EET	Emission Exemption Threshold(s)
EEZ	Exclusive Economic Zone
EIS	Environmental Impact Statement

E.O.	Executive Order
EP	Exploration Plan
ERM	Emission Reduction Measure(s)
FAA	Federal Aviation Administration
FIRE	Factor Information Retrieval System
FLM	Federal Land Manager (Bureau of Land Management (BLM), United States Fish and Wildlife Service (FWS), National Park Service (NPS), and United States Department of Agriculture Forest Service (USFS))
FPS	Floating Production System
FPSO	Floating Production, Storage, and Offloading vessel
FR	*Federal Register*
FWS	Fish and Wildlife Service (DOI)
GAO	Government Accountability Office
G&G	Geological and Geophysical
GHG	Greenhouse Gas
GOADS	Gulf-wide Offshore Activities Data System
GOM	Gulf of Mexico
H_2S	Hydrogen Sulfide
hp	Horsepower
hpm	Mechanical Horsepower
IC	Information Collection
IRFA	Initial Regulatory Flexibility Analysis

IRIA	Initial Regulatory Impact Analysis
kW	kilowatt
MACI	Maximum Allowable Concentration Increase
MARPOL	International Convention for the Prevention of Pollution from Ships
MODU	Mobile Offshore Drilling Unit
MSC	Mobile Support Craft
NAAQS	National Ambient Air Quality Standards
NEI	National Emissions Inventory (USEPA)
NEPA	National Environmental Policy Act of 1969
NESHAP	National Emissions Standards for Hazardous Air Pollutants
NH_3	Ammonia
NO_2	Nitrogen Dioxide
NO_x	Nitrogen Oxides
N_2O	Nitrous Oxide
NPS	National Park Service (DOI)
NSPS	New Source Performance Standards
NSR	New Source Review (USEPA)
NTC	NO_x Technical Code
NTL	Notice to Lessees
O_3	Ozone
OCS	Outer Continental Shelf
OCSLA	Outer Continental Shelf Lands Act of 1953, as amended

OIRA	Office of Information and Regulatory Affairs (Office of Management and Budget)
OMB	Office of Management and Budget (Executive Office of the President)
ONRR	Office of Natural Resources Revenue (DOI)
OSV	Offshore Supply Vessel
Pb	Lead
PEMS	Parametric Emissions Monitoring Systems
PM	Particulate Matter
$PM_{2.5}$	Fine Particulate Matter, 2.5 micrometers in diameter or less
PM_{10}	Particulate Matter, 10 micrometers in diameter or less
PRA	Paperwork Reduction Act of 1995
PSD	Prevention of Significant Deterioration
PTE	Potential to Emit
Pub. L.	Public Law
RIA	Regulatory Impact Analysis
ROV	Remotely Operated Vehicle
ROW	Right-of-Way
rpm	Revolutions per minute
RUE	Right of-Use and Easement
SBA	Small Business Administration
SCC	Source Classification Codes
SIL	Significant Impact Level
SMOKE	Sparse Matrix Operator Kernel Emissions

SO_2	Sulphur Dioxide
SOB	Statement of Basis
SOx	Sulphur Oxides
SIP	State Implementation Plan
SSB	State seaward boundary
TAS	Treatment as State
TIMS-Web	Technical Information Management System Web-based Application
TIP	Tribal Implementation Plan
TLP	Tension-Leg Platforms
tpy	Tons per year
TSP	Total Suspended Particulates
U.S.	United States
USCG	United States Coast Guard
U.S.C.	United States Code
USEPA	United States Environmental Protection Agency
USGS	United States Geological Survey
VOC	Volatile Organic Compound
$\mu g/m^3$	Micrograms per cubic meter

II. Executive Summary

The Outer Continental Shelf Lands Act (OCSLA) requires the Department of the Interior (DOI) to promulgate regulations for compliance with the National Ambient Air Quality Standards (NAAQS) pursuant to the Clean Air Act (CAA) (42 U.S.C. §§ 7401 *et seq*.), to the

extent that activities approved under OCSLA significantly affect the air quality of any State (43 U.S.C. § 1334(a)(8)). The U.S. Geological Survey (USGS), a BOEM predecessor agency, prepared the first air quality regulations under OCSLA, which were promulgated by the Secretary of the Interior in 1980 (45 F.R. 15128, March 7, 1980). The current version of these regulations is contained in 30 CFR part 550 ("Oil, Gas and Sulphur Operations in the Outer Continental Shelf") subparts A ("General"), B ("Plans and Information"), and C ("Pollution Prevention and Control"). These regulations require: 1) the submission of information on projected air emissions from offshore oil and gas exploration or development activities with a proposed plan for exploration (i.e., an exploration plan (EP)) or development (i.e., a Development and Production Plan (DPP) or a Development Operations Coordination Document (DOCD); 2) the application of various emission exemption thresholds to determine whether air quality impacts would be presumed *de minimis* and, therefore, not require further BOEM review under subpart C or whether the impacts would exceed the threshold and require further review under subpart C; 3) the modeling of projected emissions when a facility's projected emissions exceed the exemption thresholds and would therefore potentially cause air quality impacts to a State;[1] and, 4) the control of an emissions source proposed for any facility that would cause or

[1] In the 1990 Clean Air Act Amendments, Congress added two provisions authorizing Federally-recognized Indian tribes to be treated like States under the CAA. Congress added section 301(d) that authorizes the Administrator of the USEPA "to treat Indian tribes as States." In implementing this provision, the USEPA published proposed rule entitled "the Tribal Clean Air Act Authority" to implement this provision of the Act. In its proposed rule (63 FR 7271, Feb. 12, 1998), the USEPA stated "[The] Regulations in this part identify those provisions of the Clean Air Act for which Indian tribes are or may be treated in the same manner as States. In general, these regulations authorize eligible tribes to have the same rights and responsibilities as States under the Clean Air Act and authorize EPA approval of tribal air quality programs meeting the applicable minimum requirements under the Act." Furthermore, in its "EPA Statement of Policy on Consultation and Coordination with Indian Tribes," dated May 4, 2011, on p. 3 in the section entitled Guiding Principles, the USEPA states: "EPA recognizes and works directly with Federally-recognized tribes as sovereign entities with primary authority and responsibility for each tribe's land and membership, and not as political subdivisions of states or other governmental units." Just as States establish State

contribute to an exceedance of the AAQSB.

BOEM is proposing to revise and replace its air quality regulations with a new set of regulations that reflect a number of policy changes with respect to the existing air quality regulatory program (AQRP (30 CFR 550 subpart C)). While the existing underlying framework would remain the same in a number of key aspects, the proposed rule would change in significant ways the manner in which BOEM regulates emissions from certain sources on the OCS. The most significant changes in the proposed rule relate to: 1) fulfilling BOEM's statutory responsibility under section 5(a)(8) of OCSLA by addressing all relevant criteria and major precursor air pollutants and by cross-referencing the AAQSB for those pollutants to those of the USEPA; 2) formalizing the concept and application of the term "attributed emissions;" 3) changing the methods for determining the locations from which air emissions will be measured and evaluated; 4) modifying the process by which emission exemption thresholds (EETs) are established and updated; 5) changing the circumstances when ERM, including Best Available Control Technology (BACT), are required, and establishing new criteria for the application of ERM; 6) revising the boundary at which BOEM determines air quality compliance to the State seaward boundary (SSB), rather than the coastline; 7) formalizing requirements for the consolidation of emissions from multiple facilities; 8) consistent with BOEM's existing regulatory authority, articulating a schedule for ensuring that plans, including previously

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Implementation Plans (SIPs) to comply with CAA/USEPA requirements, the tribes can establish Tribal Implementation Plans (TIPs) to regulate the air quality over tribal lands (which are then outside the general jurisdiction of the State SIP). In addition, for those tribes that have been granted "treatment as State" (TAS) status (i.e., providing for Indian tribes to play essentially the same role in Indian country that states do within State lands for purposes of air quality management), BOEM will allow such a tribe to appeal the approval of a plan, in a manner similar to that accorded to States. For this reason, BOEM has proposed to expand the analysis of impacts under its air quality rules to include potential impacts to Federally-recognized Indian tribes having either TAS status or an approved TIP.

approved plans, will be compliant with these updated regulations; 9) adding an air quality component to the submission of RUE, ROW, and lease term pipeline applications; 10) an expanded use of offsets as an alternative in circumstances where BACT was previously required; and 11) the addition of a new requirement for all plans to be reviewed at least every 10 years, to ensure ongoing compliance with the NAAQS, as amended from time to time.

BOEM is proposing to amend the current regulations to provide a mechanism by which the regulations remain up-to-date in the future, particularly when the USEPA changes an applicable AAQSB; to reflect the recent statutory expansion of BOEM's air quality jurisdiction (42 U.S.C. § 7627, as amended by Public Law (Pub. L.) 112-74); to improve the clarity of existing regulatory provisions; to account for technological advances in air quality measurement, evaluation, and reporting that have occurred since the current regulations were promulgated; and to reflect industry practices and procedures that have evolved since 1980.

BOEM is proposing to define a number of additional key terms, to clarify the objectives and procedures associated with the AQRP, and to reorganize a number of existing provisions in its regulations. The proposed rule would consolidate all the existing data collection and information requirements in a single section dedicated to air quality. The pertinent provisions of BOEM's regulations related to air quality would be either substantially updated or entirely replaced.

The proposed rule would make a number of changes to the existing requirements associated with reporting, tracking, modeling, and monitoring the air emissions from stationary facilities operating on the OCS and emissions from associated non-stationary sources, including vessels

and vehicles, and aircraft traversing above the OCS or over State submerged lands[2] that operate in support of such facilities.

Since BOEM's current air quality regulations were published in 1980, the USEPA has revised the NAAQS to include additional criteria pollutants (i.e., to include Fine Particulate Matter, 2.5 micrometers in diameter or less ($PM_{2.5}$)), standards with a wider range of averaging times and statistical forms.[3] There are two types of NAAQS: primary NAAQS, which are intended to protect public health with an adequate margin of safety; and secondary NAAQS, which are focused on protecting public welfare.

This proposed rule would enhance the process by which operators of OCS facilities determine whether their proposed exploratory or developmental activities could cause or contribute to a significant adverse impact to the air quality of any State. It would define the circumstances under which BOEM would require lessees and operators[4] to control their air emissions in order to meet the USEPA's air pollution control-related standards for criteria air pollutants (i.e., pollutants for which there are NAAQS) and major precursor air pollutants. The proposed rule would incorporate by reference USEPA's Significant Impact Levels (SILs), Ambient Air Increments (AAIs), and the primary and secondary NAAQS. It would also make a number of changes to ensure that certain provisions within BOEM's rules are automatically updated whenever the USEPA updates its NAAQS, SILs and AAIs.

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[2] State submerged lands are the part of each State's territory that extends from the shoreline up to the point of federal jurisdiction (typically three miles from shore, but in some cases extending up to nine miles from shore). In contrast, the offshore lands under federal jurisdiction are referred to as the Outer Continental Shelf (OCS).

[3] In general, air quality standards are based on the concentration of a given pollutant at a given location averaged over a particular length of time, called the averaging time, evaluated in combination with some statistical parameter, which is referred to as the statistical form of the standard.

[4] Although the rule refers to lessees or operators, the provisions of the proposed rule would also apply to right-of-way holders, right-of-use and easement holders, lease-term pipeline applicants and any other party or parties that may be required to submit a plan to BOEM for review and approval.

Because the USEPA's current NAAQS include standards for both annual and short-term averaging times, the proposed rule would also provide for the collection, evaluation, and consideration of data with respect to the long-term and short-term exposure to air pollution originating from the OCS. Under current BOEM regulations, most of the effects that are evaluated relate to an annual exposure to a certain level of pollution. Short-term averaging times measure something different, namely the potential impact of a short-term exposure to the same pollutant, where the level of pollution is much greater. In some cases, the long-term exposure to low levels of pollution may be harmful; in other cases, the short-term exposure to high levels of pollution may also be harmful. Because the proposed rule would evaluate different levels of exposure over different time periods, the proposed rule would more accurately determine whether any OCS operations would have the potential to cause an adverse effect to a State's air quality. The proposed rule would require the modeling of emissions over any averaging time that the USEPA has determined would be relevant whenever the projected annual emissions of a given pollutant exceed the EETs. This change would, therefore, enable BOEM to better ensure compliance with all the NAAQS. This change is of particular relevance in the case of nitrogen oxides (NO_x) because that air pollutant is the one for which the annual exemption threshold is most often exceeded.

In order to ensure ongoing compliance with the NAAQS referenced in OCSLA, the proposed rule would also provide for the collection of additional information on approved activities described in any initial, revised, modified, resubmitted, or supplemental EP, DPP, or DOCD, or application for a RUE, pipeline ROW, or lease term pipeline (hereinafter referred to by the general term "plan"), in order to verify the information reported in the plan. As is the case with

the current BOEM regulations, the proposed rule would establish emissions exemptions thresholds. The proposed rule would continue to require facilities whose projected emissions of criteria and major precursor pollutants would exceed the thresholds to model those emissions in order to determine whether such emissions could potentially cause the air quality of any State to exceed the NAAQS.

To ensure that OCS operations do not cause any such impact to the air quality of a State, the proposed rule would require large emitters of air pollutants, namely, those whose facilities exceed BOEM's EETs -- not only to project their emissions in their plan, but also to demonstrate that their actual emissions do not exceed their projected emissions (as contained in their original plan). To ensure ongoing compliance, three major new procedures have been proposed. First, under the proposed rule, if the USEPA revises any AAQSB that applies (NAAQS, or any applicable SIL, or AAI), BOEM would examine the appropriateness of its EETs, and, BOEM, at its discretion, would periodically revise its EETs for the air pollutant(s) corresponding to USEPA's revision(s). Second, certain large emitters would be required to develop a method for measuring and reporting their emissions to demonstrate their actual emissions do not exceed the original projections upon which approval was granted. Third, starting in 2020,[5] all lessees and operators with previously approved plans would be required to update their plans with then current emissions data, and BOEM would re-evaluate all of these updated plans against the current EETs and for compliance with current AAQSB, according to a schedule proposed in 550.310(c)(2). All lessees and operators that submit plans would be required to include up-to-date emissions data in their plans to ensure they comply with then current AAQSB.

[5] BOEM is proposing this date because BOEM expects that it will have completed the studies to set new EETs by that time.

Although BOEM does not issue air quality permits and instead reviews air emissions in the context of its AQRP, BOEM recognizes that a one-time review of a particular facility's compliance with AAQSB may not be adequate to ensure that the facility does not cause or contribute to a violation of the NAAQS within a State. USEPA periodically updates the NAAQS and adds new averaging times and statistical forms for the various indicator pollutants. Measurement and evaluation techniques and methods are expected to improve over time. Equipment ages and becomes less efficient as it does so. The types and characteristics of support vessels, vehicles and aircraft may change. For these and various other reasons, BOEM has proposed that evaluating a plan's effectiveness more than once may aid BOEM in ensuring "compliance with the national ambient air quality standards pursuant to the Clean Air Act (42 U.S.C. § 7401 *et seq*.), to the extent that activities authorized under [OCSLA] significantly affect the air quality of any State" (43 U.S.C. § 1334(a)(8)). Consistent with the requirement in every offshore lease that lessees and operators are required to comply with changes to the regulations, as they are refined, BOEM is proposing plans be reevaluated periodically for air quality purposes.[6]

Finally, this rule proposes to codify the existing mechanism BOEM uses in the GOM OCS Region to report ongoing emissions information (i.e., the Gulf-wide Offshore Activities Data System or GOADS, as described in Notice to Lessees and Operators ([NTL], BOEM NTL No. 2014-G01) and apply it to all OCS regions under BOEM air quality jurisdiction. This information is important to ensure that OCS activities authorized by BOEM do not cause any State to exceed the NAAQS. BOEM also uses this information in its National Environmental

[6] See section 550.310(c)(2), below, of the proposed rule text.

Policy Act (NEPA) documents at several stages of the OCS leasing and plan review and approval process. In addition, BOEM shares this data with the USEPA to enhance its national emissions inventory (NEI), and with States and local air quality management agencies for the development of State Implementation Plans (SIPs). In-addition, BOEM collects emissions information related to Greenhouse Gases (GHGs) on a regular basis as part of the GOADS program and provides this information to lessees and operators to facilitate their reporting to the USEPA.

III. Background

A. Statutory Authority

OCSLA grants DOI authority to issue leases for the development of the nation's energy and mineral resources on the OCS. The U.S. OCS extends from three to nine nautical miles (nm) offshore (this varies by State) to the extent of U.S. claimed jurisdiction and control, which is 200 nm or more from the coastal States' baseline.[7] BOEM makes OCS resources available for expeditious and orderly development through leasing, subject to environmental safeguards, in a manner that is consistent with the maintenance of competition and other national needs (43 U.S.C. § 1332(3)). In 1978, OCSLA was amended to include a requirement for DOI to promulgate regulations for "compliance with the national ambient air quality standards pursuant to the CAA (42 U.S.C. §§ 7401 *et seq.*), to the extent that activities authorized under [OCSLA] significantly affect the air quality of any State" (43 U.S.C. § 1334(a)(8)). In 1980, the USGS, a

[7] The official U.S. coastal baseline is recognized as the low-water line along the coast in accordance with the articles of the United Nations Convention on the Law of the Sea, art. 76, Dec.10, 1982, 1833 U.N.T.S. 3, 428. The territorial sea extends seaward 12 nautical miles (nm) from the baseline. The Exclusive Economic Zone (EEZ) extends from the outer boundary of territorial sea seaward to 200 nm. The continental shelf begins at 12 nm, includes the EEZ and may extend further. The U.S. OCS extends from the SSB to the extent of the continental shelf. See 43 U.S.C. § 1331(a); see also 43 U.S.C. § 1301.

BOEM predecessor agency responsible for overseeing OCS energy and mineral activity, promulgated air quality regulations for activities authorized on the entire OCS, which are now BOEM's air quality regulations.

In 1990, Congress amended section 328 of the CAA and transferred authority to regulate air emissions on the OCS, other than in the Central and Western GOM, from DOI to the USEPA. In 2011, Congress again amended section 328 to transfer the authority for regulating air emissions from the USEPA back to DOI for those parts of the OCS adjacent to the North Slope Borough of the State of Alaska. As of the publication of this proposed rule, DOI's jurisdiction for ensuring compliance with the NAAQS pursuant to the CAA includes OCS areas adjacent to Texas, Louisiana, Mississippi, Alabama, and the North Slope Borough of the State of Alaska.

B. Current Air Quality Framework—Air Quality Regulatory Program

Congress has geographically divided air quality regulatory authority for authorized OCS activities between the USEPA and BOEM, based upon where those activities occur on the OCS. While the overall objectives of BOEM's and the USEPA's air quality regulations are similar, there are differences in each agency's statutory authority and differences in the way each agency implements its statutory charge. The USEPA implements its charge through permitting (CAA Sections 165 and 173). The CAA directs the USEPA to establish requirements to control air pollution from sources on the OCS to attain and maintain federal and State ambient air quality standards and to comply with the provisions of part C of subchapter I of the CAA (CAA Section 328(a)). USEPA regulations for permitting OCS sources "ensure that there is a rational relationship to the attainment and maintenance of federal and State ambient air quality standards and the requirements of part C of title I, and that the rule is not used for the purpose of

preventing exploration and development of the OCS" (40 CFR 55.1). The USEPA's OCS air quality regulations incorporate requirements derived from other areas of the CAA and USEPA regulations and for sources within 25 miles of the State boundary require compliance with local rules as if the source were located onshore, the result of which is that operators must demonstrate compliance with several different types of requirements.

BOEM's jurisdiction under 43 U.S.C. § 1334(a)(8) requires BOEM to promulgate regulations "for compliance with the national ambient air quality standards pursuant to the [CAA] . . . to the extent that activities under OCSLA significantly affect the air quality of any State." Thus, regulations implementing this section regulate offshore emissions specifically to protect State air quality rather than protecting air quality above the OCS generally. Upon submission by a lessee or operator of a plan, BOEM will determine whether the plan is consistent with the OCSLA and BOEM's regulations. If BOEM determines that a plan is inconsistent with OCSLA or BOEM's regulations, BOEM will require modifications of the plan as necessary to achieve consistency. BOEM may approve, require modification of, or disapprove an EP. BOEM can disapprove an EP only if there are no possible modifications that would avoid "serious harm or damage to life (including fish and other aquatic life), to property, to any mineral (in areas leased or not leased), to the national security or defense, or to the marine, coastal, or human environment," as described in 43 U.S.C. § 1334(a)(2)(A)(i). With respect to a DPP or a DOCD, BOEM must approve, disapprove, or require modification of the plan after conducting a compliance review, which includes compliance with the regulations implementing section 1334(a)(8). In addition, the timing of BOEM's decisions is also circumscribed by the provisions of OCSLA. Under OCSLA, BOEM is required to approve a

plan within 30 days for an EP or within 60 days for a DPP or DOCD, if BOEM finds that the plan is consistent with OCSLA and its implementing regulations, including those ensuring air quality compliance under section 5(a)(8) of OCSLA. (See 43 U.S.C. §§ 1340(c) and 1351(h)).

BOEM's predecessor, USGS, developed the current air quality regulatory framework in 1980 to address potential onshore air quality impacts of OCS operations on adjacent States. These regulations require lessees or operators to submit information on projected air emissions in their proposed EPs, DPPs and DOCDs. BOEM considers air emissions information submitted by lessees and operators as one component of its review of the overall exploration or development plan. The regulatory process by which BOEM evaluates the submitted emissions information is referred to in this document as BOEM's AQRP. The 1980 regulations first established a process for determining whether the potential air quality impacts from any given plan are low enough that they should be exempt from further air quality regulatory analysis. Plans that do not exceed these EETs are generally exempt from further analysis. For plans that exceed these exemption thresholds, BOEM regulations require lessees and operators to conduct modeling intended to help BOEM determine whether emissions from any facility could cause an exceedance of the AAIs or NAAQS onshore, and if so, what mitigation (i.e., emissions reduction) measures, if any, BOEM should impose on those proposed exploration and development activities to reduce the potential impacts to affected States.

BOEM conducts its AQRP analysis whenever a lessee or operator proposes new exploration, development, or production operations on the OCS or submits a revised or supplemental plan, which would modify operations in a manner that could cause an increase in the release of regulated pollutants above the amounts described in a previously approved plan. The AQRP

focuses on the impact of emissions from a specific exploration or development and production project and its potential onshore impacts on air quality. The AQRP does not directly regulate OCS air quality, since 43 U.S.C. § 1334(a)(8) requires BOEM to focus its plan review on the potential impacts to the air quality of the States. The AQRP consists of a quantitative review of specific air quality data that informs a decision to approve, require modification of, or disapprove a specific plan. Any modifications BOEM requires as a result of the AQRP review become an enforceable provision of the approved plan. As BOEM fulfills its statutory obligation, its AQRP also achieves other objectives: 1) to protect public health from adverse air quality effects; 2) to protect public welfare by preventing a deterioration in the air quality of the environment (e.g., to protect crops, forests, and wildlife); 3) to prevent the formation of new designated non-attainment areas; and, 4) to preserve and prevent degradation of the air quality in national parks and other areas of special natural, recreational, scenic, or historic value. In practical terms, this is accomplished by assessing whether OCS operations and activities will advance these objectives. The AQRP is one factor that BOEM considers in making a determination on the overall plan.

The AQRP analysis is intended to account for emissions of pollutants considered harmful to public health and the environment from facility and associated support craft. The plan must include descriptions of all relevant emissions sources—offshore, stationary and nonstationary, and certain onshore ones—regardless of whether they are intended to be used on a short-term or long-term basis, and regardless of attainment status. As part of the AQRP analysis, BOEM currently evaluates the emissions of most pollutants that the USEPA has designated as NAAQS "criteria pollutants" (CPs) in the USEPA's air quality regulatory scheme. The USEPA currently

defines the following six pollutants as CPs: carbon monoxide (CO); nitrogen dioxide (NO_2); sulphur dioxide (SO_2); ozone (O_3); particulate matter (PM); and lead (Pb). BOEM evaluates air emissions using the NAAQS as a standard because OCSLA provides that BOEM must ensure compliance with the NAAQS (43 U.S.C. § 1334(a)(8)). At the time the current regulations were promulgated, BOEM's predecessor, USGS, determined that Pb was generally not released in sufficient quantities from offshore oil and gas operations to warrant a separate analysis, and so BOEM does not currently review Pb data as part of the AQRP. Also, as of 1980, the USGS had determined that there was no way to review O_3 formation directly, but it instead decided to regulate O_3 formation indirectly, through the tracking of O_3 precursor pollutants, volatile organic compounds (VOCs) and NO_x.

In addition to regulating CPs, BOEM currently regulates most of the major precursor pollutants that lead to the formation of the CPs. Some CPs are also precursors for other CPs. For example, USEPA has identified SO_2 as a precursor to the formation of $PM_{2.5}$, which is PM that is 2.5 micrometers in diameter or less, and both are CPs. BOEM's current regulations address two precursor pollutants of ozone, NO_x and VOCs. Ammonia (NH_3) is not currently covered by BOEM's regulations but is proposed to be regulated in this proposed rule, because it may be regulated under the Clean Air Act as a precursor pollutant to the formation of $PM_{2.5}$.

The USEPA has found that GHG[8] emissions endanger the public health and welfare (74 Federal Register (FR) 66496, Dec. 15, 2009). BOEM recognizes that the continued and prospective emissions of GHGs from offshore oil and gas operations will contribute to global

[8] GHGs are defined by the USEPA as the aggregate group of the following six greenhouse gases: carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF6). See, e.g., 40 CFR 52.21(b)(49)(i).

GHG concentrations.[9] The goal of this rule, however, is to implement Section 5(a)(8) of OCSLA, which requires BOEM to regulate air quality so as not to allow exceedances of the NAAQS in any State. While GHGs are not regulated under the NAAQS and are currently being addressed by the USEPA through other sections of the CAA, climate change itself impacts air quality, particularly ground-level ozone, and has consequential health impacts associated with poor air quality.[10] However, because GHGs are not regulated under the NAAQS, Section 5(a)(8) of OCSLA specifically is not the appropriate statutory vehicle to address the harm that GHGs cause and BOEM is not proposing to address the issue of GHG emissions in this proposed rule.

The Bureau, however, is still interested in addressing GHGs consistent with its legal authorities. Lessees and operators currently submit to the NEI the results of BOEM's calculation of GHG information as part of GOADS, and GHG emissions are considered as part of the NEPA review of lease sales and post-lease approvals. In the coming months, BOEM will engage stakeholders regarding potential avenues to address GHG emissions, as appropriate, either through a separate rulemaking or some other action.

Separate but related to the GHG issue is the matter of black carbon (BC) dispersion and deposition in Alaska and other parts of the Arctic, which is an environmental concern. BC is a component of $PM_{2.5}$, and as such would be a component of a CP that will be regulated under the

[9] More recently, in the preamble to its proposed new source performance standards for the oil and gas industry, the USEPA provided an update regarding the climate change impacts that result from GHG emissions(80 FR 56593, 56602, Sept. 18, 2015). Many of the numerous impacts identified by the USEPA, such as increased severity of storms, increased water pollution (including ocean acidification), rising sea levels, loss of sea ice, and habitat loss, relate to coastal areas and the natural resources of the OCS. Both the 2009 endangerment finding and the recent proposed new source performance standards underscore that these impacts will exacerbate ongoing environmental pressures in Alaska, and will particularly impact Alaska native communities.

[10] See 74 FR 66496 (No. 239, December 15, 2009), "Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act," or the United States Global Change Research Program (USGCRP) National Climate Assessment, available at http://nca2014.globalchange.gov/report or the Intergovernmental Panel on Climate Change (IPCC) reports available at http://www.ipcc.ch/.

proposed rule.[11] The ambient concentrations of $PM_{2.5}$, including BC, would be considered in any analysis of the pre-existing background pollution levels before any plan could be approved for development on the OCS. Recent scientific studies[12] have indicated that BC can be a source of negative health effects.[13]

BOEM is actively investigating this issue and our evaluation of the potential impacts of BC and a determination of appropriate controls is continuing to evolve. BOEM and the USEPA are coordinating their efforts on this matter.

In addition to the health effects associated with the $PM_{2.5}$ emissions that include BC, there are also potentially significant implications to climate change and global warming from BC. These relate primarily to three factors: 1) BC particles directly absorb sunlight and reduce the planetary albedo[14] when suspended in the atmosphere; 2) BC absorbs incoming solar radiation, disturbs the temperature structure of the atmosphere, and influences cloud cover; and 3) when deposited on high albedo surfaces like ice and snow, BC particles reduce the total surface

[11] Black carbon is not classified as a unique CP and the USEPA does not directly regulate its emissions other than as a component of PM2.5.

[12] For example, "Black Carbon Exposures, Blood Pressure, and Interactions with Single Nucleotide Polymorphisms in MicroRNA Processing Genes," in Environmental Health Perspectives, 118:943-948 (2010), and "Long-Term Exposure to Black Carbon and Carotid Intima-Media Thickness: The Normative Aging Study" in Environmental Health Perspectives, 121:1061-1067 (2013). Web addresses for these studies described are at: http://www.jstor.org/stable/27822949?seq=1#page_scan_tab_contents and http://dash.harvard.edu/handle/1/11877015

[13] Based on an assessment of the scientific evidence for health effects associated with exposures to ambient PM, in the most recent review of the NAAQS for PM, the USEPA concluded that "many constituents of PM can be linked with differing health effects and the evidence is not yet sufficient to allow differentiation of those constituents or sources that are more closely related to specific health outcomes" (PM Integrated Science Assessment (ISA), section 2.4.4).

[14] Albedo is the fraction of solar energy (shortwave radiation) reflected from the Earth back into space. It is a measure of the reflectivity of the earth's surface. Ice, especially with snow on top of it, has a high albedo: most sunlight hitting the surface bounces back towards space.

albedo[15] available to reflect solar energy back into space. Small initial snow albedo reduction may have a large radiative forcing effect[16] because of a positive feedback: Reduced snow albedo increases surface temperatures and the increased surface temperature decreases the snow cover and further decreases surface albedo.[17]

While BOEM does not currently have sufficient data to support a specific limit on BC, the exemption thresholds research study currently underway for the Gulf of Mexico (which is described in detail in section III.D.1, under the heading of "Exemption Threshold Analysis") will analyze BC as part of the overall review. The study will apply the Community Multi-scale and Air Quality (CMAQ) Model and the Comprehensive Air Quality Model with Extensions (CAM_X) photochemical grid models, as part of the analysis. PM emissions specified in the emissions inventory will be allocated to individual PM species[18] as part of the Sparse Matrix

[15] Total surface albedo is the diffuse reflectivity or reflecting power of a surface. It is the ratio of reflected radiation from the surface to incident radiation upon it. In this case, the reduction in total surface albedo would represent the reduction in albedo that is caused by the relevant OCS operations in the vicinity of the project or development that is generating BC emissions.

[16] Radiative forcing or climate forcing is defined as the difference of insolation (sunlight) absorbed by the Earth and energy radiated back to space.

[17] Mollie Bloudoff-Indelicato (January 17, 2013). "A Smut Above: Unhealthy Soot in the Air Could Also Promote Global Warming: Atmospheric black carbon is not only bad for the lungs, but can also act as greenhouse particles under certain circumstances." Scientific American. January 22, 2013.
IPCC, Changes in Atmospheric Constituents and in Radiative Forcing, in Climate Change 2007: The Physical Science Basis. Contribution Of Working Group I To The Fourth Assessment Report Of The Intergovernmental Panel On Climate Change 129, 132 (2007), available at http://www.ipcc.ch/ipccreports/ar4-wg1.htm. (Magnitudes and uncertainties added together, as per standard uncertainty rules).
V. Ramathan and G. Carmichael, Global and regional climate changes due to black carbon, 1 NATURE GEOSCIENCE 221-22 (23 March 2008) ("The BC forcing of 0.9 W m–2 (with a range of 0.4 to 1.2 W m–2) … is as much as 55% of the CO2 forcing and is larger than the forcing due to the other GHGs such as CH4, CFCs, N2O or tropospheric ozone.").

[18] There are many forms of PM. The U.S. National Research Council has emphasized the importance of examining the risk of PM species ("Research Priorities for Airborne Particulate Matter: IV: Continuing Research Progress." Washington, D.C., National Research Council, 2004). Determining the differential toxicity of PM2.5 species and identifying species with greatest toxicity is of great importance to emission-control strategies and regulations. These investigations have reported numerous components that may be responsible for particle toxicity, such as elemental and organic carbon, sulfate, nitrate, and metals including zinc, nickel, iron, potassium, and chromium.

Operator Kernel Emissions (SMOKE) emissions processing and modeling system[19] using PM speciation factors obtained from USEPA's SPECIATE database[20] for each source category (as defined by the Source Classification Code (SCC)). This evaluation will result in PM mass being broken into the mass associated with elemental carbon (EC), organic carbon, and other elements, as well as particle bound VOCs, such as polycyclic aromatic hydrocarbons. BC is essentially equivalent to the EC portion of PM. CMAQ[21] and CAMx[22] model projections of EC will be calculated and modeled for further analysis. This will be done both for the domain defined for the study (*see* section III.D.1), and for specific sources. Two other models commonly used by the industry and BOEM to evaluate air quality, AERMOD[23] and CALPUFF,[24] are being considered for use and will apply a similar technique to apportion $PM_{2.5}$ mass for a BC analysis.

BOEM requests comments and data on the extent of BC emissions from OCS-related operations and potential means of reducing such emissions and their negative effects. BOEM also requests comment on other factors, information, or data that BOEM should consider in its analysis of BC, either in connection with or in addition to its air quality regulatory analysis.

C. Current Air Quality Regulatory Program Data Requirements

As explained above, BOEM's AQRP review, conducted under existing regulations at 30 CFR

[19] See the following site for additional information on the SMOKE modeling system: https://cmascenter.org/smoke/

[20] SPECIATE is the USEPA's repository of volatile organic gas and PM speciation profiles of air pollution sources. For additional information, see: http://www.epa.gov/ttnchie1/software/speciate/

[21] Further information on CMAQ is available at: http://www.fhwa.dot.gov/environment/air_quality/cmaq/

[22] Further information on CAMX is available at: http://www.camx.com/

[23] AERMOD is described in detail in the publication, "AERMOD: DESCRIPTION OF MODEL FORMULATION," U.S. Environmental Protection Agency, EPA-454/R-03-004, September 2004, available at: http://www.epa.gov/scram001/7thconf/aermod/aermod_mfd.pdf

[24] CALPUFF is an advanced non-steady-state meteorological and air quality modeling system adopted by the USEPA in its Guideline on Air Quality Models as the preferred model for assessing long range transport of pollutants and their impacts on federal Class I areas and on a case-by-case basis for certain near-field applications involving complex meteorological conditions. Further information on this model is available at: http://www.src.com/

part 550 subparts B and C, is triggered when a lessee or operator submits or resubmits an exploration or development plan. With respect to air quality, BOEM currently requires the submitter to provide the following information:

1. Projected emissions

Under existing BOEM regulations, the lessee or operator must provide tables showing the projected air emissions of all regulated criteria and major precursor pollutants, except $PM_{2.5}$, Pb, and O_3,[25] generated by the submitted plans. In addition, for each source for each pollutant, lessees must identify: the projected hourly emissions rate in peak pounds per hour; the total projected annual emissions in tons per year (tpy); the frequency and duration of projected emissions; and all projected emissions over the duration of the plan (i.e., for as many years as the operations will continue).

2. Maximum potential emissions

The lessee or operator must base all of its projected air emissions identified in (1) above on the maximum rated capacity of the equipment on the plan's drilling unit or facility.

3. Processes, equipment, fuels, and combustibles

The lessee or operator must provide a description of processes, processing equipment, combustion equipment, fuels, and storage units, including the characteristics and the frequency, duration, and maximum burn rate of any well test fluids to be burned.

[25] Existing BOEM air pollution prevention and control regulations (30 CFR part 550 subpart C) apply air quality standards and screening methods current as of 1980. At that time PM2.5 was not regulated and all PM was considered as total suspended particulates (TSP). Neither Pb nor O3 were included in the USEPA's screening methods under 40 CFR 52.21(c) or 40 CFR 165(b)(2).

4. Distance to shore

The lessee or operator must provide the distance between any given facility and the closest shoreline of an adjacent State.

5. Emission reduction measures (ERM)

Each lessee or operator must describe any proposed air emission reduction measures (ERM), including a description of the relevant source(s), the emission reduction control technologies or procedures, the quantity of reductions to be achieved, and any monitoring system proposed to measure emissions.

6. Reductions in emissions from non-exempt drilling units

The lessee or operator must provide a description of how the lessee or operator intends to address the emissions generated, if emissions from the plan are greater than the lessee's or operator's respective emission-exemption amounts and if modeling indicates that some form of emissions reductions will be necessary.

7. Documentation

The lessee or operator must document the basis for all of its calculations, including engine size, rating, and applicable operational information. In the GOM region, BOEM and industry have historically used worksheets contained in forms BOEM-0138 (Gulf of Mexico Air Emissions Calculations for EPs) and BOEM-0139 (Gulf of Mexico Air Emissions Calculations for DOCDs) for air quality information.

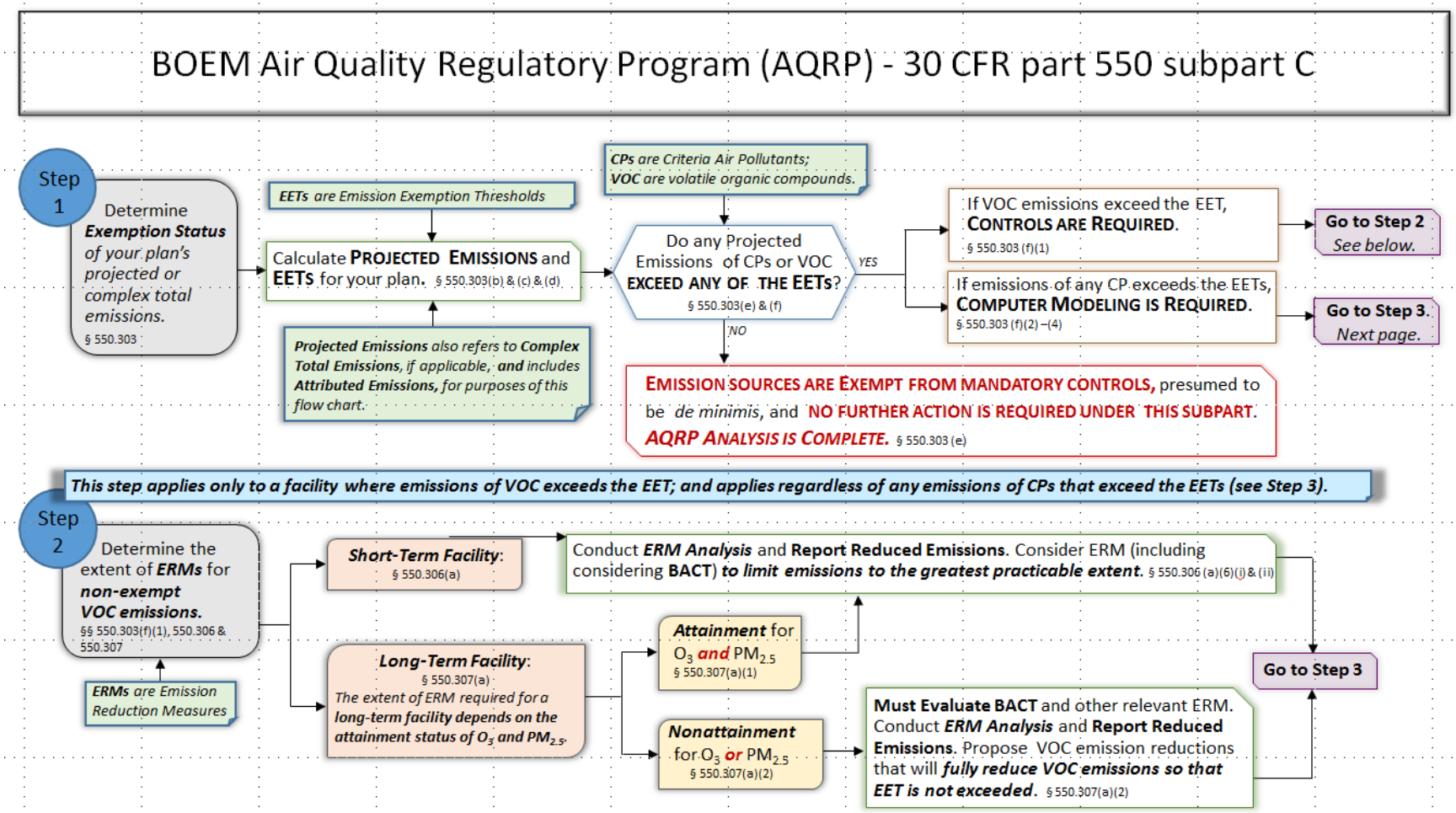
D. Proposed Analytical Approach

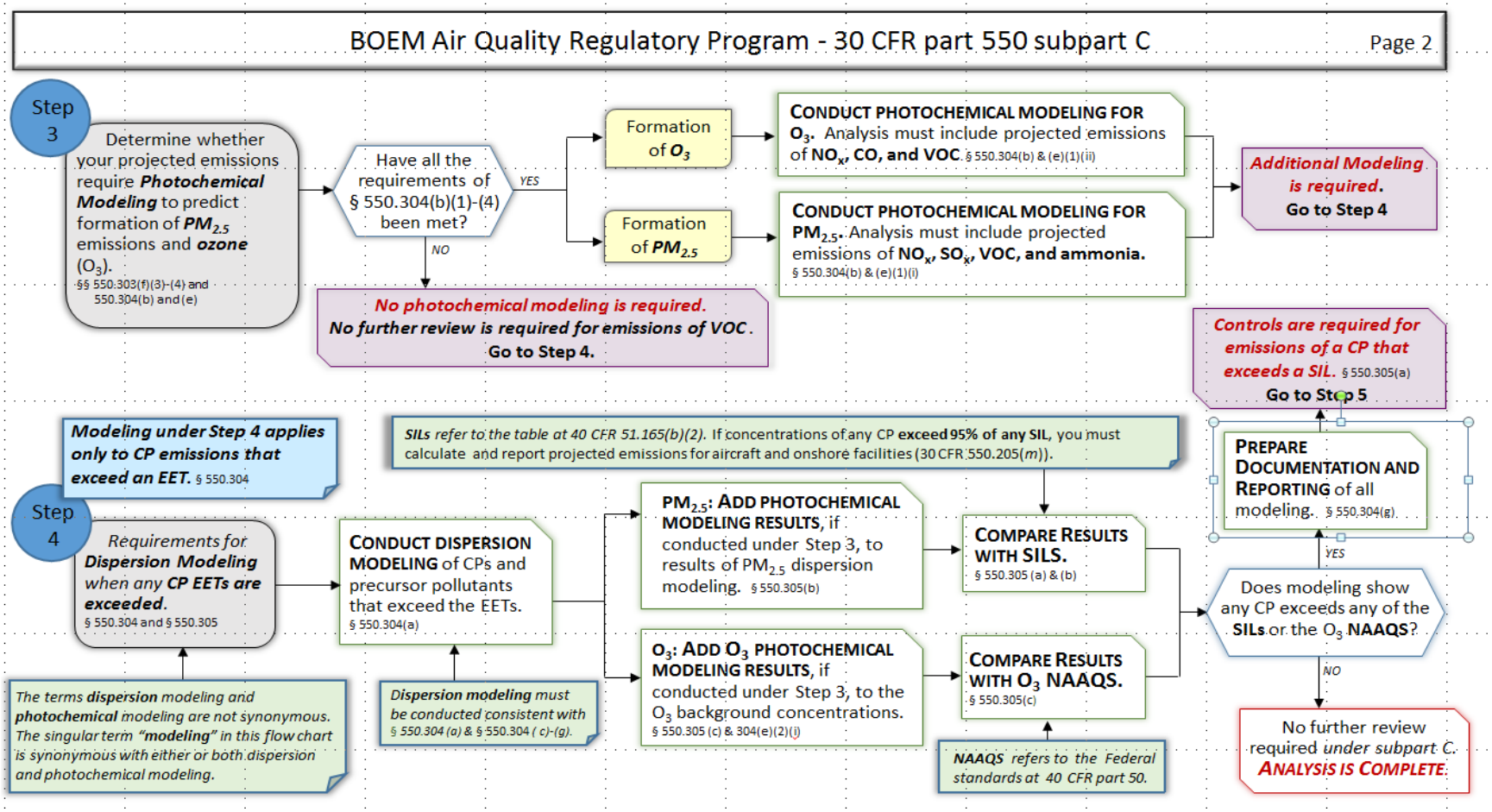
1. Flowchart

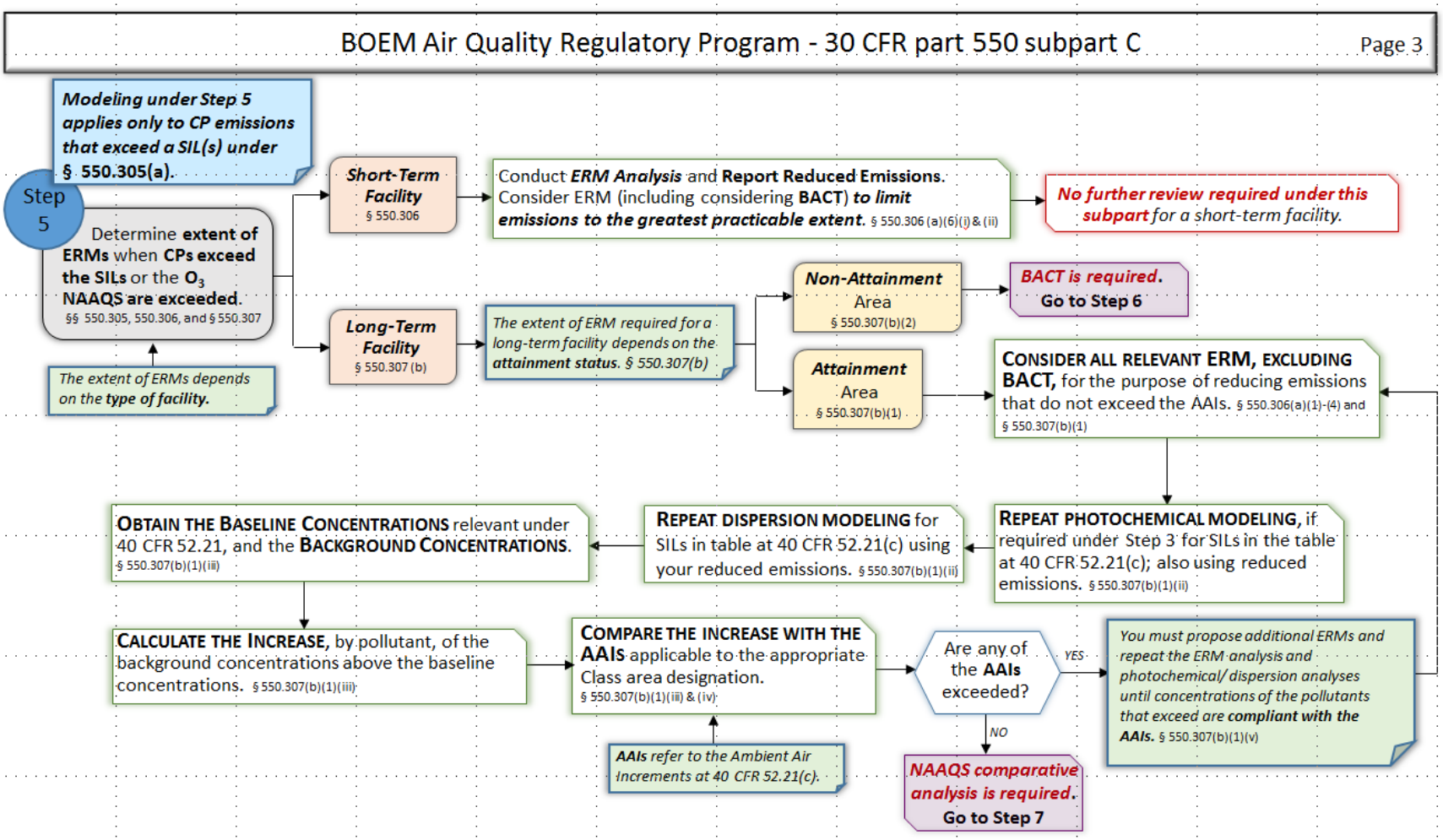
The following flow chart illustrates the analytical approach that a lessee or operator would

use to evaluate its projected emissions under this proposed rule. The flow chart is intended for informational purposes only. In any circumstances where the flow chart may be interpreted to conflict with the regulatory text, the regulatory text is controlling.

[See attached flowchart]


BOEM Air Quality Regulatory Program (AQRP) - 30 CFR part 550 subpart C
Step 1
Determine Exemption Status of your plan's projected or complex total emissions. § 550.303
EETs are Emission Exemption Thresholds
Calculate PROJECTED EMISSIONS and EETs for your plan. § 550.303(b) & (c) & (d)
Projected Emissions also refers to Complex Total Emissions, if applicable, and includes Attributed Emissions, for purposes of this flow chart.
CPs are Criteria Air Pollutants; VOC are volatile organic compounds.
Do any Projected Emissions of CPs or VOC EXCEED ANY OF THE EETs? § 550.303(e) & (f)
YES
NO
If VOC emissions exceed the EET, CONTROLS ARE REQUIRED. § 550.303 (f)(1)
Go to Step 2 See below.
If emissions of any CP exceeds the EETs, COMPUTER MODELING IS REQUIRED. § 550.303 (f)(2) –(4)
Go to Step 3. Next page.
EMISSION SOURCES ARE EXEMPT FROM MANDATORY CONTROLS, presumed to be de minimis, and NO FURTHER ACTION IS REQUIRED UNDER THIS SUBPART. AQRP ANALYSIS IS COMPLETE. § 550.303 (e)
This step applies only to a facility where emissions of VOC exceeds the EET; and applies regardless of any emissions of CPs that exceed the EETs (see Step 3).
Step 2
Determine the extent of ERMs for non-exempt VOC emissions. §§ 550.303(f)(1), 550.306 & 550.307
ERMs are Emission Reduction Measures
Short-Term Facility: § 550.306(a)
Long-Term Facility: § 550.307(a)
The extent of ERM required for a long-term facility depends on the attainment status of O3 and PM2.5.
Attainment for O3 and PM2.5 § 550.307(a)(1)
Nonattainment for O3 or PM2.5 § 550.307(a)(2)
Conduct ERM Analysis and Report Reduced Emissions. Consider ERM (including considering BACT) to limit emissions to the greatest practicable extent. § 550.306 (a)(6)(i) & (ii)
Must Evaluate BACT and other relevant ERM. Conduct ERM Analysis and Report Reduced Emissions. Propose VOC emission reductions that will fully reduce VOC emissions so that EET is not exceeded. § 550.307(a)(2)
Go to Step 3


BOEM Air Quality Regulatory Program - 30 CFR part 550 subpart C
Page 2
Step 3
Determine whether your projected emissions require Photochemical Modeling to predict formation of PM2.5 emissions and ozone (O3).
§§ 550.303(f)(3)-(4) and 550.304(b) and (e)
Have all the requirements of § 550.304(b)(1)-(4) been met?
YES
NO
No photochemical modeling is required. No further review is required for emissions of VOC. Go to Step 4.
Formation of O3
Formation of PM2.5
CONDUCT PHOTOCHEMICAL MODELING FOR O3. Analysis must include projected emissions of NOx, CO, and VOC. § 550.304(b) & (e)(1)(ii)
CONDUCT PHOTOCHEMICAL MODELING FOR PM2.5. Analysis must include projected emissions of NOx, SOx, VOC, and ammonia. § 550.304(b) & (e)(1)(i)
Additional Modeling is required. Go to Step 4
Controls are required for emissions of a CP that exceeds a SIL. § 550.305(a) Go to Step 5
Modeling under Step 4 applies only to CP emissions that exceed an EET. § 550.304
SILs refer to the table at 40 CFR 51.165(b)(2). If concentrations of any CP exceed 95% of any SIL, you must calculate and report projected emissions for aircraft and onshore facilities (30 CFR 550.205(m)).
Step 4
Requirements for Dispersion Modeling when any CP EETs are exceeded. § 550.304 and § 550.305
CONDUCT DISPERSION MODELING of CPs and precursor pollutants that exceed the EETs. § 550.304(a)
PM2.5: ADD PHOTOCHEMICAL MODELING RESULTS, if conducted under Step 3, to results of PM2.5 dispersion modeling. § 550.305(b)
O3: ADD O3 PHOTOCHEMICAL MODELING RESULTS, if conducted under Step 3, to the O3 background concentrations. § 550.305 (c) & 304(e)(2)(i)
COMPARE RESULTS WITH SILS. § 550.305 (a) & (b)
COMPARE RESULTS WITH O3 NAAQS. § 550.305(c)
PREPARE DOCUMENTATION AND REPORTING of all modeling. § 550.304(g)
YES
Does modeling show any CP exceeds any of the SILs or the O3 NAAQS?
NO
No further review required under subpart C. ANALYSIS IS COMPLETE.
The terms dispersion modeling and photochemical modeling are not synonymous. The singular term "modeling" in this flow chart is synonymous with either or both dispersion and photochemical modeling.
Dispersion modeling must be conducted consistent with § 550.304 (a) & § 550.304 (c)-(g).
NAAQS refers to the Federal standards at 40 CFR part 50.


BOEM Air Quality Regulatory Program - 30 CFR part 550 subpart C
Page 3
Modeling under Step 5 applies only to CP emissions that exceed a SIL(s) under § 550.305(a).
Step 5
Determine extent of ERMs when CPs exceed the SILs or the O3 NAAQS are exceeded. §§ 550.305, 550.306, and § 550.307
The extent of ERMs depends on the type of facility.
Short-Term Facility § 550.306
Conduct ERM Analysis and Report Reduced Emissions. Consider ERM (including considering BACT) to limit emissions to the greatest practicable extent. § 550.306 (a)(6)(i) & (ii)
No further review required under this subpart for a short-term facility.
Long-Term Facility § 550.307 (b)
The extent of ERM required for a long-term facility depends on the attainment status. § 550.307(b)
Non-Attainment Area § 550.307(b)(2)
BACT is required. Go to Step 6
Attainment Area § 550.307(b)(1)
CONSIDER ALL RELEVANT ERM, EXCLUDING BACT, for the purpose of reducing emissions that do not exceed the AAIs. § 550.306(a)(1)-(4) and § 550.307(b)(1)
REPEAT PHOTOCHEMICAL MODELING, if required under Step 3 for SILs in the table at 40 CFR 52.21(c); also using reduced emissions. § 550.307(b)(1)(ii)
REPEAT DISPERSION MODELING for SILs in table at 40 CFR 52.21(c) using your reduced emissions. § 550.307(b)(1)(ii)
OBTAIN THE BASELINE CONCENTRATIONS relevant under 40 CFR 52.21, and the BACKGROUND CONCENTRATIONS. § 550.307(b)(1)(iii)
CALCULATE THE INCREASE, by pollutant, of the background concentrations above the baseline concentrations. § 550.307(b)(1)(iii)
COMPARE THE INCREASE WITH THE AAIs applicable to the appropriate Class area designation. § 550.307(b)(1)(iii) & (iv)
AAIs refer to the Ambient Air Increments at 40 CFR 52.21(c).
Are any of the AAIs exceeded?
YES
You must propose additional ERMs and repeat the ERM analysis and photochemical/dispersion analyses until concentrations of the pollutants that exceed are compliant with the AAIs. § 550.307(b)(1)(v)
NO
NAAQS comparative analysis is required. Go to Step 7

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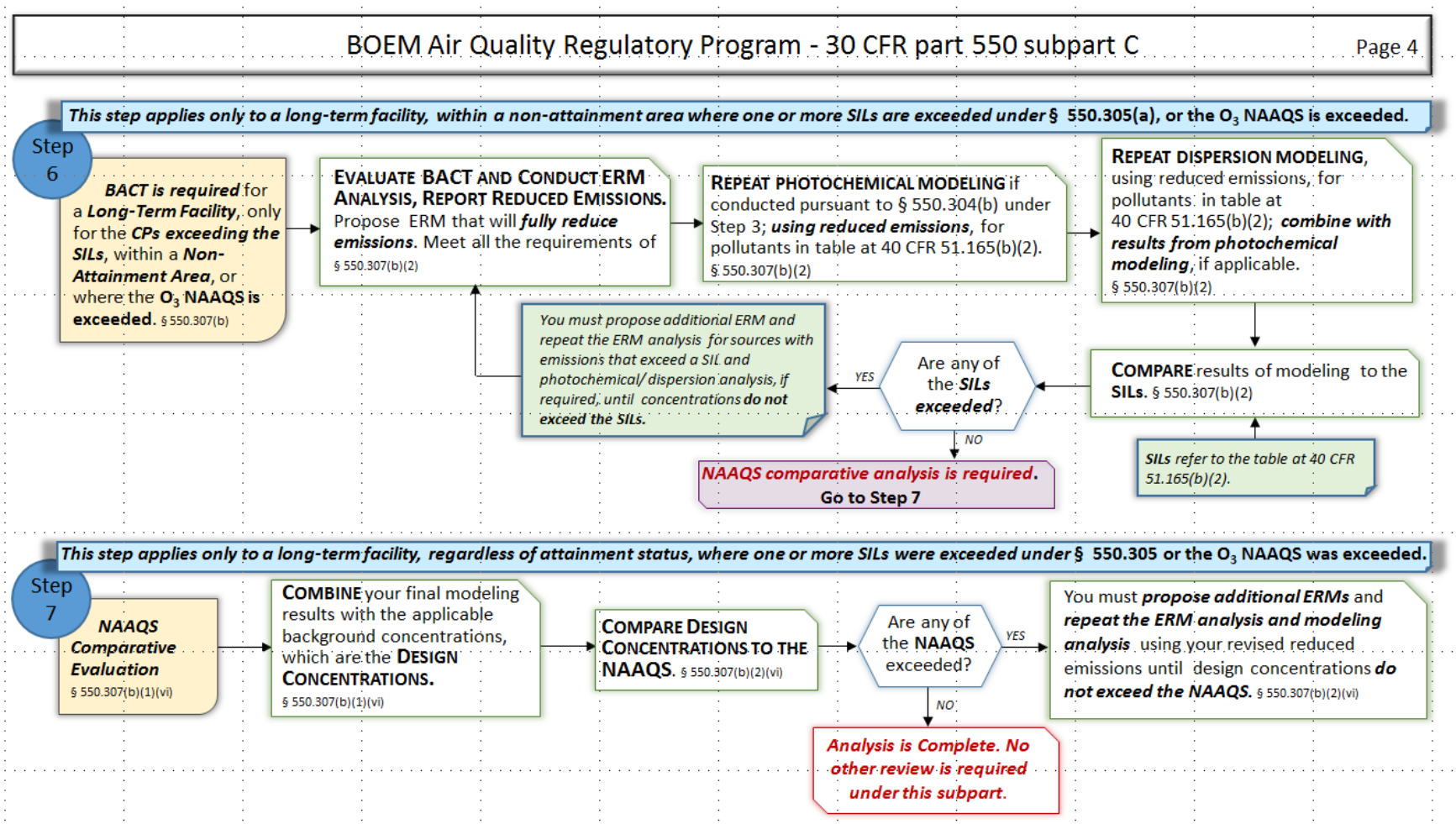
BOEM Air Quality Regulatory Program - 30 CFR part 550 subpart C
Page 4
This step applies only to a long-term facility, within a non-attainment area where one or more SILs are exceeded under § 550.305(a), or the O3 NAAQS is exceeded.
Step 6
BACT is required for a Long-Term Facility, only for the CPs exceeding the SILs, within a Non-Attainment Area, or where the O3 NAAQS is exceeded. § 550.307(b)
EVALUATE BACT AND CONDUCT ERM ANALYSIS, REPORT REDUCED EMISSIONS. Propose ERM that will fully reduce emissions. Meet all the requirements of § 550.307(b)(2)
REPEAT PHOTOCHEMICAL MODELING if conducted pursuant to § 550.304(b) under Step 3; using reduced emissions, for pollutants in table at 40 CFR 51.165(b)(2). § 550.307(b)(2)
REPEAT DISPERSION MODELING, using reduced emissions, for pollutants in table at 40 CFR 51.165(b)(2); combine with results from photochemical modeling, if applicable. § 550.307(b)(2)
COMPARE results of modeling to the SILs. § 550.307(b)(2)
SILs refer to the table at 40 CFR 51.165(b)(2).
Are any of the SILs exceeded?
YES
You must propose additional ERM and repeat the ERM analysis for sources with emissions that exceed a SIL and photochemical/ dispersion analysis, if required, until concentrations do not exceed the SILs.
NO
NAAQS comparative analysis is required. Go to Step 7
This step applies only to a long-term facility, regardless of attainment status, where one or more SILs were exceeded under § 550.305 or the O3 NAAQS was exceeded.
Step 7
NAAQS Comparative Evaluation § 550.307(b)(1)(vi)
COMBINE your final modeling results with the applicable background concentrations, which are the DESIGN CONCENTRATIONS. § 550.307(b)(1)(vi)
COMPARE DESIGN CONCENTRATIONS TO THE NAAQS. § 550.307(b)(2)(vi)
Are any of the NAAQS exceeded?
YES
You must propose additional ERMs and repeat the ERM analysis and modeling analysis using your revised reduced emissions until design concentrations do not exceed the NAAQS. § 550.307(b)(2)(vi)
NO
Analysis is Complete. No other review is required under this subpart.

While many significant changes would be made to BOEM's AQRP under the proposed rule, the analytical framework remains fundamentally the same. Under both the current regulations and the proposed rule, the lessee or operator must perform the following fundamental steps: 1) identify and describe the characteristics of all the relevant emissions sources; 2) calculate the emissions associated with these sources; 3) determine which emissions should properly be allocated to the lessee's or operator's plan; 4) compare the emissions totals, on a per-pollutant basis, to a series of exemption formulas; 5) apply ERMs to sources of VOC emissions that exceed the VOC exemption threshold; 6) conduct modeling of the potential impacts for any criteria pollutant that exceeds an exemption threshold and compare against various AAQSB; and 7) propose emission reduction measure(s) as necessary to ensure compliance with those standards and benchmarks. The "Summary of Key Changes" section of this preamble outlines the major changes included in this proposed rule. While the basic steps of the AQRP process would remain similar, the proposed rule would alter how the data are gathered, the standards and benchmarks against which the data are evaluated, and the process by which the air quality information is reviewed.

BOEM's current air quality evaluation methodology is based in large part on the USEPA's New Source Review (NSR) pre-construction permitting program.[26] Under one part of that program, USEPA uses pollutant-specific emission rates (called Significant Emissions Rates) to

[26] The NSR pre-construction permitting program is mainly composed of two parts: the Prevention of Significant Deterioration (PSD) program in attainment areas and the New Source Review Program for non-attainment areas. The PSD program applies to any "major emitting facility," including any OCS source, that commences construction or undertakes a major "modification" in an attainment area (CAA sections 165(a) and 169(2)(C)). A "major emitting facility" or "major source" is a stationary source that emits or has the potential to emit (PTE) any air pollutant in the amount of at least 100 or 250 tpy, depending on the source category and irrespective of the facility's location. A major "modification" is any physical or operational change to a stationary source that would result in both a significant emissions increase and a significant net emissions increase of one or more regulated NSR pollutants. A new major source or major modification must apply BACT, which is determined on a case-by-case basis taking into account, among other factors, the cost effectiveness of the control and energy and environmental impacts (40 CFR 52.21(b)(12) and (j)).

determine whether a permit applicant is required to conduct an ambient air quality analysis for each pollutant.[27] If so, USEPA then uses concentration levels known as SILs to help determine whether an individual source will cause or contribute to an exceedance of the NAAQS and the level of analysis necessary to make that determination.

BOEM uses emission exemption thresholds to determine whether the lessee's plan emissions would potentially impact the air quality of the State. When the thresholds are not exceeded, those emissions are presumed to not cause or contribute to an exceedance of the NAAQS. The USEPA uses applicability thresholds to determine if a source is subject to the requirements of the respective parts of the NSR permitting program and then applies screening criteria like the SILs[28] to determine whether emissions per pollutant require further regulatory review.

Given BOEM's distinct mandate to focus on State impacts from OCS activities, BOEM currently uses a formula that accounts for the distance of the facility from the shoreline. Specifically, the determination as to whether a facility could significantly affect onshore air quality under BOEM's AQRP is based on a formula that considers both the amount of air pollutant emitted and the distance of the proposed facility from the shoreline.[29] Because BOEM's determination of what constitutes potentially significant emissions varies depending on a proposed facility's distance from shore, BOEM uses distance as a variable in its formula to determine the relevant EET. If a proposed plan would cause emissions of criteria or precursor

[27] 40 CFR 52.21(b)(23); 40 CFR 52.21(m)(1)(i).

[28] The SILs are benchmarks used by the USEPA to determine whether some area may potentially be significantly affected by the emissions generated from a proposed new stationary source of emissions. The SILs are used as a screening tool to determine what additional steps, if any, may be required before a stationary source can be approved.

[29] This differs from the way in which the USEPA determines which facilities are subject to the NSR preconstruction permitting program. As explained in the previous footnote, the USEPA makes this determination based on whether the emissions of a new source or modification to an existing source are higher than a certain amount of tons of air pollution per year or whether the modification would result in both a significant emissions increase and a significant net emissions increase of one or more regulated NSR pollutants irrespective of the facility's or facilities' location.

air pollutants in excess of the EET, the proposed plan is required to include a detailed air quality analysis. If a proposed plan would not cause emissions of criteria or precursor air pollutants in excess of the EET, the plan is not required to include a detailed air quality analysis. BOEM refers to plans that are not required to include a detailed air quality analysis as "exempt."

2. Exemption threshold analysis

The first step in the approach of both the current regulations and the proposed rule is the exemption threshold analysis discussed above. BOEM determines, based on the information provided by the lessee or operator, whether or not any given plan (EP, DPP or DOCD) will generate emissions above a defined exemption threshold. If so, further analysis is required. If not, the impact to the air quality of the State is presumed to be *de minimis* and no further action is required.

BOEM currently has only one set of exemption thresholds, which are, under the existing regulations, applied identically in the Central and Western GOM OCS Regions and offshore of the North Slope Borough of the State of Alaska. BOEM is now in the process of conducting scientific studies to re-evaluate the exemption thresholds formulas, for both the GOM and Alaska OCS Regions to tailor those thresholds to the relevant environmental characteristics of each region and to take into consideration USEPA standards applied to various time periods, whether annual or shorter intervals. These BOEM studies will evaluate and, if necessary, provide the basis for updating the current exemption threshold equations and consider whether recent advances in the field of computer simulation modeling and the availability of comprehensive meteorological datasets unique to each region may be applied to improve the exemption threshold equations by applying the updated underlying data. The studies will use computer-simulated air quality dispersion and photochemical modeling to provide the information

necessary to evaluate the current threshold equations (i.e., for the EETs) and, if necessary, establish a basis for developing a new method. All modeling conducted for the studies will be consistent with the USEPA's Guideline on Air Quality Models (40 CFR part 51 Appendix W).

The GOM and Alaska OCS studies are designed to fulfill the following objectives:

- Prepare onshore and offshore emissions inventories for use in computer simulation air quality dispersion and photochemical modeling, based on the multi-sale 2017-2022 scenario emissions for both OCS Regions;
- Evaluate current meteorological data and develop new data, as necessary, for input into air quality models;
- Conduct air quality dispersion and photochemical modeling to discern the collective effect of onshore and offshore emissions on the onshore area of adjacent States;
- Investigate the current exemption threshold formulas for evidence the rates are protective of the annual and short-term (24-hours or less) AAQSB using dispersion and photochemical air quality modeling and, if necessary, develop a new method;
- Conduct visibility analyses for the GOM Region Class I areas: Breton Wilderness; Saint Marks Wilderness; Chassahowitzka Wilderness; and Bradwell Bay; and,
- Perform a 40 CFR part 51 Appendix W Section 3.2.2 "Equivalency Demonstration" for modeling purposes in the GOM region. Such an "Equivalency Demonstration" would involve determining the most appropriate model for the exemption thresholds, taking into account the USEPA list of preferred models and the relevant criteria for evaluating alternatives.

As discussed above, BOEM is considering establishing two or more sets of EETs (i.e., per pollutant, averaging time, and location), at least one for the GOM OCS Region and at least one

for the area offshore of the North Slope Borough of the State of Alaska. For this reason, BOEM would like comments on the appropriateness of potentially distinct emissions thresholds or threshold formulas for these two areas, and/or how these thresholds should be structured.

The USEPA recently established new one-hour NAAQS for NO_2, and SO_2, as well as changes to the 8-hour O_3 and annual $PM_{2.5}$ NAAQS, and also given that the USEPA has recommended an interim SIL for one-hour NO_2 at 8ug/m[30] and an interim SIL for one-hour SO_2 at 3 parts per billion,[31] but has not proposed to add these SILs (or any SILs for $PM_{2.5}$ or ozone) to 40 CFR 51.165(b)(2), comments are solicited on how these new ambient standards and SILs that have the status of only being USEPA recommendations should be implemented in the context of the new studies, for the purpose of updating the new EETs that result.

Until such time as new EETs are established, the existing exemption thresholds will continue to apply identically in both regions.

3. Modeling analysis

In the event the exemption threshold analysis indicates that one or more criteria or major precursor pollutants would exceed an applicable threshold, the plan submitter must proceed to the second step in the BOEM AQRP, which is the modeling analysis. The purpose of the modeling analysis is to help BOEM determine, based on the information provided by the lessee or operator, whether or not the proposed operations that generate emissions above an exemption threshold would cause or contribute to a violation of the NAAQS.[32] BOEM's AQRP currently models the onshore concentrations created by the relevant criteria or precursor pollutants emitted

[30] Available at: http://www3.epa.gov/nsr/documents/20100629no2guidance.pdf
[31] Available at http://www.epa.gov/sites/production/files/2015-07/documents/appwso2.pdf
[32] Under this proposed rule, the modeling analysis would also be used in certain cases to determine whether an exceedance of the AAIs has occurred; this is not listed separately, since the purpose of the AAI analysis is to protect an attainment area from potentially exceeding the NAAQS.

offshore. Under existing regulations, plans that would result in operations or uses that generate ambient concentrations above these Significance Levels as modeled onshore are subject to further review and analysis. BOEM's Significance Levels are listed in its regulations at 30 CFR 550.303(e).

These Significance Levels in BOEM's existing regulations are based on USEPA's SILs (as they existed approximately 35 years ago), which are ambient concentration levels used by the USEPA to determine whether the ambient air concentration of any given air pollutant could cause or contribute to a violation of the NAAQS at a given location. Under USEPA's historical practice in the PSD program, if the ambient air impacts of each criteria air pollutant are below the applicable SILs for all relevant averaging times, then the incremental emissions are considered to have an impact that is *de minimis* and, therefore, not significant. BOEM's regulations utilize the USEPA's SILs to determine whether emissions of any given pollutant that originates offshore could have a potentially significant effect onshore. The USEPA SILs are expressed in terms of pollutant concentrations averaged over a specific period of time (i.e., averaging time), for example on an annual basis. There are also SILs designed to evaluate peak emissions of air pollutants over shorter time intervals, which include the 1-hour, 3-hour, 8-hour, and 24-hour averaging times. By incorporating the relevant USEPA values listed in a table in an USEPA regulation, BOEM would automatically apply these timing intervals or averaging times, as well for those pollutants and averaging times that are reflected in USEPA regulations.

Under BOEM's existing regulations, in order to evaluate the potential onshore effects of offshore emissions, the models project the ambient concentration of any given air pollutant at various measurement points onshore, which are referred to as receptor locations. If any projected concentration of a given air pollutant does not exceed BOEM's applicable

Significance Level(s) at all receptor locations onshore for all relevant averaging times, then the incremental emissions are presumed *de minimis*, and no further analysis is required of emissions of that pollutant under the BOEM AQRP. In other cases, additional modeling and/or the application of relevant emissions reductions measures will generally be required.

At the time the current BOEM regulations were promulgated, there were no USEPA-approved modeling approaches to quantify the impacts of single sources of volatile organic compound (VOC) emissions on ambient O_3 levels. For this reason, the current rule does not require modeling of VOCs and there is nothing analogous to a SIL to indicate ambient impact of VOCs. Instead of evaluating VOC emissions against a SIL, VOCs are evaluated only against an exemption threshold. CPs and the reductions in their emissions that may be required under the current regulations are determined based on several different levels that can vary with the location of the facility, the attainment status of the areas it affects, and whether the facility is long- or short-term. In contrast, in those situations where the emissions of VOCs exceed the relevant emission exemption threshold, BOEM's regulations instead require a reduction in the emissions of VOCs[33] Based on the analysis done at the time, BOEM concluded that this reduction should have been sufficient to address the potential impact of VOCs on the formation of O_3.[34]

4. Controls for short-term facilities

If it is determined through modeling that the planned operations will generate an onshore concentration of one or more air pollutants in excess of the SILs, various further analyses must

[33] When VOC emissions exceed the EET for a short-term facility or a long-term facility affecting only an attainment area, the lessee or operator must apply ERM to reduce VOC emissions to the greatest extent possible. For a long-term facility affecting a non-attainment area, the lessee or operator must apply ERM to reduce VOC emissions so that the EET is not exceeded.

[34] Results of the ongoing studies in the GOM and Alaska will provide an updated method for evaluating VOC contributions to ambient ozone concentrations in the future.

be done in order to determine what controls must be applied. Under the current AQRP, if a facility is projected to cause ambient concentrations of air pollution above acceptable levels (i.e., the SILs), the lessee or operator of that facility must propose the application of BACT[35] in connection with post-control modeling, to demonstrate the AAQSB will likely be met. The requirements applicable to making this determination vary depending on the amount of time that the facility described in the proposed plan is anticipated to be present at any given location. The current regulations make a distinction between temporary and permanent facilities. Under the proposed rule, the phrase "short-term facility" is used instead of the phrase "temporary facility." In both cases, these terms refer to a facility that is located in one place for less than three years.

Under the proposed rule, if the projected concentration increase due to emissions from the proposed short-term facility exceeds the SILs but such exceedance only affects attainment areas, the lessee or operator would be required to determine the maximum amount of emissions reductions that it can achieve with operational controls and/or equipment replacements that are technically and economically feasible. This would represent a level of emissions reductions that achieves the maximum efficiency of their operations with respect to emissions reduction. At that point, the lessee or operator could decide whether to apply those operational controls and/or equipment replacements, or to instead obtain emissions credits. If it is determined that there are no operational controls and/or equipment replacements that are technically and economically feasible, and the emissions from the proposed facility would affect only attainment areas, then no ERM would be required. In BOEM's proposed rule, a maintenance area is treated as an attainment area; thus, the same requirements would apply.

[35] In this proposed rule, references to BACT are intended to refer to BOEM's current or proposed requirements, unless the USEPA's definition is specifically referenced. Under the USEPA regulations, most types of ERM could qualify as BACT, whereas BOEM's definition is substantially limited to physical or mechanical controls.

If the projected emissions for the proposed short-term facility exceed the SILs and such exceedance would affect a designated non-attainment area, the lessee or operator would not only be required to conduct an ERM analysis, but might also be required by the Regional Supervisor to apply additional types of ERM (beyond that which was proposed in the original plan).

Under the proposed rule, described in more detail in the section-by-section analysis for section 550.306, a process has been outlined to facilitate the determination of the most appropriate ERM, of which BACT is one option. If the lessee or operator proposes to use BACT, the lessee or operator would be required to provide a description of the associated energy, environmental and economic impacts[36], and other costs.

In the case of a short-term facility, the application of ERM would generally be sufficient for BOEM to conclude, without further analysis, that the facility does not cause a significant effect on the air quality of a State. As explained in the next Section, this presumption would not apply in the case of a long-term facility. Although BOEM would set the air emissions limits in connection with its approval of the plan, BSEE would be responsible for ensuring that any required ERM, including BACT, are actually applied in compliance with the plan requirements.

5. Controls for long-term facilities

If emissions from a long-term facility generate onshore concentrations of air pollutants in excess of the SILs, under the current regulations, the lessee or operator must apply BACT. If only an attainment area is affected, the proposed BACT must result in the plan or facility meeting the Maximum Allowable Concentration Increases (MACIs), which are set out in a table in BOEM's regulations. The MACIs are based on the USEPA's AAIs, and are designed to prevent the air quality in clean areas from deteriorating to an unacceptable level as set by the

[36] The description of the associated energy, environmental and economic impacts is not required in the case of non-BACT ERM.

NAAQS. The NAAQS represent a maximum allowable concentration "ceiling" for each air pollutant and averaging time that does not vary geographically. A MACI, on the other hand, represents the maximum increase in concentration that is allowed to occur above a baseline concentration for any given pollutant. Baseline concentrations vary geographically. When the MACI[37] is added to the baseline concentration, the result is a new "ceiling" specific to that area. A significant deterioration in the air quality is said to occur when the concentration of a pollutant would exceed the applicable MACI added to the baseline concentration in that area. BOEM and its predecessors have taken the position that the exceedance of a MACI constitutes a significant deterioration in air quality that "significantly affect[s] the air quality of any State." Moreover, the MACIs are designed to ensure that attainment areas do not fall out of attainment, and so they are appropriate increments to "ensure compliance with the [NAAQS]." Thus an activity that has the potential to cause an exceedance of the MACIs should not be approved under BOEM's current regulations.

These MACIs, and the AAIs on which they were based, vary depending on whether any given location is defined as a Class I, a Class II or Class III location (described below in the discussion of the definitions of those terms) and the relevant timeframes of exposure (i.e., averaging times).

Under the proposed rule, with respect to impacts in an attainment area, if emissions from a long-term facility were to generate concentrations of air pollutants landward of the SSB in excess of the SILs, the lessee or operator would be required to undertake an ERM analysis, excluding BACT, to determine the most effective and technically and economically feasible approach for reducing the projected emissions from its facility. If the projected concentration increase due to

[37] Under BOEM's current regulations, the term MACI is used. This proposed rule would eliminate that term and use the term AAI exclusively.

emissions from the proposed facility exceed the SILs but do not exceed the AAIs, the proposed plan could be approved without the lessee or operator having to bring the concentration increase due to the emissions from its operations below the SILs. If the projected emissions exceed the AAIs after the application of ERM, the lessee or operator would be required to use additional ERM until it could demonstrate its emissions no longer resulted in such an exceedance.

Under the proposed rule, with respect to impacts in a non-attainment area, if emissions from a long-term facility were to generate concentrations of air pollutants landward of the SSB in excess of the SILs, the lessee or operator would be required to undertake an ERM analysis, including BACT, to determine the most environmentally effective of the technically and economically feasible approaches for reducing the projected emissions from its facility. If the projected concentration increase –due to emissions from the proposed facility –continue to exceed the SILs after the application of ERM, the proposed plan could not be approved without the lessee or operator having to bring the concentration increase due to emissions from its operations below the SILs. Regardless of whether the projected emissions would affect a designated non-attainment or attainment area, the lessee or operator would be free to propose emissions credits in lieu of any other ERM to accomplish this objective.

The proposed rule retains a requirement in the current regulations (in 30 CFR 550.303(g)(2)(i)(B)) that no plan can be approved if that plan would result in the generation of emissions sufficient to cause an area of a State to switch from attainment to a non-attainment status. For that reason, any long-term facility that demonstrates projected emissions in excess of the SILs would be required to demonstrate that those emissions do not cause the exceedance of any NAAQS in an attainment area.

6. Protection of exceptional natural resources

As part of the 1977 amendments to the CAA (P.L. 95-95; 91 Stat. 685), Congress mandated that the country be divided into various areas based on their sensitivity to potential problems associated with poor air quality. These amendments establish Class I, II, and III areas. The restriction on emissions are most strict in Class I areas and are progressively more lenient in Class II and III areas. In addition to the three classifications mentioned in the statute, the Federal Land Managers (FLMs)[38] have established a fourth classification which they title "sensitive Class II areas." Sensitive Class II areas represent an intermediate classification intended to designate special areas, such as national monuments and national refuges that, while not subject to the same level of controls as Class I areas, require special protections above those normally afforded to typical Class II areas.

Thus, parts of the country are designated as Class I or sensitive Class II areas to indicate that they have been identified for special protections. National parks, national wilderness areas, national monuments, national seashores, and other areas of special national or regional natural, recreational, scenic, or historic value are generally designated as Class I[39] or as sensitive Class II areas. FLMs, including the U.S. Department of Agriculture's Forest Service, and DOI's Bureau of Land Management (BLM), National Park Service (NPS) and U.S. Fish and Wildlife Service (FWS) manage these areas. Together, these FLMs have the affirmative responsibility to protect

[38] The Federal Land Managers' Air Quality Related Values Work Group (FLAG) was formed to develop a more consistent approach for the Federal Land Managers (FLMs) to evaluate air pollution effects on their resources. Of particular importance is the New Source Review (NSR) program, especially in the review of Prevention of Significant Deterioration (PSD) of air quality permit applications. For a facility located in or near a Class I area, the PSD permitting program uses AQRVs when evaluating the potential impact of a proposed source or modification on resources which are sensitive to air quality.

[39] Several tribes have also requested USEPA to redesignate their lands from Class II to Class I to provide additional air quality protection. These are the Northern Cheyenne Reservation, the Flathead Indian Reservation, the Fort Peck Indian Reservation, the Spokane Indian Reservation and the Forest County Potawatomi Community Reservation. See 40 CFR 52.1382(c), 52.2497(c) and 52.2581(f).

the unique attributes and air quality of Class I and sensitive Class II areas. BOEM has not proposed and does not intend to evaluate air quality impacts in non-sensitive Class II or Class III areas other than by applying the typical AQRP requirements.

Under the CAA, FLMs are charged with reviewing available information about proposed facilities in order to determine their potential air quality impacts on Class I areas. FLMs have established Air Quality Related Values (AQRV), which represent resources which are sensitive to air quality and include a wide array of vegetation, soils, water, fish and wildlife, and visibility. The goal of the FLMs is to ensure that pollution levels stay below the critical loads (i.e., below which they have determined there would be no adverse impact to a Class I area). These AQRVs include values designed to protect visibility, odor, flora, fauna, and geological, archeological, historical, and cultural resources, as well as soil and water resources. The AQRVs for various Class I areas differ depending on the purpose and characteristics of a particular area and the assessment by an area's FLM. The FLMs determine the requirements for compliance with each AQRV.[40]

FLMs evaluate plans submitted to BOEM to determine whether there would be any potential adverse impact to a Class I or sensitive Class II area and to recommend controls, as appropriate, if there are potentially adverse impacts. In order to complement this process, BOEM's AQRP requires any proposed long-term facility whose emissions cause an exceedance of the SILs to meet the standards for the MACIs that correspond to the Class designation of the areas onshore of the proposed operations.

[40] See http://www.nature.nps.gov/air/Pubs/pdf/flag/FLAG_2010.pdf.

7. Primary and secondary National Ambient Air Quality Standards (NAAQS) evaluation

Once BOEM determines the MACIs or the SILs would not be exceeded, BOEM must make a further determination that the NAAQS would also not be exceeded in any attainment area.

There are two types of NAAQS, primary and secondary. Primary NAAQS are intended to protect public health, including the health of sensitive subpopulations with a requisite margin of safety, whereas secondary standards are intended to protect public welfare (e.g., effects on crop yields) from any known or anticipated adverse effects associated with the presence of the specified pollutants in ambient air. These standards are composed of four elements: indicator; averaging time; statistical form; and level. Under both BOEM's current regulations and its proposed rule, for any pollutant for which there is more than one standard, plans must comply with whichever NAAQS standard is strictest in terms of the ERMs needed for the facility. Generally, according to both BOEM and USEPA regulations, no project can be approved if it would result in design concentrations for any given air pollutant in excess of the level for either the primary or secondary NAAQS for that pollutant in an attainment area.

The NAAQS, codified at 40 CFR part 50, identify the maximum allowable concentrations, or "ceilings," and forms, for each of the various CPs at any given location. Under its current regulations, BOEM will not approve a plan that it determines would cause the ambient air quality either at the shoreline or farther onshore to deteriorate significantly beyond the air quality specified by the applicable NAAQS for any given air pollutant, regardless of whether the change would comply with the other relevant SIL(s) or AAI(s) for that same pollutant.[41] Because the

[41] There could be an exception in a case where offsets are used in lieu of another ERM. In the proposed rule, the emissions credits must affect the same Air Quality Control Region (AQCR) as the facility's projected emissions. Because the boundaries of the AQCR may not be the same as the boundaries of the non-attainment areas (because

NAAQS represent the amount of an air pollutant that is allowable at any given location, evaluating the emissions of the pollutant to determine the potential for an exceedance requires information on existing concentrations of the pollutant at the location, i.e., the background concentration. The sum of the background concentration of the pollutant plus the incremental concentration of that same pollutant caused by the projected emissions for the relevant averaging time and statistical form is referred to as the design concentration of that pollutant. BOEM compares the design concentration with the NAAQS to determine if there is likely to be an exceedance.

8. Intersection with the National Environmental Policy Act

Under current BOEM regulations, while the AQRP is focused on the extent to which projected air emissions generated offshore could significantly impact the air quality onshore, BOEM also considers air quality impacts related to lease and plan approval as part of its analyses conducted pursuant to NEPA. BOEM considers potential impacts from air emissions individually and collectively, including potential air quality impacts offshore and onshore that would be caused by proposed oil and gas exploration and development activities. Because of BOEM's staged decision-making with respect to activities conducted under an OCS lease, NEPA reviews involve multiple analyses and occur at several time points in the OCS lease and development process.

In order to comply with the applicable requirements of NEPA, BOEM evaluates the likely cumulative impacts of OCS development during its Five-Year Oil and Gas Leasing Program and

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non-attainment areas are typically much smaller), and because the proposed rule would commit BOEM to always allowing offsets provided they are in the same AQCR, the effects of the facility's pollution and the offsets may occur in different areas. Thus, it is possible that the non-attainment area may remain unaffected even after the relevant ERM have been applied. Since the offset is the same magnitude as the required reduction, the statement would be accurate on an aggregate basis, regardless of the attainment/non-attainment areas to which the offset would apply.

the associated Five-Year Programmatic Environmental Impact Statement. BOEM conducts an additional analysis of such prospective impacts at the time it prepares a multi-sale Environmental Impact Statement (EIS) or a NEPA analysis on an individual lease sale. BOEM conducts an even more detailed air quality analysis at the time the lessee or operator submits the EP, or RUE or ROW application, lease-term pipeline application, and again when the lessee or operator submits a DPP or DOCD. At these two later stages, BOEM conducts the AQRP in order to ensure the lessee's or operator's implementation proposals comply with the applicable requirements of OCSLA and the corresponding BOEM regulations.

9. Additional environmental review

BOEM conducts analyses of the potential impact of OCS development on the conservation of the natural resources of the OCS and overlying waters (including the fish, marine mammals, plants, corals, etc.) to ensure the prevention of waste; to evaluate those circumstances that could result in environmental and other hazards; and to conserve and protect the associated mineral, economic, and environmental resources in and over the OCS, in accordance with OCSLA at 43 U.S.C. §§ 1334(a), 1340(c), and 1351. Current BOEM regulations also specify each Regional Supervisor should evaluate every plan and make a determination that the proposed activities will not cause serious harm or damage to the marine, coastal, or human environment (e.g., 30 CFR 550.202).

E. Conclusion

BOEM's AQRP is intended to protect the air quality of the States and to achieve the following objectives with regard to OCS exploration and development: 1) to protect public health from adverse effects; 2) to protect public welfare, including the economies of the States, by preventing a deterioration in the air quality of the environment (e.g., to protect crops, forests,

and wildlife); 3) to prevent the formation of new designated non-attainment areas; and 4) to preserve and enhance the air quality in national parks and other areas of special natural, recreational, scenic, or historic value. BOEM continues to maintain these same goals and objectives as it proposes to amend the regulations to more effectively meet these goals and objectives. In most cases, these objectives are similar to those of corresponding analysis and permit review processes of the States, working in conjunction with the USEPA.

In addition to BOEM's AQRP, the Bureau of Safety and Environmental Enforcement (BSEE) has an enforcement program designed to ensure lessees and operators comply with BOEM's air quality regulations and that such lessees and operators do not emit air pollutants that exceed the terms of their approved plans or RUE or pipeline ROW applications. BOEM provides plan information to BSEE on a regular basis, and BSEE uses this information to evaluate applications for permits to drill. BSEE also monitors lessee or operator operations on an ongoing basis, as one component of its inspections process.

IV. Summary of Key Changes

A. Air Pollution Emissions Standards

The current rule has AAQSB relevant to CO, SO_2, NO_x, total suspended particulates (TSPs) and VOCs. The proposed rule would broaden the scope of BOEM's AQRP to cover all the NAAQS criteria pollutants and the major precursor pollutants, as required by OCSLA. Under the proposed rule, carbon monoxide and VOCs would be subject to substantially the same requirements as under the current regulations. The review of SO_2 would be expanded to also include an evaluation of other sulphur oxides (SO_x). Total suspended particulates would be replaced as an indicator pollutant with a new indicator pollutant titled PM_{10}. New regulatory requirements would be added for O_3, Pb, $PM_{2.5,}$ and NH_3, none of which have specific emissions

limits in the current regulations. In addition, the requirements for hydrogen sulfide (H_2S), a minor precursor to SO_2, would be refined. The proposed rule defines BOEM's list of criteria and precursor pollutants by reference to the relevant tables in the USEPA's regulations, thereby ensuring that any changes or additions promulgated by the USEPA would be automatically accounted for in the BOEM regulations.

In addition to accounting for all of the criteria and major precursor pollutants, as required by OCSLA, the proposed rule would result in enhanced collection, evaluation, and consideration of data on such pollutants over a greater variety of time intervals (i.e., averaging times), because BOEM would evaluate air pollutant emissions in terms of the effects, not only on annual pollution levels, but also on pollution levels for the other averaging times the USEPA uses in evaluating SILs, AAIs (MACIs) and NAAQS for CPs, including 1-hour, 3-hour, 8-hour, and 24-hour averaging times. The differing averaging times were established in recognition that higher short-term concentrations of a pollutant can have adverse effects even when the long-term average concentration of the same pollutant falls within relevant annual standards. The proposed rule would better align and coordinate the information gathering and data analysis requirements in BOEM's regulations with similar requirements used by the USEPA and reflected in USEPA requirements and tables. Specifically, under the proposed rule, BOEM would require the use of the USEPA's tables for SILs, AAIs and NAAQS in any circumstance where modeling is required. Thus, any changes to any applicable USEPA AAQSB would automatically be cross-referenced by BOEM regulations and would not require that BOEM amend or update its regulations.

Under the proposed regulations, certain provisions within BOEM's rules would be updated automatically whenever the USEPA makes corresponding changes in:

- The SILs, also known as significant impact levels or significance levels, with the associated averaging times, as defined in 40 CFR 51.165(b)(2);
- The AAIs (i.e., concentration levels of ambient pollutants and associated statistical form), as defined in 40 CFR 52.21(c);
- The primary or secondary NAAQS, as defined in 40 CFR part 50;
- The identification of criteria and major precursor air pollutants, as defined in 40 CFR 51.15(a);
- The list of approved air quality models, as defined in 40 CFR part 51, Appendix W;
- USEPA air quality modeling requirements and methodologies, as defined in 40 CFR part 51, Appendix W;
- Emissions factors, based on models defined by the USEPA or the FAA, to determine emissions levels for tier- and non-tier-compliant marine and non-road engines and aircraft;
- Reporting timeframes associated with the NEI; and
- Significant emissions rates (SERs) for criteria and major precursor pollutants, as defined in 40 CFR 51.21(b)(23)(i).

Under the proposed rule, certain provisions in BOEM's rule would also be updated automatically whenever the USEPA changes 40 CFR 1043.100 to reflect emissions standards and other requirements applicable to marine engines under Annex VI to the International Convention for the Prevention of Pollution from Ships (as the protocol is defined in 33 U.S.C. § 1901), as implemented in the U.S. through the Act to Prevent Pollution from Ships (33 U.S.C. §§ 1901-1915). This protocol is commonly referred to as "MARPOL." The MARPOL standards are part of the federal coordinated strategy to address emissions from

vessels adopted by the USEPA which consists of 1) the CAA engine standards and fuel limits for U.S. vessels contained in 40 CFR 80 and 40 CFR 1042; 2) the North American and U.S. Caribbean Sea Emission Control Areas designed by amendment to the MARPOL protocol; and 3) the MARPOL engine emission and fuel sulphur limits that apply to all vessels regardless of flag (see 75 FR 22896, April 30, 2010). BOEM proposes that foreign vessels be allowed to use the MARPOL standards as emission factors for the purposes of the program, if there are no preferred, more accurate alternatives, with certain adjustments.[42]

In addition, as the following are modified by the USEPA, BOEM's standards for review of plans and requirements would change correspondingly:

- The attainment or designated non-attainment status of State lands potentially impacted by emissions from OCS activities, as defined in 40 CFR part 81, subpart C; and
- The Class designation of federal, State or tribal lands or waters on or potentially impacted by emissions from OCS activities, as defined in 40 CFR part 81, subpart D.

B. Attributed Emissions

Historically, BOEM has considered two primary sources of emissions in connection with its regulation of OCS air emissions—stationary sources, and non-stationary sources, such as support vessels, over-the-ice vehicles and aircraft. The proposed rule would change the manner in which lessees and operators must consider and model emissions from support vessels and other non-stationary sources. The changes would mean that plans will more accurately reflect how emissions may affect the air quality of States, given improvements in modeling capabilities.

[42] Such adjustment would be done in order to take appropriate account the deterioration in performance, based on the age of the equipment and the potential variation of the actual emissions from the standard to account for the maximum potential emissions that the emissions source may emit (as described in section 550.205(b)(2)(vii) of the proposed rule text).

1. Emissions from stationary sources

BOEM proposes relatively few changes to what constitutes the kinds of stationary sources of air emissions subject to review and/or regulation. In accordance with OCSLA, all offshore facilities constructed or operating on the OCS must be covered by an approved plan that BOEM has evaluated for compliance with relevant emissions standards. While the proposed rule would retain this basic principle, the proposed rule would expand the definition of facility to address the greater variety of facilities now being constructed. Accordingly, the proposed rule would replace any existing reference to a "drilling unit" with a reference to the broader term "facility" and would clarify that air quality and air emissions information and analysis must be provided with respect to any facility that is proposed to be located on the OCS. Further details concerning the definition of the term facility are provided in the section-by-section analysis of the new or updated definitions listed in section 550.302. The proposed rule would make clear that emissions from decommissioning activities would be included in a facility's projected emissions.

This proposed rule does not specify air quality review requirements associated with the decommissioning or removal of structures on the OCS. BOEM is soliciting information on the most appropriate method for establishing and reporting air quality requirements associated with decommissioning and structure removal activities in the context of the AQRP. This includes a request for information and comment on when and how BOEM should receive air quality emission data and information associated with decommissioning and structure removal and how an assessment of feasible ERM should be applied. One approach on which BOEM solicits comment would be whether it should provide for only the collection of emissions data associated with decommissioning activities for some period of time, followed by a second phase in which BOEM could utilize the data that was previously collected to craft an approach tailored to this

unique type of activity.

2. Emissions from mobile support craft (MSC)

In the proposed rule, BOEM would continue to require the collection and evaluation of emissions data related to offshore supply vessels (OSVs) and other support vessels and vehicles (collectively, mobile support craft (MSCs)) for two primary reasons. First, the data remain necessary to accurately model the impact of any given exploration or development project to determine whether the air emissions are likely to exceed the emissions thresholds, and, therefore, to determine whether the air emissions are potentially significant. Second, this proposed rule would allow BOEM to use the data to determine whether emissions associated with a project covered by a plan are at a level such that the planned operations could cause or contribute to a violation of the NAAQS in a State.

BOEM's statutory responsibility to regulate "for compliance with the [NAAQS], to the extent that activities authorized under this subchapter significantly affect the air quality of any State," authorizes BOEM to take into account sources of emissions directly related to OCS operations that have the potential to significantly affect a State's air quality.[43] A portion of the emissions associated with exploration and development of OCS oil and gas come from the MSCs providing support to OCS operations. While MSC operations do not require direct BOEM

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[43] The conference report accompanying the enactment of section 5(a)(8) of OCSLA explained:

> The standards of applicability the conferees intended the Secretary to incorporate in such regulations is that when a determination is made that offshore operations may have or are having a significant effect on the air quality of an adjacent onshore area, and may prevent or are preventing the attainment or maintenance of the AAQSs of such area, regulations are to be promulgated to assure that offshore operations conducted pursuant to this act do not prevent the attainment or maintenance of those standards. The terms "may have" and "may prevent" refer to the Secretarial judgment regarding future consideration of exploration plans, or development and production plans, in which the potential for "significant effect" is analyzed prior to approval and thus commencement of the proposed activities.

See, H.R. Rep. No. 95-1474, at 85-86 (1978) (Conf. Rep.).

authorization, their activities and the associated emissions are undertaken pursuant to contracts and orders from lessees and operators engaging in oil and gas exploration and development, which require BOEM's approval of a plan. Without an accounting of these emissions in the plan, BOEM would not know whether emissions that will stem from its approval would have the potential to significantly affect the air quality of any State. Accordingly, BOEM is not proposing to regulate MSC sources directly, but it would continue its current practice of attributing MSC emissions to the approved facilities that the MSCs support. The most feasible, and perhaps only means, of preventing significant effects on State air quality is to require operators to manage the emissions that are closely associated with its operations. In this rule BOEM is proposing to refine the method for attributing these mobile source emissions to facilities.

Historically, and with cooperation from industry, BOEM followed an approach similar to the USEPA's to account for vessel emissions in the GOM. BOEM's current regulations require that operators report in their plans those emissions from MSCs that occur within 25 miles of a OCS facility. Although the current regulations are not explicit on this point, BOEM's GOM practice has been to add these emissions to the emissions of the facility and compare the total against the exemption thresholds to determine whether modeling and controls are required.[44] BOEM's predecessor agencies chose this approach to be consistent with the approach used by the USEPA.[45]

However there are a number of reasons that attributing all MSC emissions within a 25-mile

[44] The practice has differed in BOEM's Alaska region during those periods in which the Secretary had air quality jurisdiction over the Arctic OCS. For the Arctic, BOEM's practice has been to require reporting of MSC emissions in the plan, but the Alaska region has not made it a practice to combine those emissions with the facility's emissions to compare against the exemption thresholds.

[45] See § 328 of the CAA, 43 U.S.C. § 7627, specifies that "emissions from any vessel servicing or associated with an OCS source, including emissions while at the OCS source or *en route* to or from the OCS source within 25 miles of the OCS source, shall be considered direct emissions from the OCS source." OCLSA does not mention emissions from such vessels.

radius of the facility may not be the best approach. This method of attributing emissions does not provide the most accurate picture of the effects of BOEM's plan approval on the State's air quality. Historically, the vast majority of new OCS operations were located within 50 miles of the shoreline. Thus, the 25-mile facility radius adequately addressed the impact of vessel air emissions on the air quality of States. For facilities located within 25 miles of the shoreline, 100% of all MSC emissions would have been accounted for by this formula. For facilities located 50 miles from the shoreline, roughly 50% of the total MSC emissions would have been accounted for. For facilities located 100 miles from the shoreline, only 25% of the total MSC emissions would be accounted for and at 200 miles distance, only 12.5% of the emissions would be considered. Also, in terms of the potential impact to a State, the most important MSC emissions generally would be those occurring closest to the State. Therefore, although 25% of MSC emissions for a facility located 100 miles from shore may be accounted for under the 25-mile rule, the 75% of emissions that are not considered would likely have a greater impact. According to the formula used in BOEM's current exemption thresholds, 3,300 tons of emissions 100 miles from shore would have an equivalent effect to 100 tons of emissions of the same pollutant 3 miles from shore. Applying this formula, the 25% of emissions within 25 miles of a facility would account for less than 2% of the impact on State air quality, and the portion of emissions from MSCs that occur while the MSC is closer to the State's boundary would have a proportionally larger effect on the State's air.

Historically, facilities in the GOM accounted for the vast majority of the total emissions, with MSC emissions representing only a small share of total emissions. However, in the most recent inventory, BOEM determined that facilities only account for 45% of all OCS emissions associated with oil and gas exploration and production. Also, today, more facilities are being

constructed at increasing distances from the shoreline. Today, some are located as far as 200 miles away from shore.

Given these shifts, BOEM believes it is no longer appropriate to utilize a blanket 25-mile radius, because that radius does not capture most of the attributed emissions that occur between a port and the facility. Thus, the importance of accurately taking MSC emissions into consideration has grown substantially. BOEM could not ensure that it has avoided permitting uses of the OCS that would adversely affect the State if its evaluation of OCS projects did not take into account the majority of the relevant emissions.

Additionally, current BOEM analysis treats all emissions from MSCs as if they originate at the facility itself. Improvements in dispersion modeling technology have made it easier to more accurately project impacts of emissions based on where these emissions actually occur. For this reason, it is no longer necessary or appropriate to aggregate emissions from non-stationary sources at one location for purposes of air quality analysis.

Increasingly, lessees and operators are using new types of support vessels, including vessels that operate continuously offshore without having to return to port. When considered along with those support vessels that are unique to the Arctic, either due to its extreme environmental conditions or to the need to make up for the lack of onshore support facilities, it is increasingly evident that the use and types of vessels are substantially different than in the past.

In the Consolidated Appropriations Act, 2012 (P.L. 112-74), Congress mandated that BOEM regulate air quality impacts from activities on the OCS adjacent to the North Slope Borough of the State of Alaska along with activities on the OCS in the Central and Western GOM. BOEM must now also consider the potential effects caused by air pollution generated by operations unique to the Arctic region, such as ice breakers and other vessels or vehicles that would not

normally be necessary or present in the GOM. The relative proportion of attributed emissions to total emissions (i.e., support vessel emissions relative to facility emissions) is substantially higher in Alaska than in the GOM. This is due to, among several things, the substantial differences in the existing oil and gas infrastructure, the significant variations in climate between the GOM region and Alaska, and the relatively greater need for MSCs (and their higher emissions) to support OCS facilities offshore Alaska. In the Alaska region, a typical ratio of MSC emissions to facility emissions would be in the range of 80% to 20%. Thus, the emissions of ice breakers, oil spill support vessels, trucks that operate over ice and other vessels unique to the Arctic make the need to account for MSC emissions even greater than is the case in the GOM.

Furthermore, those MSCs used in Alaska are of a type whereby they can more readily operate outside of a 25-mile radius of the facility. While supply vessels, crew boats and tug boats cannot easily avoid coming into close contact with the facility they support, this is not true of ice breakers or oil spill support vessels. Such vessels can be and often are located just beyond the 25-mile boundary, sometimes closer to shore than the facility itself. Because, in an Arctic context, the MSCs generate far more emissions than the facilities they support, not accounting for their emissions makes it impossible to appropriately avoid authorizing activity causing or contributing to a violation of the NAAQS.

BOEM is proposing a more accurate standard, namely that the emissions of MSCs should be accounted for while they are actually operating in support of the facility. As long as an ice breaker is engaged in active operations on behalf of a facility (and, in whose absence, the ice breaker would not be used), its emissions should count towards the total emissions resulting from plan approval. Once the MSC is no longer providing support to a facility, its emissions should

not be considered as part of the projected emissions in the plan.

In addition to these differences, technological advances with respect to non-stationary source modeling allow more accurate modeling of emissions from non-stationary sources. Unlike the situation in the past, when there was no accurate means to evaluate the emissions of mobile sources in terms of the impact to stationary sources, such modeling can be readily and accurately done today. BOEM believes that it is important to employ the most advanced and scientifically accurate measurements and evaluation techniques of air pollution, in order to most effectively implement its mandate.

For all these reasons, BOEM has reevaluated its historical method of accounting for non-stationary source emissions (i.e., emissions generated from support vessels, vehicles, and aircraft operating on the OCS, or in State waters, that are associated with OCS facilities) and proposes to revise the current practice in both Alaska and the GOM to better address BOEM's mandate. Instead of automatically applying a 25-mile radius, BOEM is proposing to require lessees and operators to report and attribute the MSCs to facilities to which the vessel is actually providing operational support, regardless of its distance from that facility. In the proposed rule, the key is whether an MSC is operating in support of a facility authorized under OCSLA, not how close the MSC it is to that facility. The proposed rule would require all MSCs operating in support of a facility to attribute their emissions to that facility while they provide such support (except in those rare cases where such attribution would be impractical). MSCs that do not provide support to a facility would not be reported, regardless of how close or distant they are. The discussion of proposed paragraph 550.205(d), in the section-by-section description below, sets forth the details of how the proposed rule would require lessees and operators to attribute MSC emissions to a facility, including the allocation of emissions from MSCs servicing multiple facilities (see

discussion below).

3. Determination of attributed emissions

BOEM is proposing to define the term "attributed emissions" to cover non-stationary source emissions associated with a plan, including, "for any given criteria or precursor air pollutant, the emissions from MSCs and aircraft, operating above the OCS or State submerged lands, that are attributed to a facility."

As described in the discussion of proposed paragraph 550.205(d), in Section V below, where an MSC described in a plan also supports one or more facilities not described in a plan, the proposed rule would provide several alternatives for determining the emissions from a vessel or vehicle that should be attributed to the particular facility in the plan. A lessee or operator could always choose to attribute all of an MSC's emissions to a facility regardless of how many facilities it supports. The rule, however, would allow a lessee or operator to attribute only that relevant portion of a vessel's emissions to its facility or facilities. The proposed rule would provide a lessee or operator with a process to attribute only a portion of an MSC's emissions to its facility. This procedure is designed to provide the most detailed, accurate information available about the MSC's emissions. BOEM recognizes that any given lessee or operator may not know at the time of plan submittal, or RUE or pipeline ROW application, the extent to which it will rely on MSCs that also support facilities unrelated to those covered by the lessee's or operator's plan. For this reason, the procedure would allow lessees and operators alternative ways of making conservative estimates of the portion of an MSC's emissions that should be attributed to a facility. The intent of these alternatives is to simplify the process for determining the allocation of support vessel emissions in situations where it would otherwise be impracticable to do so.

BOEM's proposed approach would reduce the potential for over-counting emissions resulting from plan approval compared with BOEM's current practice. Under BOEM's current practice, one hundred percent of the emissions of an MSC are counted when located within 25 miles of a plan facility, regardless of whether that MSC also supports five, ten, or even 20 unrelated facilities within a 25-mile radius of the facility. Under the proposed rule, emissions would be allocated to the appropriate facility in all cases where it would be practicable to do so, in accordance with proposed paragraph 550.205(d). Only in the rare situation where there would be no reasonable basis to make any more accurate allocation would the 25-mile radius analysis remain as a last resort option. Ultimately, BOEM believes there is no reason to hold an operator responsible for emissions based on an emitting MSC's proximity to a facility, but rather it should be required to manage its operations to prevent exceedances of the NAAQS which result from only those MSCs which actually support its operations. Air emissions of an MSC may often occur close to shore, and therefore would cause a greater impact onshore and/or at the SSB, than a similar amount of emissions from that same MSC which occur in the vicinity of the facility. BOEM is seeking comments on this proposed approach and will consider alternative methods that more accurately attribute emissions from mobile sources to the appropriate facility.

4. Exclusion of aircraft and onshore emissions sources

BOEM also proposes to change its approach to accounting for air pollutant emissions associated with other non-stationary sources. The proposed rule would continue to require lessees or operators to identify all vessels and vehicles supporting a facility and to report their relevant air emissions as part of each plan, as is the case with the current policy. However, BOEM is proposing to change how aircraft and onshore emissions would be addressed.

Although lessees or operators would continue to be required to identify the likely types and

number of support aircraft they propose to use, no collection of emissions data for those aircraft would generally be required under the proposed rule, except in exceptional circumstances. BOEM is proposing this change because collecting information on emissions from aircraft that support OCS operations in all plans would be unduly burdensome since aircraft emissions are a small fraction of emissions in most plans and their inclusion would likely not cause a facility's projected emissions to exceed the EETs or any AAQSB in a State where it would otherwise not do so. Available data from plans submitted to BOEM and its predecessors indicate that the level of relevant emissions from aircraft is generally an extremely small percentage of the total emissions reported in each plan. Furthermore, there are a large number of aircraft supporting OCS facilities and these aircraft service more facilities and are used for a wider variety of purposes than MSCs, including for purposes other than supporting oil and gas facilities on the OCS. This makes it cumbersome to accurately quantify and attribute (with respect to OCS support functions) their emissions to individual facilities in a plan in many cases. Accordingly, BOEM believes it is not prudent to require all lessees and operators to report aircraft emissions.

The proposed rule, however, would require a lessee or operator to submit aircraft emissions information to account for the situation in which a plan proposes exceptional or unusual aircraft operations. This provision would cover situations in which a lessee or operator plans abnormally high use of aircraft to support its operations, or the lessee or operator plans to use aircraft that emit exceptionally high amounts of pollutants. In those situations, the proposed rule would require the lessee or operator to determine whether aircraft emissions would cause its projected emissions to exceed an emission exemption threshold or AAQSB. If a plan which is already required to conduct modeling results in incremental increases in concentration of a pollutant that are greater than 95 percent of the value of a SIL, the proposed rule would require the lessee or

operator to also model its aircraft emissions.[46]

Likewise, under the proposed rule, lessees and operators would not normally be required to report information on emissions from onshore support facilities. Emissions from large sources onshore are in many cases already identified and regulated by the USEPA, or by the States in the context of their respective SIPs.[47] In addition, under the CAA the USEPA has established standards for several types of mobile sources, no matter where they are operated through requirements that engines, vehicles, and equipment be certified to exhaust emission limits, and through the regulation of certain characteristics of the fuels used in these engines. The proposed rule would not require a lessee or operator to gather or report the emissions generated onshore in support of an OCSLA-authorized activity on the OCS. BOEM has determined in the past and continues to hold that, for purposes of this separate program, such emissions are *de minimis* and that further regulation of them, beyond what already applies or that may be established by USEPA and States under applicable federal and State law, is not warranted. As would be the case with aircraft, however, if a plan describes the use of onshore sources that generate unusually high levels of emissions, such that these emissions could cause the project's total projected emissions to exceed an EET or AAQSB, then the lessee or operator would be required to provide information on its onshore emissions.

While this proposal takes the approach described here for aircraft and onshore emissions, BOEM is considering whether it should instead establish a requirement whereby plans that

[46] BOEM expects that aircraft emissions typically represent less than two percent of all plan emissions, and that any plan with emissions below 95 percent of the value of every SIL, excluding aircraft emissions, would be extremely unlikely to generate total emissions, even if including those from aircraft, in excess of any SIL; therefore, modeling of aircraft emissions would normally not be required.

[47] USEPA regulates these sources to the extent they are in source categories subject to New Source Performance Standards (NSPS) or National Emissions Standards for Hazardous Air Pollutants (NESHAP) coverage. States regulate them to the extent they are covered in their State NSPS plans, have taken delegation of NESHAPs, or have chosen to regulate them in order to meet criterial pollutant NAAQS or under NSR.

propose aircraft and onshore emissions above a certain threshold, expressed as either a percent of the total plan emissions or an absolute amount of emissions, would have to include emissions from aircraft and onshore support facilities. BOEM would welcome comments on this approach, and also any data or analysis relevant to the issue of whether, and to what extent, aircraft and onshore emissions should be considered in evaluating a facility's emissions profile.

Please provide comments on this approach and what threshold might be most appropriate.

C. Points of Measurement

1. Point-of-origin measurement

Historically, BOEM applied "point source" modeling to plans for facilities and their MSCs. Point source modeling evaluates all emissions associated with any source as if they originated from a single location, regardless of whether that source is stationary (e.g., a drilling unit or platform) or non-stationary (e.g., a supply vessel). The term "point source" refers to the location from which the pollutants are discharged, not the location at which the impacts from the emissions are measured or evaluated (referred to as receptor locations). In the case of a stationary facility, point source modeling is appropriate because it accurately reflects where the emissions are occurring.

With respect to non-stationary sources, however, point source modeling is much less accurate because the actual emissions generated by such a source are discharged over a broad area. BOEM's regulations currently do not address the appropriate types of models to use to account for emissions from non-stationary sources, although some operators already model non-stationary emissions sources as 1) area or line sources; 2) volume sources; or 3) so-called pseudo-points (i.e., some mobile sources are modeled as if their emissions originated at one or

more stationary points).[48]

MSCs operating in support of facilities on the OCS typically discharge emissions continuously between the port and the facility. BOEM believes line and volume source modeling for non-stationary sources would accurately project the impact of emissions from such MSC on onshore air pollution levels at the SSB. The improved accuracy and information value from line and/or volume source modeling of pollutant dispersions would provide BOEM a more realistic projection of actual impacts on the air quality of a State.

With volume source modeling, it is also possible to more accurately model the effect of emissions discharged by non-stationary sources on fixed landscapes (i.e., land, mountains, lakes, etc.), taking into account relevant factors, such as air pressure, currents, winds, and temperatures in relation to the discharge of pollutants and their ambient distribution at distant locations. With improved ambient air quality dispersion data, air quality impacts can be evaluated more effectively. BOEM requests comments on the various types of modeling that could or should be used to more accurately reflect the origin and dispersion of emissions that are generated by mobile sources, such as MSCs, and under what circumstance volume source modeling would be appropriate or inappropriate.

2. State seaward boundary (SSB)

In developing this proposed air quality rule, BOEM revisited an issue it encountered while drafting its 1980 air quality regulations: whether air quality impacts should be evaluated starting at the shoreline or at the SSB, which is typically three nautical miles offshore, but which may be as much as nine nautical miles offshore depending on the particular State. On the basis of

[48] In line-, area-, and volume- source models, the emissions are modeled as if they are emitted evenly and continuously across a line, area, or volume. In point source models, some emissions may be modeled as if they are emitted from many discrete points along a path or over an area.

BOEM's interpretation of its statutory authority, BOEM has concluded that it is more appropriate to measure at the SSB than at the shoreline.

Section 5(a)(8) of OCSLA requires DOI to regulate "for compliance with the national ambient air quality standards pursuant to the CAA (42 U.S.C. § 7401 *et seq*.), to the extent that activities authorized under [OCSLA] significantly affect the air quality of any State" (43 U.S.C. § 1334(a)(8)). BOEM historically interpreted the phrase "significantly affect the air quality of any State" to limit it to considering those effects that would occur landward of the shoreline. BOEM thus historically has evaluated any OCS activity in terms of the effects of that activity on the concentration of pollutants landward of the shoreline.

BOEM has re-evaluated this position. BOEM believes the term "State" in section 5(a)(8) of OCSLA should be interpreted to include the entire area of a State's jurisdiction extending to its seaward boundary (either three or nine nautical miles seaward of its shoreline). (*See* 43 U.S.C. § 1312.) Moreover, the States are responsible for attainment of the NAAQS over the entirety of the State including their submerged lands. The USEPA interprets the CAA consistently with BOEM's interpretation under this proposed rule. Generally, the USEPA requires States to regulate their air quality up to their seaward boundary. For instance, the USEPA does not allow States to permit an onshore or offshore source that would cause the air quality above State submerged lands to exceed an applicable AAI. In addition, the secondary NAAQS are specifically intended to protect public welfare. Impacts to the air quality above State submerged lands have the potential to adversely affect a range of natural resources, such as marine mammals, coral, fish, etc. that are included in the category of resources protected under the secondary NAAQS. For these reasons, BOEM believes that its regulations should ensure that OCS facilities not cause or contribute to a violation of the NAAQS in any area of a State up to

the State's seaward boundary.

The USEPA has advised BOEM that a variety of environmental and scientific studies have shown that changes in air quality have also caused impacts to human health off the coast in near-shore areas. For example, these include specific health impact studies for the NAAQS, as well as port air quality analyses that show the impacts of emissions from ships and diesel engines, diesel emissions studies (health effects and ports)),[49] information regarding environmental justice populations in coastal areas,[50] impacts to subsistence fishing on fishing piers that extend into the near-shore areas[51], and the sensitivity of native Alaskan populations.[52] There also are studies that trace the emissions from offshore and onshore sources to near-shore and onshore areas. Although the available data are not yet conclusive, BOEM proposes to consider and evaluate the impacts of air pollution over State submerged lands,[53] including Alaska.[54]

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[49] "USEPA, Regulatory Impact Analysis: Control of Emissions of Air Pollution from Category 3 Marine Diesel Engines, EPA-420-R-09-019, December 2009." Available at: http://www.epa.gov/otaq/regs/nonroad/marine/ci/420r09019.pdf.

[50] See Shell permits for:
1) Kulluk:
http://www.epa.gov/region10/pdf/permits/ocs/shell/kulluk/SoB_Draft_072211_Public_Comment.pdf, and
http://www.epa.gov/region10/pdf/permits/shell/kulluk/SoB_Environmental_Justice_Analysis_Kulluk_072211_Public_Comment_07-19-2011.pd\
2) Discoverer:
http://www.epa.gov/region10/pdf/permits/shell/discoverer_supplemental_statement_of_basis_chukchi_and_beaufort_air_permits_070111.pdf and
http://yosemite.epa.gov/oa/eab_web_docket.nsf/Filings%20By%20Appeal%20Number/4BB1D10E49B2C0F585257934006FEFB8/$File/Final%20Attachment%204...11.pdf

[51] Wolfe, R. J. 2004. Local traditions and subsistence: a synopsis of twenty-five years of research in Alaska. Technical Paper No. 284. Alaska Department of Fish and Game, Division of Subsistence, Juneau, Alaska.

[52] See Wernham, Inupiat Health and Proposed Alaskan Oil Development: Results of the First Integrated Health Impact Assessment/Environmental Impact Statement for Proposed Oil Development on Alaska's North Slope, 2007; and Alaska Native Health Status Report 2009 http://www.anthc.org/chs/epicenter/upload/ANHSR.pdf

[53] Although there are likely no particular studies that deal with air pollution impacts specifically on the area over State submerged land, the Statement of Basis (SOB) for the Shell permits discusses these concepts as part of the air quality impacts analysis for these permits. These SOBs also have appendices that go into more detail about the air quality impact analysis.

[54] Specifically with respect to the Alaskan OCS, the USEPA prepared the following document on the OCS air quality impacts: "Technical support document review of Shell's supplemental ambient air quality impact analysis for the Discoverer OCS permit applications in the Beaufort and Chukchi seas," United States Environmental Protection Agency, Region 10, Seattle, Washington, June 24, 2011.

Though the proposed rule would impose stricter requirements than exist under the current BOEM regulations, BOEM's requirements would still differ from those of the USEPA. In accordance with section 328 of the CAA, the USEPA requires, in areas where it has jurisdiction, that any facility located on the OCS within 25 miles of the State seaward boundary is subject to all the requirements of 40 CFR part 55. These include, but are not limited to, the federal requirements as set forth in 40 CFR Part 55.13 (e.g., NSPS, NESHAPs and permitting requirements) and the federal, State and local requirements of the corresponding onshore area, and the area that is geographically closest to the source or another onshore area that the USEPA Administrator designates (40 CFR 55.14).

BOEM welcomes comments and analysis on the potential impacts of emissions generated from OCS sources on the air quality over State submerged lands and/or the potential impact of such emissions on the environment above such lands, as well as any scientific, technical, or other information that can be provided to measure or evaluate the impact of OCS-originated air pollutants on the area over State submerged lands.

3. Point-of-impact measurement

Although current BOEM regulations provide that measurements of any potential impacts of OCS emissions take place along the shoreline, they do not specify from which point along the shore the emissions should be evaluated when modeling is required. Because of this, it has generally been assumed the ambient concentrations should be evaluated at the point on the

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See also,
http://www.epa.gov/region10/pdf/permits/ocs/shell/kulluk/SoB_AppA_AQIA_072211_Public_Comment.pdf
See also,
http://www.epa.gov/region10/pdf/permits/ocs/shell/kulluk/SoB_AppA_AQIA_072211_Public_Comment.pdf
In addition, similar analyses have been done by the USEPA's Region 4 in connection with the issuance of OCS permits there. The SOB's in Region 4 are known more generally as preliminary determinations and all can be found at: http://www.epa.gov/region4/air/permits/ocspermits/ocspermits.html

shoreline closest to the facility. This interpretation of the proper approach is reinforced by the formula used for the exemption threshold analysis, which requires operators to calculate the closest distance between the facility and the shoreline. BOEM has published instructions and a guidance document for BOEM forms BOEM-1038 (Gulf of Mexico Air Emissions Calculations for EPs) and BOEM-1039 (Gulf of Mexico Air Emissions Calculations for DOCDs), stating the measurement point (for the purposes of calculating the distance parameter in the emission exemption threshold formulas) should generally be the closest point of land. See BOEM website, "Reporting Instructions," *available at* http://www.boem.gov/BOEM-0138-instructions/, and "Tips to Avoid Common Emissions Spreadsheet Errors," *available at* http://www.boem.gov/Form-0138-and-0139-Tips/. This approach works well in the GOM, considering wind patterns and other relevant meteorological conditions.

In evaluating meteorological data within the parts of the Chukchi Sea OCS bordering Alaska, however, BOEM recognizes prevailing wind patterns are often not from sea to shore (i.e., from north to south) but rather move at an angle, either from the northwest to southeast or from the northeast to the southwest. Because of this, the point at which the air emissions released from a facility would have the greatest effect (i.e., yield the highest pollutant concentration) may be much farther along the State's boundary than the closest point on that boundary. In order to accurately model the potential effects of any given air pollutant on a State, therefore, it is important that the effects of such air emissions be evaluated not at the closest point of the State but rather where the concentrations of emissions would be the highest (i.e., where the potential impacts would be the greatest).

Because of this, the proposed regulations specify the effects of emissions, for modeling purposes, would be evaluated at those locations in the State(s) where the concentration of any

given pollutant is expected to be the highest. Additionally, the effects of emissions would be evaluated in the non-attainment area where the concentration of any given pollutant is expected to be the highest among non-attainment areas for that pollutant (if different from the most affected area). This location might be on land or over State submerged lands. That location in the model would likely be the same for many, but not necessarily all, pollutants. Those air pollutants, such as O_3, that are not directly emitted by a facility, but are instead created in the atmosphere, are often more heavily affected by climatological or meteorological conditions, which often cause them to concentrate at a location different than other air pollutants. Given technological advances, BOEM does not anticipate that adding additional hypothetical receptor locations to the modeling should present any technical difficulty but welcomes comments on how this requirement could be implemented most effectively.

4. Ambient air quality monitoring

Monitoring is a general term for on-going collection and use of measurement data or other information for assessing performance against a standard or status with respect to a specific requirement. In general, there are two basic types of monitoring:

- Ambient air quality monitoring, which collects and uses measurement data (or other information) from onshore monitoring stations or remote sensing); and
- Emissions source monitoring, which involves collecting and using measurement data (or other information) at individual stationary sources of emissions (i.e., facilities, RUEs, pipeline ROWs, etc.) to verify actual emissions of such sources, and validate the effectiveness of ERM.

Thus, ambient air quality monitoring is the systematic, long-term assessment of pollutant levels by measuring the quantity and types of certain pollutants in the surrounding, outdoor air,

whereas emissions source monitoring is the process of monitoring particulate and gaseous emissions from a specific source.

Air quality monitoring is carried out to assess the extent of pollution, ensure compliance with national legislation, evaluate control options, and provide data for air quality modeling. There are a number of different methods to measure any given pollutant, varying in complexity, reliability, and detail of data. These range from simple passive sampling techniques to highly sophisticated remote sensing devices. In general, monitoring strategies should carefully examine the options to determine which methodology is most appropriate, taking into account the initial investment costs, operating costs, reliability of systems, and ease of operation.

Air quality monitoring stations are the most typical means for obtaining ambient air quality information. The locations for monitoring stations may depend on the purpose of the monitoring. Most monitoring networks are designed with human health objectives in mind, and monitoring stations are therefore established in population centers. Many governments (local, regional or national) give specific guidelines on where to monitor within these areas - next to busy roads, in city center locations, or at a location of particular concern (e.g., a school, hospital). Background monitoring stations are also established, to act as a “control” when determining source apportionment.

Once data are collected from a monitoring system, they are then stored in data management systems and databases. Subsequently, the data must be retrieved and analyzed to see what they reveal about the effectiveness of regulatory standards, the accuracy of modeling, impacts on health endpoints, and as an overall way of assessing potential impacts. In the U.S. these ambient air quality monitoring data are collected and housed in the Air Quality System (AQS). The AQS contains ambient air pollution data collected by the USEPA, State, local, and tribal air pollution

control agencies from thousands of monitoring stations. AQS also contains meteorological data, descriptive information about each monitoring station (including its geographic location and its operator), and data quality assurance/quality control information.

BOEM has relied on the USEPA's AQS data to determine the relevant ambient air quality on which lessees and operators perform their analysis of the AAI's and the NAAQS in connection with their submission of plans and to comply with BOEM's air quality requirements in areas under BOEM's air quality jurisdiction. BOEM has proposed that it should evaluate the air quality of States to the State seaward boundary. There are, however, few monitoring stations in relevant locations on the coast and no monitoring stations in the ocean along the SSB. To improve the accuracy of the estimates of the background concentrations of the relevant pollutants, BOEM is investigating various alternatives for collecting, utilizing and disseminating this information, including technologies such as remote sensing and spectral analysis, and is proposing flexibility to adopt such approaches in the future. The proposed rule would allow BOEM the flexibility to consider adopting such approaches that meet the proposed standard for effectiveness. Otherwise, the relevant background concentrations would be obtained from the relevant USEPA regional office, as is the case today.

D. Emission Exemption Thresholds (EETs)

Consistent with the current rule, the proposed rule would define EETs as the maximum allowable rate of projected emissions, calculated for each air pollutant, above which facilities would be subject to the requirement to perform modeling. Functionally, these EETs would establish those levels of projected emissions below which BOEM has determined they would not cause or contribute to a violation of the NAAQS or the AAIs. Under the proposed rule, if the USEPA revises a NAAQS, or any applicable SIL or AAI, BOEM would examine the

appropriateness of its EETs[55], and, BOEM, at its discretion, would periodically revise its exemption formula(s) or its exemption threshold amount(s) for the corresponding air pollutant(s). Because USEPA has recently revised many NAAQS, the proposed rule would allow revision of the exemption formula(s) to reflect these revisions, without waiting for further revisions to trigger a review under this update scheme.

The current EETs would continue in place under the proposed rule until the relevant air quality studies have been completed and new EETs, if necessary, are developed and implemented. At a future point in time, but no later than 2020, BOEM will propose new exemption thresholds for the GOM and Alaska OCS Regions by publishing a FR notice. Subsequently after reviewing comments on the notice, BOEM could finalize new exemption thresholds with another FR notice.

Consistent with the current rule, the proposed rule provides that, if the projected emissions associated with a proposed facility are exempt, then the lessee or operator would not be required to perform air quality modeling described in proposed section 550.304, or to apply any emission reduction measure(s) (ERM), as described in proposed sections 550.305 through 550.307.

New EETs are not being proposed in this proposed rule because the scientific basis for determining the potential impacts on the States of OCS emissions have not yet been established. The proposed rule, however, would set a new policy governing how BOEM establishes emission exemption thresholds in the future. Specifically, the proposed rule would provide that BOEM would, sometime after the rule becomes effective, publish new proposed EETs in the FR and provide the opportunity for public comment. In the proposed rule, BOEM has included a range

[55] The purpose of the EETs is to establish thresholds below which BOEM believes there is no reasonable possibility that BOEM's approval of a plan would cause a violation of any AAQSB in any State. The EETs are intended to avoid forcing lessees and operators to perform unnecessary air quality modeling in situations where no benefit from such modeling could reasonably be anticipated.

of EETs within which BOEM may establish updated EETs for each pollutant.

As long as the new thresholds fall within the exemption threshold ranges proposed in this rule, BOEM would not implement them through a separate rulemaking, though the new thresholds would not become final until after BOEM received public comment. If, however, the proposed thresholds were to fall outside these ranges, BOEM would implement them through a separate rulemaking. A range would be established for each criteria or precursor pollutant. The proposed rule would establish both maximum and minimum emissions formulas for each pollutant, above and below which, respectively, BOEM would not set new emissions thresholds without conducting a new rulemaking process. As a result of the new environmental exemption studies, which have previously been described, a new set of formulas will be developed to update the EET formulas currently in place. On an ongoing basis thereafter, BOEM would update the EETs to reflect changes in the NAAQS, SILs, and AAIs; advances in measurement and modeling technology; changes in pre-existing pollution levels in the potentially affected States; and various other factors. The current exemption threshold formulas take the distance of the facility from the State into account because dispersion modeling would indicate the impacts are likely to be lower as the distance involved becomes greater. The proposed formulas for these minimums represent emissions levels below which the ambient air impact at the nearest point in a State would not exceed any SIL, taking distances into account. However, there may be a more appropriate manner in which to establish the minimums. For that reason, BOEM requests comments on the EET formulas and the underlying analysis used in this rulemaking or whether absolute values may be more appropriate. Until such time as BOEM has determined new EETs and has published them in the FR ("the date of the Notice"), the distance component of the emissions exemption calculation would continue to be the distance of the facility from shore. After the date

of the Notice, each distance formula would instead utilize the distance of the facility from the SSB.

After the date of the Notice, the lessee or operator would be required to apply the new set of formulas for the EETs in effect at that time (i.e., to determine whether projected emissions would be exempt from further analysis). BOEM would use the following criteria to determine the EET formulas: the absolute level of projected emissions; the distance of the proposed facility or facilities from any State or from critical natural resources, animals, fish and habitats; the relative need to protect public health and welfare and the existing amounts of air pollution in potentially affected States; the types, frequency and duration of any air pollutant emissions and their formation and/or dispersion characteristics; prevailing meteorological characteristics; any USEPA AAQSB applied in this proposed rule; other facilities and vessels located in the vicinity of the proposed facility; and other necessary and appropriate considerations. Until BOEM has established new formulas based on these criteria, the proposed rule would provide that projected emissions are exempt if they are below the current exemption formulas.

The intent of those provisions that would allow BOEM to modify the EETs is to ensure that the exemption thresholds accurately reflect the amounts of potential emissions that could adversely affect a State. Because the NAAQS are subject to change as scientific knowledge improves and because modeling techniques and methods may improve over time, the emission exemption threshold formulas should also be subject to change. Under the proposed rule, BOEM would revise the EETs on an ongoing basis either as a result of a change in an applicable standard or because BOEM's ability to measure and evaluate the impact of existing EETs has improved.

E. Emissions Reductions Measures (ERM)

1. Emissions credits and offsets

Current regulations specify that BACT should be implemented as the first and primary emissions control mechanism any time that a proposed facility is estimated to exceeded a SIL. This BACT requirement was meant to ensure consistency with the USEPA regulations as they existed when the regulations were issued in 1980.

BOEM's rationale regarding this point has evolved to allow for greater flexibility, while still protecting the air quality of neighboring States. Under the proposed rule, if the projected emissions associated with a proposed OCS facility exceed an AAQSB, operational controls would be the first option to be considered. Operational controls, such as limiting the hours of operation or operating at a higher level of engine efficiency could be both more cost effective and more successful in reducing incremental emissions, particularly in those situations where the proposed exceedances are small. As an alternative, lessees and operators would have the option of replacing old or inefficient equipment with newer and less polluting equipment. This could involve, for example, replacing a diesel engine with a natural gas powered engine. If these options were not sufficient, other ERM, including BACT and emissions credits, would then be considered.[56]

One change in this regard relates to emissions credits. Under the current rule, offsets can only be used once the relevant BACT has been deemed inadequate. Even then, the current rule provides no guidelines as to how offsets might apply in situations other than to offshore facilities. Other forms of emissions credits, such as emissions trading, acquiring of trading program allowances and so forth, are not addressed by the current regulation.

[56] The BOEM provision allowing for equipment replacements is contingent on the lessee or operator complying with all other applicable federal regulations, as noted in the proposed regulation in section 550.309(f).

Under the proposed rule, emissions credits, which would include offsets, are defined as: "emissions reductions from an emissions source(s) not associated with the plan that are intended to compensate for the excessive emissions of criteria or precursor air pollutants, regardless of whether these emissions credits are acquired from an emissions source(s) located either offshore or onshore, including: 1) emissions offsets generated by the lessee or operator directly; or 2) emissions offsets acquired from a third party; or 3) trading allowances or other alternative emission reduction method(s) or system(s) associated with a market-based trading mechanism, such as a mitigation bank, or through other competitive markets where these assets are exchanged." Essentially this means that emissions credits consist of any form of emissions reduction, regardless of whether such reductions consist of physical or operational controls on non-plan facilities (i.e., facilities other than those covered by the proposed plan), or whether they consist of the use of market-based mechanisms that involve reductions achieved through third parties. Under the proposed rule, emissions offsets could consist of BACT applied by a lessee or operator to another one of its own, previously approved, facilities on the OCS.

The proposed rule would therefore considerably increase the mechanism by which emissions reduction could be achieved. Under the proposed rule, in cases where operational controls would not be sufficient to achieve the required emissions reductions lessees and operators would be able to utilize emissions credits, as opposed to applying BACT to a facility in the proposed plan. The proposed rule would also provide that lessees or operators who submit plans that include emissions credits demonstrate that the operator has notified the relevant State and that emissions credits be verifiable.

The selection of emissions credits in lieu of BACT would often result in both a net cost savings and a net environmental benefit. The savings would result from the greater flexibility

afforded lessees and operators to make the reductions either on their facility, on another facility (either on the OCS or in waters above State submerged lands), on some unrelated stationary emissions source onshore, or through acquiring the emissions credits from a third party. Because older, higher polluting facilities whose emissions would be easiest to reduce are most frequently located on or near the shoreline, in most cases the use of emissions credits would involve a reduction in the emissions from an onshore stationary source or from an older oil and gas facility located offshore in waters above State submerged lands.

Under the current regulations, offsets are only permitted if they would cause a reduction of emissions on the OCS with respect to the facilities covered by the proposed plan. Under the proposed rule, any reduction in emissions that is accomplished within the same USEPA air quality control region (AQCR)[57] would be an acceptable emissions credit. Thus, if a facility associated with a proposed plan were required to reduce its emissions by 100 tons of NO_x per year, such a reduction could be generated from any other source within the relevant AQCR, whether the source of that reduction is located on the OCS, over State submerged lands, or onshore, and regardless of whether the source of the reduction is stationary, such as a facility, or mobile, such as an MSC.

As currently defined, the AQCR boundaries do not extend to include the OCS and, for this reason, it may sometimes be difficult to determine which AQCR would be most applicable. BOEM also recognizes that some AQCRs are very large, so it may not be certain that offsets in one part of the AQCR have a benefit to the area affected by offshore emissions. BOEM requests comments on how to best to define the relevant AQCR(s) and on whether there may be more

[57] An air quality control region (AQCR) is an area, designated by the USEPA, that has common air pollution issues and which is likely to be affected by the same sources of air pollutant emissions. See 42 U.S.C. § 7407. The term AQCR is defined at 40 CFR 51.100(m) and in 40 CFR 60.21(i). The current AQCRs are defined in the USEPA regulations at 40 CFR part 81 subpart B.

appropriate alternative to defining the offset-generating areas or how to best refine the approach of applying AQCRs in this context.

The use of emissions credits in lieu of BACT would provide a net environmental benefit because the use of emissions credits would typically involve a reduction in emissions onshore or over State submerged lands, at that point where the impact to State air quality is greatest, rather than on the OCS, which might be far away from the point at which any impact might be felt. For example, if an OCS facility located 30 miles offshore were to be required to reduce its emissions of NO_x by 200 tpy, under the current regulations that reduction would have to be achieved primarily by reducing the emissions from the facility itself. As a result, the 200 TPY reduction in NOx emissions from an OCS source might avoid the same amount of ambient NOx at the shoreline that would be avoided by only 20 TPY reduction in emissions at the shoreline. Given the greater flexibility provided by the proposed rule, if a lessee or operator instead decided to instead pay an onshore power plant to reduce its emissions by the same 200 TPY of NO_x, the net impact to the State would be a reduction in onshore emissions of 200 TPY. Thus, the same reduction in NOx emissions could have a much greater positive environmental impact. For more details on the offset requirements, see the section-by-section analysis for section 550.309(e).

Furthermore, because the proposed rule does not prohibit the joint acquisition of emissions credits, the proposed rule would allow emissions credits to be obtained and divided among multiple lessees or operators (presumably located near to one another in the vicinity of a State) in order to potentially spread the costs of complying with air quality requirements.

2. Applicability of Best Available Control Technology (BACT) upon an exceedance of the Significant Impact Levels (SILs)

BOEM's current regulations require that any proposed plan that identifies projected

emissions of air pollutants that would result in an exceedance of the SILs onshore is required to implement BACT (30 CFR 550.303(g) and 303(h)). Under existing BOEM regulations, "Best available control technology" or BACT means an emission limitation based on the maximum degree of reduction for each air pollutant subject to regulation, taking into account energy, environmental and economic impacts, and other costs. The BACT is required to be verified on a case-by-case basis by the Regional Supervisor and may include reductions achieved through the application of processes, systems, and techniques for the control of each air pollutant.

Under the proposed rule, the evaluation of the SILs would not automatically trigger the requirement for BACT. In fact, BACT would never be the only possible ERM. Under the proposed rule, emissions credits including offsets would always be available as an alternative. The proposed rule would generally limit the requirement to apply BACT and/or offsets (or, more generally, emissions credits) to situations where the SILs exceedance relates to a non-attainment area. For a long-term facility whose emissions affect only attainment areas, BACT and/or offsets would be required only if a further analysis indicates that the SIL exceedance, taken in combination with all other facilities located in the same general vicinity, would potentially cause an increase in the concentrations of a relevant air pollutant that would endanger the attainment status of some area in any State by exceeding the AAIs. In all other cases, when the AAIs are not exceeded, the proposed rule would not generally require further ERM.

For long-term facilities whose emissions affect a non-attainment area, where an exceedance of the relevant SILs would trigger the requirement for more extensive controls, BOEM expects that lessees and operators would likely choose emissions credits in all but a few cases (likely limited to those rare situations where localized control equipment would be the only effective way to prevent the facility from adversely affecting the attainment status of an onshore area).

3. ERM evaluation criteria

If the modeling results show impacts that are higher than the SILs, ERM would be required as specified in section 550.306, for a short-term facility, or as specified in section 550.307, for a long-term facility. Current BOEM regulations require that any operator subject to controls (because its emissions are projected to exceed the SILs as defined in BOEM's regulations) must conduct a BACT analysis, and that BOEM must evaluate the amount of emissions reductions that each available emissions-reducing technology or technique would achieve, as well as the energy, environmental, economic and other costs associated with each technology or technique. The current regulations do not, however, specify explicitly that each lessee or operator evaluate all the potentially effective forms of BACT and do not therefore require a consideration of all the feasible alternatives. This section describes the methodology in this proposed rule for determining what forms of ERM would be required for any given plan.

Under the proposed rule, a lessee or operator would be required to identify all of the potentially feasible forms of ERM and rank them according to their potential effectiveness. Only those situations where a potentially more effective ERM is infeasible[58] would such an operator be allowed to propose less potentially effective forms of ERM.

The proposed rule would provide a two-stage procedure for analyzing and selecting ERM, when required, based on modeling results. First, the lessee or operator would identify all the alternative control technologies available and determine their technical feasibility. Second, the lessee or operator would rank and choose specific control technologies. Although these two stages are implicit in BOEM's current regulations, they are stated explicitly for the first time in this proposed rule.

[58] In the case of BACT, the cost effectiveness of every option must be considered and any alternative that is not cost effective (in terms of the emissions reductions achieved) may be excluded as non-viable.

The purpose of this approach would be to ensure that the types of ERM considered would be those that would have the greatest potential to reduce the amount of emissions. The first stage in the process would require lessees and operators to consider all technically feasible control technologies (and not submit a plan that fails to mention feasible options). No lessee or operator could propose only control technologies that would either be largely ineffective (but inexpensive to implement) or cost prohibitive (so they could be discarded) to avoid selecting a cost effective and technologically effective form of ERM. The second stage would require operators to demonstrate the selected ERM is the most effective control technology that could be implemented cost effectively. Under the proposed rule, the most effective technology would always be considered, so it would be implemented unless it was found not to be cost effective.

The effectiveness of any given form of ERM would be measured in terms of the total number of tons of a pollutant that would be reduced on an annual basis. The cost effectiveness would be the annual tonnage reduction estimate divided by the cost. Thus, cost effectiveness would represent the cost per ton of pollutant emissions averted through the application of ERM. Both the amount of emissions reduced and the cost effectiveness of any proposed or potential ERM can be evaluated for any given pollutant or based on the total reduction in all relevant pollutants, depending on which pollutants need to be reduced.

Determining cost effectiveness would require considering the benefits to be achieved from emissions reductions against the costs that would be incurred to achieve those benefits. Accordingly, cost effectiveness means the absolute effectiveness of the technology (in terms of tons of emissions avoided), and its emission control efficiency (ECE) (percentage reduction) compared to the total potential cost of the technology. All of the costs and benefits of any potential control would be considered in determining what constitutes a cost effective emission

reduction measure and what would, therefore, constitute viable ERM.

Although not stated explicitly, the current regulations allow a lessee or operator to apply no controls whatsoever when its "proposed" BACT is claimed to be unfeasible. The proposed rule would make explicit that technically feasible controls would always be required but would allow much greater flexibility in how the relevant ERM are determined and evaluated. Once the required emission reduction measure(s) (ERM) are identified, a lessee or operator would be required to thoroughly describe the emissions reduction controls it proposes to apply. The rule would also provide specific provisions governing the sufficiency and effectiveness of these measures and require a lessee or operator to monitor its continual effectiveness over the duration of the plan under reasonably foreseeable circumstances.

The proposed rule would also explicitly articulate requirements for ERM that are implicit in the current regulations. The proposed rule would retain the term BACT, though the definition would be rewritten for clarity. In maintaining a "performance-based" approach to the proposed rule, BOEM is not proposing specific types of BACT, technical standards, or ERM. BOEM is seeking comment on whether it should identify various forms of ERM that have been approved in other situations, whether by BOEM, the USEPA or another regulator, and whether BOEM should provide additional specificity on how to determine the most appropriate form of ERM and/or what cost effectiveness would be considered presumptively reasonable in making such a determination. All of these issues could be addressed in the context of establishing criteria for what may constitute "presumptive BACT" or presumptive ERM. BOEM invites comment on whether BOEM should adopt presumptive ERM and, if so, what processes it should use for adopting and updating the various forms of presumptive ERM that are suggested or approved.

Section III of USEPA publication entitled "PSD[59] and Title V Permitting Guidance for Greenhouse Gases," [Office of Air Quality Planning and Standards, Air Quality Policy Division, Research Triangle Park, NC, EPA-457/B-11-001, March 2011] describes the USEPA's process for determining the appropriate use of BACT.[60] BOEM has examined the USEPA approach and intends to take these guidelines into consideration in developing its own guidelines for ERM, as well as for making a determination as to the viability and cost-effectiveness of alternative forms of ERM "taking into account energy, environmental, and economic impacts and other costs." Because BOEM intends to publish its own ERM guidelines, it solicits comments on the USEPA's approach and the underlying methodology for making the determination as to what forms of ERM may be most appropriate under various circumstances, as well as comments on why or under what circumstances the USEPA approach may or may not be appropriate to the OCS environment and how the ERM requirements could be best tailored to the unique conditions of the offshore oil and gas industry.

4. Nitrogen Oxides (NO_x) Waiver and Volatile Organic Compounds (VOC) Waiver

There are situations where the increase in a given precursor pollutant will not contribute to an increase in the ambient air concentration of the CP for which it is a precursor. That situation is particularly important in the case of NOx and VOCs, which are both precursors for O_3. The USEPA has recognized that, under certain circumstances an increase in NOx or VOC may have no effect on the formation of O_3 in the tropospheric atmosphere and may, in fact, actually cause a

[59] PSD stands for Prevention of Significant Deterioration.

[60] BOEM and the USEPA differ in their requirements for BACT, primarily due to the difference in their respective regulatory frameworks. BOEM reviews the BACT alternatives as part of its AQRP, under both the current regulation and the proposed rule prospectively, determining in advance of the facility installation what form of BACT is appropriate. The USEPA also evaluates BACT prospectively, but the CAA also specifies, among other requirements, that BACT cannot be less stringent than any applicable standard of performance under the New Source Performance Standards (NSPS) (42 U.S.C. § 7479(3)). Therefore, although BOEM looks to USEPA practices when evaluating control technologies, due to the unique nature of the OCS, BOEM also exercises independent judgment on what constitutes BACT and how it should be applied.

decrease in O_3 formation. The degree to which a change in the emissions of NOx or VOCs would contribute to O_3 formation in the atmosphere is referred to as the O_3 efficiency. Because there are situations where an increase in NOx or VOCs would have no negative or even a positive effect, BOEM is proposing to exempt a facility from reducing its emissions of these precursor air pollutants in such situations. Generally, VOC emissions must be greater than NOx emissions to trigger O_3 formation. A ratio of VOCs to NOx of 4:1 to 16:1 is within the range where O_3 forms.[61]

The USEPA allows the issuance of a "NOx Waiver" for areas where limiting NOx emissions does nothing to decrease O_3, and in some cases, can actually increase O_3. A "VOCs Waiver" could similarly be issued in the reverse case (i.e., where there is already too much VOC in the atmosphere to further contribute to the production of O_3). The proposed rule would adopt a similar approach and limit the mandate to reduce NOx and VOC emissions, for the purpose of limiting O_3 formation, to those situations where the limits would be effective. Because atmospheric conditions change over time, the rule would also propose that, in the event that a facility is waived from controlling NOx as a precursor to O_3, or from controlling VOCs for controlling O_3, BOEM could re-impose the requirement to set up ERM at some future date, if BOEM determined that the waiver was not having the intended effect.

F. Consolidation of Emissions from Multiple Facilities

The proposed rule would require a lessee or operator to combine projected emissions from its multiple facilities under certain circumstances in order to evaluate whether the close placement of multiple facilities operating at the same time could jointly cause or contribute to a violation of

[61] This topic is addressed in more detail in the book "Introduction to Atmospheric Chemistry," by Daniel J. Jacob, Princeton University Press, 1999, available at the following location: http://acmg.seas.harvard.edu/people/faculty/djj/book/bookchap12.html

the NAAQS. This proposed requirement would only apply to facilities that are wholly or partially owned, controlled or operated by the same entity, and is designed to prevent a single entity from segmenting its operations into multiple plans to avoid exceeding EETs. Emissions from nearby facilities that are not wholly or partially owned, controlled or operated by the same entity would be reviewed in the context of the relevant NEPA analyses.

BOEM's current practice is to require, in specific circumstances, the consolidated analysis of facilities covered by multiple plans in accordance with the following provision of paragraph 550.303(j): "If, during the review of a new, modified, or revised Exploration Plan or Development and Production Plan, the Regional Supervisor determines or an affected State submits information to the Regional Supervisor which demonstrates, in the judgment of the Regional Supervisor, that projected emissions from an otherwise exempt facility will, either individually or in combination with other facilities in the area, significantly affect the air quality of an onshore area, then the Regional Supervisor shall require the lessee to submit additional information to determine whether emission control measures are necessary." The current regulations do not specify under what circumstances the Regional Supervisor would make such a determination.

This proposed rule recognizes the fact that the emissions from two or more OCS facilities located in close proximity to one another may have an adverse impact on the air quality of a State even if the individual EETs, considered separately, would indicate that that facility should not cause an adverse impact to the air quality of a State. This would generally only be true in the situation where two or more facilities were operated contemporaneously, however. Closely-grouped facilities that emit pollutants at the same time can affect the air quality of a State differently than facilities that are spread across a larger area because the emissions would be

more concentrated and would, correspondingly, cause a greater concentration of air pollution within a neighboring State. Accordingly, the proposed rule would require consolidation to prevent a lessee or operator from "segmenting" his operations by describing proximate activities in separate plans or RUE or pipeline ROW applications in order avoid modeling or applying controls.

The proposed rule would specify that a lessee or operator would be required to consolidate projected emissions from multiple facilities if: 1) the emissions from multiple facilities are generated by proximate activities (i.e., the same well(s); a common oil, gas, or sulphur reservoir; the same or adjacent lease block(s); or, by facilities located within one nautical mile of one another); 2) the lessee or operator wholly or partially owns, controls or operates those facilities; 3) the construction, installation, drilling, operation, or decommissioning of any of the lessee or operator's facilities occurs within the same 12-month period as the construction, installation, operation, or decommissioning of another facility that meets conditions 1 and 2; and, 4) such a consolidation of emissions from multiple facilities would generate emissions sufficient to exceed an applicable emission exemption threshold. If two or more facilities meet all of these conditions, under the proposed rule, the lessee or operator would be required to calculate the sum of the projected emissions from those facilities (including its respective attributed emissions).

The proposed rule would specify that, if all of the emissions to be combined relate to the lessee's or operator's wholly-owned facilities, the lessee or operator would be required to provide the data and analysis regarding the complex total emissions. However, where the lessee or operator only partially owns the facilities whose projected emissions are to be consolidated, the lessee or operator would need to gather data from the operator of any facility that it does not

wholly own[62] or which it does not operate and would need to provide to BOEM all the data and analysis it gathered. BOEM would make a determination that the lessee or operator has appropriately considered the relevant data in its analysis of the complex total emissions.

Under the proposed rule, if any lessee or operator is required to consolidate projected emissions data from multiple facilities, then anywhere a requirement applies to projected emissions, the lessee or operator would instead be required to use complex total emissions (except with respect to the process by which projected emissions are determined for any given facility, as specified in section 550.205(d)).

G. Ongoing Monitoring and Review of Projected Emissions

BOEM is proposing mandatory record keeping of fuel usage and activity data for all emissions sources, and we are proposing that non-exempt facilities subject to emissions reductions controls or mitigation and facilities that are exceptionally large be required to monitor their actual emissions. BOEM expects that most of the monitoring that would be required to be implemented in connection with the proposed rule would be of the type known as a Predictive Emissions Monitoring System (PEMS).[63]

PEMS is an air quality monitoring that provides continuous data recording and generates reports according to the applicable regulatory requirements. PEMS is used to meet 40 CFR part 60, Appendix B, requirements for audit and performance standards on new stationary sources. It is also applied in many other contexts, including the PSD program (40 CFR 51.166-166), and the approval and promulgation of implementation plans (under 40 CFR 52.21). The USEPA generally regards PEMS as a secure and reliable means of collecting, storing, and reporting

[62] All BOEM plan approvals and data are publically available and can be obtained from the BOEM website.
[63] For an overview of PEMS as well a general background discussion of other monitoring systems that may also be appropriate in certain contexts on the OCS, see citation to this website: http://cfpub.epa.gov/oarweb/mkb/Basic_Information.cfm.

compliance data.

PEMS can be used on most combustion sources that fire gaseous or liquid fuels and for most compliance parameters such as NOx, SO_2, CO, CO_2, O_2, hydrocarbons, NH_3, hydrogen sulfide, and formaldehyde. BOEM welcomes comments on the potential application of PEMS and/or the best approaches for selecting and evaluating monitoring systems.

1. Recordkeeping and measurement criteria

In order to ensure ongoing compliance with the NAAQS, the proposed regulations would authorize BOEM to collect additional information on activities or plans after they have been approved.

Under the current structure, BOEM approves all plans for facilities in advance of the construction and installation of such facilities on the OCS. With respect to air quality, the plans contain estimates of prospective pollutant emissions based on the information that is available about the most likely emissions for every emissions source that is proposed to be used. This process necessarily involves estimates because it utilizes emissions projections for equipment, much of which is not yet in use at the particular site. The same principle applies to proposed ERM. The ERM that are put into the plan are also prospective; the ERM would not be applied to the facilities, equipment or MSCs until after a plan has been approved. The effectiveness of any physical controls that have not yet been installed cannot be measured but only projected. Based on this approach, it would be difficult to determine what the actual emissions would be for one facility, on a stand-alone basis, let alone a range of support vessels, vehicles, aircraft and ancillary equipment. For this reason, namely, in order to provide greater confidence that the actual emissions levels are not exceeding the projected levels, BOEM has proposed a more

reasonable approach to establish basic record-keeping and measurement criteria that could be applied after a plan has been implemented and the associated facilities are fully operational.

The proposed rule adds a requirement that all operators 1) keep fuel logs for all the relevant equipment and 2) maintain operating records (e.g., operating times by level of capacity) for all key facilities, MSCs, and equipment described in the proposed plan. The information would need to be maintained on a month-by-month basis and would need to be provided to BOEM according a schedule determined by the respective BOEM region.

In addition to requiring all facilities to keep records as described above, certain facilities would also be required to measure actual emissions at specified intervals. The proposed rule outlines four criteria that would be used to determine which facilities would be subject to this requirement. First, the proposed rule would require the measurement of air pollutant emissions for plans which are approved subject to BACT. Such plans would have to demonstrate their actual emissions were not significantly above the projected emissions. Second, the proposed rule would require that any facility or emissions source that is not certified or compliant with USEPA emissions requirements applicable to engines or equipment intended or certified for use in the U.S. should also be required to demonstrate that its levels of actual emissions nevertheless are consistent with the estimates provided in the plan. Because the equipment is not certified, it is impossible to know without actual measurement the extent to which emissions are similar to emissions from certified equipment. Accordingly, BOEM believes that a demonstration should be made that the actual emissions of such equipment complies with the emissions levels which BOEM approved as part of the plan review.

Third, there are some situations where the accuracy and reliability of estimates of projected emissions, based on emissions factors, are unreliable or would be subject to a great range of

variation. BOEM proposes to require measurement and reporting of actual emissions for plans in which the projected emissions cannot be reliably determined or in situations where the potential error in the emissions factors could result in a significant underestimate of the projected emissions (particularly in situations where the underestimate is of such a magnitude that not addressing the error could have a significant impact upon a State's air quality). This requirement is intended to allow BOEM to require monitoring on facilities with high emissions or a high level of variability in the accuracy of emissions factors or estimates. Because projected emissions are based on an activity rate and an emissions factor and because emissions factors are somewhat uncertain, the difference between the projected emissions and actual emissions will increase with higher activity rates. So, the range of potential projected emissions for larger facilities is much greater than those for smaller facilities, and the potential ramifications for errors are larger than for small facilities. Although this provision would likely be rarely invoked, it is important that BOEM can verify the actual emissions of large facilities in situations where it has evidence to believe that the actual emissions are under-reported.

Finally, in some areas, particularly those where the background concentrations of a pollutant are high or where the USEPA has recently changed a standard, and where there is a greater likelihood of a nearby facility causing or contributing to a violation of the NAAQS, monitoring of actual emissions may also be required. The modeling that was used to demonstrate that there is, presumptively, no such impact could only be valid if the assumptions regarding the actual background concentrations of pollutants are accurate. If a model of potential emissions were to rely on inaccurate background concentration estimates, its conclusions would also be suspect. For that reason, BOEM has proposed that these facilities in these areas may also be required to verify that their emissions correspond to those estimated in the plan.

H. Structure of the Proposed Rule

In contrast with the current BOEM regulations, where air quality data provisions are set forth in many sections, including sections 550.215, 550.218, 550.224, 550.225, 550.245, 550.249, 550.257, 550.258 and 550.284, the proposed rule would establish one set of data requirements related to air quality in a new section 550.205. In the current regulations, plan requirements applicable to EPs are dealt with in one part of the regulations, and plan requirements applicable to DPPs and DOCDs are dealt with in another part of the regulations. Because the air quality requirements applicable to EPs, DPPs, and DOCDs are largely the same, BOEM proposes to place all the plan requirements relevant to air quality in one consolidated section.

The majority of the proposed rule consists of two major parts: a new section on data requirements and collection, section 550.205; and an air quality analysis control and compliance subpart, 30 CFR part 550 subpart C. The content of the two primary air quality data sections from the current regulations, sections 550.218 and 550.249, would be covered by proposed section 550.205, and those existing sections would be eliminated.

The proposed rule would replace the current subpart C, which includes air quality evaluation and analysis and requirements for the application of emissions reductions measures. This new proposed subpart would describe the process for post-approval review of plans and for addressing compliance with future changes to the AAQSB on the part of the USEPA. BOEM is proposing to change the title of subpart C from “Pollution Prevention and Control” to “Air Quality Analysis, Control, and Compliance,” to better reflect the scope and intent of this subpart.

To make the regulations more precise and to ensure they remain up-to-date, BOEM is proposing to add a number of new definitions and to clarify a number of existing definitions. The proposed rule would consolidate all the definitions and acronyms specific to air quality in a

single section, replace or update various provisions, and clarify the regulations in those circumstances where the existing text could be considered unclear or potentially subject to more than one reasonable interpretation.

1. Potential monitoring alternatives

BOEM solicits comments on various alternatives that could be used to achieve the Bureau's objective of monitoring large emitters. The following are examples of alternatives that have been identified. In addition, there may also be other alternatives that should be considered.

One alternative would be for BOEM to require measurement of actual emissions on facilities with emissions above a specific threshold to be determined in the final rule. BOEM would like comments on what an appropriate threshold might be.

A second alternative would be for BOEM to establish general criteria that could be used to determine the potential error in the emissions estimates. Among the criteria being considered are: production volume of the facility, size, type, and efficiency of engines proposed to be used, the age of equipment, the attainment or designated non-attainment status of the nearby areas within any State, the length of time the equipment will be operated, the proximity to other facilities, and/or the historic reliability and variability of emissions factors for the equipment being used. Under this alternative, BOEM would make a determination on a case-by-case basis whether any given facility would be required to report its actual emissions.

A third alternative would be to require actual emissions measures for any plan that proposes to use equipment with emissions factors that BOEM has determined to be particularly unreliable. Under this alternative BOEM would provide information to lessees and operations as to what specific types of equipment would be subject to this reporting requirement.

The fourth alternative would be to establish a monitoring and reporting formula whereby facilities whose projected emissions exceed a fixed percentage of the emission exemptions thresholds would be required to monitor and record their actual emissions. For example, BOEM could require that any facility with projected emissions for any CP that exceeds 85 percent of the threshold would have to report its actual emissions for all criteria and major precursor pollutants. This is due to the potential margin of error in the emissions factors. BOEM solicits comments on the appropriate percentage of the emissions exemptions thresholds for this reporting threshold.A fifth alternative would be any combination of the previous alternatives.

BOEM is also considering whether it should require measurement of actual emissions from activities in all plans, but limit the kinds of sources for which measurement is required, based on the uncertainty in the emissions factors estimates for specific pieces of equipment and the potential costs of measuring emissions from the associated equipment. The section-by-section description of proposed section 550.311 sets forth text for this proposal.

In addition to monitoring requirements, BOEM is also proposing provisions that clarify the way in which BOEM will ensure that previously approved plans comply with the statutory requirements. As noted previously, OCSLA requires "compliance with the national ambient air quality standards pursuant to the CAA (42 U.S.C. § 7401 *et seq*.), to the extent that activities authorized under [OCSLA] significantly affect the air quality of any State" (43 U.S.C. § 1334(a)(8)). BOEM believes this provision should properly be interpreted to mean that BOEM has a continuing obligation to ensure the protection of State air quality and that such obligation extends to ensuring compliance with the NAAQS, as they are amended to incorporate new and more accurate scientific information regarding the potential adverse public health and welfare impacts of air pollution.

Because the NAAQS are updated periodically to reflect improved information, BOEM believes that it would be appropriate to re-evaluate plans or RUE applications approved many years ago for compliance with section 5(a)(8) of OCSLA, even though the facility has not been modified in such a manner as to require the submission of a revised plan. For this reason, in addition to the new record-keeping and emissions measurement requirements, BOEM is also proposing that lessees and operators be subject to a requirement to resubmit their plans on a periodic basis for re-evaluation. The current practice, and one that would be continued under the proposed rule, is to project air emissions for ten years from the date of plan submission. Under the proposed rule, if a lessee or operator is operating under an approved plan, it would be required to resubmit a plan for a periodic air quality review ten years after BOEM's previous approval of the operator's last plan. This provision would be added in furtherance of the objective of section 5(a)(8) of OCSLA, which requires BOEM to ensure compliance with the NAAQS, and which makes no provision for any exceptions with respect to previously approved plans. All of the applicable requirements of this subpart in effect on the date of resubmission would apply on the same basis to a resubmitted plan as for an initial plan or RUE application. BOEM requests comments on this provision, particularly with respect to the potential impact on lessees and operators.

2. Plan resubmittals

Once the new EETs have been established, BOEM would conduct periodic reviews of plans that were approved prior to that time. This is to ensure the lessee or operator's emissions remain compliant with OCLSA and are in accordance with the provisions of the OCS leases that require compliance with subsequent revisions to the regulations. Plans would be resubmitted according to the schedule in proposed section 550.310(c), no more frequently than ten years after they were

approved. Plans that were revised or modified would also be due for resubmittal ten years after their most recent revision or modification was approved.

A plan resubmitted pursuant to this proposed provision would be required to be updated to comply with the requirements of section 550.205 as they exist at the time of the plan resubmission and to include the most current data on emissions factors. It would be reevaluated against the EETs and formulas as they exist at the time of the plan resubmission. The resubmitted plan must be modified to include any data collected on actual emissions since the last time the plan was submitted or resubmitted. Under the proposal, if a plan would indicate an exceedance of any applicable emission exemption threshold, all of the other applicable requirements of this subpart would apply as for an initial plan.

For plans that were approved prior to the effective date of this rule, the lessee or operator would be required to resubmit the air quality component of its previously approved plan after the date in which BOEM has determined new EETs and published them in the FR. The resubmission would be conducted on a phased basis, beginning in 2020. For further details, see the section-by-section analysis description of proposed section 550.310(c)(2).

I. Gulf-wide Offshore Activities Data System (GOADS)

The proposed rule would include a new provision to support BOEM's effort to inventory emissions on the OCS. Currently, BOEM maintains this type of emissions inventory information on air pollutants in the GOM Region. BOEM collects the information through GOADS, as described most recently in BOEM NTL No. 2014-G01, and previous NTLs. The major pollutants for which BOEM has collected data in the GOADS include the following: CO, sulphur oxides (SO_x), NO_x, PM (including both PM_{10}, and $PM_{2.5}$), and volatile organic compounds (VOCs), including exempted compounds (40 CFR 51.100). BOEM also has collected

information on GHGs, including CO_2, methane (CH_4), and N_2O through the GOADS.

The proposed rule would codify this current GOM practice, provide for the expansion of this activity to the North Slope Borough of the State of Alaska, and facilitate the gathering of information in other OCS areas to the extent necessary to augment the NEI or for another purpose such as to obtain relevant NEPA data. The proposed provision would require all lessees, operators, and holders of rights-of-use and easements (RUEs) to collect, maintain, and submit information on an ongoing basis regarding air pollutant emissions from all relevant emissions sources. BOEM would use this information to maintain a comprehensive OCS emissions inventory of air pollutants.

The information would assist BOEM in meeting its requirements under OCSLA to ensure the offshore activities it authorizes do not significantly affect the air quality of a State. Also, the information submitted under this provision would allow BOEM to determine OCS-wide emissions for leased areas and use that data to inform NEPA analysis and coordinate with the USEPA and coastal States to determine ambient air quality levels and mitigations of adverse impacts. The inventory will continue to augment BOEM's NEPA review by providing an accurate inventory to determine ambient concentrations of air pollutants and by serving as a basis to compute emission trends and to perform necessary air quality impact assessments. Separately, the data provided by lessees, operators, and RUE holders are analyzed and supplemented by BOEM, and the results are provided to the submitters in order to assist them in complying with their reporting obligations to the USEPA. Under the proposed rule, BOEM would continue to make this information available to OCS lessees, lease operators, and RUE holders to assist with their mandatory reporting of certain GHGs to the USEPA. See 40 CFR 98.233.

OCSLA requires DOI to make a decision on whether to approve an EP within 30 days and a

DPP within 60 days. Consequently, the air quality review process for the plan is limited in its ability to provide extensive analysis of complex plans. Although not mentioned explicitly in OCSLA, BOEM's regulations require a similar review timeframe for DOCDs. While there is an opportunity for public comment on plans, there is limited opportunity for public review of air pollution measures in EPs, DPPs, or DOCDs. BOEM requests comments on how more opportunity for public input could be provided, while observing legal constraints on plan review timeframes.

J. Prevention of Significant Deterioration

The AAIs established by the USEPA represent ambient concentrations of CPs in attainment areas that have been established to prevent the significant deterioration of air quality. Increases in ambient concentrations of CPs that exceed the AAIs present a risk of causing an attainment area to become a non-attainment area. BOEM proposes to evaluate increases in ambient air concentrations to ensure compliance with the AAIs.

The preamble to the current regulation[64] stated that the maximum allowable increases (when added to the baseline concentration) "are ceilings which cannot be exceeded within an applicable area. To calculate the acceptable emission level, a lessee must combine the ambient air concentrations resulting from the projected emissions of total suspended particulates and SO_2 from the proposed OCS facility with those emissions of TSP and SO_2 from other onshore and offshore sources which contribute to the consumption of the maximum allowable increases." There is, however, no provision in the current BOEM regulations that explicitly requires accounting for "other onshore and offshore sources which contribute to the consumption of the maximum allowable increases."

[64] 45 Federal Register (FR) 15133 (Mar. 7, 1980).

Accordingly, the proposed rule would contain an explicit requirement that facilities for which BACT is implemented consider other sources of emissions that contribute to consumption of the AAI when they compare the impacts of their controlled emissions against the AAIs.

Through this notice, BOEM is soliciting comments on alternative ways for how it might effectively ensure that the increments are not "consumed" in the relevant attainment areas or what steps it might take to protect the increments in an operational context without creating an undue burden on lessees or operators. One alternative for determining the extent to which the increments have been "consumed" would be to separately evaluate the cumulative effects of offshore development in the context of the NEPA analysis conducted for the Five-Year Oil and Gas Leasing Program or in connection with the lease sales. Another alternative might be to conduct periodic cumulative impact assessments of the air quality in relevant attainment areas. Based on either the NEPA analysis or a separate cumulative impact assessment, BOEM might maintain a database of relevant AAIs that have previously been "consumed." These data could be evaluated in the context of the plan review process, or separately in some other context.

V. Section-by-Section Analysis of the Proposed Rule

The following are the changes proposed by this rule in part 550:

A. 30 CFR Part 550, subpart A

Section 550.101 - Applicability

The section heading of section 550.101 would be revised from "Authority and Applicability" to read "Applicability." This change would make the section title better reflect the current content of the section.

Section 550.102 - What does this part do?

The proposed rule would modify paragraph (a) of this section to make clarifying

amendments. In addition, paragraph (b), which contains the table entitled "Where To Find Information For Conducting Operations," would be updated as follows with the following additions: the acronym for application of permit to drill (APD); a reference to the subsection on Development and Production Plans (DPP) to include Development Operations Coordination Documents (DOCD); the acronym for geological and geophysical (G&G) permits; the acronym from oil spill financial responsibility, (OSFR); a subsection to cover Rights-of-Use and Easement; acronyms for Rights-of-Use and Easement (RUE) and pipeline Rights-of-Way (ROW); and a new subsection referencing the Air Quality proposed regulations in subpart C.

Section 550.105 - Deleted Definitions

The terms "attainment area," "best available control technology," "emission offsets," "existing facility," "facility," "non-attainment area," and "projected emissions" would be deleted from section 550.105and moved into the list of definitions in section 550.302 because these terms are only used in the context of the air quality regulations. The purpose of the proposed changes to section 550.105 would be to include only definitions that are intended to apply to all of part 550. The terms proposed for deletion from section 550.105 apply only to air quality, and are, therefore, not appropriate for section 550.105. Although the term "facility" has wide applicability in BOEM's regulations, the definition of "facility" in the current section 550.105 expressly applies only to the current air quality regulation found at section 550.302. Accordingly, BOEM proposes to move this definition, along with the other air-quality-specific definitions, to subpart C (i.e., air quality) of the regulations.

Section 550.105 - Revised Definitions

Note on Definitions

The definitions in section 550.105 are intended to apply to all of part 550. The definitions

proposed to be added or revised in proposed section 550.302 are meant to apply only to section 550.205 of subpart B and all of subpart C.

In many cases, the definitions as used in part 550 differ from the meaning of the same term found in other agencies' regulations, in other contexts, or as used in common usage. Any word, phrase, or term that is not defined should be understood in the common and ordinary meaning of that word, phrase, or term. For example, the term nitrogen oxides is not defined, and it is not used in a manner that would require the term to be defined uniquely in this proposed rule, because BOEM uses it in its common and ordinary meaning. In contrast, the phrase "Best Available Control Technology," and its corresponding acronym BACT, is used as defined in proposed section 550.302, and it would not have the same meaning as used in the USEPA regulation.

Definitions related to air quality terms are currently located in three places in part 550: sections 550.105, 550.200, and 550.302. Under the proposed rule, definitions of terms that are related solely to air quality would be located in section 550.302 as part of subpart C. Other definitions related to both air quality and other parts of the regulations are left in section 550.105. Subparts A and B contain some requirements related to air quality, and proposed sections within these subparts would use terms that would be defined in subpart C. Under this organizational framework, the proposed rule would move some of the definitions from one section to another and some terms would also be updated.

The proposed rule would revise or add definitions of the following terms:

Air pollutant.

This definition would be revised to include the following: 1) any criteria air pollutant for which the USEPA has established numerical criteria, referred to as the primary or secondary

National Ambient Air Quality Standards (NAAQS), in 40 CFR part 50 and as may be amended pursuant to section 109 of the CAA; 2) any major precursor air pollutant identified by the USEPA that contributes to the formation of a criteria air pollutant through an atmospheric or photochemical reaction, including, but not limited to, VOCs, NH_3, and those CPs that are also precursors for other CPs (such as SO_2); and 3) any USEPA-defined GHG, as defined at 40 CFR 98.6 and as may be amended pursuant to section 111 of the CAA; and, 4) any USEPA-defined Hazardous Air Pollutant, as defined at 40 CFR 63.2 and as may be amended pursuant to section 112 of the CAA. The purpose of this change is to clarify that, while there are many types of air pollutants, the focus of BOEM's regulatory efforts in this rulemaking is on the criteria and major precursor pollutants.

Emissions source.

The current regulations define the term "source" in section 550.302 as, "an emission point. Several sources may be included within a single facility." The proposed rule would replace the term "source" with "emissions source" and locate the newly defined term in section 550.105. The proposed rule would define "emissions source" as "a device or substance that emits air pollutant(s) in connection with any authorized activity described in your plan." The proposed definition would also clarify that several emissions sources may exist on a single facility, aircraft, vessel, or vehicle. The proposed rule would further make clear anything that: 1) produces or results in the release of one or more air pollutant(s), including the flashing, flaring, or venting of natural gas; 2) involves burning any oil or well test fluids; or 3) generates fugitive emissions, is an emissions source.

BOEM is proposing to use the term "emissions source" in place of the current term, "source," since the term is used only in the air quality context (although referred to throughout

part 550 of the regulations). The proposed definition of "emissions source" would be broader than the existing definition of "source." It would also clarify that an emissions source need not be part of a single facility. Examples of equipment that would fall under this proposed definition include, but not be limited to: boilers/heaters/burners, diesel engines, drilling rigs, combustion flares, cold vents, glycol dehydrators, natural gas engines, natural gas turbines, pneumatic pumps, pressure/level controllers, amine units, tanks, dual fuel turbines, sources involved in mud degassing, storage tanks, well testing equipment, vessels (including support vessels, pipeline lay barges, pipeline bury barges, derrick barges), and any other equipment that could cause fugitive emissions, venting, losses from flashing, or loading losses.

Federal Land Manager (FLM).

The proposed rule would add this term to mean the Secretary of the Department with authority over any federal Class I area or sensitive Class II area (or the Secretary's designee). This definition is adapted from USEPA regulations at 40 CFR part 51, subpart P, implementing the CAA provisions on protecting visibility in Class I areas.

Federally-recognized Indian tribe

For the purpose of this proposed rule, a Federally-recognized Indian tribe refers to a Federally-recognized Indian tribe that has either a Treatment as State (TAS) status recognized by the USEPA or an approved Tribal Implementation Plan (TIP).

Flaring.

Under the current section 550.105, "flaring" is defined as "the burning of natural gas as it is released into the atmosphere." The proposed rule would revise this definition to read, "…the burning of natural gas or other hydrocarbons and the release of the associated emissions into the atmosphere." The proposed definition would also provide that, because lessees and operators

can use flaring to reduce the emissions of hydrocarbon vapors, it could potentially also be considered as an air pollutant emission reduction measure. The proposed definition would further make clear flares can be a mechanism used to control emissions from storage tanks, loading operations, glycol dehydration units, vent collection systems, and amine units. In addition, the proposed definition would note flares usually operate continuously but some are used only for process upsets, which occur during the exploration or development process when large amounts of flammable gases are released suddenly and unexpectedly. Finally, the proposed definition would provide the term "flaring" is equivalent to combustion flaring (i.e., burning of the gases), but it is distinct from cold venting, which involves the discharge of raw pollutants into the air without burning.

BOEM is proposing to revise the definition of flaring and distinguish it from venting as a result of a response to Report 11-34 by the Government Accountability Office (GAO) in "FEDERAL OIL AND GAS LEASES: Opportunities Exist to Capture Vented and Flared Natural Gas, Which Would Increase Royalty Payments and Reduce Greenhouse Gases."

Minerals.

The proposed rule would revise the definition of the term "minerals" slightly to align with OCSLA section 2(q), 43 U.S.C. § 1331(q). There would be no substantive changes to the definition for minerals, which continues to include oil, gas, sulphur, geopressured-geothermal and associated resources, and all other minerals that are authorized to be produced from public lands.

Mobile support craft (MSC).

The proposed rule would add this term to the definitions section to mean "any offshore supply vessel (OSV) as defined by the USCG in accordance with 46 U.S.C. § 2101, and any

ship, tanker, tug or tow boat, pipeline barge, anchor handling vessel, facility installation vessel, refueling or ice management vessel, oil-spill response vessel, or any other offshore vessel, remotely operated vehicle (ROV), or any offshore vehicle used by, or in the support of, the offshore operations described in a plan."

Consistent with the approach currently used by BOEM, for the purpose of evaluating air emissions, an MSC is considered a facility while temporarily attached to the seabed or connected to another facility.

Offshore supply vessel.

The term "offshore supply vessel" is defined in the USCG regulations. The term "support vessel" is used but not defined in the current BOEM regulations.[65] BOEM's regulations do specify, however, that the meaning of the term support vessel includes crew boats, supply boats, anchor handling vessels, tug boats, barges, ice management vessels, and other vessels, some of which do not qualify as offshore supply vessels under the USCG definition. Because of the potential confusion that could be caused by utilizing a term similar to that used by the USCG, BOEM proposes to revise its existing regulations and replace the term "support vessel" with a new term, "Mobile support craft," which would include offshore supply vessels as defined by the USCG, as well as any other vessel or vehicle used to support OCS exploration, development, production or transportation operations.

Offshore vehicle.

Current section 550.200 defines "offshore vehicle" as "a vehicle that is capable of being driven on ice." The proposed definition would clarify that an offshore vehicle is a type of MSC that is capable of being driven on ice and would add the phrase "and which provides support

[65] See 30 CFR 550.224 and 550.257.

services or personnel to your facility or facilities."

Right-of-Use and Easement (RUE).

RUE is not currently defined in 30 CFR 550. The proposed rule would define RUE to mean seabed use authorizations that BOEM may grant at an OCS site, other than an OCS lease, pursuant to sections §§ 550.160 through 550.166 of this part.

State.

State is not currently defined in the regulations. The proposed rule would add this definition in order to clarify that the word "State" includes its submerged lands and extends to the federal/State boundary. Any reference to the word "State" in this proposed rule, unless otherwise specified, is intended to include the area offshore a State up to the federal/State boundary.

Venting.

Venting is currently defined in 30 CFR 250.105. The proposed rule would modify that definition to read "the release of gas into the atmosphere, including though a stack without igniting it, whereby relief flows of natural gas or other hydrocarbons are directed to an unignited flare or which is otherwise discharged directly to the atmosphere. This includes gas that is released underwater and bubbles to the atmosphere."

Section 550.141 - May I use or be required to use alternate procedures or equipment?

The proposed rule changes the title from "May I ever use alternate procedures or equipment?" and would add new paragraph (d) to existing section 550.141, stating, "In order to protect public health, you may be required or allowed to temporarily suspend the use of equipment that emits air pollutants, or to implement operational control(s) on the use of such equipment by the Regional Supervisor, when an adjacent State or locality declares an air quality

episode or emergency, provided that any such suspension or operational control(s) would not cause an immediate threat to safety or the environment." The purpose of this provision is to ensure any BOEM-authorized equipment, which might contribute to air emissions episodes or air quality emergencies, could be turned off, or operated in a limited capacity, for the duration of such a declared emergency, as long as it can be done safely.

Local air quality authorities in States adjacent to the OCS periodically declare air emissions episodes or air quality emergencies when the concentration of a pollutant is especially high. BSEE and its predecessors have historically either required or allowed the suspension of use and testing of standby equipment during emergency health episodes declared by local authorities adjacent to the Pacific OCS (NTL 2000 P-01). Such suspensions have, for example, allowed Pacific OCS operators the ability to curtail stationary source emissions according to the measures contained in Episode Avoidance Plans or Emergency Action Plans, which the operators typically prepare at the request of either the USEPA or the State. The proposed provision would apply more generally to any equipment authorized under part 550 and that emits air pollutants. It would also apply anywhere on the OCS where operations could contribute to an air quality emergency.

Section 550.160 - When will BOEM grant me a right-of-use and easement, and what requirements must I meet?

The proposed rule would redesignate current paragraphs (f), (g), (h), and (i) as paragraphs (g), (h), (i), and (j) and add a new paragraph (f). The new paragraph would specify that facilities constructed or maintained on RUEs must meet the air quality requirements of section 550.205 of subpart B of this part and that subpart C would also apply to that RUE application. The rule clarifies that any reference to a lessee or operator in those sections would apply equally to any

applicant for a right-of-use and easement.

The new provision of this section is intended to apply to those situations where an organization is proposing to install a new facility on a RUE and that facility is not included in an exploration or development plan. In the event that an existing RUE was approved as part of an exploration or production plan, no new requirements would be imposed. Similarly, any application for a new RUE that is included within the scope of a proposed exploration or development plan would not be affected by the requirements of this paragraph.

BOEM requests comments on the most appropriate method for establishing and reporting air quality requirements associated with the removal of any facility installed pursuant to a RUE in the context of the AQRP.

Section 550.187 - What region-wide offshore air emissions data must I provide?

The proposed rule would add new section 550.187. The new section would require a lessee, an operator, or a holder of a RUE to collect, maintain, retain for a period of no less than 10 years, and submit to the appropriate regional office on an ongoing basis according to a schedule established by BOEM, information regarding all air pollutant emissions from all emissions sources associated with its operations. The primary means by which this requirement would be implemented is by requiring the lessees and operators to maintain records of the type and amount of fuel consumed (i.e., fuel logs) by all relevant sources. BOEM would use this information to maintain a comprehensive OCS emissions inventory of air pollutants. Currently, BOEM maintains this type of emissions inventory information on air pollutants in the GOM Region with the GOADS. The proposed rule would replace the name “GOADS” with the name “OCS emissions inventory” because the proposed rule anticipates the data collection would not be limited to the GOM in the future.

The current BOEM practice is to require the submission of this information every three years, and BOEM intends to maintain this practice for the foreseeable future. The three-year timeframe is consistent with USEPA regulations regarding the timeframes for submitting this information. However, given that the USEPA may change its regulations and given that, in some cases, current USEPA regulations require more frequent reporting from some sources, the proposed regulations cross-reference USEPA regulations with respect to the timing of the information submittal. That way, the rule would propose to automatically reflect any changes made by the USEPA with respect to the NEI timing requirements. Accordingly, the proposed rule would specify that the reporting timeframes will be determined by the requirements of 40 CFR 51.30(a), as it may be amended.

The proposed rule would require that the submitted information include air emissions or the activity data necessary to calculate the emissions of stationary emissions sources, including all facilities, and all non-stationary sources, including MSC(s) and any other non-stationary emissions source(s) of air pollutants above the OCS or above State submerged lands that operate in support of an OCS facility, as determined by the Regional Supervisor. GOM has historically obtained the MSC data from independent sources and intends to continue this process for the foreseeable future. BOEM would likely only change this practice if the data collection became impractical.

Under the proposed rule, a lessee or operator may request that the owner of such non-stationary emissions source(s) provide the information to BOEM or a BOEM-designated agent, but the lessee or operator would still be responsible for submitting the required information if the owner does not submit it.

Currently, the GOM Region prepares its emissions inventory by allowing lessees and

operators to directly input data either on fuel use or on equipment usage and operating time. BOEM then uses this data to calculate the resulting emissions. This proposed rule would allow for the continuation of that practice in the GOM Region, and the expansion of that practice to other OCS regions. Accordingly, the proposed rule requires the submission of 1) facility and equipment usage, including hours of operation at each percent of capacity for each emissions source; and/or 2) fuel logs containing monthly and annual fuel consumption data showing the quantity, type, and sulphur content of fuel used for each emissions source. The proposed rule would require the information provided under this proposed section should be at a sufficient level of detail so as to facilitate BOEM's compilation of a comprehensive OCS emissions inventory of air pollutants. BOEM solicits comments on various alternative methods for ensuring the accurate reporting of emissions and the appropriate methods that might be used to ensure the accuracy of the data and information it collects.

Consistent with the approach taken by the USEPA in the development of the NEI, the proposed rule specifies that lessees and operators would be required to classify the emissions according to the appropriate SCCs as defined by the USEPA in their Source Classification Codes listing, incorporated by reference in section 198(b)(1)(iv) of this chapter. The purpose of this requirement is to distinguish the various emissions processes including mobile source processes. The USEPA also estimates mobile source emissions of commercial marine vessels and without this distinction there would be a risk that either BOEM or the USEPA could double count the emissions that are reported.

Finally, the proposed rule would allow the Regional Director to waive or allow a delay in compliance with the requirements of this section on a region-wide basis. The reason for this waiver provision is to allow regions to avoid duplicating the effort already undertaken by the

USEPA in this regard, particularly in areas where BOEM does not have air quality jurisdiction and does not, therefore, have any unique or separate data or IC requirements.

Under the proposed rule, a lessee, an operator, or a holder of a RUE would be required to submit the required information upon request or on an ongoing basis as determined by BOEM starting in 2017 or in the next reporting period if the rule is not effective by 2017 and continuing according to the timeframe established by the USEPA in its regulations governing the NEI to the appropriate regional OCS office. Leases and RUEs acquired after 2017 would be subject to the reporting requirement at the end of the next reporting period. The proposed rule would also require submission of this information more frequently if the lessee, operator, or holder of a RUE has an emissions source that generates facility emissions that have a PTE[66] such that it would qualify as a Type A source according to the USEPA's regulations in Table 1 of Appendix A of Subpart A. – Emission Thresholds by Pollutant for Treatment as Point Source of 40 CFR 51.50. These regulations contain thresholds set by the USEPA to determine which emissions sources within States require annual reporting to States for the NEI that the USEPA conducts for other sources every three years.

As with the current GOADS in the GOM OCS region, the information obtained under this proposed provision is necessary to allow BOEM to determine more accurately air emissions from the activities it has authorized on the OCS and fulfill its statutory obligations under OCSLA section 5(a)(8). BOEM also uses that data to inform NEPA reviews and analysis and coordinate with the USEPA and coastal States. The inventory would provide data to augment BOEM's

[66] The USEPA concept of PTE, which it defines at 40 CFR 51.301, is similar to the BOEM concept of facility emissions, in that both PTE and facility emissions refer to the maximum aggregate capacity of a stationary source to emit a pollutant under its physical and operational design. This concept includes all emissions sources attached to a facility but excludes the attributed emissions of non-stationary sources, such as MSCs. For further details on the concept and use of PTE in the USEPA context, see "Potential to Emit: A Guide for Small Business," USEPA, Office of Air Quality Planning and Standards, Research Triangle Park, NC, EPA-456/B-98-003, October 1998, available at: http://www3.epa.gov/airtoxics/1998sbapptebroc.pdf.

NEPA review by providing an accurate basis from which to compute emission trends and to perform necessary air quality impact assessments. In addition, the emissions data derived from information provided under this program would continue to be made available from BOEM to OCS lessees, operators, and RUE holders to assist with their mandatory reporting of GHGs to the USEPA. BOEM would also continue to use the inventory to meet information requests from the general public.

BOEM currently collects emissions data related to GHGs on a regular basis in the GOM OCS Region as part of the GOADS program. BOEM recognizes the impacts of GHG emissions on the air and water overlying the OCS, primarily associated with ocean acidification, and the States, in connection with climate change, and the importance and sensitivity of this issue. For this reason, BOEM is researching the implications of GHG emissions generated by OCS facilities and MSCs and evaluating various alternatives for potentially limiting these GHG emissions.

Section 550.198 Documents incorporated by reference.

The proposed rule would incorporate by reference certain material into part 550 with the approval of the Director of the Federal Register under 5 U.S.C. § 552(a) and 1 CFR part 51. The proposed rule would provide for the process BOEM may use to amend its regulations to incorporate different versions of these documents.

For all material incorporated by reference, the applicable document would be the specific edition or specific edition and supplement or addendum cited in this section. Lessees and operators would be allowed to comply with a later edition of a specific document incorporated by reference, provided they show that complying with the later edition provides a degree of scientific or technical accuracy, environmental protection, or performance equal to or better than

would be achieved by compliance with the listed edition; and they obtain the prior written approval for alternative compliance from the authorized BOEM official.

The proposed rule would explain that the effect of incorporation by reference of a document into the regulations in this part is that the incorporated document is a requirement. The proposed rule states that when a section in this part incorporates all of a document, the lessee or operator would be responsible for complying with the provisions of that entire document, except to the extent that the section which incorporates the document by reference provides otherwise. Further it states that when a section in this part incorporates part of a document, the lessee or operator would be responsible for complying with that part of the document as specified in that section. The specific documents proposed to be incorporated by reference include:

(1) U.S. Environmental Protection Agency, USEPA Docket Center (EPA/DC), Public Reading Room, EPA WJC West, Room 3334, 1301 Constitution Ave. NW., Washington, DC 20460.

(i) AP 42, Fifth Edition, Compilation of Air Pollutant Emission Factors, Volume 1: Stationary Point and Area Sources, January 1995, incorporated by reference at proposed section 550.312(b)(2)(iii)(C) and (b)(2)(vi).

(ii) Motor Vehicle Emission Simulator (MOVES), User Guide, Assessment and Standards Division, Office of Transportation and Air Quality, EPA-420-B-14-055, July 2014, incorporated by reference at proposed section 550.205(b)(2)(iii)(B).

(iii) User's Guide for the Final NONROAD2005, EPA420-R-05-013, December 2005. This publication is applicable to the NONROAD2008 model, incorporated by reference at proposed section 550.205(b)(2)(iii)(B).

(iv) FIRE (Factor Information Retrieval System) Version 5.0: Source Classification Codes

and Emission Factor Listing for Criteria Air Pollutants, Office of Air Quality Planning and Standards, Office of Air and Radiation, EPA 454/R-95-012, Research Triangle Park, NC 27711, August 1995, incorporated by reference at § 550.187(c)(4).

(2) Federal Aviation Administration (FAA), Office of Environment and Energy, (AEE-100), 800 Independence Avenue, SW, Washington, DC 20591.

(i) Aviation Environmental Design Tool (AEDT) User's Guide, Version 2B, prepared for the FAA Office of Environment and Energy (AEE-100), Washington, D.C. prepared by U.S. Department of Transportation and Volpe National Transportation Systems Center, Cambridge, MA, July 2015 (as amended) incorporated by reference at § 550.205(b)(2)(iii)(D).

(ii) Aviation Environmental Design Tool (AEDT), Version 2B, AEDT Standard Input File (ASIF) Reference Guide, prepared for the FAA of Environment and Energy (AEE-100), Washington, D.C. prepared by U.S. Department of Transportation and Volpe National Transportation Systems Center, Cambridge, MA, May 2015 (as amended) incorporated by reference at § 550.205(b)(2)(iii)(D).

(3) International Maritime Organization, 4 Albert Embankment, London SE1 7SR, United Kingdom, or http://www.imo.org, or 44-(0)20-7735-7611.

(i) Revised MARPOL Annex VI, Regulations for the Prevention of Air Pollution from Ships, and NO_X Technical Code [NTC] 2008, 2009 edition, incorporated by reference at proposed section 550.205(b)(2)(v).

(ii) Revised MARPOL Annex VI, Regulations for the Prevention of Pollution from Ships ("2008 Annex VI"), incorporated by reference at proposed section 550.205(b)(2)(v).

(iii) NO_X Technical Code 2008, incorporated by reference at proposed section 550.205(b)(2)(v).

B. 30 CFR Part 550, subpart B

The following are the changes proposed by this rule in part 550:

Section 550.200 – Definitions

Offshore vehicle.

The proposed rule would move the definition of this term into section 550.105 because it is used more often outside the air quality context and is referred to throughout the regulations in part 550.

Section 550.205 – What air emissions information must be submitted with my plan (EP, DPP, DOCD, or application for a RUE, pipeline ROW, or lease term pipeline)?

In the current regulations, plan requirements related to air quality are widely dispersed. Air quality requirements are discussed throughout part 550, particularly in sections 550.207, 550.212, 550.218, 550.224, 550.225, 550.227, 550.242, 550.249, 550.257, 550.258 and 550.261. In order to provide a consistent, comprehensive listing of all of the data requirements related to air quality, these existing air quality regulations would be consolidated in one new section, "§ 550.205 What air emissions information must be submitted with my plan (EP, DPP, DOCD, or an application for a RUE, pipeline ROW, or lease term pipeline)?" Most references to air quality requirements in the other sections of part 550 would be deleted and replaced with a cross-reference to the single new section 550.205. In addition, the proposed rule would specify that this section would apply to RUE, pipeline ROW, and lease term pipeline applications.

Paragraph 550.205(a) - Emissions sources

The proposed rule would make clear that all lessees or operators must list and describe every emissions source on or associated with any facility or facilities and MSC(s) described in a plan. In contrast to the current regulations, the proposed rule describes in detail what should be

considered an emissions source and what should or should not be included in that category. The proposed rule adds specificity to the requirements to ensure plans and RUE, pipeline ROW, and lease term pipeline applications are prepared consistently and evaluated according to a standard set of criteria. This would include each emissions source used during the construction, installation (including well protection structure installation), and operation of any exploration, testing, drilling (including well test flaring), development, or production equipment or facility or facilities (including every platform or manmade island included in their plan). The proposed rule would specify lessees or operators must account for the air pollutant emissions sources associated with all drilling operations, including workovers and recompletions, sidetracking, and pipeline construction, and reported emissions sources must include those associated with any oil or gas produced on a lease that is used during the course of lease operations (i.e., any beneficial use of produced oil or gas). The proposed rule would require the list of emissions sources to cover the duration of the proposed plan's activities.

The proposed rule would require lessees or operators to specify the equipment type and number, manufacturer, make and model, location, purpose (i.e., the intended function of the equipment and how it would be used in connection with the proposed activities covered by the plan) and physical characteristics of each emissions source. It would also require reporting of the type and sulphur content of fuel stored and/or used to power each emissions source and the frequency and duration of the proposed use.

The proposed rule would contain additional provisions for engines on facilities and MSCs. For all engines on each facility, including non-road engines, marine propulsion engines (in the case of MODUs when attached to the seabed), or marine auxiliary engines (i.e., a nonroad or highway engine on a vessel that is used to power a crane, a drill, or an auxiliary power unit, but it

is not installed on a marine vessel, as defined at 40 CFR 1042.901), the lessee or operator would be required to identify and provide the engine manufacturer, engine type, fuel type, engine identification, and maximum rated capacity of the engine, to be expressed in kilowatts (kW), if available. If a lessee or operator has not yet determined what specific engine would be used, it would be allowed to provide analogous data for a comparable engine with the greatest maximum rated capacity for the type of engine that it will use. For this purpose, BOEM would consider a comparable engine to be one having similar operational and emissions characteristics and similar operational and physical limitations. Under the proposal, if the engine for which the lessee or operator provides documentation has physical design and operational limitations and these limitations are the basis of its emissions calculations, then the lessee or operator must provide documentation of such limitations.

For engines on MSCs, including marine propulsion and marine auxiliary engines, the proposed rule would require lessees or operators provide information regarding the engine displacement in liters/cylinder, and maximum speed in revolutions per minute (rpm). If the specific rpm information is not available, the proposed rule would require the lessee or operator to indicate whether the rpm would be less than 130 rpm, equal to or greater than 130 rpm but less than 2,000 rpm, or equal to or greater than 2,000 rpm, based on best available information.

For offshore vehicles and MSCs, the proposed section would provide that when a lessee or operator does not know which specific engines will be used or the information about them cannot be verified, it may estimate maximum potential emissions based on the maximum potential emissions of the type of MSC typically used in the planned operations.

Finally, for any emissions source that does not fall into one of these categories, the proposed rule would require lessees or operators to provide all information needed to calculate and verify

the associated emissions, such as volumes vented, volumes flared, size of tank, number of components, etc.

Paragraph 550.205(b) - Emissions factors

The purpose of this section is to provide information regarding how a lessee or operator would determine the level of air emissions for each emissions source described in its plan. The proposed rule would provide a considerable amount of detail regarding what emissions factors should be used. Emissions factors are the values that allow lessees or operators to calculate how much of a pollutant will be emitted based on the operation of the source. The proposed rule would retain the current requirement that, for each emissions source, for every criteria and major precursor air pollutant, the lessee or operator must identify the most appropriate emissions factor(s) for calculating its projected emissions. The proposed rule would specify the acceptable methods to be used for determining the appropriate emissions factors. In general, a lessee or operator would be allowed to use actual emissions amounts derived from emission testing done for a specific emissions source in lieu of one of the approaches to estimate emission factors set out below. When determining the emissions factors through testing, the lessee or operator must consider test points and fuel. In general, unless the unique circumstances of the proposed plan make it clearly impractical to do so, test points should be devised based on actual operations as opposed to using the test points and engine loads contained in one of the various marine or non-road duty cycles. It cannot be assumed that emissions per hour or emissions per kW or per hp hour from large main engines on drill ships and platforms are highest during full load or near-full load operation. Large main engines on drill ships and platforms typically operate at less than half full power, and emissions factors for some pollutants during this operation may be significantly higher than at full load or near-full load. Specifically, actual

maximum emissions per hour or emissions per kW or horse-power hour may not be properly estimated by assuming 90% load, since emissions factors for different pollutants can have different variation with load. Under the proposed rule, the emissions factor and emission per hour or emissions per kW or per horse-power hour for the operation that is actually expected should be determined, and the emissions under 90% load should be used only if emissions at this load are the highest and thus conservative.

The proposed rule would further specify that the lessee or operator must ensure that the fuel used in the testing to generate the emission factors reflect the type of fuel that will be used by the engine in actual operation. The sulphur content is especially important with respect to measuring PM and SO_x emissions.

The proposed rule would specify that in the event that the lessee or operator were to elect not to measure the actual emissions for any given emissions source, it would need to select an emissions factor from the list of sources provided in the proposed rule. These are described below, in the order of preference.

First, the proposed rule would provide that the lessee or operator use the emissions factor(s) that are vendor-guaranteed or provided by the manufacturer of the specific emissions source, if available. If the lessee or operator were to use vendor-guaranteed or manufacturer data, it would need to demonstrate 1) that the fuel used by the manufacturer to generate the emission factors reflects the type of fuel that will be used by the engine in actual operation and 2) that the actual engine has not been modified outside the configuration used to generate the emission factors; thus, the emission factors used in the plan must represent the actual pattern of use for that equipment in operations. The proposed rule would specify that where a manufacturer has not provided an emissions factor for the emissions source the lessee or operator proposes to use, the

lessee or operator may use a manufacturer's emissions factor for a similar source only if the lessee or operator could demonstrate to the satisfaction of the Regional Supervisor that the emissions generated by the lessee or operator's emissions source are the same as or lower than that for which a manufacturer's emissions factor is available.

Second, the proposed rule would state that emissions factors generated from source tests required by USEPA Outer Continental Shelf permits would be allowed as BOEM emission estimates for a specific rig since these emissions factors are based on prior emissions tests. These emissions tests are required across the range of actual load operations for engines on Mobile Offshore Drilling Units (MODU). The proposed rule would further specify that if emissions factors were not generated through testing for a particular engine, emissions factors generated from a recent and similar permitted engine may be used.[67] Data from a rig from the same manufacturer, having an engine of the same model and year would generally be allowed, unless the Regional Supervisor has a reason to believe that such data may not be accurate or reliable.

Third, if emission factors, based on models or an emission model guidance document developed by the USEPA or FAA is available and appropriate to the emissions source, the lessee or operator may use the relevant emission factors from that model or guidance document. The proposed rule would provide a list of emission models that may be used to obtain emission factors for certain types of emissions sources. In particular, two referenced documents from the USEPA provide in-use emission factors for a variety of engines including "Category 3" main propulsion engines on vessels and engines used in equipment on vessels, covering both engines certified to USEPA emission standards and engines certified by other nations and international

[67] I.e., the same make, model and year engine would be required.

organizations.

Fourth, the lessee or operator would use emission factors from published studies conducted by a reputable source, such as the South Coast Air Quality Management District, California Air Resources Board, a university, or research agency, to the extent they may yield reliable emission factors or formula to calculate emissions factors for certain types of engines and equipment other than for the large main engines on drilling ships and drill platforms and for locomotive-sized engines powering cranes. These studies may be helpful to generate emission factors for marine coating operations, flares, emissions from drilling muds, etc. If an emission study is used, the study must cover representative engines, fuels, and duty cycles.

Fifth, in certain situations, the MARPOL Annex VI engine emission standards may be used as proxies for emission factors. This option would be available only for an engine installed on a non-U.S. flagged vessel that is not part of an engine family that is covered by a USEPA certificate of conformity but that is MARPOL certified. In this case, the lessee or operator must indicate the vessel flag as well as engine size used to determine the standards to use as the proxy emission factor for that engine. If this approach is used, the plan would also be required to account for any differences in fuel sulphur limits.[68] If all fuel used by the subject drilling ships and offshore platforms is purchased in the U.S., the CAA fuel requirements would apply.

BOEM seeks comment on: 1) whether this fifth alternative would be appropriate or is

[68] Under Annex VI, the NOx engine type certification is separate and not related to the fuel sulphur limits. The technical code for certifying Annex VI Regulation 13 engines requires "suitable" testing fuel be used and that the characteristics of the testing fuel be noted for the certification. Vessels operating in North American/Caribbean Emissions Control Area (ECA) are all required to use 0.1% sulfur fuel, regardless of the flag of the vessel and regardless of where the fuel was purchased. Vessels may also achieve compliance within the ECA by receiving an Annex VI Regulation 3 trial permit or Regulation 4 equivalency determination, in lieu of using the 0.1% sulphur fuel. If the MSC operations associated with the facility are all within the ECA and the Annex VI Reg13 engine was tested using 0.1% sulfur fuel, there would be no differences in fuel sulphur limits to account for. However, it is recognized that the ECA is smaller than the OCS area impacted by this regulation so vessels may not be using 0.1% sulfur fuel, and that the Annex Regulation 13 engine may have been certified using a fuel different from the fuel used during operations.

needed, particularly given that the emission factors used in USEPA's marine and nonroad emission models apply regardless of flag (i.e., emissions from similar engines in similar use regardless of whether the engine is on a US or a foreign-flag vessel); 2) how such an approach would be applied to engines that use Heavy Fuel Oil, since the NO_x Technical Code (NTC) allows engines to be certified on diesel fuel (which can have relatively high sulfur content); and, 3) what approach could be taken to estimate pollutants other than NOx (since there are no MARPOL standards for the majority of criteria and precursor pollutants) and, if using one of the other approaches is preferred, whether the NO_x emission factors from those other approaches should be used and this fifth alternative be not adopted.

Sixth, under the proposed rule, if none of the methods provided in the first five options above are applicable, for a natural gas-powered engine of any rated capacity, or for a non-road diesel-powered engine with a maximum rated capacity less than 900 kW, or for a non-engine emissions source, the lessee or operator could use the appropriate emissions factor from the USEPA AP 42, Fifth Edition, Compilation of Air Pollutant Emission Factors, Volume 1: Stationary Point and Area Emissions sources, or any update thereto, as incorporated by reference at § 550.198(b)(1)(i).

Seventh, if none of the above options are applicable,[69] the lessee or operator would be required to conduct stack testing on the emissions source to determine the appropriate emissions factor. The data from stack testing could be used only for the engine for which the stack testing was conducted.

If a lessee or operator elects to apply an emissions factor based on a standard, as allowed under the 5th and 6th alternatives, it must take appropriate account of the deterioration in

[69] This option is not required as the first alternative because stack testing is generally very expensive and limits the flexibility of operators in preparing their plan(s) (because stack testing is engine-specific).

performance based on the age of the equipment and the potential variation of the actual emissions from the standard to account for the maximum potential emissions that the emissions source may emit. Given that equipment tends to operate less efficiently over time, the lessee or operator should make an appropriate upward adjustment in the emissions estimates for older equipment (e.g., to reflect emission deterioration over time). BOEM solicits comments and suggestions on how this might most appropriately be conducted and the extent to which there are appropriate, documented, methodologies for making these kinds of adjustments.

The proposed rule would also require that any time a lessee or operator revises a plan, including as a part of its resubmissions every ten years, it must consider the age of the equipment, adjust for any change in operating efficiency, and provide the associated emissions factors in its revised or resubmitted plan, as applicable. Also, under the proposed rule the Regional Supervisor may require a lessee or operator to use a different emissions factor for any emissions source or air pollutant if the Regional Supervisor has reason to believe the selected emissions factor is inaccurate to a material degree or new information on emissions factors becomes available. The proposed rule would also provide the Regional Supervisor may require stack testing or another form of validation to verify the accuracy of an emissions factor.

Various U.S. manufacturers of non-road and marine diesel engines produce both domestic and export-only versions of each piece of equipment. The domestic version is manufactured to comply with USEPA emissions requirements whereas the export-only version may or may not comply with USEPA requirements. Domestic versions may, in some cases, be exported. Manufacturers in other countries also produce, or may in the future produce, both engines that are certified by the USEPA as legal for sale in the U.S. and engines that are not. The USEPA provides emissions factors for such equipment that is certified to be legal for use in the U.S., and

these emission factors apply to an originally-configured U.S.-certified engine regardless of its marketing path. It does not test or evaluate the emissions of U.S.-manufactured equipment intended only for export or foreign-manufactured equipment not intended for sale in the U.S. For this reason, under the proposed rule, if a lessee or operator proposes to utilize an engine or equipment that is manufactured in the U.S. or any other country, but which is not certified by the USEPA for use in the U.S., the lessee or operator may not use a USEPA emissions factor intended to apply to the domestic version of such engine or equipment of the same vintage. Under the proposed rule, if a lessee or operator proposes to utilize an engine or equipment on a U.S.-flagged vessel that is not USEPA-certified for use in the U.S., then that lessee or operator must test the actual emissions of the proposed engine or equipment and submit data on its actual emissions. If the lessee or operator claims to use a USEPA certified engine or equipment, it must submit documentation of that engine or equipment's certification.

Under the proposed rule, if a lessee or operator's projected emissions include emissions for a U.S. flagged vessel, then it must submit documentation of the USEPA-issued Certificate of Conformity for each mobile source engine.[70] For MARPOL-compliant foreign-flag equipment for which no other emissions factor data are available, MARPOL emissions standards may be used to determine proxy emission factors where such emissions standards are available (see 5th option, above).[71] However, if this source is used, the plan must account for any differences in the fuel sulphur limits applicable to the fuel being used for operations and the sulphur limit of the fuel used for emission testing. All fuel used by the subject drilling ships and offshore platforms would be required to either be purchased in the U.S. or comply with applicable CAA fuel

[70] The USEPA requires that all U.S.-flagged vessels must have engines certified by the USEPA.
[71] MARPOL emission standards and certification requirements for Category 3 propulsion engines are similar to those of the USEPA, and USEPA emission factors appropriately matched to the vintage and type of engine may be used for such engines.

emissions requirements, unless the lessee or operator could demonstrate that it has properly accounted for any differences in emissions that may result from the use of non-U.S. fuel. If a lessee or operator proposes to use any engine or equipment that is neither USEPA-certified nor MARPOL-compliant, then it may not use an emissions factor intended to apply to a MARPOL compliant engine or equipment. In that case, the lessee or operator would be generally required to provide actual emissions test results for the engine.

Paragraph 550.205(c) – Facility emissions

This paragraph is intended to provide a consistent set of criteria to determine what should be included in each plan with respect to facilities and their corresponding emissions.

This paragraph would require facility emissions to be reported for each criteria and major precursor air pollutant in three separate ways. First, subparagraph (c)(1) would require the lessee or operator to calculate and report the projected annual emissions for each facility in its plan, itemized by all of the emissions of each emissions source on or physically connected to each facility. Such calculations should be done for each year that the plan is proposed to engage in operating activities, for a period of ten years. Emissions reported under this subparagraph would include those associated with any emissions source involved in the construction, installation, operation, or decommissioning of the facility, based on the maximum rated capacity of each emission source associated with the facility and using the methods and procedures specified under paragraphs (a) and (b) of this section. Second, subparagraph (c)(2), would require the lessee or operator to calculate and report the maximum 12-month rolling sum[72] of emissions from each emissions source on or connected to each facility and the maximum 12-month rolling

[72] The plan must include the emissions for the 12 consecutive month period in which the emissions are projected to be the greatest, regardless of the calendar year in which those months occur. All references to 12-month rolling sum are intended to refer to 12 consecutive month intervals without any overlap.

sum of the emissions from each facility. The purpose of this latter requirement is to identify the peak emissions that would be expected to occur during any 12-month period within the duration of the plan. Third, in subparagraph (c)(3), the proposed rule would require lessees or operators calculate the maximum projected peak hourly emissions from each emissions source on or physically connected to each facility and the maximum projected peak hourly emissions from each facility that would result from the construction, installation, operation, or decommissioning of the facility.

The proposed rule would specify the lessee or operator must calculate its projected emissions from each emission source, based on the maximum rated capacity of each engine it proposes to use, or the capacity that generates the highest rate of emissions. Emissions information would be required for emissions sources individually and for the entire facility or facilities. BOEM expects it would implement this proposed requirement by continuing its current practice whereby lessees and operators provide information on their emissions in a table that they submit with their plan.

BOEM intends this requirement to be broad, and accordingly, the proposed rule also defines "emissions sources" and "facilities" broadly. (See discussion of definitions of those terms at sections 550.105 and 550.302). The requirement to report facility emissions exists in the current regulations, but the proposed rule would refine the requirement. The result of these broad definitions in the context of this proposed section would be that all sources of emissions connected to a facility should be accounted for in a plan. Examples of emissions sources on platforms that a lessee or operator would be required to report under this proposed section include, but are not limited to, boilers/heaters/burners, diesel engines, drilling rigs attached to the seabed, combustion flares, cold vents, fugitives, glycol dehydrators, losses from flashing, natural

gas engines, natural gas turbines, pneumatic pumps, pressure/level controllers, amine units, loading losses, tanks, dual fuel turbines, and sources involved in mud degassing or storage tanks. Examples of sources that would also be accounted for under this proposed section that normally are not on a platform include, but are not limited to, drilling rigs, and any other equipment that is temporarily or permanently connected to any planned facility. This would include any support vessel (crew, supply, tugs), pipeline lay barges, pipeline bury barges, derrick barges (installation of structure), and well testing equipment, while connected or moored to the facility.

The USEPA concept of PTE, which it defines at 40 CFR 51.301, is similar to the BOEM concept of facility emissions, in that both PTE and facility emissions refer to the maximum aggregate capacity of a stationary source to emit a pollutant under its physical and operational design. In both cases, this concept includes all emissions sources attached to a facility but excludes the attributed emissions of unattached non-stationary sources.[73] For further details on the concept and use of PTE in the USEPA context, see "Potential to Emit: A Guide for Small Business," USEPA, Office of Air Quality Planning and Standards, Research Triangle Park, NC, EPA-456/B-98-003, October 1998, available at:

http://www3.epa.gov/airtoxics/1998sbapptebroc.pdf

BOEM is considering whether to use the term PTE instead of facility emissions, and BOEM invites comment on this question.

Paragraph 550.205(d) - Attributed emissions (i.e., non-facility emissions)

Proposed paragraph 550.205(d) specifies how emissions from MSCs described in a plan would be attributed to a facility described in that plan. The proposed section provides the procedures by which operators would account for emissions from these MSCs while they are

[73] However, as defined by BOEM, a non-stationary source, such as a vessel, vehicle or aircraft could also have a potential to emit.

supporting the operations in the plan. Under the proposed rule, lessees and operators would be required to calculate both the total emissions that every MSC in its plan generates and then to calculate the portion of that total that should be attributed to their facility.

First, for each facility described in a plan, a lessee or operator would be required to identify the MSCs that would be used to support that facility. The lessee or operator, to the extent practicable, would also be required to identify the other facilities each MSC would support.

Second, for each such MSC, the lessee or operator would calculate its emissions per trip, from when the MSC leaves its home port until it returns (i.e., support emissions per trip), irrespective of what other facilities the MSC may also service. The lessee or operator would be required to base such calculations on the maximum rated capacity or the capacity that generates the highest rate of emissions for each emissions source on the MSC. Having done this, the lessee or operator would multiply this result by the number of trips the MSC would take in support of the facility during the 12 consecutive -month rolling maximum period over which the corresponding facility emissions would be measured. In addition, each lessee or operator would also have to determine and report the maximum projected peak hourly emission for each MSC. If an MSC does not support any other facilities, the proposed rule would require the lessee or operator to attribute all of these emissions to the facility the MSC supports. However, if an MSC supports multiple facilities, the proposed rule would then provide three alternative methods for calculating the portion of total MSC emissions that lessees and operators would be required to attribute to their facility. First, a lessee or operator could, to the extent practicable, calculate and report the difference between the total support emissions and the emissions it can document should be reasonably allocated to another facility. This option would be available to lessees or operators who know detailed information about the routes of the MSCs in their plans and what

other facilities each MSC would support. Second, if the first method is impracticable but the lessee or operator knows the number of facilities supported by any given MSC (but not their locations or the routes of the MSC), the operator could divide the total support emissions by the lowest number of the facilities the operator reasonably determines the MSC will serve on a typical trip, including the facilities described in its plan. If neither of these two methods is practicable, the rule would allow operators to calculate and report the greater of either 1) the emissions that would be generated by the MSC traveling round trip between its port or home base and the facility, or 2) the emissions from the MSC operating within 25 statute miles of the facility. Finally, the proposed rule would allow lessees or operators the ability to elect to attribute the total support emissions of any vessel or vehicle to their facility if they decide not to allocate the emissions among facilities.

The proposed rule includes the options described above because a lessee or operator may not know, at the time of plan submittal, which facilities an MSC will support. The intent is to provide these alternatives for allocating support vessel emissions in situations where it would otherwise be impracticable to do so. The options in the proposed rule are intended to account for the variety of practices that could occur on the OCS and the ability to know the particular operation of an MSC at the time of plan submittal.

With respect to paragraph (7) of proposed subsection 550.205(d), although that requirement is only one of the assumptions that are to be used in calculating the MSC emissions, the provision is intended to clarify it would not be appropriate to calculate the emissions only for one source, in the event an MSC had multiple sources of relevant emissions. The rule is intended to clarify the maximum rated capacity requirement applies to each source on every MSC, in any situation where an MSC has multiple emissions sources.

Further, the proposed rule would provide that if BOEM questions the lessee or operator's determination of the attributed emissions, the Regional Supervisor may require additional documentation to support their findings and may direct them to make changes, as appropriate.

Finally, just as BOEM is considering using the term PTE in place of the term facility emissions, BOEM is also considering using USEPA's term secondary emissions (as defined in 40 CFR 51.301) in place of attributed emissions. BOEM welcomes comment on this question.

Paragraph 550.205(e) – Projected emissions (i.e., combined facility and attributed emissions)

This paragraph is intended to provide a detailed, consistent set of criteria to determine what should be included in each plan with respect to projected emissions of facilities and MSCs.

Proposed paragraph 550.205(e) would require a lessee or operator to calculate the maximum 12 month rolling sum of projected emissions of each criteria and major precursor air pollutant for each of its facilities. This would represent the sum of the facility emissions for the 12-month rolling maximum period reported under (c)(2) of this section and attributed emissions reported under (d)(6) of this section for the same period. Pursuant to the criteria set forth in proposed paragraph 550.303(d), the lessee or operator would also be required to determine whether the projected air emissions from each facility would need to be consolidated with those of other facilities.

If any of a lessee's or operator's proposed facilities would be located in such a manner (as defined in section 505.303) as to potentially constitute proximate activities with a pre-existing facility, or a facility that was previously approved but not yet constructed, the proposed rule would require any such facility to be identified in the plan. If the lessee or operator would be required to consolidate emissions from multiple facilities, then it would need to provide

projected emissions information for each facility as well as the complex total emissions for all of consolidated activities.

In addition, the proposed rule would also require every lessee or operator to calculate and report the projected annual emissions for its facilities for each year in which it intends to operate, as well as the maximum peak hourly emissions for each facility and the corresponding attributed emissions.

Paragraph 550.205(f) - Emission reduction measures (ERM)

The purpose of this paragraph is to describe in general terms the information that must be included in a plan regarding the types and purpose of various emission reduction measures that are proposed in a plan and what reductions the lessee or operator expects to achieve from these proposed measures.

Under the proposed rule, a lessee or operator may elect to propose ERM in its plan to ensure that its projected emissions are under the EETs described in proposed section 550.303. Whether an operator elects to propose ERM or whether the proposed rule would require it, this section would require that such proposed measures be reported in the plan. This element of the proposed rule is consistent with current GOM Region practice. It would specify that the lessee or operator must provide a description of all proposed ERM, including the affected emissions source(s); the emissions reduction control technologies, procedures, and/or operational limits; the emission control efficiencies; the projected quantity of reductions to be achieved; and, any monitoring or monitoring system the submitter proposes to use to measure or evaluate the associated emissions. The rule would further clarify the lessee or operator must be able to demonstrate that all of the ERM described in the plan meet the applicable substantive requirements in proposed section 550.309.

BOEM expects lessees or operators are likely to consider operational controls to reduce emissions for many sources, for example limiting the hours of operation, reducing engine power, etc., in order to bring their projected emissions within the EETs. This proposed section would require the application of such operational controls to be documented in the plan, which would require review by the Regional Supervisor, and approval only when the ERMs are demonstrated to maintain and not compromise the safety of operations. Other sections of the proposed rule, such as proposed sections 550.309 and 550.311, would subject each proposed emission reduction measure to monitoring, reporting, and verification.

Geological sequestration of pollutants under the seabed is another potential emission reduction measure that has not yet been considered. BOEM would welcome feedback on the extent to which stakeholders consider this to be a potentially viable and effective control mechanism, either in conjunction with or as an alternative to other measures.

Paragraph 550.205(g) - Modeling information

This paragraph is intended to provide a detailed, consistent set of information and criteria to determine what should be included in each plan submitted to BOEM with respect to the proposed modeling of air emissions associated with a plan's projected operations.

If a lessee or operator conducts modeling in support of its plan, then the proposed rule would require the lessee or operator to provide: a table(s) of the appropriate and relevant maximum projected air pollutant concentrations over any area(s) of any State(s) and Class I area(s) including the most affected attainment area(s) and the most affected non-attainment area(s), as applicable; the maximum projected concentrations resulting from the projected emissions for each of the facilities, by criteria air pollutant and major precursor air pollutant, for the corresponding averaging time(s) (e.g., 1-hour, 3-hour, 8-hour, 24-hour, annual, etc.) specified in

the tables in 40 CFR 51.165(b)(2), 40 CFR 52.21(c), and 40 CFR part 50; a list of the inputs, assumptions and default values used for modeling, including the source and justification for meteorological information; the name and version of the model(s) used; a modeling report, including the modeling results (unless already provided and the projected emissions are the same or lower); and, for each MSC, the distance from the facility or facilities in the plan to the relevant home port or base. All of this information is necessary so BOEM can properly evaluate and validate the results of the modeling.

Under the proposed rule, if a lessee or operator would be required to model projected emissions, and the lessee or operator has previously submitted a modeling report and/or modeling results to the Regional Supervisor, then the lessee or operator may provide a reference to such report and/or results, rather than resubmit a modeling report and/or modeling results, provided the projected emissions are the same or lower than in the previously submitted report(s) or results.

Paragraph 550.205(h) - Requirements applicable to specific air pollutants

550.205(h)(1) - *Nitrogen and Sulphur Oxides (NO_x and SO_x)*

Because the intent of the proposed rule is to evaluate the maximum potential effect that could occur with respect to the implementation of any given plan, the proposed rule would clarify a lessee or operator must utilize data for NO_x and SO_x whenever possible or reasonable estimates thereof. Projected emissions of NO_x would need to include emissions of nitrogen oxide and NO_2, as well as any other oxides of nitrogen for which data are available. Similarly, any projected emissions of SO_x would need to be reported, including but not limited to the emissions of SO_2. Only in the event that data on the broader emissions of NO_x or SO_x are not available, would the proposed rule specify a lessee or operator could utilize data on the sum of nitrogen

oxide and NO_2 emissions as a substitute for NO_x and data on SO_2 emissions as a substitute for SO_x.

550.205(h)(2) - *PM_{10} and $PM_{2.5}$*

Because the USEPA has replaced "total suspended particulates" with two separate kinds of pollutants, a lessee or operator would be required to provide data and information on both PM_{10} and $PM_{2.5,}$ whenever such information is available for any given emissions source, and to evaluate each separately under every applicable standard in all cases where it is possible to do so. This should not present an issue, since the split in the PM classification has existed for quite a few years. Only in the rare event that available data for PM are not separately reported for both PM_{10} and $PM_{2.5}$ for any given emissions source, would the proposed rule require lessees and operators to perform their analysis of $PM_{2.5}$ emissions utilizing PM_{10} data for the emissions threshold analysis and for modeling purposes.

However, the rule specifies a lessee or operator must separately identify all $PM_{2.5}$ and PM_{10} emissions in its plan and a plan that fails to contain separate emission exemption threshold and modeling data for each pollutant will not be considered complete. Because there are separate SILs, AAIs and NAAQS for PM_{10} and $PM_{2.5,}$ and also because the $PM_{2.5}$ evaluations require an evaluation of the ambient impacts of both direct and secondary $PM_{2.5}$, a plan may not be submitted that includes and addresses only PM_{10} emissions. If the separate data are not available, the lessee or operator must utilize the data for PM_{10} for its analysis of $PM_{2.5}$, (assuming the $PM_{2.5}$ is as high as the PM_{10}).

Finally, the rule clarifies that all reporting of $PM_{2.5}$ must include the sum of filterable and condensable PM, if such information is available, in order to be complete.

550.205(h)(3) - *Hydrogen Sulfide (H_2S)*

To properly estimate the potential emissions of SO_x under this proposed paragraph, all emissions of SO_x that result from the flaring of H_2S would need to be included in the projected emissions of SO_x reported and analyzed as part of each plan. Under the proposed rule, if projected emissions of H_2S will potentially exceed the USEPA's Significant Emissions Rate for H_2S, as defined in 40 CFR 52.21(b)(23)(i), the lessee or operator must report the nature and extent of these emissions and their likely impact as part of its plan.

The proposed rule would specify that reporting of H_2S would be required to follow the USEPA's Oil and Natural Gas Sector New Source Performance Standards and National Emission Standards for Hazardous Air Pollutants Reviews. These are described more specifically in "Oil and Natural Gas Sector: New Source Performance Standards and National Emission Standards for Hazardous Air Pollutants Reviews," 77 FR 49489, RIN 2060-AP76, October 2012.

Aside from the proposed 550.205, BOEM is also proposing to modify sections 550.215 and 550.245 regarding H_2S such that if a lessee or operator proposes to flare gasses containing a potentially significant amount of H_2S, it must separately identify this activity in the plan and separately identify the resulting emissions of SO_x.

550.205(h)(4) - *Methane (CH_4)*

This rule implements BOEM's statutory authority under OCSLA section 5(a)(8) to regulate OCS air pollutant emissions from oil and gas operations in order to prevent adverse, localized air quality effects to adjacent States; since there are no significant localized air quality effects on the States associated with the emissions of methane from OCS facilities, BOEM is not proposing to regulate methane emissions in this context.

Under the proposed rule, the analysis or reporting of methane emissions would not be

required unless specifically directed to the contrary. Consistent with current BOEM policy, any reference in these proposed regulations to major precursor air pollutants would exclude methane, because the USEPA does not include methane in the definition of VOCs and does not require a methane analysis of ground level ozone formation for offshore facilities; both because methane has not historically been considered a significant precursor air pollutant with respect to distances and transport times relevant to BOEM regulation of offshore activities; and because the USEPA has not elected to formally classify methane as a precursor pollutant for O_3. BOEM solicits comments on this proposed exclusion and on how BOEM should address the effects of methane emissions on secondary O_3 formation and under what circumstances it would be appropriate, in the event it decides to do so.

550.205(h)(5) - *Ozone (O_3)*

Over the past 35 years, extensive scientific evidence has increasingly demonstrated the importance of controlling O_3, and the significant potential harm this pollutant can cause. Additionally, as a result of improvements to single source photochemical modeling capabilities, it is now possible to evaluate much more accurately how the emissions of O_3 precursors may contribute to O_3 formation and how this may affect the air quality of the States. Reflecting the changes in the NAAQS and the improvement in modeling capabilities that have occurred over the past 35 years, BOEM is now proposing to evaluate O_3 directly for compliance with the NAAQS.

The proposed rule would not immediately require analysis or reporting of O_3. Rather, once the new emissions exemption studies have been completed, new EETs would likely be established to address O_3 impacts to the State. Proposed paragraph 550.304(b) details the circumstances when O_3 modeling would be required. Comments may be submitted as to how

this would best be accomplished and at what point in time the implementation of these new standards would be most appropriate.

550.205(h)(6) – *Lead (Pb) and Ammonia (NH_3)*

Ammonia (NH_3) has been identified as a potentially significant precursor air pollutant for $PM_{2.5}$. The proposed rule would require reporting of NH_3 emissions, for any given source, if that information is available. Such a determination would be based on whether there are published manufacturer specifications of emissions factors for NH_3, whether such information could be obtained from the USEPA, or whether it could be obtained or could be derived from another recognized source, such as utilizing a mass balance approach.

Lead (Pb) is a CP for which NAAQS have been established. For this reason, consistent with the OCSLA mandate, likeNH_3, reporting of Pb emissions would be required to the extent relevant information is available or could be derived from another recognized source, such as utilizing a mass balance approach.

Because of BOEM's obligation under OCSLA to ensure compliance with the NAAQS, BOEM is proposing that all emissions of NAAQS pollutants should normally be reported. If the lessee or operator intends to use a source known to emit a potentially significant amount of Pb or NH_3, then it must obtain a reasonable estimate of the associated Pb or NH_3 emissions. For that reason, the proposed rule specifies that zero emissions for Pb and NH_3 may be assumed only in the situation where relevant data are not available and neither the lessee or operator nor BOEM have a reason to anticipate that the emissions could be potentially significant.

Paragraph 550.205(i) – Distance calculations

To determine the appropriate EET for each facility in a plan, the proposed rule would retain the requirement that the lessee or operator provide the distance in statute miles, from the

shoreline, until such time as the new thresholds are established in 2020. Because the proposed rule intends to retain the current exemption methodology for a period of time and then replace that methodology,[74] two distance measures would be proposed in this rule. As is currently required by BOEM regulations, the first would be the distance from shore, as measured in a straight line from the site of each facility to the closer of the mean high water mark of a State or, on the Pacific coast, the mean higher high water mark, or the nearest Class I area of any State. The second would be the distance from a State's seaward boundary. For each facility described in the plan, the lessee or operator would be required to calculate and provide the distance in statute miles, as measured in a straight line from the site of the facility to the closest point at which the OCS borders any State, at the seaward boundary.

Paragraph 550.205(j) – Documentation

Unlike the current regulations, which do not specify any documentation or data retention requirements, the proposed rule outlines the data and recordkeeping requirements BOEM proposes to require to facilitate BOEM's evaluation and review of each plan and the corresponding operational activities that result from each plan. This information would be used to verify compliance with BOEM regulatory requirements and to ensure that compliance with such requirements continues on an ongoing basis.

The proposed rule would require lessees or operators to collect, create, and maintain records or any data or information establishing, substantiating, and verifying the basis for all information, data, and resources used to calculate their projected emissions under proposed

[74] As discussed in the context of proposed § 550.303(c), the proposed rule would continue to retain the shoreline as the point at which emissions are evaluated until such time as the new scientific studies have been completed and new exemption thresholds have been defined. At that time, BOEM would evaluate all emissions at the SSB and any facility that generates emissions in excess of a SIL at the SSB would have to apply ERM. For this reason, the distance calculation used by the exemption formulas would be the distance to shore, in the first instance, and the distance would be the distance to the SSB, in the second instance.

section 550.205. The proposed rule would require documentation of the emissions factors used and retention of any appropriate certifications, citations, methods, and procedures used to obtain or develop emission factors. The proposed rule would require collection and maintenance of all documentation pertaining to the modeling analysis, if applicable, including all references and copies of any referenced materials, as well as any data or information related to any ERM lessees or operators propose or implement. Under the proposed rule, all such information would need to be provided to BOEM, though the Regional Supervisor would be able to waive this requirement for good cause or if BOEM is able to obtain the necessary information from an independent source.

Paragraph 550.205(k) – Compliance with subpart C

The proposed rule would require lessees and operators to provide a description of how they will comply with proposed section 550.303 when the projected emissions generated by the proposed plan activities exceed the respective EETs. The proposed rule would require lessees and operators to make this determination using the formulas in proposed paragraph 550.303(c). If the lessee or operator would be subject to the requirement to monitor and report its actual emissions in accordance with section 550.311, then the description must address how it proposes to monitor its emissions.

Paragraph 550.205(l) -- Reporting

The proposed rule would require lessees and operators to submit data and information in a format and using the forms specified by BOEM. They would be required to submit information in an electronically-readable spreadsheet, such as a Microsoft Excel file on a compact disc, unless otherwise directed by the Regional Supervisor. The purpose of this requirement is to facilitate the evaluation of data by automated processes and systems. Under the current

arrangement, data are submitted to BOEM in approved Excel spreadsheets. Although the proposed rule does not specify a specific format for electronic forms, it is likely the current spreadsheets will continue to be used for the foreseeable future.[75]

The USEPA is currently working on an E-Enterprise solution for emissions data collection, whereby facilities (or companies) would report emissions data through a central place for distribution to USEPA, the States, and others. Since BOEM is proposing direct facility reporting as well, BOEM may elect to partner on this E-Enterprise solution for supporting BOEM's needs alongside those of the USEPA. This approach may be more efficient both for the regulated entities as well as for USEPA and BOEM to use and share the data. BOEM welcomes comment on this alternative and whether there may be any impediments or complications should BOEM wish to move in this direction.

If lessees and operators elect to transmit the information to BOEM electronically, such as by email, then they would be required to use a delivery medium or transmission method authorized by BOEM. The purpose of this requirement is to ensure any data or information provided to BOEM is provided in a secure and safe manner and such information is not submitted in a way (e.g., email) that could be intercepted or manipulated by third parties. DOI has established standards and requirements for the secure transmission of data on an approved technology platform and BOEM intends to adhere to DOI requirements (although it may do so using a BOEM-specific transmission mechanism, such as the Technical Information Management System Web-based application, abbreviated TIMS-Web).

[75] Currently, BOEM utilizes OMB-approved forms BOEM-0134 and BOEM-0135 for this purpose. The forms are being revised in connection with this rulemaking. BOEM also solicits comments on the proposed new forms, in terms of their usefulness, readability, complexity and completeness.

Paragraph – 550.205(m) – Additional information

Proposed paragraph 550.205(m) would set out the circumstances under which a lessee or operator would be required to include information about emissions from aircraft and from those onshore support facilities for which the lessee or operator does not have an USEPA or State agency air quality permit (i.e., "a non-permitted onshore facility"). The proposed requirement would be triggered when the modeling of air emissions indicates that a plan's proposed emissions would cause an increase in the ambient air quality at any receptor location that exceeds 95% of a SIL. If an operator or lessee would be required to report emissions from any aircraft or non-permitted onshore support facilities and they support multiple OCS facilities, the lessee or operator would be required to allocate their emissions in an appropriate manner similar to that described for MSCs. Under such circumstances, a lessee or operator would be required to include such emissions in the information required under proposed section 550.205 and proposed subpart C. The proposed rule would also permit the Regional Supervisor to require such additional data or information related to these sources as is necessary to demonstrate the plan's compliance with subpart C of this part, and/or applicable federal laws related to the protection of air quality within BOEM jurisdiction.

Paragraph – 550.205(n) – Requirements for plans to be deemed submitted

In order for a plan to be deemed submitted, all of the required air quality data and information would be required to be submitted to BOEM in accordance with the requirements of this part. BOEM would not initiate its review of the air quality component of any plan until all of the necessary information and documentation is complete. To facilitate this, the proposed rule would specify that a plan would not be deemed submitted in accordance with the requirements of section 550.231 or section 550.266 of this part until:

(1) All of the requirements of this section have been completed;

(2) The lessee, or operator, has completed the AAI analysis as specified in paragraph 550.307(b) of this part, if it is required; and

(3) The lessee, or operator, has completed any other analysis required by subpart C of this part.

Section 550.211 – What must the EP include?

Paragraph 550.211(c) – Drilling unit

The current regulation at paragraph 550.211(c) includes a provision that requires a description of the "fuels, oil and lubricants that will be stored on the facility." The regulations state the word "facility" is defined in section 550.105. However, the section to which the current regulations refer no longer exists in BOEM's regulations. That provision was originally in the regulations administered by BOEM's predecessor before it was divided into BOEM and BSEE, and was subsequently moved into the BSEE regulations at section 250.105.

The original definition of the term "facility," to which the references in sections 550.211 and 550.241 refer, was: "a vessel, a structure, or an artificial island used for drilling, well completion, well-workover, or production operations." Because this definition of facility no longer exists, BOEM is proposing to add this definition back into sections 550.211 and 550.241 where its use remains applicable, with minor modifications for clarity. No substantive change to sections 550.211 or 550.241 is being proposed.

For the purpose of this section, the term facility would mean any installation, structure, vessel, vehicle, equipment or device that is temporarily or permanently attached to the seabed of the OCS, including an artificial island used for drilling, well completion, well-workover, or other operations.

Section 550.212 – What information must accompany the EP?

This section describes the information that must be included in an EP. The change to the proposed rule for this section would update the cross-reference in paragraph 550.212(f) from sections 550.218 to 550.205, since the air quality requirements of section 550.218 are proposed to be relocated there.

Section 550.215 – What hydrogen sulfide (H_2S) information must accompany the plan?

Paragraph 550.215(d)(2) – Hydrogen sulfide

Under the proposed rule, if the H_2S emissions are projected to affect any location within a State in a concentration greater than 10 parts per million, the modeling analysis would need to be consistent with the USEPA risk management plan methodologies outlined in 40 CFR part 68. The only change made with this revision would be that the concentration of 10 parts per million would be measured at any point within the State including any point landward of the SSB, not only onshore, as is currently the case.

Paragraph 550.215(e) – Hydrogen sulfide

As explained above in the discussion of section 550.205, the proposed rule would amend this section and section 245 by adding a paragraph in each to specify flaring of any gasses containing a potentially significant amount of H_2S would be required to be separately identified in the plan, along with the resulting emissions of SO_x.

Section 550.218 – What air emissions reporting must accompany the plan? – Removed and Reserved

Sections 550.218 and 550.249 in the current regulations set forth the air quality reporting requirements of subpart B for exploration plans and development plans, respectively. All of the substantive requirements from these two sections would be consolidated into the new proposed

section 550.205 and modified as discussed above. Accordingly, sections 550.218 and 550.249 would become reserved.

Section 550.224 - What information on support vessels, offshore vehicles, and aircraft must accompany the plan?

Paragraph 550.224(a) - General

Current regulations require plans to include a description of the vessels, offshore vehicles, and aircraft lessees and operators would use to support their exploration activities (section 550.224(a)) or their development and production activities (section 550.257(a)). The proposed rule would reword paragraph (a) of the proposed sections for clarity and to incorporate the term MSC, proposed for definition in this rule, but the meaning and intent of these paragraphs would not be changed. The proposed rule would retain the current requirement to include in the description an estimate of the storage capacity of the fuel tanks and the frequency of visits to the facilities in connection with any proposed activities.

Paragraph 550.224(b) – Air emissions

Paragraph (b) of both the current paragraphs (550.224(b) and 550.257(b)) requires plans to include information regarding air emissions from vessels, vehicles, and aircraft described in the plan. The proposed rule would replace this paragraph with a cross-reference to proposed section 550.205. That proposed section, described above, would provide details about what emissions information for MSCs must be included in a plan. However, that proposed section would not generally require information on aircraft emissions. As explained above, aircraft emissions contribute only a small fraction of emissions, and aircraft emissions information is especially burdensome to collect. Accordingly, BOEM believes it is not prudent to require lessees and operators report aircraft emissions in most cases. The proposed rule would normally only

require general information about aircraft used in a plan under proposed paragraph (a), since it is necessary for the Regional Supervisor to verify whether emissions from these sources may contribute to exceeding an emission exemption threshold or an AAQBS. In some limited circumstances, where the emissions of aircraft may be determinative of whether the plan does or does not cause a significant impact to any State or tribe, the reporting of aircraft emissions may be required, as described in proposed paragraph 550.205(m).

Section 550.225 - What information on the onshore support facilities must accompany the plan?

Paragraph 550.225(b) – Air emissions

The current paragraph (b) of both of these sections (550.225 and 550.258) requires lessees and operators to provide in their plans a description of the source, composition, frequency, and duration of the air emissions likely to be generated by the relevant onshore support facilities. The proposed rule would not substantively change this requirement, but the proposed rule would revise it for clarity. The proposed rule would delete the parenthetical text in the current paragraphs – "attributable to your proposed exploration activities" and "attributable to your proposed development and production activities" – in order to avoid confusion with the use of the term "attributed emissions" in proposed section 550.205.

The proposed rule would limit the current requirement for onshore emissions sources in order to reduce unnecessary reporting and focus reporting requirements on areas with the greatest potential impact. BOEM currently requires reporting of onshore support facility emissions as may be necessary for the Regional Supervisor to determine whether emissions from these sources may contribute to exceeding an EET or an AAQSB, as described in the preamble section on proposed paragraph 550.205(m). This requirement in the current regulations is based on the

premise that there may be some circumstances where the amount of air pollution generated by onshore support facilities, taken in conjunction with the offshore emissions associated with OCS operations, could have a potentially significant impact to the air quality of the States. However, BOEM believes that the requirement can be made more appropriately tailored to limit unnecessary reporting, while still incorporating select onshore emissions information in appropriate circumstances. As described more fully in the preamble discussion of proposed paragraph 550.205(m), the proposed rule would collect information on onshore support emissions if two specific criteria are both met: 1) if a plan which is already required to conduct modeling results in incremental increases in concentration of a pollutant that are greater than 95 percent of the value of a SIL (this is the same criteria that applies to the inclusion of aircraft); and 2) if the relevant onshore support facilities are not already permitted by the USEPA or a relevant State authority. The goal of this proposed provision is to incorporate significant data that may contribute to OCS permitted activity affecting the air quality of the states but to avoid collecting unnecessary information. BOEM solicits comments on this proposal, both with respect to whether gathering data on onshore support facilities is necessary and/or appropriate and what criteria should be used to determine the circumstances under which data about onshore support facility emissions should be collected.

BOEM uses the information that would be required in this paragraph for the analysis of cumulative impacts it performs under NEPA. The proposed rule would also provide that the information regarding onshore support facilities would only be required by BOEM if it is not available from another agency. BOEM can obtain some of the information for proposed and existing onshore support facilities for use in its NEPA or other environmental analyses through the USEPA or other air quality agencies.

BOEM solicits comments on what types of onshore facilities should be identified and reported with respect to their air emissions and how best to evaluate their emissions in the context of the AQRP.

Section 550.241 – What must the DPP or DOCD include?

Paragraph 550.241(c) – Drilling unit and Paragraph 550.241(d) – Production facilities

The change proposed here is analogous to the change proposed at section 550.211. The current regulations at paragraph 550.241(c) and (d) include provisions that require a description of drilling units and production facilities in a DPP or DOCD. This description includes "fuels, oil and lubricants that will be stored on the facility" or "the estimated maximum quantity of fuels and oil that will be stored on the facility," respectively. The current regulations state the word "facility" is defined in section 550.105(3). However, the section to which the current regulation refers no longer exists in BOEM's regulations. That provision was originally in BOEM's predecessor's regulations before it was divided into BOEM and BSEE and was subsequently moved into the BSEE regulations at section 250.105.

The original definition of the term facility, to which the reference in section 550.241 refers, was: "a vessel, a structure, or an artificial island used for drilling, well completion, well-workover, or production operations." Because this definition of facility no longer exists, BOEM is proposing to add this definition back into paragraph 550.211(c) and in section 550.241, with minor modifications for clarity. No substantive change to section 550.241 is being proposed.

For the purpose of this section, the term facility would mean any installation, structure, vessel, vehicle, equipment or device that is temporarily or permanently attached to the seabed of the OCS, including an artificial island used for drilling, well completion, well-workover, or other operations.

Section 550.242 – What information must accompany the DPP or DOCD?

This section describes the information that would be required to be included in a DPP or DOCD. The change to the proposed rule for this section would update the cross-reference in 550.212(g) from 550.249 to 550.205, since the air quality requirements of section 550.249 are proposed to be relocated there.

Section 550.245 – What hydrogen sulfide (H_2S) information must accompany the plan?

Paragraph 550.245(d)(3) – Hydrogen sulfide emissions

See the discussion for paragraph 550.215(d)(2).

Paragraph 550.245(e) – Hydrogen sulfide

See the discussion for paragraph 550.215(e).

Section 550.249 – What air emissions reporting must accompany the plan?

See the discussion for section 550.218.

Section 550.257 - What information on support vessels, offshore vehicles, and aircraft must accompany the plan?

Paragraph 550.257(a) – General and Paragraph 550.257(b) – Air emissions

See the discussion for section 550.224.

Section 550.258 - What information on the onshore support facilities must accompany the plan?

Paragraph 550.258(b) – Air emissions

See the discussion for section 550.225.

Section 550.280 - How must I conduct activities under the approved EP, DPP, DOCD, RUE, pipeline ROW, or lease term pipeline application?

The proposed rule would modify the title of this proposed section from "How must I conduct

activities under the approved EP, DPP, or DOCD?" to "How must I conduct activities under the approved EP, DPP, DOCD or RUE, pipeline ROW, or lease term pipeline application?" In addition, the proposed rule would modify paragraph (a) of the current regulations, which specifies that a lessee or operator must conduct all of its activities in accordance with an approved EP, DPP, or DOCD and any approval conditions. This provision would be modified to clarify that a lessee or operator may not install or use any facility, equipment, vessel, vehicle, or other emissions source not described in the approved EP, DPP, DOCD, or application for RUE, pipeline ROW, or lease term pipeline and that a lessee or operator may not install or use a substitute for any emissions source described in an EP, DPP, DOCD, or application for a RUE, pipeline ROW, or lease term pipeline without prior BOEM approval.

Section 550.284 - How will BOEM require revisions to the approved EP, DPP, DOCD, or application for a RUE?

Paragraph 550.284(a) – Periodic review

The proposed rule would modify the title of the section from "How will BOEM require revisions to the approved EP, DPP, or DOCD" to "How will BOEM require revisions to the approved EP, DPP, DOCD or application for a RUE?"

Paragraph (a) of the current section specifies the Regional Supervisor will periodically review the activities conducted under an approved EP, DPP, or DOCD and the frequency and extent of this review is based upon changes to "available information and onshore or offshore conditions." The proposal would modify this paragraph to clarify that the frequency and extent of the review may be based on any changes in applicable law or regulation as well. Existing paragraph 550.284(b) allows the Regional Supervisor to require modifications to plans based on such a review. The proposed rule would not change this paragraph. As discussed below,

proposed paragraph 550.310(c) would complement the proposed change to paragraph 550.284(a) by making explicit that the Regional Supervisor may require a lessee or operator to submit a revised plan when an applicable AAQSB changes. BOEM does not anticipate that it would invoke this provision except in extraordinary circumstances and, even under those extraordinary circumstances, it would rarely, if ever, require the resubmission of a plan under this provision more frequently than every ten years.

C. 30 CFR Part 550, subpart C

Subpart C is being replaced in its entirety with a new subpart C dedicated to air pollution prevention and control.

Section 550.301 – Under what circumstances does this subpart apply to operations in my plan?

This section would specify that the proposed subpart applies to those areas of the OCS where DOI has authority to regulate air emissions pursuant to section 5(a)(8) of the OCSLA, 43 U.S.C. § 1334(a)(8), as amended, and jurisdiction pursuant to section 328(b) of the CAA, 42 U.S.C. § 7627(b), as amended. This section explains the proposed subpart would apply to all plans related to facilities on the relevant areas of the OCS, regardless of the type of plan (EP, DPP, or DOCD or application for a RUE, pipeline ROW, or lease term pipeline). The section would also state that the subpart covers existing facilities in the relevant areas.

Section 550.302 – Acronyms and Definitions concerning air quality

Paragraph (a) of the proposed rule would update the acronym list used to identify those acronyms that are relevant to the proposed rule. In addition, the proposed rule would clarify that the definitions proposed to be added or revised in proposed section 550.302 are meant to apply only to section 550.205 of subpart B and all of subpart C.

Deleted Definitions

The following three terms in the current definitions section 550.302 would be removed from the list of definitions in proposed section 550.302: "source," "temporary facility," and "volatile organic compound." The proposed rule would move the term "source," renamed "emissions source," from section 550.302 into proposed section 550.105, because it would be used in portions of part 550 outside of subpart C. The term "temporary facility" would be replaced with a new term "short-term facility" (although the meaning and purpose of the term would be similar). The proposed rule would not define the term "volatile organic compound," since other CPs and precursor pollutants would also not be defined in the regulations and because BOEM applies the common meaning of this term, as used by the USEPA and other federal agencies.

New or Revised Definitions

Paragraph (b) would list the definitions used in subpart C, as follows.

Air quality control region (AQCR)

AQCR would be newly defined to mean "an interstate area or major intrastate area, which the USEPA deems appropriate for assessing the regional attainment and maintenance of the primary or secondary national ambient air quality standards described in 42 U.S.C. § 7409, as identified under 40 CFR part 81, subparts A and B, Designation of Air Quality Control Regions."

Ambient air increments (AAIs)

AAIs would be newly defined to mean "the national standards for Ambient Air Increments set out in the table in 40 CFR 52.21(c), as amended." These are national ambient air benchmarks that represent the maximum increase in pollutant concentrations allowed for an onshore area of a State designated by the USEPA as a Class I, Class II, or Class III area. Depending on the level of the AAIs, various ERM may be required by BOEM under subpart C. In the current BOEM

regulations, the AAIs are referred to as the MACIs, as set out in the table in the current regulation at 30 CFR 550.302.

Ambient air standards and benchmarks (AAQSB)

AAQSB would be newly defined to refer collectively to all of the standards and benchmarks referenced in this proposed subpart. These would include the SILs, in 40 CFR 51.165(b)(2) (pursuant to 42 U.S.C. §§ 7401 *et seq*.); the AAIs, as set out in the table in 40 CFR 52.21(c) (pursuant to 42 U.S.C. § 7473); and the primary and secondary NAAQS defined in 40 CFR part 50 (pursuant to 42 U.S.C. § 7409).

Attainment area.

The current regulations define this term in section 550.302, and the proposed rule would revise the definition. The proposed rule would modify the definition of attainment area to mean "for any given criteria air pollutant, a geographic area, which is not designated by the USEPA as being a designated non-attainment area, as codified at 40 CFR part 81 subpart C." Thus, any area not specifically listed by the USEPA as a designated non-attainment area would be classified as an attainment area under this proposed rule, including areas that the USEPA's regulations refer to as attainment, maintenance, unclassifiable, or unclassifiable/attainment as well as areas that have not yet been designated because the two-year period to complete such designations after revision of a NAAQS has not yet passed. The proposed definition would also clarify that the same area may constitute an attainment area for one criteria air pollutant and a designated non-attainment area for another criteria air pollutant (see definition of non-attainment area). Second, because there may be multiple NAAQS averaging times for each CP, any given area may be attainment for one pollutant for one averaging time and non-attainment for the same pollutant over a different averaging time. Third, this definition would clarify that the term

attainment area, as used by BOEM, is intended to include onshore unclassifiable areas (i.e., areas that cannot be classified as attainment or designated non-attainment areas) or any other areas that the USEPA has not explicitly classified as designated non-attainment.

Attributed emissions.

This new term would be defined to mean "for any given criteria or precursor air pollutant the emissions from MSCs, operating above the OCS or State submerged lands, that are attributed to a facility pursuant to the methodology set forth in paragraph 550.205(d), for the period over which the corresponding facility emissions are measured." BOEM intends for this proposed definition to encompass the emissions that are generated from non-stationary sources that support a plan-related facility and must be evaluated in connection with the air quality component of the plan review. The specific requirements for calculating attributed emissions are set out in proposed paragraph 550.205(d).

Given that BOEM is proposing to provide various alternative methods to calculate attributed emissions, it may be possible these alternatives could yield slightly different overall results and the option chosen may not result in the highest potential calculation of attributed emissions that might be derived. Providing for these alternative methods reflects the reality that all relevant or necessary data may not be available to a lessee or operator at the time its plan is prepared and submitted to BOEM. Regardless of the ultimate method used to allocate MSC emissions and derive attributed emissions, however, no lessee or operator will be allowed to emit air pollutants in an amount that exceeds what was approved in its plan and a lessee or operator generating emissions in excess of its plan approval could be subject to sanctions, including potential shut-in for a violation. In addition, under this proposed rule, there are specific monitoring and record-keeping provisions that would be added to ensure ongoing compliance with the proposed

regulations. For this reason, BOEM anticipates that lessees or operators will be conservative in emissions allocations.

Background concentration.

This new term would be defined to mean "the ambient air concentration of any given criteria air pollutant that arises both from local natural processes and from the transport into the airshed of natural or anthropogenic pollutants originating locally or from another location, either as measured from an USEPA-approved air monitoring system or as determined on some other appropriate scientifically justified basis, as approved by BOEM." The background concentration of a pollutant represents the concentration of any given pollutant that is present prior to the establishment of operations related to a proposed facility.

Evaluating compliance with the NAAQS requires the consideration of two factors, 1) the background concentration of any given pollutant at the point of measurement, and 2) the contribution to the concentration that would be generated as a result of the facility being proposed. The incremental amount of the pollutant that is contributed by the operations associated with a plan is added to the background concentration of that pollutant in order to determine the amount of pollution that would exist as a result of the implementation of the proposed plan. The sum of the background concentration for any given pollutant and the incremental amount of the pollutant resulting from the implementation of the proposed plan is referred to as the design concentration of that pollutant. That design concentration represents the value that is compared to the NAAQS in order to determine whether or not the plan, if implemented as proposed, would cause an exceedance.

Baseline concentration

The term baseline concentration would be defined as the ambient background concentration

of any given air pollutant which exists or existed at the time of the first application for a USEPA PSD permit in an area subject to Sec. 169 of the CAA, based on air quality data available to the USEPA or a State air pollution control agency and on the monitoring data provided in the permit application. The proposed definition would also state that the baseline concentration is distinguished from the background concentration in that the background concentration changes continually over time to reflect the current ambient air concentration for any given air pollutant, whereas the baseline concentration remains fixed until such time as a new AAI is established for an attainment area. The difference between the current background concentration and the baseline concentration represents the change in actual concentration of a given pollutant in a relevant area caused by natural and/or anthropogenic (i.e., other stationary and non-stationary) sources that began operations after the date the baseline concentration was established.

Best Available Control Technology (BACT).

This term would be revised from the definition that exists in the current regulation. The proposed rule would define BACT to mean "a physical or mechanical system or device that reduces emissions of air pollutants subject to regulation to the maximum extent practicable, taking into account 1) the amount of emissions reductions necessary to meet specific regulatory provisions; 2) energy, environmental, and economic impacts; and 3) costs." This proposed definition and usage of the term would differ from that of the USEPA, because the USEPA's use of BACT refers to changes made in connection with the USEPA's permit process under the CAA, and BOEM does not issue air quality permits, nor does it make determinations of BACT pursuant to the CAA. Rather, BOEM requires (and is proposing to continue requiring) BACT in its review and approval of plans for which modeling has demonstrated that projected emissions may cause or contribute to an exceedance of an applicable AAQSB or a violation of the

NAAQS.

In addition, BOEM and the USEPA differ in their requirements for BACT, primarily due to the difference in their respective regulatory frameworks. BOEM reviews the BACT alternatives as part of its AQRP, under both the current regulation and the proposed rule prospectively, determining in advance of the facility installation what form of BACT is appropriate. The USEPA also evaluates BACT prospectively, but the CAA also specifies, among other requirements, that BACT cannot be less stringent than any applicable standard of performance under the New Source Performance Standards (NSPS) (42 U.S.C. § 7479(3)). Therefore, although BOEM looks to USEPA practices when evaluating control technologies, due to the unique nature of the OCS, BOEM also exercises independent judgment on what constitutes BACT and how it should be applied. This definition also clarifies that BACT, as used in this rule, is intended to refer to physical or mechanical controls (i.e., changes to the equipment and technology), in contrast to operational controls that would primarily involve changes in the ways that equipment is operated (rather than changes to the equipment itself).

With reference to "the maximum extent practicable," under certain circumstances, VOCs must be fully reduced to a rate at or below the EETs (including through the use of BACT) whether or not such a reduction would be considered practicable, unless emissions credits can be applied (see section 550.303(f)). In other words, under some circumstances a plan could not be approved because the level of VOC emissions would be too high, regardless of whether some "practical" method were available and if available was proposed to be applied to mitigate or reduce the emissions. In that rare instance, the only acceptable means to obtain approval of the plan would be for the lessee or operator to obtain emissions credits to offset the effects of the excessive VOC emissions.

Class I area.

The current regulations use this term but do not define it. Because it is used more broadly in the proposed rule, BOEM proposes to define it in the regulations. The proposed rule would define this term to mean "an area designated by the USEPA, a State, or a Federally-recognized Indian tribe , where visibility and air emissions are protected by a Federal Land Manager, and protected to standards more stringent than the NAAQS pursuant to 42 U.S.C. §§ 7472(a) or 7474, as amended;[76] Class I areas include international parks and certain national parks, wilderness areas, national monuments, and areas of special national or regional natural, recreational, scenic, or historic value." Congress has established a program to designate specific areas of the country as Class I areas, and the USEPA defines these areas in its regulations at 40 CFR part 81 subpart D. Several tribes have also requested USEPA to redesignate their lands from Class II to Class I to provide additional air quality protection.[77]

Class II area.

Like the term "Class I area," the current regulations use "Class II areas" but do not define the term. The proposed rule would define Class II area to mean "an attainment area designated by the USEPA, a State, or a Federally-recognized Indian tribe, that is protected less stringently than a Class I area." A Sensitive Class II area classification indicates a place the Clean Air Act would allow a moderate change in the air quality, but where stringent air quality constraints are nevertheless desired. This classification is less stringent than for a Class I area, which describes a place where minimal air quality degradation would be allowed, and more stringent than that of

[76] The USEPA's guidance to tribes on Class I re-designations is available here: http://www3.epa.gov/air/tribal/pdfs/GuidanceTribesClassIRedesignationCAA.pdf.
[77] For example, the Northern Cheyenne Reservation, the Flathead Indian Reservation, the Fort Peck Indian Reservation, the Spokane Indian Reservation and the Forest County Potawatomi Community Reservation. See 40 CFR 52.1382(c), 52.2497(c) and 52.2581(f).

a Class III area, which indicates a place where substantial industrial or other growth would be allowed. Sensitive Class II areas (see definition of this term, below) represent a subset or sub-classification of Class II areas that are defined by federal land management agencies as federal lands where the protection of air resources has been prioritized, as specified in acts, regulations, planning documents, or by policy.

Complex total emissions.

The proposed rule would define this new term to mean "the sum of the facility emissions that would result from all of the facilities that have been aggregated for the purposes of evaluating their potential consolidated impact on air quality, pursuant to the methodology set forth in 550.303(d), and the sum of all corresponding attributed emissions for those facilities." For the purposes of calculating complex total emissions, such emissions could include the emissions from pipeline vessels, bury barges, and lay barges during those periods of time while they are temporarily connected to the seabed on the OCS as long as these vessels meet the other requirements for complex total emissions consolidation. The proposed requirement to consolidate air emissions from multiple facilities in certain circumstances is described in more detail at the discussion of proposed paragraph 550.303(d).

Criteria air pollutant or criteria pollutant.

Criteria air pollutants are those pollutants for which the USEPA sets NAAQS. The proposed rule would add this new term (also referred to as criteria pollutant) (CP) to the proposed definitions section and would be defined to mean "any one of the principal pollutants for which the USEPA has established and maintains a NAAQS under 40 CFR part 50 and in accordance with 42 U.S.C. § 7409, as amended, for the protection of public health and welfare." The proposed rule clarifies that the USEPA has established primary standards for the protection of

public health, including sensitive populations, and it has established secondary standards for the protection of public welfare from adverse effect, including those related to effects on vegetation, ecosystems, and visibility. The proposed rule would clarify criteria air pollutants do not include VOCs or any other precursor air pollutant not already regulated under the NAAQS. Precursor pollutants are defined under the definition of precursor air pollutant or precursor pollutant as explained later in this rulemaking.

The proposed rule would define CP so it has the identical meaning as used by the USEPA. In those situations where BOEM intends for the proposed rule to refer only to CPs rather than all air pollutants, it has drafted the proposed rule so it specifically uses the term "criteria pollutant."

Design concentration.

The proposed rule would define design concentration to mean "the pollutant concentration at a given location projected, through computer-simulated air dispersion or photochemical modeling, as described under 40 CFR part 51, Appendix W, Section 7.2.1.1 to result from your projected emissions, combined with the background concentration for the same pollutant, averaging time, and statistical form at the most appropriate receptor location." Each NAAQS has both an averaging time and a statistical form. The statistical form tells how the concentration level would be violated. For instance, the "statistical form" of the annual NO_2 NAAQS is the annual mean measured over three years.

The design concentration of any given CP is compared against the NAAQS in order to determine whether or not the activities in a proposed plan, together with the background concentrations, would exceed any NAAQS at any point landward of the SSB. The appropriate background concentration is measured from the nearest point at which there is data from an USEPA-approved air monitoring system, or as determined on some other appropriate

scientifically justified basis approved by BOEM. The design concentration of any given CP is compared against the NAAQS in order to determine whether or not the activities in a proposed plan would cause the concentration of that pollutant at any point landward of the SSB to exceed the level of the NAAQS. This approach takes into consideration the pre-existing ambient air concentration of that criteria air pollutant (i.e., the background concentration), as well as the increment added as a result of the emissions generated by operations associated with the proposed plan, in determining what the impact of the plan's emissions will likely be at any given location.

Dispersion modeling.

This new term would be defined to mean "the mathematical computer simulation of air emissions being transported from a source through the atmosphere under given meteorological conditions. Emissions from sources, expressed as the rate of air pollutants emitted over time (i.e., pounds per hour), are translated through computer modeling into pollutant concentrations, expressed in units of micrograms of pollutants per cubic meter of ambient air (µg/m3), or in parts per million or billion, depending on the circumstances."

The dispersion model must take various factors into account, including the amount of air emissions generated by the proposed facility and the relevant meteorological conditions that would apply at the proposed facility site, the nearby coast, and over submerged State lands. The proposed rule would clarify that when a file containing meteorological and emissions data are evaluated, the computer model is used to project the concentrations of the pollutants at a receptor location.

Under the proposed subpart C of this part ("Air Quality Analysis, Control, and Compliance"), in the event that proposed operations exceed EETs, results of dispersion and

photochemical modeling would be used to project the potential for a source to have a significant adverse effect on the air quality of a State onshore or at the SSB, and to discern whether the control of an individual emission source would have the desired effect of reducing the emissions' impact for compliance with the AAQSB.

Emission Control Efficiency (ECE).

This new term would be defined to mean the effectiveness of ERM for any given emissions source and air pollutant. The greater the emission control efficiency (ECE), the greater the relative effectiveness of the underlying controls. ECE measures effectiveness on a relative basis (i.e., as a percent of the pollution being reduced), rather than in absolute terms (i.e., the total reduction in the annual tonnage of the pollutant emitted). ECE varies from 100%, representing a control that completely eliminates emissions, to zero, representing a control that has no effect on such emissions. The proposed rule would describe the requirements relating to ECE at proposed section 550.309.

Emissions credits.

The proposed rule would supplement the use of the term "emissions offsets" with the broader term "emissions credits." Emissions credits include emissions offsets as a subset. Emissions credits represent emissions reductions from emission sources that have nothing to do with the proposed plan or any facility or MSC associated with the plan.

The definition of this term would be revised to mean "emissions reductions from an emissions source(s) not associated with the plan that are intended to compensate for the excessive emissions of criteria or precursor air pollutants, regardless of whether these emissions credits are acquired from an emissions source(s) located either offshore or onshore, including: 1) emissions offsets generated by the lessee or operator directly; or 2) emissions offsets acquired

from a third party; or 3) trading allowances or other alternative emission reduction method(s) or system(s) associated with a market-based trading mechanism, such as a mitigation bank, or through other market oriented or competitive markets where these assets are exchanged." Emissions credits are intended to compensate for excessive emissions associated with any given plan. The new term "emissions credits" is intended to have broader application than the existing defined term "emissions offsets." The proposed definition is intended to account for any reduction in emissions from an emission source not associated with the plan, whereas the existing definition only includes reductions from facilities. The proposed defined term is used in subpart C to reflect a proposed change whereby an emissions reductions of an equivalent amount would be allowed in lieu of BACT or other emissions reductions measures, regardless of whether such reductions are achieved on sources owned by the lessee or operator or a third-party or regardless of whether the reduction is obtained through the use of a market-based trading mechanism, such as a mitigation bank. USEPA operates a number of multi-State market-based emissions trading programs. Because these programs have broad geographic coverage, purchase of allowances from one of these programs would not be certain to reduce emissions from sources in any particular AQCR. The intent of the proposed requirement is that the purchase of emissions credits result in actual emissions reductions in the affected State. Consequently, such multi-State trading programs might not be an appropriate source of emission credits under the proposed rule.

Emission exemption thresholds (EET).

The proposed rule would define this term to mean "the maximum allowable rate of projected emissions, calculated for each air pollutant, expressed as short tons per year, above which facilities would be subject to the requirement to perform modeling." The emission exemption

threshold formulas are in proposed section 550.303.

Emissions factor(s).

The proposed rule would define this term to mean a value that relates the quantity of a specific air pollutant released into the atmosphere with the operation of a particular emissions source. The proposed rule would clarify emissions factors are usually expressed as the mass of pollutant generated from each unit (e.g., mass, volume, distance, work, or duration) of activity by the emissions source emitting the pollutant.

Emission reduction measure(s) (ERM).

The proposed rule would define emission reduction measure(s) (ERM) to mean any emissions credit(s), operational control(s), equipment replacement(s), or BACT, applied on either a temporary or permanent basis, to reduce the amount of criteria or precursor air pollutant emissions that would occur in the absence of the application of such measures.

Existing facility.

The current regulations define this term as "an OCS facility described in an Exploration Plan or a Development and Production Plan submitted or approved before June 2, 1980." The proposed rule would define this term to mean "an operational OCS facility described in an approved plan." The existing definition is much narrower than the proposed one, because the existing definition is both limited to facilities described in EPs and DPPs (i.e., excluding DOCDs) and to those facilities described in plans submitted prior to June 2, 1980.

Facility.

The proposed rule would revise the definition that exists in the current regulation. The proposed rule would define the term "facility" used in proposed section 550.205 and proposed subpart C to mean "any installation, structure, vessel, vehicle, equipment, or device that is

temporarily or permanently attached to the seabed of the OCS, including but not limited to a dynamically positioned ship, gravity-based structure, manmade island, or bottom-sitting structure, whether used for the exploration, development, production, or transportation of oil, gas, or sulphur." The proposed rule would specify all installations, structures, vessels, vehicles, equipment, or devices directly associated with the construction, installation, and implementation of a facility would be considered part of a facility while located at the same site, attached, or interconnected by one or more bridges or walkways, or while dependent on, or affecting the processes of, the facility, including any ROV while attached to the facility. The proposed rule would also specify that one facility may include multiple drill rigs, drilling units, vessels, platforms, installations, devices, and pieces of equipment. Also, under the proposed rule, MODUs, even while operating in the "tender assist" mode (i.e., with skid-off drilling units), and any other vessel engaged in drilling or downhole operations, including well-stimulation vessels would be treated as facilities for purposes of evaluating air emissions. Under the proposed rule, the term would also include all Floating Production Systems (FPSs), including Column-Stabilized-Units (CSUs), Floating Production, Storage and Offloading facilities (FPSOs), Tension-Leg Platforms (TLPs), and spars. The proposed rule would also provide any vessel used to transfer production from an offshore facility be considered part of the facility while physically attached to it. Finally, the proposed rule would specify all DOI-regulated pipelines be considered facilities, as would be any installation, structure, vessel, equipment, or device connected to such a pipeline, whether temporarily or permanently, while so connected. The proposed rule would therefore require both lease-term pipeline installations and right-of-way pipeline installations to comply with BOEM's air quality regulations.

The current regulation defines facility, as used in subpart C, as: "[A]ny installation or device

permanently or temporarily attached to the seabed which is used for exploration, development, and production activities for oil, gas, or sulphur and which emits or has the potential to emit any air pollutant from one or more sources. All equipment directly associated with the installation or device shall be considered part of a single facility if the equipment is dependent on, or affects the processes of, the installation or device. During production, multiple installations or devices will be considered to be a single facility if the installations or devices are directly related to the production of oil, gas, or sulphur at a single site. Any vessel used to transfer production from an offshore facility shall be considered part of the facility while physically attached to it."

The proposed definition would be similar to the current definition in at least two ways. First, an onshore facility or onshore support facility would not constitute a "facility" under the proposed definition. Second, under the proposed rule one facility might include multiple drill rigs, drilling units, vessels, platforms, installations, devices, and pieces of equipment.

The proposed rule would generally reorganize the substance of the current definition and provide examples and more explanatory text. In addition, there are several notable substantive changes proposed. First, the proposed rule would revise the definition by eliminating the requirement that a facility "emit or have the potential to emit any air pollutant from one or more sources." This limitation could have been read to imply that, for example, since sub-sea tiebacks and other subsea devices do not themselves emit air pollutants, vessels engaged in installing them were not facilities even though they were connected to the seabed of the OCS. Removing this limitation would make clear that any vessel which is temporarily or permanently attached to the seabed such as a well-stimulation vessel or a pipeline laying vessel connected via a subsea tieback, would be considered a facility for the purposes of evaluating air emissions. Such a vessel would be considered an MSC when not attached to the seabed. The current definition was

developed when wells were drilled individually and generally connected separately to distinct production platforms. Now, many wells can be drilled and connected to a single production facility from significant distances, because subsea tiebacks are becoming increasingly viable, both technically and economically. Similarly, under the proposed rule, the same principle would apply to any structure or vessel that is connected to a pipeline or which is laying a pipeline.

Second, whereas the existing definition specifies facilities are "used for exploration, development, and production activities," the proposed rule would add "transportation" to this list. This change is intended to make the definition track the language in OCSLA Section 4(a), which includes installations and devices used for the purposes of transporting oil and gas. This change would also reflect the fact the definition now explicitly covers pipelines, which, though they do not themselves normally emit air pollutants, are the means by which vessels that do emit air pollutants are connected to the OCS.

The third change would specify more clearly any equipment directly associated with a facility is considered part of that facility if it is dependent on, or affects the processes of, that facility. The existing definition contains the provision: "During production, multiple installations or devices will be considered to be a single facility if the installations or devices are directly related to the production of oil, gas, or sulphur at a single site." The proposed definition would remove the references to production. Instead it would provide: "All installations, structures, vessels, vehicles, equipment or devices directly associated with the construction, installation, and implementation of a facility are part of a facility while located at the same site, attached, or interconnected by one or more bridges or walkways, or while dependent on, or affecting the processes of, the facility." As a consequence of these changes, mobile sources of emissions would generally be considered part of the facility only while attached to a facility, and

not part of the facility otherwise. However, while these mobile sources, such as ice breakers and other support vessels, would not usually be considered part of a facility, and therefore not regulated by BOEM as a facility, their emissions would be accounted for and reported as attributed emissions and would be evaluated to determine whether a proposed plan would cause a potential impact to a State's air quality and could, therefore, trigger a requirement to apply controls in accordance with the requirements of subparts B and C of this part.

Facility emissions.

The proposed rule would define this new term to mean, "for any given criteria or precursor air pollutant, the annual rate, the maximum 12 consecutive month rolling sum, and the peak hourly emissions from all emissions sources on or connected to a facility" (to be consistent with the State permit applications and consistent with the standards for hourly NAAQS, as set by the USEPA). Emissions data required to evaluate compliance with other NAAQS with averaging periods between 1 year and 1 hour, such as the 24-hour PM_{10} and $PM_{2.5}$ NAAQS and the and rolling 3-month Pb NAAQS would be estimated by applying temporal allocation factors to annual emissions modeling, rather than by requiring facilities to also provide emissions information for each of these averaging periods. As described in proposed section 550.205, under the proposed rule, facility emissions along with attributed emissions would constitute projected emissions.

Fugitive emissions.

The proposed rule would define this new term to mean the emissions of an air pollutant from an emissions source that do not pass through a stack, chimney, vent, or other functionally equivalent opening.

Fully reduce(d).

The proposed rule would define this term to mean "to decrease emissions of VOCs to a rate that will not exceed the emission exemption threshold calculated under subpart C paragraph 550.303(c), or to decrease emissions of criteria air pollutants to a rate that will cause ambient impacts that do not exceed the Significant Impact Levels set out in the table in 40 CFR 51.165(b)(2), as amended."

Long-term facility.

The proposed rule would define this term to mean a facility that remains at the same general location for three years or longer. Under the current regulations, there is a definition for temporary facility, but no corresponding one for long-term facility. Thus, although the definition is new, the concept underlying the use of this term has been in existence for many years.

There are two notable aspects of the proposed definition. First, the definition would specify a facility located on the same lease block or within one nautical mile of its original location is still considered to be in the same location for purposes of the air quality evaluation. Second, once a facility becomes attached to the sea floor and is used for drilling, production, or transportation, it would be considered to be "in use." The fact it might not be used for the entire year does not mean BOEM should not consider it to be located at a site for the year. For example, under the proposed rule, a facility that is located at a site for three months, then removed and later put back into service at the same location the next year would be considered in use at that location for two years. Likewise, under the proposed rule, a facility that drills on the same block for three months in each of ten years would be considered a long term facility because it is operating at the same location for more than three years; it would not be a short term facility by virtue of the fact it is only physically located in the block for a total of thirty non-contiguous months.

If a facility must move from the location where it first attached to the seabed due to adverse weather or other conditions over which the lessee or operator had no control, the proposed paragraph 550.313(b) would allow the Regional Director to extend the time for which a facility could avoid being classified as a long-term facility by the number of months during which a lessee or operator is unable to operate at that location.

Major precursor pollutant.

The proposed rule would define this new term to mean any precursor pollutant for which the States are required to report actual emissions to the USEPA, as defined in 40 CFR 51.15(a).

MARPOL-certified engine.[78]

The proposed rule would define this new term to mean "either: 1) an engine with a power output of more than 5,000 kW and a per cylinder displacement at or above 90 liters installed on a ship constructed on or after 1 January 1990 but prior to 1 January 2000 that is subject to Regulation 13.7 of MARPOL Annex VI; or, 2) an engine with a power output of more than 130 kW built on or after January 1, 2000 that is subject to Regulations 13.1 through 13.6 of MARPOL Annex VI.

According to USEPA, a MARPOL engine operated aboard a U.S. vessel must have a U.S.-issued Enhanced International Air Pollution Prevention for each engine, as well as the relevant Certificate of Compliance from the USEPA.

Maximum rated capacity.

The proposed rule would define this new term to mean "the maximum power an engine is capable of generating, expressed in kW, and if necessary, as converted from mechanical

[78] Note that the USEPA requires that each MARPOL engine installed on a U.S. vessel that operates internationally must have a USEPA-issued Engine International Air Pollution Prevention (EIAPP) certificate as well as the relevant Certificate of Compliance to the applicable CAA standards also issued by the USEPA.

horsepower (hpm, where 1 hpm of power equals 745.699872 W or 0.745699872 kW) or from the International Table values of British thermal units (BtuIT, where 1 BtuIT/hour of power equals 0.29307107 Watts or 0.00029307107 kW)."

For the purposes of determining whether a proposed facility should be exempt from modeling, the current regulation requires the reporting of projected emissions based on "the maximum rated capacity of the equipment on the proposed drilling unit under its physical and operational design" 30 CFR 550.218(a)(3). Under the proposed rule, this requirement would apply to all engines, not just the drilling unit, because the emission inventory will also include attributed emissions sources (paragraphs 550.205(c) and (d)). The proposed rule, at 550.205(d)(2)(ii), is aimed at estimating maximum emissions that could occur given the engines that will be used, under any operating constraint proposed by the source. This will involve determining the type of engine operation that produces the highest emissions per hour of operation, which for some pollutants will not be operation at maximum rated capacity. However, even in such a case, information on the maximum rated capacity will be useful for converting "percent of rated capacity" into actual engine loads and therefore emissions, and for generally documenting the types and sizes of engines that will be operating as part of the planned activities.

The proposed definition of maximum rated capacity would specify that that maximum rated capacity must be expressed in kW, or converted from hpm, or British thermal units per hour from the International Tables (BtuIT), since that is the most standard measure for power. In contrast, the term horsepower (hp) has many values, including mechanical hp, electric hp, international hp, metric hp, boiler hp, or water hp. Because there is no standard unit for hp – the range of equivalency is 735.5 watts to 750 watts; BOEM is proposing to use kW instead.

Using kW would facilitate converting measurements and would ensure the use of one consistent standard, International System of Units (SI), in kilowatts. Also, using kW would eliminate the reporting or misreporting of hp based on the many types of hp that can be used for various purposes and, thereby, improve the accuracy of the reports and information submitted to BOEM.[79]

National Ambient Air Quality Standards (NAAQS).

The proposed rule would define this term to mean "the ambient air standards established by the USEPA, as mandated by the CAA (42 U.S.C. § 7409), set out in 40 CFR part 50, for the criteria air pollutants considered harmful to public health or welfare when concentrations are elevated over time." The proposed definition would explain that the NAAQS consist of two categories, both of which are included within the defined term: primary standards that set limits to protect public health, including the health of "sensitive" populations such as asthmatics, children, and the elderly; and secondary standards that set limits to protect public welfare, including protection against visibility impairment, prevention of harm to animals, including marine mammals, fish and other wildlife, and avoidance of damage to crops, vegetation, and buildings.

Non-attainment area.

The proposed rule would revise the definition that exists in the current regulation to mean, for any given criteria air pollutant, a geographic area, which the Administrator of the USEPA has

[79] Units called "horsepower" (hp) have differing definitions: there is mechanical hp, also known as imperial hp, of exactly 550 foot-pounds per second (approximately equivalent to 745.7 watts); metric hp of 75 kg-m per second (approximately equivalent to 735.5 watts or 98.6% of an imperial mechanical hp); boiler hp used for rating steam boilers (equivalent to 34.5 pounds (about 15.6 kg) of water evaporated per hour at 212 degrees Fahrenheit (100 degrees Celsius), or 9809.5 watts);electric motor hp (equal to 746 watts); and British Royal Automobile Club (RAC) hp is one of the tax hp systems adopted around Europe which make an estimate based on several engine dimensions (using a conversion rate of 0.735 kW for 1 hp).

determined exceeds a primary or secondary NAAQS, as codified at 40 CFR part 81 subpart C. A designated "non-attainment area" is defined in the current rule as, "for any given criteria air pollutant, an area which is shown by monitored data or which is calculated by air quality modeling (or other methods determined by the Administrator of [US]EPA to be reliable) to exceed any primary or secondary ambient air quality standard established by [US]EPA." This revision is necessary because the existing definition does not clarify that any given area may be designated as an attainment area for one criteria air pollutant and yet be a designated non-attainment area for another criteria air pollutant.

Operational control(s).

The proposed rule would define this term to mean a process, method, or technique, other than a physical or mechanical control or equipment replacement, that reduces the emissions of criteria or precursor pollutants (e.g., limitation on period of operation, load balancing, use of less-polluting fuels, and/or operating equipment at less than full capacity). Operational control(s) would include, but not be limited to, operating a vessel or facility for a limited number of hours per day, limiting the total amount or type of fuel used over a period of time, load balancing or operating equipment at some level less than full capacity.

Particulate matter (PM).

The proposed rule would define this new term to mean "an airborne contaminant consisting of particulate matter that is regulated as a criteria air pollutant under the ambient air standards." The proposed rule would explain that PM_{10} refers to airborne contaminants of particulates less than or equal to 10 micrometers. PM_{10} is distinct from coarse PM in that coarse PM consists of particulate matter equal to or less than 10 micrometers but greater than 2.5 micrometers. Further, it would explain $PM_{2.5}$, or fine PM, is an airborne contaminant of particulates less than or equal

to a diameter of 2.5 micrometers.

Plan.

The proposed rule would add this term to the definitions section to mean "any initial, revised, modified, resubmitted, or supplemental Exploration Plan (EP), or DPP, DOCD, or application for a Right-of-Use and Easement (RUE), a Pipeline ROW, or lease term pipeline." The term "plan" is used throughout proposed section 550.205 and proposed subpart C, and this definition would make explicit it is intended to refer to all plans, regardless of whether a plan is for exploration or development or whether it is an initial plan or a revised, modified, resubmitted, or supplemental plan. For simplicity, where the term plan is used in proposed section 550.205 or proposed subpart C, the specific requirement would be equally applicable to all types of plans.

Potential to emit.

The definition of "potential to emit" is derived from the USEPA regulations at 40 CFR 51.301. In this proposed rule, the term is used in a manner similar to that of the term "facility emissions." Both terms are meant to describe the measure of the maximum potential rather than the actual emissions of a stationary source. In this proposed rule, the term facility emissions is generally used to refer to the emissions of sources regulated under BOEM's AQRP, whereas PTE is used to refer to the emissions of sources not regulated by BOEM.

Potential to emit means the maximum capacity of a source to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the source to emit a pollutant including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is federally

enforceable. Attributed emissions[80] do not count in determining the PTE of a stationary source.

Precursor air pollutant or precursor pollutant.

The proposed rule would add this new term to mean "a compound that chemically reacts with other atmospheric gases to form a criteria air pollutant." The proposed definition notes some precursor air pollutants are also defined as criteria air pollutants. The proposed definition would also explain precursor air pollutants include VOCs, NOx, SO_2, and NH_3.

Projected emissions.

The proposed rule would define this new term to mean "for any given criteria or precursor air pollutant, the sum of one facility's emissions and its corresponding attributed emissions over the specified time period, with the controlled or uncontrolled nature of the pollutants specified by the context." Projected emissions include the attributed emissions from offshore vessels and offshore vehicles that support a facility. The individual pollutants included among the projected emissions may be reported on an annual basis or as peak-hour projected emissions, and may be either uncontrolled or controlled and may or may not require the use of BACT, emissions credits, or other ERM from any source(s) as described in paragraphs 550.205(e) and (f).

Proximate activities.

The proposed rule would define this term to mean "activities that involve or affect any of the following: the same well(s); a common oil, gas, or sulphur reservoir; the same or adjacent lease block(s); or, facilities located within one nautical mile of one another." The proposed definition would also specify that, where a well is drilled from one facility, but production from the well will ultimately take place through a different facility, the drilling and production activities constitute proximate activities if they occur within the same twelve-month period.

[80] The USEPA refers to attributed emissions as secondary emissions, which it defines in 40 CFR 52.21.

Sensitive Class II area.

The proposed rule would define this new term to mean "a Class II area defined by an FLM agency as being federal land where protection of air resources has been prioritized, as specified in acts, regulations, planning documents, or policy." Agencies with land management responsibility commonly refer to federal land areas that are not Class I areas but are environmentally sensitive as sensitive class II areas. Although the USEPA has not defined different air quality standards or benchmarks for sensitive Class II areas, Federal Land Managers give special attention and subject sensitive Class II area to a more extensive air quality review than would normally be accorded to a typical Class II area. In the context of this rule, an important example of a sensitive Class II area would be the Arctic National Wildlife Refuge in Alaska.

Short-term facility.

This new proposed term would replace the term "temporary facility" in current section 550.302. The proposed rule would use this new term with a similar but expanded meaning. The proposed definition has been expanded so now any facility that is not a long-term facility or is not connected to such a facility would be considered a short-term facility.

If a facility must move from the location where it first attached to the seabed due to adverse weather or other conditions over which the lessee or operator had no control, the proposed section 550.313 would allow the Regional Director to extend the time for which a facility could be classified as a short-term facility by the number of months during which a lessee or operator is unable to operate at that location.

BOEM recognizes that the USEPA classifies a short-term facility as being a facility that is located at the same location for no more than two years and solicits comments on the

implications of retaining or potentially changing this longstanding practice.

Significant impact level (SIL), or Significance level.

The proposed rule would define these terms to mean "an ambient air benchmark that applies to the ambient air impact of the emissions of a criteria air pollutant, as set out in the table in 40 CFR. 51.165(b)(2)." The terms "significant impact level" and "significance level" mean the same thing and are interchangeable.

Technically feasible

The proposed rule would define this new term to mean "a technology or methodology that: 1) has been demonstrated and operated successfully on the same type of emissions source as the one under review; or 2) is available and applicable to the type of emissions source under review."

BOEM solicits comments on whether the technical feasibility should have to be demonstrated for the particular source identified in the plan or whether the feasibility could be demonstrated through use of similar but different sources.

Total support emissions.

The proposed rule would define this new term to mean "for any criteria or precursor air pollutant, the total emissions generated by an MSC that operates in support of your and any other facilities, for the 12-month period over which the corresponding facility emissions are measured." Proposed paragraph 550.205(d) would set forth an example for calculating total support emissions.

Section 550.303 - What analysis of my projected emissions is required under this subpart?

Paragraph 550.303(a) – Establishing emission exemption thresholds

BOEM establishes emission exemption thresholds (EETs). BOEM would define EETs as the maximum allowable rate of projected emissions, calculated for each air pollutant, above which facilities would be subject to the requirement to perform modeling. These EETs would establish those levels of consolidated emissions below which BOEM has determined would not cause or contribute to a violation of the NAAQS.

The proposed rule would provide that, if projected emissions or complex total emissions are exempt, then the lessee or operator would not be required to perform air quality modeling in accordance with the requirements of proposed section 550.304 of this subpart and to apply any controls, as described in proposed sections 550.305 through 550.307.

Paragraph 550.303(b) –Calculating projected emissions

These paragraphs would establish the requirement that a lessee or operator must compare its projected emissions or its complex total emissions with the applicable EETs. More detailed requirements for calculating and reporting projected emissions, facility emissions, and attributed emissions are set forth in proposed section 550.205 and explained in the preamble discussion regarding that provision.

Paragraph 550.303(c) –Emission exemption threshold(s)

Under the proposed rule, BOEM would determine whether the lessee or operator's projected emissions or complex total emissions have the potential to significantly affect the air quality of any State, in accordance with the EETs calculated under this proposed paragraph. This paragraph would provide that BOEM will, sometime after the rule is finalized, publish updated

EETs in the FR. These thresholds would be based on criteria proposed in this rule and would fall within a range proposed in this rule. Under the proposed rule, until such time as BOEM has published these new EETs in the FR (herein referred to as the date of the Notice)[81] and has solicited public comment thereon, a lessee or operator's projected emissions or complex total emissions would be exempt if its projected emissions or complex total emissions are below the EETs set in the current regulation at paragraph 550.303(d). During this period, the distance variable in these formulas would continue to be the shortest distance of the facility to the shoreline, as is the case under the current rule. The proposed rule would require BOEM to provide notice of proposed EETs in the FR, and an opportunity to comment on them, any time it subsequently issues new EETs or revises existing ones.

The proposed rule would establish the process BOEM would follow to provide notice of proposed EETs in the FR, and an opportunity to comment on them, any time it subsequently issues new EETs or revises existing ones. BOEM anticipates that it would establish new EETs based on the EET studies currently underway and would publish these in the FR after the completion of the studies (estimated in 2020). BOEM would then require that all future plans be evaluated in terms of their effects on the air quality of neighboring States by considering the impacts landward of the SSB (including the air above the State's submerged lands, at the shoreline and inland of the shoreline). New EETs for those pollutants added to this proposed rule will not be established until such time as the relevant studies have been completed.

Paragraph 550.303(c)(2) of the proposed rule provides criteria that BOEM would use to determine the formulas that BOEM would publish in the FR. These include: the absolute level of projected emissions; the distance of the proposed facility or facilities from any State or from

[81] Estimated to take place in 2020.

critical natural resources, animals, and habitats; the existing ambient air pollution in potentially affected States; the trend in the ambient air pollution in those States; the associated attainment status of such areas and the associated effects to public health and welfare; any USEPA AAQSB applied by this proposed rule; the types, frequency and duration of any air pollutant emissions and their formation and/or dispersion characteristics; the characteristics of the facility or facilities and MSCs, including the type and nature of the emissions sources, and the height of the associated emission points or stacks; the prevailing meteorological characteristics in any given area, including air stability, relevant wind speeds and directions; the amount of emissions from existing facilities and vessels in the vicinity of the proposed facility; and other necessary and appropriate conditions. Several of these criteria (used to determine the EETs) are localized and may differ according to area even within one OCS region (e.g., prevailing meteorological characteristics and the amount of emissions from existing facilities and vessels in the vicinity). Accordingly, BOEM expects that the EETs it would set in the FR would vary from area to area. This could result in different sets of formulas for each planning area or smaller geographic unit.

The proposed rule also would establish a range within which these new EET formulas will apply. Above this range, lessees and operators would always be required to perform air quality modeling, in accordance with the requirements of section 550.304 of this subpart, or to apply controls, as described in sections 550.305 through 550.307, and below this range lessees and operators would not be required to do so. Within this range, lessees and operators would be exempt from these requirements only if their projected or complex total emissions were below the EETs defined by the formulas BOEM will publish in the FR.

Proposed subparagraph 550.303(c)(3)(ii) would set the upper boundary of this range. The proposed subparagraph would set the upper bounds of this range with the current EET formulas

(currently codified at 30 CFR 550.303(d)). However, the distance variable in the formulas would be measured from the closest point on the SSB.[82] Because this feature of the upper boundary formulas would allow the upper boundary to vary all the way down to zero (when the distance is zero), BOEM is proposing to set constant values for the EETs for facilities within the first three nautical miles of the State's seaward boundary. These proposed values would be based on the current values of the current emission exemption formulas at the SSB, and, for all pollutants other than CO, they would correspond to the 100 tpy major source criteria from the USEPA NSR permitting program, as defined in its regulations at 40 CFR part 70.[83] Chart II, below, depicts how the current thresholds would shift to become the upper boundaries of the range once BOEM publishes the future thresholds in the *Federal Register*. The highest series represents the current thresholds, while the two lower series represent the EETs that would apply to those States with three and nine nautical mile State submerged land boundaries, respectively.

At the present time, BOEM does not have EETs for Pb, $PM_{2.5,}$ or PM_{10}, nor has it established EETs that would apply to anything other than the projected annual emissions. Until such time as EETs are established for these pollutants, no plan would be required to model on the basis of their emissions of these pollutants alone (except for Pb, for which the proposed rule would set an EET which could trigger a requirement for modeling).

BOEM recognizes there may be a more appropriate distance-adjusted maximum emission exemption threshold for these pollutants and solicits comments from stakeholders on what they should be. Any comments should include an analysis of the reasoning used to support an

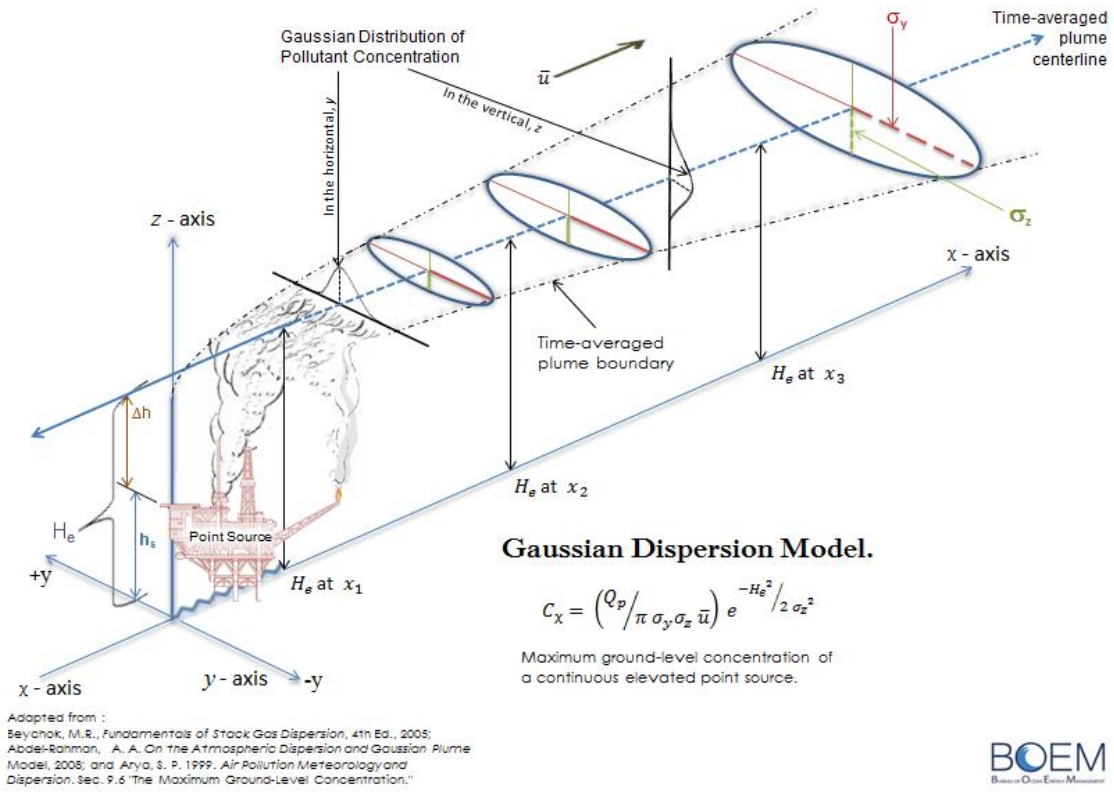
[82] Because these same formulas would also serve as the EETs during the period after the rule is finalized and before the new formulas are established in the FR , subparagraph (4)(i) sets forth the same formulas as (4)(ii) but defines the distance variable as the distance from the shoreline.

[83] The USEPA has two thresholds used to determine what constitutes a major source for purposes of its permitting program. In addition to the 28 source categories for which the 100 tpy threshold applies, the USEPA has a 250 tpy threshold that applies to other source categories. BOEM's existing exemption thresholds were originally based on the 100 tpy standard and BOEM has elected to retain this as the criteria, since it is a more conservative approach.

alternative threshold, keeping in mind that the key goal is to ensure that offshore projected emissions of Pb, $PM_{2.5}$, or PM_{10} do not "cause or contribute to a violation" of their corresponding NAAQS.

Proposed subparagraph 550.303(c)(3)(i) would set the lower boundary of this range. The proposed formulas for these minimums represent emissions levels below which the ambient air impact at the nearest point in a State would not exceed any annual SIL. To derive these equations BOEM used a Gaussian dispersion equation, setting the concentration variable of the equation equal to a SIL and solving for the corresponding emissions rate. An example of the theoretical model underlying this analysis is provided for illustration purposes below: [84]

Chart I: Gaussian Dispersion Model:



[84] BOEM Alaska OCS Region, 2015, Chukchi Sea Planning Area Oil and Gas Lease Sale 193 in the Chukchi Sea, Alaska Final Second Supplemental Environmental Impact Statement BOEM 2014-669.

C_χ Maximum pollutant concentration in micrograms per cubic meter, (g/m^3), at a point, χ

Q_p Emission rate of a polluant, p, in grams per second (g/s)

π Pi, a value of approximately 3.14, where Pi has no units

e Natural exponential function, no units, where $e^1 = 2.718$, $e^0 = 1$, and $\ln x = 1/e^x$

H Actual stack height, expressed in meters (m)

Δh Extent of plume rise above the stack at release due to heat bouyancy, where without bouyancy, $\Delta h = 0\ m$

H_e Effective stack height at a point, χ, expressed in m, where, $h_s + \Delta h = H_e$ at $\chi=0$, and where $(H_e \text{ at } \chi_1) > (H_e \text{ at } \chi_2) > (H_e \text{ at } \chi_3)$

$\bar{u}$ Mean surface wind speed in the direction of the χ-axis, averaged over a 10-minute period, recorded at a height $10\ m$ above the observation surface in miles per hour (mph), and converted to meters per second (m/s)

σ_z Vertical dispersion coefficient, distance of plume's vertical expansion below the centerline expressed in m

σ_y Horizontal dispersion coefficient, distance of plume's horizontal expansion outward from the centerline, expressed in m

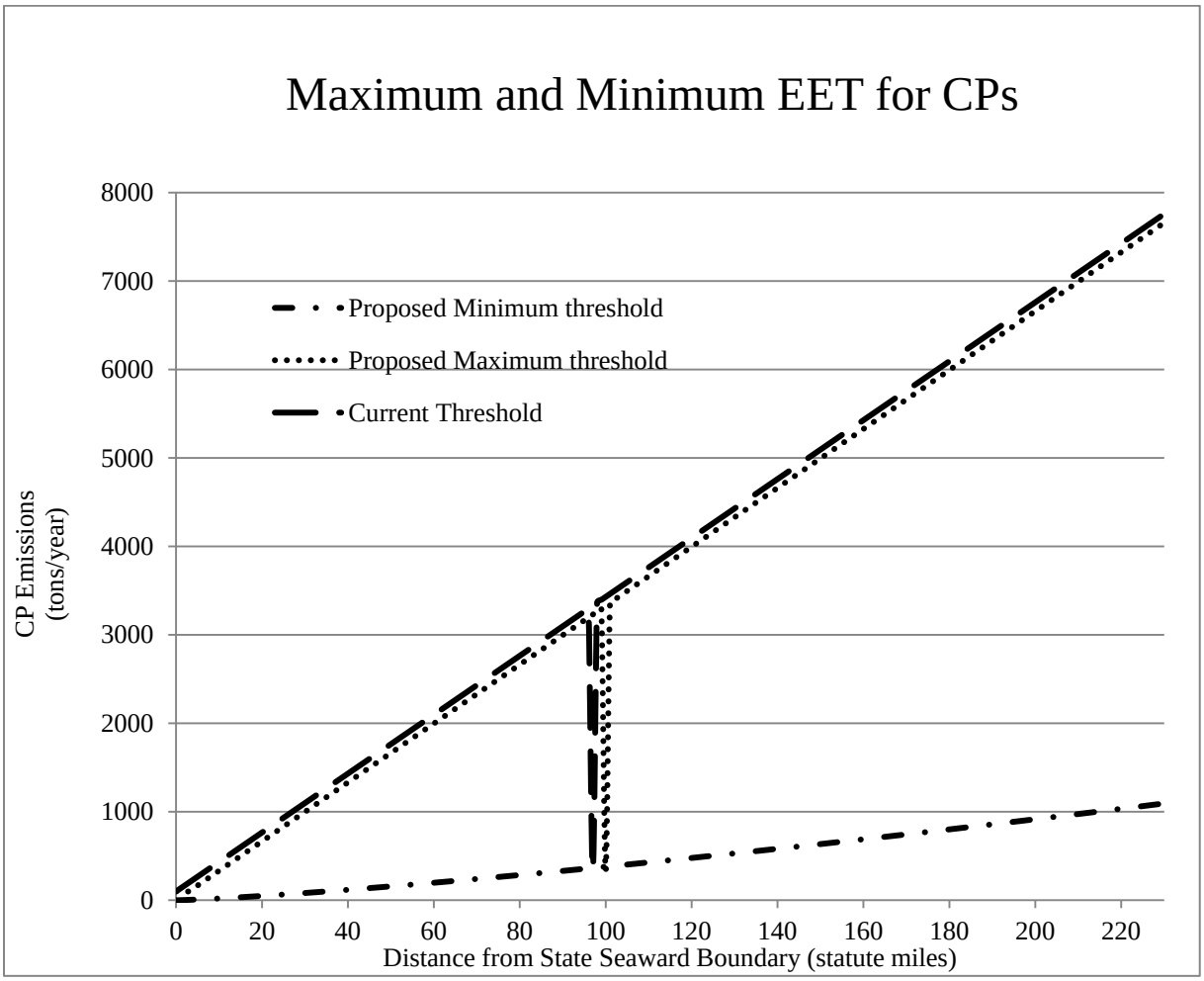
In deriving these equations BOEM used conservative assumptions regarding the wind speed, stack height and air stability. For a full description of the method used to derive these equations see the Appendix: BOEM Analysis of Minimum Emission Exemption Thresholds available in the rulemaking docket at www.regulations.gov [INSERT FULL URL].

If you have questions concerning the analysis done regarding the formulas or analysis related to the minimum emission exemption thresholds, you may contact Virginia Raps of the BOEM Alaska OCS Regional Office, by mail at the Bureau of Ocean Energy Management, Alaska OCS Region, 3801 Centerpoint Drive, Suite 500, Anchorage, AK 99503, or by email at Virginia.Raps@boem.gov, or by phone at (907) 334-5200.

The following chart illustrates the proposed emission exemption thresholds for NO_x. It shows the current exemption threshold, the proposed maximum exemption threshold, and the proposed minimum exemption threshold for NO_x. The chart shows that the proposed maximum threshold would have the same slope as the current threshold but would shift slightly lower due to proposed rule's changing the "distance" variable to be measured from the SSB. The space in-

between the proposed maximum and the proposed minimum represents the range where BOEM would apply the formulas it will publish in the *Federal Register*.

Chart II: Maximum and Minimum EET for Criteria Pollutants[85]



Subparagraph 303(c)(3)(i) lists the formulas for the proposed new minimum emission exemption thresholds for those CPs for which the USEPA has established SILs. Paragraph 303(c)(ii) would include a minimum emission exemption threshold for Pb. To establish a minimum emissions exemption level for Pb, the proposed rule would adopt the USEPA significant emissions rate for Pb, as described in USEPA regulations at 40 CFR 52.21(b)(23)(i).

[85] This chart would apply to all CPs other than CO, ozone and lead.

This amount is currently set at 0.6 short tons of emissions per year. BOEM is proposing this addition in order to ensure consistency with USEPA regulations and to ensure all OCS facilities comply with the requirements of OCSLA. BOEM is not proposing to establish a distance-based formula for Pb because the USEPA has not established SILs for Pb which would enable BOEM to apply the above methodology. Instead, BOEM is proposing to utilize the USEPA's significant emissions rate for Pb as an emissions threshold.

As an alternative to the proposed distance-based formula, BOEM is also considering an option in which it would establish new minimum EETs based on the PSD emissions limits in the USEPA's regulations at 40 CFR 52.21(b)(23)(i). Those USEPA tables are intended primarily to determine whether a facility will generate potentially significant incremental increases in pollutant concentrations in the area surrounding the proposed emissions source. BOEM could either apply the current absolute numbers or utilize the values in the USEPA table and adjust them, on either a linear basis or on the basis of a Gaussian dispersion equation, in an appropriate manner based on the distance of the facility from the State.

BOEM solicits comments on this and other possible alternative approaches to establishing new maximum EETs (above which all plans would be subject to modeling) and minimum EETs (below which BOEM would not establish any new EETs)[86]. Such a discussion would ideally include information both on the levels of the two sets of formulas, as well as on the type and nature of the formulas that should be applied.

Finally, because the NAAQS are subject to change as scientific knowledge improves and because technical and modeling capabilities may improve over time, the proposed rule provides that BOEM, at its discretion, would revise the emission exemption thresholds on an ongoing

[86] With the adoption of the new EETs, there would be no need for any lessee or operator to review or evaluate their emissions as compared to the minimum thresholds because those minimums will, in all cases, be below the EETs.

basis either as a result of a change in an applicable standard or because BOEM's ability to measure and evaluate the impact of existing emission exemption thresholds has improved or for some other reason. Thus, under the proposed rule, if the USEPA revises the NAAQS, or any applicable SIL or AAI, BOEM would examine the appropriateness of its emission exemption thresholds, and, BOEM, at its discretion, could periodically revise its exemption formula(s) or its exemption threshold amount(s) for the corresponding air pollutant(s), as appropriate.

Paragraph 550.303(d) - Consolidation of air pollutant emissions from multiple facilities

The purpose of this section is to determine whether two or more facilities wholly or partially owned, controlled or operated by the same entity that are located in relatively close proximity may collectively cause or contribute to a violation of any relevant air quality standard or benchmark, even if they would not do so when considered on a separate basis.

The proposed rule would require projected emissions from multiple facilities under common ownership to be combined for analysis and reported as complex total emissions under certain circumstances. BOEM's current practice is to require, in specific circumstances, the consolidated analysis of facilities covered by multiple plans in accordance with the following provision of paragraph 550.303(j): "If, during the review of a new, modified, or revised Exploration Plan or Development and Production Plan, the Regional Supervisor determines or an affected State submits information to the Regional Supervisor which demonstrates, in the judgment of the Regional Supervisor, that projected emissions from an otherwise exempt facility will, either individually or in combination with other facilities in the area, significantly affect the air quality of an onshore area, then the Regional Supervisor shall require the lessee to submit additional information to determine whether emission control measures are necessary." The

current regulations do not specify under what circumstances the Regional Supervisor would make such a determination.

This proposed paragraph recognizes the fact that emissions from two or more OCS facilities located in close proximity to one another may have an impact on the air quality of a State, when operated contemporaneously, even in those situations where the emissions from any one of those facilities, when compared against the emission exemption thresholds, would indicate that that facility should not cause an adverse impact to the air quality of a State. Closely-grouped facilities that emit pollutants at the same time can affect the air quality of a State differently than facilities that are spread across a larger area. The proposed rule would require a lessee or operator to add together its projected emissions with the emissions from other facilities whether or not they are described in lessee or operator's plan and whether they currently exist or are proposed.

The proposed paragraph would specify the conditions under which a lessee or operator would be required to consolidate the projected emissions from multiple facilities. Under the proposed rule, projected emissions from multiple facilities would be required to be consolidated if: 1) the emissions from multiple facilities are generated by proximate activities (i.e., the same well(s); a common oil, gas, or sulphur reservoir; the same or adjacent lease block(s); or, by facilities located within one nautical mile of one another); 2) the lessee or operator wholly or partially owns, controls or operates those facilities; 3) the construction, installation, drilling, operation, or decommissioning of any of the lessee or operator's facilities occurs within the same 12-month period as the construction, installation, operation, or decommissioning of another facility that meets conditions 1 and 2; and 4) such a consolidation of emissions from multiple facilities would generate emissions sufficient to exceed an applicable emission exemption threshold.

If any two or more facilities meet all of the conditions specified in (d)(1)(i) through (d)(1)(iv) of this proposed section the lessee or operator would be required to calculate the sum of the projected emissions from those facilities (including its respective attributed emissions), as the complex total emissions for its plan.

If there are two or more facilities that would normally be submitted in one plan, and which are intended to be part of one unit or project, those facilities should be evaluated together. This requirement is intended to discourage submission of multiple plans for the purpose of remaining under the exemption thresholds. This requirement would be applied only to facilities that are wholly or partially owned, controlled or operated by the same party. This limitation is intended to further ensure that the associated air quality analysis would be applied consistently across projects, regardless of whether a lessee's or operator's project is submitted for approval in one plan or whether it submits several plans separately.

According to BOEM regulations (in section 550.105), a lessee is defined as being "a person who has entered into a lease with the United States to explore for, develop, and produce the leased minerals. The term lessee also includes the BOEM-approved assignee of the lease, and the BOEM-approved sublessee of operating rights in the lease." The definition of "you" includes a "lessee, the owner or holder of operating rights, a designated operator or agent of the lessee(s), a pipeline ROW holder, or a State lessee granted a right of use and easement." Thus, the requirement for common ownership of a facility would extend to the lessee or their assignee as well as to those that share other lease interests, including joint ownership in a common unit, joint operating rights interests, as well as companies that use the same designated operator or unit operator for those facilities located in the same general vicinity of the proposed new facility.

In order to determine common ownership, BOEM will rely on the criteria defined by the

Office of Natural Resources Revenue (ONRR) for evaluating whether or not two companies should be considered affiliates, as defined in the regulations at 30 CFR 1206.101 and 30 CFR 1206.151. BOEM solicits comments from lessees and operators with respect to how it could most effectively limit the application of these consolidation criteria to relevant parties and avoid the consolidation of emissions associated with facilities that are operated by unaffiliated companies.

Facilities whose projected emissions would have been consolidated but for the exemption related to ownership and control would still be evaluated for their consolidated effects to the States outside of the AQRP. BOEM will conduct independent studies regarding the consolidated effects of multiple facilities on the air quality of the neighboring States and will also evaluate the potential for future cumulative impacts in conjunction with the associated NEPA review of the Five-Year Oil and Gas Leasing Program, the associated lease sales and the lease sale EISs.

The proposed paragraph would also specify that if all of the emissions to be combined relate to the lessee's or operator's wholly-owned facilities, then the lessee or operator would be required to provide the data and analysis regarding the complex total emissions. However, where the lessee or operator does not fully own all of the facilities whose projected emissions are to be consolidated, the lessee or operator would need to gather data either from the operator of any facilities that it does not wholly own or which it does not operate, or from the publically available database of plans approved by BOEM, and would need to provide all the data and analysis it gathered. BOEM would make a determination whether the lessee or operator has appropriately considered the relevant data in its analysis of the complex total emissions. If all of the emissions to be combined relate to the lessee or operator's wholly-owned facilities, that lessee or operator must provide all the data and analysis of the complex total emissions.

Under the proposed rule, if any lessee or operator were required to consolidate projected emissions data from multiple facilities, then anywhere a proposed requirement is written to apply to projected emissions that proposed requirement would instead apply to complex total emissions, except with respect to the process by which projected emissions are determined for any given facility (as specified in paragraphs 550.205(c, d and e)).

Paragraphs 550.303 (e) and (f) – Emissions do not exceed any threshold or exceed a threshold

The purpose of these two paragraphs is to determine whether the facility or facilities covered by a proposed plan should be required to do modeling to determine whether, or to what extent, its operations might adversely affect the air quality of a State. If a plan is proposed that would result in operations such that none of the EETs would be exceeded, then the plan would not be required to include air quality modeling. This is because BOEM would already have determined that the potential effects resulting from the implementation of that plan would not have the potential to cause any such adverse effect.

Under the proposed paragraph 550.303(e), if none of a plan's projected emissions or complex total emissions for any precursor or CP that exceeds the applicable emission exemption threshold, then its projected emissions would be considered *de minimis* , and therefore exempt, so that no further analysis would be required under subpart C.

Under the proposed paragraph 550.303(f), if a lessee's or operator's projected emissions or complex total emissions of the precursor or criteria air pollutant exceed the applicable emission exemption threshold, then further review would be required and potentially also controls. Under the proposed rule, the requirements associated with an exceedance would depend on which pollutant or pollutants exceed the threshold(s). If emissions of VOCs, which have no SILs,

exceed a threshold, then controls would be required pursuant to proposed sections 550.306 or 550.307, depending on whether the facility is short-term or long-term. If emissions of a criteria air pollutant exceed a threshold, then modeling would be required under proposed section 550.304. The current rule accounts for both of these two scenarios, just as the proposed rule would.

The proposed rule would add provisions specifying circumstances in which additional photochemical modeling would be required. One of these proposed provisions would require photochemical modeling of O_3 when projected emissions exceed the applicable emission exemption threshold for the O_3 precursors NO_x, VOCs, or CO. A second new proposed provision would require photochemical modeling for $PM_{2.5}$ if a plan's projected emissions of the $PM_{2.5}$ precursors, NO_x, VOCs, $PM_{2.5}$, or SO_2, exceed the applicable emission exemption threshold. In both cases, the proposed rule would not impose these photochemical modeling requirements, until such time as the conditions specified in paragraph 550.304(b) have been met.

Paragraph 550.303(g) – Changes to previously approved plans

The proposed rule would set requirements specifying when lessees and operators must submit revisions to their plans based on changes to how the plan will be implemented. The first proposed subparagraph, (g)(1), would provide that, if a lessee or operator changes its plan implementation, such that its projected emissions would occur in years other than those that were previously approved, it would be required to submit a new plan and obtain approval before it implements the proposed changes. This requirement would relate to when operations occur, not the level of emissions associated with those operations.

This proposed provision would formalize an existing practice whereby a lessee or operator is required to submit a new plan if the actual emissions associated with its operations will likely

occur in years other than those proposed and approved in the original plan. Depending on the timing of the prospective emissions, the air impacts of those emissions would vary due to other activities in the area and to seasonal effects. For future years, the NAAQS or air quality benchmarks may change. In addition, the complex total emissions analysis may need to be redone or reevaluated.

The second proposed subparagraph, (g)(2), would provide that, if a lessee or operator anticipates any increase in the maximum air pollutant emissions above that projected for any time period described in the previously approved plan, the lessee or operator would be required to submit a new plan, pursuant to 30 CFR 550.283(a)(4). That existing section provides that an operator must submit a revised plan if it proposes to increase the emissions of an air pollutant to an amount that exceeds the amount specified in the approved plan. The proposed provision would relate to the peak emissions that would be generated by the facility, including its attributed emissions, for any time period (annual, 12-month rolling sum or maximum hourly) during its OCS operations.

The third proposed subparagraph, (g)(3), would provide that, if a lessee or operator proposes to make a change to operations on its existing facility or facilities, but not to the equipment used in such operations, such that its approved projected annual emissions in any given year are higher than those previously approved for the particular year, but lower than the maximum air pollutant emissions for any year, the lessee or operator would not need to submit a revised plan—as long as the operations would occur in the same year as described in the previous plan.

The fourth proposed subparagraph, (g)(4), would require that a lessee or operator submit a new plan any time it proposes to change any equipment on its existing facility or facilities such that the proposed change would result in an increase in air pollutant emissions from that specific

equipment for any air pollutant, regardless of the impact on the total emissions of the facility as a whole.

The fifth proposed subparagraph, (g)(5), would specify if a plan was approved for a short-term facility and it was determined later that the facility would be used in such a manner that it would properly be classified as a long-term facility, then a new plan must be submitted for review and approval by BOEM.

Paragraph 550.303(h) – Federal land manager

BOEM currently consults with appropriate FLMs when it has reason to believe a lessee's or operator's proposed OCS activities could potentially cause a significant effect on air quality in a Class I area. Under the current practice, BOEM occasionally asks lessees and operators to submit additional information to show their proposed activities would not significantly affect the air quality of such areas.

The proposed rule would expressly provide that BOEM may consult with one or more relevant FLMs if it believes emissions from proposed activities could potentially have a significant effect on Class I areas or sensitive Class II areas onshore or above State submerged lands. It would further provide that BOEM would consider the views of the FLMs in determining whether the proposed plan complies with the provisions of proposed subpart C. Based on this consultation, BOEM might require additional information and analysis, either prior to or as a condition of approving the plan. Finally, it would state that, if the FLM does not raise any concerns regarding the plan in a timely manner, BOEM would assume the FLM has no objections to the plan.

Under current practice and the proposed rule, the FLMs would independently evaluate the potential impacts of air pollutant emissions from OCS activities because of their expertise,

modeling and evaluation skills. They have the unique ability to evaluate and determine the likely impacts of OCS activities on Class I and sensitive Class II areas.

Section 550.304 - What must I do if my projected emissions exceed an emission exemption threshold?

Paragraph 550.304(a) – Dispersion Models

Paragraph 550.304(a) of the proposed rule describes BOEM's proposed dispersion modeling requirements, which would apply in the event the lessee or operator's projected emissions or complex total emission exceed the limits defined in paragraph 550.303(c). Dispersion modeling shows how a pollutant that is emitted could affect the concentrations of that pollutant onshore or above State submerged lands. BOEM has determined air pollutant emissions could potentially affect a State only under those circumstances where the total annual projected emissions or the complex total emissions of any given pollutant exceed a relevant exemption threshold. For this reason, a lessee or operator must perform modeling to estimate the projected increase in the ambient concentration of a pollutant onshore only if its proposed plan proposes projected emissions that exceed an emission exemption threshold for one or more criteria air pollutants.

The proposed rule would clarify that if a lessee or operator's projected emissions, or complex total emissions, of any given criteria or precursor pollutant exceeds an emission exemption threshold, then the lessee or operator would be required to model the potential impact of those emissions and those of any other pollutant for which the exceeding pollutant is a precursor, in order to determine the potential impact to the State. However, the rule would not require that a lessee or operator perform modeling with respect to those pollutants whose emissions are not projected to exceed any relevant EET. This approach is similar to that taken by the USEPA and is done for the same reason, namely to ensure that emissions are modeled in situations where a

potential impact may occur. The USEPA method relies on the use of its SERs to make this determination, rather than requiring modeling, however.[87] In addition, the proposed rule would make it explicit that modeling must be based on the projected emissions reported under paragraph 550.205(e), or the complex total emissions, whichever is applicable.

This approach relies on the presumption that there would be one EET applicable at any given location for each precursor or CP. As an alternative, BOEM could establish multiple EETs for any given pollutant in those situations, such as for NO_x, where the same pollutant is both a CP and a precursor for another CP. In this latter case, BOEM would not require modeling of any pollutant except in the case that that pollutant exceeded a relevant EET.

The proposed rule would provide that a lessee or operator must use one or more of the following air dispersion models: an air dispersion model listed in Appendix A to 40 CFR part 51 Appendix W (Guideline on Air Quality Models); an air dispersion model listed in the Federal Land Managers' Air Quality Related Values Workgroup Guidance; or another model approved by the BOEM Chief Environmental Officer. The lessee or operator would also be required to follow the modeling procedures recommended in 40 CFR part 51 Appendix W, as amended, to the extent possible. A lessee or operator would be required to provide BOEM with a copy of its dispersion modeling protocol and the associated data and assumptions used to do its analysis before it conducts such modeling.

Paragraph 550.304(b) – Photochemical Models

The proposed rule would require both dispersion and photochemical modeling, under a limited number of circumstances. For air photochemical modeling, the proposed paragraph (b)

[87] In USEPA's case, any proposed facility that has been identified as a major source of emissions for any given pollutant must then be evaluated to determine whether that facility would generate emissions in excess of the Significant Emissions Rate (SER) for every other air pollutant. BOEM's EETs are designed to accomplish a similar purpose, namely to identify situations where a proposed facility's emissions may be potentially significant.

would also require lessees and operators use a model approved by the BOEM CEO and follow the modeling guideline provided in 40 CFR part 51 Appendix W, as amended, to the extent possible. BOEM does not anticipate implementing a requirement for lessees and operators to conduct single source photochemical modeling for plan facilities until such time as it has determined that this modeling would be reasonable and practical for such lessees and operators, taking into consideration both the technical feasibility and the costs.

The proposed rule in paragraph 550.304(b) describes BOEM's proposed photochemical modeling requirements.[88] Photochemical modeling shows the concentration increase onshore of an air pollutant that is formed as a result of photochemical processes in the atmosphere. Photochemical modeling would be required only if: 1) the projected emissions for the relevant precursor air pollutants exceed the applicable emission exemption threshold; 2) an appropriate photochemical air quality model is available that either meets the USEPA's requirements in section 3.2 of 40 CFR part 51, Appendix W, or complies with the FLM's modeling guidance, or has been approved by BOEM's CEO; and 3) BOEM has determined that adequate relevant information on background concentrations is available for the relevant location(s) in a potentially affected State. The proposed rule would require lessees and operators provide BOEM, upon request, with a copy of the photochemical modeling protocol and the associated data and assumptions used to perform the photochemical analysis before the actual modeling is conducted.

The USEPA is currently evaluating the feasibility of establishing and requiring single source

[88] This section indicates that a photochemical model will be used under certain circumstances so long as it can be approved as an alternative model under Section 3.2 of Appendix W. This is similar to what the USEPA is proposing to do, in that the USEPA's proposed revisions to Appendix W do not solely rely upon explicit use of photochemical models for each permit situation. Rather, EPA has a tiered approach with a first tier that uses existing information or reduced form models in lieu of full photochemical modeling.

photochemical modeling, something that was technically challenging and generally cost prohibitive in the past. BOEM is reviewing the USEPA's work in this area. Once BOEM has determined that the appropriate models are available, photochemical modeling may be done cost effectively, and the relevant background concentration data are available, BOEM will consider approving model(s) for use under this proposed section. Modeling protocols and the regional exemption studies supporting the EETs will likely allow BOEM to approve a photochemical model in the year 2020.

In order to make a determination as to the appropriate circumstances under which single source photochemical models should be required, BOEM must also establish appropriate EETs as the screening mechanism. BOEM may develop EETs specific to O_3 and $PM_{2.5}$ formation, either in addition to or in lieu of specific SERs or EETs, or utilize reduced form photochemical models as a screening tool to determine the circumstances under which full single source photochemical modeling may be required.[89] BOEM might consider current and future USEPA regulatory models, assessment techniques, and related guidance to develop EETs specific to O_3 and $PM_{2.5}$ formation.

Paragraph 550.304(c) – Projected emissions

Paragraph 550.304(c) of the proposed rule would require the lessee or operator to base its modeling on its maximum projected emissions, as reported under paragraph 550.205(e), or on the complex total emissions in those situations where that reporting is otherwise required.

[89] BOEM is considering chemical transport models, including Lagrangian puff models and Eulerian grid (e.g., photochemical transport) models, as well. Lagrangian puff models would require a realistic chemical environment for input, whereas photochemical transport models typically estimate a realistic chemical environment. Even though single source emissions are injected into a grid volume, comparisons with in-plume measurements indicate these types of models can capture downwind secondary pollutant impacts when applied appropriately for this purpose. Single source impacts estimated by photochemical grid models can be done by comparing a 1) model simulation with all sources and the project source at preconstruction levels and 2) model simulation with all sources and the project source at post-construction levels. Alternatively, post-construction emissions could be tracked with photochemical grid model source apportionment or source sensitivity model extensions.

Paragraph 550.304(d) – Meteorology

Paragraph 550.304(d) of the proposed rule would require, that for any modeling performed, lessees and operators must apply the best available and most recent meteorological dataset(s), either as directed in 40 CFR part 51 Appendix W, or by using an alternate dataset(s) approved by the Regional Supervisor. In addition, the proposed rule would require lessees and operators to create a modeling report documenting all emissions sources, inputs, parameters, assumptions, procedures, methods, and results including input and output files, and data upon which their analyses under subpart C would be based, and to provide BOEM with copies of all data and access to any programs used in their modeling.

Paragraph 550.304(e) – Estimates of ambient air concentrations

The proposed rule would specify in paragraph 550.304(e) that, for each criteria air pollutant resulting from your projected emissions (or complex total emissions where applicable), the lessee and operator must estimate the peak incremental concentrations projected in any attainment area(s) and, separately, in any non-attainment area(s), in any State, including State submerged lands and onshore. BOEM is proposing this new requirement because the highest air pollutant concentration on the onshore area of a State may or may not occur at the onshore area that is closest to the facility described in the plan. Depending on the meteorology of the OCS region, the maximum concentra

tion will likely occur at that point on the shoreline or above State submerged lands where the emissions are directed by the prevailing winds. The distinction between the peak attainment and peak non-attainment areas is important because the evaluation and ERM criteria are different for impacts to these two kinds of areas.

Paragraph 550.304(e) would require, to the extent practicable, estimates of the ambient air

concentrations of any criteria air pollutant consider not only the dispersion of each criteria air pollutant itself, but also the formation of any criteria air pollutant that may result from the dispersion or presence of any relevant precursor air pollutant(s). The proposed rule would state specifically which precursors would be required to be included in the analysis of $PM_{2.5}$ and O_3.

The proposed rule would also state that BOEM may provide information through Notices to Lessees to assist lessees and operators in evaluating existing ambient air concentrations, or changes in such concentrations over time, if BOEM determines that there is an effective means of estimating ambient air quality. Under the proposal, if BOEM has determined that there is an effective means of estimating ambient air quality and BOEM has established appropriate background concentration data for any given pollutant, at any given location and point in time, a lessee or operator would be required to use the relevant data provided by BOEM. Alternatively, in the event that BOEM has not determined appropriate background concentration data for any given pollutant, for any given location, and point in time, a lessee or operator would be required to use the relevant data from the USEPA for the closest appropriate location, as specified by the Regional Supervisor.

Paragraph 550.304(f) – Attributed Emissions

Paragraph 550.304(f) would require that, for the purpose of calculating the relevant attributed emissions, lessees and operators conduct modeling of attributed emissions from those locations where those emissions are most likely to occur, utilizing the most appropriate line, area, volume, or pseudo point source model that would most accurately estimate the actual emissions that will result from MSCs, or other support operations. Under the current practice, in contrast, modeling is performed on the assumption that all attributed emissions originate at the same location as that of a single stationary facility.

Paragraph 550.304(g) - Documentation and reporting

The proposed rule in paragraph 550.304(g) would require the lessee or operator to create a modeling report documenting all emissions sources, inputs, parameters, assumptions, procedures, methods, and results, including input and output files, and underlying data upon which its analysis under this subpart is based. The rule would require the lessee or operator provide BOEM with copies of the modeling report, copies of all relevant data and the lessee or operator provide access to any programs used to perform their modeling.

Section 550.305 - How do I determine whether my projected emissions of criteria air pollutants require ERM?

The proposed rule would require lessees and operators to compare the results of the modeling conducted under proposed section 550.304 with the USEPA's Significant Impact Levels (SILs). If the modeling results are higher than the SILs, ERM would be required as specified in section 550.306, for a short-term facility, or as specified in section 550.307, for a long-term facility. Under current BOEM regulations, if modeling indicates an exceedance of the SILs, which the current regulations refer to as Significance Levels, this triggers the requirement to apply BACT. The table of Significance Levels in current section 550.303(e) was based on the table of the USEPA's SILs as they existed in 1980. The USEPA's tables, however, have been updated since then.

The USEPA's regulation on SILs, at 40 CFR 51.165(b), states that an emissions source "will be considered to cause or contribute to a violation of a national ambient air quality standard" when such a source would cause an exceedance of the SILs. Accordingly, BOEM is proposing to use the SILs to set the level of projected air pollution increase at a measurement point either onshore or above State submerged lands, that, if exceeded, ERM may be evaluated and controls

may be required. BOEM is proposing to cross-reference the USEPA's table of SILs so, if there is an update or addition that results in a change to the USEPA table, that change would automatically become incorporated into BOEM's regulatory standards.

Since $PM_{2.5}$ is both emitted and formed in the atmosphere, lessees and operators would be required to add the results of their air dispersion modeling for direct $PM_{2.5}$ emissions to the results of their photochemical modeling, if required under proposed section 550.304, before comparing the results with the $PM_{2.5}$ SILs. If the resulting sum exceeds a SIL for $PM_{2.5}$ for any averaging time, the operator would be required to apply ERM. As set out in proposed section 550.304 and explained above, this additional modeling for $PM_{2.5}$ would only be required if the relevant photochemical models and background concentration are available.

In contrast to the other criteria air pollutants, the USEPA's current regulations do not set a SIL or AAI for O_3. Rather than determine equivalent standards for O_3 at the present time, BOEM is proposing to require ERM based on emissions precursors of O_3 when modeling would indicate the NAAQS for O_3 would be exceeded. Accordingly, lessees and operators would be required to add the results of their photochemical modeling, if required under section 550.304, to the existing background concentrations and determine if a NAAQS for O_3 would be exceeded for any averaging time. If any NAAQS is exceeded, the lessee or operator would be required to apply ERM. BOEM solicits comments both on this approach and whether photochemical modeling should be required in all cases. Alternatives could include reserving a full scale analysis until such time as the USEPA has established a SIL for O_3, applying a consultative process between applicant and BOEM consistent with current Appendix W until such time as revisions to Appendix W have been finalized and the USEPA has established or recommended significance levels.

Under the proposed rule, BOEM would eliminate the standard for TSPs, which measures the ambient concentration of particulates having a diameter of less than 100 micrometers. Instead, BOEM would formally adopt by cross-reference the two new standards that the USEPA created in place of the TSP standard: PM_{10} and $PM_{2.5}$. PM_{10} represents an ambient air concentration standard for particulates of a diameter of 10 micrometers or less, while $PM_{2.5}$ represents an ambient air concentration standard for particulates of a diameter of 2.5 micrometers or less. The USEPA's annual and 24-hour averaging time SILs for PM_{10} are the same as those which BOEM currently applies to TSP.[90] The current regulation's reference to TSP includes particulates of a larger size than those covered by the USEPA's definition of PM_{10}. At the time the current regulation was promulgated, the use of a TSP standard reflected the USEPA practice; however, the USEPA's standard for PM_{10} has been in place since 1987. Because the USEPA standard has been in place for many years, the majority of OCS operators have already adopted this standard, and BOEM has largely replaced TSP with PM_{10} in the GOM.

The existing SILs for other criteria air pollutants in BOEM's current regulations would not change as a result of this revision in BOEM's regulations, because they are currently set at the same levels as those set by the USEPA. The proposed rule would, however, incorporate the addition of new SILs established by the USEPA, since the adoption of BOEM's original air quality rule. Going forward, there is the possibility that the USEPA will further change the SILs, or add new SILs, in which case BOEM's decision to cross-reference the USEPA's regulation would automatically cause the BOEM significance threshold rates to change, as well.

There are some circumstances where the USEPA has not established a SIL for a given CP or

[90] The annual SIL for TSP in the current BOEM regulations has an equivalent for PM10 because the USEPA has not revoked the annual SIL for PM10, although the USEPA revoked the annual NAAQS for annual PM10 subsequent to the publication of BOEM's air quality regulations.

in which it has established only an interim SIL that it or the relevant State air quality regulatory authority may also use in evaluating the impacts of a proposed facility. In some circumstances, the USEPA may have established one or more SILs in its regulations and an additional interim SIL(s), typically for some other averaging time(s), outside of its regulations. In other cases, the USEPA may have repealed a SIL without establishing a new one. Thus, there may be situations where a lessee or operator may propose a plan that exceeds the relevant EETs, then perform modeling only to find there may not be a relevant SIL to compare against its incremental emissions or a situation where it may be unclear which SIL(s) to use. In similar situations where the USEPA or the State would issue an air quality permit, the USEPA or the relevant State permitting authority has issued permitting guidance to supplement its regulations. The proposed rule does not contain a provision on this topic and BOEM solicits comments on how best to address this issue.

BOEM also requests comment on what BOEM should do about NAAQS that do not have corresponding SILs in the USEPA regulations; comments on the following two alternative approaches are particularly welcome. One alternative would be for BOEM to require in the final rule that, for any NAAQS (pollutant and averaging period) for which there is no SIL in 40 CFR 51.165(b)(2), lessee and operators must apply the appropriate SIL being used by the most affected State (at the point where the incremental emissions caused by the facility would be highest). Another alternative would be for BOEM to establish its own interim SILs based on the USEPA's interim SILs, to be used unless and until the USEPA finalizes appropriate SILs in its regulation at 40 CFR 51.165(b).

Section 550.306 - What ERM are required for a short-term facility?

Proposed section 550.306 would set forth the requirements for ERM for both criteria and

major precursor pollutants on a short-term facility when modeling shows the facility will cause emissions to exceed the SILs, or when modeling will indicate a violation of the NAAQS for O_3. ERM would also be required when emissions of VOCs exceed the EETs under the proposed section 550.303(b). Unlike the proposed requirements for a long-term facility, the proposed control requirements for a short-term facility would be the same for criteria and major precursor pollutants.

Under BOEM's existing regulations in section 550.303(h), "[t]he lessee shall apply BACT to reduce projected emissions of any air pollutant from a temporary facility which significantly affects the air quality of an onshore area of a State." The current regulations also explicitly exempt temporary facilities from the requirements for controls set out in current regulations in section 550.303(g), which require additional analysis on top of the application of BACT for non-temporary facilities. In contrast, the proposed rule would require lessees and operators to apply only operational controls and/or equipment replacements, but not BACT in those situations where a SIL or VOC EET is exceeded. The proposed rule, like the current regulations, would not require additional AAI analysis after the application of ERM for a short-term facility.

Under the proposed rule, an ERM analysis would start by identifying all available non-BACT control measures that would be relevant to the emissions of the pollutant(s) for which ERM would be required. The lessee or operator would then determine which of these are technically feasible. BOEM is proposing to define "technically feasible" in proposed § 550.302. The proposed rule would also add a requirement that a "demonstration of technical infeasibility must be clearly documented and must show, based on physical, chemical or engineering principles, that technical difficulties would preclude the successful use of the applicable emission control technology or methodology." The lessee or operator would rank the technically feasible control

measures by their ability to reduce actual emissions, based on the overall emission control efficiency (e.g., percent pollutant removed, or emissions per unit of product) for each alternative. The lessee or operator would then evaluate and select the non-BACT ERMs that are technically feasible and that are designed to limit the facility's projected emissions to the greatest practicable extent, taking into consideration the effectiveness of emissions control(s). Then the lessee or operator would be required to evaluate the cost effectiveness of each of the selected technically feasible operational controls in order to determine its economic impacts and feasibility. To justify elimination of an option on economic grounds, the lessee or operator should demonstrate that the costs of pollutant removal for that option are disproportionately high. As an alternative, lessees or operators could substitute permanent emissions credits for operational controls or equipment replacements, at their discretion.

If no technically feasible operational controls or equipment replacements could be implemented cost effectively and the projected emissions affect only attainment areas, then no ERM would be required for the pollutant exceeding a standard other than those that the lessee or operator proposed in its plan. If no technically feasible operational controls or equipment replacements could be implemented cost effectively, and the projected emissions would affect a non-attainment area, then the Regional Supervisor could require the implementation of other ERM, including BACT, as a condition of approving the lessee's or operator's plan. Such ERM could be required on either a permanent or temporary basis, depending on the circumstances and location of the proposed facilities. If this ERM includes any proposed BACT, then the lessee or operator would be required to provide a description of the associated energy, environmental, and economic impacts, and other costs.

The nature of any ERM could vary widely depending on the issue being addressed and the

location of the relevant operations. Examples of such measures could be: running specific equipment at optimal efficiency for certain periods of time, only operating certain equipment on specific days or for some number of days in a month or week or at specific times of day, etc. They could vary based on the existing background levels of pollution, the climatic conditions and the type of plan proposed. Operational controls could involve using specific types of fuel or specific types of combustion technology or limiting the use of certain equipment to a specific purpose or circumstance. They could also involve keeping certain equipment at a specified distance from other equipment or facilities, etc.

The purpose of implementing such controls would be to keep the volume of air pollutants produced in connection with the operations conducted under a plan within a range such that none of the AAQSB would be violated, either on a temporary or ongoing basis, thereby ensuring such operations comply with BOEM air quality requirements.

Paragraph (b) of the proposed section would specify what must be included in a lessee's or operator's plan describing the results of the ERM analysis. This would consist of: an evaluation of the ERM selected, quantifying and verifying the emissions reductions measures and associated costs; a description of how the selected operational controls or replacement equipment meets the criteria in section 550.309 for ERM; and a calculation of the revised projected emissions (or complex total emissions, where applicable), taking into account the selected operational controls or replacement of equipment.

The proposed rule would specify that, if an operator has committed to apply appropriate operational controls or replacement of equipment, in the case of a plan affecting only an attainment area, or committed to apply appropriate ERM, with respect to a plan affecting a non-attainment area, BOEM could approve the plan, provided all other applicable requirements have

been met. However, if BOEM were to have a reason to believe a lessee's or operator's projected emissions may cause the NAAQS to be exceeded, the Regional Supervisor could require additional data, analysis, or modeling to demonstrate compliance with the NAAQS or might require additional ERM so that the NAAQS are not exceeded.

Section 550.307 - What ERM are required for a long-term facility?

Unlike short-term facilities, long-term facilities are generally intended to remain in operation for many years. Correspondingly, they, in conjunction with their MSCs, generally emit considerable amounts of air pollutants on an ongoing basis. Because of this, long-term facilities warrant more stringent air quality compliance requirements. This proposed section describes the air quality control analysis required of such facilities.

Proposed section 550.307 would set forth the requirements for ERM on a long-term facility when modeling shows the facility will cause emissions exceeding the AAIs or SILs (or when it would cause a violation of the NAAQS for O_3). This proposed section would expand upon the existing control requirements for facilities in paragraph 550.303(g) of the existing regulations. The current regulations mandate the application of BACT whenever a facility's emissions exceed the SILs, but they then allow "the application of additional emission controls or through the acquisition of offshore or onshore offsets." The proposed rule eliminates the preference for BACT and provides for additional options, including equipment swaps and operational controls. As is the case with current BOEM regulations, the requirements of this section differ depending on whether the potential impacts of any proposed facility would affect only attainment areas or whether non-attainment areas might also be affected. More stringent air quality requirements, of course, apply to situations where an area already exceeds a relevant pollution standard than in an area that is below that standard (i.e., has better overall air quality). BOEM has not proposed a

definition of what “affect” means in this context but solicits comments on how this determination should be best made.

One alternative would be that a facility that does not cause an exceedance of a SIL at any location in a State would not be considered to be one that impacts an affected area of the State. Conversely, any location at which a facility’s projected emissions could cause an exceedance of a SIL would constitute an affected area of a State for the purpose of this rule. The difficulty with this approach, however, lies in the fact that there may be many locations at which a SIL is exceeded and the boundary of this exceedance may be difficult or impractical to determine -- particularly in the context of the non-attainment areas.

Another alternative would be to require that any modeling be done with receptors just inside the outer boundary of a non-attainment area or at the attainment/non-attainment area boundary nearest to, or directly downwind of, the proposed facility. If modeling indicates that that no AAQSB would be exceeded at that point, then no non-attainment area would be considered affected by the proposed facility.

There may be other approaches to handling the determination of affected areas. BOEM would welcome suggestions or alternatives for how best to address this issue.

Paragraph 550.307(a) – Control of emissions of VOCs from a long-term facility

The proposed rule at 550.307(a), like the current regulation, separates requirements for controls of VOCs from requirements for controls for other air pollutants. If the projected emissions of VOCs exceed an emission exemption threshold, then the lessee or operator would be required to apply controls. The controls required would depend upon the attainment status of the areas of the State(s) potentially affected by the emissions. If the projected emissions affect, or have the potential to affect, only attainment areas for O_3 and $PM_{2.5}$, then the lessee or operator

would be required to propose ERM, excluding BACT, and would be required to demonstrate the proposed ERM would reduce the emissions of VOCs to the lowest practicable and reasonable rate (i.e., the lowest rate that can reasonably be achieved). If any designated non-attainment area for O_3 or $PM_{2.5}$ is affected, then the lessee or operator would be required to evaluate all the potentially applicable ERM, including BACT, and propose sufficient ERM to reduce VOC emissions below the applicable emission exemption threshold. For any proposed BACT, the operator or lessee would be required to provide a description of the associated energy, environmental, and economic impacts, and other costs.

Paragraph (a)(3) of the proposed section would provide for an exception to the requirement to reduce VOC emissions when they affect a State coastal area where an increase in VOCs would not lead to the formation of increased O_3 or would lead to a decrease in the formation of O_3. The proposed rule would also provide that emissions credits could be utilized as an alternative to any other relevant ERM, regardless of the attainment or non-attainment status of any area that would potentially be affected by the projected emissions associated with any lessee or operator's proposed plan.

Paragraph 550.307(b) – Control of emissions of criteria air pollutants from a long-term facility

For emissions of criteria air pollutants, the controls that would be required for long-term facilities also depend on the attainment status of the area affected by the projected emissions. If all areas affected by the projected emissions are designated attainment areas, then the lessee or operator would be required under section 550.307(b)(1) to evaluate all the potentially applicable ERM, excluding BACT, and propose sufficient ERM to reduce the ambient impact of the projected emissions and to conduct refined modeling to show the effects of the ERM, using the

process described in proposed section 550.306(a)(1) through (4) for a short-term facility. Once the appropriate ERM have been determined, the lessee or operator should re-conduct modeling to evaluate the effect of applying ERM to reduce emissions and to determine whether or not the operator or lessee's reduced emissions would cause an exceedance of the AAIs. Lessees and operators would be required to combine the ambient air effects of their emissions with the emissions from other onshore and offshore sources which contribute to the consumption of the maximum allowable increases above the baseline concentrations for each air pollutant and baseline area, as established in 40 CFR 52.21. In conducting this additional modeling, operators would be required to use the ambient air concentration data, as specified in proposed section 550.304(e)(2). If this modeling shows that ERM is not sufficient to reduce the projected concentration increases below the AAIs applicable to the potentially affected State, then the lessee or operator would be required to apply additional ERM and perform additional modeling until such efforts confirm that no AAIs would be exceeded. As discussed above, this was the intent expressed in the preamble to the BOEM's current rule. This proposed rule would make this intent clear in the regulatory text itself.

Once this additional modeling shows the ERM is sufficient to reduce the projected concentrations below the AAIs applicable to the potentially affected State, then the lessee or operator would be required to compare the resulting design concentration of each criteria air pollutant with the NAAQS. If any of the NAAQS are shown to be exceeded, the lessee or operator would be required to apply additional ERM and perform additional modeling until it determines none of the NAAQS would be violated.

As discussed earlier, the current regulations use the MACIs in place of the AAIs for determining whether long-term facilities have sufficiently reduced their impacts on attainment areas. The

MACIs were based on the AAIs at the time the current rule was promulgated. While BOEM is now proposing to cross-reference the AAIs, it is also considering whether other standards would be better. Particularly, BOEM is considering whether it would be better to use standards that are based on a percentage of the level of the NAAQS, rather than the AAIs. BOEM would appreciate comment on this issue and on what standards to set. BOEM also requests comments on the most appropriate method for defining the size and extent of the relevant "baseline areas" for the purpose of conducting the AQRP analysis.

Under the proposed rule at paragraph 550.307(b)(2), if projected emissions affect any area designated as a non-attainment area, then the lessee or operator would be required to evaluate all the potentially applicable ERM, including BACT, and propose sufficient ERM to reduce the ambient impact of its emissions of all criteria air pollutants below the applicable SILs at 40 CFR 51.165(b)(2). The proposed rule would then require a lessee or operator to conduct modeling using the revised projected emissions and compare the results with the SILs. If photochemical modeling would be required under section 550.304, then the lessee or operator would be required to also perform photochemical modeling and add the results of that modeling to the results of the additional dispersion models. If the modeling results exceed any SIL for any criteria air pollutant for any averaging time, then the lessee or operator would be required to apply additional ERM until additional modeling demonstrates all projected emissions have been fully reduced below the SILs for all criteria air pollutants for every applicable averaging time.

Paragraph 550.307(c) – Exceptions to the ERM requirement

The proposed rule at paragraph 550.307(c) would also provide that, for any averaging time other than an annual period, a facility's projected emissions may cause an ambient impact that exceeds an applicable AAI one time during any rolling 12-month period for any given criteria air

pollutant at any one location and still be considered to have fully reduced emissions. This provision is retained from the language in existing regulation subparagraph 550.303(g)(2)(i)(B), which states: "For any period other than the annual period, the applicable maximum allowable increase may be exceeded during one such period per year at any one onshore location;" however, slight changes have been made in the wording for clarity.

Additionally, this proposed paragraph would provide that if an operator or lessee's projected emissions of NO_x potentially affect a State coastal area, but would not cause an increase, or would cause a reduction, in the formation of O_3, then no ERM are required for NO_x. However, this exception would not apply if the potentially affected area is an attainment area for NO_2 and the lessee or operator's analysis indicates that the AAIs for NO_2 would be exceeded in the absence of such ERM or if the potentially affected area is a non-attainment area for NO_2.

This proposed paragraph would also provide an exception if the implementation of a plan under these regulations would compromise the safety of the operation of the facility, and such implementation of any AAQSB cannot be otherwise addressed.

Paragraph 550.307(d) – NAAQS requirement applicable to all plans

The proposed rule at paragraph 550.307(d) would contain a provision, consistent with the current BOEM regulations at subparagraph 550.303(g)(2)(i)(B) ("No concentration of an air pollutant shall exceed the concentration permitted under the national secondary ambient air quality standard or the concentration permitted under the national primary air quality standard, whichever concentration is lowest for the air pollutant for the period of exposure"), stating no concentration of an air pollutant could exceed the concentration permitted under any primary or secondary NAAQS, whichever concentration is lowest for the air pollutant for the period of exposure. The proposed rule would state that NAAQS may not be exceeded, even for a short-

term facility.

Paragraph 550.307(e) – Emissions credits

The proposed rule would clarify that a lessee or operator may propose to use emissions credits to achieve the equivalent reduction of emissions for any criteria air pollutant as an alternative to any other ERM, regardless of the attainment status of the State area affected by its facility's potential emissions.

Section 550.308 - Under what circumstances will BOEM require additional ERM on my proposed facility or facilities?

The purpose of this proposed provision is to provide a safeguard to the plan approval process, such that any approval of a facility made according to these regulations does not cause a violation of an applicable air quality control standard. Because all of BOEM's plan reviews are done on a prospective basis, it is possible the impacts of the implementation of such a plan could cause an adverse effect on a State that was not anticipated. This provision in the proposed rule provides a mechanism for State and local government entities, and certain Federally-recognized Indian tribes, that might be adversely affected by the approval of a plan or a RUE, pipeline ROW, or lease term pipeline application to raise objections on the basis of data or information that may not have been available to BOEM at the time a plan was originally approved. The current rule contains a similar provision that applies only to States.

The current regulations, under paragraph 550.303(j), provide "[i]f … the Regional Supervisor determines or an affected State submits information . . . which demonstrates . . . that projected emissions from an otherwise exempt facility will, either individually or in combination with other facilities in the area, significantly affect the air quality of an onshore area, then the Regional Supervisor shall require the lessee to submit additional information to determine

whether emission control measures are necessary."

Paragraph 550.308(a) – Regional Supervisor review

The proposed rule at paragraph 550.308(a) would expand upon this provision by specifying the Regional Supervisor could require the lessee or operator to apply additional ERM on either a temporary or permanent basis, depending on the circumstances, if he/she determines the projected emissions, or, where applicable, complex total emissions, may cause or contribute to a violation of a NAAQS, based on 1) information submitted by a State, or a local government, or a Federally-recognized Indian tribe; 2) information resulting from a cumulative impacts analysis conducted for a NEPA analysis; 3) a compliance review of a proposed plan under subpart B, paragraph 550.232(b) for an EP, or paragraph 550.267(c) for a DPP or DOCD; or 4) the declaration by an adjacent State, or the USEPA, of an air quality emergency for a location that may be affected by air emissions generated by operations.

Paragraph 550.308(b) – Lessee's or operator's right to challenge.

The proposed rule would provide in paragraph 550.308(b) any lessee or operator affected by the requirements of this section would be given notice of the Regional Supervisor's determination under paragraph (a) of this proposed section, as well as an opportunity to present additional information and analysis for review by the Regional Supervisor. Under the proposed rule, if the lessee or operator presents the Regional Supervisor with additional information and analysis, the Regional Supervisor would reassess whether the projected emissions, or complex total emissions, might cause or contribute to a violation of any NAAQS, and whether additional ERM would be required for the facility. Similar to the current regulations, under the proposed rule, the Regional Supervisor would then notify the affected State, or Federally-recognized Indian tribe, and explain the reasons for this determination.

Section 550.309 – What requirements apply to my ERM?

The proposed rule would provide explicit requirements to ensure the sufficiency, effectiveness, and control efficiency for a lessee's or operator's ERM. It also would specify how a lessee or operator could use emissions offsets.

Paragraph 550.309(a) – Sufficiency

Under the proposed rule at paragraph 550.309(a), a lessee's or operator's proposed ERM would need to be sufficient to achieve actual emissions reductions corresponding to those reported in the plan for the duration of the plan's operations under all reasonably foreseeable conditions. Under the proposed rule, the Regional Supervisor would review a lessee's or operator's proposed ERM on a case by case basis and make a determination whether such measures met the applicable criteria.

Paragraph 550.309(b) – Effectiveness

Under paragraph 550.309(b), the lessee or operator would need to continually ensure the effectiveness of its ERM for the duration of the plan's operations under the proposed rule. If emissions reductions measures become disabled or unavailable, the lessee or operator must immediately notify the Regional Supervisor and replace such ERM with others of equal or superior effectiveness within 30 days of discovering the disability or unavailability, unless the Regional Supervisor approves an extension not to exceed 90 days.

Paragraph 550.309(c) – Control Efficiency

The proposed rule at paragraph 550.309(c) would specify that the analysis of the proposed ERM would need to reflect actual ECE. The proposed rule would require a lessee or operator to substantiate any ECEs it projects and provide sufficient evidence to justify its projected ECEs to the satisfaction of the Regional Supervisor. The rule would further specify at paragraph

550.309(c)(1) that, should the substantiating data indicate a range of efficiencies, the lessee or operator would be required to utilize the more conservative estimates (i.e., those that would result in lower ECE) in its analysis and modeling. The intent of this provision is to ensure the proposed benefits that would result from BACT and/or other emissions controls would not be over-estimated, in order to ensure any controls that are proposed would be sufficient to actually reduce the emissions of a proposed facility to the levels projected in the analysis conducted pursuant to subpart C. Consistent with this, a further requirement is proposed at paragraph 550.309(c)(2) whereby ECE estimates of 100 percent ECE would generally not be considered acceptable, except in cases where there is clear and convincing and/or historical evidence to justify their use. This requirement recognizes the fact there are virtually no emissions control mechanisms that can entirely eliminate all potential air pollutant emissions, and it is both unrealistic and unreasonable to make such an overstated estimate, without definitive evidence of its accuracy.

Paragraph 550.309(d) – Emission reduction monitoring

Further, under 550.309(d), if ERM would be required in an approved plan, then the proposed rule would authorize the Regional Supervisor to require lessees and operators to provide information needed to verify the effectiveness and efficiency of the proposed ERM. The proposed rule states that a lessee or operator with a plan that is approved subject to the application of BACT must ensure that the emissions associated with each emissions source for which BACT is required complies with the emissions verification requirements of section 550.311 of this subpart. The rule further states that the Regional Supervisor may also require the installation of emissions measurement meters if the Regional Supervisor determines that such meters are necessary to ensure compliance with this requirement (i.e., that other alternatives may

not be sufficient to ensure compliance).

Paragraph 550.309(e) – Emissions Credits

The purpose of acquiring an emissions credit is to cause a reduction in the emissions of a given pollutant from a business or activity unrelated to the plan, so that the total concentration of a given pollutant within a given area will not increase (as a result of the operations associated with a plan) beyond a permissible level.

The proposed rule at paragraph 550.309(d) would set forth requirements for emissions credits. First, the lessee or operator would be required to acquire emissions offsets from emissions source(s), either offshore or onshore, that affect the air quality of the same AQCR). Second, for a CP, the emissions credits that the lessee or operator proposes would need to provide a net air quality benefit for the same pollutant; for a precursor pollutant, any emissions credits that a lessee or operator proposes would need to provide a net air quality benefit for that CP for which the pollutant is a precursor. Third, the lessee or operator would need to demonstrate to the Regional Supervisor that the emissions credit it proposes binds it and any other parties who agree to lower their emissions. Fourth, the lessee or operator would need to also demonstrate that any emissions reductions will last for the entire period of operations covered in its plan. The Regional Supervisor might periodically require the lessee or operator to certify that the emissions reductions are still in place. Fifth, any emissions credits would need to reduce emissions below rates otherwise required by law. Sixth, in addition to BOEM, the lessee or operator would be required to notify the appropriate State air quality control jurisdiction of its proposal to acquire emissions credits, modify the permit for the underlying onshore facility to reflect the proposed reduction in emissions and, if necessary, its need to revise the State Implementation Plan to include the information regarding the emissions credits the lessee or

operator has acquired. Seventh, emissions credits would be allowed in those circumstances where BOEM could readily verify the historical emissions from the facility to be used for the emissions credit, and the emissions reduction associated with the acquired emissions credit. Eighth, the approval of an emissions credit would not be granted unless the reductions in emissions associated with the credit are verifiable by an appropriate State, tribe or federal agency (primarily through the modification of the air emissions permits for the relevant onshore facility). Finally, the proposed rule would specify that nothing in these regulations is intended to restrict emissions credits from being obtained and divided among multiple lessees or operators.

If an OCS lessee or operator proposes to use emissions credits as an emission reduction measure (ERM), in lieu of BACT, operational controls or the replacement of equipment used on the OCS, then that lessee or operator would be responsible for ensuring that the reductions are permanent and verifiable. In the event that a lessee or operator elected to reduce the pollutant emissions of an onshore facility to offset corresponding emissions for a new facility proposed on the OCS, that lessee or operator could ensure that the reductions are permanent and verifiable by notifying the relevant State air quality regulatory body and seeking a modification of the permit for the underlying onshore facility to reflect the proposed reduction in emissions. The State could then update the permitted level of emissions which would ensure compliance with the reduced emissions requirements on an ongoing basis. The State could also update its SIP, if appropriate, and modify its reporting to the U.S. Environmental Protection Agency. BOEM does not believe that this process would be unduly burdensome to the States or that it would require any State-funded monitoring or compliance activities beyond those that are already in place or contemplated.

Rather, BOEM believes that this process would largely be beneficial to the States, in that the

reduction in air emissions of onshore facilities, beyond those that would otherwise be legally required, could cause a net air quality benefit to the States and localities affected. Such a change could also allow a greater level of economic development, and a greater number of approvals for additional stationary sources onshore than might otherwise be the case (in the absence of the emissions credit). For these reasons, BOEM believes that the potential use of emissions credits by lessees or operators would be neither onerous nor unreasonable.

The proposed rule would allow emissions credits to be obtained and divided among multiple lessees or operators (presumably located near to one another in the vicinity of the State) in order to spread the costs of complying with air quality requirements over a broad area, or for any other reason.

The manner in which the proposed rule would have the potential to affect the relationship between the federal and State governments has to do with a situation in which an OCS lessee or operator proposes to use emissions credits as an emission reduction measure (ERM), in lieu of BACT. In the event that a lessee or operator elected to reduce the pollutant emissions of an onshore facility to offset corresponding emissions for a new facility proposed on the OCS, that lessee or operator would be required to notify the relevant State air quality regulatory body and arrange for the modification of the permit for the underlying onshore facility to reflect the proposed reduction in emissions. The State could then update the permitted level of emissions which would ensure compliance with the reduced emissions requirements on an ongoing basis. The State may also need to update its SIP, as appropriate, and modify its reporting to the USEPA. Lessees have not typically utilized emissions credits as a pollution mitigation measure in the past. BOEM solicits comments on the practicality and potential costs associated with the implementation of these proposals at the State level, as well as comments on how these proposals

could most effectively be implemented in coordination with the States.

Paragraph 550.309(f) – Emission Reduction Measures

Under proposed 550.309(f), unless otherwise specified, the lessee or operator could employ any operational control, equipment replacement(s), BACT, or emissions credit, on either a temporary or permanent basis, to reduce the amount of emissions that would occur in the absence of such measures. The proposed paragraph would also provide that any proposed ERM would become a condition of its plan upon approval and could be required on either a permanent or temporary basis, depending on the circumstances and location of the proposed facilities.

In addition, the rule would clarify that any lessee or operator proposing a plan that includes equipment replacement would be subject to compliance with all other applicable federal regulations, including those of the USCG.

Section 550.310 - How will revisions to the ambient air standards or benchmarks affect my plan?

Paragraph 550.310(a) – Review of plans

The proposed rule at paragraph 550.310(a) specifies that BOEM would review air pollutant emissions data in a plan according to the AAQSB that are in effect on the date the plan is deemed submitted. Because BOEM's regulations would cross-reference the USEPA's standards, BOEM would make the appropriate changes to its review of plans if the USEPA revised such standards.

Paragraph 550.310(b) – Proposed plans

The proposed rule at paragraph 550.310(b) would specify that all activities described in initial, revised, modified, and supplemental plans would be required to comply with the AAQSB in effect on the date the plan is deemed submitted.

The proposed rule, however, would provide exceptions in two situations. First, under subparagraph 550.310(b)(1), if a plan were deemed submitted shortly after the effective date of a new or revised AAQSB, and the lessee or operator believed the immediate application of the new or revised AAQSB would be impracticable or would otherwise impose an unreasonable hardship on its proposed operations, then the lessee or operator would be able to request a deferral from the requirement to comply with the new or revised standard. The Regional Director, with the concurrence of the Director, would review the request and would have the discretion to grant a temporary deferral, not to exceed two years, from compliance with the new or revised AAQSB based upon a finding of impracticability or undue hardship. Second, under subparagraph 550.310(b)(2), for any proposed plan, upon a finding that noncompliance with a new or revised AAQSB would not significantly affect the air quality of any State onshore or over State submerged lands, the Director would be able to grant a departure from compliance with the revised AAQSB. The Director would have the discretion to condition the departure upon any requirement(s) deemed necessary to avoid causing or contributing to a violation of the pre-existing NAAQS. This exception would account for situations in which the USEPA could revise or add an ambient air quality standard or benchmark that would not be relevant to OCS operations or that would go beyond BOEM's mandate to prevent significant effects on the air quality of a State, would be impracticable, or would otherwise impose an unreasonable hardship.

Paragraph 550.310(c) –Approved plans

Under the proposed rule, if a lessee or operator is operating under an approved plan, it would be required to resubmit a plan for a periodic air quality review no more frequently than ten years after BOEM's previous approval of the plan. This provision would be added in furtherance of the objective of section 5(a)(8) of OCSLA, which requires BOEM to ensure compliance with the

NAAQS, and which makes no exceptions with respect to previously approved plans. All of the applicable requirements of this subpart in effect on the date of resubmission would apply on the same basis to a resubmitted plan as for an initial plan. BOEM requests comments on this provision, particularly with respect to the potential impact on lessees and operators.

In order to ensure that the lessee or operator's emissions remain compliant with OCSLA's air quality mandate, starting in 2020, subsequent to the date of the Notice, BOEM proposes to conduct periodic reviews of plans approved prior to the effective date of the new exemption thresholds. At that point, each lessee or operator whose plan was approved prior to the effective date of this proposed rule would be required to resubmit its plan for a new air quality review on a schedule listed in the proposed rule. Although the length of time required between the original plan review and the subsequent follow-up review would vary, in no case would a lessee or operator be required to re-submit its plan for an air quality review more than once every ten years.[91] A plan initially submitted or resubmitted pursuant to this proposed provision would be required to comply with the provisions of section 550.205 as they exist at the time the plan is submitted, using the most current data on emissions factors and MSC emissions, and such a plan would, in all cases, be reevaluated against the EETs and formulas as they exist at the time of the plan resubmission, rather than those in effect at the time the plan was originally approved.

When a plan is resubmitted under this provision that plan would be required to include estimates for the annual projected emissions for the subsequent ten years or for however long the facility would be expected to remain in operation, whichever is shorter. With respect to the emissions calculations for any given emissions source, the resubmitted plan would be required to

[91] Unless the lessee or operator were required to re-submit a plan for reasons unrelated to the ten-year periodic review cycle (i.e., because it was proposing to change the plan schedule, add additional equipment or for some other reason).

account for the most recent available data on the actual emissions of that emission source. Under the proposal, if a plan would indicate an exceedance of any applicable emission exemption threshold, all applicable requirements of this subpart would apply as for an initial plan.

For plans that were approved prior to the effective date of this rule, the lessee or operator would be required to submit a new plan for a new air quality review of its existing facilities according to a schedule in a table listed in the proposed rule. This table would require that the oldest plans be submitted first for re-review and that the most recently approved plans would be re-submitted last, according to the same ten-year review cycle. In each case, each plan would be due the same month as the month in which the plan was originally approved.

After the year 2023, plans would be re-reviewed every ten years; and the plan resubmission would be required in the month of the tenth anniversary of the initial plan approval, or the month of the tenth anniversary of the approval of a revised, modified, resubmitted or supplemental plan, whichever is later.

If a lessee or operator proposes to make a change to the equipment on its existing facility or facilities in a year or years when its plan already anticipated operations, and its proposed change would result in an increase in air pollutant emissions from that equipment for any air pollutant, the lessee or operator would be required to submit a revised plan, not simply a plan that describes the specific change being proposed.

The proposed rule would provide that if a lessee or operator fails to submit a revised plan as required under this section, then the previous approval of its plan would be revoked. In this circumstance the lessee or operator could also be subject to civil penalties or other appropriate sanctions, including the requirement to cease operations.

Section 550.311- Under what circumstance will I be required to measure and report my

actual emissions?

The purpose of this section is to describe under what circumstances a lessee or operator would be required to demonstrate its actual emissions have been and are in compliance with its previously approved plan(s).

Paragraph 311(a) - Compliance demonstration conditions

Paragraph (a) of this proposed section would provide that facilities described in plans that were approved by BOEM under the listed conditions would be required to measure actual emissions: 1) if a plan is approved subject to the implementation of BACT or emissions credits; 2) if any emissions source on your facility uses any engine or equipment that is neither certified by the USEPA for domestic use in the U.S. nor MARPOL-compliant; 3) if the Regional Supervisor determines that lessees or operator's projected emissions, complex total emissions, for any criteria or precursor air pollutant, calculated on either an annual basis or on the basis of a 12 month rolling sum, may significantly underestimate the actual emissions, based on either historical data or ambient air monitoring; or, 4) if BOEM determines that your facility is causing or contributing to an exceedance of the NAAQS in any State.

Paragraph 550.311(b) - Emissions reporting requirements

For lessees and operators who would be required to measure and report actual emissions, proposed subsection (b) would state several basic requirements for measurement and reporting of actual emissions. Lessees and operators that are required to measure and report emissions would be required to include enough of the emissions sources to ensure that the actual emissions associated with facilities and MSCs operating under an approved plan are consistent with the projected emission limits approved for that plan. In other words, they would be required to demonstrate that a sufficient number of their large emissions sources are at or below the

projected emissions for that equipment so that the emissions associated with the remaining emissions sources would not be sufficient to cause an exceedance of the projected emissions limits approved in the plan.

Under the proposed rule, each lessee or operator would be required to consider every source that was included in its approved plan in addition to any source that would be classified as part of the projected emissions if the plan were resubmitted under the current regulations. Since the objective is to ensure that the actual emissions associated with facilities and MSCs operating under an approved plan do not significantly exceed the emissions projected for that plan, BOEM proposes to provide (as an option) a list of the kinds of emissions sources that lessees and operators could monitor to satisfy the requirements of this paragraph. On facilities, engine reporting and monitoring would include and apply to: onboard facility engines; power generation engines; Hydraulic Power Units (HPU); deck cranes; cementing units; and other engines with a maximum power rating exceeding 200 hp (149 kW). On facilities, this list would exclude: propulsion engines, boilers and incinerators, emergency generators, and lifeboat engines. For MSCs, the emissions sources subject to measurement and reporting could include: propulsion engines; power generation engines; marine auxiliary engines; and engines with a maximum power rating exceeding 200 hp (149 kW). On MSCs, this list would exclude boilers and incinerators, emergency generators, all engines onboard science vessels, offshore supply vessels, or lifeboats.

Further, measurement of actual emissions would be required to reflect actual operations on the OCS and not exclusively on the basis of ECEs, fuel logs, or activity data. The lessee or operator would need to demonstrate that the data submitted to BOEM under this section is consistent with any data provided to BOEM under the requirements of section 550.187. The

lessee or operator would be required to provide this information in a manner and on a schedule determined by the Regional Supervisor.

BOEM solicits comments as to how it should best implement the requirements of this section with respect to those facilities that would be required to report their actual emissions. BOEM invites comments on this issue with respect to how best to achieve the objective of obtaining actual data on potentially large pollution emitters while not adversely impacting those small-volume emitters whose emissions do not have any realistic potential to adversely affect the air quality of any State.

Paragraph 550.311(c) - Notification requirements

Proposed sub-section (c) would require the lessee or operator to notify BOEM, if any of its actual emissions exceed its projected emissions at any time after the plan has been approved and to provide BOEM with the appropriate data regarding the exceedance.

If a lessee or operator proposes to make a change to the equipment on its existing facility or facilities in a year or years when its plan already anticipated operations, and its proposed change would result in an increase in air pollutant emissions from that equipment for any air pollutant, the lessee or operator would be required to submit a revised plan, not simply a plan that describes the specific change being proposed.

Paragraph 550.311(d) – Data submittal requirements

As with the reporting done pursuant to section 550.205, subsection (d) of the proposed section would specify that a lessee or operator must submit data and information in a format, and using the forms, specified by BOEM. The lessee or operator must submit information in an electronically-readable format, unless otherwise directed by the Regional Supervisor. If it transmits the information to BOEM electronically, then it must use a delivery medium or

transmission method authorized by BOEM.

While the current regulation requires monitoring and reporting of emissions, it does not specify what monitoring is required. The proposed rule at section 550.311 would provide more specificity on how the monitoring and reporting must be carried out. BOEM believes a more comprehensive approach to emissions measurement and monitoring could improve the quality and type of information for estimating impacts on affected States. BOEM requests comments and suggestions with respect to the best approach to post-approval record-keeping, monitoring and reporting, including potential alternative approaches.

Section 550.312 - What post-approval recordkeeping and reporting is required?

Paragraph 550.312(a) – Stack testing

The proposed rule would include requirements necessary to validate the emissions estimates that are described in a plan. The proposed rule would specify at paragraph 550.312(a) if stack testing was used as a method to develop emissions factors under proposed section 550.205 or was used to develop any other information submitted pursuant to that section, then a lessee or operator would be required to conduct the stack testing every three years and to report the results. BOEM seeks comment on whether it should require or recommend that the stack testing data be collected with the USEPA's electronic reporting tool and submitted via CDX (Compliance and Emissions Data Reporting Interface-), so that the USEPA can update the AP 42/WebFIRE emissions factors and so BOEM can compile the relevant data and supply it to other lessees and operators for their use in the future.

Paragraph 550.312(b) – Fuel logs and activity data

Proposed paragraph 550.312(b) would describe the recordkeeping requirements that would be necessary to demonstrate compliance with the plan in all cases, whether or not ERM are

required and whether or not the conditions in proposed paragraph 550.311(a) were satisfied. Under the proposed rule, lessees or operators would be required to retain information on monthly fuel consumption, for each emissions source, including attributed emissions sources, showing the quantity, type, and sulphur content of fuel used; collect facility and equipment usage information, including hours of operation at each percent of capacity for each emissions source. Venting, flaring, flashing and any other release of any air pollutant emissions that would not otherwise be accounted for by fuel consumption would be required to be reported for any emissions source that generates criteria air pollutants or precursor air pollutants in connection with OCS activities.

The proposed rule would require the lessee or operator to retain this information for a period of no less than 10 years. Reporting of fuel logs, facility and equipment activity and usage information, and fuel sulphur content must be provided to BOEM on a schedule established by the Regional Director. This provision is intended to ensure ongoing air quality compliance, after a plan is approved. It would both maintain consistency with the USEPA's approach to regulating OCS operations and retain the requirements of BOEM's current regulations at 30 CFR 550.303(k) and 550.304(g).

If BOEM elects to obtain the relevant data for a lessee's or operator's attributed emissions from an independent third party, then the Regional Supervisor may waive the requirement to submit fuel logs or collect facility and equipment usage information for MSCs.

BOEM solicits comment on whether there are other ways of collecting information or monitoring to ensure ongoing compliance with approved plans. Additionally, BOEM requests comment on alternative approaches to ensure compliance with an approved plan. BOEM also requests specific comment on whether there are ways to minimize the data collection and

reporting burden associated with fuel logs while also ensuring the ongoing compliance with an approved plan. For example, there may be circumstances under which some facilities and/or MSCs would generate such low levels of emissions that there would be no practical possibility that the operations of those facilities and/or MSCs, cumulatively or separately, could exceed any relevant EET(s). Under those circumstances, the requirement to maintain fuel logs and/or activity data records may not be necessary or could be modified. BOEM solicits comment on what those circumstances may be and how BOEM might craft an exception or modification to the record-keeping requirements for small facilities and/or MSCs, so as to minimize the cost burden on lessees and operators – consistent with BOEM's need to ensure the integrity of its air quality regulatory program.

The proposed rule would also specify that record-keeping and reporting must be consistent with the USEPA's requirements for Electronic Reporting and Recordkeeping Requirements for New Source Performance Standards. These are available in the following document: Electronic Reporting and Recordkeeping Requirements for New Source Performance Standards, 80 FR 15099, RIN 2060-AP63, March 2015.

Paragraph 550.312(c) – Meteorological reporting

The current paragraph 550.303(l) provides the Regional Supervisor may require, for a period of time and in a manner approved or prescribed, a lessee to collect and submit meteorological data from any of its facilities. The proposed rule in paragraph 550.312(c) would include a provision with similar language. However, the proposed rule would add a provision allowing a lessee or operator to instead collect and report meteorological data derived from any other mutually agreed upon location with the approval of the Regional Supervisor.

Paragraph 550.312(d) – Other information

The proposed rule in paragraph 550.312(d) would add a provision to make clear the Regional Supervisor might require other information needed to support any finding or determination under subpart C.

Paragraph 550.312(e) – Additional requirements imposed by other agencies

The proposed rule would clarify that another federal agency could impose additional reporting, monitoring, or other requirements beyond those proposed by BOEM. None of the provisions of this paragraph would prevent the imposition of additional monitoring or reporting requirements on the part of BSEE or any other federal agency.

Section 550.313 - Under what circumstances will BOEM impose additional requirements on facilities operating under already approved plans?

The proposed rule would provide that under certain circumstances BOEM might impose additional requirements on existing facilities operating under approved plans. In addition to the new requirement that all plans be subject to a ten-year re-review process, the proposed rule would provide that BOEM might impose other requirements on facilities operating under an already approved plan if an applicable AAQSB changes or if BOEM determines the operations are:

(a) Causing or contributing to a violation of the NAAQS, either individually or in combination with any other offshore operations (this provision would also account for plans approved with either a NO_x or VOC waiver that may not continue to be appropriate);

(b) Emitting unauthorized air pollutants;

(c) Creating conditions posing an unreasonable risk to public health or welfare; or

(d) Violating any applicable federal, State or tribal law related to air quality.

Also if a plan approved as a short-term facility later becomes a long-term facility, the proposed rule would require a lessee or operator to submit an initial plan under the standards applicable to long-term facilities. The proposed rule would allow the Regional Director to grant a temporary exception to this requirement if the short-term facility became a long-term facility as a result of adverse weather conditions or other circumstances beyond the lessee's or operator's control that delayed operations in the lease area. The exception would not be allowed to exceed the number of months the lessee or operator had been unable to operate.

Section 550.314 - Under what circumstances will the Regional Supervisor review the projected emissions from my existing facility or facilities?

The purpose of this proposed section is to outline the ongoing requirements, which are intended to ensure the lessee or operator will not allow its facility or facilities to generate emissions in excess of those approved in the plan.

This section would update and modify the requirements in current paragraph 550.304(a). That paragraph describes a process by which a State, or a Federally-recognized Indian tribe having either a TAS status or a USEPA-approved TIP, can request more information about emissions data or the review of an existing plan. The proposed rule would provide that a State or Indian tribe could request that the Regional Supervisor to supply it with the air pollution data regarding an existing facility's projected emissions, if such data were needed either for the updating of the State's or Indian tribe's emissions inventory or because a State or Indian tribe believed an existing facility's projected emissions might cause or contribute to a violation of the NAAQS. The proposed rule would further provide that lessees or operators might be required to submit air pollutant emissions data to the entity submitting such a request.

Further, under the proposed rule, the entity submitting a request would be permitted to

submit information to BOEM that it believed indicated that projected emissions from an existing facility could cause or contribute to a violation of the NAAQS. In such a case, the lessee or operator responsible for the facility would be given the opportunity to present information to the Regional Supervisor that demonstrates its facility's projected emissions would not cause such an effect. The Regional Supervisor would evaluate the new information submitted and would determine whether the lessee or operator's actual emissions, including their attributed emissions, would have the potential to cause or contribute to a violation of the NAAQS. The Regional Supervisor would base this determination on an evaluation of the emissions data, the available meteorological data, and the distance of the facility from the State or Reservation. If the Regional Supervisor were to determine an existing facility's projected emissions had the potential to cause or contribute to a violation of the NAAQS, then the lessee or operator would be required to submit additional data as requested by the Regional Supervisor. This provision is intended to complement the provision described in paragraph 550.205(m), which outlines those exceptional circumstances under which additional data or information may be required.

D. 30 CFR Part 550, subpart J

The following change is proposed in part 550, subpart J:

Section 550.1012 - What are the air quality requirements for pipeline rights-of-way holders?

Applications for rights-of-way are currently sent to and reviewed by BSEE. The proposed rule would not change that process except to add a requirement that any application for approval of a new pipeline ROW would also be subject to BOEM's air quality requirements. The proposed rule would specify that when a person applies for a right-of-way (ROW) in any part of the OCS under the air quality regulatory jurisdiction of the Department, its application would be

required to include the information required by section 205 of this part and demonstrate that the ROW complies with subpart C of this part. The proposed rule would also specify that any requirement in either section 205 of subpart B or subpart C that refers to plans should be interpreted to apply equally to rights-of-way and that any requirement that refers to lessees should be interpreted to apply equally to ROW holders or grantees.

There are a few exceptions proposed to these requirements that are based on the unique nature of pipeline ROWs: the provisions in subpart C that refer to the consolidation of multiple facilities and, the periodic resubmittal of plans under proposed paragraph 550.310(c) would not apply to ROW holders or grantees.

In addition, the proposed rule specifies that no additional requirements would apply to a proposed or existing RUE that is already included within the scope of an existing or proposed exploration or development plan. The proposed rule would also specify that BOEM will notify BSEE of its determination that the organization or individual has provided the information required by section 550.205 and met the requirements of subpart C of this part. If necessary, BOEM would notify BSEE of additional conditions necessary to ensure that the activities will comply with subpart C of this part.

VI. Interagency and Public Outreach

The Department has and continues to make a substantial effort to review its proposals with relevant stakeholders, both within and outside the federal government. It has conferred, and intends to continue to further confer, with the BSEE, the BLM, the FWS, the NPS, the USEPA, the United States Coast Guard (USCG), the National Oceanic and Atmospheric Administration and other relevant federal agencies prior to formulating the final rule. BOEM also intends to review this proposed rule with affected States.

DOI strives to strengthen its government-to-government relationship with Federally-recognized Indian Tribes and Alaska Native Claims Settlement Act Corporations through a commitment to consultation with Indian Tribes and recognition of their right to self- governance and Tribal sovereignty. This proposed rule will be subject to an extensive public comment period and the views of all potentially affected industry and interested environmental groups will be solicited and carefully considered. The Department will consider and evaluate the comments of all potentially affected and interested parties, consistent with the OCSLA mandate that it appropriately balance the economic benefits associated with "expeditious and orderly development" against the potential environmental risks (i.e., "subject to environmental safeguards") that may be associated with any changes to existing air quality regulations.

VII. Legal & Regulatory Analyses

A. Statutes

1. National Environmental Policy Act (NEPA) of 1969

BOEM has developed a draft Environmental Assessment (EA) to determine whether this proposed rule would have a significant impact on the quality of the human environment under the NEPA. The draft EA is available for review and public comment in the docket for this proposed rule at www.regulations.gov [INSERT FULL URL]. Questions or comments related to the EA should be directed to Eric Wolvovsky at 45600 Woodland Road, Sterling, VA 20166; phone (703)787-1719; or email at Eric.Wolvovsky@boem.gov.

2. Paperwork Reduction Act (PRA) of 1995

This proposed rule contains a collection of information that has been submitted to the OMB for review and approval under 44 U.S.C. § 3507(d). If you wish to comment on the IC aspects of this proposed rule, you may send your comments directly to OMB (see the ADDRESSES section

of this notice). Please reference 30 CFR 550, Subpart C, Air Quality, 1010-NEW, in your comments. To see a copy of the IC request submitted to OMB, go to http://www.reginfo.gov (select Information Collection Review, Currently under Review); or you may obtain a copy of the supporting statement for the new collection of information by contacting the Bureau's Information Collection Clearance Officer at (703) 787-1025.

The title of the collection for this rule is Air Quality, 30 CFR part 550, subparts A, B, and C (Proposed Rulemaking).

This rulemaking proposes to add new IC requirements to current regulations under 30 CFR part 550, subparts A, B, and C. The IC for the current regulations has been approved under the following OMB Control Numbers:

- 1010–0114 (subpart A), expires December 31, 2016 (30,635 hours; $165,492 non-hour costs).
- 1010-0151 (subpart B), expires January 31, 2018 (432,512 hours; $3,939,435 non-hour costs).
- 1010-0057 (subpart C), expires January 31, 2018 (112,111 hours; $0 non-hour costs).

This rule would add new and expand existing requirements under regulations at 30 CFR part 550, subparts A and B, and would provide a rewrite of 30 CFR part 550, subpart C. Therefore, we are requesting OMB assign a new OMB Control Number for the IC requirements in the proposed rule. When the final rule becomes effective, we will move the requirements and burdens associated with subpart A and subpart B into their respective collections. We will use the new OMB Control Number for the IC requirements and burdens associated with the new subpart C and will discontinue the use of current OMB Control Number 1010-0057.

The PRA provides an agency may not conduct or sponsor and a person is not required to

respond to a collection of information unless it displays a currently valid OMB control number.

The rule proposes: to incorporate the USEPA's regulatory standards for air quality; address the expansion of BOEM's air quality jurisdiction to include the OCS adjacent to the North Slope Borough of the State of Alaska; account for technological advances in air quality measurement, evaluation, and reporting capabilities; take into account emissions from offshore supporting vessels; and reflect changes in practices and procedures as they have evolved. Potential respondents are holders and operators of federal OCS leases, operating rights holders, holders of Rights of Use and Easement (RUEs), holders of Pipeline Rights-of-Way (ROWs) or holders of a lease-term pipeline, and independent third-parties working on behalf of any of these persons. The frequency of response varies, but is primarily on the occasion or as per the requirement. Responses to this collection are mandatory or are required to obtain or retain a benefit. The IC does not include questions of a sensitive nature. BOEM will protect proprietary information according to the Freedom of Information Act (5 U.S.C. § 552) and DOI's implementing regulations (43 CFR part 2), 30 CFR part 552, *OCS Oil and Gas Information Program*, and 30 CFR 550.197, *Data and information to be made available to the public or for limited inspection.*

We expect the estimated hour burden for the rulemaking to be 146,490 hours and $3,455,000 in non-hour costs. Some of the requirements, especially in subpart A, are not new; they are being moved or expanded. The table below provides a breakdown of the estimates for the rule. Current OMB-approved hours and requirements are in regular font; expanded requirements and hours are shown in italics. The proposed new requirements are shown in bold and are summarized as follows:

- Subpart A. BOEM is proposing to implement a requirement from the CAA to work with the USEPA to expand and maintain a national air emissions inventory. The requirement

to submit a copy of a USEPA-required Episode Avoidance Plan is currently approved as part of the IC in subpart C but would be collected under subpart A (section 550.141(d)) in the proposed rule. We expect no burden change since the occurrence is very limited and therefore the burden currently approved is sufficient. The proposed rule would expand a requirement under right-of-use and easement (RUEs) to account for air quality documentation and records (section 550.160(*f*) +287 hours). The rule also proposes to codify details regarding the gathering and reporting of OCS air inventory information, and broaden the requirement from being applicable only to the Western GOM to one that is applicable to all OCS regions. This requirement and the associated burdens are not new; they were originally accounted for in subpart C, but have been modified and moved to subpart A. The reasons for this are twofold. First, this requirement is unrelated to the regulatory requirements involving the review of the potential air quality impacts associated with proposed plans (i.e., the primary purpose of subpart C). Second, the requirements for collecting and maintaining air inventory information are meant to apply to all owners and operators of facilities, including lessees, lease operators, operating rights holders, holders of RUEs or pipeline ROWs—whether or not that ROW includes an accessory structure—and all owners and operators of non-stationary sources operating on the OCS in support of any facility, whether or not such person was required to submit or comply with the requirements of subpart C (New section 550.187, +112,425 hours). This would increase the total burden under subpart A +112,712 hours.

- Subpart B. To simplify the air quality review process, BOEM is proposing to consolidate the requirements relating to air quality into one new section (section 550.205), which would be equally applicable to all Exploration Plans (EPs), Development and Production

Plan (DPPs), or DOCDs, as well as to any updates or modifications of any such plans. Proposed section 550.205 includes the expanded air quality emissions factors and reporting requirements for all emissions sources. The proposed rule would expand BOEM's air quality submission requirements to include any area in which BOEM is given jurisdiction, including the OCS adjacent to the North Slope Borough of the State of Alaska. To accommodate various changes in the air quality requirements, BOEM will modify its current air quality information forms (BOEM-0138, Air Emission Calculations for EPs, and BOEM-0139, Air Emission Calculations for DPPs and DOCDs). These forms will be updated to include the new air pollution emissions factors and to reflect the addition of new emissions sources and categories and types of equipment and vessels (e.g., icebreakers). The forms will be restructured to better accommodate the consolidation of emissions across multiple, related facilities; to better reflect the goal of complying with USEPA AAQSB; and to reflect various other changes necessitated by the proposed rulemaking. The forms will be renamed so that it is clear that they are intended to be applicable and functional for all affected OCS Regions. BOEM is working with a contractor to revise these forms to provide automated calculations after data entry. The draft forms will be included in the docket for this proposed rulemaking and will be made available for public comment. The proposed modifications to the forms will increase the current aggregated burdens for submitting an EP, DOCD, and DPP by the following: for EPs, +3,100 hours; for DPP/DOCDs +5,150 hours. The proposed rule also expands the current requirement to submit post-approval information for EP/DPP/DOCD to include RUEs (section 550.284 +224 hours). This would increase the burden under subpart B +8,474 hours.

- Subpart C. This rulemaking proposes a rewrite of current subpart C regulations to address new air pollution prevention and control requirements so we are addressing all requirements as new. This subpart would require analysis and modeling for expanded air emissions and compliance reporting for those criteria and major precursor air pollutants that exceed the threshold, and allow for air emissions consolidation from multiple facilities (expanded from current regulations) (sections 550.303 and 304; 6,626 hours, $1,000,000 non-hour costs for modeling). This subpart would also add the requirements associated with emission reduction measures, including but not limited to the BACT (sections 550.306-310; 682 hours), as well as monitoring and reporting requirements, including the collection of data and maintenance of fuel logs (sections 550.311-314; 17,986 hours, $2,455,000 non-hour costs); and general departure information (section 550.300-314; 10 hours). The proposed rule would create new subpart C with a total burden of 25,304 hours and $3,455,000 non-hour costs.

BURDEN TABLE

[Current requirements in regular font; e*xpanded* requirements shown in *italic font*; **new** requirements shown in **bold font**]

Citation 30 CFR 550 Subpart A and Related NTLs	**Reporting and Recordkeeping Requirement****	**Hour Burden**	**Average No. of Annual Responses**	**Annual Burden Hours**
Per the requirements in this rule, you must submit information in an electronically readable format unless otherwise directed by BOEM. If you transmit the information electronically, you must use a delivery medium or transmission method authorized by BOEM.				
Information and Reporting Requirements				
141*(d)*	Request approval to use new or alternative procedures*; temporarily suspend equipment or implement operational control(s);* submit required information.	Burdens currently covered under 30 CFR 550, subpart A (1010-0114).		0
160*(f)*	*Submit all air quality documentation/records pertaining to RUE applications; obtain approvals.*	*11*	*26 applications*	*286*
160(*f*)	*Request waiver of 10-year periodic review for RUEs from Regional Supervisor.*	*.50*	*2*	*1*

New 187*	Entities in all affected OCS Regions collect, maintain, retain for 10 yrs., and all air emissions-related data for each source that generates air pollutants on the OCS.	**43+**	**2,547 submissions**	**112,025**
New 187(b)*	Request third-party submission of required air emissions data to BOEM or BOEM-designated agent.	**2**	**200 requests**	**400**
		Total for Subpart A	**2,775 Responses**	**112,712 Hours**
Citation 30 CFR 550 Subpart B and Related NTL(s)	**Reporting and Recordkeeping Requirement**	**Hour Burden**	**Average No. of Annual Responses**	**Annual Burden Hours**
Contents of Exploration Plans				
200-206; 209*; 215(e);* 231(b); 232(d); 234; 235*;* 281(d)(3); 283; 284; 285; NTL 2010 N-06	Submit amended, modified, revised, supplemental, *or updated* EP, or resubmit disapproved EP; withdraw an EP.	Burdens currently covered under 30 CFR 550, subpart B (1010-0151).		0
New 205	Collect, maintain & submit all air quality & modeling documentation/records (including but not limited to, emissions sources, factors, reduction measures, attributed and projected emissions, distance calculations, etc.); additional documentation as requested/required by BOEM; request departures; obtain approvals.	**20**	**110 changed plans**	**2,200**
200-206; 209; 211 thru 228; NTL 2010-N-06	Submit EP and all required information (including, but not limited to, submissions required by BOEM *forms 0137, 0138, 0142*; withdrawals; lease stipulations; reports; H_2S; Geological and Geophysical (G&G); etc.); provide notifications.	Burdens currently covered under 30 CFR 550, subpart B (1010-0151).		0
New 205	Submit expanded air emissions & compliance data for EPs whose air emissions are above the exemption threshold. *Burdens for analysis/modeling covered under 30 CFR 550, subpart C (§§ 550.303-307).*			
	Collect, maintain & submit all air quality & modeling documentation/records (including but not limited to, emissions sources, factors, reduction measures, attributed and projected emissions, distance calculations, etc.); additional documentation as requested/required by BOEM; request departures; obtain approvals.	**25**	**20 plans**	**500**
	Alaska Region submits air quality information as required in EP.	**200**	**2 Alaska plans**	**400**
		Subtotal	**132 Responses**	**3,100 Hours**

Contents of DPP and DOCD				
Current 200-206; 209; 266(b); 267(d); 272(a); 273; 281(d); 283(a-b); 284; 285(a-b); NTL 2010 N-06	Submit amended, modified, revised, updated, or supplemental DPP or DOCD, or resubmit disapproved DPP or DOCD.	Burdens currently covered under 30 CFR 550, subpart B (1010-0151).		0
New 205	Collect, maintain & submit all air quality & modeling documentation/records (including but not limited to, emissions sources, factors, reduction measures, attributed and projected emissions, distance calculations, etc.); additional documentation as requested/required by BOEM; request departures; obtain approvals.	**20**	**155 changed plans**	**3,100**
200-206; 209; 241 thru 262; NTL 2010 N-06, and others	Submit DPP/DOCD and accompanying/supporting information (including, but not limited to, submissions required by BOEM *Forms 0137, 0139, 0142* used in GOM; lease stipulations; withdrawals, etc.); provide notifications.	Burdens currently covered under 30 CFR 550, subpart B (1010-0151).		0
New 205	Submit expanded air emissions & compliance data for DPPs/DOCDs whose air emissions are above the exemption threshold. *Burdens for analysis/modeling covered under 30 CFR 550, subpart C (§§ 550.303-307).*			
	Collect, maintain & submit all air quality & modeling documentation/records (including but not limited to, emissions sources, factors, reduction measures, attributed and projected emissions, distance calculations, etc.); additional documentation as requested/required by BOEM; request departures; obtain approvals.	**25**	**50 plans**	**1,250**
	Alaska Region submits air quality information as required in DPP/DOCD.	**400**	**2 Alaska plans**	**800**
284	Submit updated information on activities conducted under approved EPP/DPP/DOCD/*RUE*.	*4*	*56 updates*	*224*
		Subtotal	**263 Responses**	**5,374 Hours**
		Total Subpart B	**395 Responses**	**8,474 Hours**
Citation 30 CFR 550 Subpart C and Related NTL(s)	**Reporting and Recordkeeping Requirement**	**Hour Burden**	**Average No. of Annual Responses**	**Annual Burden Hours**
		Non-Hour Costs		
Air Quality Analyses in Plans				
New 303-307	Conduct required analysis & modeling for	**38**	**87 plans**	**3,306**

	expanded air emissions for those criteria & major precursor air pollutants that exceed the threshold & compliance requirements. Submit modeling reports.	$10,000 x 20 instances for incremental modeling/analysis cost of mobile sources = $200,000 $20,000 x 40 instances for additional plans that will now require modeling/analysis = $800,000 $50,000 x 0 instances for plans now requiring photochemical modeling/analysis = no costs till 2020		**$1,000,000**
New 303(d)	Report/consolidate air emissions data from multiple facilities if required.	**20**	**15 consolida-sions**	**300**
New 303(g); 310(c); 312(b)	Submit revised air emissions plans, as required. Request exceptions; obtain approvals.	Burdens currently covered under 30 CFR 550, subpart B (1010-0151).		0
New 303(h)	Provide additional information/analysis as required for plan approval.	**10**	**300 submissions**	**3,000**
New 304	Obtain approval of all modeling protocols & meteorological data sets. Provide BOEM with copies of/access to protocols & all required information.	**5**	**4 submissions**	**20**
		Subtotal	**406 Responses**	**6,626 Hours**
			$1,000,000 Non-hour Costs	
Emission Reduction Measures—BACT				
New 306; 307; 308(a); 309(a), (c), (d)	Document results of ERM analysis. Provide description of BACT proposal/data based on required analyses, associated impacts and costs; demonstrating compliance; provide additional information as required; obtain approval; Submit ECE data from manufacture.	**50**	**12 submissions**	**600**
New 307(a); 313(a)	Request VOCs or NO_X waiver for ERM.	**1**	**1**	**1**
New 308(b); 309(a)	Request reconsideration of BOEM emissions determination; submit supporting information.	Not considered IC as defined in 5 CFR 1320.4(a)(2).		0
New 309(b)	Immediately notify BOEM if ERM become disabled or unavailable; request extension for ERM (NTE 90 days).	**2**	**2 notifications**	**4**
New 309(d)	Collect and maintain monthly logs of relevant meter/monitoring equipment readings.	**12/yr.**	**6**	**72**
New 309(e)	Notify appropriate State air quality control jurisdiction of proposal to acquire emissions offsets; revise State Implementation Plan to include new info; submit to BOEM.	**1**	**1 notification**	**1**
New 310(b)	Request a departure from compliance with the new or revised AAQSB.	**2**	**2 requests**	**4**

New 310(c)	Resubmit plans for air quality review every 10 years w/ required information.	There will be no burden until 2020		0
		Subtotal	**24 Responses**	**682 Hours**
Monitoring & Reporting				
New 311(a), (b), (f)	Report/demonstrate actual emissions data/other information to verify compliance with previous approved plan on BOEM approved schedule.	**16**	**12 sub-missions**	**192**
New 311(c)	Measure actual emissions using Predictive Emission Monitoring System (PEMS).	**36**	**30 engines**	**1,080**
		$26,000 x 30 engines = 780,000 annually		
New 311(c)	Report data/information regarding exceedance of projected emissions to BOEM.	**16**	**5**	**80**
New 312(b), (d);	Submit additional information as required to BOEM.	**2**	**10 submissions**	**20**
New 312(a)	Conduct/report stack testing results every 3 yrs.	**48**	**67 tests**	**3,216**
		$25,000 x 67 stack tests = $1,675,000 annually		
New 312(b)	Retain monthly fuel information for each source on determined schedule for 10 yrs.	**48**	**265**	**12,720**
New 312(b)	Submit fuel logs or collect facility and equipment usage information for MSCs to BOEM.	**8**	**80**	**640**
New 312(c), (d)	Collect/report meteorological data in a manner described by BOEM or from agreed location; other information as required.	**4**	**3**	**12**
New 313(b)	Submit new air quality plan for short-term facility converted to a long-term facility.	**10**	**2 submissions**	**20**
New 313(b)	Request exception due to adverse weather conditions or circumstances beyond your control.	**.50**	**4**	**2**
New 314	Provide pollution data to State, Indian Tribe, or federal agency requests submit additional info. for determination to any cause/contribution to NAAQS violation within 120 days or a longer time specified by BOEM.	**2**	**2 requests**	**4**
		Subtotal	**480 Responses**	**17,986 Hours**
			$2,455,000 Non-hour Costs	
General				
New 300-314	General departure and alternative compliance/requests not specifically covered elsewhere in subpart C.	**2**	**5 requests**	**10**
		Subtotal	**5 Responses**	**10 Hours**
		Total for Subpart C	**915 Responses**	**25,304 Hours**
			$ 3,455,000 Non-Hour Costs	
Citation 30 CFR 550 Subpart J	**Reporting and Recordkeeping Requirement**	**Hour Burden**	**Average No. of Annual**	**Annual Burden Hours**

and Related			**Responses**	
1012	Collect, maintain & submit all air quality documentation/records pertaining to pipeline ROW applications; obtain approvals.	Burden covered under 30 CFR 550, subparts B and C.		0
Total Burden			**4,085 Responses**	**146,490 Hours**
			$3,455,000 Non-Hour Costs	

* The requirements and burdens added to 30 CFR 550, subpart A, are not entirely new; they are in current 30 CFR part 550, subpart C. This rulemaking moves those requirements to subpart A.
** In the future, BOEM will be allowing the option of electronic reporting for certain requirements.
\+ Exact numbers of responses and annual burden hours were approved by OMB January 2015; numbers are from ROCIS.

BOEM uses the information collected under subparts A, B, and C to ensure operations on the OCS are carried out in a safe and environmentally sound manner, do not interfere with the rights of other users, and balance the protection and development of OCS resources.

As part of our continuing effort to reduce paperwork and respondent burdens, we invite the public and other federal agencies to comment on any aspect of the reporting and recordkeeping burden. We specifically solicit comments on the following questions:

1) Is the proposed collection of information necessary for BOEM to properly perform its functions, and will it be useful?

2) Are the estimates of the burden hours of the proposed collection reasonable?

3) Do you have any suggestions that would enhance the quality, clarity, or usefulness of the information to be collected?

4) Is there a way to minimize the IC burden on those who must respond, including the use of appropriate automated electronic, mechanical, or other forms of information technology?

In addition, the PRA requires agencies to estimate the total annual reporting and recordkeeping non-hour cost burden resulting from the collection of information, and we solicit your comments on this item. For reporting and recordkeeping only, your response should split the cost estimate into two components: 1) total capital and startup cost component; and, 2)

annual operation, maintenance, and purchase of services component. Your estimates should consider the costs to generate, maintain, and disclose or provide the information. You should describe the methods you use to estimate major cost factors, including system and technology acquisition, expected useful life of capital equipment, discount rate(s), and the period over which you incur costs. Generally, your estimates should not include equipment or services purchased 1) before October 1, 1995; 2) to comply with requirements not associated with the IC; 3) for reasons other than to provide information or keep records for the Government; or 4) as part of customary and usual business or private practices.

OMB is required to make a decision concerning the collection of information contained in these proposed regulations between 30 to 60 days after publication of this document in the *Federal Register*. Therefore, a comment to OMB is best assured of having its full effect if OMB receives it by [INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]. This does not affect the deadline for the public to comment to BOEM on the proposed regulations. If you wish to comment on the IC aspects of this proposed rule, you may send your comments by email directly to OMB (OIRA_submission@omb.eop.gov) or by fax 202-395-5806, with a copy to BOEM (see the **ADDRESSES** section).

Please reference Air Quality, 30 CFR part 550, subparts A, B, and C (Proposed Rulemaking) in your comments. To see a copy of the IC request, with the draft proposed forms, submitted to OMB, go to http://www.reginfo.gov (select Information Collection Review, Currently under Review). You may also obtain a copy of the supporting statement and draft forms for the new collection of information by contacting Nicole Mason, the Bureau's Information Collection Clearance Officer, by mail at 45600 Woodland Rd., Sterling, VA 20166, by email at Nicole.Mason@boem.gov, or by phone at (703) 787-1025.

3. Regulatory Flexibility Act and Small Business Regulatory Enforcement Fairness Act of 1996

The Regulatory Flexibility Act , 5 U.S.C. §§ 601-612, requires agencies to analyze the economic impact of proposed regulations when a significant economic impact on a substantial number of small entities is likely and to consider regulatory alternatives that will achieve the agency's goals while minimizing the burden on small entities. In addition, the Small Business Regulatory Enforcement Fairness Act of 1996, 5 U.S.C. § 601note, requires agencies to produce compliance guidance for small entities if the rule has a significant economic impact. For the reasons explained in this section, BOEM has concluded that the proposed rule would likely not have a significant economic impact on a substantial number of small entities and, therefore, a regulatory flexibility analysis is not required. This Initial Regulatory Flexibility Analysis (IRFA) assesses the impact of the proposed rule on small entities, as defined by the applicable Small Business Administration (SBA) size standards. The IRFA can be found in the Initial Regulatory Impact Analysis (IRIA) within the docket for this rulemaking. The IRFA assesses the impact of the proposed rule on small entities, as defined by the applicable SBA size standards.

Based on this initial analysis, BOEM expects the implementation of this proposed rule may have a significant economic impact on a substantial number of small entities under 5 U.S.C. § 605(b). BOEM, however, is seeking comments on the IRIA to inform its analysis and conclusions regarding the degree to which this rule may have an economic impact on such entities.

As defined by the SBA, a small entity is one that is "independently owned and operated and which is not dominant in its field of operation." The definition of small business varies from industry to industry in order to properly reflect industry size differences. The proposed rule

would affect operators and holders of BOEM-issued oil and gas leases that are seeking to explore, develop or transport OCS oil and gas resources. BOEM's analysis shows that this could include about 130 companies with active operations. Entities that operate under this rule fall under the SBA''s North American Industry Classification System codes 211111 (Crude Petroleum and Natural Gas Extraction) and 213111 (Drilling Oil and Gas Wells) or 237120 (Oil and Gas Pipeline and Related Structures). For these codes, a small company is defined as one with fewer than 500 employees. A small entity is one that is "independently owned and operated and which is not dominant in its field of operation." Based on this criterion, approximately 90 (69 percent) of the 130 companies operating on the OCS are considered small and the remaining are considered large businesses.

Of the approximately 130 operators, a total of 56 companies submitted initial, revised, or supplemental exploration/development plans during calendar year 2013. Twenty-four large companies submitted 63 percent of the plans and thirty-two small companies submitted 37 percent of the plans. Operators not submitting exploration or development plans typically are continuing existing operations or hold leases undergoing geological and geophysical exploration.

Submitting an exploration or development plan is a necessary step before companies explore for hydrocarbons on the OCS or develop an economic prospect. All companies operating on the OCS including small entities must be well capitalized to undertake these multi-million or multi-billion dollar projects. The incremental cost for providing additional or consolidated air quality information for exploration plans, DOCDs or DPPs, ROWs or RUEs is a small cost in the context of an exploration or development project. Most of the compliance costs imposed as a result of this rulemaking are variable costs directly dependent on the complexity and number of plans submitted. Emission reduction measure costs would be directly related to the impact a

project may have on a State's air quality. BOEM's first-order estimate for the rulemaking's small entity compliance costs is proportional to the number of plans submitted excluding ERM costs.

The compliance costs from this rulemaking may be less for most small entities because these companies are less likely to operate the large projects that employ multiple MODUs drilling concurrently. If a facility or project is located close to the federal/State submerged lands boundary, shows emissions above the SILs in a non-attainment area and is operated or owned by a small entity, this proposed rule could have an economic impact. The GOM shelf is a mature hydrocarbon environment and few companies are initiating new exploration or development projects. However, the GOM shelf is where most of the small entities operate and hold leases. While most of the compliance costs would be imposed on lessees and operators of large deepwater projects, some near-shore projects may be impacted.

Using 2013 as a base, small companies submit about 37 percent of the plans each year and are expected to incur approximately the same proportion of costs. The incremental first year compliance costs for this rulemaking are projected to be $23 million and the peak year is $49 million. Some of those costs are for ERM or emissions credits on a very small number of projects which may or may not be owned or operated by small entities. The modeling, reporting and other costs range from $7 to $28 million each year and small entities operating in the GOM are estimated to incur a similar proportion (37 percent) of costs in each subsequent year. As described in more detail in the Executive Summary to the Regulatory Impact Analysis (RIA), these costs are expected to vary from approximately $3 million in the first year up to $10 million in the 10th year.

BOEM prepared an IRFA to assess the impact of the proposed rule on small entities, as defined by the applicable SBA size standards. The IRFA is prepared using conservative assumptions and seeks public comments on potential small entity impacts. This rule would only affect operators and federal oil and gas lessees that could conduct operations on the OCS. The Regulatory Flexibility Act, 5 U.S.C. §§ 601-612, defines small entities as small businesses, small nonprofits, and small governmental jurisdictions. We have identified no small nonprofits or small governmental jurisdictions that the rule would impact.

For the reasons explained below, BOEM has concluded this rule will not have a significant economic impact on a substantial number of small entities and that, therefore, a regulatory flexibility analysis is not required.

This incremental modeling and reporting costs for this rulemaking will generally be required of both the larger deepwater projects and near-shore projects. While there are smaller companies that explore and operate in deeper water, these companies are well capitalized and the incremental compliance costs for this rulemaking are estimated to be minimal when compared to the cost of drilling a single deepwater well.

Although BOEM does not believe that the proposed rule would have a significant economic impact on a substantial number of small entities, BOEM is requesting comment on the costs and impacts of the proposed policies in this rule on small entities. We will consider all comments at the final rule stage. We specifically request comments on the compliance cost estimates as well as regulatory alternatives that would reduce the burden on small entities.

This proposed rule:

a. Would not have an annual effect on the economy of $100 million or more. The compliance cost will not materially affect the economy nationally or in any local area.

b. Would not cause a major increase in costs or prices for consumers; individual industries; federal, State, tribal or local government agencies; or geographic regions. This proposed rule would have minimal effects on OCS operators and is not anticipated to impact oil and gas production or the cost of fuels for consumers.

c. Would not have significant adverse effects on competition, employment, investment, productivity, innovation, or the ability of U.S.-based enterprises to compete with foreign-based enterprises. This rule would have a negligible economic effect on the OCS oil and gas industry. BOEM has determined that the current costs of implementation of the current USEPA standards would likely not be significant, and that any costs associated with potential future USEPA actions are too speculative for purposes of analysis.

Pursuant to section 213(a) of the Small Business Regulatory Enforcement Fairness Act of 1996 (Pub. L. 104-121), we want to assist small entities in understanding this proposed rule so they can better evaluate its effects on them and participate in the rulemaking. If you believe this rule would affect your small business, organization, or governmental jurisdiction and you have questions concerning its provisions or options for compliance, you may contact Peter Meffert, Bureau of Ocean Energy Management Office of Policy, Regulation, and Analysis at Peter.Meffert@boem.gov or mail to 45600 Woodland Road, Sterling, Virginia 20166; or call (703)787-1610.

Small businesses may send comments on the actions of federal employees who enforce, or otherwise determine compliance with, federal regulations to the Small Business and Agriculture Regulatory Enforcement Ombudsman, and to the Regional Small Business Regulatory Fairness Board. The Ombudsman evaluates these actions annually and rates each agency's responsiveness to small business. If you wish to comment on actions by employees of BOEM,

call 1-888-REG-FAIR (1-888-734-3247).

4. Unfunded Mandates Reform Act of 1995

This rule does not impose on State, local, or tribal governments, or the private sector an unfunded mandate of more than $100 million per year. The rule does not have a significant or unique effect on State, local or tribal governments or the private sector. A statement containing the information required by the Unfunded Mandates Reform Act (2 U.S.C. §§ 1531 *et seq*.) is not required.

B. Executive Orders (E.O.) and Presidential Memorandum

1. Governmental Actions and Interference with Constitutionally Protected Property Rights (E.O. 12630) March 15, 1988

According to E.O. 12630, the rule does not have significant takings implications. The rulemaking is not a governmental action capable of interfering with constitutionally protected property rights. A Takings Implication Assessment is not required.

2. Regulatory Planning and Review (E.O. 12866) October 4, 1993

The OMB has reviewed this rulemaking under section 6(a)(3) of E.O. 12866. OMB has determined this rule is significant because it will potentially raise novel legal or policy issues. This rulemaking is not economically significant.

Executive Order 12866 provides the Office of Information and Regulatory Affairs (OIRA) within OMB will review all significant rules. To the extent permitted by law, each agency must, among other things: (a) propose or adopt a regulation only upon a reasoned determination that its benefits justify its costs (recognizing some benefits and costs are difficult to quantify); (b) tailor its regulations to impose the least burden on society, consistent with attaining regulatory objectives, taking into account, among other things, and to the extent practicable, the costs of

cumulative regulations; (c) select, in choosing among alternative regulatory approaches, those approaches that maximize net benefits (including potential economic, environmental, public health and safety, and other advantages; distributive benefits; and equity); (d) to the extent feasible, specify performance objectives, rather than specifying the behavior or manner of compliance that regulated entities must adopt; and (e) identify and assess available alternatives to direct regulation, including providing economic incentives to encourage the desired behavior, such as user fees or marketable permits, or providing information with which choices can be made by the public.

1) The proposed requirements in this rule would not have an effect of $100 million or more per year on the economy. The proposed rule would alter requirements for reporting emissions in an operator's exploration or development plan. The proposed rule also would require more accurate estimating and reporting of the emissions associated with offshore operations. The compliance costs for this rulemaking primarily relate to air dispersion and photochemical grid modeling, air pollutant emissions monitoring, air quality monitoring and the implementation of emission reduction measures (including the use of emissions credits). The remaining compliance costs are for additional paperwork burden hours identified in the section of the preamble on the PRA for Operators submitting EPs and DOCDs or DPP pipeline Rights-of-Way ROW, RUE and lease term pipeline applications. BOEM estimates the industry compliance costs for activities in the first year will be $23 million, the peak year (2020) $49 million and $290 million over 10 years discounted at 3 percent. The government staffing costs are estimated to be about $1.6 million per year and $12 million over 10 years discounted at 3 percent. BOEM estimates the total first year compliance cost for both the regulated industry and the government is $23.6 million, $51 million for the peak year and over 10 years is $302 million discounted at 3 percent.

Additional information on the compliance costs can be found in the rulemaking's draft RIA posted in the docket [INSERT DOCKET NUMBER].

The qualitative benefits for the proposed regulatory changes would be the improved ability to ensure the continued development of offshore facilities does not adversely impact any State, including its human population, economy and environment, as well as the improved information BOEM and States will receive regarding the expected air quality impacts onshore and above State submerged lands from OCS exploration and development. The proposed regulatory changes will require more accurate emissions information resulting from BOEM-authorized operations in both the Arctic and GOM. This improved air emission information will better ensure BOEM only approves plans that meet the requirements of the OCSLA (43 U.S.C. §§ 1331 *et seq.*, Pub. L. 83-212, as amended), to ensure compliance with the NAAQS to the extent that these operations do not significantly affect the air quality of any State. The proposed rule would strengthen the requirements for identifying, modeling, measuring and tracking the emissions of air pollutants. Coastal States and other stakeholders can thereby be more confident regarding the expected onshore air quality impacts from OCS oil and gas exploration and development. The additional monitoring information required for certain plans will also permit the BSEE to better assess the air quality compliance for OCS operations on a plan-by-plan basis.

Based on a consideration of the qualitative as well as quantitative factors related to the rulemaking proposal, BOEM's assessment is that it is necessary to achieve compliance with the requirements of the OCSLA and that the proposed rule's adoption would provide a net benefit to the public. The additional monitoring information required for certain plans will also permit the BSEE to better assess the air quality compliance for OCS operations on a plan-by-plan basis.

The table below summarizes BOEM's estimate of the 10-year quantifiable net benefits.

BOEM has only estimated the quantified benefits of NO_x reductions. The greatest compliance cost and NOx reduction benefits are expected for deepwater projects, especially in the Mississippi Canyon area. The quantifiable benefits are estimated to range from $8 million to $43 million per year and are attributed to the NOx reductions due to ERMs or emissions credits on those few projects that are expected to require emission reductions. The bureau's analysis did not quantify other benefits that are too difficult to estimate in concrete fiscal terms. Additional information on the compliance costs and benefits can be found in the IRIA. Even though the quantified net benefits are negative in most years, these benefits do not reflect the full implications of the impact that the rule will have overall. First, the rule could result in the reduction of VOCs, SOx, CO, and PM emissions if operational controls are required as a condition of BOEM plan approval that would not otherwise be employed by operators. These potential reductions have not been quantified because BOEM believes most operators will voluntarily utilize operational controls including best combustion practices due to fuel savings. Second, the rule could result in a lower rate of O_3 and PM formation onshore than those which have been quantified because there are likely to be reductions in O_3 and PM formation rates associated with non-NO_x reductions in precursor air emissions.[92] Third, the rule is necessary in order to ensure continued compliance with the mandates of OCSLA and, as such, is essential to the continued development of oil and gas resources on the OCS. Fourth, the elimination of the mandate to use BACT as an emissions control will allow lessees and operators to utilize offsets whenever they are cheaper. This unquantified benefit would directly reduce the compliance costs of this rule, as compared to the current regulations. Finally BOEM believes the other

[92] In addition to reductions in the rate of O3 formation resulting from NOx emissions reductions, there could also be reductions in the rate of O3 formation by unquantified reductions in VOCs. In addition, there could be additional reductions in the rate of PM formation that are due to unquantified reductions in non-NOx PM precursors.

qualitative benefits referred to in the RIA, such as the potential reduction in compliance costs[93] associated with this rulemaking and the superior environmental effects of implementing offsets onshore rather than offshore, will be more than sufficient to provide on overall positive benefit and justification for this rulemaking.

Estimated AD82 Annualized Rulemaking Net Benefits

Millions$ Years -->	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**
Estimated Industry Compliance Costs	$22.9	$29.9	$35.9	$49.4	$45.1	$36.6	$31.5	$31.7	$27.7	$28.4
Estimated Benefit (NO_x Reductions)	$26.5	$35.3	$43.1	$43.1	$34.3	$18.6	$8.8	$7.8	$0.0	$0.0
Estimated Net Benefit	$3.5	$5.4	$7.2	-$6.3	-$10.8	-$18.0	-$22.7	-$23.9	-$27.7	-$28.4

BOEM does not expect that the proposed regulatory changes will be unduly burdensome to industry. The proposed requirements are intended to improve BOEM's review and approval of planned operations by requiring more accurate information and better assessments of the air quality impacts from OCS oil and gas operations. While many of the proposed regulatory changes require additional information from operators, the changes are not expected to increase the incidences of mechanical BACT on OCS facilities. BOEM expects that plans usually will employ ERMs and emissions credits as a response to failing to meet exemption thresholds. Mechanical BACT emission controls or other ERMs may be required for some projects due to the proposed requirements in this rulemaking if emissions credits are not available. Other exploration or development projects may require ERMs due to changes in the USEPA 1-hour NOx standard[94] or changes to the O_3 standard.

2) The proposed rule would not adversely affect in a material way the economy,

[93]Examples of this include, the ability to substitute offsets for BACT in cases where the offsets would be more cost effective and allowing offsets to be established onshore, where they are likely to be less expensive and more environmentally beneficial, rather than offshore.

[94] USEPA has issued guidance recommending a SIL for the 1-hour NO2 NAAQS, which it published at: http://www3.epa.gov/nsr/documents/20100629no2guidance.pdf.

productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities. The changes proposed in this rule would strengthen the environmental safeguards and provide additional information to BOEM and coastal States to assess potential impacts to air quality. As discussed in the E.O. 13175 Consultation and Coordination with Indian Tribal Governments section of this preamble, BOEM will hold consultation meetings in Alaska.

3) This proposed rule would not create a serious inconsistency or otherwise interfere with an action taken or planned by another agency. BOEM has consulted with the BLM, FWS, NPS, the Forest Service of the Department of Agriculture, and the USEPA and has proposed changes to align its regulations with those of the BLM, FWS, the NPS and the USEPA where applicable. While the proposed rule would allow the use of the MARPOL emissions standards as proxies for marine diesel engine emission factors for marine engines, the USCG and the USEPA will continue to enforce any applicable emissions limits on vessels. The proposed regulatory changes would improve the information available and facilitate BLM, FWS and NPS analysis regarding the air quality impacts on Class II areas and endangered species.

4) This proposed rule would not alter the budgetary effects of entitlements, grants, user fees, or loan programs or the rights or obligations of their recipients.

5) This proposed rule potentially raises novel legal or policy issues regarding consistency with other federal agencies or international vessel requirements. The novel legal and policy issues are the change in attributed emissions for plans as well as the proposed relocation of the compliance boundary from the shoreline to the offshore submerged lands (State seaward) boundary used for determining exemptions from more detailed air quality analysis and/or modeled compliance with NAAQS. This proposed rule formalizes the methodology for

attributed emissions. The 25-mile radius traditionally used by BOEM will no longer apply; the projected emissions calculations account for all emissions supporting a plan's activity, including in certain cases support emissions from aircraft and onshore facilities.

BOEM has linked its air quality regulations, where applicable, to those of other agencies in multiple areas. Many USEPA standards have been explicitly cited and referenced. The Marine Pollution Convention (MARPOL) standards, which are covered in USEPA and USCG regulations, are incorporated. The BLM, FWS, NPS, and the Forest Service of the Department of Agriculture programs to maintain AQRVs, as part of the FLM process, have been explicitly referenced in the BOEM regulations. In addition, informal consultations have and will continue to take place with other federal and State agencies.

We have developed this proposed rule consistently with these requirements. The proposed changes in this rulemaking would update and better conform BOEM's air quality regulations to the requirements of OCSLA. The proposed air quality requirements would automatically be updated as the USEPA changes its standards with respect to which pollutants are potentially harmful and at what levels of exposure those pollutants cause harm. The proposed rule would replace various provisions in the current regulations with more comprehensive and up-to-date provisions based upon more recent science and technology. The rule would better address DOI's mandate to evaluate the potential impact of any OCS development with respect to the probable impacts to most closely affected States.

3. Civil Justice Reform (E.O. 12988) February 7, 1996

This rule complies with the requirements of E.O. 12988. Specifically, this rule:

(a) Meets the criteria of section 3(a) requiring all regulations be reviewed to eliminate errors and ambiguity and be written to minimize litigation; and

(b) Meets the criteria of section 3(b)(2) requiring that all regulations be written in clear language and contain clear legal standards.

4. Protection of Children from Environmental Health and Safety Risks (E.O. 13045) April 21, 1997

We have analyzed this rule under E.O. 13045, Protection of Children from Environmental Health Risks and Safety Risks. The USEPA has determined, and BOEM agrees, that children are an at-risk group for health effects associated with exposures to certain air pollutants, including some pollutants released or formed from OCS operations.

This rule addresses those air pollutants of greatest concern. BOEM welcomes additional comments on this topic and whether, or to what extent, the rule addresses these relevant issues.

This rule is not an economically significant rule and does not create an environmental risk to health or a risk to safety that may disproportionately affect children.

5. Federalism (E.O. 13132) August 10, 1999

Under the criteria in E.O. 13132, this proposed rule would not have any substantial federalism implications. This proposed rule would not substantially and directly affect the relationship between the federal and State governments. To the extent that State and local governments have a role in OCS activities, this proposed rule would not have any significant effect on that role.

A separate federalism assessment is not required and has not been prepared.

6. Consultation and Coordination with Indian Tribal Governments (E.O. 13175) November 6, 2000

DOI strives to strengthen its government-to-government relationship with Indian tribes through a commitment to consultation with Indian tribes and recognition of their right to self-

governance and Tribal sovereignty. BOEM has evaluated this proposed rule under the Department's consultation policy and under the criteria in Executive Order 13175 and has determined this rule would not cause a substantial direct or adverse effect on any Federally-recognized Indian tribe.

There are a number of reasons why BOEM has come to this conclusion. There are many circumstances whereby the proposed rule has strengthened the requirements for identifying, measuring and tracking the emissions of air pollutants and no circumstances in which the proposed rule would relax or lessen any existing air quality requirements or standards. The proposed rule would incorporate the various enhancements to the current BOEM air quality regulatory process, including but not limited to the following:

- The proposed rule would incorporate all key USEPA air quality standards and benchmarks by direct cross-reference. Thus, BOEM's proposed regulations would both reflect current USEPA standards and would be updated automatically in the future if a new air quality standard or benchmark were to be promulgated by the USEPA.
- The proposed rule expands the circumstances under which emissions from MSCs would be accounted for in both exploration and development plans. MSC emissions would be tracked and reported whenever a vessel would be operating in support of a regulated facility, regardless of its distance from that facility.

The proposed rule would enhance the accuracy of the evaluation of emissions from support vessels by measuring all such emissions from the point at which they occur. The proposed rule mandates all potentially significant emitters of air pollutants maintain fuel logs, which can be used to calculate their potential emissions. This proposed rule contains new provisions for mandatory stack testing or the installation of meters when the Regional Supervisor determines

emissions estimates may be unreliable or inaccurate. In circumstances where a lessee or operator proposes to use equipment that is not compliant with the USEPA requirements, the proposed rule would require the lessee or operator to obtain relevant air pollutant emissions data from the equipment manufacturer or, alternately, to test the actual level of pollutants that are emitted.

The rule does reflect changes Congress made with respect to the CAA when it granted Federally-recognized Indian tribes the right to regulate the air quality over their territories independently from the States. If such a tribe has been granted the authority to regulate its own air quality, by issuing air quality permits in lieu of the States, or if the tribe has implemented a tribe-wide air quality implementation plan to which new permit applicants must comply, BOEM would recognize this authority and grant the tribes the same authority as a State to appeal BOEM's approval of plans for OCS development activities. This authority would not be extended to all tribes, however, since a tribe may elect not to establish any air quality regulatory scheme. In the event that a tribe has not established its own air quality regulatory mechanism, there is no reason that it should have the same rights as a State under BOEM's regulations. Such a tribe would, of course, retain all the rights of public comment on rulemakings and to provide feedback to BOEM at public forums.

Although BOEM does not believe this rule would cause any substantial direct or adverse impact to any Indian tribe, in order to inform such Indian tribe(s), DOI intends to initiate consultations with potentially affected tribe(s) on a government-to-government basis during the public comment period for this rule. BOEM will fully consider all tribal views and concerns before issuing a final rule on this topic.

7. Actions Concerning Regulations that Significantly Affect Energy Supply, Distribution or Use (E.O. 13211), May 18, 2001

We have analyzed this rule under E.O. 13211, "Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use" and have determined this rule is not a significant energy action under the definition in Executive Order 13211. The IRIA provides a general discussion of modeling, monitoring and emission reduction compliance costs on potentially marginal GOM development projects.

8. Enhancing Coordination of National Efforts in the Arctic (E.O. 13689) January 21, 2015

E.O. 13689 recognizes the Arctic has critical long-term strategic, ecological, cultural, and economic value, and it is imperative we continue to protect our national interests in the region, which include: national defense; sovereign rights and responsibilities; maritime safety; energy and economic benefits; environmental stewardship; promotion of science and research; and preservation of the rights, freedoms, and uses of the sea as reflected in international law.

E.O. 13689 also recognizes it is vital that federal agencies work together to enhance coordination on Arctic efforts. Pursuant to this goal, the E.O. establishes an Arctic Executive Steering Committee (Steering Committee), to provide "guidance to executive departments and agencies (agencies) and enhance coordination of federal Arctic policies across agencies and offices, and, where applicable, with State, local, and Alaska Native tribal governments and similar Alaska Native organizations, academic and research institutions, and the private and nonprofit sectors." DOI is a member of this Steering Committee.

Consistent with DOI's long-standing commitment to coordinate with other federal agencies on Artic matters, BOEM will work with the Steering Committee and other relevant agencies,

including the USEPA, BSEE, FWS, NPS, BLM, and the Forest Service within the Department of Agriculture.

The E.O. also recognizes "it is in the best interest of the Nation for the Federal Government to maximize transparency and promote collaboration where possible with the State of Alaska, Alaska Native tribal governments and similar Alaska Native organizations, and local, private-sector, and nonprofit-sector stakeholders." BOEM intends to take action consistent with this objective in order to ensure the implementation of the underlying goals.

9. Improving Regulation and Regulatory Review (E.O. 13563) January 18, 2011

Executive Order 13563 reaffirms the principles of E.O. 12866 while calling for improvements in the nation's regulatory system to promote predictability, to reduce uncertainty, and to use the best, most innovative, and least burdensome tools for achieving regulatory ends. The executive order directs agencies to consider regulatory approaches that reduce burdens and maintain flexibility and freedom of choice for the public where these approaches are relevant, feasible, and consistent with regulatory objectives. E.O. 13563 emphasizes further regulations must be based on the best available science and the rulemaking process must allow for public participation and an open exchange of ideas. We have developed this rule in a manner consistent with these requirements.

Executive Order 13563 also calls for consideration regarding a regulation's impact on employment. It states, "Our regulatory system must protect public health, welfare, safety, and our environment while promoting economic growth, innovation, competitiveness, and job creation." An analysis of employment impacts is a standalone analysis, and these impacts are not included in the estimation of benefits and costs.

BOEM does not expect the proposed rule's compliance cost will be great enough to close

operations or prevent new ones from starting. However, employment reductions are possible in related activities if operators chose to slow development due to the provisions of this rulemaking. On the other hand, actions taken to comply with this proposed rule also will create employment opportunities; for example, consulting firms specializing in air quality analysis and modeling are likely to experience increased employment demand. As more companies need to model and maintain records of their emissions, new employment opportunities in the broad field of air quality analysis will emerge. While BOEM does not anticipate that companies will adopt an emission reduction measure like post-combustion SCR, the companies that install these mitigation technologies would benefit from increased demand for their equipment.

The proposed rule is not expected to generate either large negative or positive employment impacts. On balance, there will likely be adjustments on both sides among companies directly and indirectly affected by the regulation.

As stated in E.O. 12866, to the extent permitted by law, each agency must, among other things: 1) propose or adopt a regulation only upon a reasoned determination its benefits justify its costs (recognizing some benefits and costs are difficult to quantify); 2) tailor its regulations to impose the least burden on society, consistent with attaining regulatory objectives, taking into account, among other things, and to the extent practicable, the costs of cumulative regulations; 3) select, in choosing among alternative regulatory approaches, those approaches that maximize net benefits (including potential economic, environmental, public health and safety, and other advantages; distributive benefits; and equity); 4) to the extent feasible, specify performance objectives, rather than specifying the behavior or manner of compliance that regulated entities must adopt; and 5) identify and assess available alternatives to direct regulation, including providing economic incentives to encourage the desired behavior, such as user fees or

marketable permits, or providing information with which choices can be made by the public. BOEM has evaluated these options and made the determination there is no alternative that meets the need for this rulemaking and the proposed rulemaking is the best alternative for addressing the important policy objectives that BOEM is pursuing.

The proposed changes in this rulemaking would better ensure that BOEM's air quality regulations conform to the requirements of OCSLA. Unlike the current regulations, the proposed air quality requirements would automatically be updated if the USEPA changed its standards as to which pollutants are potentially harmful and at what levels of exposure those pollutants cause harm. The proposed rule would replace various provisions in the current regulations with more comprehensive and up-to-date provisions based upon more recent science and technology. The rule would better address DOI's mandate to evaluate the potential impact of any OCS development with respect to the probable impacts to most closely affected States.

10. Presidential Memorandum of June 1, 1998 on Regulation Clarity

E.O. 12866 (section 1(b)(2)), E.O. 12988 (section 3(b)(1)(B)), E.O. 13563 (section 1(a)), and the Presidential Memorandum of June 1, 1998, require every agency write its rules in plain language. This means that, wherever possible, each rule must: a) have a logical organization; b) use the active voice to address readers directly; c) use common, everyday words and clear language, rather than jargon; d) use short sections and sentences; and e) maximize the use of lists and tables.

If you feel we have not met these requirements, send your comments to Peter.Meffert@boem.gov. To better help BOEM revise the rule, your comments should be as specific as possible. For example, you should tell us the number of any section or paragraph that you think we wrote unclearly, which section(s) or sentence(s) are too long, or the section(s)

where you believe lists or tables would be useful, etc.

Public Availability of Comments

We will post all comments, including names and addresses of respondents, at www.regulations.gov. Before including your address, phone number, email address, or other personal identifying information in your comment, you should be aware we may make your entire comment—including your personal identifying information—publicly available at any time. While you can ask us in your comment to withhold your personal identifying information from public view, we cannot guarantee we will be able to do so.

List of Subjects in 30 CFR part 550

Administrative practice and procedure, Air pollutant, Air pollution, Air quality, Arctic, Attainment area, Continental shelf, Compliance, Criteria pollutants, Development plan, Development and production plan, Environmental assessments, Environmental impact statements, Environmental protection, Exploration plan, federal lands, Federal Land Manger, Greenhouse gasses, Hazardous air pollutants, New source review, Non-attainment area, Oil and gas exploration, Oil and gas development, Oil pollution, Oil production, outer Continental Shelf, Ozone, Penalties, Pipelines, Precursor pollutants, Prevention of significant deterioration, Reporting and recordkeeping requirements, Sulphur.

_____ _____

Date

Amanda C. Leiter

Acting Assistant Secretary

Land and Minerals Management

For the reasons stated in the preamble, the Bureau of Ocean Energy Management, (BOEM) proposes to amend 30 CFR part 550 as follows:

PART 550--OIL AND GAS AND SULPHUR OPERATIONS IN THE OUTER CONTINENTAL SHELF

1. The authority citation for 30 CFR part 550 is revised to read as follows:

Authority: 30 U.S.C. § 1751, 31 U.S.C. § 9701, 43 U.S.C. § 1334.

Subpart A – General

2. Revise the section heading for § 550.101 to read as follows:

§ 550.101 Applicability

3. Revise § 550.102 as follows:

§ 550.102 What does this part do?

(a) 30 CFR part 550 contains the regulations of the BOEM Offshore program that govern oil, gas and sulphur exploration, development and production operations on the Outer Continental Shelf (OCS). These regulations may require you, when conducting operations on the OCS, to submit plans, requests, applications, and notices, and, upon request, to submit supplemental information.

(b) The following table of general references shows where to look for information about these processes.

TABLE—WHERE TO FIND INFORMATION FOR CONDUCTING OPERATIONS

For information about	Refer to
(1) Applications for permit to drill (APD)	30 CFR part 250, subpart D.
(2) Development and Production Plans (DPP) and Development Operations Coordination Documents (DOCD)	30 CFR part 550, subpart B.
(3) Downhole commingling	30 CFR part 250, subpart K.
(4) Exploration Plans (EP)	30 CFR part 550, subpart B.
(5) Flaring	30 CFR part 250, subpart K.
(6) Gas measurement	30 CFR part 250, subpart L.
(7) Off-lease geological and geophysical (G&G) Permits	30 CFR part 551.
(8) Oil Spill Financial Responsibility (OSFR) coverage	30 CFR part 553.
(9) Oil and gas production safety systems	30 CFR part 250, subpart H.
(10) Oil spill response plans	30 CFR part 254.
(11) Oil and gas well-completion operations	30 CFR part 250, subpart E.
(12) Oil and gas well-workover operations	30 CFR part 250, subpart F.
(13) Platforms and structures	30 CFR part 250, subpart I.
(14) Rights-of-Use and Easement (RUE)	30 CFR part 550, subpart A.
(15) Pipelines and Pipeline Rights-of-Way (ROW)	30 CFR part 250, subpart J and 30 CFR part 550, subpart J.
(16) Sulphur operations	30 CFR part 250, subpart P.
(17) Training	30 CFR part 250, subpart O.
(18) Unitization	30 CFR part 250, subpart M.
(19) Air Quality	30 CFR part 550, subpart C.

4. Revise §550.105 as follows:

a. Delete the terms “attainment area,” “best available control technology,” “emission offsets,” “existing facility,” “facility,” “non-attainment area,” and “projected emissions.”

b. Add definitions of “emissions source,” “Federal Land Manager,” “Mobile Support Craft,” “offshore vehicle,” and “State,” to read as follows;

c. Revise the definitions of “air pollutant,” “flaring,” “minerals,” and “venting” to read as follows:

§ 550.105 Definitions

* * * * *

Air pollutant means any of the following: 1) any criteria pollutant for which the U.S. Environmental Protection Agency (USEPA) has established primary or secondary National Ambient Air Quality Standards (NAAQS), in 40 CFR part 50, pursuant to §109 of the Clean Air Act (CAA); 2) any precursor air pollutant identified by the USEPA that contributes to the formation of a criteria pollutant through a photochemical or other reaction, including, but not limited to, Volatile Organic Compounds (VOCs), ammonia (NH_3), and those criteria pollutants (CPs) that are also precursors for other CPs (such as sulphur dioxide (SO_2)); 3) any USEPA-defined Greenhouse Gas (GHG), as defined at 40 CFR 98.6, pursuant to §111 of the CAA; and, 4) any USEPA-defined Hazardous Air Pollutant, as defined at 40 CFR 63.2, pursuant to §112 of the CAA.

* * * * *

Emissions source means a device or substance that emits air pollutant(s) in connection with any authorized activity described in your plan. Several emissions sources may exist on a single facility, aircraft, vessel, or vehicle. Anything that: 1) produces or results in the release of one or more air pollutant(s), including the flashing, flaring or venting of natural gas, 2) involves burning any oil or well test fluids, or 3) generates fugitive emissions, is an emissions source. Examples include, but are not limited to: boilers/heaters/burners, diesel engines, drilling rigs, combustion flares, cold vents, glycol dehydrators, natural gas engines, natural gas turbines, pneumatic pumps, pressure/level controllers, amine units, tanks, dual fuel turbines, sources involved in mud

degassing, storage tanks, well testing equipment, vessels (including support vessels, pipeline lay barges, pipeline bury barges, derrick barges), and any other equipment that could cause fugitive emissions, venting, losses from flashing, or loading losses.

* * * * *

Federal Land Manager (FLM) means the Secretary of the Department with authority over any federal Class I area or sensitive Class II area (or the Secretary's designee).

Flaring means the burning of natural gas or other hydrocarbons and the release of the associated emissions into the atmosphere. The term "flaring" is equivalent to combustion flaring (i.e., burning of the gases), but is distinct from cold venting, which involves the discharge of raw pollutants into the air without burning.

* * * * *

Minerals includes oil, gas, sulphur, geopressured-geothermal and associated resources, and all other minerals that are authorized by an Act of Congress to be produced from public lands.

* * * * *

Mobile Support Craft (MSC) means any offshore supply vessel (OSV) as defined by the USCG in accordance with 46 U.S.C. § 2101, and any ship, tanker, tug or tow boat, pipeline barge, anchor handling vessel, facility installation vessel, refueling or ice management vessel, oil-spill response vessel, or any other offshore vessel, remotely operated vehicle (ROV), or any offshore vehicle used by, or in the support of, the offshore operations described in a plan. For the purpose of evaluating air emissions, an MSC is considered a facility while temporarily attached to the seabed or connected to another facility.

* * * * *

Offshore vehicle means a type of MSC that is capable of being driven on ice and which

provides support services or personnel to your facility or facilities.

* * * * *

Right-of-Use and Easement (RUE) means seabed use authorization, other than an OCS lease, that BOEM may grant at an OCS site pursuant to §§ 550.160 through 550.166 of this part.

* * * * *

State means any State of the United States (U.S.) extending to the limit of the State seaward boundary (SSB), as defined in 43 U.S.C. § 1301(b).

* * * * *

Venting means the release of gas into the atmosphere, including though a stack without igniting it, whereby relief flows of natural gas or other hydrocarbons are directed to an unignited flare or which are otherwise discharged directly to the atmosphere. This includes gas that is released underwater and bubbles to the atmosphere.

5. In § 550.141, add paragraph (d) and revise the title to read as follows:

§ 550.141 May I use or be required to use alternate procedures or equipment?

* * * * *

(d) In order to protect public health, you may be required or allowed by the Regional Supervisor to temporarily suspend the use of equipment that emits air pollutants, or to implement operational control(s) on the use of such equipment, when an adjacent State or locality declares an air quality episode or emergency, provided that any such suspension or operational control(s) would not cause an immediate threat to safety or the environment.

6. In § 550.160, add a new paragraph (f) to read as follows and redesignate current paragraphs (f), (g), (h) and (i) as paragraphs (g), (h), (i) and (j):

§ 550.160 When will BOEM grant me a right-of-use and easement, and what

requirements must I meet?

* * * * *

(f) If you apply for a RUE with a facility as defined in § 550.302 or you hold a RUE with such a facility, then you must submit the information required by §550.205 of subpart B of this part, except that the ten-year periodic review requirement in § 550.310(c) may be waived by the Regional Supervisor. For the purposes of this section, any provisions of those sections applicable to a lessee or operator should be read to refer equally to any RUE applicant or any holder thereof. If the RUE is approved or held as part of an existing or proposed plan, no additional air quality requirements would apply to the plan.

* * * * *

7. Add § 550.187 to Subpart A to read as follows:

§ 550.187 What region-wide offshore air emissions data must I provide?

(a) *OCS emissions inventory.* You, as a lessee, an operator, or a holder of a RUE or pipeline ROW (whether or not that ROW includes an accessory structure), must collect and maintain information regarding all air pollutant emissions from all emissions sources associated with your operations. You must retain this information for a period of no less than 10 years. You must submit this information to the appropriate regional office on an ongoing basis according to a schedule corresponding to the schedule for the National Emissions Inventory as established by the USEPA. If you have an emissions source that generates facility emissions that have a potential to emit (PTE) such that it would qualify as a Type A source according to USEPA's regulations in Table 1 of Appendix A of Subpart A ("Emission Thresholds by Pollutant for Treatment as Point Source") of 40 CFR 51.50, then, beginning in either 2017 or the next reporting period after [INSERT THE EFFECTIVE DATE OF THIS REGULATION], you must

report this information according to the timeframes specified in 40 CFR 51.30(b).

(b) The information provided must include the emissions of or the activity data necessary to calculate the emissions of stationary emissions sources, including all facilities, and all non-stationary sources, including MSC(s) and any other non-stationary emissions source(s) of air pollutants above the OCS or above State submerged lands that operate in support of your facility or facilities, as determined by the Regional Supervisor. You may request that the owner of such non-stationary emissions source(s) provide the information to BOEM or a BOEM-designated agent, but if the owner does not provide the information, the lessee, operator, or RUE or pipeline ROW holder is still responsible for submitting the required information.

(c) As part of the information required in this section, you must submit, in a form and manner as specified by the Regional Supervisor:

(1) Your facility and equipment usage, including hours of operation at each percent of capacity for each emissions source; and/or

(2) Your monthly and annual fuel consumption showing the quantity, type, and sulphur content of fuel used for each emissions source that generates air pollutants in connection with operations on the OCS.

(3) The information provided should be at a sufficient level of detail so as to facilitate BOEM's compilation of a comprehensive OCS emissions inventory of air pollutants.

(4) You must classify the emissions according to the appropriate Source Classification Codes (SCCs) as defined by the USEPA in FIRE Version 5.0: Source Classification Codes and Emission Factor Listing for Criteria Air Pollutants, incorporated by reference in section 550.198(b)(1)(iv) of this chapter.

(d) The Regional Director may waive or permit delay in compliance with the requirements

of this section on a region-wide basis.

8. Add a new § 550.198, as follows:

§ 550.198 Documents incorporated by reference.

(a) *General Requirements*.

(1) Certain material is incorporated by reference into this part with the approval of the Director of the *Federal Register* under 5 U.S.C. § 552(a) and 1 CFR part 51. To enforce any edition other than that specified in this section, BOEM will publish a notice of change in the *Federal Register* and the material will be available to the public. BOEM may make the rule amending the document effective without opportunity for public comment when BOEM determines the revisions to a document represent new industry standard technology and do not impose undue costs on the affected parties; and BOEM meets the requirements for making a rule immediately effective under 5 U.S.C. § 553.

All approved material is available for inspection at the Bureau of Ocean Energy Management, Office of Policy, Regulation and Analysis, 45600 Woodland Road, Sterling, Virginia 20166 or by phone at (703)787-1610, and is available from the sources listed below. It is also available for inspection at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or refer to: http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.

(2) In each instance, the applicable document is the one specifically referred to, including any referenced supplement or addendum, and not any other version, supplement or addendum, even if by the same author, agency or publisher. You may comply with a later edition of a specific document incorporated by reference, provided you show that complying with the later edition provides a degree of scientific or technical accuracy, environmental protection, or performance

equal to or better than would be achieved by compliance with the listed edition; and you obtain the prior written approval for alternative compliance from the authorized BOEM official.

(3) The effect of incorporation by reference of a document into the regulations in this part is that the incorporated document is a regulatory requirement. When a section in this part incorporates all of a document, you are responsible for complying with the provisions of that entire document, except to the extent that the section which incorporates the document by reference provides otherwise. When a section in this part incorporates part of a document, you are responsible for complying with that part of the document as provided in that section. BOEM incorporated each document or specific portion by reference in the sections noted. The entire document is incorporated by reference, unless the text of the corresponding sections in this part calls for compliance with specific portions of the listed documents. In each instance, the applicable document is the specific edition or specific edition and supplement or addendum cited in this section. In the case of USEPA documents, you may always use the most recent version approved by the USEPA.

(b) *Documents incorporated by reference:*

(1) Environmental Protection Agency, USEPA Docket Center (EPA/DC), Public Reading Room, EPA WJC West, Room 3334, 1301 Constitution Ave. NW, Washington, DC 20460.

(i) AP 42, Fifth Edition, Compilation of Air Pollutant Emission Factors, Volume 1: Stationary Point and Area Sources, January 1995, incorporated by reference at § 550.312(b)(2)(iii)(C) and (b)(2)(vi).

(ii) Motor Vehicle Emission Simulator (MOVES), User Guide, Assessment and Standards Division, Office of Transportation and Air Quality, EPA-420-B-14-055, July 2014, incorporated by reference at § 550.205(b)(2)(iii)(B).

(iii) User's Guide for the Final NONROAD2005 Model, EPA420-R-05-013, December 2005. This publication is applicable to the NONROAD 2008 model, incorporated by reference at § 550.205(b)(2)(iii)(B).

(iv) FIRE (Factor Information Retrieval System) Version 5.0: Source Classification Codes and Emission Factor Listing for Criteria Air Pollutants, Office of Air Quality Planning and Standards, Office of Air and Radiation, EPA 454/R-95-012, Research Triangle Park, NC 27711, August 1995, incorporated by reference at § 550.187(c)(4).

(2) Federal Aviation Administration (FAA), Office of Environment and Energy, (AEE-100), 800 Independence Avenue, SW, Washington, DC 20591.

(i) Aviation Environmental Design Tool (AEDT) User's Guide, Version 2B, prepared for the FAA Office of Environment and Energy (AEE-100), Washington, D.C. prepared by U.S. Department of Transportation and Volpe National Transportation Systems Center, Cambridge, MA, July 2015 (as amended) incorporated by reference at § 550.205(b)(2)(iii)(D).

(ii) Aviation Environmental Design Tool (AEDT), Version 2B, AEDT Standard Input File (ASIF) Reference Guide, prepared for the FAA e of Environment and Energy (AEE-100), Washington, D.C. prepared by U.S. Department of Transportation and Volpe National Transportation Systems Center, Cambridge, MA, May 2015 (as amended) incorporated by reference at § 550.205(b)(2)(iii)(D).

(3) International Maritime Organization, 4 Albert Embankment, London SE1 7SR, United Kingdom, or http://www.imo.org, or 44-(0)20-7735-7611.

(i) Revised MARPOL (Marine Pollution) Annex VI, Regulations for the Prevention of Air Pollution from Ships, and NO_X Technical Code [NTC] 2008, 2009 edition, incorporated by reference at § 550.205(b)(2)(v).

(ii) Revised MARPOL Annex VI, Regulations for the Prevention of Pollution from Ships ("2008 Annex VI"), incorporated by reference at § 550.205(b)(2)(v).

(iii) NO_X Technical Code 2008, incorporated by reference at § 550.205(b)(2)(v).

Subpart B – Plans and Information

9. Remove the following definition from § 550.200:

"Offshore vehicle".

10. Add a new § 550.205, as follows:

§ 550.205 What air emissions information must be submitted with my Plan (EPs, DPPs, DOCDs, or application for a RUE, pipeline ROW, or lease term pipeline)?

All of the terms used in this section have the meaning described in § 550.302, unless defined in § 550.105. Except if excluded from the Air Quality Regulatory Program (AQRP) by subsection (o), the requirements in this section apply to all plans, RUE, pipeline ROW, and lease term pipeline applications submitted in any area of the OCS in which the Secretary of the Interior has authority to regulate air quality on the OCS. Your plan must contain the following criteria air pollutant and major precursor air pollutant emissions information:

(a) Emissions sources.

You must list and describe every emissions source on or associated with any facility or facilities and MSC(s) described in your plan. This includes each emissions source used during the construction, installation (including well protection structure installation), and operation of any exploration, testing, drilling (including well test flaring), development, or production equipment or facility or facilities (including every platform or manmade island included in your plan). You must account for the air pollutant emissions sources associated with all drilling operations, including workovers and recompletions, sidetracking and from pipeline construction.

You must include emissions sources associated with your use of oil or gas produced from your lease.

The list of emissions sources must cover the duration of the plan's proposed activities.

(1) For each emissions source, you must identify, to the extent practicable:

(i) Equipment type and number, manufacturer, make and model, location, purpose (i.e., the intended function of the equipment and how it would be used in connection with the proposed activities covered by the plan), and physical characteristics;

(ii) The type and sulphur content of fuel stored and/or used to power the emissions source; and

(iii) The frequency and duration of the proposed use.

(2) For every engine on each facility, including non-road engines, marine propulsion engines, or marine auxiliary engines, in addition to the information specified under (a)(1), you must identify and provide the engine manufacturer, engine type, and engine identification, and the maximum rated capacity of the engine (given in kilowatts (kW)), if available. If you have not yet determined what specific engine will be available for you to use, you must provide analogous information for an engine with the greatest maximum rated capacity for the type of engine which you will use. If the engine has any physical design or operational limitations and you choose to base your emissions calculations on these limitations, then you must provide documentation of these physical design or operational limitations.

(3) For engines on MSCs, including marine propulsion and marine auxiliary engines, in addition to the information specified under (a)(1) and (a)(2), you must provide the engine displacement and maximum speed in revolutions per minute (rpm). If the specific rpm information is not available, indicate whether the rpm would be less than 130 rpm, equal to or

greater than 130 rpm but less than 2,000 rpm, or equal to or greater than 2,000 rpm, based on best available information. If the actual MSC engine types needed for calculating emissions are unknown or cannot be verified, assume an MSC possessing the maximum potential emissions for the type of MSC you would typically use for your planned operations.

(4) For offshore vehicles, you must provide the information specified under (a)(1). If the actual offshore vehicle engine types needed for calculating emissions are unknown or cannot be verified, assume an offshore vehicle possessing the maximum emissions for the types of offshore vehicles you would typically use for your planned operations.

(5) For any emissions source not described above, you must provide all information needed to calculate and verify the associated emissions, such as volumes vented, volumes flared, size of tank, and number of components.

(b) Emissions factors.

For each emissions source identified under (a) of this section, you must identify the most appropriate emissions factors used to calculate the emissions for every criteria air pollutant and major precursor air pollutant emitted by that source.

(1) Emissions testing. You may use actual emissions amounts as measured from emissions testing conducted on a specific emissions source, in lieu of the standards or emissions factors for that source which are described in paragraph (2) below. However, if none of the methods in paragraph (2) below are applicable, you must conduct stack testing on the emissions source to determine the appropriate emissions factor. The data from stack testing may be used only for the engine for which the stack testing was conducted. When determining the emission factors through testing, you must consider:

(i) Test points and procedures.

(A) In general, test points should be devised based on actual operations as opposed to using the test points and engine loads contained in one of the various marine duty cycles. If, based on the unique circumstances of the proposed project, this is impracticable, an alternative approach for defining test points may be implemented with the approval of the Regional Supervisor.

It cannot be assumed that emissions per hour or emissions per kW hour or horse-power hour from large main engines on drill ships and platforms are highest during full load or near-full load operation. The emissions factor and emission per hour or emissions per kW hour or horse-power hour for the operation that is actually expected should be determined, and the emissions under 90% load should be used only if emissions at this load are the highest and thus conservative.

(B) Testing should be done consistent with the procedures outlined in 40 CFR part 53 to the maximum extent practicable. Where the unique circumstances or requirements of the proposed operations make such procedures impracticable, alternative procedures may be implemented with the approval of the Regional Supervisor. As appropriate, you must use the General Provisions for Determining Standards of Performance for New Stationary Sources, at 40 CFR 60.8.

(ii) Fuel. You must ensure that the fuel used in the testing to generate the emission factors reflects the type of fuel that will be used by the engine in actual operation and that the sulphur content of the fuel is the same as that which will be used in the engine.

(2) In the event that you elect not to measure the actual emissions for any given emissions source, select an emissions factor from one of the following references (references are listed in priority order; you may use a method only if all the methods identified above it are not available):

(i) You may use the emissions factor(s) that are vendor-guaranteed or provided by the

manufacturer of the specific emissions source, if available; where a manufacturer has not provided an emissions factor for the emissions source you propose to use, you may use a manufacturer's emissions factor for a similar source only if you can demonstrate to the satisfaction of the Regional Supervisor that the emissions generated by your emissions source are the same as or lower than that for which a manufacturer's emissions factor is available. If you elect to use vendor-guaranteed or manufacturer data, you must demonstrate that:

(A) the fuel used by the manufacturer to generate the emission factors reflects the type of fuel that will be used by the engine in actual operation; and,

(B) the actual engine has not been modified outside the configuration used to generate the emission factors; thus, the emission factors used in the plan must represent the actual pattern of use for that equipment in operations.

(ii) You may use emissions factors generated from source tests required by the USEPA OCS permits as BOEM emission estimates for a specific rig. If emissions factors were not generated through testing for a particular engine, emissions factors generated from a recent and similar permit engine may be used. Data from a rig from the same manufacturer, having an engine of the same model and year is generally allowed, unless the Regional Supervisor has a reason to believe that such data may not be accurate or reliable.

(iii) You may use a model or table, as appropriate, developed by the USEPA or FAA, if available and appropriate to the emissions source, and you may use the emissions factors from that model or table.

(A) For commercial marine engines operating aboard MSC, excluding vehicles and aircraft, apply emission factors based on the classification of the engine (i.e., category 1, category 2, and category 3), the year the engine was manufactured, and the maximum engine power expressed in

kW. Some category 3 engine emission factors are based on rpm rather than maximum engine power. Engine category, year, model, and emission factors, by kW power rating, are given in 40 CFR § 1042.101 for category 1 and category 2 commercial engines and consider the useful life provisions of each engine category. Engine category, year, model, and emission factors, by rpm rating, are given in 40 CFR § 1042.104 for category 3 commercial marine engines, and also consider the useful life provisions for each engine category.

(B) For non-road equipment used on the drill ships or platforms, non-road emission factors, rather than marine engine emission factors may be used. The primary source for these emission factors is the NONROAD portion of the Motor Vehicle Emission Simulator (MOVES) model (http://www.epa.gov/otaq/models/moves/index.htm), as incorporated by reference at § 550.198(b)(1)(ii). Depending on the type of engine, the NONROAD2008A Model may also be used, as incorporated by reference at § 550.198(b)(1)(iii). That model is available at http://www.epa.gov/otaq/nonrdmdl.htm.

(C) For storage tanks, use the USEPA's TANKS model, or the most recent USEPA-recommended update or replacement, to generate emission factors, such as the AP 42 Compilation of Emissions Factors, Chapter VII, incorporated by reference at § 550.198(b)(1)(i).

(D) In the event that you are required to report emissions data from aircraft, use emissions factors generated by the AEDT, incorporated by reference at § 550.198(b)(2)(i)-(ii), or from another appropriate model, or set of models, approved by the FAA, in the event that the AEDT does not contain emissions factors for the relevant aircraft proposed in your plan. AEDT emissions factors are available at: http://www.faa.gov/about/office_org/headquarters_offices/apl/research/models/aedt/

(iv) You may use an emission factor from a published study conducted by a reputable source,

such as the California Air Resources Board, a university, or research agency, if such source yields reliable emission factors or formula(s) to calculate emissions factors for certain types of engines and equipment other than for the large main engines on drilling ships and drill platforms and for locomotive-sized engines powering cranes. If an emission study is used, the study must cover representative engines, fuels, and duty cycles.

(v) For non-U.S. flagged vessels having non-USEPA-certified, MARPOL-certified marine engines, you may use the MARPOL Annex VI standards, available from the International Maritime Organization, incorporated by reference at § 550.198(b)(3)(i), or the Revised MARPOL Annex VI, Regulations for the Prevention of Pollution from Ships, incorporated by reference at § 550.198(b)(3)(ii), as appropriate taking vessel flag as well as engine size into account when determining the emission factor that should apply to an engine. With respect to calculations specifically for NOx emissions or emissions factors, any reporting must comply with the NO_X Technical Code [NTC] 2008 incorporated by reference at § 550.198(b)(3)(iii). If this method is used, the plan must account for any differences in the sulphur limits of the fuel being used and the sulphur limit of the fuel used for emission testing. All fuel used by the subject drilling ships and offshore platforms must either be purchased in the U.S. or comply with applicable CAA fuel emissions requirements, unless the lessee or operator can demonstrate that it has properly accounted for any differences in emissions that may result from the use of non-U.S. fuel.

(vi) For a natural gas-powered engine of any rated capacity, or for a non-road diesel-powered engine with a maximum rated capacity less than 900 kW, or for a non-engine emissions source, you may use the appropriate emissions factor from the Compilation of Air Pollutant Emission Factors, Volume 1: Stationary Point and Area Emissions Sources, or any update

thereto, incorporated by reference at § 550.198(b)(1)(i); or,

(vii) If you elect to use the methods described in (v) or (vi), you must take appropriate account of the deterioration in the performance of the equipment based on its age and the potential variation of the actual emissions from the standard to account for the maximum potential emissions that the emissions source may emit. Given that equipment tends to operate less efficiently over time, you should make an appropriate upward adjustment in the emissions estimates for older equipment. At any time you revise your plan, including resubmissions every ten years, you must consider the age of the equipment, adjust for any change in operating efficiency, and provide the associated emissions factors in your revised or resubmitted plan, as applicable.

(3) If the Regional Supervisor has reason to believe that any air emissions factor used in your plan is inappropriate, or new or updated information on emissions factors becomes available, the Regional Supervisor may require you to use a different emissions factor for any emissions source for any air pollutant. The Regional Supervisor may require you to perform stack testing, in accordance with paragraph (b)(1), above, or some other form of validation to verify the accuracy of an emissions factor.

(4) If you propose to utilize an engine or equipment that is not certified by the USEPA for use in the U.S., you may not use a USEPA emissions factor intended to apply to a certified engine or equipment. If you propose to utilize an engine or equipment that is USEPA-certified, then you must submit documentation of its certification.

(5) If your projected emissions include emissions for a U.S. flagged vessel, you must submit documentation of the USEPA-issued Certificate of Conformity for each engine on the vessel.

(6) If you propose to use any non-U.S. engine or equipment on a non-U.S. flag vessel that is

not MARPOL-compliant, you may not use an emissions factor intended to apply to a MARPOL-compliant engine or equipment.

(c) Facility emissions.

For each criteria and major precursor air pollutant, calculate the projected annual emissions for each of your facilities, the maximum 12 month rolling sum of facility emissions and the maximum projected peak hourly emissions using the following procedures: (1) Calculate total emissions generated annually by each emissions source on or physically connected to each of the facilities described in your plan that would result from the construction, installation, operation, or decommissioning of the facility. Such calculations should be done for each year that the plan states that the operator proposes to engage in operating activities, up to ten years. This calculation should be based on the maximum rated capacity of each emissions source associated with the facility, or the capacity that generates the highest rate of emissions, and the facility's maximum potential projected annual emissions, using the methods and procedures specified under paragraphs (a) and (b) of this section.

(2) Calculate the maximum 12-month rolling sum of emissions from each emissions source on or physically connected to each facility and the maximum 12-month rolling sum of emissions from each facility that would result from the construction, installation, operation, or decommissioning of the facility. Identify the 12-month period used for this calculation. This should be the 12-month period during which your facility generates the highest amount emissions over the life of your plan.

(3) Calculate the maximum projected peak hourly emissions from each emissions source on or physically connected to each facility and the maximum projected peak hourly emissions from each facility that would result from the construction, installation, operation, or decommissioning

of the facility.

(d) Attributed emissions.

For each criteria and major precursor air pollutant, calculate the attributed projected annual emissions for each of your MSCs, the maximum 12-month rolling sum of each MSC's emissions, and the maximum projected peak hourly emissions for each MSC, using the following procedure:

(1) For each facility described in your plan, identify the MSCs that will be used to support that facility. To the extent practicable, identify the other facilities that each MSC will support.

(2) For each MSC referred to in (d)(1):

(i) An MSC that is intended to remain at sea continuously (i.e., a vessel that does not typically return to port on a regular basis) should be assumed to operate on a 24-hour basis for any day the MSC operates in the waters overlying the OCS or State submerged lands.

(ii) For all other MSCs, calculate the emissions per trip, irrespective of what other facilities the MSC may also service on each trip. These emissions include all the emissions generated between the time that the MSC leaves its port or home base until it returns (i.e., support emissions per trip). All calculations must be based on the maximum rated capacity or the capacity that generates the highest rate of emissions, if greater, for each emissions source on the MSC.

(3) Multiply the emissions per trip from (d)(2) by the number of trips the MSC will make during the 12 month period described in paragraph (c)(2) of this section to get the total support emissions for that MSC. If the MSC will remain at sea continuously, multiply the emissions it will generate per day by the number of days that it will operate in support of your facility during the 12 month period described in paragraph (c)(2).

(4) If the MSC provides support only to your facility, then you must attribute the MSC's total support emissions to that facility.

(5) For each MSC described in (d)(1) that supports multiple facilities, you may attribute the total support emissions for that MSC to your facility or you may attribute a portion of its total support emissions to your facility (i.e., calculate the attributed emissions for that MSC) using the following procedure:

(i) Subtract the emissions you can document that should be reasonably allocated to other facilities from the total support emissions calculated under (d)(3) for that MSC; or

(ii) If it is not practicable to use the method in (d)(5)(i), divide the total support emissions calculated under (d)(3) by the lowest number of facilities that the MSC will service on a typical trip; or

(iii) Where it is not practicable to use either (d)(5)(i) or (ii), calculate the greater of: (A) the emissions that would be generated by the MSC traveling round-trip between the port or home base and the facility; or, (B) the emissions generated by the MSC for the entire time it will operate within 25 statute miles of the facility.

(6) Calculate the sum of the emissions estimates that result from the calculation in (d)(4) or (d)(5) for every MSC identified in (d)(1). That sum represents the attributed emissions for your facility.

(7) All calculations must be based on the maximum rated capacity or the capacity that generates the highest rate of emissions for each of the relevant sources on every MSC.

(8) If BOEM questions your determination of the attributed emissions, the Regional Supervisor may require additional documentation to support your findings and may direct you to make changes, as appropriate.

(e) Projected emissions.

For every facility described in your plan, you must identify the maximum projected emissions for each criteria and major precursor air pollutant by calculating the annual rate (for each calendar year), the maximum 12-month rolling sum, and the maximum peak hourly rate for your facility emissions under (c)(2) and your attributed emissions under (d)(6).

(1) If any of your proposed facilities would be located in such a manner as to potentially constitute proximate activities with a pre-existing facility or a facility that was previously approved but not yet constructed, you must identify any such facility in your plan.

(2) If you are required to consolidate air emissions from multiple facilities, in accordance with the provisions of § 550.303(d), you must provide the projected emissions information for each facility and provide the complex total emissions for all of the consolidated activities.

(f) Emission reduction measure(s) (ERM).

You must provide a description of all proposed ERM, including: the affected emissions source(s); the proposed emissions reduction control technologies, procedures and/or operational limits; the emission control efficiencies; the projected quantity of reductions to be achieved; and any monitoring or monitoring system you propose to use to measure or evaluate the associated emissions. You must be able to demonstrate that all ERM meet the requirements of § 550.309.

(g) Modeling information.

If you are required to conduct any air quality modeling in support of your plan, then you must provide:

(1) Table(s) of the appropriate and relevant maximum projected air pollutant concentrations over any area(s) of any State(s), including the most affected attainment area(s) and the most affected non-attainment area(s);

(2) Table(s) of the appropriate and relevant maximum projected air pollutant concentrations over any Class I area(s), if relevant;

(3) The maximum projected concentrations resulting from the projected emissions for each of your facilities, for each criteria air pollutant and major precursor air pollutant, for the corresponding averaging time(s) (e.g., 1-hour, 3-hour, 8-hour, 24-hour, annual, etc.) specified in the tables in 40 CFR 51.165(b)(2), 40 CFR 52.21(c), and 40 CFR part 50;

(4) A list of all inputs, assumptions, and default values used for modeling and justification for each, including the source and justification for the proposed meteorological information;

(5) The name and version of the model(s), and whether the model is listed on the USEPA preferred list of models in 40 CFR part 51 Appendix W; and

(6) A modeling report, including the modeling results. If you have previously provided such a report and/or results of the analysis relevant to paragraphs (e) and (g) of this section to the Regional Supervisor, and the projected emissions are the same as or lower than in the previously submitted report(s) or results, you may instead provide a reference to such report and/or results.

(7) For each MSC, provide the distance from each facility described in your plan to the closest relevant home port (for MSCs other than offshore vehicles) or home base (for offshore vehicles), consistent with the maps and information you provide under §§ 550.224(e) or 550.256(b).

(h) Requirements applicable to specific air pollutants.

(1) Nitrogen and Sulphur Oxides (NO_x and SO_x). Various documents cross-referenced by these regulations, refer to NO_x and NO_2 (nitrogen dioxide) or SO_x and SO_2 (sulphur dioxide). Whenever possible, you must utilize data or reasonable estimates for NO_x and SO_x. At a minimum, your projected emissions of NO_x must include emissions of nitrogen oxide and NO_2,

and your projected emissions of SO_x must include emissions of SO_2. In the event that data on NO_x or SO_x emissions are not available, you must instead utilize data on nitrogen oxide plus NO_2 as a substitute for NO_x, and SO_2 emissions as a substitute SO_x.

(2) Particulate Matter (PM_{10} and $PM_{2.5}$). For each emissions source, you must provide data and information on both PM_{10} (PM that is 10 micrometers or less in diameter) and $PM_{2.5}$ (PM that is 2.5 micrometers or less in diameter) whenever such information is available and evaluate each type of particulate matter (PM) separately under every applicable standard. All reporting of $PM_{2.5}$ must include the sum of filterable and condensable PM.

In the event that data for PM is not separately available for both PM_{10} and $PM_{2.5}$ for any given source, you must utilize the PM_{10} data for the PM_{10} analysis and the same data for the $PM_{2.5}$ analysis. A plan that does not contain separate emission exemption threshold and modeling analysis for each type of PM will not be considered complete.

(3) Hydrogen Sulfide (H_2S). All emissions of SO_x that result from the flaring of hydrogen sulfide must be included in the projected emissions of SO_x reported and analyzed as part of your plan, in accordance with the USEPA's Oil and Natural Gas Sector New Source Performance Standards and National Emission Standards for Hazardous Air Pollutants Reviews. If your projected emissions of H_2S will potentially exceed the USEPA's Significant Emission Rate for H_2S, as defined in 40 CFR 51.166(b)(23)(i), you must report the nature and extent of these emissions and their likely impact as part of your plan.

(4) Methane (CH_4). Unless specifically directed to the contrary by another regulatory provision, the analysis or reporting of CH_4 emissions is not required.

(5) Ozone (O_3). Generally reporting is not required other than in accordance with the provisions of § 550.304(b), unless another regulatory provision specifically addresses O_3.

(6) Lead (Pb) or Ammonia (NH_3). Reporting of emissions for these pollutants, for any given source, is required: (i) if there are published manufacturer specifications of emissions factors for these pollutants; or (ii) if such information is available from the USEPA or could be obtained or derived from another recognized source, such as utilizing a mass balance approach. If you intend to use a source known to emit a potentially significant amount of Pb or NH_3, then you must obtain a reasonable estimate of the associated Pb or NH_3 emissions. Zero emissions for these pollutants should be assumed in the situation where relevant data are not available and neither you nor BOEM have a reason to anticipate that the emissions could be potentially significant.

(i) Distance Calculations.

(1) Distance from Shore. For each facility described in your plan, you must calculate and provide the distance in statute miles, as measured in a straight line from the site of the facility to the closer of:

(i) the nearest mean high water mark of a State, or, on the Pacific coast, the nearest mean higher high water mark; or

(ii) the nearest Class I area of any State.

(2) Distance from SSB. For each facility described in your plan, you must calculate and provide the distance in statute miles, as measured in a straight line from the site of the facility to the closest point at which the OCS borders any State, at the SSB.

(j) Documentation.

You must collect, create, and maintain records or any data or information establishing, substantiating, and verifying the basis for all information, data, and resources used to calculate your projected emissions under this section. The emissions factors you propose to use must be documented, and any relevant certifications, citations, methods, and procedures used to obtain or

develop emissions factors must be retained. You must collect and maintain all documentation pertaining to the modeling analysis under § 550.205(g), if applicable, including all references and copies of any referenced materials, as well as any data or information related to any ERM that you propose or implement. You must provide this information, unless the Regional Supervisor waives this requirement for good cause.

(k) Compliance with subpart C.

You must provide a description of how you will comply with § 550.303 when the emissions generated by your proposed plan activities exceed the respective emission exemption thresholds (EETs), calculated using the formulas in § 550.303(c). If you are subject to the requirement to monitor and report your actual emissions in accordance with § 550.311, then the description you provide must describe how you propose to monitor your emissions.

(l) Reporting.

You must submit data and information in a format, and using the forms, as specified by BOEM. You must submit information in an electronically-readable format, unless otherwise directed by the Regional Supervisor. If you transmit the information to BOEM electronically, you must use a delivery medium or transmission method authorized by BOEM.

(m) Additional information.

If you are required to conduct modeling, and if, under § 550.305 your projected emissions would cause an increase in the concentration of any pollutant that is within 95% of any Significant Impact Level (SIL), then you must: report the amount of emissions from aircraft or onshore support facilities as attributed emissions; and combine the impacts of aircraft and onshore support facilities emissions with the impacts of your projected emissions for the purposes of this section and for your analysis under subpart C. The aircraft and support facilities

for which you are required to report emissions are those described in §§ 550.224, 550.225, 550.257, and 550.258. If required to report your aircraft or onshore support facilities and those aircraft or onshore support facilities support multiple OCS facilities then you must allocate their emissions in an appropriate manner similar to that described for MSCs in § 550.205(d).

The Regional Supervisor may require such additional data or information related to these sources as is necessary to demonstrate your plan's compliance with subpart C of this part, and/or applicable federal laws related to the protection of air quality within BOEM jurisdiction.

(n) Requirements for plans to be deemed submitted.

Your plan will not be deemed submitted in accordance with the requirements of § 550.231 or § 550.266 of this part until:

(1) All of the requirements of this § 550.205 have been completed;

(2) You have completed the Ambient Air Increment (AAI) analysis, including the required BOEM forms, the modeling protocol, and the modeling results, as specified in § 550.307(b) of this part if required; and

(3) You have completed any other analysis required by subpart C of this part.

(o) Plans exempt from review under the AQRP

If you can demonstrate that your facility will not generate projected emissions of any criteria or precursor air pollutant in an amount greater than the corresponding significant emissions rate limit described in the "Pollutant and Emissions Rate" table defined in 40 CFR 52.21((b)(23)(i), your plan is exempt from the AQRP requirements of this section and subpart C of this part.

11. Revise § 550.211(c) to read as follows:

*** * * * ***

(c) *Drilling unit*. A description of the drilling unit and associated equipment you will use to

conduct your proposed exploration activities, including a brief description of its important safety and pollution prevention features, and a table indicating the type and the estimated maximum quantity of fuels, oil, and lubricants that will be stored on the facility.

For purposes of this section, the term “facility” means any installation, structure, vessel, vehicle, equipment or device that is temporarily or permanently attached to the seabed of the OCS, including an artificial island used for drilling, well completion, well-workover, or other operations.

* * * * *

12. Revise § 550.212 to read as follows:

* * * * *

(f) Air emissions information required by §550.205;

* * * * *

13. Revise § 550.215 to read as follows:

* * * * *

(d)(2) If any H_2S emissions are projected to affect any location within a State in a concentration greater than 10 parts per million, the modeling analysis must be consistent with the USEPA risk management plan methodologies outlined in 40 CFR part 68.

(e) *Hydrogen sulfide*. If you propose to flare any gasses containing a potentially significant amount of H_2S, you must separately identify this activity in your plan and separately identify the resulting emissions of sulphur oxides ($SO_{x)}$ as part of your projected emissions under § 550.205(e).

* * * * *

14. Revise § 550.218 to read as follows:

§ 550.218 [RESERVED]

15. Revise paragraphs (a) and (b) in § 550.224 to read as follows:

* * * * *

(a) *General*. A description of the MSCs and aircraft you will use to support your exploration activities. The description of MSCs must estimate the storage capacity of their fuel tanks and the frequency of their visits to your facility or facilities.

(b) *Air emissions*. See § 550.205.

* * * * *

16. Revise § 550.225(b) to read as follows:

* * * * *

(b) *Air emissions*. A description of the emissions source, the frequency and duration of its operation, and the types of air pollutants likely to be emitted by the onshore support facilities you will use. Except as required under § 550.205(m), the amount of air pollutants emitted need not be reported. You do not need to report this information for any onshore support facility if the facility is permitted under the CAA or if you can identify another agency to which this emissions information from the facility was submitted.

* * * * *

17. In § 550.241, revise paragraphs (c) and (d) to read as follows:

* * * * *

(c) *Drilling unit*. A description of the drilling unit and associated equipment you will use to conduct your proposed development drilling activities. Include a brief description of its important safety and pollution prevention features, and a table indicating the type and the

estimated maximum quantity of fuels and oil that will be stored on the facility. For the purpose of this section, the term facility means any installation, structure, vessel, vehicle, equipment or device that is temporarily or permanently attached to the seabed of the OCS, including an artificial island used for drilling, well completion, well-workover, or other operations.

(d) *Production facilities*. A description of the production platforms, satellite structures, subsea wellheads and manifolds, lease term pipelines (see definition at § 550.105), production facilities, umbilicals, and other facilities you will use to conduct your proposed development and production activities. Include a brief description of their important safety and pollution prevention features, and a table indicating the type and the estimated maximum quantity of fuels and oil that will be stored on the facility. For the purpose of this section, the term facility means a vessel, a structure, or an artificial island used for drilling, well completion, well-workover, or other operations or used to support production facilities.

* * * * *

18. Revise § 550.242 to read as follows:

* * * * *

(g) Air emissions information required by §550.205;

* * * * *

19. Revise § 550.245 to read as follows:

* * * * *

(d)(3) If any H_2S emissions are projected to affect any location within a State in a concentration greater than 10 parts per million, the modeling analysis must be consistent with the USEPA risk management plan methodologies outlined in 40 CFR part 68.

(e) *Hydrogen sulfide*. If you propose to flare any gasses containing a potentially significant

amount of hydrogen sulfide, you must separately identify this activity in your plan and separately identify the resulting emissions of SO_x, including reporting the sulphur emissions under subpart B, § 550.205(e).

* * * * *

20. Revise § 550.249 to read as follows:

§ 550.249 [RESERVED]

21. In § 550.257, revise paragraphs (a) and (b) to read as follows:

* * * * *

(a) *General*. A description of the MSCs and aircraft you will use to support your activities. The description of MSCs must estimate the storage capacity of their fuel tanks and the frequency of their visits to the facilities you will use to conduct your proposed development and production activities.

(b) *Air emissions*. See § 550.205.

* * * * *

22. In § 550.258, revise paragraph (b) to read as follows:

* * * * *

(b) *Air emissions*. A description of the source, the frequency and duration of its operation, and the types of air pollutants likely to be emitted by the onshore support facilities you will use. Except as required under § 550.205(m), the amount of emissions of air pollutants need not be reported. You do not need to report this information for any onshore support facility if the facility is permitted under the CAA or if you can identify another agency to which emissions from the facility was submitted.

* * * * *

23. In § 550.280, revise paragraph (a) to read as follows:

§ 550.280 – How must I conduct activities under the approved EP, DPP, DOCD, RUE, pipeline ROW, or lease term pipeline application?

* * *

(a) Compliance. You must conduct all of your lease and unit activities according to your approved EP, DPP, DOCD, or RUE, pipeline ROW, or lease term pipeline application, and any approval conditions. You may not install or use any facility, equipment, vessel, vehicle, or other emissions source not described in your EP, DPP, DOCD, or RUE, pipeline ROW or lease term pipeline application, and you may not install or use a substitute for any emissions source described in your EP, DPP, DOCD, or RUE, pipeline ROW, lease term pipeline application, without BOEM prior approval. If you fail to comply with your approved EP, DPP, DOCD, or RUE, pipeline ROW, or lease term pipeline application:

* * *

* * * * *

24. In § 550.284, revise paragraph (a) to read as follows:

§ 550.284 - How will BOEM require revisions to the approved EP, DPP, DOCD or application for a RUE?

(a) *Periodic review.* The Regional Supervisor will periodically review the activities you conduct under your approved EP, DPP, DOCD, or RUE application and may require you to submit updated information on your activities. The frequency and extent of this review will be based on the significance of any changes in available information, applicable law or regulation, or onshore or offshore conditions affecting, or affected by, the activities in your approved EP, DPP, DOCD, or RUE application.

(1) After 2020, any EP, DPP, DOCD or RUE application that was approved more than ten years prior must be resubmitted for air quality review in accordance with the requirements of §550.310.

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25. Revise subpart C to read as follows:

Subpart C – Air Quality Analysis, Control, and Compliance

§ 550.300	[Reserved]
§ 550.301	Under what circumstances does this subpart apply to operations in my plan?
§ 550.302	Definitions concerning air quality.
§ 550.303	What analysis of my projected emissions is required under this subpart?
§ 550.304	What must I do if my projected emissions exceed an emission exemption threshold?
§ 550.305	How do I determine whether my projected emissions of criteria air pollutants require ERM?
§ 550.306	What ERM are required for a short-term facility?
§ 550.307	What ERM are required for a long-term facility?
§ 550.308	Under what circumstances will BOEM require additional ERM on my proposed facility or facilities?
§ 550.309	What requirements apply to my ERM?
§ 550.310	How will revisions to the ambient air quality standards and benchmarks (AAQSB) affect my plan?
§ 550.311	Under what circumstances will I be required to measure and report my actual emissions?
§ 550.312	What post-approval recordkeeping and reporting is required?
§ 550.313	Under what circumstances will BOEM impose additional requirements on facilities operating under already approved plans?
§ 550.314	Under what circumstances will the Regional Supervisor review the projected emissions from my existing facility or facilities?

§ 550.301 Under what circumstances does this subpart apply to operations in my plan?

The provisions of this subpart apply to any existing facility or proposed plan involving a facility or facilities operating on, or proposed to operate on, any area of the OCS where the Secretary of the Interior has authority to regulate air emissions pursuant to section 5(a)(8) of the

Outer Continental Shelf Lands Act (OCSLA), 43 U.S.C. § 1334(a)(8), as amended, and jurisdiction pursuant to section 328(b) of the CAA, 42 U.S.C. § 7627(b), as amended, including OCS operations conducted pursuant to any plan approved under this part.

§ 550.302 Acronyms and Definitions concerning air quality.

(a) Acronyms and terms used in this subpart, and in § 550.205, have the following meanings:

AAI means Ambient Air Increment(s).

AAQSB means Ambient Air Quality Standards and Benchmarks.

AEDT means Aviation Environmental Design Tool.

APD means Application for a Permit to Drill.

AQCR means Air Quality Control Region.

BACT means Best Available Control Technology.

BLM means the Bureau of Land Management.

Btu IT means British Thermal Unit International Tables.

CAA means the Clean Air Act.

CEO means Chief Environmental Officer (BOEM)

CH_4 means Methane.

CO means Carbon Monoxide.

CP means Criteria Pollutant

CSU means Column-Stabilized-Units.

DOCD means Development Operations Coordination Document.

DOI means the U.S. Department of the Interior.

DPP means Development and Production Plan.

ECE means Emission Control Efficiency.

EET means Emission Exemption Threshold(s).

EIS means Environmental Impact Statement.

EP means Exploration Plan.

ERM means Emission Reductions Measure(s).

FAA means Federal Aviation Administration.

FLM means Federal Land Manager, which includes the heads of the U.S. Bureau of Land Management (BLM), Fish and Wildlife Service (FWS), National Park Service (NPS), Bureau of Land Management (BLM) in DOI and U.S. Forest Service in the Department of Agriculture.

FPS means Floating Production Systems.

FPSO means Floating Production Storage and Offloading vessel.

G&G means Geological and Geophysical.

GHG means Greenhouse Gas.

hp means Horsepower.

hpm means Mechanical Horsepower.

HPU means Hydraulic Power Unit.

H_2S means Hydrogen Sulfide.

kW means Kilowatt.

MARPOL means Marine Pollution Convention.

MODU means Mobile Offshore Drilling Unit.

MOVES means Motor Vehicle Emission Simulator.

MSC means Mobile Support Craft

NAAQS means the primary or secondary National Ambient Air Quality Standards.

NARA means National Archives and Records Administration.

NH_3 means Ammonia.

NO_2 means Nitrogen Dioxide.

NO_x means Nitrogen Oxides.

O_3 means Ozone.

OCS means Outer Continental Shelf.

OCSLA means Outer Continental Shelf Lands Act.

ONRR means the Office of Natural Resources Revenue

OSFR means Oil Spill Financial Responsibility.

OSV means Offshore Supply Vessel.

Pb means Lead.

PM means Particulate Matter.

$PM_{2.5}$ means fine particulate matter equal to or less than 2.5 micrometers in diameter.

PM_{10} means particulate matter equal to or less than 10 micrometers in diameter.

PTE means potential to emit.

ROW means Rights-of-Way.

Rpm means Revolutions per Minute.

RUE means Right-of-Use and Easement.

SILs means Significant Impact Levels.

SO_2 means Sulphur Dioxide.

SO_x means Sulphur Oxides.

SSB means State seaward boundary

TAS means Treatment as State.

TIP means Tribal Implementation Plan.

TLP means Tension-Leg Platforms.

VOC means Volatile Organic Compound.

U.S. means the United States

USEPA means the United States Environmental Protection Agency.

$\mu g/m^3$ means Micrograms per cubic meter.

(b) Terms used in this subpart are listed alphabetically below:

Air quality control region (AQCR) means an interstate area or major intrastate area, which the USEPA deems appropriate for assessing the regional attainment and maintenance of the primary or secondary national ambient air quality standards described in 42 U.S.C. § 7409, as provided under 40 CFR part 81, subpart B, Designation of Air Quality Control Regions.

Ambient Air Increments (AAIs) means the national benchmarks for Ambient Air Increments set out in the table in 40 CFR 52.21(c), as amended, or in 42 U.S.C. §§ 7473 *et seq*., as amended.

Ambient air quality standards and benchmarks (AAQSB) means any or all of the national ambient air quality standards and benchmarks referenced in this subpart, including the primary and secondary NAAQS defined in 40 CFR part 50; the SILs, in 40 CFR 51.165(b)(2); the AAIs, as set out in the table in 40 CFR 52.21(c).

Attainment area means, for any given criteria air pollutant, a geographic area, which is not designated by the USEPA as being a designated non-attainment area, as codified at 40 CFR part 81 subpart C (§§81.300 through 81.356). This includes areas that are referred to as attainment, maintenance, unclassifiable, or unclassifiable/attainment in that subpart, as well as areas that have not yet been designated because the two-year period to complete such designations after

revision of a NAAQS has not yet passed.

Attributed emissions means, for any given criteria or precursor air pollutant, the emissions from MSC and, if appropriate, aircraft, operating above the OCS or State submerged lands, that are attributed to a facility pursuant to the methodology set forth in 550.205(d) for the period over which the corresponding facility emissions are measured.

Background concentration means the ambient air concentration of any given criteria air pollutant that arises both from local natural processes and from the transport into the airshed of natural or anthropogenic pollutants originating locally or from another location, either as measured from an USEPA-approved air monitoring system or as determined on some other appropriate scientifically justified basis approved by BOEM.

Baseline concentration means the ambient background concentration of any given air pollutant that exists or existed at the time of the first application for a USEPA Prevention of Significant Deterioration (PSD) permit in an area subject to § 169 of the CAA, based on air quality data available to the USEPA or a State air pollution control agency and on the monitoring data provided in the permit application and as defined in 40 CFR 51.166(b)(13). The baseline concentration is distinguished from the background concentration in that the background concentration changes continually over time to reflect the current ambient air concentration for any given air pollutant, whereas the baseline concentration remains fixed until such time as a new AAI is established for an attainment area.

Best Available Control Technology (BACT) means a physical or mechanical system or device that reduces emissions of air pollutants subject to regulation to the maximum extent practicable, taking into account: 1) the amount of emissions reductions necessary to meet specific regulatory provisions; 2) energy, environmental, and economic impacts; and 3) costs.

Class I area means an area designated by the USEPA, a State, or a Federally-recognized Indian tribe, where visibility and air emissions are protected by a FLM to pursuant to 42 U.S.C. §§ 7472(a) or 7474, as amended; Class I areas include certain national parks, wilderness areas, national monuments, and areas of special national or regional natural, recreational, scenic, or historic value.

Class II area means an area designated by the USEPA, a State, or a Federally-recognized Indian tribe, that is protected pursuant to 42 U.S.C. §§ 7472(a) or 7474, as amended, to limits less stringent than those for Class I areas. Sensitive Class II areas represent a sub-classification of Class II areas that are defined by Federal Land Management Agencies as federal lands where the protection of air resources has been prioritized, as specified in acts, regulations, planning documents, or by policy.

Complex total emissions means the sum of the facility emissions that would result from all of the facilities that have been aggregated for the purposes of evaluating their potential consolidated impact on air quality, pursuant to the methodology set forth in § 550.303(d), and the sum of all corresponding attributed emissions for those facilities.

Criteria air pollutant or criteria pollutant means any one of the principal pollutants for which the USEPA has established and maintains a NAAQS under 40 CFR part 50 in accordance with 42 U.S.C. § 7409, as amended, for the protection of public health and welfare, and the environment. The USEPA has established primary standards for the protection of sensitive populations of children and the elderly and secondary standards for the protection of crops, vegetation, buildings, visibility, and prevention of harm to animals. Criteria air pollutants do not include Volatile Organic Compounds (VOCs) or any other precursor air pollutant not already regulated under the NAAQS.

Design concentration means the pollutant concentration at a given location projected, through computer-simulated air dispersion or photochemical modeling, as described under 40 CFR part 51, Appendix W, Section 7.2.1.1 to result from your projected emissions, combined with the background concentration for the same pollutant, averaging time, and statistical form at the most appropriate receptor location. The appropriate background concentration is measured from the nearest point at which there is data from an USEPA-approved air monitoring system, or as determined on some other appropriate scientifically justified basis approved by BOEM.

Dispersion modeling means the mathematical computer simulation of air emissions being transported from a source through the atmosphere under given meteorological conditions. Emissions from sources, expressed as the rate of air pollutants emitted over time (i.e., pounds per hour), are translated through computer modeling into pollutant concentrations, expressed in units of micrograms of pollutants per cubic meter of ambient air (µg/m3), or in parts per million or billion, depending on the circumstances. When a file containing meteorological and emissions data are input into the computer model, the model will project the concentrations of the pollutants at a receptor location.

Emission control efficiency (ECE) means the effectiveness of an ERM for any given emissions source and air pollutant. The greater the emission control efficiency, the greater the effectiveness of the underlying controls (i.e., measured as a percentage reduction in the underlying emissions of any given pollutant). ECE varies from 100%, representing a control that completely eliminates emissions, to zero, representing a control that has no effect on such emissions.

Emissions credits mean emissions reductions from an emissions source(s) not associated with the plan that are intended to compensate for the excessive emissions of criteria or precursor air

pollutants, regardless of whether these emissions credits are acquired from an emissions source(s) located either offshore or onshore, including: 1) emissions offsets generated by the lessee or operator itself; or 2) emissions offsets acquired from a third party; or 3) trading allowances or other alternative emission reduction method(s) or system(s) associated with a market-based trading mechanism; examples include mitigation banks or other competitive markets where these assets are exchanged.

Emission exemption threshold(s) (EET) means the maximum allowable rate of projected emissions, calculated for each air pollutant, expressed as short tons per year (tpy), above which facilities would be subject to the requirement to perform modeling.

Emissions factor(s) means a value that relates the quantity of a specific pollutant released into the atmosphere with the operation of a particular emissions source. Emissions factors are usually expressed as the mass of pollutant generated from each unit (e.g., mass, volume, distance, work, or duration) of activity by the emissions source emitting the pollutant.

Emission reduction measure(s) (ERM) means any operational control(s), equipment replacement(s), BACT, or emissions credit(s), applied on either a temporary or permanent basis, to reduce the amount of emissions of criteria or precursor air pollutants that would occur in the absence of such measures.

Existing facility means an operational OCS facility described in an approved plan.

Facility means, any installation, structure, vessel, vehicle, equipment, or device that is temporarily or permanently attached to the seabed of the OCS, including but not limited to a dynamically positioned ship, gravity-based structure, manmade island, or bottom-sitting structure, whether used for the exploration, development, production or transportation of oil, gas, or sulphur. All installations, structures, vessels, vehicles, equipment, or devices directly

associated with the construction, installation, and implementation of a facility are part of a facility while located at the same site, attached, or interconnected by one or more bridges or walkways, or while dependent on, or affecting the processes of, the facility, including any ROV attached to the facility. One facility may include multiple drill rigs, drilling units, vessels, platforms, installations, devices, and pieces of equipment. Facilities include Mobile Offshore Drilling Unit(s) (MODU), even while operating in the "tender assist" mode (i.e., with skid-off drilling units), or any other vessel engaged in drilling or downhole operations, including well-stimulation vessels. Facilities also include all Floating Production Systems (FPSs), including Column-Stabilized-Units (CSUs), Floating Production, Storage and Offloading facilities (FPSOs), Tension-Leg Platforms (TLPs), and spars. Any vessel used to transfer production from an offshore facility is part of the facility while physically attached to it. Facilities also include all DOI-regulated pipelines and any installation, structure, vessel, equipment, or device connected to such a pipeline, whether temporarily or permanently, while so connected.

Facility emissions means, for any given criteria or precursor air pollutant, the annual, the maximum 12-month rolling sum, and the peak hourly emissions from all emissions sources on or connected to a facility.

Federally-recognized Indian tribe refers to a Federally-recognized Indian tribe that has either a Treatment as State (TAS) status recognized by the USEPA or an approved TIP.

Fugitive emissions means the emissions of an air pollutant from an emissions source that do not pass through a stack, chimney, vent, or other functionally-equivalent opening.

Fully reduce(d) means to decrease emissions of VOCs to a rate that will not exceed the emission exemption threshold calculated under § 550.302, or to decrease emissions of criteria air pollutants to a rate that will not exceed the Significant Impact Levels set out in the table in

40 CFR 51.165(b)(2), as amended.

Long-term facility means a facility that has remained or is intended to remain in the same lease block or within one nautical mile of its original location for three years or longer; this three year period is measured from the time the facility is first attached to the seafloor, or another facility, and continues to run until the facility's planned operations cease, regardless of the length of time the facility remains attached to the seafloor in any given year.

Major precursor pollutant means any precursor pollutant for which the States are required to report actual emissions to the USEPA, as defined in 40 CFR 51.15(a).

MARPOL-certified engine means either: 1) an engine with a power output of more than 5,000 kW and a per cylinder displacement at or above 90 liters installed on a ship constructed on or after January 1, 1990 but prior to January 1, 2000 that is subject to Regulation 13.7 of MARPOL Annex VI; or, 2) an engine with a power output of more than 130 kW built on or after January 1, 2000 that is subject to Regulations 13.1 through 13.6 of MARPOL Annex VI.

Maximum rated capacity means the maximum power an engine is capable of generating over time, expressed in kW, and if necessary, as converted from hpm (where 1 hpm of power equals 745.699872 Watts or 0.745699872 kW) or from the International Table values of British thermal units (BtuIT, where 1 BtuIT/hour of power equals 0.29307107 Watts or 0.00029307107 kW).

National ambient air quality standards (NAAQS) means the ambient air standards established by the USEPA, as mandated by the CAA (42 U.S.C. § 7409), set out in in 40 CFR part 50, for the common criteria air pollutants considered harmful to public health or welfare. There are two categories of the NAAQS: primary standards that set limits to protect public health, including the health of "sensitive" populations such as asthmatics, children, and the elderly; and secondary standards that set limits to protect public welfare when concentrations are elevated over time,

including protection against visibility impairment; prevention of harm to animals, including marine mammals, fish and other wildlife; and avoidance of damage to crops, vegetation, and buildings. This term includes both categories.

Non-attainment area means, for any given criteria air pollutant, a geographic area, which the Administrator of the USEPA has designated as non-attainment for a NAAQS, as codified at 40 CFR part 81 subpart C. For the purposes of these regulations, all other areas will be considered Attainment areas.

Operational control means a process, method or technique, other than a physical or mechanical control, or equipment replacement that reduces the emissions of criteria or precursor air pollutants (e.g., limitation on period of operation, load balancing, and/or use of less-polluting fuels).

Particulate matter (PM) means an airborne contaminant of particulate matter that is regulated as a criteria air pollutant under the ambient air standards. PM_{10} refers to airborne contaminants of particulates less than or equal to 10 micrometers. $PM_{2.5}$, or fine PM, is an airborne contaminant composed of particulates less than or equal to a diameter of 2.5 micrometers.

Plan means any initial, revised, modified, resubmitted, or supplemental Exploration Plan (EP), Development and Production Plan (DPP), Development Operations Coordination Document (DOCD), or application for a Right-of-Use and Easement (RUE), a Pipeline ROW, or a lease term pipeline application.

Potential to emit (PTE) means the maximum capacity of a source to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, will be treated as

part of its design if the limitation or the effect it would have on emissions is federally enforceable. Attributed emissions are not counted in determining a facility's PTE.

Precursor air pollutant or precursor pollutant means a compound that chemically reacts with other atmospheric gases to form a criteria air pollutant. Some precursor air pollutants are also defined as criteria air pollutants. Precursor air pollutants include VOCs, NO_x, SO_x, and NH_3.

Projected emissions means, for any given criteria or precursor air pollutant, the sum of facility's (or facilities') emissions and the corresponding attributed emissions over the specified time period, with the controlled or uncontrolled nature of the pollutants specified by the context.

Proximate activities means activities that involve or affect any of the following: the same well(s); a common oil, gas, or sulphur reservoir; the same or adjacent lease block(s); or, facilities located within one nautical mile of one another. Where a well is drilled from one facility, but production from that well will ultimately take place through a different facility, the drilling and production activities constitute proximate activities if they occur within the same twelve months.

Sensitive Class II area means a Class II area defined by an FLM agency as being federal land where protection of air resources has been prioritized, as specified in acts, regulations, planning documents, or policy.

Short-term facility means any facility that is not a long-term facility or connected to a long-term facility.

Significance level or Significant impact level (SIL) means an ambient air benchmark or limit that applies to the ambient air impact of the emissions of a criteria air pollutant, as set out in the table in 40 CFR 51.165(b)(2).

Technically feasible means a technology or methodology that: 1) has been demonstrated to operate successfully on the same type of emissions source as the one under review; or 2) is

available and applicable to the type of emissions source under review.

Total support emissions means, for any criteria or precursor air pollutant, the total emissions generated by an MSC that operates in support of your and any other facilities, for the 12-month period over which the corresponding facility emissions are measured. For example, for any given MSC, the total support emissions would equal the number of service trips (i.e., from the port to the supported facilities) made during the relevant 12-month period multiplied by the average number of hours per service trip multiplied by the emissions per hour for all emissions source(s) on that MSC (derived from the emissions factor calculation).

§ 550.303 What analysis of my projected emissions is required under this subpart?

a) *Establishing emission exemption thresholds*. BOEM establishes the rate of projected emissions, calculated for each air pollutant, above which facilities would be subject to the requirement to perform modeling. These EETs establish those rates of emissions below which BOEM has determined emissions would not significantly affect the air quality of any State. If your projected emissions or complex total emissions are exempt, then you will not be required to perform air quality modeling in accordance with the requirements of § 550.304 of this subpart and to apply any controls, as described in §§ 550.305 through 550.307.

(b) *Calculating projected emissions.* You must compare your projected emissions, or your complex total emissions if you are required to consolidate multiple facilities under paragraph (d) of this section, with the EETs, pursuant to the methodology provided below:

(1) Projected emissions. You must calculate and report the projected emissions for each facility as set forth in § 550.205(e).

(2) Attributed emissions. You must calculate and report all attributed emissions for each facility as set forth in § 550.205(d).

(c) *Exempt emissions thresholds*. BOEM will establish EETs under this paragraph. These will determine whether your projected emissions or complex total emissions have the potential to significantly affect the air quality of any State.

(1) BOEM will establish new EETs based on the factors listed in this paragraph and publish them in the *Federal Register*. BOEM may establish different EETs that apply to different areas of the OCS or that apply to different kinds of emissions sources. BOEM may establish different EETs that apply to different areas of the OCS or that apply to different kinds of emissions sources.

If your projected emissions for any criteria air pollutant or precursor air pollutant exceeds an EET, then you will be required to perform air quality modeling in accordance with the requirements of §550.304 of this subpart and you may be required to apply controls, as described in §§ 550.305 through 550.307, unless scientific evidence and the application of the factors set in (c)(2) of this paragraph demonstrates otherwise.

(i) The first time that BOEM establishes a new set of EETs, BOEM will publish a notice in the *Federal Register* describing the proposed EETs and will specify the length of a corresponding comment period. At the conclusion of the comment period, BOEM will review and evaluate the comments and make a determination as to the final EETs. BOEM will publish a subsequent notice in the *Federal Register* listing the new EETs, along with a corresponding effective date for the new EETs.

(ii) Any time that BOEM determines that a revised EET should be established, BOEM will publish a notice in the *Federal Register* describing the proposed revised EET and will specify the length of a corresponding comment period. At the conclusion of the comment period, BOEM will review and evaluate the comments and make a determination as to the final EET. BOEM

will publish a subsequent notice in the *Federal Register* listing revised EET, along with a corresponding effective date for the revised EET.

(iii) Until the date of the Notice, a facility will not be exempt under this section if its projected emissions of any pollutant exceed EETs as calculated using the following formulas:

(A) EET= 3400 x $D^{2/3}$ for emissions of carbon monoxide (CO); and

(B) EET= 33.3 x D for emissions of each of the following: nitrogen oxides (NOx); SOx; volatile organic compounds (VOCs); and PM_{10}.

Where D is the distance of the facility from the shoreline, as identified in § 550.205(i)(1).

(C) For Pb, the EET value is the level defined in 40 CFR 52.21(b)(23)(i).

(iv) Subsequent to the date of the Notice, a facility will not be exempt under this section if its projected emission of any pollutant exceeds an EET published in the Notice.

(v) Because the USEPA's AAQSB are subject to change as scientific knowledge improves and because modeling and evaluation techniques may improve over time, BOEM will revise EETs on an ongoing basis. Thus, as the USEPA revises the NAAQS, or any applicable SIL or AAI, BOEM, at its discretion, will periodically revise its EET formula(s) or its amount(s) for the corresponding air pollutant(s), as appropriate.

(2) BOEM will determine new EET formulas taking into account the following factors:

(i) The absolute level of projected emissions;

(ii) The distance of the proposed facility or facilities from any State or from areas critical to natural resources, animals, and habitats;

(iii) The existing ambient air pollution in potentially affected States, trend in the ambient air pollution in those States, the associated attainment status of such areas, and the associated effects to public health and welfare;

(iv) Any USEPA AAQSB applied in this rule;

(v) The types, frequency, and duration of any air pollutant emissions and their formation and/or dispersion characteristics;

(vi) The characteristics of the facility or facilities and MSCs, including the type and nature of the emissions sources, and the height of the associated points or stacks;

(vii) Prevailing meteorological characteristics in any given area, including air stability, relevant wind speeds and directions;

(viii) The amount of emissions from existing facilities and vessels in the vicinity of the proposed facility;

(ix) Other necessary and appropriate considerations.

(3) BOEM will set the EET formulas within the ranges described below

(i) The minimum values in this range are determined by the formulas in the table below:

Minimum Value Equation	**Pollutant and Averaging Period**
$E_{min} = 0.677(d^{1.2693})$	Annual NOx, SOx, and PM_{10}
$E_{min} = 0.2031(d^{1.2693})$	Annual $PM_{2.5}$
$E_{min} = 3.3851(d^{1.2693})$	24-hr SO_2 and PM_{10}
$E_{min} = 0.8124(d^{1.2693})$	24-hr $PM_{2.5}$
$E_{min} = 1354(d^{1.2693})$	1-hr CO
$E_{min} = 338.51(d^{1.2693})$	8-hr CO
$E_{min} = 16.926(d^{1.2693})$	3-hr SO_2
Where *d* is the distance in statute miles from the State seaward boundary, as reported in your plan under §550.205(i)(2) and E_{min} equals tons per year.	

For Pb, the minimum value amount is the level defined in 40 CFR 52.21((b)(23)(i).

(ii) The maximum values of this range are set by the following formulas:

(A) If $d \leq 3$, then $E_{max} = 7072$ for CO; and $E_{max} = 100$ for NOx, SO_X, VOCs, and $PM_{10.}$

(B) If d > 3, then E_{max}= 3400 x $d^{2/3}$ for CO; and E_{max} = 33.3 x d for NOx, SO_X, VOCs, and PM_{10}

Where *d* will be the distance of the facility from the SSB as identified in § 550.205(i)(2).

(4) If your projected emissions for any criteria air pollutant or precursor air pollutant exceeds the EETs as determined pursuant to § 550.303, then you will be required to perform air quality modeling in accordance with the requirements of § 550.304 of this subpart and you may be required to apply controls, as described in §§ 550.305 through 550.307.

(d) *Consolidation of air pollutant emissions from multiple facilities.*

(1) You must report the projected emissions from multiple facilities which may have been or are described in multiple plans, as the complex total emissions for your plan, if:

(i) The air pollutant emissions are generated by proximate activities (i.e., the same well(s); a common oil, gas, or sulphur reservoir; the same or adjacent lease block(s); or, by facilities located within one nautical mile of one another) ; and

(ii) You wholly or partially own, control or operate those facilities; in the event of a dispute as to what constitutes common ownership, control or operations, BOEM will make a determination by reference to the ONRR criteria defined in 30 CFR 1206.101 and 30 CFR 1206.151; and

(iii) The construction, installation, drilling, operation, or decommissioning of any of your facilities occurs within a contemporaneous 12-month period as the construction, installation, drilling operation, or decommissioning of any other facility; and

(iv) Such a consolidation of emissions from multiple facilities would generate emissions sufficient to exceed an applicable emission exemption threshold (based on the exemption review described in paragraphs (e) or (f) of this section).

(2) If any two or more facilities meet all of the conditions specified in (d)(1)(i) through (d)(1)(iii) of this section, you must calculate the sum of the projected emissions from those facilities (including their respective attributed emissions) as the complex total emissions for your plan.

(3) BOEM will make a determination that you have appropriately considered the relevant data in your analysis of the complex total emissions.

(4) If you are required to consolidate projected emissions data from multiple facilities, then anywhere a requirement applies to projected emissions you must instead use complex total emissions, except with respect to the process by which projected emissions are determined for any given facility (as specified in § 550.205(d)).

(e) *Emissions do not exceed any threshold.* If none of your projected emissions or complex total emissions of any precursor or criteria air pollutant exceeds the applicable emission exemption threshold, then your projected emissions are *de minimis*, and no further analysis is required under this subpart.

(f) *Emissions exceed a threshold.* If your projected emissions or complex total emissions of the precursor or criteria air pollutant exceed the applicable emission exemption threshold, then further review and/or controls are required, in accordance with the provisions below:

(1) If the exceedance is for VOCs, you must control your emissions of VOCs in accordance with § 550.306, for a short-term facility, or § 550.307, for a long-term facility.

(2) If the exceedance is for any criteria air pollutant, then you must conduct modeling in accordance with § 550.304.

(3) If the exceedance is for NO_x, VOCs, or CO, and if the conditions specified in § 550.304(b) have been met, you are required to conduct photochemical modeling for O_3.

(4) If the exceedance is for NO_x, VOCs, $PM_{2.5}$, or SOx, and if the conditions specified in § 550.304(b) have been met, you are required to conduct photochemical modeling for $PM_{2.5}$.

(g) Changes to previously approved plans.

(1) If you change your plan implementation, such that your projected emissions, or your complex total emissions, will occur in years other than those that were previously approved, you must submit a revised plan, and that revised plan must be approved before you implement the proposed changes.

(2) If at any time you anticipate an increase in the maximum air pollutant emissions from a previously approved plan, you must submit a revised plan, pursuant to 30 CFR 550.283(a)(4).

(3) If you propose to make a change to your operations on your existing facility or facilities, but not to the equipment used in such operations, and your approved projected annual emissions in any given year are higher than those previously approved for the particular year, but lower than the maximum air pollutant emissions for any year, you do not need to submit a revised plan -- as long as the operations would occur in the same year as described in the previous plan.

(4) If you propose to make a change to the equipment on your existing facility or facilities in a year or years where your plan already anticipated operations, and your proposed change would result in an increase in air pollutant emissions from that equipment for any air pollutant, you must submit a revised plan.

(5) If your plan was approved for a short-term facility that becomes a long-term facility, then you must submit a revised plan for review and approval by BOEM.

(h) *Federal land manager*. If BOEM believes that your proposed activities may affect a Class I or a Sensitive Class II area of a State:

(1) BOEM may consult with one or more relevant FLMs to determine what effects could

result from your proposed activities.

(2) BOEM will consider the views of the FLMs in determining whether your plan complies with the provisions of this subpart. Based on this consultation, BOEM may require additional information and analysis, either prior to or as a condition of approving your plan.

(3) If the FLM does not raise any concerns regarding your plan in a timely manner, BOEM will assume that the FLM has no objections to the proposed plan.

§ 550.304 What must I do if my projected emissions exceed an emission exemption threshold?

If your projected emissions or your complex total emissions exceed the limits defined in 550.303(c) for any criteria or precursor pollutant, you must conduct modeling of that pollutant, and any other pollutant for which that pollutant is a precursor, to project the impacts of those emissions.

(a) *Dispersion Models*.

(1) You must use one or more of the following air dispersion models:

(i) A model approved by the USEPA, as described in Appendix A to 40 CFR part 51 Appendix W (Guideline on Air Quality Models); or

(ii) A model included in the Federal Land Managers' Air Quality Related Values Workgroup Guidance; or

(iii) Another model approved by the BOEM Chief Environmental Officer (CEO).

(iv) The BOEM CEO may disapprove the use of a USEPA-approved or FLM-approved air quality model, if the CEO determines that such model would not be appropriate in the OCS context.

(2) You must follow the modeling procedures recommended in 40 CFR part 51 Appendix W,

as amended, to the extent possible. You must provide BOEM with a copy of your dispersion modeling protocol and the associated data and assumptions used to do your analysis before you conduct modeling.

(b) *Photochemical Models.* Photochemical modeling is required only if:

(1) Your projected emissions (or your complex total emissions where applicable) for the relevant precursor air pollutants exceed an applicable EET;

(2) An appropriate photochemical air quality model is available that:

(i) meets the USEPA's requirements of section 3.2 of 40 CFR part 51, Appendix W;

(ii) complies with the Federal Land Managers' Air Quality Related Values Workgroup Guidance; or

(iii) is another model approved by the BOEM CEO;

(3) BOEM has determined that adequate relevant information on background concentrations is available for the relevant location(s) in a potentially affected State(s).

(4) Upon request, you must provide BOEM with a copy of your photochemical modeling protocol and the associated data and assumptions used to do your photochemical analysis before you conduct modeling.

(c) *Projected emissions*. Base your modeling on the maximum projected emissions, as reported under § 550.205(e), or on the complex total emissions, where applicable;

(d) *Meteorology.* Apply the best available and most recent meteorological dataset, either as directed in 40 CFR part 51 Appendix W, or by using an alternate dataset approved by the Regional Supervisor.

(e) *Estimates of ambient air concentrations*. For each criteria air pollutant resulting from your projected emissions (or complex total emissions where applicable), estimate the peak

incremental concentrations projected in any attainment area(s) and, separately, in any non-attainment area(s), in any State (over State submerged lands or onshore), both on an annual basis and for the other averaging times specified in the appropriate USEPA regulations at 40 CFR part 50 and the tables at 40 CFR 51.165(b)(2) and 40 CFR 52.21(c).

(1) To the extent practicable, your estimate of the incremental ambient air concentrations of any criteria air pollutant must consider not only the dispersion of each criteria air pollutant itself, but also the formation of any criteria air pollutant that may result from the dispersion or presence of any relevant precursor air pollutant(s). Specifically:

(i) Any analysis of $PM_{2.5}$ must include NO_x, SOx, VOCs, and NH_3

(ii) Any analysis of O_3 must include NO_x, VOCs, and CO.

(2) BOEM may provide information though a Notice to Lessees to assist lessees and operators in evaluating existing ambient air concentrations, or changes in such concentrations over time if it determines that there is an effective means of estimating ambient air quality.

(i) In the event that BOEM has established appropriate background concentration data, or baseline concentration data, for any given pollutant, at any given location and point in time, you must use the data provided by BOEM.

(ii) In the event that BOEM has not established appropriate background concentration data for any given pollutant, for any given location, and point in time, you should use the relevant data from the USEPA for the closest appropriate location, as specified by the Regional Supervisor.

(f) *Attributed emissions*. Conduct modeling of attributed emissions from those locations where the emissions are expected to occur (i.e., utilizing a line, area, volume, or pseudo point source model).

(g) *Documentation and reporting*. Create a modeling report documenting all emissions sources, inputs, parameters, assumptions, procedures, methods, and results, including input and output files, and data upon which your analysis under this subpart is based, and provide BOEM with this report, copies of all data and access to any programs used in your modeling.

§ 550.305 How do I determine whether my projected emissions of criteria air pollutants require ERM?

(a) For all criteria air pollutants other than $PM_{2.5}$ and O_3, compare the results of the modeling described in § 550.304 with the SILs set out in the table at 40 CFR 51.165(b)(2), as amended. If the modeling results exceed a SIL for any criteria air pollutant for any averaging time, you are required to apply ERM to sources to reduce emissions only for the CPs that exceed a SIL, as specified in § 550.306 for a short-term facility, or as specified in § 550.307 for a long-term facility.

(b) For $PM_{2.5}$, you must add the results of your dispersion modeling of direct $PM_{2.5}$ emissions conducted under § 550.304(a) to the results of your photochemical modeling, if required under § 550.304(b), before you compare the results with the $PM_{2.5}$ SILs set out in the table at 40 CFR 51.165(b)(2), as amended. If this sum exceeds a SIL for $PM_{2.5}$ for any averaging time, you are required to apply ERM for a short-term facility as specified in § 550.306, or as specified in § 550.307, for a long-term facility.

(c) For O_3, you must add the results of your photochemical modeling, if required under § 550.304(b), to the existing background concentrations, as described under § 550.302, and determine if the sum exceeds the NAAQS for O_3 for any averaging time. If so, for a short-term facility, you must apply ERM as specified in § 550.306, or as specified in § 550.307 for a long-term facility.

§ 550.306 What ERM are required for a short-term facility?

(a) If any short-term facility requires ERM under § 550.303(f) for VOCs or § 550.305 for a CP, then you are required to conduct an ERM analysis to determine potential control options and their likely cost effectiveness. In conducting your ERM analysis, you must:

(1) Identify all available control technologies relevant to the emissions of the pollutant(s) for which ERM is required;

(2) Determine which of these options are technically feasible for your plan; a demonstration of technical infeasibility must be clearly documented and must show, based on physical, chemical or engineering principles, that technical difficulties would preclude the successful use of the applicable emission control technology or methodology.

(3) Rank the technically feasible control technologies by their emission control efficiencies (ECE) and determine their likely reduction of criteria air pollutant emissions (i.e., absolute effectiveness), in tpy of emissions avoided;

(4) Evaluate the most effective ERM and document the results of your analysis; and

(5) Select reasonable operational controls or replacement(s) of equipment that are technically and economically feasible and that are designed to limit your facility's projected emissions to the greatest practicable extent, taking into consideration the effectiveness and the cost of implementation, for each option considered. You must demonstrate that you have chosen the most effective technically and economically feasible operational controls or replacement(s) of equipment for every pollutant requiring such controls that can be implemented cost effectively. As an alternative, you may propose an equivalent reduction through the use of emissions credits.

(6) If you can demonstrate to the satisfaction of the Regional Supervisor that no technically

feasible operational controls or equipment replacement(s) can be implemented cost effectively, then;

(i) For any given pollutant, if your emissions would affect only attainment areas, no ERM will be required with respect to that pollutant beyond that which was proposed in your plan.

(ii) If your emissions affect any non-attainment area for a specific pollutant, the Regional Supervisor may require the implementation of other ERM for that pollutant in lieu of operational controls or equipment replacement(s) as a condition of approving your plan. For any proposed BACT, you must provide a description of the associated energy, environmental, and economic impacts, and other costs.

(b) Unless you demonstrate to the satisfaction of the Regional Supervisor that no technically feasible control technology can be implemented cost effectively, your plan must include:

(1) An evaluation of the ERM you select, quantifying and verifying the emission reduction measure(s) and associated cost(s);

(2) A description of how your selected operational controls or replacement(s) of equipment meet the criteria in § 550.309 for emission reduction measures; and a calculation of your revised projected emissions (or complex total emissions, where applicable), taking into account your selected operational controls or replacement(s) of equipment.

(c) Upon making a commitment to apply the appropriate operational controls or replacement(s) of equipment or other ERM in lieu of operational controls or replacement(s) of equipment, BOEM may approve your plan, provided all other applicable requirements have been met.

(d) In the event that BOEM obtains information or data that would indicate that your projected emissions may cause the NAAQS to be exceeded, the Regional Supervisor may require

you to provide additional data, analysis, or modeling to demonstrate compliance with the NAAQS or may require that you implement additional ERM so that the NAAQS are not exceeded.

§ 550.307 What ERM are required for a long-term facility?

(a) *Control of emissions of VOCs from a long-term facility*. If any long-term facility requires ERM for VOCs under § 550.303(f), you must propose ERM for the facility. The extent of the ERM required depends on the attainment status of the State area affected by your projected emissions.

(1) Except as provided in paragraph (3), if all the State areas potentially affected by your projected emissions of VOCs are designated as attainment areas for O_3 and $PM_{2.5}$, then you must evaluate and propose ERM utilizing the process described for a short-term facility in § 550.306(a)(1) through (4) and consider all relevant ERM, excluding BACT. You must demonstrate in your plan that the ERM you propose, excluding BACT, will reduce the emissions of VOCs to the lowest practicable and reasonable rate, expressed in tpy. If you elect to propose BACT in lieu of an alternative ERM, you must provide a description of the associated energy, environmental, and economic impacts, and other costs.

(2) Except as provided in paragraph (3), if your projected emissions of VOCs potentially affect a State coastal area designated as a non-attainment area for O_3 or $PM_{2.5}$, then you must evaluate BACT and other relevant ERM and propose ERM utilizing the process described for a short-term facility in § 550.306(a)(1) through (4). You must fully reduce the projected emissions of VOCs to a level not to exceed the EET for VOCs, as calculated for your plan in accordance with § 550.303(c). If your proposed ERM are insufficient to reduce the emissions of VOCs to a level that does not exceed the EET, you must propose and apply additional ERM until such

reduction is achieved. For any proposed BACT, you must provide a description of the associated energy, environmental and economic impacts, and other costs.

(3) VOC Waiver: If your projected emissions of VOCs potentially affect a State coastal area but you can demonstrate that your VOCs will not cause an increase, or would cause a reduction, in the formation of O_3 (i.e., reduce the O_3 production efficiency), then no ERM are required for those VOCs.

(b) *Control of emissions of criteria air pollutants from a long-term facility*. If a long-term facility requires ERM for criteria air pollutants under § 550.305, then you must propose ERM and conduct modeling as specified below. The objectives of your proposal, and the extent to which additional requirements may apply, depend on the attainment status of the affected State area(s).

(1) If all State areas affected by your emissions are designated as attainment areas, then:

(i) You must consider all relevant ERM excluding BACT, utilizing the process described for a short-term facility in § 550.306(a)(1) through (4).

(ii) You must conduct modeling for all of the air pollutants set out in the table at 40 CFR 52.21(c) using the reduced projected emissions that result from your proposed ERM. If photochemical models are required under § 550.304, then you must also perform photochemical modeling and add the results of those models to the results of the subsequent model results.

(iii) You must combine the ambient air concentrations resulting from the projected emissions of each relevant CP with those emissions of the same CP from other onshore and offshore sources which contribute to the consumption of the maximum allowable increases above the baseline concentration for each pollutant and baseline area as established in 40 CFR 52.21. Compare your results with the AAIs applicable to the Class area designation of the State area set

out in table 40 CFR 52.21(c).

(A) For this analysis, use the ambient air quality concentration data specified in § 550.304(e)(2).

(B) As an alternative, you may instead model only the increment-related emissions increases and decreases between the baseline date and the modeling date (using emissions inventory data) for all relevant onshore and offshore sources, combined, and then compare the resulting modeled concentration change to the appropriate increment value, without regard to ambient background concentrations.

(iv) If your projected emissions affect State areas with multiple Class area designations, then you must reduce your projected emissions to meet the AAIs set out in the table in 40 CFR 52.21(c), as amended, according to the requirements for each Class area.

(v) If your proposed ERM are sufficient to reduce projected emissions, such that projected concentrations do not exceed any of the AAIs, you must then conduct the analysis described in § 550.307(b)(1)(vi). If your modeling results exceed the AAIs for any given air pollutant, then you must continue to apply additional ERM to sources to reduce that pollutant until additional modeling confirms that your projected concentrations do not exceed any AAI. Having done this, you must then conduct the analysis described in § 550.307(b)(1)(vi).

(vi) You must conduct additional modeling, adding the appropriate background concentrations defined under § 550.302 and specified in § 550.304(e)(2) to your results, in order to determine the relevant design concentrations. You must compare the design concentrations for each criteria air pollutant with the NAAQS set out in 40 CFR part 50. If any of the NAAQS is exceeded for any air pollutant for any period of exposure, then you must propose additional ERM, and repeat the corresponding modeling, until you can demonstrate that your design

concentrations do not exceed the NAAQS.

(2) If your emissions affect any area designated as a non-attainment area, then you must evaluate BACT and other relevant ERM utilizing the process described for a short-term facility in § 550.306(a)(1) through (4) and consider all relevant ERM, including BACT. You must reduce the ambient impact of your emissions of all criteria air pollutants to a level that does not exceed the applicable SILs at 40 CFR 51.165(b)(2). You must conduct modeling using your revised projected emissions and compare the results with the SILs. If photochemical modeling is required under § 550.304, then you must also perform additional photochemical modeling and combine the results of that modeling with the results of the subsequent dispersion models. If your results exceed any SIL for any criteria air pollutant for any averaging time, then you must apply additional ERM until additional modeling demonstrates that all projected emissions have been fully reduced so that no SIL is exceeded for any criteria air pollutant over any applicable averaging time. Having done this, you must then conduct the analysis described in § 550.307(b)(1)(vi).

(c) *Exceptions to the ERM requirement:*

(1) AAIs. For any averaging time other than an annual period, a facility's projected emissions may cause an ambient impact that exceeds an applicable AAI one time during any rolling 12-month period for any given criteria air pollutant at any one location and still be considered to have fully reduced emissions.

(2) NO_x Waiver: If your projected emissions of NO_x potentially affect a State coastal area, but you can demonstrate that those emissions would not cause an increase, or would cause a reduction, in the formation of O_3 (i.e., reduce the O_3 production efficiency), then no ERM are required for $NO_{x,}$ unless:

(i) The potentially affected area is an attainment area for NO_x and your analysis indicates that the AAIs for NO_x would be exceeded in the absence of such ERM; or

(ii) The potentially affected area is a non-attainment area for NO_x.

(3) VOC Waiver. A VOCs waiver could apply, as described in 550.307(a)(3).

(4) Safety exception. If the implementation of a plan under these regulations would compromise the safety of the operation of the facility, and such implementation of any air quality standards or benchmarks cannot be otherwise addressed, then BOEM may waive the requirement to apply ERM.

(d) *NAAQS requirement.* No concentration of an air pollutant may exceed the concentration permitted under any primary or secondary NAAQS.

(e) *Emissions Credits*. You may propose to use emissions credits to achieve the equivalent reduction of emissions for any criteria air pollutant as an alternative to any other ERM, regardless of the attainment status of the State area affected by your potential emissions.

§ 550.308 Under what circumstances will BOEM require additional ERM on my proposed facility or facilities?

(a) *Regional Supervisor review*. You may be required to apply additional ERM, on either a temporary or permanent basis, depending on the circumstances, even though you have demonstrated compliance with the sections above, if BOEM determines that your projected emissions or, where applicable, complex total emissions, may cause or contribute to a violation of a NAAQS. The Regional Supervisor may make this determination based on:

(1) Information submitted by a State or local government, or a Federally-recognized Indian tribe;

(2) A cumulative impacts analysis conducted for an Environmental Impact Statement (EIS) prepared to comply with the National Environmental Policy Act (NEPA);

(3) A compliance review of your proposed plan under subpart B, § 550.232(b) for an EP, or § 550.267(c) for a DPP or DOCD; or

(4) The declaration by an adjacent State, or the USEPA, of an air quality emergency for a location that may be affected by air emissions generated by your operations.

(b) *Lessee's or operator's right to challenge*. You will be given notice of the Regional Supervisor's determination, as well as an opportunity to present additional information and analysis for review by the Regional Supervisor. If you present the Regional Supervisor with additional information and analysis, the Regional Supervisor will reassess whether your projected emissions, or complex total emissions, may cause or contribute to a violation of any NAAQS, and whether additional ERM will be required for your facility. The Regional Supervisor will then notify the State or local government, or Federally-recognized Indian tribe, and explain the reasons for this determination.

§ 550.309 What requirements apply to my ERM?

(a) *Sufficiency*. Your proposed ERM must be sufficient to achieve actual emissions reductions corresponding to those reported in your plan for the duration of your plan's operations under all reasonably foreseeable conditions. On a case-by-case basis, the Regional Supervisor will review your proposed ERM and make a determination whether such measures meet the applicable criteria.

(b) *Effectiveness*. You must continually ensure the effectiveness of your ERM for the duration of your plan's operations. If your measures become disabled or unavailable, you must immediately notify the Regional Supervisor and replace such ERM with others of equal or

superior effectiveness within 30 days of discovering the disability or unavailability, unless the Regional Supervisor approves an extension not to exceed 90 days.

(c) *Control Efficiency*. Your proposed ERM must reflect actual ECE. You must substantiate any ECE that you project and provide sufficient evidence to justify your ECE to the satisfaction of the Regional Supervisor.

(1) Should your substantiating data indicate a range of ECE, you must utilize the more conservative estimates (i.e., those that would result in lower ECE) in your analysis and modeling.

(2) ECE estimates of 100 percent are generally not acceptable, except in cases where there is clear and convincing and/or historical evidence to justify their use.

(d) *Emission reductions monitoring*. If ERM are contained in your approved plan, the Regional Supervisor may require that you provide actual emissions data and/or any other information annually that the Regional Supervisor deems necessary to verify the effectiveness of your proposed ERM or their emission control efficiency.

(1) If your plan is approved subject to the application of ERM, you must ensure that the emissions associated with each emissions source for which ERM is required complies with the emissions verification requirements of § 550.311 of this subpart. The Regional Supervisor may require that you install emissions measurement meters if the Regional Supervisor determines that such meters are necessary to ensure compliance with this requirement.

(2) If you propose or are required to install emissions meters or any other monitoring equipment, you must collect and maintain monthly logs of the relevant meter or monitoring equipment readings.

(e) *Emissions Credits*. For emissions credits, the following requirements also apply:

(1) You must acquire your emissions credits from emissions source(s), either offshore or

onshore, that affect the air quality of the same AQCR.

(2) For a CP, the emissions credits that you propose must provide a net air quality benefit for the same pollutant; for a precursor pollutant, any emissions credits that you propose must provide a net air quality benefit for that CP for which the pollutant is a precursor.

(3) You must demonstrate to the Regional Supervisor that the emissions credit you propose binds you and any other parties who agree to lower their emissions.

(4) You must also demonstrate that any emissions reductions will last for a period of time sufficient to ensure your plan's continued compliance with the provisions of this subpart. The Regional Supervisor may periodically require you to certify that the emissions reductions are still in place.

(5) Any emissions credits must reduce emissions below rates otherwise required by law;

(6) In addition to BOEM, you must notify the appropriate State air quality control jurisdiction of your proposal to acquire emissions offsets and, if necessary, its need to revise the State Implementation Plan to include the information regarding the emissions offsets you have acquired. You must provide evidence of such State notification to BOEM before you commence any operations that rely on the associated emissions credits.

(7) Emissions credits are allowed in those circumstances where BOEM can readily verify the historical emissions from the facility to be used for the emissions credit, and the emissions reduction associated with the acquired emissions credit.

(8) The approval of an emissions credit will be contingent upon receipt of proper documentation and will not be granted if such an emissions credit would require BOEM to engage in ongoing monitoring to verify continued compliance.

(9) Nothing in these regulations is intended to restrict emissions credits from being obtained

and shared by multiple lessees or operators.

(f) *Emission reduction measure(s) (ERM):* Unless otherwise specified, you may employ any operational control, equipment replacement(s), BACT, or emissions credit, on either a temporary or permanent basis, to reduce the amount of emissions that would occur in the absence of such measures. Any proposed ERM will become a condition of your plan upon approval and could be required on either a permanent or temporary basis, depending on the circumstances and location of the proposed facilities.

(1) In the event that you elect or are required to apply equipment replacement on a facility as the selected form of ERM, both the method of replacement and the equipment must comply with all other applicable federal regulations.

(2) In the event that the equipment being replaced is part of an MSC subject to USCG regulation, such replacement must be implemented in such a manner as to comply with USCG regulations.

§ 550.310 How will revisions to the ambient air quality standards and benchmarks (AAQSB) affect my plan?

(a) *Review of plans*. BOEM will evaluate the air pollutant emissions data submitted in your plan for compliance with the AAQSB s in effect on the date your plan is deemed submitted.

(b) *Proposed plans*. All activities described in initial, revised, modified, and supplemental plans must comply with the AAQSB in effect on the date the plan is deemed submitted, except:

(1) If your plan was deemed submitted shortly after the effective date of a new or revised AAQSB, and you believe the immediate application of the new or revised AAQSB is impracticable or would otherwise impose an unreasonable hardship on your proposed operations, then you may request a deferral from the requirement to comply with the new or revised

standard. The Regional Director will review your request and may with the concurrence of the Director grant a temporary deferral, not to exceed two years, from compliance with the new or revised AAQSB based upon a finding of impracticability or undue hardship.

(2) Upon a finding that noncompliance with a new or revised AAQSB would not significantly affect the air quality of any State, the Director may grant a departure from compliance with the revised AAQSB. The Director may condition the departure upon any requirement(s) deemed necessary to avoid causing or contributing to a violation of the NAAQS.

(c) *Approved plans.*

(1) In order to ensure that your emissions remain compliant with any changes to the NAAQS, you are required to resubmit your plan for a periodic air quality review ten years after BOEM's previous approval of your plan, as further defined in subparagraph (2) of this paragraph. A plan resubmitted pursuant to this provision must be updated to comply with the requirements of § 550.205 as they exist at the time of the plan resubmission, including the most current data on emissions factors and MSC emissions, and must be reevaluated against the EETs and formulas as they exist at the time of the plan resubmission. When you resubmit a plan under this provision, that plan must include estimates for the annual projected emissions for the subsequent ten years, or for however long the plan's facility or facilities would be expected to remain in operation, whichever is shorter. With respect to the emissions calculations for any given emissions source, the resubmitted plan must account for the most recent available data on the actual emissions of the relevant emission source. All of the applicable requirements of this subpart in effect on the date of resubmission apply on the same basis to a resubmitted plan as for an initial plan.

(2) In order to ensure that your emissions remain compliant with OCSLA, starting in 2020,

BOEM will conduct periodic reviews of plans approved prior to the effective date of the new exemption thresholds. To accomplish this, from that year forward, you must submit the air quality component of your previously approved plan according to the following schedule, regardless of whether you have a change in emissions.

Year the Plan was Approved	**Year in Which Resubmission is Required:**
Prior to 1980	2020
1980 through 1984	2021
1985 through 1989	2022
1990 through 1994	2023
1995 through 1999	2024
2000 through 2004	2025
2005 through 2009	2026
2010 through 2012	2027
2013 through 2014	2028
2015 through 2016	2029
2017 through 2018	2030
2019 through 2020	2031
2021 through 2022	2032
2023 and beyond	Ten years after year of approval

(i) The plan is due to BOEM on the same month as the month in which the plan was originally approved.

(ii) For an initially approved plan, the lessee or operator is required to resubmit the plan in accordance with the table in (2), above.

(iii) If a revised, modified, resubmitted, or supplemental plan is submitted within ten years from the date of the initial plan submittal, the new resubmission date would be ten years from the date of approval of the revised, modified, resubmitted, or supplemental plan.

(iv) If you fail to submit a revised plan as required under this section, then the previous approval of your plan is revoked. You may be subject to civil penalties or other appropriate sanctions for a regulatory violation, including the requirement to cease operations, as provided by 43 U.S.C. § 1350.

§ 550.311 Under what circumstances will I be required to measure and report my actual emissions?

(a) Compliance demonstration conditions

Under any of the following conditions, you must demonstrate that your actual emissions have at all times and continue to be in compliance with your previously approved plan:

(1) Your plan is approved subject to the implementation of BACT or emissions credits;

(2) Any emission source on your facility uses an engine that is not certified by the USEPA consistent with the requirements of 40 CFR 1042 or 40 CFR 1043, for U.S.-flag vessels, or that is not certified to the MARPOL Annex VI Regulation 13 requirements as required by the Act to Prevent Pollution from Ships, for foreign-flag vessels operating in the U.S.

(3) The Regional Supervisor determines that your projected emissions, or complex total emissions, for any criteria or precursor air pollutant, calculated on either an annual basis or on the basis of a 12-month rolling sum, may significantly underestimate your actual emissions based either on historical data about your emissions sources or on ambient air monitoring.

(4) BOEM determines that your facility causes or contributes to an exceedance of the NAAQS in any State.

(b) Emissions reporting requirements.

If you are required to make the demonstration described in this section:

(1) Your measurement of actual emissions must include enough of your emissions sources to ensure that the actual emissions associated with facilities and MSCs operating under your approved plan are consistent with the projected emissions approved for your plan. You must consider every source that was included in your approved plan in addition to any source that would be classified as part of your projected emissions if your plan were resubmitted under the

current regulations.

(2) BOEM will consider various alternatives for reporting of relevant emissions sources. One option would be to monitor only the following key pieces of equipment:

(i) For facilities, the required monitoring and reporting of engines would typically include:

(A) onboard facility engines;

(B) power generation engines;

(C) Hydraulic Power Units (HPU) engines;

(D) deck cranes;

(E) cementing units;

(F) engines with a maximum power rating exceeding 200 hp (149 kW);

(ii) For facilities, monitoring and reporting would typically exclude:

(A) propulsion engines;

(B) boilers and incinerators;

(C) emergency generators;

(D) lifeboat engines.

(iii) For MSCs the sources, monitoring and reporting would likely include:

(A) propulsion engines;

(B) power generation engines;

(C) marine auxiliary engines; or,

(D) engines with a maximum power rating exceeding 200 hp (149 kW).

(iv) MSCs monitoring and reporting would typically exclude boilers and incinerators, emergency generators, and any engines onboard science vessels, OSVs, or lifeboats.

(3) Your demonstration must reflect your actual operations on the OCS and must be based

exclusively on data derived from your actual equipment and not only on the basis of ECEs or fuel logs or activity data.

(4) You must be able to demonstrate that the data submitted to BOEM under this section is consistent with any data provided to BOEM under the requirements of §550.187.

(5) You must provide the information required for this demonstration in a manner and on a schedule determined by the Regional Supervisor.

(c) *Notification requirements*

If, on the basis of your demonstration of actual emissions, you determine at any time your actual emissions exceed your projected emissions for any pollutant you must notify BOEM and provide BOEM with the appropriate data regarding the exceedance.

(d) *Data submittal requirements*

You must submit data and information in a format, and using the forms as specified by BOEM. You must submit information in an electronically-readable format, unless otherwise directed by the Regional Supervisor. If you transmit the information to BOEM electronically, you must use a delivery medium or transmission method authorized by BOEM.

§ 550.312 What post-approval recordkeeping and reporting is required?

(a) *Stack testing*. If stack testing was used as a method to develop your emissions factors under § 550.205 or was used to develop any of the other information submitted pursuant to that section, then you must conduct the stack testing every three years and report the results, utilizing the General Provisions for Determining Standards of Performance for New Stationary Sources, Available at 40 CFR 60.8.

(b) *Fuel logs and activity data*. In order to demonstrate compliance with your plan, you must retain information on monthly fuel consumption, for each emissions source, including attributed

emissions sources, showing the quantity, type, and sulphur content of fuel used; collect facility and equipment usage information, including hours of operation at each percent of capacity for each emissions source. Venting, flaring, flashing and any other release of any air pollutant emissions that would not otherwise be accounted for by fuel consumption must be reported for any emissions source that generates criteria air pollutants or precursor air pollutants in connection with OCS activities.

(1) You must retain this information for a period of no less than ten years. You must submit this information to BOEM on a schedule set by the Regional Director.

(2) If BOEM obtains the relevant data for your attributed emissions from an independent third party, then the Regional Supervisor may waive the requirement to submit fuel logs or collect facility and equipment usage information for MSCs.

(3) *Electronic Records*. Record-keeping and reporting must be consistent with the USEPA's requirements for Electronic Reporting and Recordkeeping Requirements for New Source Performance Standards.

(c) *Meteorological reporting*. The Regional Supervisor may require, for a period of time and in a manner approved or prescribed, that you collect and report meteorological data from any of your facilities. The Regional Supervisor may allow you to substitute facility-specific data for meteorological data derived from any other mutually agreed upon location.

(d) *Other information*. Notwithstanding any other provision within this subpart, the Regional Supervisor may require you to provide any other information within your possession, or otherwise reasonably obtainable, to support any finding or determination under this subpart.

(e) *Additional requirements imposed by other agencies*. None of the provisions of this section would prevent the imposition of additional monitoring or reporting requirements on the part of BSEE or any other federal agency.

§ 550.313 Under what circumstances will BOEM impose additional requirements on facilities operating under already approved plans?

(a) BOEM may impose additional air quality requirements on facilities operating under already approved plans if an applicable AAQSB changes or if BOEM determines:

(1) Your operations are causing or contributing to a violation of the NAAQS, either individually or in combination with any other offshore operations;

(2) Your plan was approved with either a NO_x waiver or a VOC wavier, and the air quality conditions in the affected State have changed to such an extent that your emissions of NO_x or VOCs would contribute to an increase in the ambient O_3 concentration such that the NAAQS for O_3 may be exceeded (in an attainment area), or the NAAQS for O_3 would continue to be exceeded (in an area that is non-attainment for O_3).

(3) Your plan was approved with a NO_x waiver, and the air quality conditions in the affected State have changed to such an extent that your emissions of NO_x would contribute to an increase in the ambient concentration of NO_x such that the NAAQS for NO_x may be exceeded (in an attainment area), or the NAAQS for NO_x would continue to be exceeded (in an area that is non-attainment for NO_x).

(4) Your operation is emitting unauthorized air pollutants;

(5) Your operation is creating conditions posing an unreasonable risk to public health or welfare; or

(6) Your operation is violating any applicable federal, State or tribal law related to air

quality.

(b) If a plan was approved for a short-term facility that becomes a long-term facility, a new air quality plan must be submitted for the facility under the standards applicable to a long-term facility. If this reclassification resulted from adverse weather conditions, or other circumstances beyond your control, that prevented operations in your lease area, the Regional Director may grant a temporary exception for a period not to exceed the number of months that you were unable to operate.

§ 550.314 Under what circumstances will the Regional Supervisor review the projected emissions from my existing facility or facilities?

(a) A State, or a Federally-recognized Indian tribe, may request the Regional Supervisor to supply it with the air pollution data regarding an existing facility's projected emissions, when such data are needed either for the updating of the State's emissions inventory or because a State believes an existing facility's projected emissions may cause or contribute to a violation of the NAAQS.

(b) The Regional Supervisor may require you to submit air pollutant emissions data to the State, or a Federally-recognized Indian tribe, submitting such a request.

(c) The State, or a Federally-recognized Indian tribe, submitting a request may submit information to BOEM that it believes indicates projected emissions from an existing facility may cause or contribute to a violation of the NAAQS. You will be given the opportunity to present information to the Regional Supervisor that demonstrates that your facility's projected emissions do not cause such an effect.

(d) The Regional Supervisor will evaluate the new information submitted and will determine, based on the emissions data, the available meteorological data, and the distance of the

facility from the SSB whether your actual emissions, including your attributed emissions, has the potential to cause or contribute to a violation of the NAAQS.

(1) If the Regional Supervisor determines that your existing facility's projected emissions are unlikely to cause or contribute to a violation of the NAAQS, the Regional Supervisor will notify the requesting State, or a Federally-recognized Indian tribe, and you and explain the reasons for this finding.

(2) If the Regional Supervisor determines that your existing facility's projected emissions have the potential to cause or contribute to a violation of the NAAQS, you must submit the additional information that the Regional Supervisor requests in order for BOEM to determine whether or not your existing facility causes or contributes to a violation of the NAAQS. You must submit this information within 120 days of the Regional Supervisor's request, or within a longer period of time at the Regional Supervisor's discretion.

26. Revise subpart J to read as follows:

Subpart J-Pipelines and Pipeline Rights of Way

§ 550.1011 Bond Requirements for pipeline right-of-way holders.
§ 550.1012 What are the air quality requirements for pipeline right-of-way holders?

* * * * *

27. Add a new § 550.1012 to subpart J to read as follows:

§ 550.1012 What are the air quality requirements for pipeline rights-of-way holders?

(a) When you apply for or acquire a ROW in any part of the OCS under the air quality regulatory jurisdiction of the Department, you must:

(1) Include in your application the information required by § 550.205 of this part; and

(2) Demonstrate that your activities will comply with the requirements of subpart C of this part.

(b) For the purpose of this paragraph:

(1) Any requirement in either § 550.205 of subpart B or subpart C that refers to plans should be interpreted to apply equally to ROW applications except for the provision regarding the consolidation of multiple facilities (paragraph 550.303(d)) and for the periodic resubmission of plans (paragraph 550.310(c));

(2) Any requirement in either § 550.205 of subpart B or subpart C that refers to lessees or operators applies equally to ROW holders or grantees, except that no additional requirements apply to any proposed or existing pipeline ROW or lease term pipeline holders, that are already included within the scope of an existing or proposed exploration or development plan.

(3) BOEM will notify BSEE of its determination that you have provided the information required by § 550.205 and met the requirements of subpart C of this part. If necessary, BOEM will notify BSEE of additional conditions necessary to ensure that your activities will comply with subpart C of this part.