



Via email & [www.regulations.gov](http://www.regulations.gov)

June 20, 2016

Mr. Peter Meffert  
Office of Policy, Regulation, and Analysis  
Bureau of Ocean Energy Management  
U.S. Department of the Interior  
45600 Woodland Road  
Sterling, VA 20166

**Re: Joint Trades Comments  
Air Quality Control, Reporting and Compliance; Proposed Rules  
81 Federal Register 19718 (April 5, 2016)  
Docket Id: BOEM-2013-0081**

Mr. Meffert,

The American Petroleum Institute (API), the Offshore Operators Committee (OOC), the National Ocean Industries Association (NOIA), the Independent Petroleum Association of America (IPAA), the International Association of Drilling Contractors (IADC), and the Offshore Marine Services Association (OMSA) – hereinafter referred to as “the Joint Trades” - respectfully submit the attached comments on the Bureau of Ocean Energy Management’s (BOEM), proposed rule *Air Quality Control, Reporting and Compliance*, 81 Federal Register 19718 (April 5, 2016), Docket Id: BOEM-2013-0081.

The Joint Trades represent energy companies who conduct the vast majority of the Outer Continental Shelf (OCS) oil and natural gas exploration and production activities in the United States. Additionally, many of our associations’ members are involved in drilling, equipment manufacturing, construction, and support services for the offshore oil and natural gas industry, and all will be adversely impacted by this BOEM rulemaking.

Our members recognize that offshore operations must be conducted safely and in a manner that protects the environment. The U.S. offshore industry has advanced the energy security of our nation, and contributed significantly to our nation’s economy. Our goal is for operations integrity and fit-for-risk designs, and we are concerned that many of the requirements in the proposed rule will have no beneficial impact on air quality while adding unnecessary financial and data collection burden to the industry. In addition, we are concerned that the proposed rule could materially impair the ability to maintain current production operations, reduce future development and production, or result in taking of leases and stranding of valuable reserves, all of which could lead to reduced royalties as well as lower sales, income, and ad valorem tax payments by the industry. To avoid these negative consequences, it is imperative that BOEM and industry collaborate to develop rules that are more workable and effective.

Our comments are submitted without prejudice to any of our member companies' right to have or express different or opposing views. We have encouraged all of our members to submit comments on the proposal.

In developing this response, industry drew on the expertise of our member companies and environmental consultants that resulted in thousands of man hours of effort. Industry is providing this technically-based set of comments to aid BOEM in its efforts to create a robust and effective air quality rule. As stated in our earlier comment letters, we believe additional time to review and comment on this lengthy and complex rulemaking was needed and, had it been provided, would have further contributed to the proposal's effectiveness. Indeed, additional time to review and comment on this complicated and lengthy rulemaking is warranted to provide the public an adequate opportunity to participate as required under the Administrative Procedure Act. Going forward substantial industry-regulator engagement is imperative to generate and implement a workable and effective rule.

This letter highlights some of the proposed requirements that will have the greatest impact on industry, but there are numerous other specific proposed requirements that will also have significant impacts. The enclosed attachments include detailed information on how we believe these proposed regulations will significantly impact industry, and offer recommendations for clarifying the proposed rule language.

Significant issues with the greatest impact are highlighted below:

## **1. BOEM Has Not Demonstrated That Revised Rules Are Needed**

*Issue* – Executive Order 12866 requires “Each agency shall identify the problem that it intends to address (including, where applicable, the failures of private markets or public institutions that warrant new agency action) as well as assess the significance of that problem.” In the proposed rule, BOEM has not identified a problem that must be addressed.

The Outer Continental Shelf Lands Act (OCSLA) authorizes the Secretary of the Interior to promulgate regulations for compliance with the National Ambient Air Quality Standards (NAAQS) to the extent that activities authorized under OCSLA significantly affect the air quality of any state. BOEM's existing air quality regulatory program (AQRP) has worked successfully for more than 30 years to fulfill this narrow mandate.

Alaska and Gulf of Mexico coastal state air quality plans (State Implementation Plans) and conclusions from dozens of BOEM's own analyses indicate that OCS sources do not have a significant effect on onshore air quality. Given that BOEM already has practices in place to ensure compliance with recent air quality standards (such as the 1-hour NO<sub>2</sub> standard) and that BOEM has not demonstrated OCS sources significantly affect the air quality of any state, there is no reasonable justification for an expansive new regulation that brings with it significant cost implications to the industry.

*Recommendation* – BOEM should not proceed with the expansive overhaul of the air quality regulatory program until there is a demonstration that OCS sources significantly affect onshore air quality and jeopardize compliance with the NAAQS.

## **2. Ongoing Regional Air Quality Studies Should Be Completed to Inform the Rule**

*Issue* – BOEM has initiated multi-year, multimillion-dollar air quality studies designed to determine whether OCS emissions significantly affect onshore air quality in Alaska and in the Gulf coast states and, if necessary, to determine whether changes in emissions exemption thresholds are warranted. These studies will also conduct regional photochemical modeling to determine the extent to which precursor pollutants

affect onshore ozone and PM<sub>2.5</sub> concentrations. Given that the existing regulatory program is operating effectively, as evidenced by BOEM's own studies and state SIPs that show that OCS sources do not have a significant effect on onshore air quality, there is no reason to revise emissions exemption thresholds that determine when additional modeling and expensive emission reduction measures are required.

*Recommendation* – BOEM should not proceed with the development of any new emission exemption thresholds or modeling requirements unless the air quality studies are completed and demonstrate a need for revisions.

### **3. BOEM is Not Authorized to Regulate Emissions from Mobile Support Craft**

*Issue* - The proposed rule would require operator plans to include extensive information about support vessels (referred to as Mobile Support Craft or “MSC”), and vessel emissions would be included in the exemption determination and in modeling analyses. The proposed rule is not clear if emission sources on support vessels would be subject to emission reduction measures (ERM).

BOEM cannot consider MSC emissions when determining whether OCS activities significantly affect the air quality of a state because MSCs are not activities authorized under OCSLA. BOEM does not authorize mobile vessels, and OCSLA explicitly excludes vessels from the Secretary's legal purview. BOEM may only regulate vessels when they cease to be vessels and instead become, or become part of, an “artificial island,” “installation” or “device” that is “permanently or temporarily attached to the seabed for the purpose of exploring for, developing, or producing” oil, gas or sulphur from the OCS. (See 43 U.S.C. § 1333(a)). Unlike vessels, BOEM authorizes these structures and devices, and may subject them (and only them) to its air quality regulations under section 5(a)(8) of OCSLA.

Aside from legal constraints, there are numerous practical considerations that preclude effective regulation of vessel emissions. For example, the proposed rule requires detailed information regarding the support vessels, including engine data, tank capacities, travel routes, emission factors, and short-term and long-term emissions. The designated operator of an OCS facility is likely to contract with another entity for support vessel services. At the time of plan submittal, neither the contractor nor the designated operator will know with any certainty what vessel will be used let alone any of the detailed information the rule requires.

Furthermore, there are already well understood, comprehensive, and effective national and international programs in place that regulate vessel emissions. Analogous to national EPA programs that establish motor vehicle emission standards, MARPOL Annex VI establishes emissions standards that apply to U.S. and foreign vessels of any type (including mobile offshore drilling units, floating drilling rigs, and other vessels) operating within the North American Emission Control Area (ECA). With the International Maritime Organization (IMO) programs in place, the gradual replacement of engines and ships will reduce emissions without additional regulation by BOEM. In addition, EPA establishes standards for marine engines for U.S. registered or flagged vessels. Just as the national motor vehicles emissions programs preempt permitting under new source review for onshore industrial facilities, MARPOL and EPA emissions requirements should preempt permitting of vessels associated with OCS projects. The recent IMO designation of the North American coastal waters as an ECA has significantly reduced the sulphur level of the fuel consumed by vessels transiting the OCS, both those supporting energy production and those in other usage.

*Recommendation* – BOEM should eliminate all provisions related to accounting for or regulating emissions from MSC.

#### **4. BOEM’s Proposed Consolidation of Facility Emissions is Unnecessary and Unjustified**

*Issue* - The proposed rule modifies the current definition of “facility” in the regulations. In addition, BOEM proposes to add several definitions to the rule, including “complex total emissions,” “proximate activities,” “projected emissions,” and “attributed emissions.” Through these definitions, BOEM would not only treat as one source of regulated emissions activities that had previously been treated as separate, but also would require groups of separate facilities on separate leases to be evaluated together and comply with the regulations jointly simply because they may share a common owner or operator.

There are a number of legal and practical challenges to consolidating emissions from existing facilities with those from a facility submitting a new or modified plan. These include due process issues, the protection of sensitive, proprietary, or confidential operational information, and the need for clear criteria that can be consistently applied to determine which existing facilities are to be consolidated with a new facility. As a further complication, emissions from vessels supporting the consolidated facilities must also be identified and included in the analyses. Virtually no details on how consolidation is to be accomplished have been presented in the proposed rule.

The purported justification for consolidation is to ensure applicants do not segment plans so emissions are less than thresholds that require modeling and ERM requirements. However, we believe the existing air quality program has safeguards to ensure that cumulative impacts from proximate facilities are regulated when necessary, and offer additional comment on when a cumulative analysis may be required.

*Recommendation* – The proposed requirement to consolidate existing facilities with a proposed facility should not be adopted because it exceeds BOEM’s authority under OCSLA. Instead, BOEM should adopt the definition of “facility” recommended in our attached comments, which more closely adheres to the scope of BOEM’s statutory authority under section 5(a)(8) of OCSLA. BOEM should abandon the notion of aggregating emissions across multiple, proximate facilities simply because they share a common record title owner or operator.

#### **5. Recertification of Existing Facilities is Unnecessary**

*Issue* - Proposed section 550.310(c) would require lessees to re-submit previously approved plans at least every 10 years to verify compliance with BOEM’s current air quality regulations, including those provisions relating to new information gathering and reporting requirements.

The requirement to re-submit plans every 10 years is inconsistent with section 25(h)(3) of OCSLA, which indicates that BOEM can only review an existing plan “based upon changes in available information and other onshore or offshore conditions affecting or impacted by development and production pursuant to such plan.” BOEM lacks the authority to require re-submission or revision of an already-approved plan, absent some indication of changed conditions or impacts. It follows, therefore, that BOEM may not promulgate a regulation imposing a blanket requirement that all operators periodically re-submit their plans for review unless there is a specific reason showing that each re-submitted plan warrants review because there have been changed conditions or impacts. Although existing leases are generally subject to amended regulations over time, compliance with successive iterations of the air quality regulations promulgated under section 5(a)(8) alone cannot possibly constitute grounds for re-submission and re-approval, on new and far more onerous terms, of existing DPPs and DOCDs. Accordingly, BOEM may not require re-submission and re-approval of existing plans.

Furthermore, BOEM's existing procedures assure continued compliance with NAAQS. When new facilities are proposed, facilities whose emissions exceed exemption thresholds are required to demonstrate compliance with the NAAQS by adding model-predicted pollutant concentrations (due to facility emissions) to background concentrations. The background concentrations include contributions from existing OCS sources, however small, so BOEM can be assured that existing facilities do not contribute to violations of the NAAQS. Second, current section 550.303(j) authorizes the Regional Supervisor to require submittal of additional information when they judge an individual facility alone or in combination with others may significantly affect the air quality of an onshore area.

*Recommendation* - BOEM should not require resubmission and additional approval of existing plans.

## **6. BOEM's Emission Reduction Credit Program is Not Fully Developed and the IRIA Underestimates the Cost of Credits**

*Issue* - The proposed regulation allows the use of emissions credits as a component of emission reduction measures (ERM). In concept, the flexibility to be able to use emissions credits for ERM purposes would be beneficial to OCS facilities. However, the practical application of emissions credits programs requires establishing basic principles as part of the implementing regulation. A number of fundamental components of an effective emissions reduction credit (ERC) program are missing from the proposed rule, rendering the proposal incomplete.

Furthermore, the average cost that BOEM's IRIA assumes for emissions credits does not reflect recent costs for emission reduction credits in ozone nonattainment areas near the Gulf of Mexico, and ERC costs in these areas could rise. The EPA lowered the 8-hour ozone NAAQS from 75 ppb to 70 ppb in October 2015 and certain areas along the Gulf of Mexico coast are expected to continue their status as nonattainment areas. This means the demand for onshore NOx and VOC emission reduction credits in this region will likely continue, and BOEM's proposed regulation could create additional demand. Because of this increased demand, we believe the availability of ERCs is questionable and that the ERC cost analysis performed by BOEM considerably underestimates the cost of this emission reduction concept.

Although there may be value in an emission reduction program for facilities in the Gulf of Mexico when BOEM's regulatory framework is developed, there is no emission reduction credit program in Alaska. Consequently, BOEM cannot rely on ERCs as cost effective ERM options for Beaufort and Chukchi sea facilities. The regulatory impact analysis should be updated accordingly.

*Recommendation* – BOEM must further develop the emission reduction credit concept and include the additional program elements in a re-proposed rule.

## **7. BOEM Must Maintain the Point of NAAQS Compliance at Onshore Locations**

*Issue* - The proposed rule would relocate the point of compliance from the state shoreline to the seaward edge of the state seaward boundary. The point of compliance is an important component of the AQRP as it is used to determine exemptions from detailed air quality analyses, the significance of air impacts, whether emissions cause or contribute to a violation of the NAAQS, and the need for ERM. (See 81 Fed. Reg. at 19738-19740, 19794). Although a state's territory extends to its seaward boundary, this is not the appropriate point at which to assess air-quality impacts for a number of reasons.

First, as discussed, under section 5(a)(8) the Secretary’s authority is limited to promulgating regulations for “compliance with the [NAAQS] pursuant to the [CAA] to the extent that activities authorized under [OCSLA] significantly affect the air quality of any State.” Under the relevant state implementation plans, the border of the air quality control regions appears to extend only to the shoreline and not to the respective states’ territorial waters. As such, NAAQS do not apply in the territorial waters.

Second, when enacting section 5(a)(8), Congress clearly was concerned only with impacts to onshore air quality. For example, the legislative history states:

*The conferees intent was that...regulations might be appropriate for the air above or near an artificial installation or other device (platform), so that emissions from such source is [sic] controlled to prevent a significant effect on the air quality of an adjacent onshore area. 1978 U.S.C.C.A.N. at 1684-1685.*

Third, BOEM itself recently acknowledged that because the NAAQS are intended to protect human health, BOEM is only concerned with the onshore impacts of OCS activities. (See BOEM 2017-2022 Draft Multisale EIS at xvii (“Since the primary NAAQS are designed to protect human health, BOEM focuses on the impact of these activities on the States, where there are permanent human populations”)).

Finally, BOEM’s proposal to use the seaward boundary to assess air quality impacts of OCS activities is arbitrary because the geographic extent of states’ territorial waters is not uniform. Some state seaward boundaries extend three miles from shore, others nine miles from shore.

We also note practical considerations that argue against this change. As BOEM acknowledges in the preamble, there are no ambient air quality monitoring stations offshore, so there is no way to determine background concentrations to represent current air quality. Use of onshore data would likely overstate offshore background concentrations by very large margins.

Recommendation - The point at which OCS air impacts are assessed must be the shoreline and not the state seaward boundary.

## **8. The Costs of the Proposed Rule Outweigh the Benefits**

Issue - BOEM’s Initial Regulatory Impact Analysis (IRIA) estimates that the ten-year net present value of the proposed regulation is negative \$97 million using a discount rate of three percent - which indicates that the cost of the regulation will exceed the benefit. This represents a government policy that is doing more harm than good.

The current BOEM cost benefits analysis overlooked, or did not quantify many costs, such as the costs of installation and maintenance of emission reduction measures, the cost of using Selective Catalytic Reduction (SCR) as a Best Available Control Technology (BACT) for NOx emissions, and the cost to modify MSCs to provide the proposed fuel consumption and engine operational data. Our consultant surveyed OCS operators and vendors for historical cost information, and considering just some of the additional costs of the proposed rule, we estimate a total 10 year cost of more than \$3.4 billion, more than 10 times BOEM’s estimate.

*Recommendation* – BOEM must consider all the costs of the proposed rule and provide a more accurate Regulatory Impact Assessment. Although the IRIA demonstrated costs outweigh benefits, improving the quality and scope of the analysis will confirm the proposed rule is not justified.

## **9. BOEM’s Proposed Rule is Incomplete**

*Issue* - In many instances the provisions of the proposed rule appear to be incomplete or premature. BOEM has specifically solicited comments in the preamble on approximately forty issues in the proposed rule that have not been fully developed, defined or concretely proposed. Many of the issues that are undeveloped would be critical components of any final air quality regulatory program, and may have significant impact to offshore operators. Without fully developed proposals on these issues, industry does not have a clear understanding of the scope of the proposed regulation and cannot provide meaningful stakeholder comment. Constructive feedback on many, if not most, of these requests involves detailed technical review and significant information gathering. Due to the compressed comment period, we were not afforded enough time to give these requests the full consideration and/or the technical analysis they warrant. Furthermore, there are many instances where BOEM’s intent described in the preamble does not align with the proposed rule as written.

*Recommendation* - BOEM must publish a revised proposed rule that addresses the approximately forty issues for which it has solicited comment and which contains proposed rule text consistent with the preamble discussion. The revised proposed rule must address the critical components with sufficient specificity to facilitate meaningful stakeholder comment. To do otherwise would violate the Administrative Procedure Act.

### **Summary**

We believe the expansive rule revision BOEM proposes is unnecessary and many of the provisions are beyond the scope of BOEM’s existing statutory authority over OCS air emissions. There are many incomplete concepts in the proposed rule that must be developed after consideration of our comments and offered again for public review and comment.

BOEM has indicated the desire to finalize the proposed rule by December 2016. We are concerned that this artificial deadline will impede BOEM’s ability to adequately address stakeholder comments and develop a final rule that both protects the environment and does not hinder America’s energy renaissance, particularly when the agency has conceded there is no urgent issue for the proposed regulation to address. BOEM should take sufficient time between the close of the comment period and promulgation of any final rule to review and analyze all the submitted comments, make appropriate revisions, and complete the necessary internal and interagency reviews.

If you have any questions, or require clarification, on any of the comments provided here by the Joint Trades, please contact either Cathe Kalisz at [kaliszc@api.org](mailto:kaliszc@api.org) or Greg Southworth at [greg@offshoreoperators.com](mailto:greg@offshoreoperators.com)

We appreciate the opportunity to provide these comments, and look forward to further discussions to resolve the significant issues associated with the proposed rule.

Yours truly,



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Alan Spackman  
VP – Policy, Government & Regulatory Affairs  
International Association of Drilling Contractors

Attachments

cc with Attachments:

Abigail Hopper, Director, Bureau of Ocean Energy Management  
Walter Cruickshank, Deputy Director, Bureau of Ocean Energy Management



# Comments on the Proposed Rulemaking – 30 CFR Part 550 Air Quality Control, Reporting, and Compliance; Proposed Rules

June 20, 2016

Docket ID No. BOEM-2013-0081

American Petroleum Institute (API)  
Offshore Operators Committee (OOC)  
National Ocean Industries Association (NOIA)  
Independent Petroleum Association of America (IPAA)  
International Association of Drilling Contractors (IADC)  
Offshore Marine Services Association (OMSA)

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## EXECUTIVE SUMMARY

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The Outer Continental Shelf (OCS) regulated community has numerous concerns with the Bureau of Ocean and Energy Management's (BOEM's) proposed revisions to its air quality regulatory program (30 CFR Part 550 – Air Quality Control, Reporting, and Compliance). Our primary concern is that BOEM's proposed changes exceed the limited scope of BOEM's authority to regulate emissions under section 5(a)(8) of the Outer Continental Shelf Lands Act (OCSLA), 43 U.S.C. § 1334(a)(8). Under this section BOEM may regulate the emissions of activities it authorizes only if those authorized activities have a significant effect on the air quality of a state that threatens attainment or ongoing compliance with the National Ambient Air Quality Standards (NAAQS) in that state.

We believe the issues we address in our comments are sufficient to warrant withdrawal of this proposed rule. A new rule addressing the numerous deficiencies should not be re-proposed in advance of ongoing multi-year, multi-million dollar air quality studies designed, in part, to inform this rulemaking.

All previous environmental studies and assessments conducted by BOEM and others have concluded that emissions from OCS sources are not significantly impacting the air quality of any state. The new, ongoing studies will either confirm previous assessments, or, if they determine that there are significant air quality impacts, will help inform which pollutants may be of concern, which modeling tools are needed, and how exemption thresholds should be developed. In either case, BOEM should not proceed with any rulemaking until the studies are completed.

The proposed rule also includes several proposed requirements that are unjustified because they exceed BOEM's regulatory authority under the OCSLA, are not practically or administratively feasible, or provide little or no environmental benefit. Additionally, and as importantly, some critical rule provisions are not fully developed and incomplete as to preclude meaningful evaluation of impacts on OCS entities.

Listed below are our primary concerns with the proposed rule. To facilitate review of our comments, we have summarized the concern and provided a recommendation with a reference to the detailed comments for additional supporting discussion.

### **BOEM Has Not Demonstrated a Need for the Rule Revisions**

Executive Order 12866 requires “Each agency shall identify the problem that it intends to address (including, where applicable, the failures of private markets or public institutions that warrant new agency action) as well as assess the significance of that problem.” BOEM has not identified a problem that must be addressed.

OCSLA authorizes the Secretary of the Department of Interior (Interior) to promulgate regulations for compliance with the NAAQS to the extent that activities authorized under OCSLA significantly affect the air quality of any state. BOEM's current Air Quality Regulatory Program (AQRP) has worked successfully for more than 30 years to fulfill this narrow mandate.

The only justification BOEM offers for this accelerated rulemaking is that “Waiting to publish these regulatory changes until 2018 or 2019, when both the Alaska and Gulf of Mexico exemption threshold studies are completed, would make it more difficult to ensure that BOEM meets its statutory duties.”<sup>1</sup>

Alaska and Gulf of Mexico coastal state air quality plans (State Implementation Plans) and conclusions from dozens of BOEM’s own analyses indicate that OCS sources do not have a significant effect on onshore air quality. Given that BOEM already has practices in place to ensure compliance with recent air quality standards (such as the 1-hour NO<sub>2</sub> standard) and that BOEM has not demonstrated OCS sources significantly affect the air quality of any state, there is no justification for an expansive new regulation with huge cost implications.

Recommendation – BOEM should not proceed with the expansive overhaul of the AQRP until there is a demonstration that OCS sources significantly affect onshore air quality and jeopardize compliance with the NAAQS.

Refer to Sections 1.1, and 2.3 for detailed comments on this matter.

### **Regional Air Quality Studies Now Underway Are Needed to Inform the Rule**

BOEM is in the midst of multi-year, multi-million dollar air quality studies designed to determine whether OCS source emissions significantly affect onshore air quality in Alaska and in the Gulf coast states and, if necessary, to determine whether changes in emissions exemption thresholds (EETs) are warranted. These studies will also conduct regional photochemical modeling to determine the extent to which precursor pollutants affect onshore ozone and particulate matter less than or equal to 2.5 micrometers in diameter (PM<sub>2.5</sub>) concentrations. Given that the existing regulatory program is operating effectively, as evidenced by BOEM’s own studies and by State Implementation Plans (SIPs) that show that OCS sources do not have a significant effect on onshore air quality, there is no justification to revise EETs that determine when additional modeling and expensive emission reduction measures (ERMs) are required.

Recommendation – BOEM should not proceed with the development of any new EETs or modeling requirements unless the air quality studies demonstrate a need and inform decisions regarding appropriate exemption thresholds.

Refer to sections 2.4 and 8.2 for detailed comments on this matter.

### **BOEM is Not Authorized to Regulate Emissions from Mobile Support Craft**

The proposed rule revisions would require submitted plans to include extensive information about support vessels (referred to as Mobile Support Craft or MSC) and vessel emissions would be included in the exemption determination and in modeling analyses. It is not clear if emission sources on support vessels would be subject to ERM.

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<sup>1</sup> Air Quality Control, Reporting, and Compliance, Initial Regulatory Impact Analysis, RIN: 1010-AD82, page 64.

BOEM cannot consider MSC emissions when determining whether activities it authorizes significantly affect the air quality of a state because MSC are not “activities authorized” under OCSLA. BOEM does not authorize mobile sources, and OCSLA explicitly excludes vessels from the Secretary’s legal purview. BOEM may only regulate vessels when they cease to be vessels and instead become or become part of an “artificial island,” “installation” or “device” that is “permanently or temporarily attached to the seabed for the purpose of exploring for, developing, or producing” oil, gas or sulphur from the OCS. See 43 U.S.C. § 1333(a). Unlike vessels, BOEM authorizes these structures and devices, and may subject them (and only them) to its air quality regulations under section 5(a)(8) of OCSLA.

Aside from legal constraints, there are numerous practical considerations that preclude effective regulation of vessel emissions. For example, the proposed rule requires detailed information regarding MSC, including engine data, tank capacities, travel routes, emission factors, and short-term and long-term emissions. The designated operator of an OCS facility is likely to contract with another entity for support vessel services. At the time of plan submittal, neither the contractor nor the designated operator is likely to know with any certainty what vessel will be used, let alone any of the detailed information the rule requires.

Furthermore, there are already programs in place that regulate vessel emissions. Analogous to national Environmental Protection Agency (EPA) programs that establish motor vehicle emission standards, Annex VI to the International Convention on the Prevention of Pollution from Ships (MARPOL Annex VI) establishes emissions standards that apply to US and foreign vessels of any type (including Mobile Offshore Drilling Units (MODUs), floating drilling rigs, and other platforms) operating within the North American Emission Control Area (ECA). With the International Maritime Organization (IMO) programs in place, the gradual replacement of engines and ships will reduce emissions without additional regulation by BOEM. In addition, EPA establishes standards for marine engines for US registered or flagged vessels. Just as the national motor vehicles emissions programs preempt permitting under new source review for industrial facilities onshore, MARPOL and EPA emissions requirements should preempt permitting of vessels associated with OCS facilities.

Recommendation – BOEM should eliminate all provisions related to accounting for or regulating emissions from MSC.

Refer to Section 1.2.4 and Chapter 3 for detailed comments on this matter.

### **BOEM’s Proposed Consolidation of Facility Emissions is Unnecessary and Unjustified**

The proposed rule modifies the current definition of “facility” in the regulations. In addition, BOEM proposes to add several definitions to the rule, including “complex total emissions,” “proximate activities,” “projected emissions,” and “attributed emissions.” Through these definitions, BOEM would not only treat as one source of regulated emissions activities that had previously been treated as separate, but also would require groups of separate facilities on separate leases to be evaluated together and to comply with the regulations jointly simply because they may share a common owner or operator. If EETs are exceeded based on the emissions of any facility or the combined facilities, the impacts would need to be addressed for either an existing facility undergoing a plan resubmission or for a new plan to go forward.

There are a number of legal and practical challenges to consolidating existing facility emissions with those from a facility submitting a new or modified plan. These include due process issues, the protection of sensitive, proprietary, or confidential operational information, and the need for clear criteria that can consistently be applied to determine which existing facilities are to be consolidated with a new facility. As a further complication, emissions from vessels supporting the consolidated facilities must also be identified and included in the analyses. Virtually no details on how consolidation is to be accomplished have been presented in the proposed rule.

The purported justification for consolidation is to ensure applicants do not segment plans so emissions are less than thresholds that require modeling and ERM requirements. However, we believe the existing air quality program has safeguards to ensure that cumulative impacts from proximate facilities are regulated when necessary, and offer additional comment on when a cumulative analysis may be required.

Recommendation – The proposed requirement to consolidate existing facilities with a proposed facility (§ 550.303(d)) should not be adopted because it exceeds BOEM’s authority under OCSLA. Instead, BOEM should adopt the definition of “facility” recommended in our comments, which more closely adheres to the scope of BOEM’s statutory authority under section 5(a)(8) of OCSLA. BOEM should abandon the notion of aggregating emissions across multiple, proximate facilities simply because they share a common record title owner or operator.

Refer to Section 1.4 and chapters 4 and 5 for detailed comments on this matter.

### **The Costs of the Proposed Rule Outweigh the Benefits**

BOEM’s Initial Regulatory Impact Analysis (IRIA) estimates that the ten year net present value of the proposed regulation is negative \$97 million using a discount rate of three percent, which indicates that the cost of the regulation will exceed the benefit. This represents a government policy that is doing more harm than good.

The current BOEM cost benefits analysis overlooked or did not quantify many costs, such as the costs of installation and maintenance of ERM, and the cost of using Selective Catalytic Reduction (SCR) as a Best Available Control Technology (BACT) for NO<sub>x</sub> emissions. Our consultant surveyed OCS operators and vendors for historical cost information and considering just some of the additional costs of the proposed rule, we estimate a total 10 year cost of more than \$3.4 billion, more than 10 times BOEM’s estimate.

Recommendation – BOEM must consider all the costs of the proposed rule and provide a more accurate Regulatory Impact Assessment (RIA). Although the IRIA demonstrated costs outweigh benefits, improving the quality and scope of the analysis will confirm the proposed rule is not justified.

Refer to Appendix B for detailed comments on BOEM’s IRIA.

## **BOEM's Proposed Rule is Incomplete**

In many instances the provisions of the proposed rule appear to be incomplete or premature. BOEM has specifically solicited comments in the preamble on approximately forty issues that have not been fully developed, defined, or concretely proposed. Many of the issues that are undeveloped would be critical components of any final air quality regulatory program, and may have significant impact to offshore operators. Without fully developed proposals on these issues, the regulated community does not have a clear understanding of the scope of the proposed regulation and cannot provide meaningful stakeholder comment. Furthermore, there are many instances where BOEM's intent described in the preamble does not align with the proposed rule as written.

Recommendation - BOEM must publish a revised proposed rule that addresses the approximately forty issues for which it has solicited comment and that resolves inconsistencies between the preamble and the text of the proposed rule. The revised proposed rule must address the critical components with sufficient specificity to facilitate meaningful stakeholder comment.

To do otherwise would violate the Administrative Procedure Act (APA).

Refer to sections 1.5.3, 2.5, 2.6, 7.1, 7.2, 8.6, 8.7, 11.1, and 12.4 for detailed comments on this matter.

## **Recertification of Existing Facilities is Unnecessary**

Proposed § 550.310(c) would require lessees to resubmit previously approved plans at least every 10 years to verify compliance with BOEM's current air quality regulations, including those provisions relating to new information gathering and reporting requirements.

The requirement to resubmit plans every 10 years is inconsistent with section 25(h)(3) of OCSLA, which indicates that BOEM can only review an existing plan "based upon changes in available information and other onshore or offshore conditions affecting or impacted by development and production pursuant to such plan." BOEM lacks the authority to require resubmission or revision of an already-approved plan, absent some indication of changed conditions or impacts. It follows, therefore, that BOEM may not promulgate a regulation imposing a blanket requirement that all operators periodically resubmit their plans for review unless there is a specific reason showing that each resubmitted plan warrants review because there have been changed conditions or impacts. Although existing leases are generally subject to amended regulations over time, compliance with successive iterations of the air quality regulations promulgated under section 5(a)(8) alone cannot possibly constitute grounds for resubmission and re-approval, on new and far more onerous terms, of existing Development and Production Plans (DPPs) and Development Operations Coordination Documents (DOCDs).

Furthermore, BOEM's existing procedures assure continued compliance with NAAQS. When new facilities are proposed, facilities whose emissions exceed exemption thresholds are required to demonstrate compliance with the NAAQS by adding model-predicted pollutant concentrations attributable to facility emissions to background concentrations. The background

concentrations include contributions from existing OCS sources, however small, so BOEM can be assured that existing facilities do not contribute to violations of the NAAQS.

Recommendation: BOEM should not require resubmission and additional approval of existing plans.

Refer to sections 1.3.2 and 4.1, and Chapter 10 for detailed comments on this matter.

### **BOEM's Emission Reduction Credit Program is Not Fully Developed and the IRIA Underestimates the Cost of Credits**

The proposed regulation allows the use of emissions credits as a component of ERM. In concept, the flexibility to be able to use emissions credits for ERM purposes would be beneficial to OCS facilities. However, the practical application of emissions credits programs requires establishing basic principles as part of the implementing regulation. A number of fundamental components of an effective ERC program are missing from the proposed rule, rendering the proposal incomplete.

Furthermore, the average cost that BOEM's IRIA assumes for emissions credits does not reflect recent costs for emission reduction credits in ozone nonattainment areas near the Gulf of Mexico, and ERC costs in these areas could rise.

The EPA lowered the 8-hour ozone NAAQS from 75 ppb to 70 ppb in October 2015, and certain areas along the Gulf of Mexico coast are expected to continue their status as nonattainment areas. This means the demand for onshore NO<sub>x</sub> and VOC emission reduction credits in this region will likely continue, and BOEM's proposed regulation could create additional demand.

Because of this increased demand, we believe the availability of ERCs is questionable and that the ERC cost analysis performed by BOEM considerably underestimates the cost of this emission reduction concept.

Although there may be value in an emission reduction program for facilities in the Gulf of Mexico when BOEM's regulatory framework is developed, there is no emission reduction credit program in Alaska. Consequently, BOEM cannot rely on ERCs as cost effective ERM options for Beaufort and Chukchi sea facilities. The RIA should be updated accordingly.

Recommendation: Further develop the emission reduction credit concept and include the additional program elements in a re-proposed rule.

Refer to sections 7.1.1, 7.1.5, and 7.5 for detailed comments on this matter.

### **BOEM Must Maintain the Point of NAAQS Compliance at Onshore Locations**

The proposed rule would relocate the point of compliance from the state shoreline to the seaward edge of the state seaward boundary. The point of compliance is an important component of the AQRP as it is used to determine exemptions from detailed air quality analyses, the significance of air impacts, whether emissions cause or contribute to a violation of the NAAQS, and the need for ERM. (See 81 Fed. Reg. at 19738-19740, 19794). Although a

state's territory extends to its seaward boundary, this is not the appropriate point at which to assess air-quality impacts for a number of reasons.

First, as discussed, under section 5(a)(8) the Secretary's authority is limited to promulgating regulations for "*compliance with the [NAAQS] pursuant to the [CAA] to the extent that activities authorized under [OCSLA] significantly affect the air quality of any State.*" (emphasis added). Under the relevant SIP, the border of the air quality control regions (AQCR) appears to extend only to the shoreline and not to the respective states' territorial waters. As such, NAAQS do not apply in the territorial waters.

Second, when enacting section 5(a)(8), Congress clearly was concerned only with impacts to *onshore* air quality. For example, the legislative history states:

*The conferees intent was that...regulations might be appropriate for the air above or near an artificial installation or other device (platform), so that emissions from such source is [sic] controlled to prevent a significant effect on the air quality of an adjacent onshore area.*

*1978 U.S.C.C.A.N. at 1684-1685.*

Third, BOEM itself recently acknowledged that because the NAAQS are intended to protect human health, BOEM is only concerned with the onshore impacts of OCS activities. The BOEM 2017-2022 Draft Multisale Environmental Impact Statement (page xvii) states "Since the primary NAAQS are designed to protect human health, BOEM focuses on the impact of these activities on the States, where there are permanent human populations".

Finally, BOEM's proposal to use the seaward boundary to assess air quality impacts of OCS activities is arbitrary because the geographic extent of states' territorial waters is not uniform. Some state seaward boundaries extend three miles from shore, others nine miles from shore.

We also note practical considerations that argue against this change. As BOEM acknowledges in the preamble, there are no ambient air quality monitoring stations offshore, so there is no way to determine background concentrations to represent current air quality. Use of onshore data would likely overstate offshore background concentrations by very large margins.

Recommendation: The point at which OCS air impacts are assessed must be the shoreline and not the state seaward boundary.

Refer to sections 1.2.5, 8.4, and 8.6 for detailed comments on this matter.

## **Summary**

We believe the expansive rule revision BOEM proposes is not necessary and many of the provisions are beyond the scope of BOEM's statutory authority over OCS air emissions. There are many incomplete concepts in the proposed rule that must be more fully developed after consideration of our comments and offered again for public review and comment.



BOEM has indicated the desire to finalize the proposed rule by December 2016. We are concerned that this artificial deadline will impede BOEM's ability to adequately address stakeholder comments and develop a final rule that both protects the environment and does not hinder America's energy renaissance, particularly when the agency has conceded there is no urgent issue for the proposed regulation to address. BOEM should take sufficient time between the close of the comment period and promulgation of any final rule to review and analyze all the submitted comments, make appropriate revisions, and complete the necessary internal and interagency reviews.

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## INTRODUCTION

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BOEM has proposed revisions to 30 CFR 550, Subparts A, B, C, and J. These proposed revisions, referred to as BOEM's "Air Quality Control, Reporting and Compliance" rule, were published in the Federal Register on April 5, 2016. The proposed rule represents substantive changes to the existing regulatory framework, including the replacement of the current 30 CFR 550 Subpart C rule text in its entirety. The new rule would exponentially increase the requirements imposed on offshore operators and is not reasonable considering the minimal impact of OCS operations on onshore air quality.

As stated in our earlier comment letters, we believe additional time to review and comment on this lengthy and complex rulemaking was needed and, had it been provided, would have further contributed to the proposal's effectiveness. Indeed, additional time to review and comment on this complicated and lengthy rulemaking is warranted to provide the public an adequate opportunity to participate as required under the APA. Going forward, substantial industry-regulator engagement is imperative to generate and implement a workable and effective rule.

We offer the following comments on the proposed regulation. Comments provided in Chapter 1 address key legal issues raised by BOEM's proposed rule, and Chapters 2 through 13 address various technical and policy issues. We have provided suggested regulatory text revisions in redline-strikeout format in Appendix A. Appendix B presents our comments on BOEM's IRIA. Finally, Appendix C provides responses to each of BOEM's solicitations for comment. BOEM has specifically solicited comments on approximately forty issues in the proposed rule that have not been fully developed or defined. Many of the issues that are undeveloped are critical components of the air quality regulatory program, and may have significant impact to offshore operators. Constructive feedback on many, if not most, of these requests involves detailed technical review and significant information gathering. Due to the compressed comment period, we were not afforded enough time to give these requests the full consideration and/or the technical analysis they warrant.

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Appendices

Appendix A – Requested Changes to Proposed Rule

Appendix B – Comments on Initial Regulatory Impact Analysis

Appendix C – Responses to BOEM’s Specific Requests for Comment on Rule Provisions

# 1 Legal Analysis

## 1.1 BOEM has failed to demonstrate the need for sweeping new regulations.

The Bureau of Ocean Energy Management's (BOEM's) authority to regulate air emissions on the Outer Continental Shelf (OCS) is limited to section 5(a)(8) of the Outer Continental Shelf Lands Act (OCSLA), 43 U.S.C. § 1334(a)(8). Section 5(a)(8) authorizes the Secretary to promulgate regulations:

*...for compliance with the [N]ational [A]mbient [A]ir [Q]uality [S]tandards [(NAAQS)] 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.*

To date, despite the detailed information gathering and analytical requirements of BOEM's current regulations, the agency has *never* found that any OCS facility, individually or cumulatively, caused or contributed to a violation of the NAAQS.

Apart from the putative benefits of reducing emissions associated with offshore oil and gas activities, which, as discussed below, is beyond the scope of BOEM's statutory authority, BOEM has not provided any legally defensible justification for its expansive and complex regulatory proposal. To the contrary, BOEM has made clear that additional regulation of OCS emissions is unnecessary. Even the March 2016 Environmental Assessment accompanying this proposed rule concedes that the environmental impact of all the requirements of the proposal would be "minimal" because "on the whole...OCS operations have a minimal impact on the air quality onshore." Oil, Gas, and Sulphur Operations in the Outer Continental Shelf 30 CFR Part 550 – Proposed Subparts A, B, C and J, Environmental Assessment (March 2016) at 17.

BOEM's recent multisale Draft Environmental Impact Statement (EIS) for Gulf of Mexico OCS Oil and Gas Lease Sales: 2017-2022 also demonstrates that emissions from offshore oil and gas facilities are, in BOEM's words, "minor." As recently as April 2016, BOEM explained in its Draft EIS that region-wide Lease Sale 249, which would offer approximately 92.3 million acres for sale, result in the installation of dozens of new facilities, and produce between 0.211-1.118 billion barrels of oil and 0.547-4.24 trillion cubic feet of gas, would not have any significant impact on onshore air quality, either individually or cumulatively with nine similar lease sales. In the EIS, BOEM concludes that the "air quality impacts of OCS oil and gas exploration, development and production, as well as the non-OCS oil- and gas-related activities sources" associated with the sales would be "minor." *Id.* at 4-12. This finding is consistent with the most recent analysis of the air impacts associated with OCS operations conducted by BOEM's predecessor, the Minerals Management Service (MMS), which similarly concluded that OCS activities had no significant impact on state air quality. See Gulf of Mexico Air Quality Study, Final Report (Aug. 1995), [www.data.boem.gov/PI/PDFImages/ESPIS/3/3427.pdf](http://www.data.boem.gov/PI/PDFImages/ESPIS/3/3427.pdf).

BOEM is currently in the midst of conducting new OCS air quality studies. The agency is clearly acting prematurely by proposing to finalize the proposed rule before the studies are complete. It is simply unclear why BOEM believes the information it currently has regarding the absence of onshore air quality impacts urgently compels more stringent regulation. At a minimum, because



BOEM's rush to regulation is completely unsupported by any evidence whatsoever that a problem even exists, its proposal to impose an expensive, administratively burdensome, and potentially disruptive suite of new regulations on OCS lessees and operators is arbitrary, capricious, and an abuse of discretion.

BOEM should not rush to promulgate regulatory requirements that BOEM itself acknowledges are unnecessary, and should at least postpone this rulemaking effort until the current OCS air quality studies are completed and the results are made publicly available.

## **1.2 Section 5(a)(8) of the Outer Continental Shelf Lands Act represents the full extent of BOEM's authority to regulate OCS air emissions.**

BOEM's authority to regulate air emissions on the OCS is limited by section 5(a)(8) of OCSLA, which represents the full extent of BOEM's jurisdiction over OCS emissions. This is clear based not only on the plain language of the statute, but also on an examination of the statute's legislative history.

Congress amended OCSLA in 1978 to add, *inter alia*, section 5(a)(8). See Pub. L. 95-372, § 204 (1978). An earlier House version of the legislation included a proposed subsection (a)(9), which would have authorized the Secretary to regulate air quality above the OCS. See H. Rep. No. 95-590, at 9 (Aug. 29, 1977) (proposing sections 5(a)(8) and (a)(9) of OCSLA). According to the House Conference Report on the 1978 OCSLA amendments, which was recognized by the Ninth Circuit Court of Appeals as "perhaps the strongest evidence of congressional intent outside of the language of [OCSLA] itself,"<sup>2</sup> the decision *not* to adopt proposed section 5(a)(9) demonstrates "[t]he conferees' intent...that the regulations promulgated by the secretary *not* generally require that the air mass above the OCS...be brought into compliance with...air quality standards..." See H.R. Conf. Rep. No. 95-1474, at 85-86 (Aug 10, 1978) (Reprinted in 1978 U.S.C.C.A.N., 1674, 1684-1685) (emphasis added). Accordingly, by enacting the specific and limited mandates of section 5(a)(8), while simultaneously declining to enact 5(a)(9), Congress clearly intended to limit the scope of the Secretary's authority to regulate OCS emissions. This conclusion is also consistent with the well-established principle of statutory interpretation: *expressio unius est exclusio alterius* (the inclusion of one is the exclusion of others). See, e.g., *FDA v. Brown and Williamson Tobacco Corp.*, 529 U.S. 120, 160 (2000).

OCSLA does not provide any other source of authority for the Secretary to regulate OCS air emissions beyond that which is expressly granted in section 5(a)(8). First, the so-called "general regulatory authority" established in section 5(a), which was also a part of the 1978 OCSLA amendments, does not give BOEM independent authority to regulate offshore emissions for any purpose not specified in section 5(a)(8). See 43 U.S.C. § 1334(a).<sup>3</sup> Such an interpretation would not only directly conflict with the clear intent of Congress in enacting the

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<sup>2</sup> *State of California v. Kleppe*, 604 F.2d 1187, 1196 (9th Cir. 1979).

<sup>3</sup> The "general regulatory authority" instructs the Secretary to "prescribe such rules as may be necessary to carry out [the provisions of OCSLA related to the leasing of the OCS]," and allows the Secretary "to prescribe and amend such rules and regulations as he determines to be necessary and proper in order to provide for the prevention of waste and conservation of the natural resources of the [OCS], and the correlative rights therein...." 43 U.S.C. § 1334(a).

specific scope of authority in section 5(a)(8), it would also run afoul of the fundamental principle of statutory interpretation that specific statutory language trumps more general statutory language. See *Fourco Glass Co. v. Transmirra Products Corp.*, 353 U.S. 222, 228 (1957) (“However inclusive may be the general language of a statute, it will not be held to apply to a matter specifically dealt with in another part of the same enactment.”) (citations omitted); see also *Green v. Block Laundry Machine Co.*, 490 U.S. 504 (1989). Second, the broad language at the end of section 5(a), which states that “[t]he regulations prescribed by the Secretary...shall include, *but not be limited to* [the following provisions],” also cannot be interpreted to grant the Secretary authority beyond that set forth in section 5(a)(8). Congress could not have intended to precisely prescribe the Secretary’s authority to regulate OCS emissions under section 5(a)(8), while simultaneously authorizing the Secretary to promulgate whatever air quality or emission-limiting regulations she deems appropriate. Such an interpretation would ignore the careful legislative decision-making process evidenced in the legislative history, and allow the simple phrase “not limited to” to inordinately expand the express grant of congressional authority to regulate emissions. Cf. *Whitman v. Am. Trucking Assn’s, Inc.*, 531 U.S. 457, 468 (2001) (“Congress...does not alter the fundamental details of a regulatory scheme in vague terms or ancillary provisions – it does not...hide elephants in mouseholes”); *MCI Telecom. Corp. v. AT&T*, 512 U.S. 218, 231 (1994).

Because section 5(a)(8) of OCSLA limits BOEM’s authority to regulate OCS air emissions, any provision of the proposed rule that exceeds this limit is invalid and in excess of BOEM’s statutory authority. 5 U.S.C. § 706(2)(C).

### **1.2.1 BOEM does not have “jurisdiction” over OCS air emissions pursuant to section 328(b) of the Clean Air Act.**

Proposed section 550.301, titled “Under what circumstances does this subpart apply to operations in my plan?” incorrectly asserts that section 328(b) of the Clean Air Act (CAA), 42 U.S.C. § 7627(b), gives BOEM “jurisdiction” over activities described in OCS plans. This is simply not the case. Section 328 of the CAA establishes the U.S. Environmental Protection Agency’s (EPA) authority to regulate emissions associated with “OCS sources,” which are defined in section 328(a)(4)(C) of the CAA.

The scope of CAA section 328(b) is very limited vis-à-vis the Secretary of the Interior. Specifically, it: (1) imposes on her the obligation to consult with the EPA Administrator to ensure coordination of the OCSLA regulations with EPA’s onshore pollution control regulations; and (2) requires her to complete a research study by November 15, 1993, examining the impacts of OCS emissions on onshore areas that are not in NAAQS attainment for either ozone (O<sub>3</sub>) or nitrogen dioxide (NO<sub>2</sub>). Section 328(b) of the CAA does not impose on the Secretary any other requirements or grant her any other authority over OCS emissions.

Because section 328(b) of the CAA does not implicate the Secretary’s “jurisdiction” in any way, BOEM should remove the reference to that provision from proposed section 550.301.

### **1.2.2 Proposed § 550.307(a) imposes limits on the emission of volatile organic compounds from long-term OCS sources even where there is no evidence that the VOC emissions would threaten, cause, or contribute to a violation of the NAAQS.**

Section 5(a)(8) of OCSLA authorizes the Secretary to promulgate regulations for compliance with the NAAQS to the extent that activities authorized under OCSLA significantly affect the air quality of any state. As explained in OCSLA's legislative history:

*[t]he standards of applicability the conferees intended the Secretary to incorporate in such regulations is [sic] 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 ambient air quality standards 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.*

1978 U.S.C.C.A.N., 1674, 1684 (emphasis added). BOEM therefore lacks the authority to regulate OCS emissions absent a finding that those emissions: (1) "significantly" affect the air quality of a state; *and* (2) interfere with a state's ability to achieve or maintain compliance with the NAAQS.

BOEM proposes a three-step process for determining whether to regulate emissions of pollutants. First, under the procedures detailed in the proposed rule, the operator would determine whether emissions associated with an OCS activity are less than BOEM-identified emission exemption thresholds (EETs), based on the lessee's or operator's projected emissions. See Proposed § 550.303. If projected emissions would not exceed the EETs, then BOEM would consider the emissions *de minimis*, and no further action would be required. Proposed § 550.303(e). If, on the other hand, emissions of a pollutant were to exceed an EET, then the lessee or operator would be required to proceed to step two and model the dispersion of that pollutant to determine its impact on the air quality of an adjacent state. See Proposed § 550.304. To determine the degree of onshore impact, BOEM proposes to adopt EPA thresholds, including Ambient Air Increments (AAIs) and Significant Impact Levels (SILs), which BOEM uses as thresholds for determining whether OCS emissions cause or contribute to a violation of the NAAQS. See 81 Fed. Reg. at 19777.<sup>4</sup> If projected emissions are expected to exceed the applicable thresholds, BOEM would proceed to the third step of the process and evaluate emission reduction measures (ERM) and determine whether to require emission controls.

BOEM arbitrarily proposes to abandon this three-step approach with respect to volatile organic compounds (VOCs) from long-term OCS sources. Under the proposal, if VOC emissions associated with an OCS activity are anticipated to exceed the BOEM-identified EETs (which, in

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<sup>4</sup> As discussed further in Section 2.2 of these comments, using AAIs for this purpose is inappropriate because AAIs are unrelated to determining compliance with the NAAQS.

the context of the other pollutants, would merely trigger dispersion modeling), BOEM would skip step two and jump to step three and require lessees or operators to propose ERM. See Proposed § 550.307(a). Although in the preamble BOEM indicates that there is no AAI or SIL for VOCs, the absence of such standards does not authorize the agency to forego determining whether VOC emissions affect attainment or maintenance of the NAAQS onshore – an express statutory requirement – before regulating them. BOEM may not impose ERMs for VOC emissions simply because the agency has no convenient standard for assessing whether those emissions affect attainment or maintenance of the NAAQS. To the contrary, absent such a determination, BOEM has no authority to regulate emissions of VOCs at all. Because this proposed truncated process would neither consider the *significance* of the effect of the emissions on the “air quality of [a] [s]tate” nor endeavor to assess the impact of the emissions on onshore *attainment or maintenance of the NAAQS*, the proposed VOC regulations in section 550.307 are inconsistent with the mandate of section 5(a)(8) and exceed BOEM’s authority.<sup>5</sup>

### **1.2.3 OCSLA does not grant BOEM any authority with respect to greenhouse gases and hazardous air pollutants.**

Proposed section 550.105 defines “air pollutant” to include greenhouse gases (GHGs) and hazardous air pollutants (HAPs), even though GHGs and HAPs are outside the scope of BOEM’s authority under section 5(a)(8) of OCSLA. In the preamble, BOEM indicates that it does not intend to include GHGs or HAPs under the purview of the proposed rule. See 81 Fed. Reg. at 19739, 19751. Notwithstanding this representation, by including GHGs and HAPs in the definition of “air pollutant,” BOEM would subject GHGs and HAPs to the proposed rule’s regulatory requirements, even though these types of emissions are clearly unrelated to the attainment or maintenance of the onshore NAAQS. Such inclusion, therefore, is beyond the purview of section 5(a)(8) and is impermissible.<sup>6</sup>

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<sup>5</sup> The fact BOEM’s current regulation at 30 C.F.R. § 550.303(f) regulates VOCs in the identical impermissible manner is irrelevant. BOEM must correct its previous mistake, and it must do so in accordance with OCSLA. To do otherwise would clearly violate the Administrative Procedure Act (“APA”), 5 U.S.C. § 706, which prohibits agencies from promulgating rules that are arbitrary, capricious, or otherwise not in accordance with law.

<sup>6</sup> BOEM suggests that requiring submission of GHG information and potentially regulating GHG emissions would reduce ocean acidification and reduce the effects of climate change. See 80 Fed. Reg. at 19751. These matters are simply beyond the scope of BOEM’s regulatory authority under OCSLA section 5(a)(8). See, e.g., 1978 U.S.C.C.A.N. at 1684 (“...the Secretary of the Interior shall, with appropriate regulations, assure that offshore operations conducted pursuant to [OCSLA] do not prevent the attainment of [] State [ambient air quality] standards, if the air quality of that State is significantly affected by such offshore operations”). Moreover, Congress clarified that section 5(a)(8) of OCSLA was *not* intended to protect offshore resources. See *id.* at 1864-65 (explaining that “[t]he conferees intent was that the regulations promulgated by the Secretary not generally require that the air mass above the OCS itself be brought into compliance with national or State ambient air quality standards but that regulations might be appropriate for the air above or near an artificial installation or other device (platform), so that emissions from such source is [sic] controlled to prevent a significant effect on the air quality of an adjacent onshore area”).

BOEM incorrectly assumes that section 5(a)(8) authorizes it to compel lessees to incur the time and expense to collect, maintain, and disclose to BOEM information relating to GHG and general air pollutant emissions. See, e.g., Proposed § 550.187 (requiring lessees and operators to collect, maintain, and report “information regarding *all air pollutant emissions* from all emission sources associated with [OCS] operations”) (emphasis added); see also 81 Fed. Reg. at 19722, 19747, 19750 (discussing same). More specifically, proposed section 550.187 would codify and make mandatory the existing Gulf of Mexico Region (GOMR) mechanism for reporting ongoing emissions under the Gulf-wide Offshore Activities Data System (GOADS), as provided for in BOEM Notice to Lessees and Operators (NTL) No. 2014-G01, which provides for the collection of GHG and HAP information from operators that voluntarily submit it.<sup>7</sup> Similarly, under proposed section 550.303, BOEM would establish “the rate of projected emissions, calculated for each *air pollutant*, above which facilities would be subject to the requirement to perform modeling,” and require lessees and operators to calculate, report, and compare projected emissions of pollutants for the purpose of determining whether modeling is required. In addition, proposed section 550.303(d) would require lessees and operators to account for, consolidate, and model all “air pollutant emissions” from multiple facilities. Because BOEM proposes to include GHGs and HAPs in the definition of “air pollutant,” all of the requirements discussed above would apply to GHGs and HAPs even though they are unrelated to the attainment and maintenance of the NAAQS.<sup>8</sup> BOEM cites no authority for its inclusion of GHGs and HAPs, and OCSLA does not grant it any.<sup>9, 10</sup>

BOEM suggests that requiring lessees and operators to submit GHG and HAP emissions information will assist in the preparation of future environmental reviews under the National

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<sup>7</sup> Although NTLs interpret and clarify existing rules, they cannot impose new regulatory requirements. Previous BOEM attempts to use NTLs to impose substantive new requirements have failed. See, e.g., *Ensco Offshore Co. v. Salazar*, No. 10-1941, 2010 WL 4116892, at \*5 (E.D. La. Oct. 19, 2010) (invalidating NTL No. 2010-N05 because it was a substantive rule masquerading as interpretative guidance that was not promulgated in accordance with APA notice-and-comment procedures). This line of cases makes clear that APA rulemaking would be required to make GOADS reporting mandatory.

<sup>8</sup> The mere fact that industry has, in certain instances, voluntarily complied with BOEM requests for HAP and GHG emissions information, does not grant BOEM the authority to compel industry to gather and produce such information, or to penalize lessees for refusing to submit such information.

<sup>9</sup> Although other OCSLA provisions impose on BOEM certain responsibilities and authorities, none authorize the requirements BOEM is now seeking to impose. See, e.g., 43 U.S.C. § 1344(a) (requiring BOEM to take various information into account when developing each 5-year plan, but providing no independent authority to compel lessees to provide information for that purpose); *id.* at § 1346 (requiring BOEM to undertake various studies, but providing no independent authority to compel lessees to gather and produce information to support those efforts); *id.* at § 1348 (requiring lessees to maintain safe workplaces, but providing no authority to compel lessees to gather and produce to BOEM information regarding HAP and GHG emissions).

<sup>10</sup> Because black carbon is also not related to compliance with the NAAQS, BOEM similarly lacks the authority to regulate it, notwithstanding BOEM’s stated interest in doing so in the future. See 81 Fed. Reg. at 19724.

Environmental Policy Act (NEPA). NEPA does not grant BOEM the authority to impose information-gathering requirements on lessees and operators in the hopes that such information will be useful for future analyses or serve a public or governmental purpose. Instead, NEPA requires agencies to gather the environmental information necessary to make a reasoned choice among the alternatives when deciding whether, and under what conditions, to undertake a *specific* course of action (such as approving a project). It is well established that the purpose of NEPA is to inform agency decision making. 40 C.F.R. § 1500.1(c); *Pacific Legal Found. v. Andrus*, 657 F.2d 829, 837-38 (6th Cir. 1981) (although compliance with NEPA serves to inform policymakers and the public, “[t]his ... does not exist independent of the primary purpose to insure an informed decision by the agency contemplating federal action.... [Informing policymakers and the public] is an added benefit derivative of the primary [decision making] purpose”).

With respect to NEPA analyses conducted for specific project approvals under OCSLA, HAP and GHG emissions information cannot influence BOEM’s decision-making. This is because BOEM’s decision space to approve Exploration Plans (EPs), Development and Production Plans (DPPs), and Development Operations Coordination Documents (DOCDs) under OCSLA is severely limited. For example, section 11(c) of OCSLA, *requires* BOEM to approve an EP if it complies with applicable regulations, including those “prescribed...pursuant to [OCSLA section 5(a)(8)].” 43 U.S.C. § 1340(c). Accordingly, if the EP complies with the section 5(a)(8) regulations, BOEM *must* approve it. Because section 5(a)(8) itself cannot be used to compel production of GHG or HAP emissions, and no other section of OCSLA, including the “general rulemaking” provisions of section 5(a), can be used to compel disclosure of such information, BOEM lacks the authority to disapprove an EP for failure to produce HAP or GHG emissions information. BOEM similarly lacks the authority to condition approval of an EP based on the lessee controlling or reducing HAP or GHG emissions associated with the plan. Simply put, OCSLA *requires* BOEM to approve an otherwise compliant plan, regardless of the associated HAP or GHG emissions, and leaves no room for BOEM to consider HAPs and GHGs in deciding whether to approve, approve with modifications, or deny EPs, DPPs, and DOCDs.<sup>11</sup> Given this constrained decision space, BOEM has no obligation under NEPA to consider HAP or GHG emissions when deciding to approve, approve with modifications, or deny a plan. See, e.g., *DOT v. Pub. Citizen*, 541 U.S. 752, 768 (2004) (“Since [the Federal Motor Carrier Safety Administration (“FMCSA”)] has no ability categorically to prevent the cross-border operations of Mexican motor carriers, the environmental impact of the cross-border operations would have no effect on FMCSA’s decisionmaking—FMCSA simply lacks the power to act on whatever information might be contained in the EIS”); *Alaska Wilderness League v. Jewell*, 788 F.3d 1212 (9th Cir. 2015) (agencies need not comply with NEPA when their discretionary decision space is constrained by statute); cf. *DOT*, 541 U.S. at 768 (noting that a “rule of reason” is inherent in NEPA and its implementing regulations, “which ensures that agencies determine whether and to what extent to prepare an EIS *based on the usefulness of ... information to the decisionmaking*”).

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<sup>11</sup> Under OCSLA, BOEM may disapprove an otherwise compliant plan, *i.e.*, one that complies with section 5(a)(8), *only* if approving the plan would constitute such a threat to the human or marine environment, or to national security, that cancellation of the underlying lease would be necessary. See 43 U.S.C. § 1334(a)(2)(A). The HAPs or GHGs emissions associated with a plan could not create such a situation.

*process*") (emphasis added). Accordingly, BOEM has no authority to compel lessees to produce such information.

In sum, section 5(a)(8) does not authorize BOEM to require lessees to gather and disclose GHG or HAPs emissions information to the agency, and BOEM has not cited any authority that would permit it to do so. Consequently, BOEM should remove from the proposal any provision requiring lessees to obtain, analyze, report, or control emissions of HAPs and GHGs.

#### **1.2.4 BOEM cannot regulate emissions from mobile support craft, which are outside the scope of BOEM's jurisdiction, by "attributing" these emissions to OCS facility emissions.**

Proposed section 550.302 includes mobile support craft (MSC), including vessels, in the definition of "facility." Thus, as drafted, the proposed rule would impermissibly force applicants to account for MSC emissions and subject MSC emissions to direct BOEM regulation.

Additionally, proposed sections 550.205(d) and (e) and 550.224(b) would impermissibly "attribute" MSC emissions to the emissions of a facility, presumably regulating the emissions of platforms to offset the emissions of "associated" MSC even though neither section (5)(a)(8), nor the other requirements of OCSLA, apply to MSC.

The scope of BOEM's authority prevents it from directly regulating MSC emissions or attributing MSC emissions to OCS facilities. First, under section 5(a)(8), BOEM cannot consider MSC emissions when determining whether "*activities authorized under [OCSLA]* significantly affect the air quality of [a] [s]tate" because MSC are not "*activities authorized under [OCSLA]*." This is true even though MSC are included in the plans submitted for BOEM approval, because BOEM does not approve, regulate, or otherwise authorize them.<sup>12</sup> Second, section 4(a) of OCSLA further limits the Secretary's regulatory authority to "artificial islands... and ... installations... permanently or temporarily attached to the seabed, which may be erected thereon

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<sup>12</sup> For example, icebreakers, support vessels, crew boats, and aircraft are free to traverse the waters and air above the OCS without any authorization or permission from BOEM. Even mobile offshore drilling units ("MODUs") may travel where they wish without authorization from BOEM. At the same time, however, no person may drill for oil and gas in the OCS without BOEM authorization. 43 U.S.C. § 1340. Similarly, the construction, installation, and operation of an OCS facility also requires BOEM authorization. So for example, while regulations promulgated under section 5(a)(a) of OCSLA apply to a MODU's emissions while it is engaged in drilling in the OCS under BOEM authorization, they do not apply to that MODU while it is underway.

Aircraft or other MSC are simply outside the purview of section 5(a)(8) of OCSLA, because they require no authorization or permission from BOEM to do anything. Even while on an OCS production platform, for example, they can neither be regulated as facilities nor included in emissions calculations under section 5(a)(8) unless they are performing an activity specifically authorized by BOEM. Thus, BOEM should remove all provisions from the proposed rule that would account for the emissions of aircraft or the operation of onshore facilities, which are clearly not "*activities authorized under [OCSLA]*." See Proposed §§ 550.205(m), 550.224(b), 550.225(b), and 550.304(f).

for the purpose of exploring for, developing, or producing resources therefrom.” 43 U.S.C. § 1333(a). MSC are clearly not “artificial islands . . . permanently or temporarily attached to the seabed” that are “exploring for, developing, or producing” oil and gas.<sup>13</sup> So BOEM’s regulatory authority cannot extend to MSC because they are not “permanently or temporarily attached to the seabed” for the purpose of “exploring for developing, or producing” oil and gas. See *also REDOIL v. EPA*, 716 F.3d 1155 (9th Cir. 2013) (support vessels that are not “[p]ermanently or temporarily attached to the seabed,” or “[p]hysically attached to an OCS facility,” are not “regulated or authorized under [OCSLA]”).

The OCSLA legislative history supports the exclusion of MSC emissions from BOEM’s regulatory authority. The Conference Report accompanying the 1978 OCSLA amendments only contemplates regulating emissions from OCS installations and platforms under section 5(a)(8), and does not indicate any concern for the emissions from vessels or anything other than “authorized” installations and platforms:

*The conferees [sic] intent was that the regulations promulgated by the Secretary not generally require that the air mass above the OCS itself be brought into compliance with the [NAAQS] but that regulations might be appropriate for the air above or near an artificial installation or other device (platform), so that emissions from such source is controlled to prevent a significant effect on the air quality of an adjacent onshore area.*

1978 U.S.C.C.A.N. at 1684-1685 (emphasis added). Consistent with the jurisdictional scope of section 4(a) of OCSLA, the report does not consider assessing or controlling emissions from any source other than an installation or platform.

BOEM should therefore modify the definition of “facility” as follows to exclude MSC from BOEM’s regulatory purview (the underlined text reflects proposed additions while the strikethrough text represents proposed deletions), and to clarify that the air quality review applies only to activities under its jurisdiction:

§ 550.302 *Acronyms and definitions concerning air quality.*

*... Facility means, any installation, structure, ~~vessel, vehicle,~~ equipment, or device that is temporarily or permanently attached to the seabed of the OCS for the purpose of exploring for, developing, or producing oil or gas or sulphur therefrom, and which emits a regulated criteria or precursor pollutant, including but not limited to a dynamically positioned ship, gravity-based structure, manmade island, or bottom-sitting structure,*

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<sup>13</sup> As particularly relevant here, Congress expressly excluded one type of MSC – vessels – from OCSLA’s purview. See 43 U.S.C. §§ 1332 (1)-(2) (“the subsoil and seabed of the [OCS] appertain to the United States and are subject to its jurisdiction and control...[OCSLA] shall be construed in such a manner that the character of the waters above...[are] high seas, and the right to navigation...therein shall not be affected”); *id.* at § 1333(a)(1) (extending the jurisdiction of the U.S., through OCSLA, to “such installation or other device (*other than a ship or vessel*) [attached to the seabed] for the purpose of transporting [oil and gas] resources”) (emphasis added).



~~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 the facility are a part of a facility only 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, while temporarily or permanently attached to the seabed and exploring for, developing, or producing oil and gas or sulphur resources. 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-, while temporarily or permanently attached to the seabed. 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.~~

### **1.2.5 The proposal impermissibly assesses emissions impacts at the seaward boundary of states rather than at the shoreline.**

Proposed section 550.205(i) would relocate from the state shoreline to the seaward edge of state territorial waters the "compliance boundary" that is used for determining exemptions from detailed analyses, the need for modeling, the significance of air impacts, whether emissions cause or contribute to a violation of the NAAQS, and the need for ERM. See 81 Fed. Reg. at 19738-19740, 19794. Although a state's territory extends to its seaward boundary, this is not the appropriate point at which to assess air-quality impacts for a number of reasons.

First, as discussed, under section 5(a)(8) the Secretary's authority is limited to promulgating regulations for "compliance with the [NAAQS] pursuant to the [CAA] to the extent that activities authorized under [OCSLA] significantly affect the air quality of any State." (emphasis added). Under the relevant state implementation plans (SIPs) (the vehicles through which states must demonstrate how they will achieve and maintain compliance with the NAAQS), the border of the air quality control regions (AQCR) appears to extend only to the shoreline and not to the respective states' territorial waters. As such, NAAQS do not apply in the territorial waters. Using the seaward boundary of the territorial waters as the point for determining NAAQS compliance under section 5(a)(8) therefore is inconsistent with BOEM's statutory authority.<sup>14</sup>

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<sup>14</sup> In contrast, Texas appears to apply Title V federal operating permit requirements to stationary sources in its territorial waters. See Title V Program Applicability, [http://www.tceq.state.tx.us/permitting/air/titlev/pro\\_applicability.html](http://www.tceq.state.tx.us/permitting/air/titlev/pro_applicability.html) ("The 30 TAC Chapter 122 requirements also apply to stationary sources in the State of Texas territorial waters."). However, obtaining a Title V federal operating permit is not relevant to OCSLA section 5(a)(8) because it is distinct from NAAQS compliance.

Second, when enacting section 5(a)(8), Congress clearly was concerned only with impacts to *onshore* air quality. For example, the legislative history states:

*The standards of applicability the conferees intended...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 of the ambient air quality standards 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 conferees intent was that...regulations might be appropriate for the air above or near an artificial or other device (platform), so that emissions from such source is [sic] controlled to prevent a significant effect on the air quality of an adjacent onshore area.*

*1978 U.S.C.C.A.N. at 1684-1685.*

Third, BOEM itself recently acknowledged that because the NAAQS are intended to protect human health, BOEM is only concerned with the onshore impacts of OCS activities. See BOEM 2017-2022 Draft Multisale EIS at xvii (“Since the primary NAAQS are designed to protect human health, BOEM focuses on the impact of these activities on the States, where there are permanent human populations”). Here, however, BOEM proposes to assess air quality impacts of OCS activities at the seaward edge of the state’s territorial waters even though there are no “permanent human populations” in such areas. BOEM’s proposal is therefore inconsistent with the purpose of the NAAQS, as expressly acknowledged by BOEM.

Finally, BOEM’s proposal to use the seaward boundary of the states’ territorial waters to assess air quality impacts of OCS activities is arbitrary because the geographic extent of states’ territorial waters is not uniform. Texas’ territorial waters, for example, extend 9 nautical miles (nmi) seaward from shore, while Louisiana’s territorial waters only extend 3 nmi. BOEM does not offer any legally defensible rationale, based on NAAQS compliance or otherwise, for its proposal to assess OCS emission impacts in some places at 3 nmi from shore and in other places at 9 nmi from shore.

For all of these reasons, the point at which OCS air impacts are assessed must be the shoreline and not the state seaward boundary.

#### **1.2.6 BOEM’s proposal to enforce compliance with federal, state, or tribal laws related to air quality exceeds the agency’s authority.**

Proposed section 550.313(a)(6) would allow BOEM to impose “additional requirements on facilities operating under already approved plans” if the “operation is violating any applicable federal, State, or tribal law related to air quality.” However, BOEM lacks the authority to enforce any air quality-related laws that are not designed to ensure compliance with the NAAQS, *e.g.*, those laws intended to regulate HAPs, GHGs, odors, noise, nuisance, and other air quality-

related values (AQRVs).<sup>15</sup> Because of this lack of authority, BOEM cannot impose on any OCS facility “additional requirements” unrelated to compliance with the NAAQS.

### **1.2.7 BOEM lacks a legal justification for including other “Federal Land Managers” in determining compliance with section 5(a)(8) or for requiring additional information and analysis in response to their concerns.**

Because OCSLA authorizes BOEM to regulate OCS activities only for compliance with the NAAQS, BOEM cannot regulate “significant” air quality impacts in and of themselves. Yet, section 550.303(h) proposes to do precisely that by providing federal land managers (FLMs) an open-ended invitation to raise issues, require studies, and require mitigation of air impacts on AQRVs in sensitive onshore areas managed by FLMs. See 81 Fed. Reg. at 19775. BOEM, however, fails to provide a sufficient nexus between AQRV protection and NAAQS compliance to justify this proposed requirement. The CAA charges FLMs with the separate and distinct obligation to protect AQRVs within their respective CAA jurisdictions. OCSLA did not grant FLMs any authority over OCS emissions, and it did not authorize BOEM to use its section 5(a)(8) authority as a means of protecting AQRVs that are of concern to FLMs.<sup>16</sup> Accordingly, BOEM should remove those portions of proposed section 550.303(h) from the final rule that would involve FLMs in determining compliance with section 5(a)(8) of OCSLA or that would allow BOEM to impose any non-OCSLA related requirement on lessees at the behest of FLMs.

### **1.3 BOEM may not use its limited regulatory authority over air emissions to reconsider already approved plans, or to impose new requirements on existing facilities.**

#### **1.3.1 The proposal should not require ongoing emissions monitoring and reporting to ensure continued compliance with the air quality regulations, and should not impose new air quality requirements in the absence of a plan review.**

Proposed sections 550.309(d), 550.311, 550.312, and 550.313 require ongoing emissions reporting to ensure continued compliance with regulations promulgated under OCSLA section 5(a)(8). This is inconsistent with congressional intent, as it would impose new requirements on an already-approved plan. Congress intended that the regulations promulgated under section 5(a)(8) would only apply at the plan approval stage. See, e.g., 43 U.S.C. § 1340(c)(1) (requiring approval of an EP if the applicant complies with regulations promulgated under OCSLA section 5(a)(8)); *id.* at § 1351(h)(1) (allowing approval of a DOCD only if the applicant complies with regulations promulgated under OCSLA section 5(a)(8)); 78 U.S.C.C.A.N. at 1685 (“exploration plans... and development and production plans ... are to comply with any regulations promulgated pursuant to section 5(a)(8) of [OCSLA] ... *Thus, in considering approval,*

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<sup>15</sup> AQRVs are a key component of Class I prevention of significant deterioration (PSD) reviews under the CAA, which are clearly beyond the purview of BOEM’s authority to regulate for compliance with the NAAQS.

<sup>16</sup> FLMs have no place in determining whether OCS operations comply with BOEM’s section 5(a)(8) regulations. Although they might have special “expertise” to evaluate the impacts of emissions on AQRVs in the areas they manage (81 Fed. Reg. at 19775), this is not relevant for the purpose of section 5(a)(8) compliance.

*modifications, and disapproval of a **submitted** exploration plan or development and production plan*, the Secretary is to insure compliance with any applicable regulations promulgated...pursuant to section 5(a)(8)”) (emphasis added). BOEM’s proposal to use its section 5(a)(8) authority to require ongoing emissions monitoring and reporting, and to impose new emission requirements even when a new plan has not been submitted, exceeds the scope of BOEM’s authority to ensure compliance with the NAAQS under OCSLA section 5(a)(8).

### **1.3.2 The requirement to resubmit and obtain re-approval of previously approved plans is problematic and presents potential breach of contract and takings issues.**

Proposed section 550.310(c) would require lessees to resubmit previously approved plans at least every 10 years to verify compliance with BOEM’s current air quality regulations, including those provisions relating to new information gathering and reporting requirements. *See also* proposed rule §§ 550.284; 550.303(g); 550.309(d).<sup>17</sup>

The requirement to resubmit plans every 10 years is inconsistent with section 25(h)(3) of OCSLA, which indicates that BOEM can only review an existing plan “based upon changes in available information and other onshore or offshore conditions affecting or impacted by development and production pursuant to such plan.” 43 U.S.C. § 1351(h)(3). BOEM lacks the authority to require resubmission or revision of an already-approved plan, absent some indication of changed conditions or impacts. It follows, therefore, that BOEM may not promulgate a regulation imposing a blanket requirement that all operators periodically resubmit their plans for review unless there is a specific showing that each resubmitted plan warrants review because there have been changed conditions or impacts. Although existing leases are generally subject to amended regulations over time, compliance with successive iterations of the air quality regulations promulgated under section 5(a)(8) alone cannot possibly constitute grounds for resubmission and re-approval, on new and far more onerous terms, of existing DPPs and DOCDs. Accordingly, BOEM may not require resubmission and re-approval of existing plans as proposed.<sup>18</sup>

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<sup>17</sup> Although BOEM does not specify the consequence that will follow if BOEM is dissatisfied with the resubmitted plan, the proposal suggests that failure to resubmit a plan could result in revocation of the lessee’s existing plan. Moreover, the criteria for revoking an existing plan are unclear. Under OCSLA, the standard for *disapproving* a plan application is the same as for lease *cancellation*. The threshold for plan *revocation* should be at least as high. OCSLA permits lease cancellation only in the narrowest and most extreme circumstances. *See, e.g.*, 43 U.S.C. § 1334(a)(2) (requiring a showing of imminent and “serious harm” to life, property, national security, or the marine, coastal or human environment, and requiring a hearing, suspension period, and compensation, prior to cancelling a producing lease). It is doubtful that emissions from existing facilities, much less reduced emissions from future facilities, can ever present such an imminent threat.

<sup>18</sup> Indeed, it appears that BOEM is attempting to leverage its authority to review plans and cancel leases under OCSLA to coerce lessees into providing scientific information that is unrelated to OCSLA

Although finalizing this plan resubmission requirement would be arbitrary and capricious, if BOEM nonetheless included such a requirement in the final rule, then at a minimum, it should clarify that: (1) the resubmitted plan will be reviewed for continued compliance with onshore NAAQS, and (2) additional conditions will be imposed only where operations are “significantly” affecting the air quality of a state and preventing attainment or continued compliance with the NAAQS onshore.

#### **1.4 Proposed § 550.303(d) improperly requires aggregation of emissions across “proximate” facilities with common partial ownership or control, and which are contemporaneously operated.**

BOEM is inappropriately attempting to transpose to the OCS EPA’s Title V and New Source Review onshore permit programs, under which two or more stationary sources may be treated as a single stationary source for emission aggregation purposes, if, among other things, they are under common ownership or control and are “contiguous and adjacent.”<sup>19</sup> First, BOEM’s proposal is inconsistent with OCLSA because the CAA does not apply to OCS areas that are subject to section 5(a)(8). Second, BOEM’s proposal in this regard reflects a fundamental misunderstanding of OCS lease ownership and operations.

As an initial matter, there is no basis for BOEM’s tacit assumption that “common” ownership equates with “common” control on the OCS. *Cf. U.S. v. Bestfoods*, 118 S. Ct. 1876 (1998). A cursory review of a BOEM serial register page for a lease block demonstrates that OCS leases frequently have numerous fractional interest owners, including both record title and operating rights owners, with varying degrees of control (or no control at all) over operations. Imposing coordinated and interrelated air-quality responsibilities on two or more proximately located facilities, even if the leases on which they are located share one or some common record title or operating rights holders, is arbitrary and unfair because owners without the power to ensure compliance with the “aggregated” air quality responsibilities could nevertheless be held liable for noncompliance.<sup>20</sup> Because holding non-common or non-controlling interest owners responsible

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compliance (e.g., as GHG, HAP, and other information reporting requirements). In essence, BOEM is telling lessees that wish to continue operating on the OCS that they can do so *only* if they also submit to participation in an independent and unrelated program for acquiring, analyzing, and disclosing emissions information and reducing air pollution from various sources that far exceeds that authorized under OCSLA. BOEM may not engage in such coercive behavior. *Cf. NFIB v. Sebelius*, 132 S. Ct. 2566, 2602-2607 (establishing the “anti-leveraging principle” and holding that federal imposition of new conditions constitutes impermissible coercion when the conditions “take the form of threats to terminate other significant independent grants”).

<sup>19</sup> *Cf. Summit Petroleum Corp. v. EPA*, 690 F.3d 733 (6th Cir. 2012) (vacating EPA’s single source determination and holding that the term “adjacent” unambiguously refers to physical proximity, and that EPA’s interpretation that a natural gas sweetening plant and various sour gas production wells located across an area of approximately 43 miles were a single source because there were “adjacent” was unreasonably inconsistent with the plain meaning of that term).

<sup>20</sup> To illustrate, under the proposal’s vague provisions, a person who holds a 5 percent non-controlling

for the regulatory compliance of all aggregated leases raises serious due process and confidentiality concerns in addition to basic practicability concerns, BOEM should withdraw proposed section 550.303(d), and reconsider its proposal to aggregate OCS leases simply on the basis of “common ownership and control.”

Additionally, “contemporaneous operation” of proximate leases cannot be used as a trigger for the imposition of new emissions reporting or mitigation requirements under section 5(a)(8). Only the submission of an EP or DPP/DOCD (or arguably the periodic review of a DPP/DOCD), can trigger BOEM’s section 5(a)(8) authority. See 43 U.S.C. §§ 1340, 1351.

**1.5 BOEM’s proposal to grant itself or other agencies unlimited discretion to dictate future requirements on an ad-hoc basis and to disregard its self-imposed requirements violates the APA.**

**1.5.1 Proposed §§ 550.308 and 550.313 would allow BOEM to sidestep the entire regulatory process established in the proposed rule and arbitrarily impose regulatory requirements in excess of its section 5(a)(8) of OCSLA authority.**

BOEM proposes to allow the Regional Supervisor to require a lessee or operator to apply “additional [emission reduction measures, (ERMs)] on either a temporary or permanent basis, depending on the circumstances, if he/she determines that projected emissions, or where applicable[,] complex total emissions, may cause or contribute to a violation of a NAAQS.” Proposed rule § 550.308(a). The very purpose of the proposed rule is to establish a carefully-crafted, scientifically defensible, reasonably implementable system for determining whether project emissions may cause or contribute to a violation of the NAAQS, and, if so, which ERMs should be imposed. Including a provision that would allow the Regional Supervisor to simply

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interest in lease A and a 5 percent non-controlling interest in lease B could be held liable for compliance (or noncompliance) with the proposal’s emissions and reporting requirements for *both leases*. More importantly, *all* of the remaining 95 percent interest owners in each lease would *also* be held liable for the compliance of *both leases, even if they only have an interest in one of them*. This is because the 5 percent “common” owner could provide grounds for aggregation under the “common ownership or control” provision of the proposed rule.

It is also possible that each lease has a different operator, which adds further complexity, since operators of one lease are usually contractually obligated to keep information about the lease confidential from owners of other leases. While on the one hand everyone who will be held responsible for the lease A’s compliance should have access to the relevant compliance information for that lease, those that only have ownership interest in lease B are not entitled to any information concerning lease A, much less the ability to control what happens on lease A.

Aggregating three or more leases would increase the complexity exponentially. BOEM has failed to consider these issues, and it does not explain how these obvious concerns would be resolved in the context of the proposed rule.

ignore the entire proposed regulatory scheme, make his or her own NAAQS compliance determination, and impose his or her own emission controls at will, is plainly arbitrary.<sup>21</sup>

Proposed section 550.313 is also flawed for many other reasons. First, that provision would allow BOEM to unilaterally “impose additional air quality requirements on facilities operating under already approved plans” if BOEM determines, *inter alia*, that the operation is emitting “unauthorized pollutants,” “creating conditions posing an unreasonable risk to public health or welfare,” or “violating any applicable federal, State, or tribal law related to air quality.” Although it is unclear what “unauthorized pollutant” means, as discussed above, under section 5(a)(8) BOEM may only regulate criteria pollutants that cause or contribute to nonattainment of the NAAQS. Proposed section 550.313 is also unacceptably vague because it fails to explain what would constitute emissions of pollutants sufficient to present an “unreasonable risk to public health and welfare.” Again, section 5(a)(8) only addresses compliance with the NAAQS and does not grant BOEM overarching authority to generally “protect public health and welfare” (in fact, that is what the NAAQS are for) or to ensure compliance with air quality laws in general.

In addition, proposed section 550.313 conflicts with proposed section 550.303(d), which limits facility aggregation to “proximate” facilities with “common ownership.” Proposed section 550.313 would instead permit aggregation with “any offshore operation” regardless of proximity, ownership, or control, rendering proposed section 550.303(d) superfluous. (emphasis added). Additionally, because Congress intended that the regulations promulgated under section 5(a)(8) apply only at the plan review and approval stage, BOEM may not simply impose new “air quality” requirements (even if it had the authority to do so, which, as discussed above, it does not) on facilities operating under an already-approved plan. Consequently, BOEM should remove proposed sections 550.308 and 550.313 from the final rule.

### **1.5.2 Proposed § 550.312 inappropriately authorizes BOEM to impose meteorological data gathering and reporting requirements at its discretion.**

Proposed section 550.312(c) would require lessees to submit meteorological data “for a period of time and in a manner approved or prescribed” by the Regional Supervisor. This proposed provision fails to inform the regulated community what is required of it and proposes to allow the agency to simply make up the rules as it goes along. BOEM may not reserve such broad discretion to dictate future requirements on an ad-hoc basis.

All regulations must be sufficiently clear and specific so the regulated community has “fair notice” of the regulatory requirements. *FCC v. Fox Television Stations, Inc.*, 132 S. Ct. 2307, 2309 (2012); *see also id.* at 2317-18 (“A fundamental principle in our legal system is that laws which regulate persons or entities must give fair notice of conduct that is forbidden or required”); *Papachristou v. Jacksonville*, 405 U.S. 156, 162 (1972) (“Living under a rule of law entails various suppositions, one of which is that [all persons] are entitled to be informed as to what the

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<sup>21</sup> Although proposed section 550.308(b) allows lessees and operators to challenge the Regional Supervisor’s determinations, BOEM should clarify that section 550.308(b) does not preclude administrative appeal of the Regional Supervisor’s decision to the Interior Board of Land Appeals pursuant to 30 C.F.R. § 550.290.

State commands or forbids”) (quoting *Lanzetta v. New Jersey*, 306 U.S. 451, 453 (1939) (alteration in original).

The requirement that regulations be clear stems from the protections provided by the Due Process Clause of the Fifth Amendment, and leads courts to invalidate laws and regulations that are impermissibly vague. See, e.g., *Fox Television Stations*, 132 S. Ct. at 2317; *United States v. Williams*, 553 U.S. 285, 304 (2008). According to the Supreme Court: “The void for vagueness doctrine addresses at least two connected but discrete due process concerns: regulated parties should know what is required of them so they may act accordingly; and precision and guidance [in rulemaking] are necessary so that those enforcing the law do not act in an arbitrary or discriminatory way.” *Id.* Here, BOEM must propose the specific criteria for timing and content of data submissions and subject its proposal to the notice-and-comment rulemaking process under the Administrative Procedure Act (APA).

### **1.5.3 Proposed § 550.304(e) inadequately specifies the methods lessees must use when determining ambient air quality.**

Proposed section 550.304(e) prescribes the methods lessees must use when estimating the quality of the ambient air in the area that may be impacted by their operations. The provisions of proposed section 550.304(e) are vague, nonspecific, and indicate that BOEM may in the future issue a NTL informing lessees how to conduct this critical analysis. Prescribing methods for estimating ambient air quality is a quasi-legislative exercise that may only be effectuated via APA notice-and-comment rulemaking. NTLs are not rules, and BOEM may not use them to impose substantive or binding requirements on lessees. See *EnSCO Offshore Co. v. Salazar*, No. 10-1941, 2010 U. Dist. LEXIS 111226, 2010 WL 4116892, \*15-17 (E.D. La. Oct. 19, 2010). Accordingly, to the extent BOEM declines to adopt states’ or EPA’s existing assessments of onshore ambient air quality, BOEM may only prescribe methods for lessee estimation of ambient air quality through the APA rulemaking process.

### **1.5.4 Proposed § 550.312 would inappropriately allow other agencies to impose additional monitoring or reporting requirements at their discretion.**

Section 550.312 appears to permit BOEM to authorize other agencies to impose additional monitoring or reporting requirements on operators or lessees. See 81 Fed. Reg. at 19785. However, BOEM may not delegate its OCSLA regulatory authority to other agencies, and may only impose air quality control and reporting requirements consistent with section 5(a)(8) of OCSLA.

### **1.5.5 The proposed rule’s reservation of discretion to BOEM to revise emission exemption thresholds for any reason, without expressly requiring additional rulemaking, presents APA concerns.**

Revising the regulatory emissions thresholds is a quasi-legislative exercise because it imposes new standards that are binding on lessees and the agency. See *Gen. Motors Corp. v. Ruckelshaus*, 742 F.2d 1561, 1565 (D.C. Cir. 1984). Although the proposal indicates that BOEM would propose new thresholds and seek public comment before finalizing any future changes (see 81 Fed. Reg. at 19773), BOEM must engage in full APA notice-and-comment rulemaking before changing EETs. See 5 U.S.C. §§ 553, 706.



**1.5.6 BOEM proposes to require measurement of actual emissions on facilities with emissions above “a specific threshold,” and requests comment on what that threshold should be in the final rule.**

In the preamble BOEM proposes to require measurement of actual emissions on facilities with emissions above “a specific threshold,” and requests comment on that threshold. 80 Fed. Reg. at 19746. Establishing a threshold for requiring measurement of *actual emissions*, an exceedingly difficult, expensive, and burdensome proposition, is a critically-important quasi-legislative exercise. The threshold BOEM is considering must be proposed with sufficient specificity to facilitate meaningful stakeholder comment before finalization. To do otherwise would violate the APA, 5 U.S.C. § 553. Accordingly, BOEM must first propose a threshold for public comment before it can issue a final regulation.

**1.6 The potentially perpetual recordkeeping requirement proposed § 550.205(j) imposes is unjustified.**

Although proposed section 550.205(j) requires lessees to “maintain” records of any data or information “establishing, substantiating, and verifying the basis for all information, data, and resources used to calculate their projected emissions,” it does not indicate how long these records must be maintained. 81 Fed. Reg. at 19759. BOEM may not impose a potentially interminable records retention requirement, and must propose a reasonable records retention period, such as five years or the life of the plan, whichever is less. *See Fox Television Stations, Inc.*, 132 S. Ct. at 2317-18; *Trinity Broad. of Fla., Inc. v. FCC*, 211 F.3d 618, 628 (D.C. Cir. 2000).

**1.7 The proposed rule will impose new administrative burdens on BOEM that will impair its ability to timely process applications for plan approvals.**

Pursuant to 30 C.F.R. § 550.231, BOEM only has fifteen days to deem complete an EP, and it only has thirty days thereafter to approve, disapprove, or approve the plan with modifications. Even if an operator or lessee were to submit a plan in full compliance with the proposed rule, it would be impossible for BOEM to review the voluminous amount of information (including data, emissions information, modeling, etc.) required under the proposed rule within the required timeframes. This is more than a problem of administrative efficiency. Requiring applicants to submit a volume of information that cannot be reviewed within the regulatory timeframe constitutes an impermissible violation by BOEM of its own regulations. Such a result is also contrary to Congress’ intent to ensure that compliance with section 5(a)(8) does not interfere with the timeframes established for plan review and approval. As stated in the legislative history:

*The conferees do not intend that the application of section 5(a)(8) regulations will interfere with the time periods provided in the conference report for review and approval of exploration plans, and development and production plans. The conferees expect that these regulations will be implemented consistently with the timetables established by these amendments.*

78 U.S.C.C.A.N. at 1685. Consequently, BOEM should only promulgate those regulations that are absolutely necessary to address the purported problem of onshore air quality and avoid

imposing excessive, expensive, and time-consuming administrative burdens on lessees and the agencies that do nothing to further Congressional goals.

### **1.8 BOEM’s cursory regulatory impact analyses and its non-compliance with executive orders underscore the arbitrary nature of the proposed rule.**

Under the APA, a rule’s validity depends on the quality of analysis supporting the rule and whether the agency’s conclusion is rationally related to the facts in the record. *See, e.g., R.J. Reynolds Tobacco Co. v. FDA*, 696 F.3d 1205, 1220 (D.C. Cir. 2012), *overruled on other grounds by Am. Meat Inst. v. USDA*, 760 F.3d 18 (D.C. Cir. 2014) (examining FDA’s Regulatory Impact Analysis and noting that FDA lacked the evidence to support its decision); *see also Motor Vehicle Mfrs. Ass’n of U.S., Inc. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 56 (1983) (explaining that the agency must articulate a “rational connection between facts and judgment required to pass muster under the arbitrary and capricious standard”). Here, BOEM has severely underestimated the regulatory impacts of its proposal. This, coupled with its noncompliance with various executive orders intended to ensure a reasoned decision-making process, undermines the validity of BOEM’s proposed rule.<sup>22</sup>

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<sup>22</sup> For example, BOEM concluded that the proposal is “not a significant energy action” under E.O. 13211 (May 18, 2001). It also simultaneously concluded that, although the regulation is necessary to protect onshore air quality, the rule would have “minimal” impact on public health, safety, welfare and the environment under E.O. 1356, presumably because “OCS operations have a minimal impact on the air quality onshore.” Oil, Gas, and Sulphur Operations in the Outer Continental Shelf 30 CFR Part 550 – Proposed Subparts A, B, C and J, Environmental Assessment (March 2016) at 17. All these conclusions are internally inconsistent and undermine BOEM’s rationale for the proposed rule.

## 2 General Comments

### 2.1 OCSLA's mandate for BOEM differs from the CAA's mandate for EPA.

We acknowledge BOEM's intent to update its Air Quality Regulatory Program (AQRP) to reflect the EPA's current ambient air quality standards. However, many of the proposed rule provisions mirror those in EPA's industrial air quality permitting programs. EPA's programs are not appropriate for OCS sources and BOEM has no mandate to apply the EPA air programs.

The air quality programs of Interior and EPA are authorized by the 1978 OCSLA and the 1990 CAA, respectively. These Acts differ considerably:

- OCSLA recognizes that the OCS is a "vital national resource" and should be made available for development "subject to environmental safeguards." Interior's mandate under OCSLA, per the preamble to the 1980 rulemaking, is to "regulate OCS activities only if the emissions from the activities have significant effects on onshore air quality."
- The CAA main objective is to regulate air quality and establish standards (NAAQS) to protect human health and safety.

Although Section 328(b) of the CAA requires Interior to "consult with the [EPA] to assure coordination of air pollution control regulation for OCS emissions and emissions in adjacent onshore areas," its authorization to require pollution controls for OCS emissions is still constrained to OCS activities that will significantly affect air quality of a state for purposes of compliance with the NAAQS. This does not allow BOEM to adopt the extensive programs for air pollution control mandated under the CAA, and certainly does not mandate that BOEM adopt broader, more restrictive, or more onerous provisions based on EPA's regulations. Congress acknowledged that BOEM is not required to, and could not, recreate and administer EPA's programs offshore, yet BOEM has randomly selected a number of concepts from EPA's programs and attempts to apply these concepts even more broadly in this more limited context. This has resulted in a proposed rule of cobbled-together concepts that are not only unnecessary to achieve BOEM's mandate, but are not workable for the regulated community or BOEM in the offshore context. Just a few examples of these concepts are:

*"Maximum projected emissions", which are akin to EPA's concept of Potential to Emit (PTE) (40 CFR 51.301). While EPA's program looks only at emissions from the stationary source, BOEM proposes a much broader scope that includes "attributed emissions" (emissions from mobile sources) and "consolidated emissions" (which amount to existing, background emissions).*

*"Attributed emissions" which echo EPA's concept of Secondary Emissions. Again, BOEM's approach is unnecessarily broader by including emissions from MSC and potentially aircraft. EPA, by definition, excludes mobile source emissions in 40 CFR 52.21(b)(18) from Secondary Emissions.*

In developing its existing air quality regulatory program, Interior acknowledged that its program should be guided by EPA's program because of EPA's air quality expertise, but should differ because offshore conditions are not the same as those encountered onshore. In the preamble to the 1980 rulemaking, Interior wrote "all OCS sources are external to the areas whose air

quality they may affect, a situation not commonly encountered in EPA's regulatory program. Thus, the Department [Interior] has used only those aspects of EPA's program that are adaptable to the offshore situation.”

In the proposed rule, it appears that BOEM has selected concepts developed by EPA over decades of rulemaking and litigation that were intended to address a distinct mandate to control air pollution from stationary, onshore sources.

There is no compelling reason for additional regulation of OCS emissions. Interior developed an air quality regulatory program that has ensured that emissions from OCS sources do not significantly affect compliance with NAAQS at onshore locations, as discussed below. BOEM needs to conduct a thorough review of how these concepts can or should be implemented for the OCS or whether their application is even necessary to achieve BOEM's mandate.

## **2.2 BOEM cannot require plans to address air quality assessment criteria other than NAAQS.**

A number of proposed rule sections require special consideration of Class I areas or Sensitive Class II areas, or consultation with Federally-recognized Indian tribes or FLMs. However, as discussed in Section 1.2.7, OCSLA authorizes BOEM to regulate OCS activities only for compliance with the NAAQS; BOEM cannot regulate “significant” air quality impacts in and of themselves. BOEM has not provided a sufficient nexus between “sensitive” areas protection and NAAQS compliance to justify these additional proposed requirements. Consequently, all proposed rule provisions related to Class I areas, Sensitive Class II areas, and consultation with FLMs or Federally-recognized Indian tribes should be removed to the extent they are not directly related to compliance with NAAQS in onshore areas.

As discussed in Section 2.1, OCSLA's requirement for the Secretary of the Interior to consult with the EPA Administrator in the development of its air quality regulations does not require BOEM to adopt the extensive programs for air pollution control that apply to onshore sources under the CAA. In particular, EPA's Prevention of Significant Deterioration (PSD) program introduces a wide range of regulatory criteria that are unnecessary for BOEM to satisfy its mandate to ensure compliance with NAAQS. Consequently, we request that BOEM eliminate all references in the proposed rule to PSD increments and AQRVs (see Appendix A for suggested rule language in redline-strikeout format to assist in revised regulatory text). The criteria we propose to assess “whether activities authorized under [OCSLA] significantly affect the onshore air quality of any state” are presented in Chapter 9.

## **2.3 BOEM has not demonstrated that offshore activities significantly affect onshore air quality and prevent attainment or maintenance of NAAQS.**

As discussed in Section 1.2.2, BOEM lacks the authority to regulate OCS emissions absent a finding that those emissions 1) “significantly” affect the air quality of a state; and (2) interfere with a state's ability to achieve or maintain compliance with the NAAQS. We have examined relevant SIPs, BOEM's own studies and NEPA analyses, and more than 90 modeling analyses in plan submittals and determined there has been no demonstration that OCS sources significantly affect the air quality of a state or a state's ability to comply with the NAAQS.

### 2.3.1 Review of State Implementation Plans.

SIPs are developed by states to provide a framework for attaining or maintaining their compliance with the NAAQS. Reviews of the existing SIPs for Alaska and states bordering the Gulf of Mexico (Texas, Louisiana, Mississippi, and Alabama) were conducted to determine whether and how they considered OCS emissions. The incorporation of OCS sources within the SIPs were identified as follows:

- The Houston-Galveston-Brazoria ozone SIP includes OCS sources in the attainment demonstrations but focuses the attainment strategy on local industrial sources and motor vehicle NO<sub>x</sub> reductions, not on OCS sources.
- The Baton Rouge ozone SIP includes OCS sources in the attainment demonstrations, but the OCS sources were not considered a significant contributor to NAAQS violations. The area is currently proposed for attainment designation.
- The Louisiana sulphur dioxide (SO<sub>2</sub>) SIP for St. Bernard parish does not include OCS sources or any other sources more than 20 km from the nonattainment area, and focuses solely on two local onshore industrial facilities to achieve attainment.

Individual state agencies for the affected states listed above were contacted to confirm the findings of the SIP reviews. According to the agencies, OCS-based contributions to onshore pollutant concentrations are small. In all cases, the SIPs indicate that the states responsible for achieving NAAQS compliance do not consider OCS sources to be significant contributors.

### 2.3.2 OCS NEPA analyses consistently conclude OCS sources do not have a significant effect on onshore air quality.

As discussed in Section 1.2.1, Congress added Section 328(b) to the CAA in 1990, directing the Secretary of the Interior to prepare a study assessing the impacts of OCS sources on ozone and NO<sub>2</sub> nonattainment areas and to consult with the EPA Administrator to determine if additional actions were necessary. The MMS published the Secretary of Interior's report in 1995, concluding that "the contribution of [OCS petroleum development] emission sources on onshore ozone concentrations is small."<sup>23</sup> Following the publication of this report, EPA and MMS did not pursue any further regulatory action to mitigate onshore air quality impacts from OCS sources. The 1995 study was the first of many conducted by Interior evaluating the effect of OCS emissions on onshore air quality.

NEPA documents prepared by MMS and its successor agency, BOEM, assessed whether air quality from OCS sources "significantly affect the air quality of any state." A review of these documents indicates that none of them demonstrated that OCS activities endanger onshore air quality. A list of the reviewed documents and their conclusions is provided below:

- BOEM's Final Programmatic EIS (PEIS) was published in 2012 and addressed the 2012-2017 OCS oil and gas leasing program in the Gulf of Mexico. The 2012-2017 PEIS assesses NO<sub>2</sub>, SO<sub>2</sub>, particulate matter less than or equal to 2.5 micrometers in diameter (PM<sub>2.5</sub>), particulate matter less than or equal to 10 micrometers in diameter PM<sub>10</sub>, carbon

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<sup>23</sup> Minerals Management Service, Gulf of Mexico Air Quality Study, Final Report, Volume I, 1995, at <http://www.gomr.boemre.gov/PI/PDFImages/ESPIS/3/3424.pdf>

monoxide (CO), and ozone impacts and concludes that emissions due to the oil and gas leasing program would not result in any exceedance of the NAAQS for these pollutants.

→ The 2012-2017 PEIS included photochemical modeling studies indicating extremely small contributions from existing offshore operations to ozone concentrations at onshore areas where the 75 ppb NAAQS is exceeded. The projected emissions from the 2012-2017 proposed activities were similar to the emissions used in the modelling studies, and the onshore emissions in the nonattainment areas were expected to decrease. As a result, BOEM determined the proposed leasing program would not significantly impact onshore ozone concentrations and that the cumulative impact to ozone nonattainment areas would likely be reduced. These same photochemical modelling results are repeated in BOEM's 2016 Draft Multisale EIS for the 2017-2022 leasing program in the Gulf of Mexico.

- BOEM's Multisale EIS for the 2012-2017 leasing program in the Western and Central Planning Areas of the Gulf of Mexico concluded that each lease sale would have minimal impact to onshore air quality. As required by NEPA, BOEM subsequently reassessed the conclusions of this EIS for each individual lease sale and reaffirmed its original conclusion each time.
- The 2014-2016 Western Planning Area Lease Sale EIS found that "emissions of pollutants into the atmosphere from the routine and accidental activities associated with a WPA [Western Planning Area] proposed action are projected to have minimal impacts to onshore air quality, and emissions of pollutants into the atmosphere from activities associated with the OCS Program are also not projected to have significant effects on onshore air quality."
- The 2015-2017 Central Planning Area Lease Sale EIS found that "emissions of pollutants into the atmosphere from activities associated with the OCS Program are not projected to have significant effects on onshore air quality because of the prevailing atmospheric conditions, emission rates and heights, and the resulting pollutant concentrations."
- BOEM's 2015 Final Second Supplemental EIS for Lease Sale 193 in the U.S. Chukchi Sea evaluated air quality impacts throughout the exploration, development, and production period, concluding that impacts would range from negligible to minor over 77 years. MMS's 2008 Draft EIS for lease sales in the U.S. Beaufort Sea also concluded that air quality impacts would be low.
- The Draft PEIS for BOEM's 2017-2022 leasing program concludes that the direct program will result in minor contributions to criteria pollutant concentrations, that the NAAQS will not be violated, and that the PSD increments will not be exceeded.
- In addition to the NEPA documents discussed above, we reviewed twenty-four EISs and Environmental Assessments published by BOEM (and formerly the MMS) between 2002 and 2015 addressing oil and gas lease sales in the Gulf of Mexico region. None of these documents conclude that oil and gas activities have the potential to endanger onshore air quality.

Outside of the impacts identified by the NEPA documents, BOEM goes further and reiterates over multiple documents that the existing regulations are sufficient. For example, BOEM's 2012-2017 Multisale EIS specifically states that existing regulations are sufficient to prevent adverse onshore air quality impacts (see section 4.1.1.1.2 of the EIS):

*Regulations, activity data reporting via the [Gulfwide Offshore Activity Data System] reporting requirement, and mitigation, such as monitoring the performance of the catalytic converter, would ensure [pollutant concentrations] stay within the NAAQS.*

The conclusion that existing regulations are sufficient to protect onshore air quality attainment is reiterated in BOEM's 2017-2022 Draft Programmatic EIS:

*BOEM and USEPA regulations require mitigations to prevent or reduce impacts in areas defined as nonattainment by USEPA. For operations that do not demonstrate the potential to impact attainment status, existing methods of regulating pollutants by the USEPA and BOEM are expected to maintain USEPA defined attainment statuses. These existing regulations will also prevent the deterioration of air quality in nearby Class I Areas and reduce impacts to Sensitive Class II Areas from oil and gas development.*

This long list of BOEM assertions that OCS sources do not significantly affect onshore air quality is offered yet again in the NEPA Environmental Assessment for BOEM's proposed air quality rule.<sup>24</sup> On page 17, addressing the No Action Alternative, BOEM states:

*There is the potential that OCS emissions affect ozone in the Greater Houston area. On the whole, however, OCS operations have a minimal impact on the air quality onshore.*

As indicated above, OCS emissions have modeled onshore impacts in the Houston-Galveston-Brazoria area that constitute a small fraction of the overall ambient ozone concentrations where the associated 8-hr NAAQS is exceeded. However, this does not mean that new regulations for OCS emissions are a necessary measure to prevent ozone exceedances in the Houston area. The Houston-Galveston-Brazoria SIP, most recently updated in 2010, does not identify offshore sources as a significant contributor to nonattainment and does not rely on reductions of offshore emissions to achieve compliance with the ozone NAAQS. In the SIP, Texas's Commission on Environmental Quality (TCEQ) includes MMS's 2005 Gulfwide Emission Inventory as part of its ozone baseline. The SIP also models future projected ozone based on mitigation measures that focus on local mobile emission sources; these modeled projections also use the 2005 Gulfwide Emission Inventory. Thus, the SIP demonstrates that Houston will attain compliance with the ozone NAAQS without new regulations of offshore sources.

#### **2.4 BOEM should not propose new air quality regulations before its scientific air quality studies are completed.**

There are several scientific studies being undertaken to improve the understanding of atmospheric dispersion and atmospheric chemistry in the Gulf of Mexico and the Arctic. These include ongoing, comprehensive regional air quality studies in the Gulf of Mexico and the Arctic, and a proposed atmospheric tracer study in the Gulf of Mexico. Additionally, as discussed in Section 8.1, there are some needed upgrades to the Offshore and Coastal Dispersion (OCD) model to facilitate its use in meeting additional requirements proposed in the rule.

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<sup>24</sup> 81 Federal Register 19718; <https://www.gpo.gov/fdsys/pkg/FR-2016-04-05/pdf/2016-06310.pdf>

Considering the above, BOEM should postpone promulgation of a new air quality regulation until it completes its studies and determines whether OCS emissions significantly affect onshore air quality to the extent that compliance with NAAQS is jeopardized. After the studies are completed, BOEM can update its OCS meteorological and dispersion modeling tools, and establish new emissions exemption thresholds if warranted.

#### **2.4.1 Gulf of Mexico and Arctic Air Quality Studies**

BOEM is currently conducting comprehensive multi-year scientific studies assessing the onshore air quality implications of Arctic and Gulf of Mexico OCS emissions. Both studies will evaluate the effect OCS emissions sources have on onshore air quality and will assess existing (and possibly develop new) EETs. The Arctic and Gulf of Mexico studies are scheduled to be completed in December 2017 and August 2017, respectively. Therefore, any rule revisions should be postponed until BOEM completes these studies, updates the OCS meteorological and dispersion modeling tools, establishes the emissions exemption thresholds, and (most importantly) determines whether OCS emissions significantly affect onshore air quality to the extent that compliance with NAAQS is jeopardized.

The purpose of the study focusing on air quality in the Gulf of Mexico and coastal areas<sup>25</sup> is two-fold: to support the EIS for the 2017-2022 Lease Block Sales program and to assess existing (and possibly develop new) EETs. In support of the EIS, photochemical grid modeling will be performed using a GOADS emissions database and the National Emissions Inventory to assess cumulative onshore air quality impacts from offshore OCS emissions.

For the EET analysis, emissions from hypothetical OCS sources will be modeled with CALPUFF or AERMOD for sources greater than or less than 50km from the State seaward boundary, respectively. The existing EETs will be evaluated in light of the NAAQS and SILs that have been promulgated since the existing EETs were developed. If modeling demonstrates the existing EETs are not sufficiently protective, new EETs will be developed.

The Arctic study<sup>26</sup> also has similar objectives:

- Test the hypothesis that the cumulative impacts from OCS-related activities, exclusive of permitted sources, would not cause a statistically significant impact on Alaska.
- Test the hypothesis that secondary PM<sub>2.5</sub> and ozone are not significant for cumulative impact analyses.
- Evaluate modelling results to assess the cumulative impact of emissions on the OCS and on the North Slope.
- Apply the results to demonstrate compliance under the NEPA and the CAA for EISs and EAs prepared by BOEM and use the information to evaluate the existing emission exemption equations and, if needed, develop revised exemption equations.

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<sup>25</sup> Air Quality Modeling in the Gulf of Mexico Region (GM-14-01)

<sup>26</sup> Arctic Air Quality Impact Assessment Modeling (AK-13-01)



#### **2.4.2 BOEM's Gulf of Mexico tracer study will further support improved modeling tools.**

BOEM's Environmental Studies Program, Studies Development Plan for Fiscal Years 2016-2018 includes a \$1.9 million project to conduct tracer studies in the Gulf of Mexico to better understand the dispersion of air pollutants from offshore sources ("Tracer Experiments for Atmospheric Dispersion Model").<sup>27</sup> BOEM's description of the tracer study indicates:

*... AERMOD model also will be used to replace the BOEM's OCD air quality model. Furthermore, AERMOD model (EPA) was developed for overland applications. For the Gulf of Mexico, the present data sets are poorly representative of how temperature, winds, and mixing height vary vertically over the atmospheric boundary layer and free troposphere. The existing regulatory air quality models have not been rigorously tested in the marine and coastal environments.*

*BOEM has ongoing studies, which include "Air Quality Modeling in the Gulf of Mexico Region", to investigate the BOEM's exemption levels and the cumulative impact analysis, and "Enhancing the Capability of a New Meteorological Model for Air Quality and Other BOEM Applications in the Gulf of Mexico". A meteorological field program to collect the meteorological and wave data over the water has also been proposed and described previously. The meteorological model is crucial in the success of the accurate prediction of air concentrations. The accurate wind field generated from a meteorological model is needed for the transport of air pollutants and the meteorological data is also needed in the derivation of the dispersion parameters needed for air quality modeling.*

*Objectives: This study is a major tracer field campaign to obtain independent air concentration dataset for air quality model verification, especially in the coastal areas. The collected data can be used to derive the dispersion parameters needed for dispersion modeling. The information obtained from the meteorological measurements is crucial in understanding the atmospheric process, characterizing the structure of the atmospheric boundary layer, and the derivation of the dispersion parameters needed for air quality modeling.*

We applaud BOEM's efforts and objectives, both in its ongoing and planned studies, to advance the scientific understanding of OCS atmospheric chemistry and dispersion mechanisms. BOEM has recognized that it needs additional data and improved modeling tools in order to more accurately assess air quality consequences of OCS activity. As such, any rulemaking should be deferred until BOEM completes its regional modeling analyses to determine if, or to what extent OCS sources affect compliance with NAAQS onshore, because the current state of the science indicates that the OCS sources do not impact the onshore areas' attainment status.

#### **2.5 BOEM's proposed rule contains many incomplete or undeveloped provisions, precluding meaningful assessment of rule impacts.**

In many instances, the provisions of the proposed rule appear to be incomplete or premature. BOEM has specifically solicited comments on approximately forty issues in the proposed rule

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<sup>27</sup> <http://www.boem.gov/FY-2016-2018-SDP/>, pp.241-242

that have not been fully developed or defined. Appendix C provides responses to each of BOEM's requests for comment.

Many of the issues that are undeveloped are critical components of the air quality regulatory program, and may have significant impact to the regulated community. Without fully developed answers to these issues, the regulated community does not have a clear understanding of the scope of the proposed regulation and cannot provide meaningful stakeholder comment.

The following are a selection of noteworthy examples:

- In the preamble, BOEM proposes to require measurement of actual emissions on facilities with emissions above "a specific threshold," and requests comment on what that threshold should be in the final rule. (81 Fed. Reg. 19746).
- Proposed § 550.311(b)(2) states "BOEM will consider various alternatives for reporting of relevant emissions sources. One option would be to monitor only the following key pieces of equipment." This provision does not specify what sources are required to have emissions monitoring systems; it simply indicates that BOEM is considering alternatives. Because BOEM has not indicated a specific compliance option, it is impossible to assess the need for and impact of this proposed requirement.
- In § 550.303(c)(3), BOEM proposes to implement new proposed EETs in the Federal Register without a separate rulemaking. BOEM has included a range of EETs within which BOEM may establish updated EETs for each pollutant. However, in the preamble, BOEM states that 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. (81 Fed. Reg. 19741).
- In the preamble, BOEM seeks comments on how to attribute emissions from mobile sources to the appropriate facility. (81 Fed. Reg. 19737).
- In the preamble, BOEM solicits comments on the proposed new Air Quality Emissions Reporting (AQR) forms, in terms of their usefulness, readability, complexity and completeness. (81 Fed. Reg. 19759). However, the provided forms, available in the proposed rule docket on [www.regulations.gov](http://www.regulations.gov), are incomplete and do not align with the proposed rule requirements.
- In the preamble, BOEM states that the classification of short-term facility may potentially change based on public comment. (81 Fed. Reg. 19769).

Actions such as establishing emission exemption thresholds, defining the scope of emissions to be evaluated under the air quality regulatory program, and setting requirements for emissions measurement and monitoring systems are critically-important quasi-legislative exercises to support rulemaking. BOEM must publish a revised proposed rule that addresses these critical components with sufficient specificity to facilitate meaningful stakeholder comment. To do otherwise would potentially violate the APA.

## **2.6 BOEM's stated intent in the preamble does not align with many of the proposed rule provisions.**

There are many instances in which BOEM's proposed intent, as described in the preamble, differs from the language of the proposed rule. Some of the discrepancies are for critical compliance requirements. For example:

- In the preamble, BOEM states that an ERM analysis for a short-term facility should address only non-best available control technology (BACT) ERM, unless BOEM requires BACT control measures to address any affected nonattainment area or BOEM determines projected emissions may cause a NAAQS to be exceeded. (81 Fed. Reg. 19778). However, the short-term facility ERM analysis requirement presented in § 550.306 does not indicate that such an ERM analysis is limited to only non-BACT control measures.
- When the control of emissions from a long-term facility is required, BOEM states in the preamble that a lessee or operator with emissions that affect any nonattainment area must perform modelling using revised projected emissions after the application of applicable ERM, including BACT, and compare the results of this modelling to relevant SILs, with no additional modelling required once the modelling results are below all relevant SILs. (81 Fed. Reg. 19780). Section 550.307(b)(2) requires the same facility to perform that same SIL analysis modelling, but then the facility must also perform NAAQS analysis modelling and further ERM evaluation, as required.
- BOEM 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 § 550.311. (81 Fed. Reg. 19781). However, § 550.309(d)(1) requires a lessee or operator to ensure that the emissions associated with each emissions source for which ERM (not just BACT), is required, to comply with the emissions verification requirements of § 550.311. Furthermore, § 550.311(b)(1) requires that the “measurement of actual emissions ...are consistent with the projected emissions approved for your plan.” And that the operator must “consider “every source” not just the emissions source for which BACT is required.
- In the preamble, BOEM states that the “rule proposes to codify the existing mechanism BOEM uses in the Gulf of Mexico OCS Region to report ongoing emissions information (i.e., the GOADS, as described in [NTL, BOEM NTL No. 2014–G01] and apply it to all OCS regions under BOEM air quality jurisdiction.” (81 Fed. Reg. 19722). However, proposed § 550.187 expands the requirements significantly, including requiring operators to submit “facility and equipment usage, including hours of operation at each percent of capacity for each emissions source” and “monthly and annual fuel consumption showing the quantity, type, and sulphur content of fuel used for each emissions source.”
- In the preamble, BOEM states that under “the proposed rule, any reduction in emissions that is accomplished within the same EPA AQCR would be an acceptable emissions credit.” (81 Fed. Reg. 19741). However, § 550.309 requires that the emissions credits must “affect the air quality of the same AQCR.”

## **2.7 Extension of comment period and final rule deadline.**

While we appreciate the additional 14-day extension to the comment period, a minimum of 180 days was required to fully analyze the potential impacts of the proposed changes and provide constructive comments on this broad, high impact, and complex rulemaking. Because there was not an Advance Notice of Proposed Rulemaking (ANPRM), the regulated community did not have an opportunity to supply information on technical and operational issues that may impact the feasibility of BOEM’s proposed significant changes. Furthermore, as discussed above,

BOEM solicited comments on approximately forty specific issues that require careful consideration and analysis.

A minimum of 180 days was needed to ensure rigorous stakeholder engagement such as conducting thorough technical and cost analyses, as well as providing the information requested in the proposed rule. However, we have developed as complete a set of comments as time constraints allowed.

## **2.8 BOEM must provide adequate time to comply with the final rule.**

The changes proposed in this rulemaking are significant and will require time for operators and BOEM staff to understand and implement. Therefore, it is critical that a phase-in period be incorporated into the implementation of any final rule. This additional time is justified because the new requirements were not published as an ANPRM which would have allowed more time for public comment and industry preparation, and allowed for more time for the development of compliance programs.

If promulgated as written, the final rule would significantly increase recordkeeping and reporting requirements, and would require installation of meters, monitoring systems, and control technologies. In addition, as discussed in Section 2.5, because many of the rule provisions are undeveloped, it is impossible to determine what the compliance requirements and implications would be at this time.

BOEM must establish a compliance timeline following the effective date of the regulation for designated operators and BOEM staff to develop compliance programs to meet the requirements of the final rule. The compliance timeline must account for the number of affected facilities and the associated engineering, implementation and training needed to comply with the new rules.

### 3 Mobile Support Craft

Under BOEM's proposed revisions, plans would require the inclusion of extensive information about support vessels (MSC) and vessel emissions would be included in the exemption determination and in modeling analyses. It is not clear if emission sources on support vessels would be subject to ERM.

Section 1.2.4 of our comments explains that BOEM cannot consider MSC emissions when determining whether "activities authorized under [OCSLA] significantly affect the air quality of [a] [s]tate" because MSC are not "activities authorized under [OCSLA]."

We concur with Interior's position in the preamble to the 1980 rulemaking that support vessels are not part of a facility if they are not physically attached to a drillship or to an installation that is attached to the seabed and used to transfer production:

*vessels used to transfer production away from a facility on the OCS shall be considered part of the facility for the entire period of time that the vessel is moored or otherwise physically attached to the facility. Thus, for purposes of calculating the total emissions, all emissions from such a vessel must be treated as emissions from a source on the facility during that period in which the vessel is physically attached to the facility. Sources on support vessels other than vessels used to transfer production from a facility will not be considered part of the facility." [45 Fed. Reg. No. 47 15135]*

In other words, the production transfer vessel ceases to be a "vessel," and is subsumed in a BOEM-authorized "facility" while attached to it and engaged in "producing" OCS resources. See 43 U.S.C. § 1333(a). For similar reasons, a MODU drilling into the seabed ceases to be a "vessel" on the high seas, beyond BOEM jurisdiction, and becomes a BOEM-authorized "facility" when it attaches to the seabed and is "exploring for" OCS resources. *Id.* MSC, on the other hand, which are simply vessels on the high seas (or aircraft in the air), are not attached to the seabed for the purposes of exploring for, developing, or producing OCS, and therefore do not require BOEM "authorization." This precludes them from being subject to any regulatory requirement BOEM establishes under section 5(a)(8) of OCSLA. There are also a number of practical considerations that preclude effective regulation of MSC, as outlined in Section 3.2 below.

For the reasons outlined in this section, we request that BOEM eliminate all rule provisions that require MSC emissions to be accounted for or attributed to a facility. MSC emissions, whether those directly related to a plan or those attributed to a proximate facility, should not be included in comparisons with the EET and should not be included in the modeling analyses.

#### 3.1 It has not been demonstrated that MSC emissions significantly affect onshore air quality.

As discussed in detail in Section 2.4.1, BOEM is currently conducting a multi-year evaluation of Gulf of Mexico offshore emissions and onshore consequences. BOEM's study will support an EIS for an upcoming lease block sales program but is also expected to provide the technical basis for changes to the EETs. The study will consider more than 2,000 offshore installations and related MSC.

This is not the first such study, but it is one of the most comprehensive. To the best of our knowledge, neither BOEM nor any state agency has determined that MSC are a significant contributor to onshore air pollutant concentrations, and thus their own findings do not support the regulation of support vessels. In fact, as shown in Sections 1.1 and 2.3, BOEM has repeatedly asserted in its own documents that OCS sources have a minimal effect on onshore air quality and the MSC emissions are a small fraction of the total OCS sources, showing them to be an insignificant contributor. Given OCSLA's directive that BOEM only regulate offshore facilities to the extent that they affect compliance with the NAAQS onshore, it is unreasonable to propose regulations on MSC.

### **3.2 It is not practical to quantify emissions from MSC.**

Proposed § 550.205 identifies information that must be submitted with EPs, DPPs, DOCDs, or applications for a RUE, pipeline ROW, or lease term pipeline. The section requires plans to include "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....*

*(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 paragraph (a)(1) of this section, 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 MSC, including marine propulsion and marine auxiliary engines, in addition to the information specified under paragraph (a)(1) and (2) of this section, 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.*

This is an extraordinary information demand, and virtually impossible to fulfill at the time a plan is being developed. If BOEM proceeds with this language, it will be overwhelmed with engine data on every MSC in a lessee's fleet of contracted vessels – data of minimal practical utility. Furthermore, plans will have to be constantly updated to account for changes in the lessee's fleet (which occur frequently).

More importantly, BOEM's proposed regulation is asking for information that is not likely to be known at the time of application. Operators of offshore leases typically contract with offshore support companies to provide supplies, oil spill response capabilities, ice management (in the Alaska OCS), and other services. At the time of submittal of an EP, DPP, or DOCD, the designated operator may not have selected a contractor to provide those services. Even if the contractor has been selected, neither the operator nor the contractor are likely to know which support vessel will be used to provide the service. And even if the contractor were selected and knew which vessel would likely initiate service to a facility, another vessel may be substituted. Consequently, it is simply not feasible to accurately quantify emissions from supply vessels at the time of application.

BOEM should continue its current practice by which the lessee describes the support vessels in plan documents, but exclude any information for MSC related to air emissions.

### **3.3 It is not practical to accurately apportion MSC emissions to a planned facility.**

Proposed § 550.205(d) of BOEM's proposed rule requires applicants to "attribute" a share of MSC emissions to the facility when determining exemption and when conducting dispersion modeling assessments.

*(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...*

This section goes on to prescribe procedures to calculate emissions from MSC from the time an MSC leaves port until the time it returns to port, and indicates applicants may attribute some of the emissions to other facilities.

As noted above, operators of offshore facilities typically retain offshore support companies to provide supplies, oil spill response capabilities, and other services. At the time of submittal of an EP, DPP, or DOCD, the designated operator may not know which company will be selected to provide those services. Even if the contractor has been selected, neither the operator nor the contractor are likely to know which support vessel will be used to provide the service. In

addition, neither the contractor nor the applicant will know at the time of application how many other OCS facilities will be serviced by the same support vessel. Even after operations have begun, the support vessel route is likely to change with the varying customer requirements and weather. Consequently, it is simply not feasible to accurately attribute emissions from supply vessels at the time of application.

Furthermore, collection of emissions information for mobile sources provides no indication of onshore impact unless the emissions are associated with a specific location. Just as the position of a platform must be known before one can model the onshore effect of its emissions, the location of a vessel determines its potential effect on onshore air quality. But the course a vessel will travel is impossible to predict during development of plans.

No method currently exists to accurately attribute emissions from mobile sources to the appropriate facility and we do not believe it is necessary to do so. Although BOEM requested comment on “methods that more accurately attribute emissions from mobile sources to the appropriate facility”, BOEM lacks authority to regulate vessels and we object to BOEM’s proposal to include emissions from MSC “regardless of proximity but only to the extent related to the applicant’s operations.”

### **3.4 Other programs regulate emissions from MSC.**

It is not clear if the proposed rule would require emission controls on MSC. However, as referenced in Sections 1.2.4 and 3.1, BOEM lacks the authority to regulate MSC. Further, there are already programs in place to regulate emissions from MSC.

The International Maritime Organization (IMO) is the United Nations agency concerned with maritime safety and security and the prevention of marine pollution from ships. The international air pollution standards are found in Annex VI to the International Convention on the Prevention of Pollution from Ships (MARPOL Annex VI). Under MARPOL Annex VI, all US and foreign vessels of any type (including MODUs, floating drilling rigs, and other platforms) operating within the North American Emission Control Area (ECA) must comply with the requirements of Annex VI, except as explicitly excluded, including the following:

- Emissions to air from ships in US waters are subject to the requirements of the North American and US Caribbean Sea ECAs.
- Sulphur oxides (SO<sub>x</sub>) and particulate matter emissions are limited through fuel oil sulfur limits that apply to all vessels.
- The nitrogen oxides (NO<sub>x</sub>) control requirements of Annex VI apply to marine diesel engines greater than 130 kW output power that are installed on a vessel constructed after January 1, 2000 or have undergone a major conversion on or after January 1, 2000.
- Under MARPOL Annex VI, any ship of 400 gross tons and above engaged in voyages to ports or offshore terminals under the jurisdiction of other Parties, and platforms and drilling rigs engaged in voyages to waters under the sovereignty or jurisdiction of other Parties must carry an International Air Pollution Prevention Certificate (IAPPC) and Engine International Air Pollution Prevention Certificates (EIAPPC) to demonstrate that



they have been approved by their Flag Administration to meet the international limits for air emissions from ships, including SO<sub>x</sub> and NO<sub>x</sub>.

- There are accepted mechanisms for Coastal State Administrations to check compliance with the IAPPC and EIAPPC(s), and BOEM should recognize these without imposing additional burdens on the regulated community.

In fact, BOEM's proposals for MSC could threaten to undermine or contradict regulations that other US agencies with jurisdiction for vessel emissions have already freely entered into. For example, the proposed regulations seem to conflate two distinct and separate issues: emissions of SO<sub>x</sub> and emissions of NO<sub>x</sub>.

SO<sub>x</sub> emissions are a product of fuel sulphur content and are not an engine certification matter. Emissions of NO<sub>x</sub>, however, are an engine certification matter, and marine engines are tested with a reference fuel. The emission factors for engines are approved in accordance with test cycles defined in the NO<sub>x</sub> Technical Code. The means of SO<sub>x</sub> compliance for ships subject to MARPOL VI is stated on the IAPPC and are approved in accordance with IMO guidelines such as MEPC Resolution 259(68). NO<sub>x</sub> emissions are the subject of the EIAPPC, which is then used to endorse the IAPPC.

Under BOEM's proposal, however, the fuel sulphur content used for engine testing would form part of the engine approval. This would represent a major deviation from the IMO NO<sub>x</sub> Technical Code requirements, and would create difficulties in terms of demonstrating compliance.

With the IMO programs in place, the gradual replacement of engines and ships will reduce emissions without additional regulation by BOEM. We note that MARPOL Annex VI regulation is analogous to how onshore mobile sources are regulated. For example, refinery permit applications do not need to include in a permit application emissions from trucks delivering supplies to a refinery or carrying refined fuel from a refinery. Likewise, a lumber mill permit does not limit emissions or require emissions controls on a railroad locomotive hauling product. In both cases, other regulatory programs address emissions from transportation sources (i.e., the Federal Railroad Administration, and EPA motor vehicle emissions programs).

In addition, EPA establishes standards for marine engines for US registered or flagged vessels (provided in 40 CFR parts 94 and 1042). Ships that are not US flagged vessels are not subject to EPA marine engine regulations but are subject to the MARPOL Annex VI regulations when operating in the ECA.

EPA has established emission limits for marine engines installed on US flagged vessels as part of its strategy to reduce marine vessel emissions in accordance with MARPOL Annex VI. The ECA and other requirements of MARPOL Annex VI are implemented in the US through regulations adopted under the Act to Prevent Pollution from Ships (APPS), provided in 40 CFR part 1043. Part 1043 requires that non-emergency engines greater than 130 kW installed or reconstructed on vessels after January 1, 2000 must be covered by a valid EIAPP certificate issued by EPA. Manufacturers of engines to be installed on U.S. vessels subject to this part must obtain an EIAPP certificate for an engine prior to it being installed in a vessel. Owners of US flagged vessels must keep records related to NO<sub>x</sub> standards and in-use fuel specifications

such as the Technical File, the Engine Book of Record Parameters, and bunker delivery notes as required under MARPOL Annex VI.

Finally, EPA establishes regulations governing sulfur contents in the highway diesel fuel, fuel used in nonroad equipment and locomotive, and marine (NRLM) diesel fuel (provided in 40 CFR part 80). For NRLM diesel fuel, the EPA regulations have substantially reduced the sulfur content of the fuel and, thus, the potential SO<sub>x</sub> emissions associated with its use. For example, since June 1, 2012, the maximum sulfur content for NRLM diesel fuel for most applications is 15 ppm, which was a substantial reduction from the 500 ppm standard that was introduced five years prior. These changes occurred without new emission reduction requirements from BOEM.

Therefore, BOEM's air quality rules should not include any requirements for vessels subject to IMO and EPA requirements.

### **3.5 Oil spill response vessels remain in port in the Gulf of Mexico.**

The definition of MSC in proposed § 550.105 includes oil spill response vessels (OSRVs). Pursuant to § 550.205, all MSC must be identified in the plan and emissions would be calculated as part of attributed emissions. However, in the Gulf of Mexico, OSRVs are stationed at ports along the Gulf Coast and used only when needed (e.g. when a spill occurs).

We request that all provisions related to attributing vessel emissions to a facility and requiring modeling analyses of vessels be removed from the rule. However, if BOEM proceeds with the requirements to regulate MSC, despite the lack of authority to do so, BOEM should clarify how emissions from an OSRV should be accounted for in a plan when it is unknown whether an OSRV will be required over the facility planning period.

## 4 Consolidation of Facilities

Section 550.303(d) of the proposed rule addresses 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 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 (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.*

Subject to these applicability criteria, the proposed revisions would require facility plans to include substantial information regarding “proximate” existing facilities. Not only must plans include detailed operational and emissions information about these existing facilities, emissions from the proximate facilities and attributed emissions from their MSC must be included for comparison with EETs. The combined effect of consolidating facilities and including MSC emissions for comparison with an expanded list of EETs will be that plans are far more likely to exceed EETs, thereby triggering extensive modeling and ERM evaluations. The cost implications of the proposed rule are discussed in Appendix B.

BOEM has yet to demonstrate that consolidating emissions from distant OCS facilities is needed to protect onshore ambient air quality. The only justification for this extraordinary expansion of the AGRP is that it would ensure projects are not segmented to avoid modeling and ERM requirements. However, the proposed rule has consequences that go far beyond its purported intent.

We believe there are significant legal questions and extremely challenging applicability and implementation issues associated with this proposal, and that the existing rules adequately

ensure projects are not artificially segmented. Furthermore, as discussed below, cumulative impacts are already assessed if new facilities add model-predicted concentrations to measured background values (which include the contributions from existing facilities). We request that BOEM eliminate all proposed provisions regarding aggregation of new facilities with previously permitted facilities.

#### **4.1 BOEM's existing regulations adequately address cumulative impacts.**

When emissions from proposed facilities exceed EETs, BOEM's proposed modeling procedure requires applicants to apply approved air quality models to calculate onshore concentrations attributable to the proposed facility. To demonstrate compliance with NAAQS, modeled concentrations are added to existing "background" concentrations to determine cumulative concentrations. This simple procedure accounts for emissions from existing OCS and onshore facilities as part of the background concentration, and provides the cumulative impact analysis BOEM seeks. This procedure is routinely applied in onshore permit applications. BOEM's proposal to consolidate OCS facilities unnecessarily complicates this procedure.

The preamble to the proposed rule states the concept of consolidating facilities is intended to "prevent a single entity from segmenting its operations into multiple plans to avoid exceeding EETs." Presumably, consolidating facilities is designed to ensure that the cumulative impacts of related projects are evaluated. However, BOEM already has procedures in place to examine unusual situations. In the preamble to the 1980 rulemaking, Interior recognized that "in certain infrequent instances, it is possible for emissions from OCS sources to interact in such a way as to increase notably onshore ambient air concentrations of pollutants." [45 Fed. Reg. No. 47 15135] As a result, the current AQRP includes provisions for cumulative impact assessment when there is information to suggest significant onshore impacts:

*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 lessee shall be given the opportunity to present information to the Regional Supervisor which demonstrates that the exempt facility is not significantly affecting the air quality of an onshore area of the State." [30 CFR § 550.303(j) and § 550.304(f)]*

When this was written, it was the position of Interior that "the incorporation of these provisions insures that cumulative impacts of OCS facilities on the air quality of onshore areas will be identified and effectively controlled." We believe that position remains true.

Given that cumulative effects of multiple facilities would rarely, if at all, significantly affect onshore air quality such that compliance or continued attainment of the NAAQS is threatened, the exemption screening and significance procedures should be conducted for a single facility; only when there is clear evidence or reasoning that demonstrates that multiple facilities, in combination, are significantly affecting onshore air, should additional analysis be conducted. To provide further clarity as to which facilities BOEM will consider in a cumulative analysis, we propose specific revisions to current § 550.303(j) (see our proposed § 550.303(i) in Appendix

A). Our revisions propose that BOEM include only facilities for which the lessee is the designated operator, that are within the 500 meter USCG safety zone of the otherwise exempt facility, and that share certain (specified) production equipment.

Our proposed revisions provide BOEM the ability to gather the information necessary to meet its mandate to determine whether OCS activities it approves will significantly impact the air quality of a coastal area such that emission control measures may be necessary for compliance with the NAAQS.

Furthermore, BOEM's EIS requirements of current 30 CFR § 550.227 require a cumulative analysis for identified resources, including air quality, to demonstrate compliance with NEPA. Together, the Regional Supervisor's narrowly tailored discretion to require cumulative analyses and BOEM's NEPA regulation provide sufficient authority for BOEM to protect onshore air quality from potential cumulative effects from OCS activities.

#### **4.2 BOEM's proposed criteria for consolidation of "proximate" facilities with "common" ownership are arbitrary and impractical.**

As discussed in Section 1.4, OCS leases frequently have numerous fractional interest owners with varying degrees of control (or no control at all) over operations. Accordingly, BOEM cannot assume "common" ownership equates with "common" control on the OCS. Nonetheless, the proposed rule requires that a plan include extensive information, including emissions and operational data that may be confidential, about existing facilities that are to be consolidated with a proposed facility.

Furthermore, in some areas of the Gulf of Mexico a "daisy chain" effect may potentially require a significant number of facilities across multiple lease blocks to be consolidated into a single complex. The likelihood of this happening will depend on the specificity of the ownership and distance criteria, which have yet to be resolved. Other criteria could also contribute to a daisy chain effect:

- The definition of proximate activities in proposed § 550.303 introduces the concept of a common reservoir. Using a "common reservoir" criterion for consolidating facility emissions subjects designated operators to dynamic and changing criteria. Furthermore, there is no demonstrated nexus between geophysical conditions below the surface of the seafloor and onshore air quality impacts that justifies consolidation based on a common reservoir. Additionally, this classification discloses confidential information to the general public (based on common reservoir boundaries). The public version of plans exempts submittal of reservoir and geological data.
- The definition of "facility" in proposed § 550.302 introduces the concept that a facility includes all BOEM-regulated pipelines and activities connected to such pipeline. This implies all facilities connected to a common BOEM-regulated pipeline could be considered a single facility for air quality regulatory purposes. It is not clear how consolidation of multiple facilities across multiple lease blocks would be incorporated into a single plan, especially where there are multiple operators.

To illustrate the potential complexities of BOEM's consolidation proposal, we present two figures illustrating facility locations in the Gulf of Mexico as presented in the 2011 Gulf Emission

Inventory.<sup>28</sup> In Figure 1, the single facility at the center of the circle with a one mile radius could potentially be consolidated with 69 other facilities. Figure 2 demonstrates the potential daisy chain effect by including circles of one mile radius for each of these 69 facilities. Together, these figures demonstrate that, aside from the fact that consolidation of facilities is unnecessary, consolidating facilities within a one mile radius of each other could be impractical and unworkable from a data-gathering and plan approval perspective.

#### **4.3 The implications of consolidation of existing facilities are not identified.**

Under the proposed rule, a proposed facility would potentially be required to identify emissions from multiple facilities (and their associated MSC) and to address the aggregated emissions in an EP, DPP, or DOCD. However, implications of consolidations for the existing facilities is not clear. Per proposed § 550.303(d)(4), if a designated operator is required to consolidate multiple facilities, then anywhere a requirement applies to “projected emissions” it would instead apply to “complex total emissions.”

If emissions from the proposed facility do not cause onshore concentrations that exceed a SIL but emissions from the consolidated facility do, it is not clear whether the new facility, the existing facility, or both would implement ERMs. The proposed text in § 550.306(5) refers to selecting reasonable operational controls to “limit your facility’s projected emissions to the greatest practicable extent.” Section 550.307(a), states that “you must apply ERM for the facility.” This would suggest that ERM is only required for the facility described in the plan.

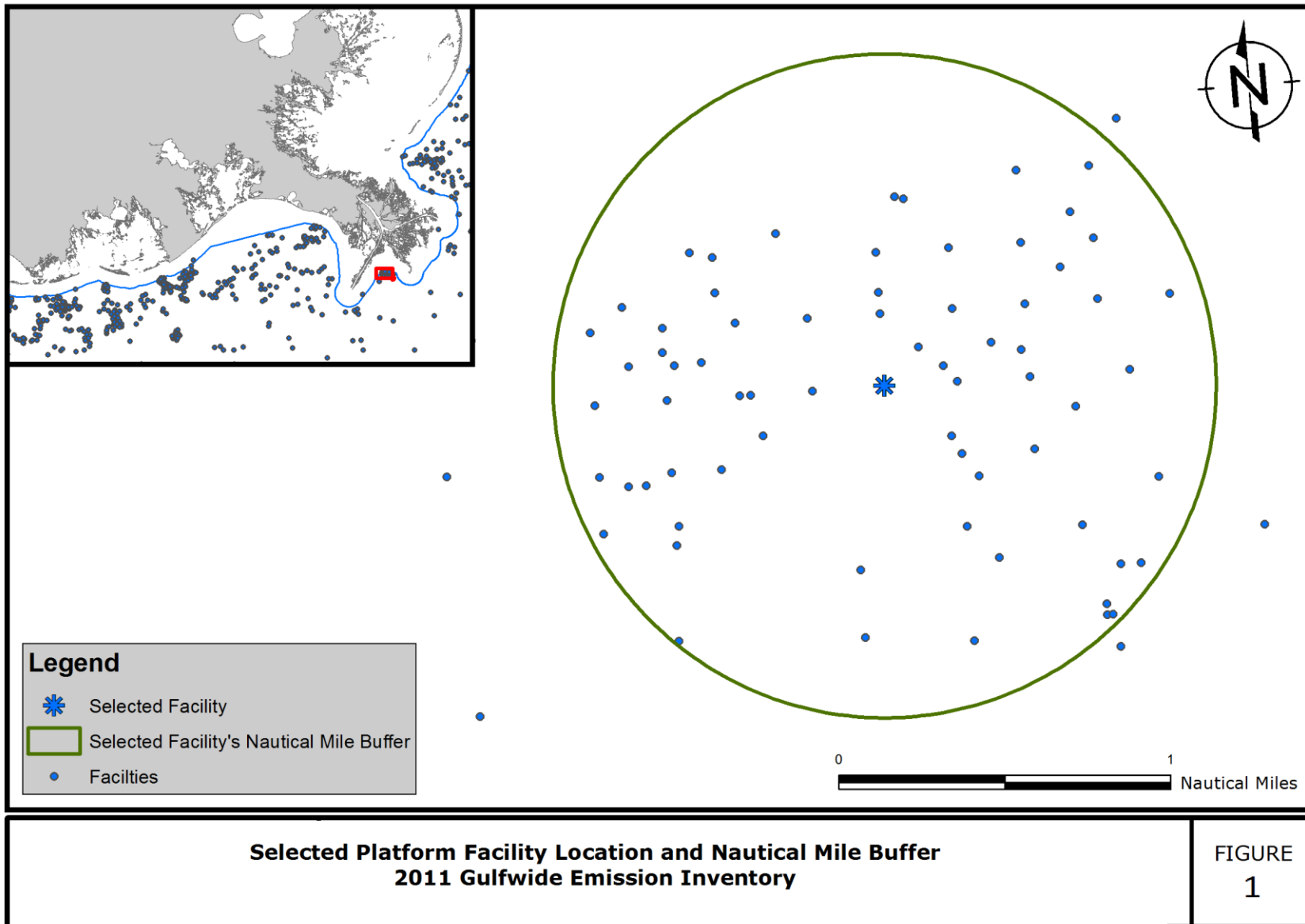
However, proposed § 550.306(b)(2) requires a description of “your revised projected emissions (or complex total emissions, where applicable), taking into account your selected operational controls or replacement(s) of equipment” and §§ 550.307(b)(1)(iv) and (b)(2) refer to reducing “your projected emissions” to meet the AAIs and “demonstrating “that all projected emissions have been fully reduced so that no SIL is exceeded.” Consequently, it appears these sections will require designated operators to assess and implement ERM on existing facilities that are already operating according to approved plans.

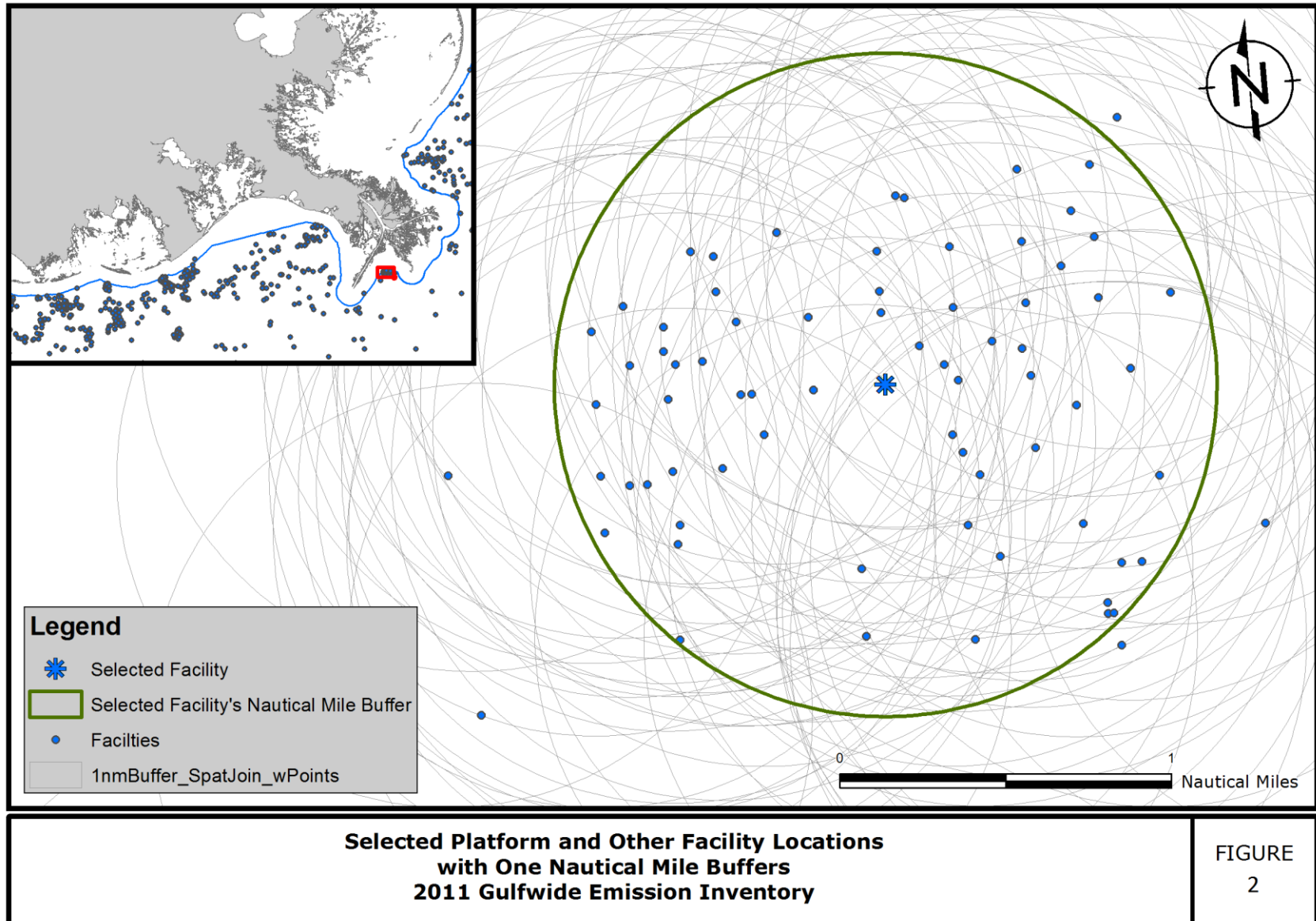
Similarly, if a complex of facilities is operating under an approved DOCD or DPP and near field exploration is proposed, it is not clear if the introduction of a MODU into the complex area would trigger a revision to the DOCD or DPPs or the requirements for the existing facilities to demonstrate compliance with current NAAQS.

In summary, we request that BOEM revise the proposed rule to eliminate all suggestion of consolidation of proximate facilities and focus plan approval on the proposed facility. However, we support retaining the narrowly tailored discretion of the Regional Supervisor to require a cumulative analysis subject to the conditions specified in our proposed § 550.303(i) (see Appendix A).

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<sup>28</sup> Wilson, D., R. Billings, R. Chang, H. Perez, and J. Sellers. 2014. *Year 2011 Gulfwide emissions inventory study*. US Dept. of the Interior, Bureau of Ocean Energy Management, Gulf of Mexico OCS Region, New Orleans, LA. OCS Study BOEM 2014-666.







## 5 Facility Definition

The proposed rule modifies the current definition of “facility” in the regulations. In addition, BOEM proposes to add several definitions to the rule, including “complex total emissions,” “proximate activities,” “projected emissions,” and “attributed emissions.” Through these definitions, BOEM would not only treat activities that had previously been treated as separate as “one facility”, but also would require groups of separate facilities to be evaluated together (e.g., if they are located near one another), even though they are in fact separate facilities. If EETs are exceeded based on the emissions of any facility or the combined facilities, the impacts would need to be addressed for either an existing facility undergoing a plan resubmission or for a new plan to go forward.

The proposed addition of these new concepts and the changes to the definition of “facility” should not be adopted because they: (1) exceed BOEM’s authority under OCSLA, and (2) inappropriately broaden the common-sense notion of the types of activities that are subject to BOEM’s air quality regulatory jurisdictions by inappropriately combining distinct facilities. In total, these proposals would create tremendous uncertainty regarding how these terms will be interpreted and applied over time.

Although the beginning of the proposed definition seems to establish a somewhat discrete boundary for the facility that a regulated entity would be able to apply in practice and would create replicable results from plan to plan, the additional inclusion of all installations, structures, vessels, vehicles, equipment, or devices “*while dependent on, or affecting the processes of*” the facility is vague and open to unguided and subjective interpretation. Furthermore, the final sentence also expands the scope of the term “facility” well beyond an easily understood, discrete boundary.

BOEM should limit the scope of the term “facility” to clearly defined boundaries within the scope of BOEM’s authority. Otherwise, companies could be required to account for emissions that are difficult to identify and model and “address” those emissions for continued operation or before a project could go forward. This level of uncertainty is unworkable in the context of drilling operations and could subject operators to ad hoc and potentially inconsistent determinations by BOEM, which could evolve over time.

Accordingly, BOEM should not include these additional emissions in “complex total emissions” and should delete reference to “facilities” (plural) throughout these definitions. Only the “facility” (as defined below) emissions should be included in the analysis.

Joint trades’ proposed definition of “Facility” – Section 550.302:

*Facility means, any installation, structure, ~~vessel, vehicle,~~ equipment, or device that is temporarily or permanently attached to the seabed of the OCS for the purpose of exploring for, developing, or producing oil or gas or sulphur therefrom, and which emits a regulated criteria or precursor pollutant, 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~~ the facility are a part of a facility only 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, while temporarily or permanently attached to the seabed and exploring for, developing, or producing oil and gas or sulphur resources. 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, while temporarily or permanently attached to the seabed. 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.

## 6 Emission Exemption Thresholds

After BOEM studies in the Gulf of Mexico and Alaska are completed, BOEM proposes to revise the EETs. The proposed rule establishes a range with the “maximum” potential EETs stated in § 550.303(c)(3)(ii) and the minimum potential EETs in Table 1 of § 550.303. The maximum EETs are the same as the existing EETs except the distance used is from the state seaward boundary not the shoreline.

### 6.1 BOEM’s proposed regulation is premature because it attempts to define a range for exemption criteria before the necessary scientific bases have been established.

As discussed below, in this chapter, BOEM should not constrain future EET values by including a range in the rule. BOEM should not finalize emissions exemption threshold ranges prior to completing its scientific studies.

As discussed in greater detail in Section 2.4.1, there are several scientific studies being undertaken to improve the understanding of atmospheric dispersion in the Gulf of Mexico and to determine the effect of OCS emissions on onshore air quality in Alaska and the Gulf of Mexico. Although BOEM acknowledges that studies are underway that will inform the selection of EETs, BOEM’s rulemaking identifies a range of possible EETs that will constrain the ultimate decision.

In its Initial Regulatory Impact Analysis (IRIA), BOEM states on page 64 that waiting until the scientific studies are completed

*would make it more difficult to ensure that BOEM meets its statutory duties. The amendments are necessary to ensure BOEM establishes up-to-date requirements and air quality standards are consistent with those identified by USEPA under the CAA, preparation of projected emissions, air dispersion and photochemical modeling, and control of emission sources. In addition, the purpose of the amendments is to ensure the consistent, efficient, and informed management of the OCSLA provision to ensure air emissions from BOEM-authorized activities on the OCS do not result in material impacts to state air pollution by the GOMR and Alaska OCS oil and gas operations.*

As discussed in sections 1.1 and 2.3, BOEM has repeatedly asserted in its own documents, including the Environmental Assessment for this proposed rule, that OCS sources have a minimal effect on onshore air quality. Consequently, there is no urgency in adopting new EETs and modeling requirements for OCS sources to ensure protection of onshore air quality. BOEM can continue to require plans to address NAAQS not identified in its existing rule as it currently does for the 1-hour NO<sub>2</sub> standard. Furthermore, BOEM acknowledges on page 64 that

*It is BOEM’s current practice to update the SILs and AAls and add the additional air pollutants for which standards have been established by the USEPA even without changes in BOEM’s regulations.*

Because the science studies have not been completed and there is no demonstrated need for immediate updates to the rule, BOEM should eliminate the proposed range of EETs from the

proposed rule. After the studies are completed, BOEM must engage in full APA notice-and-comment rulemaking before changing any EETs.

BOEM solicited comments on the appropriateness of distinct emissions thresholds or threshold formulas for Alaska and Gulf of Mexico, and/or how these thresholds should be structured. Consistent with our overall position on revising EETs, BOEM should delay this decision until the scientific bases for EETs have been established. Until then, we have no basis for making a decision on this important issue. However, given the much lower existing background concentrations in the North Slope Borough, we anticipate that higher EETs will be appropriate in Alaska.

## **6.2 The high end of the proposed emissions exemption threshold range may be overly conservative.**

At § 550.303, the proposed rule identifies the current EETs as the maximum exemption thresholds that might be adopted. However, it is not a foregone conclusion that the EETs recommended in future studies would be lower than the existing EETs. As recently as 2014, Dr. Chester Huang from BOEM published an article in the *Journal of the Air and Waste Management Association* comparing the BOEM EET formula for annual TSP, SO<sub>2</sub>, and NO<sub>x</sub> with four other options.<sup>29</sup> He concluded “it has been shown that the total amount of emissions from the facility for each air pollutant calculated using BOEM’s exemption formula is conservative.”

Based on this paper and industry permitting experience, future conservative EETs might be higher and there is no scientific reason to limit them using the existing formulae. As did Dr. Huang, we typically find that the simple screening procedures such as the one used to establish the existing exemption thresholds are far more conservative than more refined modeling analyses. Such conservatism significantly increases cost to the regulated community with little benefit to onshore air quality. For that reason, we do not support BOEM’s proposal to use the existing formulae, adjusted for compliance at the state seaward boundary, as the upper limit to potential exemption thresholds.

We support BOEM’s proposal to establish new EETs based on the EET studies now underway and we oppose the continued use of the simple Gaussian equation to determine EETs.

## **6.3 Emissions exemption thresholds must account for distance to the onshore area of a State.**

BOEM requested comments on a mass-based emissions exemption threshold similar to EPA’s PSD program (81 Fed. Reg. 19741). A mass exemption threshold is inconsistent with the authority granted by OCSLA because mass emissions alone do not determine whether a source will have a significant effect onshore that affects compliance with the NAAQS. Other factors, primarily distance and wind direction but including atmospheric chemistry and emissions release

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<sup>29</sup> C.H. Huang (2015), Derivation of exemption formulas for air quality regulatory applications, *Journal of the Air and Waste Management Association*, 65:3, 358-364, DOI: 10.1080/10962247.2014.993003.

characteristics, determine the onshore consequence. If a mass-based exemption level were set, it could result in costly emission control requirements with minimal environmental benefit.

Because OCSLA authorizes BOEM to regulate emissions only to the extent the emissions have a significant effect on onshore air quality and threaten compliance with NAAQS, BOEM cannot ignore distance when establishing exemption thresholds.

#### **6.4 Separate emissions exemption thresholds are needed for criteria pollutants that are also PM<sub>2.5</sub> and ozone precursors.**

##### **6.4.1 BOEM should refine its definition of precursor air pollutant.**

BOEM addresses both direct emissions of criteria pollutants and precursor air pollutants. BOEM defines a precursor air pollutant as:

*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<sub>x</sub>, SO<sub>x</sub>, and NH<sub>3</sub>. (§ 550.302(b))*

This definition is too broad. Unless the scientific studies currently underway indicate otherwise, we recommend that BOEM adopt a more specific definition of precursor that outlines the circumstances under which precursors must be considered for modeling and assessment of NAAQS compliance. Provisions similar to that contained in EPA's New Source Review regulations would be appropriate, such as from 40 CFR 51.165(a)(1)(xxxvii):

*Regulated NSR pollutant, for purposes of this section, means the following:*

*(A) Nitrogen oxides or any volatile organic compounds;*

*(B) Any pollutant for which a national ambient air quality standard has been promulgated;*

*(C) Any pollutant that is identified under this paragraph (a)(1)(xxxvii)(C) as a constituent or precursor of a general pollutant listed under paragraph (a)(1)(xxxvii)(A) or (B) of this section, provided that such constituent or precursor pollutant may only be regulated under NSR as part of regulation of the general pollutant. Precursors identified by the Administrator for purposes of NSR are the following:*

*(1) Volatile organic compounds and nitrogen oxides are precursors to ozone in all ozone nonattainment areas.*

*(2) Sulfur dioxide is a precursor to PM<sub>2.5</sub> in all PM<sub>2.5</sub> nonattainment areas.*

*(3) Nitrogen oxides are presumed to be precursors to PM<sub>2.5</sub> in all PM<sub>2.5</sub> nonattainment areas, unless the State demonstrates to the Administrator's satisfaction or EPA demonstrates that emissions of nitrogen oxides from sources in a specific area are not a significant contributor to that area's ambient PM<sub>2.5</sub> concentrations.*

*(4) Volatile organic compounds and ammonia are presumed not to be precursors to PM<sub>2.5</sub> in any PM<sub>2.5</sub> nonattainment area, unless the State demonstrates to the Administrator's satisfaction or EPA demonstrates that emissions of volatile organic*

*compounds or ammonia from sources in a specific area are a significant contributor to that area's ambient PM<sub>2.5</sub> concentrations; or*

The EPA definition clarifies that VOCs and ammonia are not PM<sub>2.5</sub> precursors unless it is demonstrated that emissions of these compounds significantly contribute to PM<sub>2.5</sub> concentrations. The EPA definition of precursor also excludes methane and CO, whereas BOEM proposes to include CO as a precursor pollutant and has solicited comment on how it should address the effects of methane emissions on secondary ozone formation and when it might be appropriate to do so (see Appendix C). BOEM should revise its proposed precursor definition to be consistent with the above citation. BOEM should also revise its proposed photochemical modeling requirements at § 550.304(e)(1) to consider only SO<sub>x</sub> and NO<sub>x</sub> for modeling PM<sub>2.5</sub> and only NO<sub>x</sub> and VOC when modeling ozone.

#### **6.4.2 BOEM should establish separate EETs for criteria pollutants that are also precursors.**

Although BOEM should delay establishing EETs until the science studies are completed, BOEM should then clarify in proposed § 550.303 and § 550.304 that criteria pollutants that are also precursors to PM<sub>2.5</sub> and ozone formation would have two or more sets of EETs: 1) one triggering an analysis for an associated NAAQS for the criteria pollutant and 2) one or more EETs triggering a photochemical modeling analysis for PM<sub>2.5</sub> and/or ozone. Some NO<sub>x</sub> and SO<sub>x</sub> sources may exceed the criteria pollutant EETS, but may not necessarily be required to perform an assessment of compliance with the ozone and/or PM<sub>2.5</sub> NAAQS.

#### **6.5 The low end of the EET range provides no environmental benefit.**

The EETs at the low end of the proposed range likely provide no environmental benefit and could result in significant negative economic impacts. This statement is supported by examining how many plans are likely to require modeling if the lower EETs are adopted and a review of modeling submitted with prior Gulf of Mexico plans.

Emissions associated with 1,132 facilities were obtained from the 2011 Gulfwide Emission Inventory Study (GEIS).<sup>30,31</sup> We compared actual emissions for each facility to the existing EETs and the proposed minimum EETs. Support vessels emissions were not attributed to the facilities. Only the annual EETs were assessed because the GEIS does not report 24-hour, 8-hour, 3-hour, or 1-hour emission rates. The pollutants considered were NO<sub>x</sub>, SO<sub>x</sub>, PM<sub>2.5</sub>, and PM<sub>10</sub>.

The assessment revealed that 32 facilities would be required to conduct air quality modeling under existing EETs. Under the proposed minimum EETs, and not accounting for facility consolidation, 427 additional facilities would exceed the EETs and have to conduct modeling. In

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<sup>30</sup> Wilson, D., R. Billings, R. Chang, H. Perez, and J. Sellers. 2014. Year 2011 Gulfwide emissions inventory study. US Dept. of the Interior, Bureau of Ocean Energy Management, Gulf of Mexico OCS Region, New Orleans, LA. OCS Study BOEM 2014-666.

<sup>31</sup> The GEIS complexes were not assessed because the definition of a complex for the emission inventory differs from that in the proposed rule. We also ignored "minor sources" (caissons, wellhead protectors, and living quarters).

other words, the fraction of facilities exceeding the EETs would increase from 3 percent to 41 percent. Furthermore, this analysis is based on actual emissions rather than projected emissions and did not consider the implications of consolidating facilities or vessel emissions as BOEM now proposes. Inclusion of these additional aspects could further increase the number of facilities required to conduct air quality modeling.

Next we examined modeling studies that have been conducted under the current regulations. We evaluated NO<sub>2</sub> because the NO<sub>2</sub> NAAQS is very stringent. Modeled facilities included jackup rigs, semisubmersible units, and drillships operating between 4 and 196 miles from shore. Of 38 facilities that conducted dispersion modeling of NO<sub>2</sub>, approximately 90 percent predicted onshore 1-hr NO<sub>2</sub> concentrations that exceed the 1-hr NO<sub>2</sub> SIL but none predicted exceedances of the 1-hour NO<sub>2</sub> NAAQS.

If the 38-facility dataset is representative of all Gulf of Mexico facilities, then under BOEM's proposed rule 90 percent of OCS facilities may require NO<sub>x</sub> ERM and would be required to conduct additional modeling depending on whether the facility is short-term or long-term. However, previous modeling indicates that none of the existing facility operations result in onshore ambient air design concentrations that exceed the NAAQS.

This finding is corroborated by the Gulf of Mexico lease sale Draft EIS BOEM recently circulated for public comment.<sup>32</sup> Section 4.1.2 of the Draft EIS states "The 1-hour NO<sub>x</sub> modeling performed by operators as part of the post-lease approval process indicates less than the maximum increase allowed."

Review of the proposed EETs and existing dispersion modeling indicate that the proposed rule would increase the number of OCS sources required to conduct modeling without providing any environmental benefit. Consequently, BOEM should not revise its EETs or set a minimum EET threshold until it completes its scientific studies.

## **6.6 The minimum emissions exemption thresholds in § 550.303 include errors.**

There is an error in Table 1 of the proposed rule and in the supporting technical document.<sup>33</sup> The technical document applies a simple Gaussian model to estimate EETs for a given downwind distance, SIL and averaging period. The model is used to predict an hourly concentration and the estimate is supposed to be adjusted for different averaging periods using the persistence factors from EPA's dispersion model AERSCREEN. Our review of the analysis indicates the averaging time scaling was not performed when adjusting the results for each pollutant.

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<sup>32</sup> Gulf of Mexico OCS Oil and Gas Lease Sales: 2017-2022 Draft Environmental Impact Statement Volume I & Volume II, U.S. Department of the Interior, Bureau of Ocean Energy Management, April 2016.

<sup>33</sup> "Methodology for Determining Emission Thresholds Based on EPA Significance Levels", Appendix to Air Quality Control, Reporting and Compliance, Proposed Rule (30CFR Part 550: Subparts A, B, C, & J), RIN 1010-AD82, BOEM March 17, 2016.

For example: the EET of 1-hr CO is given by  $1354d^{1.2693}$ . We have independently checked this result using the equations in the technical document. The leading coefficient for 8-hr CO after adjusting for the decrease in the SIL and the scaling factor for an 8-hour average should be  $1354*(500/2000)*(1.0/0.9)$  or 376.1, not 338.5 as reported in the supporting document and Table 1 of § 550.303. Similarly, the annual EETs in Table 1 are 10 times too low. For example, using 1-hour CO as the basis, the constant 1354 should be  $1354*(1.0/2000)*(1.0/0.1)$  or 6.77, not 0.677.



## **7 Emission Reduction Measures**

### **7.1 BOEM must fully define and develop the emission reduction measures program and ensure that it is appropriate for OCS operations.**

We support BOEM's proposal to change the circumstances of when ERM, including BACT and emissions credits, are required. However, the proposed rule does not provide adequate information regarding how BOEM would evaluate and implement its ERM program and what expectations would be placed on OCS facility operators. From the preamble, it is clear that the ERM program is still only in a conceptual state, as evidenced by the many solicitations for comment on numerous aspects of ERM (see Appendix C). The ERM program BOEM is considering must be proposed with sufficient specificity to facilitate meaningful stakeholder comment.

In the preamble to the proposed rule, BOEM states that it intends to publish its own ERM guidelines, and solicits comments on the EPA's approach and the underlying methodology for making the determination as to what forms of ERM may be most appropriate under various circumstances. BOEM also solicits comments on why or under what circumstances the EPA 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. (81 Fed. Reg. 19744).

As discussed in Section 2.1, given the difference in Congressional mandate, it is entirely appropriate that BOEM's policy regarding emissions controls for OCS facilities differs from EPA's policy. OCS sources are external to the areas whose air quality they may affect and generally are located at long distances from that area. Given the considerable distance between OCS facilities and the shoreline, the potential to "significantly affect the air quality of any state" is minimal and in such cases there is no justification for complicated and expensive emissions controls.

The following sections provide comments and recommendations on specific aspects of the ERM program.

#### **7.1.1 BOEM must clarify the proposed requirements for emission reduction measures.**

Proposed §§ 550.309(a)-(c) present requirements for ERM that address "sufficiency", "effectiveness", and "control efficiency." These requirements are unclear, overly complicated, and duplicative of the plan requirements in proposed § 550.205(f). Proposed § 550.205(f) requires operators to provide a description of all ERM, including the "projected quantity of reductions to be achieved" (sufficiency), the "monitoring or monitoring system you propose to use to measure or evaluate the associated emissions" (effectiveness), and the "emission control effectiveness."

Proposed § 550.309(b) requires continuous verification that ERM are effective, however, BOEM does not specify what will be expected of operators in order to demonstrate compliance. BOEM proposes in § 550.309(d) that the Regional Supervisor may require actual emissions data and/or any other information he or she deems necessary to verify compliance. Because this is

overly vague and without well-developed provisions, the regulated community does not have a clear understanding of the scope of the proposed regulation and cannot provide meaningful stakeholder comment.

Proposed § 550.309(c) requires the operator to substantiate any emissions control efficiency but again BOEM does not specify what will be expected of operators in order to demonstrate compliance with an estimated emission control efficiency.

The requirements related to “effectiveness” and “control efficiency” are suitable for emissions sources installed with BACT or operational controls, but are not relevant terms for emissions credits. BOEM should revise these requirements to only apply to emissions sources installed with BACT or operational controls.

Furthermore, proposed § 550.309(d)(1) requires that operators ensure that emissions associated with emissions sources subject to ERM comply with the emissions verification requirements in § 550.311. However, proposed § 550.311 does not identify specifically how emissions are to be monitored; instead, BOEM states that it is considering various alternatives. BOEM has also proposed inconsistent requirements, where the monitoring requirements in § 550.309(d) are applicable to emissions sources approved subject to ERM, whereas the proposed requirements in § 550.311 are applicable to plans that are approved subject to BACT and emissions credits. Again, without well-defined provisions, the regulated community does not have a clear understanding of the scope of the proposed regulation and cannot provide meaningful stakeholder comment. In Chapter 11, we provide recommendations for monitoring alternatives.

### **7.1.2 BOEM must provide clarity on how it will consider technical feasibility and cost effectiveness.**

In the preamble, BOEM indicates that 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.” (81 Fed. Reg. 19743).

This position contradicts the authority granted by OCSLA 43 U.S.C. § 1347(b), which requires that (emphasis added),

*In exercising their respective responsibilities for the artificial islands, installations, and other devices referred to in section 1333 (a)(1) of this title, the Secretary, and the Secretary of the Department in which the Coast Guard is operating, shall require, on all new drilling and production operations and, wherever practicable, on existing operations, the use of the best available and safest technologies which the Secretary determines to be economically feasible, wherever failure of equipment would have a significant effect on safety, health, or the environment, except where the Secretary determines that the incremental benefits are clearly insufficient to justify the incremental costs of utilizing such technologies.*

As required by OCSLA, BOEM's ERM approach must consider the safety of the technology, as well as both economic and technical feasibility, when requiring the use of emission reduction measures.

Typically, offshore facilities have been designed and constructed to maximize space utilization, and extra space is often times not readily available for changes to existing equipment components. Consequently, it is not always technically possible to install and operate emission controls on OCS facilities. For example, many emission controls are dependent on adequate gaseous fuel conditioning, but space and weight constraints limit the available options for add-on gaseous fuel conditioning systems. OCS facilities must stay within overall weight and weight distribution limits to ensure they meet stability and buoyancy requirements required for safety purposes. These overall weight and space constraints limit the use of add-on emissions controls.

If emissions controls are added to a facility, then the weight and positioning of the additional equipment affects the facility's weight bearing capacity for other purposes, which can result in costs to resolve and/or limit certain facility activities that are integral to the function of the facility. Additionally, such added weight may require structural modifications (e.g. additional load bearing structures), which may or may not be possible, based on the design of the facility. When considering technical feasibility, BOEM must take into account the variability in types of facilities. What may be technically feasible for a production platform may not be feasible for a drillship.

In addition, technical feasibility determinations should consider the type of activity of the emissions unit. For example, while catalytic controls may effectively control power generation engines that operate at relatively steady load, the same controls may not be effective at controlling drilling rig engines or crane engines that operate at variable loads for short periods of time, because the engine would not consistently achieve the operating temperature required for catalytic controls to operate effectively. All these considerations must be accounted for when determining technical feasibility.

The costs of installing and operating emissions controls on offshore facilities are much greater than for corresponding onshore facilities, and per OCSLA, must be taken into account. These changes require significant amount of engineering, capital, and time. To retrofit such facilities requires a shipyard period of weeks to months for a mobile structure, or offshore equipment handling vessels and possibly production shut-ins for fixed structures. The costs to make these types of changes can be enormous, ranging from tens of thousands to millions of dollars.

In the preamble, BOEM proposes that "cost effectiveness would be the annual tonnage reduction estimate divided by the cost." (81 Fed. Reg. 19743). However, the basis of absolute tonnage conflicts with OCSLA's provision at OCSLA 43 U.S.C. § 1347(b) that control technologies are not required if the incremental benefits are clearly insufficient to justify the incremental costs. Given "BOEM's distinct mandate to focus on State impacts from OCS activities," the benefits must be based on improvements to onshore air quality, not absolute tonnage. (81 Fed. Reg. at 19730). Further, "BOEM's determination of what constitutes potentially significant emissions varies depending on a proposed facility's distance from shore."

The same basis should be used to determine cost effectiveness, wherein, the cost of controls must be justified by the incremental benefit to onshore air quality.

### **7.1.3 BOEM should develop a presumptive ERM program, but allow case-by-case ERM analyses.**

Completing thorough and complete ERM analyses requires extensive time and effort on the part of offshore operators and reviewing those analyses requires considerable time and effort by BOEM staff. Given the similarities in the types of emission units associated with OCS operations and in the available technically and economically viable controls options, it would benefit the regulated community, and BOEM, if BOEM would establish and maintain an approved presumptive ERM data repository or clearinghouse that would fulfil the requirements of proposed §§ 505.306 and 550.307. Several states have established similar repositories of guidance documents for utilization by the regulated community when performing state BACT analyses. For example, the TCEQ provides extensive guidance on what is considered to be current state BACT for a large variety of industries and emission sources. Similar BOEM guidance would allow OCS operators to apply the presumptive ERM as part of plan submittals without having to provide the detailed and time consuming justification that would be required in an ERM analysis. Application of presumptive ERM as part of plan submittals would also reduce the time necessary for BOEM to review and approve plans.

However, as discussed above, because technical and economic feasibility may vary significantly between OCS facilities, any finalized rule or guidance must allow an option for OCS operators to prepare case-by-case ERM analyses, taking into consideration technical, economic, and safety considerations specific to their facility.

### **7.1.4 Offshore operators must have the flexibility to install emission reduction measures where it is most effective.**

The ERM analysis process proposed in § 505.306(a)(1) requires the designated operator to “Identify all available control technologies relevant to the emissions of the pollutant(s) for which ERM is required.” Because the rule does not limit the ERM review to the largest emissions sources, operators would be required to evaluate control technologies for each emissions source that emits the pollutant for which ERM is required.

As discussed above, installing control technologies offshore is far more complicated and costly than for onshore due to safety considerations, the unique environmental conditions, the operational nature of the facilities (e.g. MODU load management during drilling), and space/weight constraints. Given that OCS facilities are external to the areas whose air quality they may affect, the distance between OCS facilities and the affected areas will impact the effectiveness of the control technology in terms of the incremental benefit to onshore air quality. Where OCSLA requires the use of best and safest control technology, the provisions apply “except where the Secretary determines that the incremental benefits are clearly insufficient to justify the incremental costs of utilizing such technologies” (43 U.S.C. § 1347(b)). Emissions controls, at most, should be required only for the largest emissions units at a facility, where application of the ERM would result in sufficient incremental benefits to onshore air quality to justify the costs.

### **7.1.5 BOEM must establish a clear process to obtain emission reduction credits.**

The proposed regulation allows the use of emissions credits as a component of ERMs. In concept, the flexibility to be able to use emissions credits for ERM purposes would be beneficial to OCS facilities. However, the practical application of emissions credits schemes requires establishing basic principles as part of the relevant implementing regulation. The following principal components appear to be missing from the proposed rule regarding the application of emissions credits:

- The establishment of a baseline period to be used to calculate the quantity of creditable emission reductions attributable to an emission source;
- The useful life of emission reduction credits from an emission source (i.e., does an emissions credit expire if it is not used after a certain time period?); and
- Due to the temporary nature of certain OCS sources when compared to typical onshore stationary sources, the establishment of whether emissions credits can be transferred when an OCS source that relied upon such credits discontinues operation.

Section 550.309(e) proposes requirements for emissions credits but the provisions are vague and unclear, for example, identifying areas where emissions credits may be obtained or what is meant by “net air quality benefit.” The preamble implies that the magnitude of the credit would equal that of the required reduction; however, the use of “net air quality benefit” indicates that the credit would have to achieve the same improvement to air quality (concentration). (81 Fed. Reg. 19733). BOEM must publish a revised proposed rule that establishes clear requirements relating to emissions credits with sufficient specificity to facilitate meaningful stakeholder comment.

Finally, BOEM must work with states and the regulated community to develop an OCS emissions credit banking database that would maintain records of available OCS-generated emissions credits, as well as emissions credits that onshore sources choose to include in BOEM’s banking database. By establishing an OCS emissions credit banking database and associated procedures for banking emissions credits in this database, BOEM would significantly streamline the implementation of an emissions credit program.

### **7.2 BOEM must clarify that designated operators can propose measures to limit projected emissions below the emissions exemption thresholds.**

Under the current regulatory framework, designated operators may propose measures to reduce emissions to stay below EETs. One example of an operator-proposed measure is the use of historical fuel usage rates on emission sources or industry practices (e.g., limit engine operation to 65 or 80 percent maximum load capacity) rather than the more conservative approach of using equipment nameplate capacity to estimate equipment emissions. Another example is the use of projected operating durations rather than the more conservative approach of using calendar-year durations (24 hr/day; 365 day/yr) to estimate equipment emissions. Of course, both these examples have associated tracking and reporting requirements applied during the plan approval process to ensure compliance with the underlying assumptions.

In the preamble, BOEM suggests that 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 § 550.303.” (81 Fed. Reg. 19757). Further, “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.”

However, language in the proposed rule itself is not clear on this issue or on what additional requirements would apply. The proposed rule requires operators to calculate projected emissions based on the highest rated capacity of the emissions source, or the highest rate of emissions, and then compare projected emissions to the EETs to determine if further air quality review is required. The rule does not indicate that application of operator-proposed measures is permitted prior to comparing projected emissions to the EETs.

And, while § 550.309(f) proposes that “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”, and § 550.205(f) proposes that designated operators provide a description of proposed ERM and demonstrate that the ERM meet the requirements of § 550.309, the proposed § 550.205(o) and 550.303(e) state that plans that have emissions below the EETs are exempt from these sections.

Compliance with these types of proposed measures, such as limited fuel use or load capacity, operational controls and equipment replacement, would be demonstrated through the recordkeeping and reporting requirements in the approved plan. Also, the operator-proposed measures will be included and identified in BOEM’s AQR forms. As discussed in Section 7.1, BOEM’s proposed § 550.309 requires operators to provide detailed information regarding ERM that is generally not appropriate to these types of operational controls (e.g., control efficiency, continuous monitoring, etc.). Therefore, BOEM should not require facilities implementing operational controls and equipment replacement to provide the information proposed in § 550.309.

We support BOEM’s proposed intention to allow for designated operators to propose measures to reduce emissions below EETs, as stated in the preamble. However, the language in the proposed rule must be revised to reflect its intent.

### **7.3 ERM compliance provisions must account for startup operations.**

The proposed requirement to demonstrate continuous compliance does not account for startup operations. Many types of emissions control technologies, such as oxidation catalysts, catalytic diesel particulate filters, and selective catalytic reduction, must be operated above certain temperature thresholds to effectively reduce emissions. For example, for an engine, the time necessary to reach the required operating temperature depends on the engine type, its size, its application, the size of the control device, ambient temperature, and the load imposed on the engine during the startup period. Sound technical reasons and documented regulatory determinations support providing a basis for relief during startup from emission limits based on controls that require engines or other types of emission sources to come up to temperature to effectively control emissions. Consequently, BOEM should account for these alternate operating modes in the ERM provisions.

#### **7.4 BOEM cannot attribute mobile support craft emissions to facilities or impose indirect emissions controls on MSC.**

As discussed in Section 1.2.4, proposed §§ 550.205(d)-(e) and 550.224(b) would impermissibly “attribute” all vessel emissions to the emissions of a facility. Because vessels are not “activities authorized” under OCSLA for the purposes of section 5(a)(8), they are beyond the purview of any rule BOEM might promulgate, such as application of ERM. However, BOEM’s ERM requirements, as proposed, will result in the regulation of emissions of platforms and drillships, and potentially MSC, to offset the emissions of “associated” vessels, which are outside the scope of BOEM’s jurisdiction.

OCSLA does not grant authority to regulate or require emissions controls for mobile vessels. As discussed in Section 1.2.4, this is clear from the plain language of OCSLA, which exempts vessels from the purview of OCSLA, as well as the clear intent of Congress included in the legislative history of the 1978 OCSLA amendments. The lack of jurisdiction over vessels has also been recognized by the courts. For example, in 2013, the 9th Circuit Court of Appeals observed that support vessels that are not “[p]ermanently or temporarily attached to the seabed,” or “[p]hysically attached to an OCS facility,” are not “regulated or authorized under the Outer Continental Shelf Lands Act.” *REDOIL v. EPA*, 716 F.3d 1155 (9th Cir. 2013); See 43 U.S.C. §§ 1332, 1333(a)(1).

Beyond the legal issues with these proposed requirements presented in Section 1.2.4, there are practical issues with requiring ERM on vessels that the lessee or operator neither owns nor controls. For example, determination of which party or parties would be responsible for implementing or paying for ERM would be problematic, and would be further complicated in cases where a support vessel services multiple facilities. Furthermore, OCS operators contract for services, but cannot be certain which vessel a contractor will assign – certainly not at the point plans are being developed and submitted. Finally, as discussed earlier, these vessels and associated emissions are regulated under other regulatory programs such as MARPOL and EPA Marine Tier programs.

As described above, the proposed rule would result in the regulation of and implementation of emissions controls on MSC, which is outside the scope of BOEM’s authority.

#### **7.5 Increasing requirements for emission reduction measures could increase the demand for onshore emission reduction credits and the costs of credits could increase well above BOEM’s assumptions.**

The average cost BOEM assumed for emissions credits does not reflect recent costs for emission reduction credits in ozone nonattainment areas near the Gulf of Mexico.

Because the EPA lowered the 8-hour ozone NAAQS from 75 ppb to 70 ppb in October 2015 (2015 ozone NAAQS), certain areas along the Gulf of Mexico coast are expected to continue their status as nonattainment areas, and be designated nonattainment with respect to the 2015 ozone NAAQS. This means the demand for onshore NO<sub>x</sub> and VOC emission reduction credits in this region will likely continue – even without the additional demand created by BOEM’s proposed regulation. Furthermore, NO<sub>x</sub> and VOC emissions reduction mandates associated with attainment plans for these areas, as well as the introduction of new standards for certain

facilities and the increasing stringency of existing standards for other facilities under 40 CFR part 60, could reduce the potential supply of onshore emissions credits available to OCS sources because these type of emissions reductions are not creditable. Moreover, NO<sub>x</sub> and VOC emissions reduction mandates associated with attainment plans usually represent low cost emissions reductions available to affected sources, which in turn could increase the cost necessary to generate creditable NO<sub>x</sub> and VOC emissions marketable to OCS sources.

Considering the recent costs of emission reduction credits in ozone nonattainment areas in the Gulf of Mexico region, the expected increase in demand for onshore NO<sub>x</sub> and VOC emission reduction credits, and the potential decrease in the availability of low cost NO<sub>x</sub> and VOC emissions reductions marketable to OCS sources, we believe the emissions credit cost analysis performed by BOEM considerably underestimates the cost of this emission reduction concept. Additional detail and analysis are provided in Appendix B.

#### **7.6 BOEM should not require facilities to notify states to revise their State Implementation Plans.**

Proposed § 550.309(e)(6) requires operators to notify states of a need to revise their SIPs when operators acquire emission reduction credits from onshore sources. We are not aware of any SIPs in the Gulf States or Alaska that include reductions in emissions from OCS sources as part of attainment demonstrations. Furthermore, we are not aware of requirements for onshore facilities to notify states when reducing emissions at a facility in order for the state to update its SIP. States and federal agencies will be notified of emissions reductions at onshore facilities through typical permitting processes; therefore, there is no need to provide this additional information to states. This creates a situation which is unnecessarily duplicative and redundant. As discussed in Section 7.1, BOEM must fully develop its emissions credits scheme prior to finalizing the rule, which would include a mechanism for states to access the emissions credits banking database.

Furthermore, the proposed requirement is vague. If BOEM elects not to remove this requirement, BOEM must clarify and specify what information and data the designated operator would be required to submit, and to whom.



## 8 Modeling Tools and Procedures

Based on the Bureau of Safety and Environmental Enforcement's (BSEE's) web site, there are more than 2100 active platforms in the Gulf of Mexico OCS. Proposed rule changes consolidating facilities, attributing MSC emissions to facilities, and introducing additional EETs are likely to significantly increase the modeling required for plan submittals and, potentially, recertification. As a result, the accuracy and appropriateness of air quality models available to designated operators will be ever more important. As outlined in this chapter, there are a number of issues that need to be addressed. Therefore, any proposed rule should wait until the outcome of BOEM's modeling studies in the Arctic and Gulf of Mexico are completed and peer reviewed.

### 8.1 BOEM's default dispersion models are not designed to address all the requirements of the proposed rule.

The current offshore modeling approach used by both EPA and BOEM for criteria pollutants involves the application of the OCD model to evaluate emissions from offshore sources within 50 km of the shoreline, and the CALPUFF modeling system for transport distances greater than 50 km. Both models are currently listed in Appendix A: Summaries of Preferred Air Quality Models to 40 CFR Appendix W of Part 51: Guideline on Air Quality Models.

In July 2015, EPA proposed to remove CALPUFF from the list of Preferred Models in Appendix W (80 Fed. Reg. 45340). In addition, EPA does not recommend the aerosol chemistry modules in CALPUFF for secondary aerosol formation. Because at present there is no replacement for CALPUFF, BOEM should allow its continued use even if EPA removes it as a preferred model in Appendix W. CALPUFF can still be used to evaluate direct emissions of criteria pollutants.

OCD is the currently recommended model for offshore distances less than 50 km. However, OCD has not been updated in many years and lacks several features making it difficult to apply for air quality assessments. Specifically, OCD:

- does not contain internal routines for processing either missing data or hours of calm meteorology. The existing postprocessor also cannot perform these tasks without modification.
- does not contain the Plume Volume Molar Ratio Method (PVMRM), Ambient Ratio Method 2 (ARM2) or Ozone Limiting Method (OLM) included as options in AERMOD for assessing the 1-hour NO<sub>2</sub> NAAQS.
- lacks the recommended methods for estimating design concentrations associated with the new 24-hour PM<sub>2.5</sub>, 1-hour NO<sub>2</sub>, and 1-hour SO<sub>2</sub> NAAQS. The current OCD postprocessor cannot perform these tasks without changes to the code.
- does not contain a volume source routine and the area source routine only considers circular areas without allowance for any initial vertical dispersion. Many different types of offshore sources are not easily simulated by the point source routine in OCD, such as support vessels that BOEM has proposed to include in modelling assessments.
- contains a shoreline fumigation model, but requires an overland meteorological data set that is difficult to prepare. The overland meteorological preprocessor is no longer

supported by the EPA and the meteorological data formats required by the preprocessor are no longer supported by the National Climate Data Center.

For recent permitting on the Alaska OCS, the EPA Model Clearinghouse approved a hybrid approach combining a new meteorological pre-processor called AERCOARE and the AERMOD dispersion model. However, this approach is not expected to be included in the upcoming changes to Appendix W and has not been approved for application to offshore facilities in the Gulf of Mexico. In addition, AERMOD without any revisions is not appropriate for offshore sources. Specifically:

- AERMET and AERMOD boundary layer formulation are based on standard overland parameterizations – stable at night, unstable during the day. That is not applicable for overwater dispersion characteristics. The stability depends on the difference between the air and water temperature. Overwater it is possible to have stable conditions 24 hours a day with warm air over cold water or have very unstable conditions 24 hours a day with cold air over warm water.
- The issues with the boundary layer formulation will also impact the mixing height depth calculation.
- A separate issue is the platform downwash issue. Platforms have 10 or 20 meters of open air under them and the building downwash calculations in AERMOD assume the structure is ground-based, which will overstate the downwash. This leads to overpredictions of concentrations near platforms.

Both CALPUFF and OCD are functional and can continue to be applied by skilled modelers, but both require upgrades or replacement if models are to be used to evaluate secondary aerosol formation, MSC, and the statistical nature of the short-term NAAQS for PM<sub>2.5</sub>, PM<sub>10</sub>, SO<sub>2</sub>, and NO<sub>2</sub>. We recommend that BOEM delay implementation of these additional rule modeling requirements until the models are updated.

EPA proposed in July 2015 to allow for the use of numerical weather prediction meteorology where no representative observed meteorology exists, or where it is difficult to measure. As part of its Gulf of Mexico and Arctic studies, BOEM is currently conducting a model performance evaluation to show equivalent performance between the Weather Research Forecast (WRF) - driven AERMOD/CALPUFF and WRF-driven OCD. The proposed rule and new EET development should wait until these studies are complete and new regulatory modeling procedures are recommended.

## **8.2 Expensive and complex photochemical modeling is not warranted. BOEM has not demonstrated that OCS ozone and PM<sub>2.5</sub> precursor emissions significantly impact onshore air quality such that attainment or maintenance of the NAAQS are threatened.**

As detailed in our comments on the IRIA (see Appendix B), photochemical modeling is an expensive and complex technical undertaking. The proposed rule would require photochemical modeling of ozone and PM<sub>2.5</sub> in the event precursor EETs are exceeded and an “appropriate” photochemical model is available (§ 550.304(b)).

However, BOEM has not provided any study or evidence to demonstrate that offshore emissions significantly affect PM<sub>2.5</sub> and ozone concentrations onshore or within the state

seaward boundary. In fact, as discussed in Section 2.3.1, all the SIPs developed by the states bordering the Gulf of Mexico and Alaska, show OCS-based contributions to onshore pollutant concentrations as small. In all cases, the SIPs indicate that the states responsible for achieving NAAQS compliance do not consider OCS sources to be significant contributors. Until such a demonstration is provided, there is no justification for requiring facilities to perform complex photochemical modeling to address PM<sub>2.5</sub> or ozone compliance with the NAAQS. Any additional requirements are premature until the studies discussed above are complete.

### **8.3 Proposed method for modeling MSC.**

Notwithstanding BOEM's lack of authority to regulate mobile support vessels and our objection to modeling such vessel emissions, the line source method proposed by BOEM is inappropriate. Unlike a busy roadway or a long conveyor belt, which have constant emissions along a line, vessel emissions at a given location are short-lived and not easily assessed as area, line, or even volume sources.

MSC would be more appropriately included as volume sources or thin area sources placed along a transport route as is the case recommended by EPA for roadways or as an area source when the vessels are distributed within a general area of activity. However, the current offshore regulatory model OCD cannot simulate volume or area sources. While OCD could be used to simulate pseudo point sources placed along expected vessel paths, the number of point sources required to accurately characterize such emissions is outside the capabilities of the model. So in addition to the spatial issues involved in distributing the vessel emissions, arbitrary assumptions are needed to temporally distribute such emissions over the distance travelled for each NAAQS averaging period.

Regardless of the modeling technique applied, there are difficulties at the EP, DPP, and DOCD stage specifying which vessel(s) will serve a facility or what its route will be. Near shore, potential impacts are highly dependent on the routes taken by the vessels and the release characteristics and emissions of each vessel. As discussed in Section 3.3, neither the vessel nor the route is likely to be known at the time of plan submittal.

### **8.4 BOEM's proposed requirement to model mobile support vessels is geographically boundless.**

BOEM's proposed rule requires MSC emissions to be considered as long as the MSC is involved in activities supporting the facility, which BOEM asserts should include emissions from the time the vessel leaves port until the time it returns to port. The "port" could be hundreds of miles away in the Gulf of Mexico and would be more than a thousand miles away in Alaska. This is analogous to asking a refinery to evaluate ship emissions from the point where crude oil is loaded until it arrives at the refinery and from the refinery to the port where product is delivered.

Furthermore, it is not clear where impacts must be assessed. The proposed rule suggests vessels supporting Alaska OCS operations in the Beaufort and Chukchi seas would be required to assess emissions and impacts for the entire 1,500-mile voyage to and from Dutch Harbor, their nearest supply port. As discussed in Section 1.2.4 and in Chapter 3, BOEM lacks authority

to regulate vessel emissions and requirements for emissions assessment and modeling are unlawful as well as impractical.

Another critical issue is whether an air quality assessment of vessel emissions would be required to demonstrate compliance at the hull of the ship when a vessel crosses the state seaward boundary. OCSLA does not grant Interior authority to regulate activity outside the OCS, but the proposed rule implies operators would be required to model vessels within the state seaward boundary.

### **8.5 BOEM's proposal for VOC and NO<sub>x</sub> waivers is incomplete.**

NO<sub>x</sub> and VOC waivers are allowed by EPA under § 182(f) of the CAA for nonattainment areas within an Ozone Transport Region where it can be demonstrated local emissions within an AQCR would not exacerbate existing ozone concentrations. In such instances, local ozone concentrations exceeding the NAAQS are caused by transport within a multistate region upwind. Petitions for waivers to EPA include weight-of-evidence arguments using photochemical modeling, monitoring data, and qualitative descriptions of the effects of local NO<sub>x</sub> and/or VOC emissions on ozone formation. Typically, such waivers are obtained for an AQCR to exclude control requirements set forth in a SIP for a much larger area.

BOEM has included this concept for VOC and NO<sub>x</sub> waivers in § 550.307. Given that BOEM regulates offshore sources not within an AQCR or a nonattainment area, some adjustments to the onshore waiver programs would be required.

However, prescriptive portions of the proposed rule requiring controls based on NO<sub>x</sub> and/or VOC emissions should always be waived if applicants can present an analysis showing such controls would not have significant air quality benefits or would not be required to comply with the NAAQS.

### **8.6 The procedure for determining background concentrations is critical and must be developed in coordination with the regulated community.**

Section 550.304(e) of the proposed rule addresses how background concentrations are to be added to model predictions to determine total concentrations. At § 550.304(e)(2)(i), BOEM states applicants "must use the data provided by BOEM" if BOEM has established "appropriate" background concentrations.

Prior to that process, BOEM needs to propose the procedures it will use to establish background air quality concentrations because there are a number of critical factors. These include: the statistics to be applied to the measurements; data filtering procedures to remove the influences of nearby sources; data stratification parameters to be used, such as stratification by season and hour; and procedures for use and filtering of shoreline data by wind direction to assess onshore versus offshore source influences.

There needs to be flexibility in establishing background concentration because the closest monitoring station is not necessarily the most relevant. Existing ozone monitoring locations along the Gulf coast likely over-state background ozone at the State's seaward boundary because they are influenced by land-based emission sources. For example, in the Houston-

Galveston-Brazoria ozone nonattainment area, the ozone monitor that is closest to the Gulf is located on Galveston Island (EPA site number 48-167-1034). This monitor is located closer to petrochemical facilities in Texas City than to the nearest State seaward boundary. Similarly, in the Beaumont/Port Arthur area, the Sabine Pass ozone monitor (EPA number 48-245-0101) is located closer to petrochemical facilities in Port Arthur than to the nearest State seaward boundary. Such monitors are not representative of the larger Gulf of Mexico area.

There may also be situations where monitoring data are not available or are otherwise unsuitable as background values. In this case, we request that BOEM provide operators the option of using scientifically supported modeling data to estimate background concentrations.

### **8.7 Regional emission inventories for existing sources and increment consuming sources have not been developed and will be impractical for each operator to develop.**

As discussed in Section 2.2, we maintain that OCSLA does not authorize BOEM to require evaluations of AAI because such metrics are not relevant to demonstrating compliance with NAAQS. Nonetheless, in the event that BOEM retains a requirement for increment evaluation, BOEM must provide a regional baseline emissions database to allow modeling of the baseline concentrations and increment consumption. This is a very complex undertaking, and it is unreasonable to require an OCS plan to compile such information.

We also note that onshore sources conducting an increment evaluation under EPA's PSD program are not required to include OCS source emissions. That implies State agencies do not consider OCS sources to significantly consume increments. Consequently, it seems inappropriate to require OCS sources to conduct an onshore increment analysis themselves.

### **8.8 BOEM's proposed method for comparing model predictions to AAIs is unclear and unnecessarily complicated.**

As discussed in Section 2.2, we maintain that OCSLA does not authorize BOEM to require evaluations of AAI because such metrics are not relevant to demonstrating compliance with NAAQS. Nonetheless, in the event that BOEM retains a requirement for increment evaluation, we request that BOEM simplify its AAI compliance assessment.

BOEM's proposed rule uses comparisons to the AAIs based on a 12-month rolling average. Compliance would be indicated when the AAI is not exceeded more than once within any rolling 12-month period. Typically, EPA assesses compliance with the AAIs and NAAQS using calendar block averages, not running or rolling averages. This is a much simpler procedure than what BOEM proposes.

If BOEM maintains its requirement for rolling averages, BOEM needs to clarify exactly how the rolling averages should be calculated. For example, BOEM should confirm for a 24-hour average whether the running average is adjusted by one hour or one minute for each period. Within an 8760 hour year there would be  $8760-24+1 = 8749$  24-hour periods using a running average incremented by an hour.

BOEM also needs to clarify what it means by a 12-month period. Typically, EPA assesses AAls using calendar years over multiple years or in some instances a single 12 month period when meteorological data are collected from an on-site program that does not start on January 1st. BOEM must indicate if the 12-month period is calculated every hour, day, or month within a modeling period greater than a month. The request for a rolling average compliance demonstration adds an extra burden to post-processing the model results that is not included in most modeling systems. Such uncertainty could lead to considerable modeling costs of questionable value that have not been anticipated by the agency.

### **8.9 BOEM should limit the domain of the modeling assessment.**

BOEM specifies in § 550.205(g) and in part in § 550.304(e) that a plan applicant must provide concentration estimates in any area of any state. This requirement implies an unlimited modeling domain and needs to be constrained to the area potentially affected by OCS sources.

We acknowledge the need to identify maximum facility concentrations in attainment and nonattainment areas, and the need to demonstrate compliance with the NAAQS in attainment areas. However, the focus of a modeling assessment should be on the points of maximum impact, not distant locations that are less-affected. We recommend that BOEM limit the domain of the required modeling to coastal areas, which are defined in proposed rule language in Appendix A as follows:

*Coastal area of any State means the inland area up to 25 miles of the shoreline where the shoreline refers to the nearest mean high water mark of a State. A lesser distance may be acceptable if the modeling analysis demonstrates that maximum concentrations occur closer to the shoreline.*

### **8.10 BOEM should clarify the process and requirements associated with modeling protocols.**

Under § 550.304(a)(2), a modeling protocol and associated data must be submitted to BOEM prior to conducting the analysis. BOEM needs to clarify the content of the protocol and the schedule for review and approval of the protocol. It would improve consistency of content and efficiency of preparation and review if BOEM were to provide a template or framework for the protocol. It would also be helpful if an applicant could submit a protocol that adopts a standardized protocol and identifies only where the modeling analysis would deviate from that standard.

In many instances, the methods and data evolve as the modeling analyses are being conducted, so allowances must be identified for changes. Furthermore, in many instances modeling analyses for similar facilities and modifications to an existing facility would use the same modeling techniques and assumptions as the previous analysis. Therefore, applicants should be allowed to reference a previous protocol to avoid the delay associated with the submittal and review of a protocol for each application.

## 9 Defining “Significantly Affect”

OCSLA authorizes BOEM to regulate emissions associated with offshore oil and gas exploration, development, and production activities when they “significantly affect” onshore air quality such that attainment or maintenance of the NAAQS is threatened. In response, BOEM developed its current AQRP that first assesses the potential for air quality impacts using a screening procedure. That procedure requires applicants to compare annual emissions from proposed facilities with emissions thresholds that depend on the distance from the OCS facility to the shore. If facility emissions of an air pollutant exceed the relevant criteria, dispersion modeling must be conducted to determine whether the predicted onshore concentrations are “significant.” Under this system, “significant” was used as a proxy for attainment with the NAAQS, and facilities that had a “significant” effect on air quality were subject to emission controls.<sup>34</sup>

Current and proposed BOEM regulations cite SILs that were developed by the EPA in the 1970s as part of its program to prevent deterioration of air quality in areas attaining the NAAQS. BOEM’s current regulations require application of BACT to the OCS facility when dispersion modeling indicates onshore concentrations exceed the SIL established for a pollutant. The SILs BOEM applies are for annual NAAQS.

The proposed rule also requires dispersion modeling of criteria and precursor pollutants if emissions exceed EETs. Criteria for emission reduction measures are triggered when modeled pollutant concentrations exceed a SIL, either for a short-term or annual NAAQS. BOEM proposes to apply separate impact criteria for short-term and long-term facilities and for effects to attainment versus non-attainment areas when modeled pollutant concentrations exceed the SILs:

- For a short-term facility affecting an attainment area, the applicant must conduct an ERM analysis and implement operational controls that are technically and economically feasible. If no technically feasible operational controls can be implemented cost effectively, then no ERM will be required.
- For a short-term facility affecting a nonattainment area, the ERM process is the same as above. However, if a facility proposes that no technically feasible operational controls are cost effective, BOEM may require the implementation of other ERM, including BACT.
- For a long-term facility affecting an attainment area, the applicant must apply ERM, excluding BACT, for VOC and criteria pollutants. The applicant must also demonstrate compliance with AAls and NAAQS and apply additional ERM if necessary to achieve that compliance.
- For a long-term facility affecting a nonattainment area, the applicant must employ BACT for VOC and criteria pollutants. Applicants must apply additional ERM such that VOC emissions are less than the EETs and model-predicted criteria pollutant concentrations are less than the SILs and total concentrations comply with NAAQS.

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<sup>34</sup> The modeling requirement does not apply to VOC emissions under the current rule and does not apply to VOC emissions under the proposed rule until BOEM’s Gulf of Mexico science studies are completed.

Although the consequences of affecting an onshore area are identified, BOEM does not define “affect.” We address that omission in this chapter, but first respond to BOEM’s request for comment on how it should treat interim SILs or pollutants/averaging times for which EPA has not established a SIL.

### **9.1 BOEM should adopt its own SILs.**

As discussed in Section 2.1, BOEM has a different mandate than EPA and has no obligation to adopt EPA procedures or EPA impact criteria other than the NAAQS. BOEM adopted EPA SILs for the current air quality regulation, but EPA has not promulgated SILs for all criteria pollutants and averaging times.

We propose that BOEM continue applying only the promulgated EPA regulatory SILs (40 CFR 51.165(b)(2)) until the Gulf of Mexico and Alaska regional air quality studies are completed. If those studies conclude that changes to the AQRP are warranted, the results of the studies may inform selection of appropriate SILs. There does not appear to be a particular standard or formula used by EPA to establish SILs, as they range from 1 to 5 percent of the NAAQS. BOEM has the option of identifying SILs based on a scientific rationale, or some percentage of the NAAQS it deems to be significant. Selection of SILs is another opportunity to involve the regulated community.

If BOEM elects to continue use of EPA SILs, we recommend that BOEM adopt, in lieu of any EPA interim SILs, SILs set at no less than 5 percent of the applicable NAAQS. When EPA promulgates a SIL that is incorporated in the affected state’s SIPs, then the new regulatory SIL would apply.

### **9.2 In nonattainment areas, BOEM should define “affect” as exceeding a SIL at an onshore location.**

BOEM should continue its current policy of requiring emission reductions when model-predicted concentrations in nonattainment areas attributable to an OCS source exceed a SIL. This policy is appropriate because OCSLA requires that OCS sources that have a significant effect on onshore air quality not cause or contribute to violations of a NAAQS.

However, the proposed rule, perhaps inadvertently, requires that a NAAQS analysis be conducted even after application of ERM demonstrates that predicted impacts are below any applicable SILs. Proposed section 550.307(b)(2) requires that, after demonstrating that no SILs are exceeded, “...you must then conduct the analysis described in § 550.307(b)(1)(vi).” Section 550.307(b)(1)(vi) requires ERM until compliance with NAAQS is demonstrated. This is clearly impossible if the area is nonattainment and local monitoring stations continue to show violations of the NAAQS, as reductions in OCS emissions could not fix what is most likely a local onshore emissions problem.

We have proposed in Appendix A that BOEM modify the proposed rule text at § 550.307(b)(2), including deleting the last sentence that references § 550.307(b)(1)(vi).



To further clarify the requirements for assessing air quality impacts in a nonattainment area, we recommend that BOEM define “Affect the air quality of any State” as applied in nonattainment areas as follows:

*The air quality of any State coastal nonattainment area is considered to be affected by an OCS source when a model-predicted onshore concentration attributable to emissions from the OCS source exceeds a SIL.*

### **9.3 In attainment areas, BOEM should define “affect” as exceeding a SIL and a corresponding NAAQS.**

BOEM's current use of the SILs appears to be borrowed from EPA's PSD permit process. In EPA's program, if predicted concentrations are less than the SILs, the project impact is assumed to be insignificant with respect to increments and NAAQS and no further analysis is warranted. If predicted concentrations exceed the SILs, the applicant must conduct a cumulative analysis to determine compliance with NAAQS.<sup>35</sup> Thus, for attainment areas, the SILs are utilized only to determine whether the potential impact warrants a cumulative analysis.<sup>36</sup> BOEM has no obligation to apply EPA programs, but this general approach is also appropriate for evaluating whether OCS source emissions significantly “affect” onshore air quality.

Although ERM are appropriate when concentrations attributable to OCS sources exceed SILs in nonattainment areas, the Alaskan coastal areas of the Chukchi and Beaufort seas and the coastal areas of Louisiana, Mississippi, Alabama, and most of Texas are attainment areas for all criteria pollutants.<sup>37</sup> Attainment areas can accommodate a greater increase in pollutant concentrations before compliance with ambient air standards are a concern. Consequently, in most attainment areas, the SILs are too stringent a threshold for requiring ERMs.

A SIL associated with the 1-hour NO<sub>2</sub> NAAQS has not been promulgated and BOEM's current policy is to require Gulf of Mexico applicants to add a representative background concentration to the model-predicted NO<sub>2</sub> concentration attributable to facility emissions to evaluate compliance with the NAAQS. Unless the cumulative impact (background plus facility) exceeds the NAAQS, emission controls are not required.

We believe that this is the most appropriate way to determine if an OCS facility has significant onshore air quality impacts that affect compliance with the NAAQS, and thus whether emissions controls are warranted. We therefore recommend that the approach identified above be applied to all criteria pollutants that are emitted from a facility at quantities exceeding an EET. This approach takes into consideration existing air quality conditions onshore, which are critical to

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<sup>35</sup> Note that EPA's cumulative analysis requires modeling of regional sources and the addition of a background concentration. This double counts contributions from regional emission sources because the effects of those emissions should already be accounted for in the background concentrations.

<sup>36</sup> BOEM's current program deviates from EPA's program in this regard in that it requires application of BACT if concentrations exceed SILs. EPA only requires additional analysis.

<sup>37</sup> The only nonattainment areas along the coasts of the western and central Gulf of Mexico are the Houston -Galveston-Brazoria ozone nonattainment area and the St. Bernard parish SO<sub>2</sub> nonattainment area. Both nonattainment areas are dominated by onshore industrial emissions.

understanding whether emission control is warranted to comply with onshore NAAQS. This policy is consistent with the intent of Congress that controls only be required where needed to ensure compliance with NAAQS. 43 U.S.C. § 1334(a)(8); 1978 U.S.C.C.A.N., 1674, 1684-1685. Furthermore, unlike SILs, NAAQS are established for all criteria pollutants and averaging periods.

In summary, we recommend that BOEM define “Affect the air quality of any State” as applied in attainment areas as follows:

*The air quality of any State coastal attainment area is considered to be affected by an OCS source when emissions from that source result in a model-predicted onshore concentration that exceeds the SIL and the modelled concentration plus background concentration exceeds the NAAQS.*

#### **9.4 Emission reduction measures for VOCs should not be required unless BOEM’s ongoing studies conclude there is a significant onshore impact.**

For criteria pollutants, BOEM requires modeling of pollutants that exceed EETs. Modeling determines whether the emissions affect the onshore air quality and whether emission reductions are required.

Because BOEM has yet to determine that photochemical modeling tools are available, it eliminates the modeling step for VOCs, a precursor to ozone formation, and requires ERM when emissions exceed the VOC EET. Thus, the proposed rule regulates VOC emissions without any demonstration of impact to onshore air quality. As discussed in Section 1.2.2, this is contrary to BOEM’s authority.

Consequently, BOEM should delete the requirement for VOC ERM based solely on an exceedance of an emissions threshold. At a minimum, VOC ERMs should not be required until scientific studies now underway in the Arctic and the Gulf of Mexico conclude that emissions from offshore facilities are having a significant effect on onshore attainment or maintenance of the ozone NAAQS.

## 10 Reauthorization of Plans and Plan Revisions

BOEM's proposed regulation would require lessees to resubmit previously approved plans at least every 10 years to verify compliance with BOEM's current air quality regulations. As proposed, all of the applicable requirements in effect on the date of resubmission would apply on the same basis to a resubmitted plan as for an initial plan. See Proposed § 550.284; § 550.303(g); § 550.309(d); § 550.310(c). Proposed § 550.310(c) does not specify the consequence that will follow if BOEM is dissatisfied with the resubmitted plan, but the proposal suggests that failure to resubmit a plan could result in revocation of the lessee's existing plan.

Although existing leases are generally subject to amended regulations over time, compliance with successive iterations of the air quality regulations promulgated under section 5(a)(8) alone is not grounds for resubmission and additional approval, on new and far more onerous terms, of existing EPs, DPPs, and DOCDs. As discussed in Section 1.3.2, BOEM may not change its regulations to avoid the consequences of what would otherwise be a breach of contract. Section 1.3.2 also notes that OCSLA authorizes BOEM to review an existing plan only "based upon changes in available information and other onshore or offshore conditions affecting or impacted by development and production pursuant to such plan." 43 U.S.C. § 1351(h)(3).

Accordingly, BOEM should not require resubmission and additional approval of existing plans. At a minimum, BOEM should clarify that (1) the resubmitted plan will be reviewed for continued compliance with onshore NAAQS, and (2) additional conditions will be imposed only where an OCS operation is "significantly" affecting the air quality of a state and preventing attainment or contributing to continued nonattainment of onshore NAAQS.

### 10.1 Current regulations and procedures assure continued compliance with NAAQS.

BOEM's current AQRP has accomplished the Congressional mandate of allowing the development of OCS resources while ensuring continued compliance with the NAAQS. Every proposed EP, DPP, or DOCD is subject to time-tested procedures that consider the magnitude of air emissions against the distance to the shoreline. In some cases, air dispersion modeling is conducted that demonstrates a *de minimis* impact to onshore air quality. In other cases, applicants implement operational controls or install control equipment such that the facility described in the plan is either exempt from modeling or the modeling of controlled emissions meets regulatory criteria.

This initial review must be based on potential emissions from the proposed facility. Potential emissions are calculated assuming equipment is operating at its maximum anticipated rate and applying conservative factors to estimate emissions. In some scenarios, operators may propose measures to reduce emissions to stay below EETs. In actual operation, engines and other equipment operate at rates well below maximum and actual emission factors are lower than the conservative default values that BOEM encourages. Consequently, the emissions and potential onshore impacts found in plans are typically much greater than those that actually occur. In addition, contributions from existing facilities are accounted for in background concentrations when new facilities conduct air quality modeling to demonstrate compliance with the NAAQS.

Furthermore, significant changes in the facility equipment or its operation are already subject to review (e.g., § 550.283(a)(4) requires resubmission of AQRs to account for emission increases, and BSEE inspections offshore typically compare approved AQRs to installed equipment). Absent such changes, there is no compelling reason to re-evaluate the facility on a periodic basis because the initial analysis will still be a conservative assessment of potential air quality effects and existing requirements ensure oversight for changes.

Outside of the plan approval process and BSEE inspections, the air emissions from existing OCS facilities are already subject to periodic review because BOEM conducts a cumulative impact analysis when it proposes additional leasing of offshore areas and approves additional plans.

Finally, the current rule provides BOEM with the ability to review existing facilities in the rare case where a state submits information to the Regional Supervisor that indicates that emissions from an existing facility may be significantly affecting the air quality of the onshore area of the state (§ 550.304 of the current regulation). In that case, the Regional Supervisor will review the available emissions data and make a determination as to whether the existing facility has the potential to significantly affect the air quality of an onshore area. If the existing facility does have the potential to significantly affect the onshore air quality of a state and threaten compliance with NAAQS, then BOEM can require the operator to evaluate facility emissions under that AQRP and apply controls.

For all these reasons, we believe the current program is protective of onshore air quality and that BOEM should not require plan resubmittals.

## **10.2 Resubmittal, review, and reauthorization of plans will require significant contractor and BOEM staff time.**

There are also practical considerations when requiring periodic plan resubmittals. When EPA implemented its Title V Air Operating Permit program in the 1990s, existing major sources were required to submit permit applications by a specified deadline. State and local agencies were overwhelmed by the volume of applications that required their detailed analysis and careful drafting of new permits. It took years for the agencies to address the backlog of applications. Because air operating permits must be renewed every five years, agencies face a recurring barrage of applications near the anniversaries of the initial deadline. This task has become a significant workload for the state air agencies.

Implementation of a requirement for periodic review of existing facility plans would require operators to hire consultants to repeat work that was already reviewed by Interior. Because there are several thousand facilities in the Gulf of Mexico, BOEM would have to significantly increase its staffing to address analyses that offer very little added benefit to onshore air quality.

We also note that the construction permits (i.e., PSD) that EPA issues to industrial sources do not require renewal, and are valid as long as no major modifications occur at the facility.

### **10.3 Emissions from existing facilities are accounted for in background concentrations.**

As discussed in Section 4.1, when emissions from proposed facilities exceed EETs, BOEM's proposed modeling procedure requires applicants to apply approved air quality models to calculate onshore concentrations attributable to the proposed facility. To demonstrate compliance with NAAQS, modeled concentrations are added to existing "background" concentrations to determine cumulative concentrations. This simple procedure accounts for emissions from existing OCS and onshore facilities as part of the background concentration, and provides a cumulative impact analysis. These analyses, which would likely be required for the majority of new facilities (see Section 6.5) and the cumulative analyses BOEM conducts in its lease sale and plan-specific NEPA analyses, ensure that OCS facilities are not causing exceedances of the NAAQS onshore. BOEM's proposal to require re-modeling of existing facilities every ten years is unnecessary.

### **10.4 Retrofitting existing operational facilities to meet new regulatory requirements is costly and in some cases may not be technically possible.**

It is not always technically possible to install and operate emission controls on existing OCS facilities. OCS facilities must stay within overall weight and weight distribution limits to ensure they meet stability and buoyancy requirements required for safety purposes. Typically, offshore facilities have been designed and constructed to maximize space utilization, and extra space is often times not readily available for changes to existing equipment components. These overall weight and space constraints limit the use of add-on emissions controls. If emissions controls are added to a facility, then the weight and positioning of the additional equipment affects the facility's weight bearing capacity for other purposes, which can result in costs to resolve and/or limit certain facility activities that are integral to the function of the facility. Additionally, such added weight may require structural modifications (e.g. additional load bearing structures).

Furthermore, the costs of installing and operating emissions controls on offshore facilities are much greater than for corresponding onshore facilities, and per OCSLA, must be taken into account. To retrofit such facilities requires a shipyard period of weeks to months for a mobile structure, or offshore equipment handling vessels and possibly production shut-ins for fixed structures. The costs to make these types of changes can be very large, in the tens of thousands to millions of dollars.

### **10.5 BOEM should clarify the requirements for plan revisions.**

The proposed rule language in § 550.280 and § 550.303 raises some issues for clarification regarding the requirements for plan revisions.

Section 550.280(a) states:

*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:*

While § 550.303(g)(4) states

*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.*

The language presented in § 550.280(a) would prevent an operator from replacing a piece of equipment without BOEM approval, even if the replacement would not result in an increase in emissions. This could extend to routine maintenance of a facility where there is no increase in emissions, such as the replacement of a valve. BOEM should revise § 550.280(a) to specify that the condition does not apply to the installation or use of equipment that does not result in an increase in annual air pollutant emissions and does not apply where the proposed activity is determined to be an insignificant activity, as discussed in Section 12.2.

## **11 Monitoring, Recordkeeping, And Reporting**

BOEM has proposed extensive and costly emissions monitoring, recordkeeping and reporting requirements as part of the proposed OCS regulations. As explained in sections 1.2.4 and 1.3.1, BOEM lacks the legal authority to impose a majority of these requirements on OCS lessees and operators, and to impose any requirement with respect to MSC. However, should BOEM retain these impermissible provisions in any final rule, BOEM should, at a minimum, reduce the monitoring, recordkeeping, and reporting burden to reflect the minimal impact OCS operations have on onshore air quality as follows.

### **11.1 BOEM should clarify what types or designs of emissions monitoring systems would be acceptable under the proposed rule.**

Parametric Emissions Monitoring Systems (PEMS) are referenced in the preamble of the proposed rule (81 Fed. Reg. 19745) as an option for monitoring emissions, but the rule text in § 550.311 does not specifically reference PEMS nor clarify which specific emissions monitoring equipment will be required by the proposed rule. Actual emissions monitoring could include Continuous Emissions Monitoring Systems (CEMS) or PEMS.

Based on discussions in the preamble and the IC Burden Table (81 Fed. Reg. 19790) costs analyzed by BOEM, one might assume that BOEM will likely require PEMS but that is not stated specifically in the proposed rule. Given the harsh and remote environments that OSC sources operate in, CEMS/PEMS would be susceptible to frequent outages and downtime and would be extremely costly to install and maintain. Therefore, we believe that CEMS/PEMS should only be considered when other more reasonable monitoring methods are not appropriate. In most instances monitoring facility fuel usage and hours of operation would provide ample data to accurately estimate emissions.

Additional data would have been provided as part of this comment package; however, because there was not an ANPRM, the regulated community did not have an opportunity to research and analyze possible monitoring options.

### **11.2 BOEM should limit monitoring to sources subject to BACT requirements.**

As currently written, the proposed regulations do not stipulate which specific sources will require emissions monitoring. Specifically, as stated in proposed § 550.311(b)(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.”

Also, as discussed above, the specific emissions monitoring systems to be employed to monitor actual emissions has not been specified in the proposal. Actual emissions monitoring could be a CEMS or PEMS. Costs for installation and maintenance of monitoring equipment such as CEMS/PEMS, fuel meters, hourly load capacity monitors, etc. are significant (see Appendix B). As such, the use of PEMS/CEMS and other monitoring equipment on most emissions sources located on MODUs, platforms and MSC would not be cost effective or operationally reliable due to the harsh environment in which this equipment operates. It should also be noted that the CEMS/PEMS are highly sophisticated electronic equipment that require highly skilled and certified technicians to maintain and service. As OCS facilities will operate in remote areas of

the Alaska OCS or Gulf of Mexico, up to hundreds of miles from the nearest shoreline, it could take days to get a service technician to the MODU or platform and the CEMS/PEMS operational, not to mention the cost incurred due to the service call-out.

Therefore, actual emissions monitoring and other parametric monitoring should only be considered for large sources where BACT controls have been implemented to ensure compliance with the NAAQS. Such monitoring measures would only be employed when other more reasonable monitoring measures such as fuel usage or hours of operation are inadequate to ensure compliance.

To ensure accurate, reliable and cost effective monitoring, and to be consistent with the provisions of proposed § 550.205(k), BOEM should allow applicants to submit a monitoring and recordkeeping plan which would include a description of how the applicant proposes to monitor emissions. This would allow the applicant to determine which parameters are best suited to ensure proper control equipment performance. Where the applicant proposes to use EPA or IMO-certified engines, BOEM should not require additional monitoring or source test requirements because the certification process requires the engines to meet performance criteria for the useful life of the engine as long as manufacturer-recommended maintenance is completed.

Furthermore, proposed § 550.311 identifies the conditions under which additional emissions reporting is required. BOEM should revise the proposed rule such that additional reporting will not be required for pollutants for which facility emissions are below the EET or demonstrated onshore impacts well below NAAQS. These facilities clearly are not causing or contributing to an exceedance of the NAAQS in any State, and the additional monitoring and reporting burdens are not warranted.

Proposed § 550.311(b)(1) also requires emissions measurement and reporting of every source that was included in an approved plan in addition to any source that would be classified as part of projected emissions if the plan were resubmitted under the current regulations. In effect, this provision requires a reopening of the approval conditions for existing facilities and conceivably revises the approval conditions without any approval process. BOEM should not require collection of information from existing facilities to demonstrate compliance with requirements established after their plan was approved.

### **11.3 Emissions testing should only be conducted on the largest emissions units and then only initially and following a physical modification.**

Proposed § 550.312(a) requires emission testing every three years if such testing was used to develop emission factors under proposed § 550.205 for a submitted plan. In most onshore permits and source test provisions contained in federal standards, emissions testing is limited to major emissions units and is limited to an initial test and subsequent tests only if the unit is physically modified and emissions from previous test results are no longer representative. Emissions testing is far more complicated offshore than onshore due to safety considerations and space constraints, and should be limited accordingly. Considering the remoteness of the OCS facilities, and the safety considerations and space constraints, if a facility chooses to conduct emissions testing to develop emissions factors, the emissions testing should (at most)



be required only for the largest emissions units at a facility and then only initially with subsequent testing only required if the emission unit is physically modified and previous test results are no longer representative.

#### **11.4 BOEM should exempt certain equipment from monitoring, recordkeeping and reporting.**

The level of detail the proposed rule requires is a significant concern. It may be appropriate to include significant sources of emissions (e.g. large stationary engines) that account for the majority of OCS air emissions. However, it is not practical to include small, insignificant sources that do not materially contribute to overall facility emissions, as the environmental benefits do not outweigh the significant resources and costs associated with recordkeeping, reporting and monitoring efforts.

To address this issue, we have prepared a list of “insignificant activities” that we propose would not be included in a plan or any associated emissions inventories. We propose to add a definition of insignificant activities in the form of a table in § 550.105 (see Appendix A). The insignificant activities definition includes a detailed list of activities that do not significantly contribute to emissions at an OCS facility, much less create an adverse impact to air quality onshore. We recommend that BOEM consider inclusion of this definition and the list of insignificant activities to ease the planning, monitoring and reporting burden associated with the proposed rule, as well as ensure that the focus is properly applied to the comparatively larger emissions sources.

#### **11.5 The 10 year recordkeeping requirements of § 550.187(a) and § 550.312(b)(1) as well as the proposed recordkeeping requirements in § 550.205(j) are unjustified.**

Proposed § 550.187 requires offshore operators to collect and maintain information regarding all air pollutant emissions from all emissions sources associated with their operations for a period of no less than ten years. Furthermore, proposed § 312(b) requires that offshore operators collect and maintain fuel log and activity data monthly for each emission source for a period of no less than ten years.

There is an information collection (IC) burden for the maintenance of records for ten years, which is greater than typical retention requirements for facilities under EPA or State agency jurisdiction. There is also a “non-hour” cost associated with this requirement. Maintenance of electronic records is not free and given the substantial increase in recordkeeping requirements for each plan, this burden could be substantial. The IC burden associated with recordkeeping activities could be reduced if BOEM followed typical retention policies of other State and Federal agencies, which typically require facilities to retain information for periods ranging between two and five years. As documented in Appendix A, we request that this period be reduced to no more than the shorter of five years or the life of the plan, whichever is shorter.

Although proposed § 550.205(j) requires lessees to “maintain” records of any data or information “establishing, substantiating, and verifying the basis for all information, data, and resources used to calculate their projected emissions,” it does not indicate how long these records must be maintained. (81 Fed. Reg. 19759). BOEM may not impose a potentially

interminable records retention requirement, and must specify a records retention period so the regulated community knows what is required. Accordingly, BOEM must establish a reasonable records retention period before finalizing the regulation. As documented in Appendix A we request that this period be reduced to five years or the life of the plan, whichever is shorter.

**11.6 The provisions of § 550.187 should be revised to require emissions reporting only for criteria pollutants.**

The preamble discussion indicates that BOEM does not intend to include GHGs or HAPs under the scope of the proposed rule. (81 Fed. Reg. 19751). However, by including GHGs and HAPs in the definition of “air pollutant,” GHGs and HAPs would be subject to the proposed rule, even though they are unrelated to the attainment or maintenance of the onshore NAAQS, and therefore beyond the purview of OCSLA section 5(a)(8). As discussed in Section 1.2.3 of this document, BOEM must revise the emissions reporting requirements of proposed § 550.187 to only apply to criteria pollutants that BOEM is authorized to regulate.

## 12 Plan Emissions Data Requirements

### 12.1 Proposed emission source data requirements for plans are overly burdensome, unnecessary, and in many cases impossible to provide.

Section 550.205 identifies the air emissions information that must be submitted with EPs, DPPs, and DOCDs, or application for a RUE, pipeline ROW, or lease term pipeline. This section requests detailed information for the wide range of activities associated with exploration, development and production, including construction and decommissioning, for the duration of the plan. The rule would require such detail as (for example) the serial numbers and revolutions per minute (rpm) of engines of support vessels. In many cases, this level of detail is virtually impossible to provide and is not useful for the purpose of assessing onshore NAAQS compliance.

The proposed rule requires that all emissions sources be included when estimating projected emissions. As written, this could conceivably include sources considered insignificant in other regulatory permitting programs, such as welding and painting maintenance activities, rescue boats, small storage tanks, or fugitive emissions (flanges, valves, etc.) on support vessels or MODU. There is no reasonable rationale for requiring the collection of this level of detail for small sources on the OCS, and the burden of collection of this information in terms of cost and time would far outweigh any nominal benefit of collecting it. See Section 11.4 for additional discussion.

Section 550.205 requires plans to include “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...*

*(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 paragraph (a)(1) of this section, 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 paragraph (a)(1) and (2) of this section, 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.*

This is an extraordinary information demand, and requires information that is impossible to predict at the time of application, especially for MSC (see Section 3.2). Furthermore, plans will have to be constantly updated to account for changes in the lessee's equipment and fleet (which occur frequently).

Even ignoring MSC and considering only emission units on drilling units and platforms, the level of detail requested is unnecessary. If BOEM finalizes this proposed requirement, the agency will be overwhelmed with engine data of minimal practical utility. Given the minimal impact of offshore sources to onshore air quality, as discussed in sections 1.1 and 2.3, quantifying emissions to such detail does nothing to enhance assurance that offshore sources are not threatening compliance with NAAQS onshore.

As discussed in Section 1.7, if an operator or lessee were to submit a plan in full compliance with the proposed rule, it would be impossible for BOEM to review the voluminous amount of information required under the proposed rule within the required statutory timeframes. Consequently, BOEM should only promulgate those regulations that are absolutely necessary to address the purported problem of onshore air quality and avoid imposing excessive, expensive, and time-consuming administrative burdens on lessees and the agencies that do nothing to further Congressional goals.

## **12.2 Plans should focus only on large emissions units.**

The level of detail required in the proposed rule for emissions sources described in plans is unmanageable and of great concern. It is appropriate to include large sources of emissions (e.g. large stationary engines) that account for the vast majority of OCS air emissions. However, it is not practicable to include small, *de minimis* sources or activities that do not make significant contributions to overall facility emissions.

As recommended in Section 11.4, BOEM should develop a list of "insignificant activities" that would be exempt from the plan and AQRP requirements of subparts B and C. We propose, in Appendix A § 550.105, a definition and list of insignificant activities. The proposed list includes

equipment and activities that do not significantly contribute to emissions at an OCS facility, much less create an adverse impact onshore. Excluding insignificant activities from rule requirements will ease the planning and reporting burden and maintain the focus on larger emissions sources.

### **12.3 The proposed hierarchy for estimating emissions is overly prescriptive and unwarranted.**

Section 550.205(b) of the proposed rule prescribes a hierarchy of acceptable methods for determining the emission factors for a given emission unit for use in a plan. The proposed hierarchy will require a significant amount of work to evaluate and select a method for each pollutant and each emissions source. This will exponentially increase the amount of time required to prepare emissions inventories, and yet, BOEM has not demonstrated that the current method for determining emissions is ineffective.

Under the proposed rule, if no other methods are applicable, then the lessee or operator must conduct emissions testing on the emissions source to determine the appropriate emissions factor. The other methods include use of: vendor-guaranteed or manufacturer-provided emissions or emission factors; emissions factors generated from source tests required by EPA OCS permits as BOEM emission estimates for a specific rig; a model or table, as appropriate, developed by EPA or Federal Aviation Administration (such as for marine engines, non-road engines, tanks, etc.); emissions factors from a published study conducted by a reputable source (such as California Air Resources Board); MARPOL Annex VI standards; and emissions factors from the Compilation of Air Pollutant Emission Factors, Volume 1: Stationary Point and Area Emissions Sources.

However, the proposed methodology does not account for the fact that some emission calculations do not lend themselves to a “published” emission factor. The emission factor can be derived for the site specific source. This would include glycol dehydrators, crude oil/condensate storage tanks, and amine gas sweetening units.

Further, regulatory standards to which engines are designed and certified are established for pollutant-specific emissions criteria. Other non-engine emissions source factors are also typically pollutant specific. BOEM should clarify that emission factor evaluations will be conducted on a per pollutant basis, such that an operator may use engine certifications or emissions testing to determine emissions factors for an applicable pollutant and other types of emission factor methods for other pollutants (i.e., AQR default factors).

In reviewing various state and federal agency permitting programs, the process by which an emission factor is selected is at the discretion of the owner/operator of the facility. Onshore facilities are typically not restricted to a hierarchy priority of emission estimation methodologies. In light of all the possible emission estimation methodologies, and to account for advancements in such methodologies, BOEM should leave selection of the methodology to the OCS operators. BOEM will have the opportunity to review and comment on the acceptability of the emissions factors as part of the plan approval process. Also, by including such a detailed list of emission estimation methodologies as part of the rule text, BOEM is limiting their ability to make changes to the list without triggering the rulemaking process.

## 12.4 The air quality emissions reporting spreadsheets are incomplete.

Section 550.205 of the proposed rule identifies what air emissions information must be submitted with offshore plans, including the acceptable methods for determining the appropriate emissions factors to be used and how to report facility emissions, attributed emissions and projected emissions for offshore plans. In conjunction with the proposed rule, BOEM released draft revised air emissions calculations workbooks that will be used to estimate air emissions for EPs (EP\_AQ.xls) and DOCDs (DOCD\_AQ.xls) in order to meet the requirements of § 550.205.

The following list outlines discrepancies noted between the proposed rule and the AQR workbooks, and includes recommendations to correct and streamline the IC burden costs for offshore operators. In offering suggested improvements, we are not conceding that we agree with the proposed rule requirements nor that the information addressed is necessary for BOEM to perform its functions or useful in determining whether OCS activities significantly affect the air quality of a state. Furthermore, as discussed in Section 2.7, a minimum of 180 days was needed to conduct a thorough review of the proposed rule and supporting information. The list below reflects as complete a review of the spreadsheets as time allowed.

- The workbooks as released for review and comment use EPA AP-42 references as the primary source of emission factors and only reference industry studies or BOEM's 2005/2011 Gulfwide emissions inventory if no AP-42 factor is available. In contrast, the proposed rule lists emission factor references in a prioritized order, stating that a method may only be used if all other higher priority methods are not available. According to § 550.205(b), AP-42 factors should only be used when factors that are based on source test results or that are vendor-guaranteed or provided by the manufacturer are not available.
- The draft workbooks do not report estimated emissions for each of the emissions categories required under the proposed rule. For example, the SUMMARY page only presents a single maximum 12-month rolling total emissions value for each pollutant, which would represent the "projected emissions" for that pollutant. However, per § 550.205(c)(2), the maximum 12-month rolling sum of emissions needs to be calculated from each facility and from each individual emissions source on or physically connected to each facility. The proposed rule also requires that the lessee report maximum rolling-12 month "attributed emissions" (during the same 12-month period as the facility maximum), which are not calculated by the workbooks.
- Similar to the 12-month sum of emissions discussed above, § 550.205(c)(3), (d), and (e) require the estimation of the maximum projected peak hourly emissions. The draft workbooks calculate hourly emissions for individual sources based on estimated annual emissions. Therefore, those hourly emissions essentially represent average hourly emissions and not maximum projected peak hourly emissions as required by the rule. Furthermore, the draft workbooks overestimate the total hourly emissions for each operating year (each EMISSIONS sheet), because they assume all sources will be operating at the same time rather than accounting for the temporal distribution of source operations. For example, if a support vessel operates from 1/1/16-5/31/16 with 40.8 lb/hr of PM10 emissions and another source operates from 6/1/16-12/31/16 with 40.8 lb/hr of PM10 emissions, the workbooks sum these values together yielding a maximum value of 81.6 lb/hr of PM10 emissions instead of estimating 40.8 lb/hr of PM10. Similarly, a facility may have multiple power generating turbines with one turbine off-line acting as a spare. The AQR spreadsheet would currently estimate emissions as if all turbines were

operating. BOEM should update the workbooks to calculate all of the emissions categories or revise the regulation to clarify that only the emissions categories calculated by the workbooks are necessary. BOEM should also ensure that the AQR workbooks do not overestimate maximum hourly emissions.

- The ability to allocate “attributed emissions” to multiple facilities is not currently functional in the AQR spreadsheet as described under § 550.205(d)(5). It is evident that the inclusion of this functionality was started but not completed.
- The draft workbooks currently do not account for all activities regulated under the proposed new regulations. Specifically, the workbooks do not account for decommissioning activities.
- The draft workbooks currently do not account for including aircraft and onshore facility when predicted concentrations attributable to offshore sources are within 95 percent of a SIL.
- It is unclear how the workbooks could be modified to account for consolidation of multiple facilities, especially in regard to calculating maximum rolling 12-month values of complex total emissions.
- Based on a review of the workbook instructions, BOEM must revise the instructions to more clearly follow the regulatory requirements and include additional instructions for proper use of the workbook. This would minimize the burden on the offshore operators as well as BOEM staff when reviewing completed workbooks. The revisions should be completed prior to publication of the final rule and include an opportunity for additional comment.
- Section 550.205(a) of the proposed regulation requires a substantial amount of information for emission sources that could be captured in the AQR spreadsheets. It would reduce the IC burden on offshore operators if the AQR spreadsheets were revised to include all relevant data requested by § 550.205(a)(1-5) rather than having to provide some of the data in the spreadsheet and the remaining data in separate tables as part of a plan submittal.
- The draft AQR spreadsheets as released for comment have no mechanisms to include ERMs (operational controls, equipment replacement, BACT, or emission credits) that will be employed or acquired as part of a proposed OCS operation. Updating the AQR spreadsheets to standardize and account for ERMs would reduce the IC burden on offshore operators as well as minimize BOEM review time.
- The proposed rule includes a new requirement for ROW, RUE and lease-term pipeline applications to include air emissions data with the application. However, BOEM has not provided a draft air emissions calculations workbook or similar tool for submitting this information.

Notwithstanding the comments above, we request that BOEM update the draft AQR workbooks in order to align with the proposed redline/strikeout rule requirements provided in Appendix A. BOEM must update the workbooks and allow for additional comment prior to publication of the final rule.

## **12.5 BOEM cannot regulate emissions from aircraft and onshore facilities, which are outside the scope of BOEM's jurisdiction.**

As discussed in more detail in Section 1.2, BOEM's proposed rule impermissibly "attributes" non-OCSLA authorized activity (i.e., MSC) emissions to the emissions of a facility, presumably regulating the emissions of platforms and drillships to offset the emissions of "associated" activities. BOEM's regulatory authority under section 5(a)(8) of OCSLA is limited to activities that it "authorizes," which includes "artificial islands and installations...permanently or temporarily attached to the seabed, which may be erected thereon for the purpose of exploring for, developing, or producing resources therefrom." 43 U.S.C. § 1333(a). BOEM has no authority to authorize aircraft or onshore facilities, which are clearly not attached to the seabed for the purpose of exploring for, developing or producing oil or gas. BOEM therefore has no authority to regulate their emissions or any other aspect of their operation. Because aircraft and onshore facilities are not "activities authorized" under OCSLA for the purposes of section 5(a)(8), they and their emissions are beyond the purview of any rule BOEM might promulgate.

### **12.5.1 We support BOEM's determination that collection of emissions data from aircraft and onshore facilities is unnecessary.**

BOEM's proposal to not require the collection of emissions data from aircraft and onshore facilities is appropriate, because, as stated in the preamble (81 Fed. Reg. 19737):

*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 MSC, 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.*

Furthermore,

*Emissions from large sources onshore are in many cases already identified and regulated by the EPA, or by the States in the context of their respective SIPs. In addition, under the CAA the EPA 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. (81 Fed. Reg. 19738).*

Based on the reasons provided, and because aircraft and onshore facilities are not "activities authorized" under OCSLA for the purposes of Section 5(a)(8), we support BOEM's proposal not to require the collection of emissions data for these sources.



### **12.5.2 Air dispersion modeling of emissions from aircraft and onshore sources is unwarranted.**

Under proposed § 550.205(m), applicants would be required to provide emissions information and model emissions from aircraft and onshore facilities when predicted concentrations attributable to offshore sources are within 95 percent of a SIL. BOEM has not provided a scientific reasoning for the seemingly arbitrary 95 percent threshold nor has it reconciled the valid reasons listed in Section 12.5.1 for not including these sources. Further, BOEM proposes that operators combine modeled concentrations from aircraft and onshore facilities with the impacts of the projected emissions, without consideration that the impacts from aircraft and onshore facilities are negligible and rarely coincide in time or location with impacts from OCS facilities. For this reason, these data are not useful for assessing onshore NAAQS compliance. There is no environmental benefit associated with requiring detailed information about aircraft even if OCS source contributions to onshore concentrations are within BOEM's arbitrary threshold of 95 percent of a SIL.

### **12.6 It is unreasonable to regulate air emissions from right-of-use and easement and right-of-way activities.**

The proposed rule includes a new requirement for ROW, RUE and lease-term pipeline applications to include air emissions data with the application. RUE and ROW applications do not require inclusion of air emissions data under the current regulations,<sup>38</sup> and BOEM has not demonstrated that these activities significantly affect onshore air quality or threaten compliance with the NAAQS in onshore areas. Nor have RUE and ROW emissions been identified as significant sources in any affected state SIPs. Consequently, it is unreasonable to regulate emissions from these activities.

Furthermore, collecting emissions resulting from installing and operating pipeline that support OCS operations would be unduly burdensome because available data indicate that the level of relevant emissions from pipeline installation and operation is generally an extremely small percentage of the EETs. A review of typical offshore ROW operations indicates that maximum projected emissions from installing a pipeline and operating a junction platform associated with a ROW are on the order of 0-10 percent of the EETs. Similar to BOEM's position on aircraft emissions, because the emissions from activities associated with ROW applications are de minimis, the collection of emissions data from these activities is unwarranted.

### **12.7 BOEM cannot regulate emissions of black carbon, hazardous air pollutants, hydrogen sulphide, and greenhouse gases.**

As discussed in Section 1.2.3, § 550.105 of the proposed rule provides new definitions. The definition of "Air Pollutant" has been expanded beyond criteria pollutants to include precursor pollutants, HAP, and GHG. Inclusion of HAP and GHG increases the number of pollutants BOEM may collect information on from seven to approximately 200.

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<sup>38</sup> BOEM issued NTL 2015-N06 pertaining to RUE (new installations) which clarified that in order for BOEM to grant the RUE request for installations, the proposed activities by OCS lessees are also subject to the Plans approval process and the regulation requirements set forth in 30 CFR Part 550, subpart B.

The preamble discussion indicates that BOEM does not intend to include GHGs or HAPs under the purview of the proposed rule. (81 Fed. Reg. 19751). However, by including GHGs and HAPs in the definition of “air pollutant,” GHGs and HAPs would be subject to the proposed rule, even though they are unrelated to the attainment or maintenance of the onshore NAAQS, and therefore beyond the purview of OCSLA section 5(a)(8).

Although HAPs and GHGs are not a component of the modelling analyses and are not at this time subject to ERM, the proposed rule imposes a number of requirements to HAPs and GHGs as if they were criteria pollutants:

- Proposed § 550.187 would codify and make mandatory the existing GOMR mechanism for reporting ongoing emissions under the GOADS, as provided for in BOEM NTL No. 2014-G01. NTL No. 2014-G01 currently requires operators to collect and report activity information including facility, equipment, and fuel usage. BOEM uses that information to calculate emissions data for NAAQS criteria pollutants. BOEM also calculates emissions data for GHG to assist operators with their mandatory reporting of greenhouse gases to the EPA. However, proposed § 550.187(a) would expand the requirements to require operators to “collect and maintain information regarding all air pollutant emissions from all emissions sources associated with your operations” which would include collection of GHG and HAP information.
- Under proposed § 550.303, BOEM would establish “the rate of projected emissions, calculated for each air pollutant, above which facilities would be subject to the requirement to perform modelling,” and require lessees and operators to calculate, report, and compare projected emissions of pollutants for the purpose of determining whether modelling is required. Proposed § 550.303(d) would require lessees and operators to account for, consolidate, and model all “air pollutant emissions” from multiple facilities. As the definition of “air pollutant” is currently drafted, these requirements would apply to GHG and HAP emissions even though these emissions are unrelated to the attainment and maintenance of the NAAQS.

BOEM requires applicants to identify SO<sub>2</sub> emissions attributable to H<sub>2</sub>S flaring but also requires identification of H<sub>2</sub>S emissions if they exceed the Significant Emission Rates (SER) established in EPA’s PSD program. While there is a need to account for SO<sub>2</sub> emissions due to flaring of H<sub>2</sub>S, there is no basis under OCSLA to require reporting of H<sub>2</sub>S emissions because there is no NAAQS for H<sub>2</sub>S.

Because OCSLA does not authorize BOEM to promulgate emission regulations for any purpose other than to the extent that such emissions have a significant impact on onshore air quality, BOEM must remove HAPs and GHGs from the definition of “air pollutant” and from the requirements of the proposed rule.

For similar reasons, BOEM’s consideration of future regulation of black carbon in the preamble is precluded by its lack of OCSLA authority to do so. EPA has not promulgated any air quality standards for black carbon. To the extent black carbon is regulated under the CAA, it is regulated as a component of PM<sub>2.5</sub>.

## **13 Other Comments**

### **13.1 BOEM should clarify the terminology for responsible entity.**

The proposed rule uses the phrase "lessee, operator and owner" in several places. However, the "designated operator" is the entity responsible for developing, submitting and seeking approval of plans. It is our understanding that it is not BOEM's intent to change the compliance responsibility of the designated operator, who is ultimately responsible for plan submittal and compliance. Consequently, BOEM must clarify the rule text to refer to "designated operator" when referring to the entity responsible for plan submittal and compliance.

### **13.2 OCSLA does not provide BOEM with authority to incorporate documents and establish them as regulatory requirements.**

In proposed § 550.198, BOEM proposes to incorporate by reference certain documents and make them "regulatory requirements." However, BOEM only has the authority to regulate emissions from activities it authorizes to the extent those activities have a significant effect on state air quality and that cause or contribute to a violation of the NAAQS. The documents proposed for incorporation by reference under proposed § 550.198 are not related to this purpose. Instead, they are guidance documents that do not contain mandatory requirements, (e.g. EPA AP-42), or are mandatory standards that are unrelated to BOEM's OCSLA authority (e.g. MARPOL Annex VI, which is applicable to vessel operators, not OCS lessees/operators). BOEM may not make guidance documents mandatory or otherwise hijack regulatory processes that are outside of its jurisdiction to somehow enforce compliance on OCS lessees and operators.

In addition, it is unclear how an operator would comply with non-mandatory guidance documents such as EPA AP-42 or the MOVES Users Guide, which are not worded in mandatory terms and compliance with which is uncertain. It is also unclear how operators are to comply with mandatory regulatory requirements that are not intended for lessees and operators. Therefore, BOEM must remove § 550.198(a)-(d) in its entirety.

## **APPENDIX A: REQUESTED CHANGES TO PROPOSED RULE**

Throughout our comments, we have objected to many of these proposed rule provisions as beyond the scope of BOEM’s authority and contrary to law, as well as being impracticable and unworkable. If BOEM nevertheless proceeds with these rule provisions, the agency should, at a minimum, limit certain specified rule provisions according to our suggestions for revised language below.

<b>New Rule Section Title</b>	<b>New Rule Reference</b>	<b>New Rule Text</b>	<b>Comments/Issues/Questions</b>	<b>Proposed Alternate Language</b>
<i>Definitions</i>	550.105	<p><i>Air pollutant</i> means any of the following:</p> <p>(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 section 109 of the Clean Air Act (CAA);</p> <p>(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 (NH3), and those criteria pollutants (CPs) that are also precursors for other CPs (such as sulphur dioxide (SO2));</p> <p>(3) any USEPA-defined Greenhouse Gas (GHG), as defined at 40 CFR 98.6, pursuant to section 111 of the CAA; and</p> <p>(4) Any USEPA-defined Hazardous Air Pollutant, as defined at 40 CFR 63.2, pursuant to section 112 of the CAA</p>	<p>As explained in Section 1.2.3 of our comments, BOEM’s mandate under OCSLA is to ensure that OCSLA authorized activities do not significantly affect onshore air quality relevant to NAAQS. NAAQS are based on levels of criteria pollutants and precursor air pollutants. Therefore, it is not appropriate to include hazardous air pollutants and greenhouse gases in the definition of “air pollutant” as these are not covered by the NAAQS. See Section 12.7 of our comments for additional discussions on this issue.</p> <p>Additionally, BOEM states at 81 Fed. Reg. at 19,748 the “definitions related to air quality terms are currently located in three places in § 550: §§ 550.105, 550.200, and 550.302.” However, several definitions of air quality terms (air pollutant, attainment area, BACT, emission offsets, existing facility, minerals, non-attainment area, projected emissions) are also contained in §250.105. If BOEM were to proceed with modifying or removing the 30 CFR 550.105 &amp; 550.302 definitions, it would introduce regulatory disconnect between the use of the terms under BEOM’s &amp; BSEE’s regulation. Such a disconnect creates unnecessary regulatory complexity. It is our request that BSEE revise or delete those definitions from § 250.105 under a separate rulemaking.</p> <p>Finally, consistent with the Environmental Protection Agency’s (EPA) regulatory requirements contained in 40 CFR 51.165(a)(1)(xxxvii) it is requested that BOEM clarify that VOC and NH3 are presumed not to be precursors to PM2.5, unless a State demonstrates to the Administrator’s satisfaction or EPA demonstrates that emission of VOC or NH3 from OCS sources are a significant contributor to an area’s ambient PM2.5 concentrations. As such, we request that the USEPA citation for precursor air pollutant identified by the at 40 CFR 51.166(b)(49)(i) which address this issue be included in the definition of air pollutant.</p>	<p><i>Air pollutant</i> means any of the following:</p> <p>(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 section 109 of the Clean Air Act (CAA);</p> <p>(2) Any precursor air pollutant identified by the USEPA at 40 CFR 51.166(b)(49)(i) <del>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 (NH3), and those criteria pollutants (CPs) that are also precursors for other CPs (such as sulphur dioxide (SO2));</del></p> <p>3) VOCs and NH3 are presumed not to be precursors to PM2.5, unless a State demonstrates to the EPA Administrator’s satisfaction or EPA demonstrates that emissions of VOCs or NH3 from OCS sources in a specific area are a significant contributor to that area’s ambient PM2.5 concentrations; <del>any USEPA-defined Greenhouse Gas (GHG), as defined at 40 CFR 98.6, pursuant to section 111 of the CAA; and</del></p> <p>(4) <del>Any USEPA-defined Hazardous Air Pollutant, as defined at 40 CFR 63.2, pursuant to section 112 of the CAA</del></p>
	550.105	<p><i>Emissions source</i> 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 produces or results in the release of one or more air pollutant(s), including the flashing, flaring or venting of natural gas, involves burning any oil or well test fluids, or 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.</p>	<p>The proposed definition of emissions source attempts to list any and all types of equipment and activities that may result in emissions to the atmosphere. This creates a definition that is overly prescriptive and complex. Attempting to list all potential equipment and processes that generate regulated air emissions is not needed to fully define applicable emission sources.</p> <p>It is suggested to simplify the definition as shown to the right. The proposed alternate definition would be inclusive of emission sources listed in the draft definition. However, it is important that text is added (in red) to clarify that an emissions source releases pollutants to the atmosphere and does not include equipment where emissions are recovered and utilized in a beneficial manner as well as limiting the term pollutant to criteria and precursor pollutants. As discussed at length in our comments, BOEM’s mandate under OCSLA is to ensure that OCSLA authorized activities do not significantly affect onshore air quality relevant to NAAQS. NAAQS are only based on levels of criteria pollutants and precursor air pollutants.</p> <p>BOEM proposes that all emissions sources be included when estimating projected emissions. This could conceivably include insignificant sources, such as welding and painting maintenance activities, rescue boats, small storage tanks, or fugitive emissions (flanges, valves, etc.) on support vessels or mobile offshore drilling units (MODU). There is no reasonable rationale for requiring the collection of this level of detail for small sources on the OCS, and the burden of collection of this information in terms of cost and time would far outweigh any nominal benefit of collecting it. As such, we are proposing to introduce the concept of creating an “insignificant activities” definition, similar to what most states have included in their air quality rules. Hence, a statement has been added to the definition of emissions source to clarify that insignificant activities are not considered emissions sources.</p> <p>Most state environmental regulatory agencies that have authority from the USEPA to implement and enforce the Part 70/Title V Federal Operating Permit Program and the New Source Review program under the Clean Air Act include “Insignificant Activities” lists in the air permitting rules. A few examples of State agencies that include Insignificant Activities include Louisiana Department of Environmental Quality, Mississippi Department of Environmental Quality, Alabama Department of Environmental Management and the Texas Commission on Environmental Quality. Furthermore, the USEPA under its Clean Air Act Title V Operating permits program</p>	<p><i>Emissions source</i> means a device or substance that emits <del>criteria or precursor</del> air pollutant(s) <del>to the atmosphere</del> in connection with any authorized activity described in your plan. Several emissions sources may exist on a single facility, <del>aircraft, or vessel, or vehicle. Anything that produces or results in the release of one or more air pollutant(s), including the flashing, flaring or venting of natural gas, involves burning any oil or well test fluids, or generates fugitive emissions, is an emissions source. Examples include, but are not limited to:</del> <del>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.</del> Equipment and activities listed as “insignificant activities” are not considered emissions sources for purposes of subparts A, B, C.</p>

New Rule Section Title	New Rule Reference	New Rule Text	Comments/Issues/Questions	Proposed Alternate Language																												
			allows the use of “Insignificant Activities” to exempt certain emission sources. Under 40 CFR 70.5(c), the EPA may approve as part of a State program a list of insignificant activities and emissions levels which need not be included in permit applications.																													
	550.105	<i>Federal Land Manager (FLM)</i> means the Secretary of the Department with authority over any federal Class I area or sensitive Class II area (or the Secretary’s designee).	As discussed in Sections 1.2.7 and 2.2 of our comments, BOEM’s sole authority is for regulating compliance with the NAAQS. Therefore, all proposed rule provisions related to Class I areas, Sensitive Class II areas, and consultation with FLMs or Federally-recognized Indian tribes should be removed.	<del><i>Federal Land Manager (FLM)</i> means the Secretary of the Department with authority over any federal Class I area or sensitive Class II area (or the Secretary’s designee).</del>																												
	550.105	<i>Flaring</i> 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.	The proposed definition contains language that is unnecessary. Furthermore, we request that the current definitions of flaring in § 250.105 be updated to be consistent with the final definition promulgated under § 550.105. If BOEM were to proceed with changing the 30 CFR 550.105 definition of flaring but not change the definition in § 250.105, it would introduce regulatory disconnect between the uses of the term under BSEE’s regulation. Such a disconnect creates unnecessary regulatory complexity. Finally, we are proposing to further simplify the definition by replacing the terms “natural gas or other hydrocarbons” with the general term “gas”. This change is more inclusive and will eliminate unneeded text.	<del><i>Flaring</i> means the burning of natural gas or other hydrocarbons and the release of the associated emissions as it is released 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</del>																												
	550.105	Proposed new definition.	<p>The level of detail required for emissions sources described in plans is a significant concern in this proposed rule. It is appropriate to include substantial sources of emissions (e.g. large stationary engines) that account for the majority of OCS air emissions. However, as discussed in Section 12.2 of our comments it is not practicable to include small, insignificant sources that do not make significant contributions to overall facility emissions. Due to the lack of environmental benefit compared to the significant effort required to collect information about insignificant sources we request that insignificant activity emission sources not be required for inclusion in plan submittals or associated emission inventories.</p> <p>The proposed definition and list of insignificant activities (see right) include equipment and activities that do not significantly contribute to emissions at an OCS facility, much less create an adverse impact onshore. It is strongly requested that BOEM consider inclusion of this list of insignificant activities to ease the planning and reporting burden associated with the proposed rule, as well as ensure that the proper focus is applied to comparatively larger emissions sources.</p>	<p><b>Proposed New Definition</b>  <i>Insignificant Activities</i> means activities with emissions levels which have been determined to be at levels that need not be further assessed for the purposes of this part. Emissions sources identified below as “insignificant activities” are exempt from all air quality requirements in 30 CFR 550:</p> <table border="1" data-bbox="2001 778 2473 1816"> <thead> <tr> <th colspan="2">Insignificant Activities List</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>external combustion equipment with a design rate less than or equal to 10 million btu per hour;</td> </tr> <tr> <td>2.</td> <td>storage tanks, except those storing crude oil and condensate;</td> </tr> <tr> <td>3.</td> <td>any engine with a maximum horsepower rating less than or equal to 100 hp;</td> </tr> <tr> <td>4.</td> <td>emissions from laboratory equipment/vents used exclusively for routine chemical or physical analysis for quality control or environmental monitoring purposes;</td> </tr> <tr> <td>5.</td> <td>noncommercial water washing operations of empty drums less than or equal to 55 gallons;</td> </tr> <tr> <td>6.</td> <td>portable fuel tanks used on a temporary basis in maintenance and construction activities;</td> </tr> <tr> <td>7.</td> <td>emissions from process stream or process vent analyzers;</td> </tr> <tr> <td>8.</td> <td>storage tanks containing soaps, detergents, surfactants, waxes, glycerin, vegetable oils, greases, animal fats, sweetener, molasses, corn syrup, aqueous salt solutions, or aqueous caustic solutions;</td> </tr> <tr> <td>9.</td> <td>catalyst charging operations;</td> </tr> <tr> <td>10.</td> <td>mud degassing operations;</td> </tr> <tr> <td>11.</td> <td>activities which occur strictly for maintenance of buildings, grinding, cutting, welding, woodworking, general repairs, janitorial activities, steam cleaning, and water washing activities;</td> </tr> <tr> <td>12.</td> <td>surface-coating of equipment during miscellaneous maintenance and construction activities, including spray painting, roll-coating and painting with aerosol spray cans.</td> </tr> <tr> <td>13.</td> <td>miscellaneous equipment maintenance or construction, which may include, but is not limited to, such activities as: welding, steam cleaning, equipment used for hydraulic or hydrostatic testing, miscellaneous solvent use, miscellaneous sandblasting, sweeping, insulation removal, acid washing, caustic washing, water blasting, application of refractory and insulation, brazing, soldering, the use of adhesives, grinding, and cutting;</td> </tr> </tbody> </table>	Insignificant Activities List		1.	external combustion equipment with a design rate less than or equal to 10 million btu per hour;	2.	storage tanks, except those storing crude oil and condensate;	3.	any engine with a maximum horsepower rating less than or equal to 100 hp;	4.	emissions from laboratory equipment/vents used exclusively for routine chemical or physical analysis for quality control or environmental monitoring purposes;	5.	noncommercial water washing operations of empty drums less than or equal to 55 gallons;	6.	portable fuel tanks used on a temporary basis in maintenance and construction activities;	7.	emissions from process stream or process vent analyzers;	8.	storage tanks containing soaps, detergents, surfactants, waxes, glycerin, vegetable oils, greases, animal fats, sweetener, molasses, corn syrup, aqueous salt solutions, or aqueous caustic solutions;	9.	catalyst charging operations;	10.	mud degassing operations;	11.	activities which occur strictly for maintenance of buildings, grinding, cutting, welding, woodworking, general repairs, janitorial activities, steam cleaning, and water washing activities;	12.	surface-coating of equipment during miscellaneous maintenance and construction activities, including spray painting, roll-coating and painting with aerosol spray cans.	13.	miscellaneous equipment maintenance or construction, which may include, but is not limited to, such activities as: welding, steam cleaning, equipment used for hydraulic or hydrostatic testing, miscellaneous solvent use, miscellaneous sandblasting, sweeping, insulation removal, acid washing, caustic washing, water blasting, application of refractory and insulation, brazing, soldering, the use of adhesives, grinding, and cutting;
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13.	miscellaneous equipment maintenance or construction, which may include, but is not limited to, such activities as: welding, steam cleaning, equipment used for hydraulic or hydrostatic testing, miscellaneous solvent use, miscellaneous sandblasting, sweeping, insulation removal, acid washing, caustic washing, water blasting, application of refractory and insulation, brazing, soldering, the use of adhesives, grinding, and cutting;																															

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				<p>14. refueling emissions from forklifts, cranes, carts, maintenance trucks, helicopters, marine vessels, and other similar sources.</p> <p>15. office activities such as photocopying, blueprint copying, and photographic processes;</p> <p>16. emissions from pipeline pigging and repair operations;</p> <p>17. fugitive dust emissions from mud, cement, or dry chemical transfers, storage and use;</p> <p>18. emissions from storage or use of water-treating chemicals;</p> <p>19. miscellaneous additions or upgrades of instrumentation or control systems;</p> <p>20. emissions from food preparation in kitchens, cafeterias, and facilities where food is consumed on-site;</p> <p>21. emissions from air contaminant detectors, air contaminant recorders, combustion controllers, or combustion shutoff devices;</p> <p>22. buildings, cabinets, and facilities used for storage of chemicals in closed containers;</p> <p>23. use of products for the purpose of maintaining air conditioning or refrigeration units;</p> <p>24. stacks or vents to prevent escape of sanitary sewer gases through plumbing traps and marine sanitation devices;</p> <p>25. emissions from equipment lubricating systems (i.e., oil mist);</p> <p>26. potable water treatment systems and sewage treatment systems</p> <p>27. instrument air systems, excluding fuel-fired compressors;</p> <p>28. air vents from air compressors;</p> <p>29. periodic use of air for cleanup;</p> <p>30. solid waste dumpsters;</p> <p>31. emissions from pneumatic starters on reciprocating engines, turbines, or other equipment, pneumatic pumps, and pneumatic pressure level controllers.</p> <p>32. emissions from engine crankcase vents;</p> <p>33. generators, boilers, or other fuel burning equipment that is of equal or smaller capacity than the primary operating unit, that cannot be used in conjunction with the primary operating unit [except for short durations when shutting down the primary operating unit (maximum of 24 hours) and when starting up the primary operating unit until it reaches steady-state operation (maximum of 72 hours)], and that does not increase emissions of any criteria or precursor air pollutant;</p> <p>34. lifeboats and fast rescue boats;</p> <p>35. emissions from firefighting training or testing;</p> <p>36. produced water treatment units (e.g., Wemco units) on crude oil and natural gas production platforms;</p> <p>37. emergency electrical power generators used only during power outages or periodic testing;</p> <p>38. emissions associated with an oil spill or emergency response action, exercise or drill;</p> <p>39. emissions associated with laundry operations, including but not limited to the operation of washers, extractors, dryers;</p>



Appendix A - Requested Changes to Proposed Rule

New Rule Section Title	New Rule Reference	New Rule Text	Comments/Issues/Questions	Proposed Alternate Language
				<p>40. Emissions associated normal use of consumer-type cleaning or disinfecting products or medical products such as furniture polish, spray disinfectants, cleansers, hand sanitizers, asthma inhalers, etc.;</p> <p>41. refuse incinerators;</p> <p>42. temporary sources that operate less than 60 days;</p> <p>43. other similar sources that the Regional Supervisor determines are insignificant activities;</p> <p>44. Emission units that emit no more than 5 tpy of any criteria or precursor air pollutant.</p>
	550.105	<i>Minerals</i> 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.	No comments regarding this definition.	N/A
	550.105	<i>Mobile support craft</i> (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.	More clarity is needed in determining what is meant by “connected to another facility.” It is requested that the phrase “by a walkway” be added. This addition will eliminate confusion and inconsistent application when the rule is applied. For example, a supply vessel may be temporarily servicing a facility by supplying potable water or diesel fuel via a transfer hose. This type of operations should not be considered as “connected to another facility.” This clarification would not change how air emissions are accounted for under § 550.205(d).	<i>Mobile support craft</i> (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 or part of facility as specified in the definition of facility in § 550.302(b)a-facility-while-temporarily-attached-to-the-seabed-or-connected-to-another-facility.
	550.105	<i>Offshore vehicle</i> 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.	No comments regarding this definition.	N/A
	550.105	<i>Right-of-use and easement (RUE)</i> 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.	To maintain consistency with BSEE definitions found in § 250.105 it is requested to align the definitions of “right of use” and “easement” as two separate terms.	<p><del><i>Right-of-use and easement (RUE)</i> 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.</del></p> <p><i>Right-of-use</i> means any authorization issued under 30 CFR Part 550 to use OCS lands.</p> <p><i>Easement</i> means an authorization for a nonpossessory, nonexclusive interest in a portion of the OCS, whether leased or unleased, which specifies the rights of the holder to use the area embraced in the easement in a manner consistent with the terms and conditions of the granting authority.</p>
	550.105	<i>State</i> 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).	No comments regarding this definition.	N/A
	550.105	<i>Venting</i> means the release of gas into the atmosphere, including through 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.	To maintain consistency with BSEE definitions found in § 250.105 it is requested to adopt the BSEE definition of venting. Note this definition is consistent with the current definition contained in in § 550.105.	<del><i>Venting</i> means the release of gas into the atmosphere, including through a stack into the atmosphere 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.</del> This includes gas that is released underwater and bubbles to the atmosphere.
<b>May I use or be required to use alternate procedures or equipment?</b>	550.141(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.	In § 550.141(d), the Proposed Rule provides BOEM authority to temporarily suspend the use of equipment that emits air pollutants, or to implement operational control(s) on the use of such equipment, for the purpose of “protecting public health” when an adjacent State or locality declares an “air quality episode or emergency.” This provision is inconsistent with the scope of BOEM’s authority under Section 5(a)(8) of OCSLA, which only allows BOEM to regulate for “compliance with the [NAAQS].” Accordingly, even if there is an onshore emergency, that emergency must be related to compliance with the NAAQS, and BOEM must demonstrate that the OCS facility at issue is (1) significantly impacting the ambient air quality of that state, and (2) causing or contributing to the NAAQS violation that gives rise to the state-declared “emergency,” before it may impose any operational control or limitation on the use of equipment. The probability that such a situation could occur is extremely remote. As BOEM itself acknowledges in the preamble to the rule and in its many environmental analyses, it is unlikely that an adjacent state will experience any significant, much less NAAQS-violative, impact from an OCS facility. Given this, it is extremely unlikely that reducing an OCS facility’s emissions would provide any benefit in mitigating the state emergency or relate to onshore compliance with the NAAQS. Accordingly, proposed § 550.141(d) should be removed from the proposal.	<del>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 criteria or precursor 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 for criteria or precursor pollutants, provided that any such suspension or operational control(s) would not cause an immediate threat to safety or the environment, and it can be determined that your OCS source is contributing to the State or local air quality episode or emergency.</del>



<b>New Rule Section Title</b>	<b>New Rule Reference</b>	<b>New Rule Text</b>	<b>Comments/Issues/Questions</b>	<b>Proposed Alternate Language</b>
	550.141(e)	<p>With respect to published documents cited in these regulations, including those incorporated by reference in § 550.198, the following provisions apply:</p> <p>(1) 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.</p> <p>(2) In the case of USEPA documents, you may always use the most recent version approved by the USEPA.</p>	<p>As technical knowledge and scientific evaluation evolves, it is imperative that BOEM’s rules incorporate the most recent, state-of-the-art science. As noted in our below comments to § 550.198, there is no need for the documents to be incorporated by reference. If BOEM elects to proceed with the listing of published documents, it is imperative that the language be changed to allow the use of the most recent, state-of-the-art science. Therefore, it is requested that bullet item 1) in this paragraph be changed to say that the most recent version of any supplemental technical document may be used as a standard and the Regional Supervisor may request any sufficiency determinations from the publishing body rather than from the individual operators.</p> <p>If the language is not altered, BOEM may be forced into largely unworkable situations whereby BOEM will be inundated with “alternative compliance” requests from a number of operators each time the incorporated by reference documents undergo the typical processes by which they are updated. Such an administrative burden is not anticipated under the IC burden hours included in the preamble.</p>	<p>With respect to published documents cited in <del>these regulations</del> Subpart B, including those incorporated by reference in § 550.198, the following provisions apply:</p> <p>(1) In each instance, the applicable document is the most recent version approved by the publishing body. <del>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.</del></p> <p>(2) In the case of USEPA documents, you may always use the most recent version approved by the USEPA.</p>
<b>When will BOEM grant me a right-of-use and easement, and what requirements must I meet?</b>	550.160(f)	<p>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, 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.</p>	<p>As discussed in Section 12.6 of our comments, RUE and ROW applications do not require air emissions data to be included under the current regulations and BOEM has not demonstrated that these activities significantly affect onshore air quality or threaten compliance with the NAAQS in onshore areas. Therefore, it is requested that this provision be deleted.</p>	<p><del>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, 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.</del></p>
<b>What region-wide offshore air emissions data must I provide?</b>	550.187(a)	<p><i>OCS emissions inventory.</i> 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 [EFFECTIVE DATE OF THE FINAL RULE], you must report this information according to the timeframes specified in 40 CFR 51.30(b).</p>	<p>Throughout the proposed the terms “lessee” and “operator” appear to be used interchangeably. It is requested that where these terms appear that the term “designated operator” be used to ensure that it is clear that the designated operator of any OCS facility is the responsible party. This approach is consistent with implementation of other OCS requirements.</p> <p>As noted in other comments, specificity should be added to this paragraph that clarifies the pollutants required for the inventory are criteria and precursor air pollutants.</p> <p>81 Fed. Reg. at 19751 acknowledges that USEPA also estimates mobile source emissions of commercial marine vessels, which makes the inclusion of marine support craft into the OCS emission inventory unnecessary. Furthermore as discussed in Section 1.2.4 of our comments BOEM does not have the authority to regulate MSCs. As such, we request that MSCs be excluded from emission inventory requirements as well as all provisions of this regulation.</p> <p>As discussed in Section 11.5 of our comments, a record retention period of 5 years or the life of the plan, whichever is shorter, aligns with similar USEPA and State air quality programs. We are not aware of any other air quality programs that require a 10-year record retention schedule.</p> <p>BOEM is the lead agency for air quality in the Western and Central Gulf of Mexico, and the Arctic OCS regions. Therefore, we request the deletion of any references to USEPA requirements for the National Emissions Inventory. It is incumbent on BOEM to coordinate with USEPA to ensure that emission inventories for OCS facilities are coordinated with USEPA’s schedule for the National Emissions Inventory. BOEM may elect to continue its current process by which it communicates upcoming agency collection activities via the NTL mechanism (e.g., BOEM 2014-G01).</p> <p>Finally, as explained in Section 2.8 of our comments the changes proposed in this rulemaking are significant and will require time for operators and BOEM staff to understand and implement. Therefore, it is critical that a phase-in period be incorporated into the implementation of the final rule. It is requested that additional time be provided to allow the regulated community and BOEM staff to develop compliance programs to meet the requirements of the final rule. This additional time is justified since the new requirements were not published as an Advanced Notice of Proposed Rulemaking which would have allowed more time for public comment, and allowed for more time for the development of compliance programs.</p>	<p><i>OCS emissions inventory.</i> You, as a <del>lessee, an</del> designated operator, <del>or a holder of a RUE or pipeline ROW (whether or not that ROW includes an accessory structure),</del> must collect and maintain information regarding all <del>criteria and precursor</del> air pollutant emissions from all emissions sources <del>as identified in your plan associated with your operations, excluding MSCs.</del> You must retain this information for a period of <del>no less than five years or the life of the plan, whichever is shorter</del> 10 years. You must submit this information to the appropriate regional office on an ongoing basis according to a schedule <del>established by BOEM, corresponding to the schedule for the National Emissions Inventory as established by the USEPA.</del> If you have an <del>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;</del> then, beginning in either 2017 or the next reporting period after [EFFECTIVE DATE OF THE FINAL RULE], you must report this information according to the timeframes specified in 40 CFR 51.30(b).</p>
	550.187(b)	<p>The information provided must include the emissions of or the activity data necessary to calculate the emissions of stationary</p>	<p>The terms “stationary source” and “non-stationary source” as used in this subsection are not defined in the proposed rule and do not align with the remainder of the proposed</p>	<p>The information provided must include the emissions of or the activity data necessary to calculate the emissions of stationary emissions sources <del>described in your plan, excluding MSCs.</del></p>

Appendix A - Requested Changes to Proposed Rule

New Rule Section Title	New Rule Reference	New Rule Text	Comments/Issues/Questions	Proposed Alternate Language
		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.	regulatory language, which primarily uses the term emission source. Deleting the use of terms "stationary source" and "non-stationary source" will provide further clarity and eliminate unnecessary regulatory text.  As discussed in Section 1.2.4 of our comments, BOEM lacks the authority to regulate MSCs. As such, we proposed the removal of the requirement for the operator to provide information on emissions on the MSCs.	<del>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.</del>
	550.187(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 § 550.198(b)(1)(iv).	To be consistent with the proposed approach that each operator will be required to specify the specific monitoring requirements as part of their plan submittal, we are requesting that the detailed items identified in § 550.187(c)(1-4) be deleted as they may conflict with the approved plan. As discussed in Section 11.2 of our comments, BOEM will have the opportunity to review and approve all proposed emission source monitoring requirements prior to plan approval. See additional comments below under § 550.311.	As part of the information required in this section, you must submit, in a form and manner as specified by the Regional Supervisor: <del>(1) Your facility and equipment usage as described in your approved plan, 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 § 550.198(b)(1)(iv).</del>
	550.187(d)	(d) The Regional Director may waive or permit delay in compliance with the requirements of this section on a region-wide basis.	No comment regarding this requirement.	N/A
<b>Documents incorporated by reference.</b>	550.198(a)	(1) Certain material is incorporated by reference into this part with the approval of the Director of the <i>Federal Register</i> under 5 U.S.C. 552(a) and 1 CFR part 51. 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. To enforce any edition other than that specified in this section, BOEM will publish a document in the <i>Federal Register</i> and the material will be available to the public. 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: <a href="http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html">http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html</a> . (2) 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.	The documents proposed for incorporation by reference under this paragraph are either reference documents that do not contain compliance requirements (e.g. USEPA AP-42), or the documents are standards that are required by other regulatory requirements (e.g. MARPOL Annex VI). It is not necessary to incorporate these documents by reference as compliance requirements. These documents are either existing compliance requirements, or are not "compliance documents" at all, such as the USEPA AP-42 or the MOVES Users Guide. These documents were developed as guidance documents not regulatory requirements and should remain so. Therefore, it is requested that BOEM remove § 550.198(a)-(d) in their entirety.	<del>(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. 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. To enforce any edition other than that specified in this section, BOEM will publish a document in the Federal Register and the material will be available to the public. 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: <a href="http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html">http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html</a>. (2) 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.</del>

New Rule Section Title	New Rule Reference	New Rule Text	Comments/Issues/Questions	Proposed Alternate Language
	550.198(b)	Environmental Protection Agency, Office of Air and Radiation, 1200 Pennsylvania Ave, NW, MS6101A, Washington, DC 20460. (1) AP 42, Fifth Edition, Compilation of Air Pollutant Emission Factors, Volume 1: Stationary Point and Area Sources, January 1995, incorporated by reference at § 550.205(b). (2) 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). (3) User's Guide for the Final NONROAD2005 Model, EPA420-R-05-013, December 2005 incorporated by reference at § 550.205(b). (4) FIRE (Factor Information Retrieval System) Version 5.0: Source Classification Codes and Emission Factor Listing for Criteria Air Pollutants, EPA 454/R-95-012, August 1995, incorporated by reference at § 550.187(c).	See comment under § 550.198(a).	<del>Environmental Protection Agency, Office of Air and Radiation, 1200 Pennsylvania Ave, NW, MS6101A, Washington, DC 20460. (1) AP 42, Fifth Edition, Compilation of Air Pollutant Emission Factors, Volume 1: Stationary Point and Area Sources, January 1995, incorporated by reference at § 550.205(b). (2) 40 CFR 94 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). (3) User's Guide for the Final NONROAD2005 Model, EPA420-R-05-013, December 2005 incorporated by reference at § 550.205(b). (4) FIRE (Factor Information Retrieval System) Version 5.0: Source Classification Codes and Emission Factor Listing for Criteria Air Pollutants, EPA 454/R-95-012, August 1995, incorporated by reference at § 550.187(c).</del>
	550.198(c)	Federal Aviation Administration (FAA), Office of Environment and Energy, (AEE-100), 800 Independence Avenue, SW, Washington, DC 20591. (1) Aviation Environmental Design Tool (AEDT) User's Guide, Version 2B, July 2015 (as amended) incorporated by reference at § 550.205(b). (2) Aviation Environmental Design Tool (AEDT), Version 2B, AEDT Standard Input File (ASIF) Reference Guide, May 2015 (as amended) incorporated by reference at § 550.205(b).	See comment under § 550.198(a).	<del>Federal Aviation Administration (FAA), Office of Environment and Energy, (AEE-100), 800 Independence Avenue, SW, Washington, DC 20591. (1) Aviation Environmental Design Tool (AEDT) User's Guide, Version 2B, July 2015 (as amended) incorporated by reference at § 550.205(b). (2) Aviation Environmental Design Tool (AEDT), Version 2B, AEDT Standard Input File (ASIF) Reference Guide, May 2015 (as amended) incorporated by reference at § 550.205(b).</del>
	550.198(d)	International Maritime Organization, 4 Albert Embankment, London SE1 7SR, United Kingdom, or <a href="http://www.imo.org">http://www.imo.org</a> , or 44-(0)20-7735-7611. (1) Revised MARPOL (Marine Pollution) Annex VI, Regulations for the Prevention of Air Pollution from Ships, and NOX Technical Code [NTC] 2008, 2009 edition, incorporated by reference at § 550.205(b). (2) Revised MARPOL Annex VI, Regulations for the Prevention of Pollution from Ships ("2008 Annex VI"), incorporated by reference at § 550.205(b). (3) NOX Technical Code 2008, incorporated by reference at § 550.205(b).	See comment under § 550.198(a).	<del>International Maritime Organization, 4 Albert Embankment, London SE1 7SR, United Kingdom, or <a href="http://www.imo.org">http://www.imo.org</a>, or 44-(0)20-7735-7611. (1) Revised MARPOL (Marine Pollution) Annex VI, Regulations for the Prevention of Air Pollution from Ships, and NOX Technical Code [NTC] 2008, 2009 edition, incorporated by reference at § 550.205(b). (2) Revised MARPOL Annex VI, Regulations for the Prevention of Pollution from Ships ("2008 Annex VI"), incorporated by reference at § 550.205(b). (3) NOX Technical Code 2008, incorporated by reference at § 550.205(b).</del>
	550.200(b)	Remove the definition of "Offshore vehicle"	No comment regarding this requirement.	N/A
<b>What air emissions information must be submitted with my Plan (EPs, DPPs, DOCDs, or application for a RUE, pipeline ROW, or lease term pipeline)?</b>	550.205	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 (AQR) by paragraph (o) of this section, 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:	As explained in Section 2.8, the changes proposed in this rulemaking are significant and will require time for operators and BOEM staff to understand and implement. Therefore, it is critical that a phase-in period be incorporated into the implementation of the final rule. It is requested that additional time be provided to allow the regulated community and BOEM staff to develop compliance programs to meet the requirements of the final rule. This additional time is justified since the new requirements were not published as an Advanced Notice of Proposed Rulemaking which would have allowed more time for public comment, and allowed for more time for the development of compliance programs.  Finally, as discussed in Section 12.6 of our comments, RUE and ROW applications do not require air emissions data to be included under the current regulations and BOEM has not demonstrated that these activities significantly affect onshore air quality or threaten compliance with the NAAQS in onshore areas. Therefore, it is requested that RUE and ROW be deleted from this provision.	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 (AQR) by paragraph (o) of this section, 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:
	550.205(a)	<i>Emissions sources.</i> 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	The level of detail required for emissions sources described in plans is a significant concern in this proposed rule. It is appropriate to include substantial sources of emissions that account for the majority of OCS air emissions. However, as discussed above in our proposed addition of insignificant activity definition in § 550.105 and in Section 12.2 of our comments it is not practicable to include small, insignificant sources that do not make significant contributions to overall facility emissions. As such, we request that insignificant activities be excluded from the definition of emission sources.  As discussed previously and in Section 1.2.4 of our comments, BOEM does not have the authority to regulate MSCs. Therefore, MSCs are requested to be removed from this provision.	<del><i>Emissions sources.</i> You must list and describe every emissions source on or associated with any facility or facilities and MSC(s) described in your plan, to the extent practicable. 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 criteria 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. Emission sources deemed as insignificant activities as defined in § 550.105 are exempt from all air quality requirements in 30 CFR 550.</del>



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		<p>your lease. The list of emissions sources must cover the duration of the plan’s proposed activities.</p>	<p>Inclusion of the sentence, “You must include emissions sources associated with your use of oil or gas produced from your lease” raises additional concerns. The proposed wording makes this requirement potentially limitless. It is possible that this sentence could be interpreted to include onshore sources such as refineries and chemical plants which are unrelated to OCS facilities, and over which BOEM has no jurisdiction. If the intent of this language is to capture how oil or natural gas may be used on an OCS facility for fuel or other purposes, emissions estimates for these activities would already be captured by as part of normal emission estimation practices, therefore the sentence is unnecessary.</p> <p>Finally, as discussed in Section 12.4 of our comments the proposed draft "AQR" spreadsheet contain material deficiencies to estimate emissions as defined in BOEM’s proposed definition.</p>	
	550.205(a)(1)	<p>For each emissions source, you must identify, to the extent practicable:</p> <ul style="list-style-type: none"> <li>(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;</li> <li>(ii) The type and sulphur content of fuel stored and/or used to power the emissions source; and</li> <li>(iii) The frequency and duration of the proposed use.</li> </ul>	<p>BOEM proposes to require identification of MSCs and their annual, rolling 12-month, and hourly emissions, and to identify what other facilities would be served by a given MSC. With the exception of vessels engaged in geological and geophysical exploration (see 43 U.S.C. §1340(a)), BOEM’s regulatory authority under OCSLA is limited to “artificial islands.....and.....installations...permanently or temporarily attached to the seabed, which may be erected thereon for the purpose of exploring for, developing, or producing resources therefrom.”<sup>1</sup> This does not include vessels (except perhaps those attached to such artificial islands and installations for the purpose of exploring for, developing, or producing OCS resources).</p> <p>OCS operators contract for services, but cannot be certain which vessel a contractor will assign – certainly not at the point exploration or development plans are being submitted. Likewise, identification of other offshore facilities to be served by a given MSC is unknown. Furthermore, BOEM asks that applicants identify the emissions per trip and multiply those emissions by the number of trips per year to identify annual emissions; this is impossible to project because there is no way to anticipate what route a support vessel will take years in advance of the trip. Nor is it practicable for an OCS operator to predict the types of support vessel activities that may be necessary over a 10-year span. Given these uncertainties, an operator cannot know what fraction of the trip emissions should be attributed to its facility. Nevertheless, BOEM’s attempt to impose such MSC regulatory requirements demonstrates a lack of understanding of the support vessel operations in the GOM. Furthermore, as discussed in Section 1.2.4 of our comments, BOEM does not have the authority to regulate MSCs. As such, we request that MSCs be specifically excluded from this provision.</p> <p>Finally, as discussed in comments to § 550.205(a) above, insignificant activities should be exempt from data collection activities.</p> <p>In addition, the AQR spreadsheets that accompany the proposed rule are not constructed such that this information can be collected. See Section 12.4 of our comments for list of items BOEM should address.</p>	<p>For each emissions source, <del>excluding MSCs and insignificant activities</del>, you must identify, to the extent practicable:</p> <ul style="list-style-type: none"> <li>(i) Equipment type <del>and number</del>, manufacturer, make and model, <del>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;</del></li> <li>(ii) The type and sulphur content of fuel stored and/or used to power the emissions source; and</li> <li>(iii) The frequency and duration of the proposed use.</li> </ul>
	550.205(a)(2)	<p>For every engine on each facility, including non-road engines, marine propulsion engines, or marine auxiliary engines, in addition to the information specified under paragraph (a)(1) of this section, 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.</p>	<p>See comments under § 550.205(a)(1) above.</p>	<p>For every engine on each facility, <del>except those emissions sources excluded as insignificant activities, including non-road engines, marine propulsion engines, or marine auxiliary engines,</del> in addition to the information specified under paragraph (a)(1) of this section, 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 <del>emissions</del> for the type of engine which you <del>will</del> plan to 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.</p>

<sup>1</sup> 43 U.S.C. § 1333(a)

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	550.205(a)(3)	For engines on MSCs, including marine propulsion and marine auxiliary engines, in addition to the information specified under paragraph (a)(1) and (2) of this section, 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.	As discussed in Section 1.2.4 of our comments, BOEM does not have the authority to regulate MSCs. As such, we request that this provision be deleted from the regulation.	<del>For engines on MSCs, including marine propulsion and marine auxiliary engines, in addition to the information specified under paragraph (a)(1) and (2) of this section, 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.</del>
	550.205(a)(4)	For offshore vehicles, you must provide the information specified under paragraph (a)(1) of this section. 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.	As discussed in Section 1.2.4 of our comments, BOEM does not have the authority to regulate MSCs. As such, we request that this provision be deleted from the regulation.	<del>For offshore vehicles, you must provide the information specified under paragraph (a)(1) of this section. 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.</del>
	550.205(a)(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.	See comments under § 550.205(a) above.	For any emissions source, <b>excluding insignificant activities</b> , 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.
	550.205(b)	<i>Emissions factors.</i> For each emissions source identified under paragraph (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.	<p>Manufacturer engine certifications and performance guarantees are designed to meet pollutant-specific emissions criteria. Additionally, other non-engine emissions source factors are typically pollutant specific. As such, we request changes to clarify that this evaluation is done on a pollutant basis. This would alleviate concerns that engine certifications or emissions testing that don't address all pollutants could be used in conjunction with other types of emission factors (i.e., AQR default factors.)</p> <p>Furthermore, some emission calculations do not lend themselves to a "published" emission factor. The emission factor can be derived for the site specific source information. This would include glycol dehydrators, crude oil/condensate storage tanks, and amine gas sweetening units. We request that BOEM clarify that model/software (e.g., GLYCALC, E&amp;P Tanks) used to calculate emissions from glycol dehydrators, crude oil/condensate storage tanks, and amine gas sweetening units are allowed under (b)(2)(iii).</p> <p>As noted in other comments, specificity should be added to this paragraph that clarifies the pollutants subject to this provision are criteria and precursor pollutants.</p>	<i>Emissions factors.</i> For each emissions source identified under paragraph (a) of this section, you must identify <b>for each criteria and precursor pollutant the most appropriate</b> emissions factors used to calculate the emissions for every criteria air pollutant and <b>major</b> precursor air pollutant emitted by that source.
	550.205(b)(1)	<i>Emissions testing.</i> 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 (b)(2) of this section. However, if none of the methods in paragraph (b)(2) of this section 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.	<p>In general, we support the use of actual emissions as measured by emissions testing as an option to estimate emissions in the plan. This subsection presents conflicting language whereby in some places, the focus is on emissions source and in other places the focus is on engines. It is requested that a consistent use of the term emission source be used in this subsection.</p> <p>The inclusion of specific language on test points and procedures is unnecessarily specific and since the basis for the emission factor will have to be identified in the plan submittal, BOEM will have the opportunity to review and comment on the acceptability of the emissions test data, including test points and procedures as part of the plan approval process.</p> <p>We request that BOEM include language that allows for adjustments of measured SO2 emissions (if warranted) based on the sulphur fuel contents which would be identified as required in § 550.205(a). Inclusion of such language will alleviate the need for re-testing if the sulphur levels in fuel differ from what was measured during the emissions test. Alternatively, BOEM could elect to offer the use of a mass-balance approach to estimating SO2 emissions based on the sulphur levels in the fuel types. Many state and federal agencies accept a similar methodology to estimate SO2 emissions.</p> <p>Furthermore, many operators have multiple versions of the same equipment across their portfolio. It would be beneficial to the OCS operators if the BOEM would allow for the use of emissions test results on similar equipment (i.e., same make and model.)</p> <p>Finally, it should be noted that 40 CFR part 53 refers to Ambient Air Monitoring Reference and Equivalent Methods. These method are not used for stack testing. The reference should be for applicable test methods in 40 CFR part 60, Appendix A.</p>	<i>Emissions testing.</i> 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 <del>which are described in paragraph (b)(2) of this section. However, if none of the methods in paragraph (b)(2) of this section are applicable, you must conduct stack testing on the emissions source to determine the appropriate emissions factor.</del> The data from stack testing may be used only for the <b>engine emission source</b> for which the stack testing was conducted. When determining the emission factors through testing, you must consider: (i) Test points and procedures. <del>(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.</del> <b>(BA)</b> Testing should be done consistent with the procedures outlined in 40 CFR part 60, Appendix A53 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. <del>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.</del> may adjust your measured SO2 emissions to account for the sulphur levels identified for the relevant emission source

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		<p>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.</p> <p>(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.</p>		<p>identified in 550.205(a)</p>
	550.205(b)(2)(i)	<p>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):</p> <p>(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:</p> <p>(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,</p> <p>(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.</p>	<p>Rather than restricting operators to a priority list of emission factors, the list included in § 550.205(b)(2)(i)-(vi) should be presented as a list of emission estimation methodology options, either within the rule text or as a separate guidance document.</p> <p>In reviewing various state and federal agency permitting programs, the process by which an emission factor is selected is at the discretion of the owner/operator of the facility. Onshore facilities are typically not restricted to a hierarchy priority of emission estimation methodologies. In light of all the possible emission estimation methodologies, and to account for advancements in such methodologies, BOEM should leave selection of the methodology to the OCS operators. Also, by including such a detailed list of emission estimation methodologies as part of the rule text, BOEM is limiting their ability to make changes to the list without triggering the rulemaking process.</p> <p>It is requested that BOEM remove this very prescriptive and limiting process. As per § 550.205(b)(3), BOEM retains the ability to review the selected emission factor and require the use of a different emission factor or to require emissions testing if a more appropriate factor is not available.</p>	<p><del>In the event that you elect not to measure the actual emissions for any given emissions source, you may select an emissions factor from one of the following references subject to agency approval (references are listed in priority order; you may use a method only if all the methods identified above it are not available):</del></p> <p><del>(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:</del></p> <p><del>(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,</del></p> <p><del>(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.</del></p>
	550.205(b)(2)(ii)	<p>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.</p>	<p>As discussed in the comments to § 550.205(b)(2)(i), we request the removal of the overly prescriptive emission factor selection process. As such, we request that this subsection be eliminated.</p> <p>If BOEM elects not to remove this section, we seek to clarify that the relevant manufacturer should be the engine manufacturer and not the rig manufacturer. Where the term rig appears in this subsection, we would request the term engine be used.</p> <p>Furthermore, if BOEM elects not to remove this section, it should address the mechanism by which the various operators will have knowledge of which engines may have had source tests conducted pursuant to an USEPA OCS permit. This information is not readily available to all operators.</p>	<p><del>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.</del></p>
	550.205(b)(2)(iii)	<p>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.</p> <p>(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.</p> <p>(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</p>	<p>As discussed in the comments to § 550.205(b)(2)(i), we request the removal of the overly prescriptive emission factor selection process. As such, it is requested that this subsection be eliminated. If BOEM elects not to remove this section, we offer the following comments:</p> <ul style="list-style-type: none"> <li>- We request BOEM to allow the use of process modelling to estimate emissions, specifically for storage containers for which the USEPA TANKS 4.0 program is a poor emissions estimation tool;</li> <li>- The USEPA TANKS program is a useful tool for regularly (i.e., cylindrical) shaped storage containers. Storage containers on OCS facilities may come in various sizes that will not easily be represented in the TANKS program. Given the minimal emissions of most storage containers on OCS facilities, we request the use of default emission factor similar to that employed in the current AQR emission spreadsheet; note that many storage containers may fit within the proposed insignificant activity list (see comments to 550.205(a)) and therefore, emissions estimation may not be warranted.</li> <li>- We request BOEM to allow models or tables approved by USEPA or FAA. "You may use a model or table, as appropriate, developed or approved 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."</li> <li>- The referenced MOVES model cited in the proposed rule may not be a user friendly model for operators and we request that the use of a default emission factor similar to</li> </ul>	<p><del>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.</del></p> <p><del>(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.</del></p> <p><del>(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 (<a href="http://www.epa.gov/otaq/models/moves/index.htm">http://www.epa.gov/otaq/models/moves/index.htm</a>), as incorporated by reference at § 550.198. Depending on the type of engine, the NONROAD2008A Model may also be used, as incorporated by reference at § 550.198. That model is available at <a href="http://www.epa.gov/otaq/nonrdmdl.htm">http://www.epa.gov/otaq/nonrdmdl.htm</a>.</del></p> <p><del>(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</del></p>



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		<p>Simulator (MOVES) model (<a href="http://www.epa.gov/otaq/models/moves/index.htm">http://www.epa.gov/otaq/models/moves/index.htm</a>), as incorporated by reference at § 550.198. Depending on the type of engine, the NONROAD2008A Model may also be used, as incorporated by reference at § 550.198. That model is available at <a href="http://www.epa.gov/otaq/nonrdmdl.htm">http://www.epa.gov/otaq/nonrdmdl.htm</a>.</p> <p>(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.</p> <p>(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, 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: <a href="http://www.faa.gov/about/office_org/headquarters_offices/apl/research/models/aedt/">http://www.faa.gov/about/office_org/headquarters_offices/apl/research/models/aedt/</a></p>	<p>that employed in the current AQR spreadsheet.</p> <ul style="list-style-type: none"> <li>- Some operators may have diesel engines that are certified to meet the requirements in 40 CFR 60 Subpart IIII and operated in a certified manner. We request the use of applicable emission factors in 40 CFR 60 Subpart IIII, Tables 1 – 4. This could affect backup and emergency diesel engine drivers for generators, pumps, air compressors.</li> <li>- Various sections of the proposed rule discuss emissions from “Flashing”. The documents incorporated by reference (e.g., EPA TANKS model and AP-42) do not calculate “flash” emissions from crude oil/condensate or produced water; however, there are multiple other generally accepted mechanisms (e.g., Peng-Robinson equation of state models - PROMAX, HYSIS, PROsim, VMGSim) or API 4697 E&amp;P Tanks Ver 3 program for flashing calculations. These models are approved by USEPA for 40 CFR 98 Subpart W calculations (REF: 40 CFR 98.233(j)(1)) and for NSPS OOOO in 40 CFR 60 Subpart OOOO (REF: 40CFR 60.5365(e)). For GOADS, BOEM used the Vasquez-Beggs equations for flash calculations for crude oil and condensate.</li> <li>- Similarly, to the “flashing” discussion above, the proposed rule does not include a reference document that is capable of estimating glycol dehydration unit still column vent and flash tank (gas-condensate-glycol separator) emissions. GRI-GLYCalc model is an USEPA approved model for glycol dehydration unit emission calculations – 40 CFR 63 Subparts HH and HHH. Also, GLYCalc is the model used for GOADS emission calculations since 2000.</li> <li>- We request that BOEM allow for use of operations and engineering judgment (in lieu of an emission factor) to estimate the volume of gas expected to be combusted in a flare or vented from an atmospheric vent. This would cover such sources as compressor blowdowns, miscellaneous sources (pneumatic devices in natural gas service) routed to flare or vent.</li> <li>- There are some scenarios by which direct measurement of vented volumes should be acceptable to generate an emission factor. The amount of vapors liberated during lightering operation may be measured to determine gas liberated per volume of oil loaded to generate a gas to oil ratio (GOR) for the emission factor. This could require a sample of the vapors to calculate the mass of emissions for vapor vented. The proposed rule allows use of equations in the document cited: AP-42, 5.2 Transportation and Marketing of Petroleum Liquids.</li> </ul>	<p><del>Compilation of Emissions Factors, Chapter VII, incorporated by reference at § 550.198. (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, 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: <a href="http://www.faa.gov/about/office_org/headquarters_offices/apl/research/models/aedt/">http://www.faa.gov/about/office_org/headquarters_offices/apl/research/models/aedt/</a></del></p>
	550.205(b)(2)(iv)	<p>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.</p>	<p>As discussed in the comments to § 550.205(b)(2)(i), we request the removal of the overly prescriptive emission factor selection process. As such, it is requested that this subsection be eliminated. If BOEM elects not to remove this section, we offer the following comments on this subsection.</p> <ul style="list-style-type: none"> <li>- BOEM should provide a specific size threshold instead of using terms such as “large” or “locomotive size” engines. In other sections of the proposed rule, BOEM utilizes the 900 kW threshold.</li> </ul>	<p><del>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.</del></p>
	550.205(b)(2)(v)	<p>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, or the Revised MARPOL Annex VI, Regulations for the Prevention of Pollution from Ships, incorporated by reference at § 550.198, 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 NOx Technical Code [NTC] 2008 incorporated by reference at § 550.198. 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.</p>	<p>As discussed in the comments to § 550.205(b)(2)(i), we request the removal of the overly prescriptive emission factor selection process. As such, it is requested that this subsection be eliminated. If BOEM elects not to remove this section, we request the following comments be considered on this subsection.</p> <ul style="list-style-type: none"> <li>- EIAPP certificates would be issued based on test results for a parent engine. These EIAPP certificates identify the parent engine emission test result as well as the relevant Annex VI standard. The proposed rule allows for use of the Annex VI standards but is silent on the acceptability of the listed parent engine emission factor identified in the EIAPP certificate. We request BOEM allow the use of the emission factors as stated on EIAPP certificates.</li> </ul>	<p><del>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, or the Revised MARPOL Annex VI, Regulations for the Prevention of Pollution from Ships, incorporated by reference at § 550.198, 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 NOx Technical Code [NTC] 2008 incorporated by reference at § 550.198. 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.</del></p>

Appendix A - Requested Changes to Proposed Rule

<b>New Rule Section Title</b>	<b>New Rule Reference</b>	<b>New Rule Text</b>	<b>Comments/Issues/Questions</b>	<b>Proposed Alternate Language</b>
	550.205(b)(2)(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; or,	As discussed in the comments to § 550.205(b)(2)(i), we request the removal of the overly prescriptive emission factor selection process. As such, it is requested that this subsection be eliminated. If BOEM elects not to remove this section, we offer the following comments on this subsection.  - There is no explanation in the proposed rule that addresses the proposed restriction by which a non-road diesel engine on a platform greater than 900 kw cannot use AP-42. We request that the rating threshold be removed and the option to use AP-42 emission factors be retained for all non-road diesel engines.	<del>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; or,</del>
	550.205(b)(2)(vii)	If you elect to use the methods described in paragraph (b)(2)(v) or (vi) of this section, 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.	As discussed in the comments to § 550.205(b)(2)(i), we request the removal of the overly prescriptive emission factor selection process. As such, it is requested that this subsection be eliminated. If BOEM elects not to remove this section, we offer the following comments on this subsection.  - It is not feasible to make appropriate upward adjustments in emission estimates for older equipment. Emissions of a completely overhauled engine may match that of a relatively new engine so an engine's age may not necessarily result in deterioration of an engine's emissions performance; - Furthermore, there is little to no actual emissions test data that supports BOEM's assertion that emissions increase on older equipment. The USEPA's compilation of emission factors for various emissions sources (AP-42) does not provide for age-based deterioration adjustments to emission factors. We request BOEM to remove language related to age-based adjustments to emission factors. - If BOEM requires an age-based adjustment of emission factors, we request BOEM to only require the use of deterioration factors when they have been developed by the manufacturer. For example, 40 CFR 1042.245 requires manufacturers to develop deterioration factors for certain categories of engines. Consistent with EPA's approach, the requirement to develop such factors should be placed on the engine manufacturers, not the engine purchaser. Alternatively, if BOEM insists upon requiring operators to account for engine deterioration with regards to emissions, BOEM should first conduct an Environmental Study (Pursuant to the Environmental Studies Program) to establish whether engine age corresponds to deterioration of emissions performance.	<del>If you elect to use the methods described in paragraph (b)(2)(v) or (vi) of this section, 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.</del>
	550.205(b)(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) of this section, or some other form of validation to verify the accuracy of an emissions factor.	No comments regarding this paragraph.	N/A
	550.205(b)(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.	As discussed in the comments to § 550.205(b)(2)(i), we request the removal of the overly prescriptive emission factor selection process. As such, it is requested that this subsection be eliminated.	<del>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.</del>
	550.205(b)(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.	As discussed in the comments to § 550.205(b)(2)(i), we request the removal of the overly prescriptive emission factor selection process. As such, it is requested that this subsection be eliminated. Furthermore, the proposed language is an example of overly prescriptive regulatory program whereby BOEM is requesting demonstration of compliance with another federal agency.	<del>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.</del>
	550.205(b)(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.	As discussed in the comments to § 550.205(b)(2)(i), we request the removal of the overly prescriptive emission factor selection process. As such, it is requested that this subsection be eliminated.	<del>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.</del>
	550.205(c)	<i>Facility emissions.</i> 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:	As discussed in Section 8.8 of our comments, EPA assesses compliance with NAAQS using calendar block averages, not running or rolling averages. Therefore, it is requested that BOEM remove the requirement to quantify emissions for a maximum 12 month period.  Furthermore, we have reviewed multiple state agency permitting programs and EPA's permitting program for the Eastern Gulf of Mexico and have not identified an analogue for the calculation of maximum 12-month rolling sum of facility emissions as part of the application process that BOEM has proposed. Typically, a permit application for an onshore facility would provide estimates of the potential to emit on a calendar-year basis.	<i>Facility emissions.</i> For each criteria and <del>major</del> precursor air pollutant, calculate the <del>annual</del> projected <del>annual</del> emissions <del>for each of your facilities, the maximum 12-month rolling sum of facility emissions</del> and the maximum <del>peak hourly</del> projected <del>peak hourly</del> emissions using the following procedures:



<b>New Rule Section Title</b>	<b>New Rule Reference</b>	<b>New Rule Text</b>	<b>Comments/Issues/Questions</b>	<b>Proposed Alternate Language</b>
	550.205(c)(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.	<p>We request changes to this provision to improve clarity and to ensure emissions from OCS facilities are not over estimated. Based on the proposed wording in this provision it would imply that OCS facilities routinely run at maximum rated capacity over an entire calendar-year. Such an approach would grossly exaggerate potential emissions and ensure that many plans will exceed the EET values, where in practice; the actual emissions occurring under these plans may be significantly lower. As acknowledged by BOEM in multiple places in the preamble, this is a common practice under the existing regulatory framework as a mechanism to reduce emissions below the EET values and a concept that BOEM intended to carry forward. Additionally, the provisions of § 550.205(a)(2) allow for such measures; however, further clarity on this topic would be beneficial. As such, we have proposed revisions to clarify that projected emission estimates should be based on operators' annual maximum expected operations and not solely based on the maximum rated capacity of each emission source. This change will add further clarity that the use of self-mitigations measures to reduce the projected emissions by representing the anticipated operating rates and/or fuel usage levels by emission sources covered by the plan is acceptable. Additionally, we have proposed similar changes to the definition of projected emissions as listed in § 550.302(b).</p> <p>Additional revisions are requested to be consistent with the requested revisions to the definitions of <i>projected emissions</i> and <i>facility</i> as discussed in § 550.302(b) below.</p> <p>Finally, consistent with the above proposed change requested in § 550.187(a), we request that the term "designated operator" be used to ensure that it is clear that the designated operator of any OCS facility is the responsible party.</p>	Calculate <del>total projected</del> emissions generated annually by each emissions source <del>on or physically connected to each of the facilities</del> described in your plan that would result from the <del>construction, installation, operation, or decommissioning of the facility</del> . Such calculations should be done for each year that the plan states that the <del>designated</del> operator proposes to engage in operating activities, up to ten years. This calculation should be based on the <del>annual maximum rated capacity expected operations</del> of each emissions source associated with the facility, <del>or the capacity that generates the highest rate of emissions, and the facility's maximum potential projected annual emissions</del> , using the methods and procedures specified under paragraphs (a) and (b) of this section.
	550.205(c)(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.	Requested revisions to be consistent with our comments to § 550.205(c) whereby we request the removal of the 12-month rolling sum and § 550.302(b) whereby we requested changes to the definitions of <i>projected emissions</i> and <i>facility</i> .	<del>Calculate the projected maximum annual calendar year 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 calendar year with the maximum annual projected emissions that would result from the construction, installation, operation, or decommissioning of the facility 12-month period used for this calculation. This should be the 12-month period calendar year during which your facility generates the highest amount of emissions over the life of your plan.</del>
	550.205(c)(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.	The requested changes are intended to add further clarity and to be consistent with the requested revisions to the <i>projected emissions</i> and <i>facility</i> definitions as described in § 550.302(b) below.	Calculate the maximum <del>peak hourly</del> projected <del>peak hourly</del> emissions from each emissions source <del>on or physically connected to each facility</del> and the maximum <del>peak hourly</del> projected <del>peak hourly</del> emissions from each facility that would result from the <del>construction, installation, operation, or decommissioning of the facility</del> .
	550.205(d)	<i>Attributed emissions.</i> 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:	As discussed in Section 1.2.4 of our comments document BOEM does not have authority to regulate MSCs. As such, we request that this provision be removed from the proposed regulation.	<del><i>Attributed emissions.</i> For each criteria and major precursor air pollutant, calculate the attributed projected annual emissions for each of your MSCs, the maximum annual calendar year 12-month rolling sum of each MSC's emissions, and the maximum projected peak hourly emissions for each MSC, using the following procedure:</del>
	550.205(d)(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.	See comments to § 550.205(d) above regarding MSCs. Furthermore, it should be noted that operators can rarely predict which exact vessels will be utilized at the time of plan development. Changes in project schedules, work load (short term contracts), vessels dedicated to a role (i.e., high volume, supplies, etc), and availability of a MSC are a few factors used to determine what vessel will be mobilized at the start of a project. These vessels are potentially not even on contract when a plan is submitted and with around 900 different vessels (work, crew, well evaluation, well stimulation, barges, etc.) supporting different types of operations in the GoM it is impractical for operators to predict every vessel(s) which will be utilized in a plan. Furthermore, BOEM asks that applicants identify the emissions per trip and multiply those emissions by the number of trips per year to identify annual emissions; this is impossible to project because there is no way to anticipate what route a support vessel will take years in advance of the trip. Nor is it practicable for an OCS operator to predict the types of support vessel activities that may be necessary over a 10-year span.	<del>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.</del>

Appendix A - Requested Changes to Proposed Rule

<b>New Rule Section Title</b>	<b>New Rule Reference</b>	<b>New Rule Text</b>	<b>Comments/Issues/Questions</b>	<b>Proposed Alternate Language</b>
	550.205(d)(2)	For each MSC referred to in paragraph (d)(1) of this section: (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.	See comments to § 550.205(d) above regarding MSCs.	<del>For each MSC referred to in paragraph (d)(1) of this section: (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.</del>
	550.205(d)(3)	Multiply the emissions per trip from paragraph (d)(2) of this section 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) of this section.	See comments to § 550.205(d) above regarding MSCs.	<del>Multiply the emissions per trip from paragraph (d)(2) of this section 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) of this section.</del>
	550.205(d)(4)	If the MSC provides support only to your facility, then you must attribute the MSC's total support emissions to that facility.	See comments to § 550.205(d) above regarding MSCs.	<del>If the MSC provides support only to your facility, then you must attribute the MSC's total support emissions to that facility.</del>
	550.205(d)(5)	For each MSC described in paragraph (d)(1) of this section 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 paragraph (d)(3) of this section for that MSC; or (ii) If it is not practicable to use the method in paragraph (d)(5)(i) of this section, divide the total support emissions calculated under paragraph (d)(3) of this section 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 paragraph (d)(5)(i) or (ii) of this section, 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.	See comments to § 550.205(d) above regarding MSCs.	<del>For each MSC described in paragraph (d)(1) of this section 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 paragraph (d)(3) of this section for that MSC; or (ii) If it is not practicable to use the method in paragraph (d)(5)(i) of this section, divide the total support emissions calculated under paragraph (d)(3) of this section 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 paragraph (d)(5)(i) or (ii) of this section, 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.</del>
	550.205(d)(6)	Calculate the sum of the emissions estimates that result from the calculation in paragraph (d)(4) or (5) of this section for every MSC identified in paragraph (d)(1) of this section. That sum represents the attributed emissions for your facility.	See comments to § 550.205(d) above regarding MSCs.	<del>Calculate the sum of the emissions estimates that result from the calculation in paragraph (d)(4) or (5) of this section for every MSC identified in paragraph (d)(1) of this section. That sum represents the attributed emissions for your facility.</del>
	550.205(d)(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.	See comments to § 550.205(d) above regarding MSCs.	<del>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.</del>
	550.205(d)(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.	See comments to § 550.205(d) above regarding MSCs.	<del>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.</del>
	550.205(e)	<i>Projected emissions.</i> 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 paragraph (c)(2) of this section and your attributed emissions under paragraph (d)(6) of this section.	See comments to § 550.205(e)(1) below.	<del>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 annual calendar year 12-month rolling sum, and the maximum peak hourly rate for your facility emissions under paragraph (c)(2) of this section and your attributed emissions under paragraph (d)(6) of this section.</del>

Appendix A - Requested Changes to Proposed Rule

<b>New Rule Section Title</b>	<b>New Rule Reference</b>	<b>New Rule Text</b>	<b>Comments/Issues/Questions</b>	<b>Proposed Alternate Language</b>
	550.205(e)(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.	As discussed in Section 4 and 5 of our comments the consolidation of proximate activities is better addressed in § 550.303(j). Additionally, see the requested change to the definition of facility contained in § 550.302(b).	<del>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.</del>
	550.205(e)(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.	See comments to § 550.205(e)(1) above regarding facility consolidation.	<del>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.</del>
	550.205(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.	The language in this section is duplicative of other sections (§ 550.306, 550.307, and 550.309.) In an effort to stream line the regulatory language, it is requested that this language be changed to reference the relevant sections of the rule.	<del>Emission reduction measure(s) (ERM). You must provide a description of all proposed ERM and associated information required in § 550.306, 550.307, and 550.309. -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.</del>
	550.205(g)	<i>Modeling information.</i> 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).	As discussed in Section 1.2 and 2.2 of our comments, BOEM's sole authority is for regulating compliance with the NAAQS. BOEM does not have the authority to require compliance with Class I increments or AQRV. Therefore, we request that § 550.205(g)(2) be removed.  Furthermore, as discussed previously and in Section 1.2.4 of our comments document, BOEM does not have authority to regulate MSCs. As such, we request that this provision be removed from the proposed regulation.	<i>Modeling information.</i> 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 coastal area(s) of any State(s), including the <b>most-affected</b> attainment area(s) with the <b>greatest modeling predicted concentrations</b> and the <b>most-affected</b> non-attainment area(s) with the <b>greatest modeling predicted concentrations</b> ; (2) <del>Table(s) of the appropriate and relevant maximum projected air pollutant concentrations over any Class I area(s), if relevant;</del> (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 <b>above the EET</b> , 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 <b>referenced in 550.304(a)(1) listed on the USEPA preferred list of models in 40 CFR part 51 appendix W; and</b> (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) <b>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).</b>
	550.205(h)	<i>Requirements applicable to specific air pollutants</i>	No comments regarding this paragraph.	N/A
	550.205(h)(1)	<i>Nitrogen and Sulphur Oxides (NOx and SOx).</i> Various documents cross-referenced by these regulations, refer to NOx and NO2 (nitrogen dioxide) or SOx and SO2 (sulphur dioxide). Whenever possible, you must utilize data or reasonable estimates for NOx and SOx. At a minimum, your projected emissions of NOx must include emissions of nitrogen oxide and NO2, and your projected emissions of SOx must include emissions of SO2. In the event that data on NOx or SOx emissions are not available, you must instead utilize data on nitrogen oxide plus NO2 as a substitute for NOx, and SO2 emissions as a substitute SOx.	No comments regarding this paragraph.	N/A



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	550.205(h)(2)	<i>Particulate Matter (PM<sub>10</sub> and PM<sub>2.5</sub>)</i> . For each emissions source, you must provide data and information on both PM <sub>10</sub> (PM that is 10 micrometers or less in diameter) and PM <sub>2.5</sub> (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 <sub>2.5</sub> must include the sum of filterable and condensable PM. In the event that data for PM is not separately available for both PM <sub>10</sub> and PM <sub>2.5</sub> for any given source, you must utilize the PM <sub>10</sub> data for the PM <sub>10</sub> analysis and the same data for the PM <sub>2.5</sub> analysis. A plan that does not contain separate emission exemption threshold and modeling analysis for each type of PM will not be considered complete.	BOEM's language that specifically addresses that plans that do not contain separate threshold and modeling analysis for each type of PM is unnecessary. § 550.205(c) requires the estimation of projected emission for each criteria pollutant and both PM10 and PM2.5 are separate criteria pollutants. It is requested that this language is removed.	<i>Particulate Matter (PM<sub>10</sub> and PM<sub>2.5</sub>)</i> . For each emissions source, you must provide data and information on both PM <sub>10</sub> (PM that is 10 micrometers or less in diameter) and PM <sub>2.5</sub> (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 NAAQS standard. All reporting of PM <sub>2.5</sub> must include the sum of filterable and condensable PM. In the event that data for PM is not separately available for both PM <sub>10</sub> and PM <sub>2.5</sub> for any given source, you must utilize the PM <sub>10</sub> data for the PM <sub>10</sub> analysis and the same data for the PM <sub>2.5</sub> analysis. <del>A plan that does not contain separate emission exemption threshold and modeling analysis, for each type of PM will not be considered complete.</del>
	550.205(h)(3)	<i>Hydrogen Sulfide (H<sub>2</sub>S)</i> . All emissions of SO <sub>x</sub> that result from the flaring of hydrogen sulfide must be included in the projected emissions of SO <sub>x</sub> 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 <sub>2</sub> S will potentially exceed the USEPA's Significant Emission Rate for H <sub>2</sub> S, 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.	There are multiple issues with the proposed language in this subsection. Firstly, USEPA's NESHAP regulation is not relevant in geographical areas where BOEM has air quality jurisdiction, which as mentioned repeatedly through these comments is wholly focused on NAAQS and not HAPs. We request the removal of any references to USEPA NESHAP requirements and pollutants that are not criteria or precursor air pollutants.  BOEM should not require the quantification of H2S emissions as part of a plan submittal. With that said, BSEE regulations for H2S would be the pertinent mechanism to quantify H2S emissions; however, BSEE regulation is rightfully focused on facility personnel protection and not necessarily state air quality impacts.  Thirdly, the requirements in § 550.205(b) already address the quantification of criteria pollutant emissions for each emission source. The inclusion of language in this subsection to quantify SO2 emissions from flaring is un-necessary.  In conclusion, we request that § 550.205(h)(3) be removed in its entirety.	<del><i>Hydrogen Sulfide (H<sub>2</sub>S)</i>. All emissions of SO<sub>x</sub> that result from the flaring of hydrogen sulfide must be included in the projected emissions of SO<sub>x</sub> 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<sub>2</sub>S will potentially exceed the USEPA's Significant Emission Rate for H<sub>2</sub>S, 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.</del>
	550.205(h)(4)	<i>Methane (CH<sub>4</sub>)</i> . Unless specifically directed to the contrary by another regulatory provision, the analysis or reporting of CH <sub>4</sub> emissions is not required.	Methane (CH4) is not a criteria pollutant and it is not a precursor pollutant. As mentioned repeatedly throughout these comments, BOEM's air program should be wholly focused on criteria pollutants. We assert that BOEM's discretion to require inclusion of methane emissions in plan submittals is restricted. We request the removal of this subsection in its entirety.	<del><i>Methane (CH<sub>4</sub>)</i>. Unless specifically directed to the contrary by another regulatory provision, the analysis or reporting of CH4 emissions is not required.</del>
	550.205(h)(5)	<i>Ozone (O<sub>3</sub>)</i> . Generally reporting is not required other than in accordance with the provisions of § 550.304(b), unless another regulatory provision specifically addresses O <sub>3</sub> .	As there are no other provisions of this regulation that specifically address O <sub>3</sub> this language should be deleted.	<del><i>Ozone (O<sub>3</sub>)</i>. Generally reporting is not required other than in accordance with the provisions of § 550.304(b), unless another BOEM regulatory provision specifically addresses O<sub>3</sub>.</del>
	550.205(h)(6)	<i>Lead (Pb) or Ammonia (NH<sub>3</sub>)</i> . Reporting of emissions for these pollutants, for any given source, is required: if there are published manufacturer specifications of emissions factors for these pollutants; or 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 <sub>3</sub> , then you must obtain a reasonable estimate of the associated Pb or NH <sub>3</sub> 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.	There is minimal publicly available information on lead (Pb) or Ammonia (NH3) emissions from OCS emission sources. Based on experience with similar sources onshore there is no reason to believe that these emissions from OCS sources are significant. As such, we request that portions of this section be stricken and that zero emissions should be assumed. The proposed language allows BOEM to request this information under the specific situation where the emissions could be potentially significant.	<del><i>Lead (Pb) or Ammonia (NH<sub>3</sub>)</i>. Reporting of emissions for these pollutants, for any given source, is required: if there are published manufacturer specifications of emissions factors for these pollutants; or 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<sub>3</sub>, then you must obtain a reasonable estimate of the associated Pb or NH<sub>3</sub> 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.</del>
	550.205(i)	<i>Distance calculations—</i> (1) <i>Distance from shore</i> . 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) <i>Distance from SSB</i> . 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.	As discussed in Section 1.2.5 of our comments, BOEM does not have the authority to assess emissions impacts at the state seaward boundary. As such, the reference to SSB should be deleted. If BOEM insists on assessing impacts at the SSB, BOEM should publish a table that includes these distances, similar to the current practice for distance to shore. This will ensure that operators and BOEM are considering the same basis for distance.  BOEM regulates air quality emissions from oil and gas activity on areas of the OCS in federal waters of the Western and Central Gulf of Mexico and the Arctic. Because BOEM does not have jurisdiction over OCS air emissions in the Pacific coast it is requested that the reference to the Pacific coast be deleted from this provision.  Finally, as discussed in Sections 1.2.7 and 2.2 of our comments, BOEM's sole authority is for regulating compliance with the NAAQS. BOEM does not have the authority to require compliance with Class I increments or AQRV.	<del><i>Distance calculations—</i> (1) <i>Distance from shore</i>. 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) <i>Distance from SSB</i>. 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.</del>

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	550.205(j)	<i>Documentation.</i> 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.	As discussed in Section 11.5 of our comments, we request that the language in this provision be revised to identify a period of retention of five years or the life of the plan, whichever is shorter, as well as suggests language that provides the opportunity for BOEM to request this information from the operator.	<i>Documentation.</i> 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, <del>including all references and copies of any referenced materials,</del> as well as any data or information related to any ERM that you propose or implement. You must <del>retain</del> provide this information, <del>unless the Regional Supervisor waives this requirement for good cause.</del> for a period of five years or the life of the plan, whichever is shorter, and supply this information to BOEM upon request.
	550.205(k)	<i>Compliance.</i> 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.	No comments regarding this paragraph.	N/A
	550.205(l)	<i>Reporting.</i> 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	The requested changes are proposed to increase clarity.	<i>Reporting.</i> You must submit data and information in a <del>standard</del> 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 <del>as specified</del> authorized by BOEM.
	550.205(m)	<i>Additional information.</i> (1) 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 of this part. 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). (2) 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.	As explained in Section 12.5 of our comments, BOEM does not have authority to require inclusion of onshore support facilities or aircraft emissions in the air emissions evaluations. We request that this entire subsection be eliminated.	<del><i>Additional information.</i> (1) 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 of this part. 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). (2) 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.</del>
	550.205(n)	<i>Requirements for plans to be deemed submitted.</i> Your plan will not be deemed submitted in accordance with the requirements of § 550.231 or § 550.266 until: (1) All of the requirements of this section 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) if required; and (3) You have completed any other analysis required by subpart C of this part.	This subsection contains language under § 550.205(n)(2) that is unnecessary as it is already captured in § 550.205(n)(3). Therefore, it is requested that § 550.205(n)(2) be deleted from the regulation.  Additionally, § 550.205(n)(2) presents a largely unworkable situation that will delay the plan approval process. Specifically, because § 550.304(a)(2) requires an operator to submit the modelling protocol before you conduct modeling, the modeling information required by § 550.205(n) could not be submitted in the initial version of any plan. Such information could only be submitted after BOEM approves the modeling protocol. Therefore, it is requested that BOEM establish a timeline for completing its review. A 15-day limit to review and to approve or deny the protocol should be added to § 550.205(g) or § 550.304(a)(2).	<i>Requirements for plans to be deemed submitted.</i> Your plan will not be deemed submitted in accordance with the requirements of § 550.231 or § 550.266 until: (1) All of the requirements of this section have been completed; (2) <del>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) if required; and</del> (3) You have completed any other analysis required by subpart C of this part.
	550.205(o)	<i>Plans exempt from review under the AQRP.</i> 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	As discussed in Section 2.2, the use of onshore stationary source PSD significance thresholds in 40 CFR 52.21(b)(23)(i) are not appropriate for OCS regulations. As such, it is proposed that the regulatory language be updated to reflect the more appropriate EET values.	<i>Plans exempt from review under the AQRP.</i> 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 <del>EET significant emissions rate limit described in the “Pollutant and Emissions Rate” table defined in 40 CFR 52.21((b)(23)(i),</del> your plan is exempt from the AQRP requirements of this section and subpart C of this part.

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		requirements of this section and subpart C of this part.		
What must the EP include?	550.211(c)	<p><i>Drilling unit.</i> (1) 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.</p> <p>(2) 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</p>	There is no need to add the definition of facility in this provision since this is already defined in § 550.302(b).	<p><i>Drilling unit.</i> (1) 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.</p> <p><del>(2) 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.</del></p>
What information must accompany the EP?	550.212(f)	Air emissions information required by § 550.205	No comments regarding this paragraph.	N/A
What hydrogen sulfide (H <sub>2</sub> S) information must accompany the EP?	550.215(d)	(2) If any H <sub>2</sub> S 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.	As explained in Section 1.2.3 of our comments, BOEM’s mandate under OCSLA is to ensure that OCSLA authorized activities do not significantly affect onshore air quality relevant to NAAQS. Since H <sub>2</sub> S does not have a NAAQS BOEM does not have authority to regulate this pollutant. As such, this text should be removed.	<del>(2) If any H<sub>2</sub>S 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.</del>
	550.215(e)	<i>Hydrogen sulfide.</i> If you propose to flare any gasses containing a potentially significant amount of H <sub>2</sub> S, you must separately identify this activity in your plan and separately identify the resulting emissions of sulphur oxides (SO <sub>x</sub> ) as part of your projected emissions under § 550.205(e).	See comments to § 550.215(d) above. Furthermore, this subsection is unnecessary. Emissions from flaring will already be accounted for in the information required by § 550.205(b). We request the subsection be eliminated.	<del><i>Hydrogen sulfide.</i> If you propose to flare any gasses containing a potentially significant amount of H<sub>2</sub>S, you must separately identify this activity in your plan and separately identify the resulting emissions of sulphur oxides (SO<sub>x</sub>) as part of your projected emissions under § 550.205(e).</del>
	550.218	Removed	No comments regarding this paragraph.	N/A
What information on support vessels, offshore vehicles, and aircraft you will use must accompany the EP?	550.224(a)	<i>General.</i> 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.	As discussed previously, at the time a plan is submitted operators will know the type of vessel(s) needed for a project but can rarely predict which exact vessels and aircrafts will be utilized. As such, we request that the proposed changes be incorporated into this provision to better reflect available information at the time of plan submittal.	<i>General.</i> A description of type(s) (i.e., support vessel, stimulation vessel, construction vessel, etc.) 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.
	550.224(b)	<i>Air emissions.</i> See § 550.205.	As explained in Section 12.5 of our comments, BOEM does not have authority to regulate onshore support facilities, offshore vehicles, and aircraft emissions. Therefore, this provision should be deleted from the regulation.	<del><i>Air emissions.</i> See § 550.205.</del>
What information on the onshore support facilities you will use must accompany the EP?	550.225(b)	<i>Air emissions.</i> 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.	As explained in Section 12.5 of our comments, BOEM does not have authority to require inclusion of onshore support facilities or aircraft emissions in the air emissions evaluations.	<del><i>Air emissions.</i> 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 regulated under the CAA or if you can identify another agency to which this emissions information from the facility was submitted.</del>
What must the DPP or DOCD include?	550.241(c)	<i>Drilling unit.</i> 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.	See § 550.211(c) above.	<i>Drilling unit.</i> 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. <del>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.</del>



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	550.241(d)	<i>Production facilities.</i> 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.	See § 550.211(c) above.	<i>Production facilities.</i> 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. <del>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.</del>
<b>What information must accompany the DPP or DOCD?</b>	550.242(g)	Air emissions information required by § 550.205	No comments regarding this paragraph.	
<b>What hydrogen sulfide (H<sub>2</sub>S) information must accompany the DPP or DOCD?</b>	550.245(d)	(3) If any H <sub>2</sub> S 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.	See comments to § 550.215(d) above.	<del>-(3) If any H<sub>2</sub>S 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.</del>
	550.245(e)	<i>Hydrogen sulfide.</i> 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 <sub>x</sub> , including reporting the sulphur emissions under § 550.205(e).	This subsection is unnecessary. Emissions from flaring will already be accounted for in the information required by 550.205(b). We request this subsection be eliminated.	<del><i>Hydrogen sulfide.</i> 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<sub>x</sub>, including reporting the sulphur emissions under § 550.205(e).</del>
	550.249	Removed	N/A	N/A
<b>What information on the support vessels, offshore vehicles, and aircraft you will use must accompany the DPP or DOCD?</b>	550.257(a)	<i>General.</i> 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.	See comments on § 550.224(a) above.	<i>General.</i> A description of type(s) (i.e., support vessel, stimulation vessel, construction vessel, etc.) 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.
	550.257(b)	<i>Air emissions.</i> See § 550.205.	See comments on § 550.224(b) above.	<del><i>Air emissions.</i> See § 550.205.</del>
<b>What information on the onshore support facilities you will use must accompany the DPP or DOCD?</b>	550.258(b)	<i>Air emissions.</i> 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.	See comments to § 550.225(b) above.	<del><i>Air emissions.</i> 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.</del>

<b>New Rule Section Title</b>	<b>New Rule Reference</b>	<b>New Rule Text</b>	<b>Comments/Issues/Questions</b>	<b>Proposed Alternate Language</b>
<b>How must I conduct activities under the approved EP, DPP, DOCD, RUE, pipeline ROW, or lease term pipeline application?</b>	550.280(a)	<i>Compliance.</i> 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:	It should be noted that this language conflicts with other sections of the proposed rule, namely § 550.303(g)(4) and our understanding of BOEM’s intent. We suggest language changes that make this section consistent with § 550.303(g)(4) and BOEM current practices.  If BOEM were to reject the suggested changes, an operator may be forced to submit a plan with multiple "Operating Scenarios" to ensure that the approved plan includes "all 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." A plan with multiple operating scenarios will prove to be administratively burdensome to BOEM and to the operator.	<i>Compliance.</i> 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 <b>if doing so will result in an increase in maximum annual projected emissions, unless the proposed activity is determined to be an insignificant activity.</b> If you fail to comply with your approved EP, DPP, DOCD, or RUE, pipeline ROW, or lease term pipeline application:
<b>How will BOEM require revisions to the approved EP, DPP, DOCD or application for a RUE?</b>	550.284(a)	<i>Periodic review.</i> 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.	As discussed in Sections 1.3.2 and 10 of our comments, BOEM lacks the authority to require re-submission or revision of an already-approved plan, absent some indication of changed conditions or impacts. Our requested changes to this provision make this regulatory provision consistent with BOEM’s authority.	<i>Periodic review.</i> 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. <del>(1) After 2020, any EP, DPP, DOCD or RUE application required to be submitted under this provision must be updated that was approved more than ten years prior must be resubmitted for air quality review in accordance with the requirements of § 550.310.</del>
<b>Subpart C – Air Quality Analysis, Control, and Compliance</b>				
<b>Under what circumstances does this subpart apply to operations in my plan?</b>	550.301	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.	See comments in § 550.284(a) regarding BOEMs authority to require re-submission or revision of an already-approved plan.	The provisions of this subpart apply to any existing facility <b>plan deemed submitted after the effective date of the final regulation</b> 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 <b>retains</b> 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.
<b>Acronyms and definitions concerning air quality.</b>	550.302(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) CH4 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.	No comments regarding the acronym list.	N/A



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		<p>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&amp;G means geological and geophysical.                      GHG means greenhouse gas.                      hp means horsepower.                      hpm means mechanical horsepower.                      HPU means hydraulic power unit.                      H2S means hydrogen sulfide.</p>	<p>No comments regarding the acronym list.</p>	<p>N/A</p>
		<p>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.                      NH3 means ammonia.                      NO2 means nitrogen dioxide.                      NOx means nitrogen oxides.                      O3 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.</p>	<p>No comments regarding the acronym list.</p>	<p>N/A</p>
		<p>Pb means lead.                      PM means particulate matter.                      PM2.5 means fine particulate matter equal to or less than 2.5 micrometers in diameter.                      PM10 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.                      SO2 means sulphur dioxide.                      SOx 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.                      µg/m3 means micrograms per cubic meter.</p>	<p>No comments regarding the acronym list.</p>	<p>N/A</p>
	550.302(b)	<p>Terms used in this subpart have the following meanings:</p>	<p>No comments regarding this definition.</p>	<p>N/A</p>

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		N/A	As discussed in Section 9 of our comments, BOEM has not clearly defined when OCS emissions “affect the air quality of any State.” In Section 9 of our comments, we identify appropriate definitions.	<u>New Proposed Definition</u>  <i>Affect the air quality of any State</i> means the following: (1) The air quality of any State coastal attainment area is considered to be affected by an OCS source when emissions from that source result in a model-predicted onshore concentration that exceeds the SIL and the modelled concentration plus background concentration exceeds the NAAQS. (2) The air quality of any State coastal nonattainment area is considered to be affected by an OCS source when a model-predicted onshore concentration attributable to emissions from the OCS source exceeds a SIL.
		<i>Air quality control region (AQCR)</i> 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.	No comments regarding this definition.	N/A
		<i>Ambient Air Increments (AAIs)</i> 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 <i>et seq.</i> , as amended.	As discussed in Section 2.2 of our comments, BOEM’s use of the AAIs is not appropriate for OCS sources. Therefore, we request that this definition be deleted.	<del><i>Ambient Air Increments (AAIs)</i> 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 <i>et seq.</i>, as amended.</del>
		<i>Ambient air quality standards and benchmarks (AAQSB)</i> 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).	We do not believe a “catch all” phrase such as AAQSB is warranted. As discussed in Section 2.2, it is not appropriate that BOEM’s proposed rule address PSD increments (i.e., AAIs). The rule should be precise and refer explicitly to NAAQS and SILs, as appropriate. Therefore, we request that the definition of AAQSB be removed from the definitions.	<del><i>Ambient air quality standards and benchmarks (AAQSB)</i> 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).</del>
		<i>Attainment area</i> 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 (40 CFR 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.	No comments regarding this definition.	N/A
		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.	As explained in Section 1.2.4 of our comments, BOEM does not have the authority to regulate MSCs. We request that this definition be eliminated.	<del><i>Attributed emissions</i> 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.</del>
		<i>Background concentration</i> 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.	We request minor revisions to this definition to allow input from the designated operator in establishing a basis for the background concentration.	<del><i>Background concentration</i> 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 BOEM or USEPA-approved air monitoring system or as determined on some other appropriate scientifically justified basis proposed by the designated operator in the plan submittal and approved by BOEM.</del>
		<i>Baseline concentration</i> 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 section 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.	This definition is not required because it is relevant only to determining increment (AAI) consumption. As discussed in Section 2.2, it is not appropriate that BOEM’s proposed rule address PSD increments (i.e., AAIs).	<del><i>Baseline concentration</i> 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 section 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.</del>

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		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: the amount of emissions reductions necessary to meet specific regulatory provisions; energy, environmental, and economic impacts; and costs.	As noted in other comments, specificity should be added to this paragraph that clarifies the pollutants subject to this provision are criteria air pollutants. Finally, we request the addition of language ensuring that the review considers safe operations of all OCS facilities as provided in § 550.307(c)(4).	<del>Best Available Control Technology (BACT) means physical or mechanical system or device that reduces emissions of criteria air pollutants subject to regulation to the maximum extent practicable, taking into account: the amount of emissions reductions necessary to meet specific regulatory provisions; energy, environmental, and economic impacts; and costs. If the implementation of BACT 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 BACT.</del>
		<i>Class I area</i> 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.	As discussed in Sections 1.2.7 and 2.2 of our comments, BOEM's mandate under OCSLA is to ensure that the OCSLA authorized activities do not significantly affect onshore air quality relevant to NAAQS. BOEM does not have the authority to require compliance with Class I increments or AQRV.	<del>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.</del>
		<i>Class II area</i> 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.	As discussed in Section 2.2 of our comments, BOEM's use of the EPA term <i>Class II area</i> is not appropriate for OCS sources. Compliance with the NAAQS is required at all areas onshore. Therefore, we request that this definition be deleted.	<del>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.</del>
		<i>Complex total emissions</i> 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.	As discussed in Section 4 and 5 of our comments, the potential avoidance of BOEM requirements as result of segmenting plans is not a significant issue and the current provisions in § 550.303(j) adequately address this issue. Therefore, we request that the definition of <i>Complex total emissions</i> be deleted.	<del>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.</del>
		N/A	As discussed in Section 8.9 we are proposing a new definition for the term <i>coastal area of any state</i> .	<u>Newly Proposed Definition</u>  <i>Coastal area of any State</i> means the inland area up to 25 miles of the shoreline where the shoreline refers to the nearest mean high water mark of a State. A lesser distance may be acceptable if the modeling analysis demonstrates that maximum concentrations occur closer to the shoreline.
		<i>Criteria air pollutant or criteria pollutant</i> 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.	No comments regarding this definition.	N/A
		<i>Design concentration</i> 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.	We request that the referenced section in this definition be corrected to section 7.2.1. Furthermore, we request the removal of the background concentration language from this definition because it is already defined in § 550.303(b) and is unnecessary.	<del>Design concentration means the pollutant concentration at a given location projected, through computer-simulated air dispersion or photochemical modelling, 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.</del>
		<i>Dispersion modeling</i> 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	No comments regarding this definition.	N/A

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<b>New Rule Section Title</b>	<b>New Rule Reference</b>	<b>New Rule Text</b>	<b>Comments/Issues/Questions</b>	<b>Proposed Alternate Language</b>
		project the concentrations of the pollutants at a receptor location.		
		<i>Emission control efficiency (ECE)</i> 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.	The proposed regulatory text does not specify the averaging period for determining ECE and it is suggested that an annual averaging period be utilized. Furthermore, as noted in other comments, specificity should be added to this paragraph that clarifies the pollutants subject to this provision are criteria air pollutants. Finally, given the nature of operational limitations and/or equipment replacements, the estimation of an ECE is not practical or useful; therefore, we request that ECEs be used only for sources implementing BACT control requirements.	<i>Emission control efficiency (ECE)</i> means the effectiveness of an ERM, <b>excluding emission credits</b> for any given emissions source and <b>criteria</b> 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 <b>annual</b> 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.
		<i>Emissions credits</i> 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: emissions offsets generated by the lessee or operator itself; or emissions offsets acquired from a third party; or 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.	In concept, this emissions credit provision provides benefit to the OCS operators. However, because BOEM has not established any specific emission credit regulatory requirements and states do not generally have banking systems for areas designated as attainment, the usefulness of the emissions credit program is significantly limited and would be burdensome to implement solely on a case-by-case basis. See Section 7.1 of our comments for additional information.	<i>Emissions credits</i> mean emissions reductions from an emissions source(s) not associated with the plan that are intended to compensate for the <b>excessive</b> 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: emissions offsets generated by the <b>lessee or designated</b> operator itself; or emissions offsets acquired from a third party; or 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.
		<i>Emission exemption threshold(s) (EET)</i> 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.	We request minor changes to the definition of EET to improve clarity of the rule requirements. Furthermore, as noted in other comments, specificity should be added to this paragraph that clarifies the pollutants subject to this provision are criteria air pollutants	<i>Emission exemption threshold(s) (EET)</i> means the maximum allowable rate of projected emissions, calculated <b>pursuant to the requirements of § 550.303(c)</b> for each <b>criteria</b> air pollutant, expressed as short tons per year (tpy), above which facilities would be subject to the <b>requirements of § 550.304-to-perform-modelling</b> .
		<i>Emissions factor(s)</i> 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.	No comments regarding this definition.	N/A
		<i>Emission reduction measure(s) (ERM)</i> 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.	The following change is proposed to clarify that replacement could include the substitution of other equipment in place of the primary emission source.	<i>Emission reduction measure(s) (ERM)</i> means any operational control(s), equipment replacement(s) <b>or substitution(s)</b> , 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.
		<i>Existing facility</i> means an operational OCS facility described in an approved plan.	No comments regarding this definition.	N/A



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		<p><i>Facility</i> 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.</p>	<p>As discussed in Section 5 of our comments, we request that BOEM incorporated the proposed revisions to the definition of <i>Facility</i>. It is also requested that BOEM incorporate portions of the previous regulatory language contained at § 550.303(j) of BOEM’s current regulation. See proposed new language in § 550.303(i) below.</p>	<p><i>Facility</i> means, any installation, structure, <del>vessel, vehicle,</del> equipment, or device that is temporarily or permanently attached to the seabed of the OCS <del>for the purpose of exploring for, developing, or producing oil or gas or sulphur therefrom, and which emits a regulated criteria or precursor pollutant,</del> 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. <del>All installations, structures, vessels, vehicles</del> equipment, or devices directly associated with <del>the construction, installation, and implementation of a</del> the facility are a part of a facility <del>only 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.</del> 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, <del>while temporarily or permanently attached to the seabed and exploring for, developing, or producing oil and gas or sulphur resources.</del> 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, <del>while temporarily or permanently attached to the seabed.</del> Any vessel used to transfer production from an offshore facility is part of the facility while physically attached to it. <del>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.</del></p>
		<p><i>Facility emissions</i> 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.</p>	<p>See comments to § 550.205(c) whereby we request the removal of 12-month rolling sum.</p>	<p><i>Facility emissions</i> means, for any given criteria or precursor air pollutant, the <del>maximum projected annual, the maximum 12-month rolling sum,</del> and the peak hourly emissions from all emissions sources <del>on or connected to included in a facility.</del></p>
		<p><i>Federally-recognized Indian tribe</i> refers to a Federally-recognized Indian tribe that has either a Treatment as State (TAS) status recognized by the USEPA or an approved TIP.</p>	<p>As discussed in Section 2.2 of our comments, all proposed rule provisions related to Class I areas, Sensitive Class II areas, and consultation with FLMs or Federally-recognized Indian tribes should be removed.</p>	<p><del><i>Federally-recognized Indian tribe</i> refers to a Federally-recognized Indian tribe that has either a Treatment as State (TAS) status recognized by the USEPA or an approved TIP.</del></p>
		<p><i>Fugitive emissions</i> 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.</p>	<p>No comments regarding this definition.</p>	<p>N/A</p>
		<p><i>Fully reduce(d)</i> 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).</p>	<p>We request changes to the definition of <i>Fully reduce(d)</i> to be consistent with changes proposed in other sections of Subpart C.</p>	<p><del><i>Fully reduce(d)</i> 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 applicable Significant Impact Levels or NAAQS set out in the table in 40 CFR 51.165(b)(2).</del></p>
		<p><i>Long-term facility</i> 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.</p>	<p>As discussed in Section 5 of our comments, we request changes to the definition of <i>Long-term facility</i> to be consistent with our requested changes to definition of <i>Facility</i>.</p>	<p><del><i>Long-term facility</i> means a “facility” that operates 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.</del></p>
		<p><i>Major precursor pollutant</i> 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).</p>	<p>We recommend deleting this definition because the proposed rule does not appear to distinguish among major precursor pollutant, precursor air pollutant, and precursor pollutant. See alternative definition for precursor pollutant below.</p>	<p><del><i>Major precursor pollutant</i> 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).</del></p>
		<p><i>MARPOL-certified engine</i> 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.</p>	<p>No comments regarding this definition.</p>	<p>N/A</p>

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		<i>Maximum rated capacity</i> 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).	No comments regarding this definition.	N/A
		<i>National ambient air quality standards (NAAQS)</i> 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.	We request that this definition be simplified by removing unnecessary language.	<del><i>National ambient air quality standards (NAAQS)</i> 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 50.4-13., 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.</del>
		<i>Non-attainment area</i> 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.	No comments regarding this definition.	N/A
		<i>Operational control</i> 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).	The following change is proposed to clarify that replacement could include the substitution of other equipment in place of the primary emission source.	<i>Operational control</i> means a process, method or technique, other than a physical or mechanical control, or equipment replacement, or substitution 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).
		<i>Particulate matter (PM)</i> means an airborne contaminant of particulate matter that is regulated as a criteria air pollutant under the ambient air standards. PM <sub>10</sub> refers to airborne contaminants of particulates less than or equal to 10 micrometers. PM <sub>2.5</sub> , or fine PM, is an airborne contaminant composed of particulates less than or equal to a diameter of 2.5 micrometers.	No comments regarding this definition.	N/A
		<i>Plan</i> 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.	As discussed in Section 12.6 of our comments, RUE and ROW applications do not require air emissions data to be included under the current regulations and BOEM has not demonstrated that these activities significantly affect onshore air quality or threaten compliance with the NAAQS in onshore areas. Therefore, it is requested that this provision be deleted.	<i>Plan</i> 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.
		<i>Potential to emit (PTE)</i> 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.	We request that this definition be deleted as it is not necessary if <i>projected emissions</i> is used in the regulation.	<del><i>Potential to emit (PTE)</i> 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.</del>
		<i>Precursor air pollutant or precursor pollutant</i> 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 <sub>x</sub> , SO <sub>x</sub> , and NH <sub>3</sub> .	We request that BOEM revise the definition to reflect EPA’s definition of precursor air pollutant, which is more appropriate for plan reviews.	<del><i>Precursor air pollutant or precursor pollutant</i> means those compounds defined at 40 CFR 51.166(b)(49)(i) 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<sub>x</sub>, SO<sub>x</sub>, and NH<sub>3</sub>.</del>
		<i>Projected emissions</i> 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.	See comments to § 550.205(c)(1) that address operator-proposed measures to reduce emissions to more accurately reflect expected emissions for a facility. Also, as explained in Section 1.2.4 of our comments, BOEM does not have the authority to regulate MSCs. We request that the language related to attributed emissions be eliminated from this definition.	<del><i>Projected emissions</i> means, for any given criteria or precursor air pollutant, the sum of a facility’s (or facilities’) emissions and the corresponding attributed emissions over the specified time period, taking into consideration emissions controls, expected utilization, and operational controls with the controlled or uncontrolled nature of the pollutants specified by the context.</del>

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		<i>Proximate activities</i> 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.	As discussed in Section 4 and 5 of our comments, the potential avoidance of BOEM requirements as result of segmenting plans is not a significant issue and the current provisions in § 550.303(j) adequately address this issue. Therefore, we request that the definition of <i>proximate activities</i> be deleted.	<del><i>Proximate activities</i> 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.</del>
		<i>Sensitive Class II area</i> 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.	As discussed in Sections 1.2.7 and 2.2 of our comments, BOEM's sole authority is for regulating compliance with the NAAQS. Therefore, all proposed rule provisions related to Class I areas, Sensitive Class II areas, and consultation with FLMs or Federally-recognized Indian tribes should be removed.	<del><i>Sensitive Class II area</i> 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.</del>
		<i>Short-term facility</i> means any facility that is not a long-term facility or connected to a long-term facility.	No comments regarding this definition.	N/A
		<i>Significance level or Significant impact level (SIL)</i> 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).	As discussed in Section 9 of our comments, we believe SILs are appropriate for use in nonattainment areas but too stringent for use in attainment areas.	<del><i>Significance level or Significant impact level (SIL)</i> 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). For those criteria pollutants or averaging periods for which there are no SILs, an interim SIL equal to five percent of the corresponding NAAQS will be in effect until EPA promulgates SILs or BOEM adopts new SILs that are based on air quality studies underway in the Gulf of Mexico and Alaska.</del>
		<i>Technically feasible</i> means a technology or methodology that: has been demonstrated to operate successfully on the same type of emissions source as the one under review; or is available and applicable to the type of emissions source under review.	As discussed in Section 7.1.2 of our comments we request that BOEM further clarify how technical feasibility and cost effectiveness will be considered consistent with the requirements of OCSLA 43 U.S.C. § 1347(b).	N/A
		<i>Total support emissions</i> 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).	As explained in Section 1.2.4 of our comments, BOEM does not have the authority to regulate MSCs. We request that this definition be eliminated.	<del><i>Total support emissions</i> 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 calendar year 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).</del>
<b>What analysis of my projected emissions is required under this subpart?</b>	550.303(a)	<i>Establishing emission exemption thresholds.</i> 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 and to apply any controls, as described in §§ 550.305 through 550.307.	As stated in the Section § 550.303(a) emissions below the EET have been determined not to significantly affect the air quality of any state therefore no additional requirements of Subpart C are warranted to ensure compliance with NAAQS. Specifically, no additional measuring, monitoring or recordkeeping as proposed in Sections § 550.309(d), 311 and 312 should be required. The reporting requirements addressed in the OCS inventory requirements of Section 550.187 are adequate to ensure emissions do not exceed the EET values and thus impact air quality onshore. The proposed alternative language presented addresses this requested change.  As noted in other comments, specificity should be added to this paragraph that clarifies the pollutants subject to this provision are criteria air pollutants.  Furthermore, as discussed in Section 4 and 5 of our comments, the potential avoidance of BOEM requirements as result of segmenting plans is not a significant issue and the current provisions in § 550.303(j) adequately address this issue. Therefore, we request that the term <i>complex total</i> be deleted.	<del><i>Establishing emission exemption thresholds.</i> BOEM establishes the rate of projected emissions, calculated for each criteria air pollutant, above which facilities would be subject to the requirement to perform modelling. 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 modelling in accordance with the requirements of § 550.304 and to apply any controls, as described in §§ 550.305 through 550.307. are exempt from all of the requirements of Subpart C.</del>
	550.303(b)	<i>Calculating projected emissions.</i> 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 following methodology: (1) <i>Projected emissions.</i> You must calculate and report the projected emissions for each facility as set forth in § 550.205(e). (2) <i>Attributed emissions.</i> You must calculate and report all attributed emissions for each facility as set forth in § 550.205(d).	As discussed in Section 4 and 5 of our comments, we request that BOEM remove the inclusion of terms <i>complex total</i> and <i>attributed emissions</i> consistent with the requested changes discussed in the definition of <i>Facility</i> in § 550.302(b) above.	<del><i>Calculating projected emissions.</i> You must calculate and report the projected emissions for each facility as set forth in § 550.205(c) and 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 following methodology: (1) <i>Projected emissions.</i> You must calculate and report the projected emissions for each facility as set forth in § 550.205(e). (2) <i>Attributed emissions.</i> You must calculate and report all attributed emissions for each facility as set forth in § 550.205(d).</del>
	550.303(c)	<i>Exempt emissions thresholds.</i> 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.	As discussed in Section 4 and 5 of our comments, we request that BOEM remove the terms <i>complex total emissions</i> .	<del><i>Exempt emissions thresholds.</i> 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.</del>



Appendix A - Requested Changes to Proposed Rule

New Rule Section Title	New Rule Reference	New Rule Text	Comments/Issues/Questions	Proposed Alternate Language
	550.303(c)(1)	BOEM will establish new EETs based on the factors listed in this paragraph and publish them in the <i>Federal Register</i> . 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 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 paragraph (c)(2) of this section demonstrates otherwise.	Based on review of past modelling analyses, BOEM's own studies, State Implementation Plans (SIPs), and Department of Interior studies it has been determined that OCS facilities have minimal impact on onshore air quality. Therefore, the current EETs are protective of on shore air quality and do not need to be revised. See Section 2.3 of our comments for supporting documentation. Any future changes to the EETs must be based on the ongoing studies as discussed in Section 6.1.	<del>BOEM will establish new EETs based on the factors listed in this paragraph and publish them in the <i>Federal Register</i>. 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 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 paragraph (c)(2) of this section demonstrates otherwise.</del>
	550.303(c)(1)(i)	The first time that BOEM establishes a new set of EETs, BOEM will publish a notice in the <i>Federal Register</i> 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 <i>Federal Register</i> listing the new EETs, along with a corresponding effective date for the new EETs.	Proposed regulatory language regarding BOEM's first and subsequent revisions has been streamlined because the procedures specified in § 550.303(c)(1)(i) and (ii) are identical. Furthermore, as discussed in Section 1.5.5 of our comments we request that future EETs go through the full rule making process and not just a public notice in <i>Federal Register</i> .	<del>The first</del> Each time that BOEM establishes a new set of EET(s), BOEM will publish a proposed rule <del>publish a notice</del> in the <i>Federal Register</i> 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 <del>final rule notice</del> in the <i>Federal Register</i> listing the new EETs, along with a corresponding effective date for the new EETs.
	550.303(c)(1)(ii)	Any time that BOEM determines that a revised EET should be established, BOEM will publish a notice in the <i>Federal Register</i> 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 <i>Federal Register</i> listing revised EET, along with a corresponding effective date for the revised EET.	See comment on § 550.303(c)(1)(i) above.	<del>Any time that BOEM determines that a revised EET should be established, BOEM will publish a notice in the <i>Federal Register</i> 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 <i>Federal Register</i> listing revised EET, along with a corresponding effective date for the revised EET.</del>
	550.303(c)(1)(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 <sup>2</sup> /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 PM10. 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).	As stated above to comments on § 550.303(c)(1) the current EETs are protective of air quality levels on shore and thus do not require revision. As discussed in sections 2.4 and 6.1, BOEM should not finalize emissions exemption threshold ranges prior to completing its scientific studies. Furthermore, as discussed in Section 6.3, EETs must account for distance to the onshore area of a State	<del>Until the date of the notice, a</del> 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 <sup>2</sup> /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); PM <sub>2.5</sub> , and PM <sub>10</sub> . 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).
	550.303(c)(1)(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.	We request this provision be deleted to be consistent with the proposed changes to § 550.303(c)(1)(i).	<del>Subsequent to the effective date of the notice, a facility must reevaluate and resubmit their plans according to the table 550.310(c)(2) will not be exempt under this section if its projected emission of any pollutant exceeds an EET published in the notice.</del>
	550.303(c)(1)(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.	Clarification added to the proposed regulatory language to reference the specific provisions that address how BOEM will revise EET values and to remove unnecessary regulatory language. Furthermore, as noted in other comments, specificity should be added to this paragraph that clarifies the pollutants subject to this provision are criteria air pollutants.	<del>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 criteria air pollutant(s), as appropriate, and publish draft EETs according to 550.303(c)(1)(i).</del>
	550.303(c)(2)	BOEM will determine new EET formulas taking into account the following factors:	No comments regarding this provision.	N/A
	550.303(c)(2)(i)	The absolute level of projected emissions;	No comments regarding this provision.	N/A
	550.303(c)(2)(ii)	The distance of the proposed facility or facilities from any State or from areas critical to natural resources, animals, and habitats;	As discussed in Section 2.2 of our comments, BOEM cannot require plans to address air quality assessments other than NAAQS; therefore, we request the removal of such language from this provision.	The distance of the proposed facility or facilities from any coastal State <del>or from areas critical to natural resources, animals, and habitats;</del>
	550.303(c)(2)(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;	We request the removal of unnecessary language from this provision.	The existing ambient air pollution in potentially affected coastal States, trend in the ambient air pollution in those States, and the associated attainment status of such areas, <del>and the associated effects to public health and welfare attainment status should address public health and welfare;</del>
	550.303(c)(2)(iv)	Any USEPA AAQSB applied in this part;	We request this provision be updated to reflect the requested revisions to the definitions in § 550.302(b).	Any NAAQS or SIL AAQSB applied in this part;
	550.303(c)(2)(v)	The types, frequency, and duration of any air pollutant emissions and their formation and/or dispersion characteristics;	As noted in other comments, specificity should be added to this paragraph that clarifies that the pollutants subject to this provision are criteria air pollutants.	The types, frequency, and duration of any criteria air pollutant emissions and their formation and/or dispersion characteristics;



New Rule Section Title	New Rule Reference	New Rule Text	Comments/Issues/Questions	Proposed Alternate Language																																
	550.303(c)(2)(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;	As explained in Section 1.2.4 of our comments, BOEM does not have the authority to regulate MSCs. We request that the reference to MSCs be deleted.	The characteristics of the facility <del>or facilities and MSCs</del> , including the type and nature of the emissions sources, and the height of the associated points or stacks;																																
	550.303(c)(2)(vii)	Prevailing meteorological characteristics in any given area, including air stability, relevant wind speeds and directions;	No comments on this provision.	N/A																																
	550.303(c)(2)(viii)	The amount of emissions from existing facilities and vessels in the vicinity of the proposed facility; and	It is requested that this provision be deleted as it is unnecessary and identifies items that are already captured under other provisions of § 550.303(c)(2).	<del>The amount of emissions from existing facilities and vessels in the vicinity of the proposed facility; and</del>																																
	550.303(c)(2)(ix)	Other necessary and appropriate considerations.	No comments on this provision.	N/A																																
	550.303(c)(3)	BOEM will set the EET formulas within the following ranges:	Based on review of past modelling analyses, BOEM's own studies, State Implementation Plans (SIPs), and Department of Interior studies it has been determined that OCS facilities have minimal impact on onshore air quality. Therefore, the current EETs are protective of on shore air quality and do not need to be revised. See Section 2.3 of our comments for supporting documentation. Any future changes to the EETs must be based on the ongoing studies as discussed in Section 6.1.	<del>BOEM will set the EET formulas within the following ranges:</del>																																
	550.303(c)(3)(i)	The minimum values in this range are determined by the formulas in table 1 to § 550.303.  <table border="1" data-bbox="559 675 1010 1088"> <caption>Table 1 to § 550.303</caption> <thead> <tr> <th>Minimum Value Equation</th> <th>Pollutant* and Averaging Period</th> </tr> </thead> <tbody> <tr> <td><math>E_{min} = 0.677(d^{1.2693})</math></td> <td>Annual NO<sub>x</sub>, SO<sub>x</sub>, and PM<sub>10</sub></td> </tr> <tr> <td><math>E_{min} = 0.2031(d^{1.2693})</math></td> <td>Annual PM<sub>2.5</sub></td> </tr> <tr> <td><math>E_{min} = 3.3851(d^{1.2693})</math></td> <td>24-hr SO<sub>2</sub> and PM<sub>10</sub></td> </tr> <tr> <td><math>E_{min} = 0.8124(d^{1.2693})</math></td> <td>24-hr PM<sub>2.5</sub></td> </tr> <tr> <td><math>E_{min} = 1354(d^{1.2693})</math></td> <td>1-hr CO</td> </tr> <tr> <td><math>E_{min} = 338.51(d^{1.2693})</math></td> <td>8-hr CO</td> </tr> <tr> <td><math>E_{min} = 16.926(d^{1.2693})</math></td> <td>3-hr SO<sub>2</sub></td> </tr> </tbody> </table> <p>Where <i>d</i> is the distance in statute miles from the State seaward boundary, as reported in your plan under §550.205(i)(2) and <i>E<sub>min</sub></i> equals tons per year. *For Pb, the minimum value amount is the level defined in 40 CFR 52.21((b)(23)(i).</p>	Minimum Value Equation	Pollutant* and Averaging Period	$E_{min} = 0.677(d^{1.2693})$	Annual NO <sub>x</sub> , SO <sub>x</sub> , and PM <sub>10</sub>	$E_{min} = 0.2031(d^{1.2693})$	Annual PM <sub>2.5</sub>	$E_{min} = 3.3851(d^{1.2693})$	24-hr SO <sub>2</sub> and PM <sub>10</sub>	$E_{min} = 0.8124(d^{1.2693})$	24-hr PM <sub>2.5</sub>	$E_{min} = 1354(d^{1.2693})$	1-hr CO	$E_{min} = 338.51(d^{1.2693})$	8-hr CO	$E_{min} = 16.926(d^{1.2693})$	3-hr SO <sub>2</sub>	See comments to § 550.303(c)(3) above. Furthermore, as documented in Section 6.6 of our comments the minimum EETs proposed in Table 1 contain a material error and utilize an overly conservative Gaussian equation. As discussed previously, there are extensive studies being conducted now that should be considered before establishing any new EET values.	<del>The minimum values in this range are determined by the formulas in table 1 to § 550.303.</del>  <b>Delete Table 1 below.</b>  <table border="1" data-bbox="1849 705 2284 1098"> <caption>Table 1 to § 550.303</caption> <thead> <tr> <th>Minimum Value Equation</th> <th>Pollutant* and Averaging Period</th> </tr> </thead> <tbody> <tr> <td><math>E_{min} = 0.677(d^{1.2693})</math></td> <td>Annual NO<sub>x</sub>, SO<sub>x</sub>, and PM<sub>10</sub></td> </tr> <tr> <td><math>E_{min} = 0.2031(d^{1.2693})</math></td> <td>Annual PM<sub>2.5</sub></td> </tr> <tr> <td><math>E_{min} = 3.3851(d^{1.2693})</math></td> <td>24-hr SO<sub>2</sub> and PM<sub>10</sub></td> </tr> <tr> <td><math>E_{min} = 0.8124(d^{1.2693})</math></td> <td>24-hr PM<sub>2.5</sub></td> </tr> <tr> <td><math>E_{min} = 1354(d^{1.2693})</math></td> <td>1-hr CO</td> </tr> <tr> <td><math>E_{min} = 338.51(d^{1.2693})</math></td> <td>8-hr CO</td> </tr> <tr> <td><math>E_{min} = 16.926(d^{1.2693})</math></td> <td>3-hr SO<sub>2</sub></td> </tr> </tbody> </table> <p>Where <i>d</i> is the distance in statute miles from the State seaward boundary, as reported in your plan under §550.205(i)(2) and <i>E<sub>min</sub></i> equals tons per year. *For Pb, the minimum value amount is the level defined in 40 CFR 52.21((b)(23)(i).</p>	Minimum Value Equation	Pollutant* and Averaging Period	$E_{min} = 0.677(d^{1.2693})$	Annual NO <sub>x</sub> , SO <sub>x</sub> , and PM <sub>10</sub>	$E_{min} = 0.2031(d^{1.2693})$	Annual PM <sub>2.5</sub>	$E_{min} = 3.3851(d^{1.2693})$	24-hr SO <sub>2</sub> and PM <sub>10</sub>	$E_{min} = 0.8124(d^{1.2693})$	24-hr PM <sub>2.5</sub>	$E_{min} = 1354(d^{1.2693})$	1-hr CO	$E_{min} = 338.51(d^{1.2693})$	8-hr CO	$E_{min} = 16.926(d^{1.2693})$	3-hr SO <sub>2</sub>
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	550.303(c)(3)(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 NO <sub>x</sub> , SO <sub>x</sub> , VOCs, and PM <sub>10</sub> . (B) If $d > 3$ , then $E_{max} = 3400 \times d^{2/3}$ for CO; and $E_{max} = 33.3 \times d$ for NO <sub>x</sub> , SO <sub>x</sub> , VOCs, and PM <sub>10</sub> Where <i>d</i> will be the distance of the facility from the SSB as identified in § 550.205(i)(2).	See comments to § 550.303(c)(1) above.	<del>The maximum values of this range are set by the following formulas: (A) If <math>d \leq 3</math>, then <math>E_{max} = 7072</math> for CO; and <math>E_{max} = 100</math> for NO<sub>x</sub>, SO<sub>x</sub>, VOCs, and PM<sub>10</sub>. (B) If <math>d &gt; 3</math>, then <math>E_{max} = 3400 \times d^{2/3}</math> for CO; and <math>E_{max} = 33.3 \times d</math> for NO<sub>x</sub>, SO<sub>x</sub>, VOCs, and PM<sub>10</sub> Where <i>d</i> will be the distance of the facility from the SSB as identified in § 550.205(i)(2).</del>																																
	550.303(c)(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 and you may be required to apply controls, as described in §§ 550.305 through 550.307.	See comments to § 550.205(c)(1) that address an operator-proposed measure to reduce emissions to more accurately depict projected emissions for a facility.	If your projected emissions for any criteria air pollutant or precursor air pollutant exceeds the EETs as determined pursuant to § 550.303 <b>after applying mitigation</b> , then you will be required to perform air quality modeling in accordance with the requirements of § 550.304 and you may be required to apply controls, as described in §§ 550.305 through 550.307.																																
	550.303(d)(1)	<del>Consolidation of air pollutant emissions from multiple facilities.</del> (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:	As discussed in Section 4 and 5 of our comments, the potential avoidance of BOEM requirements as result of segmenting plans is not a significant issue and the current provisions in § 550.303(j) adequately address this issue. Therefore, we request that this provision be deleted.	<del>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:</del>																																
	550.303(d)(1)(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	See comments to § 550.303(d)(1) above.	<del>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</del>																																
	550.303(d)(1)(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 1206.151; and	See comments to § 550.303(d)(1) above.	<del>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 1206.151; and</del>																																

Appendix A - Requested Changes to Proposed Rule

New Rule Section Title	New Rule Reference	New Rule Text	Comments/Issues/Questions	Proposed Alternate Language
	550.303(d)(1)(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	See comments to § 550.303(d)(1) above.	<del>The construction, installation, drilling, operation, or decommissioning of any of your facilities occurs within a calendar year contemporaneous 12-month period as the construction, installation, drilling operation, or decommissioning of any other of the designated operator's facility; and</del>
	550.303(d)(1)(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).	See comments to § 550.303(d)(1) above.	<del>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).</del>
	550.303(d)(2)	If any two or more facilities meet all of the conditions specified in (d)(1)(i) through (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.	See comments to § 550.303(d)(1) above.	<del>If any two or more facilities meet all of the conditions specified in (d)(1)(i) through (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.</del>
	550.303(d)(3)	BOEM will make a determination that you have appropriately considered the relevant data in your analysis of the complex total emissions.	See comments to § 550.303(d)(1) above.	<del>BOEM will make a determination that you have appropriately considered the relevant data in your analysis of the complex total emissions.</del>
	550.303(d)(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)).	See comments to § 550.303(d)(1) above.	<del>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)).</del>
	550.303(e)	<i>Emissions do not exceed any threshold.</i> 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 <i>de minimis</i> , and no further analysis is required under this subpart.	Revisions to the proposed regulatory text were added to clarify that a facility is exempt from all provisions of Subpart C if projected emissions are below all EET values. Also, see comments to § 550.303(d)(1) above regarding the deletion of the term complex total emissions from this provision.	<del><i>Emissions do not exceed any threshold.</i> 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 <i>de minimis</i>, and no further analysis is required under this subpart. you are exempt from additional requirements as prescribed in Subpart C.</del>
	550.303(f)	<i>Emissions exceed a threshold.</i> 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:	See comments to § 550.303(d)(1) above regarding the deletion of the term complex total emissions from this provision.	<del><i>Emissions exceed a threshold.</i> 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:</del>
	550.303(f)(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.	As discussed in sections 1.2.2 and 9.4 of our comments, BOEM's proposed regulatory requirements for VOC neither consider the significance of the effect of the emissions on the air quality of a state nor endeavor to assess the impact of the emissions on onshore attainment or maintenance of the NAAQS and thus this provision is inconsistent with the mandate of OCSLA section 5(a)(8) and exceed BOEM's authority. BOEM should wait until the completion of the ongoing air emission impact studies to determine appropriate actions for VOCs.	<del>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.</del>
	550.303(f)(2)	If the exceedance is for any criteria air pollutant, then you must conduct modeling in accordance with § 550.304.	No comments regarding this paragraph.	N/A
	550.303(f)(3)	If the exceedance is for NO <sub>x</sub> , VOCs, or CO, and if the conditions specified in § 550.304(b) have been met, you are required to conduct photochemical modeling for O <sub>3</sub> .	Expensive and complex photochemical modelling is not warranted given the minimal impact of OCS facilities on onshore air quality. See additional discussions as provided in Section 8.2 of our comments.	<del>If the exceedance is for NO<sub>x</sub>, VOCs, or CO, and if the conditions specified in § 550.304(b) have been met, you are required to conduct photochemical modeling for O<sub>3</sub>.</del>
	550.303(f)(4)	If the exceedance is for NO <sub>x</sub> , VOCs, PM <sub>2.5</sub> , or SO <sub>x</sub> , and if the conditions specified in § 550.304(b) have been met, you are required to conduct photochemical modeling for PM <sub>2.5</sub> .	See response above response to § 550.303(f)(3).	<del>If the exceedance is for NO<sub>x</sub>, VOCs, PM<sub>2.5</sub>, or SO<sub>x</sub>, and if the conditions specified in § 550.304(b) have been met, you are required to conduct photochemical modeling for PM<sub>2.5</sub>.</del>
	550.303(g)(1)	<i>Changes to previously approved plans.</i> (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.	It is requested that this provision be revised to be consistent with the proposed changes in § 550.205(c)(2) and to remove the term <i>complex total emissions</i> as previously discussed.	<del><i>Changes to previously approved plans.</i> (1) If you change your plan implementation, such that your facility maximum 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.</del>
	550.303(g)(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).	As noted in other comments, specificity should be added to this paragraph that clarifies the pollutants subject to this provision are criteria pollutants and the time period and emission basis for comparison.	<del>If at any time you anticipate an increase in annual facility emissions above in the maximum annual criteria air pollutant emissions from a previously approved plan, you must submit a revised plan, pursuant to 30 CFR 550.283(a)(4).</del>
	550.303(g)(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	This subsection is repetitive with the requirement in § 550.280(a). It is suggested that this text be eliminated and the text in § 550.280(a) be revised based on the suggested language changes.	<del>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.</del>

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		described in the previous plan.		
	550.303(g)(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.	This subsection is repetitive with the requirement in § 550.280(a). It is suggested that this text be eliminated and the text in § 550.280(a) be revised based on the suggested language changes.	<del>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.</del>
	550.303(g)(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.	BOEM needs to clarify that a short-term facility can continue to operate while awaiting BOEM approval of its revised plan to become a long-term facility.	N/A
	550.303(h)	<i>Federal land manager.</i> If BOEM believes that your proposed activities may affect a Class I or a Sensitive Class II area of a State:	As discussed in Section 1.2.7 of our comments, OCLSA did not grant FLMs any authority over OCS emissions, and it did not authorize BOEM to use its section 5(a)(8) authority as a means of protecting AQRVs that are of concern to FLMs. Therefore, we request that this provision be removed.	<del><i>Federal land manager.</i> If BOEM believes modeling and Q/D analysis indicates that your proposed activities may affect NAAQS in a Class I or a Sensitive Class II area of a State:</del>
	550.303(h)(1)	BOEM may consult with one or more relevant FLMs to determine what effects could result from your proposed activities.	See comments to § 550.303(h) above.	N/A
	550.303(h)(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.	See comments to § 550.303(h) above.	<del>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.</del>
	550.303(h)(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.	See comments to § 550.303(h) above.	<del>If the FLM does not raise any concerns regarding your plan in a timely manner 15 days, BOEM will assume that the FLM has no objections to the proposed plan.</del>
	<del>550.303(i)</del> Current Regulation under § 550.303(j)	<del>Review of facilities with emissions below the exemption amount.</del> 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 lessee shall be given the opportunity to present information to the Regional Supervisor which demonstrates that the exempt facility is not significantly affecting the air quality of an onshore area of the State.	See comments to definition of Facility in § 550.302(b) above and Section 5 of our comments.	<del>Review of facilities with emissions below the exemption amount.</del> If, during the review of a new, modified, or revised Exploration Plan or Development and Production Plan, <del>the Regional Supervisor determines or</del> an affected coastal 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 emissions information to determine whether emission control measures are necessary and appropriate for NAAQS compliance. <del>Additional emissions information requested shall be limited to information relating to facilities for which the lessee is the designated operator and that are within the 500m USCG Safety Zone of the otherwise exempt facility (measured from the center of the equipment on the surface site) that share any of the following production equipment including but not limited to, amine gas sweetening units, phase separators, natural gas dehydrators, or emissions control devices.</del> The lessee also shall be given the opportunity to present information to the Regional Supervisor which demonstrates that the exempt facility is not significantly affecting the air quality of an onshore area of the State <del>for NAAQS compliance.</del>
<b>What must I do if my projected emissions exceed an emission exemption threshold?</b>	550.304	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.	As discussed in Section 4 and 5 of our comments, the potential avoidance of BOEM requirements as result of segmenting plans is not a significant issue and the current provisions in § 550.303(j) adequately address this issue. Therefore, we request that the term <i>complex total emissions</i> be deleted.	<del>If your projected emissions or your complex total emissions exceed the applicable EETs limits defined in § 550.303(c)(1)(iii) for any criteria or precursor pollutant after applying operational limitations, you must conduct modelling of that pollutant in accordance with the following paragraphs of this section and any other pollutant for which that pollutant is a precursor, to project the impacts of those emissions.</del>
	550.304(a)(1)	<i>Dispersion models.</i> (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 appendix W of 40 CFR part 51 (Summaries of Preferred 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	Clarification added to allow both the preferred and alternate USEPA approved models. Additionally, the BOEM CEO should not be allowed to override EPA approved models or FLM guidance.	<del><i>Dispersion models.</i> (1) You must use one or more of the following air dispersion models: (i) A model approved by the USEPA (preferred or alternate), as described in appendix A to appendix W of 40 CFR part 51 (Summaries of Preferred 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.</del>



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		determines that such model would not be appropriate in the OCS context.		
	550.304(a)(2)	You must follow the modeling procedures recommended in 40 CFR part 51 appendix W, 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.	See comments to § 550.205(n) above regarding modeling protocol. Furthermore, we request adding clarification that only the portions relevant to offshore sources should be followed.	You must follow the <b>relevant</b> modeling procedures recommended <b>for offshore sources</b> in 40 CFR part 51 appendix W, 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.
	550.304(b)(1)	<i>Photochemical models.</i> 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;	Expensive and complex photochemical modelling is not warranted given the minimal impact of OCS facilities on onshore air quality. See additional discussions as provided in Section 8.2 of our comments document.	<del>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;</del>
	550.304(b)(2)	An appropriate photochemical air quality model is available that: (i) Meets the USEPA’s requirements of section 3.2 of appendix W to 40 CFR; (ii) Complies with the Federal Land Managers’ Air Quality Related Values Workgroup Guidance; or (iii) Is another model approved by the BOEM CEO;	See response to § 550.304(b)(1) above.	<del>An appropriate photochemical air quality model is available that: (i) Meets the USEPA’s requirements of section 3.2 of appendix W to 40 CFR; (ii) Complies with the Federal Land Managers’ Air Quality Related Values Workgroup Guidance; or (iii) Is another model approved by the BOEM CEO;</del>
	550.304(b)(3)	BOEM has determined that adequate relevant information on background concentrations is available for the relevant location(s) in a potentially affected State(s).	See response to § 550.304(b)(1) above.	<del>BOEM has determined that adequate relevant information on background concentrations is available for the relevant location(s) in a potentially affected State(s).</del>
	550.304(b)(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.	See comments to § 550.304(b)(1) and § 550.304(a)(2) above.	<del>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.</del>
	550.304(c)	<i>Projected emissions.</i> Base your modeling on the maximum projected emissions, as reported under § 550.205(e), or on the complex total emissions, where applicable;	As discussed in Section 4 and 5 of our comments, the potential avoidance of BOEM requirements as result of segmenting plans is not a significant issue and the current provisions in § 550.303(j) adequately address this issue. Therefore, we request that the term <i>complex total emissions</i> be deleted.	<del>Projected emissions.</del> Base your modeling on the maximum projected emissions, as reported under § 550.205(e), <del>or on the complex total emissions, where applicable;</del>
	550.304(d)	<i>Meteorology.</i> 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.	No comments on this provision.	N/A
	550.304(e)	<i>Estimates of ambient air concentrations.</i> 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).	See comments in § 550.302(b) regarding the removal of the term <i>complex total emissions</i> from this provision. Additionally, see Section 8.9 of our comments and the proposed new definition add in § 550.302(b) regarding the addition of coastal areas to this provision.	<del>Estimates of ambient air concentrations.</del> For each <del>criteria air modelled pollutant resulting from your projected emissions (or complex total emissions where applicable)</del> , estimate the <del>peak maximum incremental-plan-related</del> concentrations projected in any <del>coastal attainment area(s) and, separately, in any coastal non-attainment area(s), in any State where a SIP identifies an OCS contributor (over State submerged lands or onshore), both on an annual basis and for the other</del> 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).
	550.304(e)(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 PM2.5 must include NOx, SOx, VOCs, and NH3 (ii) Any analysis of O3 must include NOx, VOCs, and CO.	See comments above on the definition of air pollutant contained in § 550.105.	<del>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 model predictions of PM2.5 and ozone must consider both direct emissions and secondary pollutant formation due to, but also the formation of any criteria air pollutant that may result from the dispersion or presence of any emissions of relevant precursor air pollutant(s), where precursor pollutants are defined at 40 CFR 51.166(b)(49)(i). Specifically: (i) Any analysis of PM2.5 must include NOx, SOx, VOCs, and NH3 (ii) Any analysis of O3 must include NOx, VOCs, and CO.</del>
	550.304(e)(2)	BOEM may provide information through 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.	The requested modifications reflect our proposed changes to the definition of <i>background concentration</i> as defined in § 550.302(b) and the removal of the AAI provisions as discussed above. Furthermore, as discussed in Section 1.5.3 of our comments these provisions are vague, nonspecific, and propose to establish via Notice to Lessees methods to demonstrate compliance with ambient air quality without going through the APA rulemaking process.	<del>BOEM may provide information through 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, or as determined on some other appropriate scientifically justified basis proposed by the designated operator and approved by as specified by the Regional Supervisor.</del>

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	550.304(f)	<i>Attributed emissions.</i> 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).	As explained in Section 1.2.4 of our comments, BOEM does not have the authority to regulate MSCs. We request that this provision be deleted.	<del><i>Attributed emissions.</i> Conduct modeling of attributed emissions from those locations where the emissions are expected to occur outside of the shoreline (i.e., utilizing a line, area, volume, or pseudo point source model).</del>
	550.304(g)	<i>Documentation and reporting.</i> 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.	No comments regarding this paragraph.	N/A
<i>How do I determine whether my projected emissions of criteria air pollutants require ERM?</i>	550.305(a)	For all criteria air pollutants other than PM <sub>2.5</sub> and O <sub>3</sub> , 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). 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.	As discussed in Section 9 of our comments, BOEM has not clearly defined when OCS emissions “affect the air quality of any State.” In Section 9, we identify appropriate definitions. The requested changes incorporate our proposed definition of “affect the air quality of any State.”	For all criteria air pollutants other than PM <sub>2.5</sub> and O <sub>3</sub> , compare the results of the modeling described in § 550.304 with the SILs <del>in coastal nonattainment and attainment areas set out in the table at 40 CFR 51.165(b)(2)</del> . If the modeling results exceed a SIL for any criteria air pollutant for any averaging time <del>in a coastal nonattainment area</del> , 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. <del>If the modeling results exceed the SIL in a coastal attainment area you must compare the modelled results plus the appropriate background concentration to the NAAQS. If the modeling results exceed a NAAQS for any criteria air pollutant for any averaging time in a coastal attainment area, you are required to apply ERM to sources to reduce emissions only for the CPs that exceed a NAAQS, as specified in § 550.306 for a short-term facility, or as specified in § 550.307 for a long-term facility.</del>
	550.305(b)	For PM <sub>2.5</sub> , you must add the results of your dispersion modeling of direct PM <sub>2.5</sub> 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 <sub>2.5</sub> SILs set out in the table at 40 CFR 51.165(b)(2). If this sum exceeds a SIL for PM <sub>2.5</sub> 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.	See response to § 550.304(b)(1) above.	<del>For PM<sub>2.5</sub>, you must add the results of your dispersion modeling of direct PM<sub>2.5</sub> 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<sub>2.5</sub> SILs set out in the table at 40 CFR 51.165(b)(2). If this sum exceeds a SIL for PM<sub>2.5</sub> 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.</del>
	550.305(c)	For O <sub>3</sub> , 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 <sub>3</sub> 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.	See response to § 550.304(b)(1) above.	<del>For O<sub>3</sub>, 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<sub>3</sub> 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.</del>
<i>What ERM are required for a short-term facility?</i>	550.306(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:	See comments to § 550.303(f) above.	If any short-term facility requires ERM under <del>§ 550.303(f) for VOCs or</del> § 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:
		N/A	We request the following new provisions to improve clarity by separating out operational control or replacement(s) control options from the BACT requirements that may be required by the Regional Supervisor.	550.306(a)(1) - For any given pollutant, you must perform the following analysis: (i) Identify all available operational controls or replacement(s) control options relevant to the emissions of the pollutant(s) for which ERM is required; (ii) 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 operational controls or replacement(s) controls option. (iii) Rank the technically feasible operational controls or replacement(s) controls options 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 (iv) Evaluate the most effective operational control or replacement(s) control options and document the results of your analysis; (v) 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. (vi) 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: (A) 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. (B) If your emissions affect any non-attainment area for a specific pollutant, the Regional

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				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 conduct the ERM analysis in 550.306(a)(2) and provide a description of the associated energy, environmental, and economic impacts, and other costs.
			See comments § 550.306(a)(1) above.	550.306(a)(2) - In conducting your ERM analysis, with BACT, you must: (i) Identify all available ERM including BACT relevant to the emissions of the pollutant(s) for which ERM is required; (ii) 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. (iii) Rank the technically feasible ERM 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; and (iv) Evaluate the most effective ERM and document the results of your analysis; and (v) Select the ERM that is technically and economically feasible and reduces 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 ERM 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.
	550.306(a)(1)	Identify all available control technologies relevant to the emissions of the pollutant(s) for which ERM is required;	See comments § 550.306(a)(1) above.	<del>Identify all available control technologies relevant to the emissions of the CRITERIA pollutant(s) for which ERM is required;</del>
	550.306(a)(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.	See comments § 550.306(a)(1) above.	<del>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.</del>
	550.306(a)(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;	See comments § 550.306(a)(1) above.	<del>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;</del>
	550.306(a)(4)	Evaluate the most effective ERM and document the results of your analysis; and	See comments § 550.306(a)(1) above.	<del>Evaluate the most effective ERM and document the results of your analysis; and</del>
	550.306(a)(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.	See comments § 550.306(a)(1) above.	<del>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.</del>
	550.306(a)(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.	See comments § 550.306(a)(1) above.	<del>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.</del>



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	550.306(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:	We request that § 550.306(b) through § 550.306(d) be deleted since all of these determinations should be made as part § 550.306(a)(1) & (2)	<del>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:</del>
	550.306(b)(1)	An evaluation of the ERM you select, quantifying and verifying the emission reduction measure(s) and associated cost(s);	See comments § 550.306(b) above.	<del>An evaluation of the ERM you select, quantifying and verifying the emission reduction measure(s) and associated cost(s);</del>
	550.306(b)(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.	See comments § 550.306(b) above.	<del>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.</del>
	550.306(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.	See comments to § 550.306(b) above.	<del>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.</del>
	550.306(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.	This language is unnecessary as BOEM regulation already includes other opportunities to request additional information and analyses. See provisions of § 550.308(a) below.	<del>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.</del>
<b>What ERM are required for a long-term facility?</b>	550.307(a)	<i>Control of emissions of VOCs from a long-term facility.</i> 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.	See comments to § 550.303(f)(1) above.	<del><i>Control of emissions of VOCs from a long-term facility.</i> 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.</del>
	550.307(a)(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 <sub>3</sub> and PM <sub>2.5</sub> , 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.	See comments to § 550.303(f)(1) above.	<del>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<sub>3</sub> and PM<sub>2.5</sub>, 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.</del>
	550.307(a)(2)	Except as provided in paragraph (a)(3) of this section, if your projected emissions of VOCs potentially affect a State coastal area designated as a non-attainment area for O <sub>3</sub> or PM <sub>2.5</sub> , 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.	See comments to § 550.303(f)(1) above.	<del>Except as provided in paragraph (a)(3) of this section, if your projected emissions of VOCs potentially affect a State coastal area designated as a non-attainment area for O<sub>3</sub> or PM<sub>2.5</sub>, 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.</del>
	550.307(a)(3)	<i>VOC waiver:</i> 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 <sub>3</sub> (i.e., reduce the O <sub>3</sub> production efficiency), then no ERM are required for those VOCs.	As discussed in Section 8.5 of our comments we support the concept of NOx and VOC waivers. Should BOEM retain NOx and VOC waivers as part of the rule, it would be useful to provide an example of a waiver analysis for an OCS source via an NTL.	N/A
	550.307(b)	<i>Control of emissions of criteria air pollutants from a long-term facility.</i> 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).	Requested clarification added to be consistent with the proposed new coastal areas definition add in § 550.302(b).	<del><i>Control of emissions of criteria air pollutants from a long-term facility.</i> 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 coastal area(s).</del>

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	550.307(b)(1)	If all State areas affected by your emissions are designated as attainment areas, then:	See comments to § 550.307(b) above.	If all <del>State coastal</del> areas affected by your emissions are designated as attainment areas, then:
	550.307(b)(1)(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).	See comments to § 550.306(a)(1) above.	You must consider all relevant ERM <del>excluding BACT</del> , utilizing the process described for a short-term facility in § 550.306(a)(1)(i) through (vi)(4).
	550.307(b)(1)(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.	See response to § 550.304(b)(1) above. Furthermore, as noted in other comments, specificity should be added to this paragraph that clarifies the pollutants subject to this provision are criteria air pollutants. Finally, it is requested that this requirement be amended to clarify that modelling requirements would only apply to criteria air pollutants that are still above the EET after using the reduced projected emission levels.	You must conduct modeling for all of the <del>criteria</del> air pollutants set out in the table at <del>40 CFR 52.21(e) 40 CFR part 50, above the EET</del> using the reduced projected emissions that result from your proposed <del>ERM</del> reductions under 550.307(b)(1)(i). <del>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.</del>
	550.307(b)(1)(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.	The requested changes to this provision will ensure consistency with other changes discussed previously.	You must combine the ambient air concentrations resulting from the projected emissions of each relevant CP with appropriate background concentrations for that CP <del>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</del> . Compare your results with the NAAQSAAIs applicable to the <del>Class area designation of the State area set out in table 40 CFR 52.21(e) 40 CFR part 50</del> . (A) <del>For this analysis, use the ambient air quality concentration data specified in § 550.304(e)(2).</del> (B) <del>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.</del>
	550.307(b)(1)(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), according to the requirements for each class area.	See comments to § 550.307(b)(1)(iii) above.	If your projected emissions and background concentration data affect <del>State onshore coastal</del> areas with multiple class area designations, then you must reduce your projected emissions to meet the NAAQSAAIs set out in the table in <del>40 CFR 52.21(e) 40 CFR part 50, according to the requirements for each class area</del> .
	550.307(b)(1)(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).	See comments to § 550.307(b)(1)(iii) above.	If your proposed <del>reductions under 550.307(b)(1)(i) ERM</del> are sufficient to reduce projected emissions, such that projected design concentrations do not exceed the relevant CP NAAQS <del>no additional modelling or ERM analyses are required.any of the AAIs, you must then conduct the analysis described in § 550.307(b)(1)(vi)</del> . If your modeling results exceed the NAAQSAAIs 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 NAAQSAAIs. <del>Having done this, you must then conduct the analysis described in § 550.307(b)(1)(vi).</del>
	550.307(b)(1)(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.	Request to delete unnecessary language as this requirement is addressed in § 550.307(b)(1)(v) above.	<del>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.</del>
	550.307(b)(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	The requested changes to this provision will ensure consistency with other changes discussed previously.	If your emissions affect any <del>coastal</del> 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)(2)(i) through (v)(4) <del>and consider all relevant ERM, including BACT</del> . 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 <del>40 CFR 52.21(e) 40 CFR part 50</del> . You must conduct modeling using your revised projected emissions and compare the results with the SILs. <del>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</del> . 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. <del>Having done this, you must then conduct the analysis described in § 550.307(b)(1)(vi).</del>



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		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).		
	550.307(c)(1)	<i>Exceptions to the ERM requirement:</i> (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.	We request this provision be deleted to be consistent with the removal of AAI provisions as discussed previously.	<del>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.</del>
	550.307(c)(2)	NO <sub>x</sub> Waiver: If your projected emissions of NO <sub>x</sub> 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 <sub>3</sub> (i.e., reduce the O <sub>3</sub> production efficiency), then no ERM are required for NO <sub>x</sub> , unless: (i) The potentially affected area is an attainment area for NO <sub>x</sub> and your analysis indicates that the AAIs for NO <sub>x</sub> would be exceeded in the absence of such ERM; or (ii) The potentially affected area is a non-attainment area for NO <sub>x</sub> .	As discussed in Section 8.5 of our comments we support the concept of NO <sub>x</sub> and VOC waivers. Should BOEM retain NO <sub>x</sub> and VOC waivers as part of the rule, it would be useful to provide an example of a waiver analysis for an OCS source.	NO <sub>x</sub> Waiver: If your projected emissions of NO <sub>x</sub> potentially affect a State <b>onshore</b> coastal area, but you can demonstrate that those emissions would not cause an increase, or would cause a reduction, in the formation of O <sub>3</sub> (i.e., reduce the O <sub>3</sub> production efficiency), then no ERM are required for NO <sub>x</sub> , unless: <del>(i) The potentially affected area is an attainment area for NO<sub>x</sub> and your analysis indicates that the AAIs for NO<sub>x</sub> would be exceeded in the absence of such ERM; or</del> <del>(ii) The potentially affected area is a non-attainment area for NO<sub>x</sub>.</del>
	550.307(c)(3)	VOC Waiver. A VOCs waiver could apply, as described in § 550.307(a)(3).	No comments regarding this paragraph.	N/A
	550.307(c)(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.	We support this citation and request that it be included in the definition of ERM to highlight from the start of the analysis.	Safety exception. If the implementation of a plan under <del>these regulations</del> <b>Subpart C</b> 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.
	550.307(d)	<i>NAAQS requirement.</i> No concentration of an air pollutant may exceed the concentration permitted under any primary or secondary NAAQS.	As discussed in Section 9.2 of our comments this provision is unreasonable and would essentially require OCS sources to completely offset their emissions if modelled impacts were shown to impact a nonattainment area even if the OSC source's impact is insignificantly small. Therefore, we request that this provision be deleted.	<del>NAAQS requirement. No concentration of an air pollutant may exceed the concentration permitted under any primary or secondary NAAQS.</del>
	550.307(e)	<i>Emissions credits.</i> 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.	In concept, this emissions credit provision provides benefit to the OCS operators. However, because BOEM has not established any specific emission credit regulatory requirements and states do not generally have banking systems for areas designated as attainment, the usefulness of the emissions credit program is significantly limited and would be burdensome to implement solely on a case-by-case basis. See Section 7 of our rule comments for additional information.	<i>Emissions credits.</i> 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 <b>coastal</b> area affected by your potential emissions.
<i>Under what circumstances will BOEM require additional ERM on my proposed facility or facilities?</i>	550.308(a)	<i>Regional Supervisor review.</i> 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:	As discussed in Section 1.5.1 of our comments, BOEM's inclusion of provision that would allow the Regional Supervisor to simply ignore the entire proposed regulatory scheme, make his or her own NAAQS compliance determination, and impose his or her own emission controls at will, is plainly arbitrary. Therefore, we request that these provisions be deleted.	<del>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:</del>
	550.308(a)(1)	Information submitted by a State or local government, or a Federally-recognized Indian tribe;	See comments on § 550.308(a) above.	<del>Information submitted by a State as part of SIP or local government, or a Federally-recognized Indian tribe;</del>
	550.308(a)(2)	A cumulative impacts analysis conducted for an environmental impact statement (EIS) prepared to comply with the National Environmental Policy Act (NEPA);	See comments on § 550.308(a) above.	<del>A cumulative impacts analysis conducted for an environmental impact statement (EIS) prepared to comply with the National Environmental Policy Act (NEPA);</del>
	550.308(a)(3)	A compliance review of your proposed plan under § 550.232(b) for an EP, or § 550.267(c) for a DPP or DOCD; or	See comments on § 550.308(a) above.	<del>A compliance review of your proposed plan under § 550.232(b) for an EP, or § 550.267(c) for a DPP or DOCD; or</del>
	550.308(a)(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.	See comments on § 550.308(a) above.	<del>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.</del>

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	550.308(b)	<i>Lessee's or operator's right to challenge.</i> 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.	See comments on § 550.308(a)	<del>Lessee's or operator's right to challenge.</del> 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.
<b>What requirements apply to my ERM?</b>	550.309(a)	<i>Sufficiency.</i> 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.	We request the removal of unnecessary language as these items are already part of the plan review process.	<i>Sufficiency.</i> 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 <del>under all reasonably foreseeable conditions.</del> 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.
	550.309(b)	<i>Effectiveness.</i> 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.	The requested changes are proposed to improve clarity of this provision and to recognize that limiting an extension period to 90 days is unreasonable for OCS operations that typically operate in remote and harsh environments.  The requirements related to "effectiveness" and "control efficiency" are suitable for emissions sources installed with BACT, but do not apply to operational controls or emissions credits. For example, an operator would not be able to demonstrate the control efficiency of operational fuel limitations. BOEM should revise these requirements to only apply to emissions sources installed with BACT.	<i>Effectiveness.</i> You must <del>continually</del> ensure the effectiveness of your <del>BACTERM</del> for the duration of your plan's operations. If your measures become <del>permanently disabled or unavailable,</del> and your emissions exceed your facility's maximum annual projected emissions as approved in your plan you must <del>immediately notify the Regional Supervisor within 5 business days of such event and set forth a schedule for and replacing such BACTERM</del> with others of equal or superior effectiveness as soon as practicable <del>within 30 days of after</del> discovering the disability or unavailability, <del>unless the Regional Supervisor approves an extension not to exceed 90 days.</del>
	550.309(c)	<i>Control efficiency.</i> 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.	Substantiating actual emission control efficiency would likely require testing. As discussed in Section 7.1.1 of our comments, BOEM should outline what is required to "substantiate" ECE as part of the rulemaking, allowing operators due process to comment. Furthermore, this provision should be limited to emission sources subject to BACT or operational control limitations. Until this provision is further clarified we request that it be deleted.	<del>Control efficiency.</del> 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.
	550.309(c)(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.	See comments on § 550.309(c) above.	<del>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.</del>
	550.309(c)(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.	See comments on § 550.309(c) above.	<del>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.</del>
	550.309(d)	<i>Emission reductions monitoring.</i> 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.	It is requested that this provision be updated to reflect that actual emissions monitoring would only be applicable in instances where control technology was employed as part of BACT requirements. There are already sufficient requirements under the monitoring and recordkeeping portion and GOADs to ensure compliance with operational limits.	<i>Emission reductions monitoring.</i> If <del>ERM BACT</del> 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 <del>ERM BACT</del> or their emission control efficiency as a condition of the plan approval.
	550.309(d)(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. 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.	It is requested that this provision be removed because it is duplicative of § 550.311.	<del>If your plan is approved subject to the application of ERM CONTROL TECHNOLOGY, you must ensure that the emissions associated with each emissions source for which ERM CONTROL TECHNOLOGY is required complies with the emissions verification requirements of § 550.311. 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.</del>
	550.309(d)(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.	See comments on § 550.309(d)(1) above. Furthermore, it is unclear what the term "emissions meters" means as it is not defined in this Subpart.	<del>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.</del>
	550.309(e)	<i>Emissions credits.</i> For emissions credits, the following requirements also apply:	No comments regarding this paragraph.	N/A
	550.309(e)(1)	You must acquire your emissions credits from emissions source(s), either offshore or onshore, that affect the air quality of the same AQCR.	See comments in § 550.307(e) above.	N/A
	550.309(e)(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	See comments in § 550.307(e) above.	N/A

Appendix A - Requested Changes to Proposed Rule

<b>New Rule Section Title</b>	<b>New Rule Reference</b>	<b>New Rule Text</b>	<b>Comments/Issues/Questions</b>	<b>Proposed Alternate Language</b>
		precursor.		
	550.309(e)(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.	See comments in § 550.307(e) above.	N/A
	550.309(e)(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.	See comments in § 550.307(e) above.	
	550.309(e)(5)	Any emissions credits must reduce emissions below rates otherwise required by law;	See comments in § 550.307(e) above.	N/A
	550.309(e)(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.	See comments in § 550.307(e) above..	N/A
	550.309(e)(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.	See comments in § 550.307(e) above.	N/A
	550.309(e)(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.	See comments in § 550.307(e) above.	N/A
	550.309(e)(9)	Nothing in these regulations is intended to restrict emissions credits from being obtained and shared by multiple lessees or operators.	See comments in § 550.307(e) above.	N/A
	550.309(f)	<i>Emission reduction measure(s) (ERM)</i> : 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.	No comments on this provision.	N/A
	550.309(f)(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.	It is requested that this unnecessary language be removed. BOEM does not have authority to enforce other applicable federal regulations.	<del>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.</del>
	550.309(f)(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.	As explained in Section 1.2.4 of our comments, BOEM does not have the authority to regulate MSCs. Furthermore, the owners of MSC's and not the operators are responsible for compliance with USCG. As such, this provision should be removed.	<del>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.</del>
<b>How will revisions to the ambient air quality standards and benchmarks (AAQSB) affect my plan?</b>	550.310(a)	<i>Review of plans.</i> BOEM will evaluate the air pollutant emissions data submitted in your plan for compliance with the AAQSBs in effect on the date your plan is deemed submitted.	We request the following changes to increase clarity of this provision and to make the regulatory language consistent with changes previously discussed. Furthermore, as noted in other comments, specificity should be added to this paragraph that clarifies the pollutants subject to this provision are criteria air pollutants.	<i>Review of plans.</i> BOEM will evaluate the <del>criteria</del> air pollutant emissions data submitted in your plan in accordance with the processes established in 550.303 and 550.304. <del>for compliance with the</del> The NAAQS and SILs that are AAQSBs in effect on the date your plan is deemed submitted will be utilized (if necessary) to determine if ERMs are necessary.
	550.310(b)	<i>Proposed plans.</i> 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:	See comments to § 550.310(a).	<i>Proposed plans.</i> All <del>activities described in initial, revised, modified, and supplemental</del> plans must comply with the NAAQS and SILsAAQSB in effect on the date the plan is deemed submitted, except:

<b>New Rule Section Title</b>	<b>New Rule Reference</b>	<b>New Rule Text</b>	<b>Comments/Issues/Questions</b>	<b>Proposed Alternate Language</b>																																																												
	550.310(b)(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.	See comments to § 550.310(a). We support the option for an operator to request a two-year deferral. Planning for new productions facilities takes multiple years and unexpected changes to the AAQSB can pose significant schedule risks if the necessary DOCD approvals are delayed.	If your plan was deemed submitted shortly after the effective date of a new or revised <del>NAAQS or SILsAAQSB</del> , and you believe the immediate application of the new or revised <del>NAAQS or SILsAAQSB</del> is impracticable or would otherwise impose an unreasonable hardship on your proposed operations, then you may request a deferral from the requirement to <del>have the air emissions evaluated utilizing</del> 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 <del>evaluations to</del> the new or revised AAQSB based upon a finding of impracticability or undue hardship.																																																												
	550.310(b)(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.	BOEM has not explained in enough detail how this subsection could be acted upon by the Director. It is unclear how a finding of non-compliance with a new or revised NAAQS would be found to similarly not significantly affect air quality of any state. It is requested that this process be further clarified.	Upon a finding that noncompliance with a new or revised <del>NAAQSAAQSB</del> would not significantly affect the air quality of any State <del>coastal area</del> , the Director may grant a departure from compliance with the revised <del>NAAQSAAQSB</del> . The Director may condition the departure upon any requirement(s) deemed necessary to avoid causing or contributing to a violation of the NAAQS.																																																												
	550.310(c)(1)	<i>Approved plans.</i> (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 paragraph (c)(2) of this section. 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.	As discussed in Sections 1.3.2 and 10 of our comments, the requirement to re-submit plans every 10 years is inconsistent with section 25(h)(3) of OCSLA, which indicates that BOEM can only review an existing plan “based upon changes in available information and other onshore or offshore conditions affecting or impacted by development and production pursuant to such plan.” 43 U.S.C. § 1351(h)(3).	<del>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 paragraph (c)(2) of this section. 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.</del>																																																												
	550.310(c)(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.  <table border="1" data-bbox="540 1336 1028 1729"> <thead> <tr> <th>Year the Plan was Approved</th> <th>Year in Which Resubmission is Required:</th> </tr> </thead> <tbody> <tr><td>Prior to 1980</td><td>2020</td></tr> <tr><td>1980 through 1984</td><td>2021</td></tr> <tr><td>1985 through 1989</td><td>2022</td></tr> <tr><td>1990 through 1994</td><td>2023</td></tr> <tr><td>1995 through 1999</td><td>2024</td></tr> <tr><td>2000 through 2004</td><td>2025</td></tr> <tr><td>2005 through 2009</td><td>2026</td></tr> <tr><td>2010 through 2012</td><td>2027</td></tr> <tr><td>2013 through 2014</td><td>2028</td></tr> <tr><td>2015 through 2016</td><td>2029</td></tr> <tr><td>2017 through 2018</td><td>2030</td></tr> <tr><td>2019 through 2020</td><td>2031</td></tr> <tr><td>2021 through 2022</td><td>2032</td></tr> <tr><td>2023 and beyond</td><td>Ten years after year of approval</td></tr> </tbody> </table>	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	See comment to § 550.310(c)(1) above.	<del>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 most recently approved supplemental or revised plan according to the following schedule, regardless of whether you have a change in emissions.—</del>  <b>Delete Table below.</b>  <table border="1" data-bbox="1852 1336 2340 1719"> <thead> <tr> <th>Year the Plan was Approved</th> <th>Year in Which Resubmission is Required:</th> </tr> </thead> <tbody> <tr><td>Prior to 1980</td><td>2020</td></tr> <tr><td>1980 through 1984</td><td>2021</td></tr> <tr><td>1985 through 1989</td><td>2022</td></tr> <tr><td>1990 through 1994</td><td>2023</td></tr> <tr><td>1995 through 1999</td><td>2024</td></tr> <tr><td>2000 through 2004</td><td>2025</td></tr> <tr><td>2005 through 2009</td><td>2026</td></tr> <tr><td>2010 through 2012</td><td>2027</td></tr> <tr><td>2013 through 2014</td><td>2028</td></tr> <tr><td>2015 through 2016</td><td>2029</td></tr> <tr><td>2017 through 2018</td><td>2030</td></tr> <tr><td>2019 through 2020</td><td>2031</td></tr> <tr><td>2021 through 2022</td><td>2032</td></tr> <tr><td>2023 and beyond</td><td>Ten years after year of approval</td></tr> </tbody> </table>	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
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	550.310(c)(2)(i)	The plan is due to BOEM on the same month as the month in which the plan was originally approved.	See comment to § 550.310(c)(1) above.	<del>The plan is due to BOEM on the same month as the month in which the plan was originally most recently approved.</del>																																																												



Appendix A - Requested Changes to Proposed Rule

<b>New Rule Section Title</b>	<b>New Rule Reference</b>	<b>New Rule Text</b>	<b>Comments/Issues/Questions</b>	<b>Proposed Alternate Language</b>
	550.310(c)(2)(ii)	For an initially approved plan, the lessee or operator is required to resubmit the plan in accordance with the table in paragraph (c)(2) of this section.	See comment to § 550.310(c)(1) above.	<del>For an initially plans approved after the effective date of these rules plan, the lessee or operator is required to resubmit the plan in accordance with the table in paragraph (c)(2) of this section.</del>
	550.310(c)(2)(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.	See comment to § 550.310(c)(1) above.	<del>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.</del>
	550.310(c)(2)(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.	See comment to § 550.310(c)(1) above.	<del>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.</del>
<b>Under what circumstances will I be required to measure and report my actual emissions?</b>	550.311(a)	<i>Compliance demonstration conditions.</i> 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:	It is requested that the unnecessary language be removed from this provision.	<i>Compliance demonstration conditions.</i> Under any of the following conditions, you must demonstrate that your actual emissions <del>are have at all times and continue to be</del> in compliance with your previously approved plan:
	550.311(a)(1)	Your plan is approved subject to the implementation of BACT or emissions credits;	It is requested that BOEM limit monitoring of actual emission to sources equipped with control technology required as part of BACT review.	Your plan is approved subject to the implementation of BACT <del>or emissions credits</del> ;
	550.311(a)(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.	See comment to § 550.311(a)(1) above.	<del>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.</del>
	550.311(a)(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.	See comment to § 550.311(a)(1) above.	<del>The Regional Supervisor determines that your projected emissions, or complex total emissions, for any criteria or precursor air pollutant, calculated on either an maximum projected 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.</del>
	550.311(a)(4)	BOEM determines that your facility causes or contributes to an exceedance of the NAAQS in any State.	The requested change is proposed to provide additional clarity to this provision.	<del>BOEM Regional Supervisor</del> determines that your facility causes or contributes to an exceedance of the NAAQS in any State.
	550.311(b)	<i>Emissions reporting requirements.</i> If you are required to make the demonstration described in this section:	No comments on this provision.	N/A
	550.311(b)(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.	As discussed in Section 11.2 of our comments BOEM should limit the monitoring of actual emissions to emission sources installed with BACT. It would be more appropriate for the operators to propose which specific sources will be monitored as part of plan submittals as already required by 550.205(k). Additionally, as explained in Section 1.2.4 of our comments, BOEM does not have the authority to regulate MSCs. Therefore, we request that this provision be deleted.	<del>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.</del>
	550.311(b)(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:	See comment to § 550.311(b)(1) above.	<del>BOEM will consider various alternatives for reporting of relevant emissions sources. One option would be to monitor only the following key pieces of equipment:</del>
	550.311(b)(2)(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).	See comment to § 550.311(b)(1) above.	<del>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).</del>
	550.311(b)(2)(ii)	For facilities, monitoring and reporting would typically exclude: (A) Propulsion engines; (B) Boilers and incinerators; (C) Emergency generators; (D) Lifeboat engines.	See comment to § 550.311(b)(1) above.	<del>For facilities, monitoring and reporting would typically exclude: (A) Propulsion engines; (B) Boilers and incinerators; (C) Emergency generators; (D) Lifeboat engines.</del>

Appendix A - Requested Changes to Proposed Rule

New Rule Section Title	New Rule Reference	New Rule Text	Comments/Issues/Questions	Proposed Alternate Language
	550.311(b)(2)(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).	See comment to § 550.311(b)(1) above.	<del>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).</del>
	550.311(b)(2)(iv)	MSCs monitoring and reporting would typically exclude boilers and incinerators, emergency generators, and any engines onboard science vessels, OSVs, or lifeboats.	See comment to § 550.311(b)(1) above.	<del>MSCs monitoring and reporting would typically exclude boilers and incinerators, emergency generators, and any engines onboard science vessels, OSVs, or lifeboats.</del>
	550.311(b)(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.	See comment to § 550.311(b)(1) above	<del>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.</del>
	550.311(b)(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.	See comment to § 550.311(b)(1) above	<del>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.</del>
	550.311(b)(5)	You must provide the information required for this demonstration in a manner and on a schedule determined by the Regional Supervisor.	See comment to § 550.311(b)(1) above	<del>You must provide the information required for this demonstration in a manner and on a schedule determined by the Regional Supervisor.</del>
	550.311(c)	<i>Notification requirements.</i> 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.	As BOEM has greatly expanded the number of emissions sources that have to be identified in the plan submittal, each additional source represents a potential whereby, actual emissions of the emission source could exceed its projected emissions. If BOEM expects this level of granularity, the administrative burden on operators is substantial. We request that notifications of an exceedance of projected emissions be based on the sum of the entire facility annual emissions.	<i>Notification requirements.</i> If, on the basis of your demonstration of actual emissions, you determine at any time your facility's actual annual emissions exceed your projected annual emissions as described in your plan for any pollutant you must notify BOEM and provide BOEM with the appropriate data regarding the exceedance;
	550.311(d)	<i>Data submittal requirements.</i> 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.	It is requested that OCS operators be provided an opportunity to review and comment on any forms that may be implemented through the formal rule making process.	<i>Data submittal requirements.</i> You must submit data and information in a standard 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.
<b>What post-approval recordkeeping and reporting is required?</b>	550.312(a)	<i>Stack testing.</i> 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.	In most onshore permits and stack test provisions in federal standards, stack testing is limited to major emissions units and is limited to only initial testing or testing if modifications to the equipment are undertaken. Stack testing is far more complicated offshore than onshore due to safety considerations and space constraints, and should be limited accordingly. Considering the remoteness of the OCS facilities, and the safety considerations and space constraints, stack testing, at most, should be required only for the largest emissions units at a facility and then only initially or after significant modifications to the emissions unit that would make the previous testing invalid. Therefore, we request that this provision be modified to eliminate the requirement to repeat testing every three years. Furthermore, we request the removal of the reference to 40 CFR 60.8 as this provision does not specify the reporting requirements associated with stack testing.	<i>Stack testing.</i> 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.
	550.312(b)	<i>Fuel logs and activity data.</i> 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.	As discussed in Section 11.4 of our comments the implementation of individual engine and emission source fuel or activity data monitoring is extremely costly and the benefits do not outweigh the costs. We request that BOEM revise these requirements to apply only to substantial emissions sources.	<del><i>Fuel logs and activity data.</i> 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.</del>
	550.312(b)(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.	A ten-year recordkeeping requirement is unprecedented, as EPA and States require facilities to retain information for periods ranging between two and five years. BOEM did not explain its basis for selecting a ten year period or why a facility must continue to keep copies of information for such a lengthy time when it already provides this information to BOEM on a periodic basis. Therefore, it is requested that the recordkeeping time period be reduced to five years or the life of the plan, whichever is less.	You must retain this information for a period of no less than <del>ten years</del> five years or the life of your plan, whichever is less. You must submit this information to BOEM on a schedule set by the Regional Director.

Appendix A - Requested Changes to Proposed Rule

<b>New Rule Section Title</b>	<b>New Rule Reference</b>	<b>New Rule Text</b>	<b>Comments/Issues/Questions</b>	<b>Proposed Alternate Language</b>
	550.312(b)(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.	As explained in Section 1.2.4 of our comments, BOEM does not have the authority to regulate MSCs. As such, this provision should be removed.	<del>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.</del>
	550.312(b)(3)	<i>Electronic Records.</i> Record-keeping and reporting must be consistent with the USEPA's requirements for electronic reporting and recordkeeping requirements for new source performance standards.	It is requested that BOEM separate its reporting requirements from those of EPA. Adopting parts of the NSPS will create confusion and inconsistency in reporting.	<i>Electronic Records.</i> Record-keeping and reporting must be consistent with the BOEM'S USEPA's standard requirements for electronic reporting and recordkeeping requirements <del>for new source performance standards.</del>
	550.312(c)	<i>Meteorological reporting.</i> 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.	As discussed in Section 1.5.2 of our comments, this proposed provision fails to inform the regulated community of what is required and consequently establishes a framework for rulemaking without due process. This provision must be sufficiently clear and specific so the regulated community has "fair notice" of the regulatory requirements. As such, it is requested that this provision be deleted as currently written.	<del><i>Meteorological reporting.</i> 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.</del>
	550.312(d)	<i>Other information.</i> 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.	This provision is ambiguous and unclear and it is requested to be removed from the rule	<del><i>Other information.</i> 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.</del>
	550.312(e)	<i>Additional requirements imposed by other agencies.</i> 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.	It is requested that this provision be deleted as additional monitoring and reporting requirements imposed by other agencies are not relevant to BOEM's authority and do not belong in this regulation.	<del><i>Additional requirements imposed by other agencies.</i> 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.</del>
<b>Under what circumstances will BOEM impose additional requirements on facilities operating under already approved plans?</b>	550.313(a)	BOEM may impose additional air quality requirements on facilities operating under already approved plans if an applicable AAQSB changes or if BOEM determines:	As discussed in Section 1.5.1 of our comments, we request that the provisions of § 550.313 be deleted in its entirety or rewritten to provided much need clarification and ensure that the statutory authority of section 5(a)(8) of OCSLA is not exceeded.	<del>BOEM may impose additional air quality requirements on facilities operating under already approved plans if an applicable AAQSB changes or if BOEM determines:</del>
	550.313(a)(1)	Your operations are causing or contributing to a violation of the NAAQS, either individually or in combination with any other offshore operations;	See comment to § 550.313(a) above.	<del>Your operations are causing or contributing to a violation of the NAAQS, either individually or in combination with any other offshore operations;</del>
	550.313(a)(2)	Your plan was approved with either a NO <sub>x</sub> 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 <sub>x</sub> or VOCs would contribute to an increase in the ambient O <sub>3</sub> concentration such that the NAAQS for O <sub>3</sub> may be exceeded (in an attainment area), or the NAAQS for O <sub>3</sub> would continue to be exceeded (in an area that is non-attainment for O <sub>3</sub> ).	See comment to § 550.313(a) above.	<del>Your plan was approved with either a NO<sub>x</sub> 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<sub>x</sub> or VOCs would contribute to an increase in the ambient O<sub>3</sub> concentration such that the NAAQS for O<sub>3</sub> may be exceeded (in an attainment area), or the NAAQS for O<sub>3</sub> would continue to be exceeded (in an area that is non-attainment for O<sub>3</sub>).</del>
	550.313(a)(3)	Your plan was approved with a NO <sub>x</sub> waiver, and the air quality conditions in the affected State have changed to such an extent that your emissions of NO <sub>x</sub> would contribute to an increase in the ambient concentration of NO <sub>x</sub> such that the NAAQS for NO <sub>x</sub> may be exceeded (in an attainment area), or the NAAQS for NO <sub>x</sub> would continue to be exceeded (in an area that is non-attainment for NO <sub>x</sub> ).	See comment to § 550.313(a) above.	<del>Your plan was approved with a NO<sub>x</sub> waiver, and the air quality conditions in the affected State have changed to such an extent that your emissions of NO<sub>x</sub> would contribute to an increase in the ambient concentration of NO<sub>x</sub> such that the NAAQS for NO<sub>x</sub> may be exceeded (in an attainment area), or the NAAQS for NO<sub>x</sub> would continue to be exceeded (in an area that is non-attainment for NO<sub>x</sub>).</del>
	550.313(a)(4)	Your operation is emitting unauthorized air pollutants;	See comment to § 550.313(a) above. Furthermore, as noted in other comments, specificity should be added to this paragraph that clarifies the pollutants subject to this provision are criteria air pollutants above levels approve in the plan for the facility.	<del>Your operation is emitting unauthorized air pollutants;</del>
	550.313(a)(5)	Your operation is creating conditions posing an unreasonable risk to public health or welfare; or	See comment to § 550.313(a) above.	<del>Your operation is creating conditions posing an unreasonable risk to public health or welfare; or</del>
	550.313(a)(6)	Your operation is violating any applicable federal, State or tribal law related to air quality.	See comment to § 550.313(a) above. Furthermore, as discussed in Section 1.2.6 of our comments, BOEM lacks the authority to impose requirements unrelated to compliance with the NAAQS on any OCS facility. As such, BOEM has no authority to enforce violations of regulations under the jurisdiction of other agencies.	<del>Your operation is violating any applicable federal, State or tribal law related to air quality.</del>



Appendix A - Requested Changes to Proposed Rule

<b>New Rule Section Title</b>	<b>New Rule Reference</b>	<b>New Rule Text</b>	<b>Comments/Issues/Questions</b>	<b>Proposed Alternate Language</b>
	550.313(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.	No comments on this provision.	N/A
<b>Under what circumstances will the Regional Supervisor review the projected emissions from my existing facility or facilities?</b>	550.314(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.	As discussed in Section 2.2 of our comments, all proposed rule provisions related to Class I areas, Sensitive Class II areas, and consultation with FLMs or Federally-recognized Indian tribes should be removed. Furthermore, it is requested that the term "believes" be replaced with the term "determined."	A State, <del>or a Federally-recognized Indian tribe,</del> 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 <b>determined</b> <del>believes</del> an existing facility's projected emissions may cause or contribute to a violation of the NAAQS.
	550.314(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.	See comments to § 550.314(a) above.	The Regional Supervisor may require you to submit air pollutant emissions data to the State, <del>or a Federally-recognized Indian tribe,</del> submitting such a request.
	550.314(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.	See comments to § 550.314(a) above.	The State, <del>or a Federally-recognized Indian tribe,</del> submitting a request may submit information to BOEM that <del>it believes</del> 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.
	550.314(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.	The requested changes are proposed to provide further clarity and to be consistent with previously discussed changes.	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 <del>SSB shoreline</del> whether your facility's <del>projected-actual</del> emissions, <del>including your attributed emissions,</del> <del>has the potential to</del> <del>are causing</del> <del>cause</del> or <del>contribute</del> <del>contributing</del> to a violation of the NAAQS.
	550.314(d)(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.	See comments to § 550.314(a) above.	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, <del>or a Federally-recognized Indian tribe,</del> and you and explain the reasons for this finding.
	550.314(d)(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.	No comments on this provision.	N/A
<b>What are the air quality requirements for pipeline rights-of-way holders?</b>	550.1012(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:	As discussed in Section 12.6 of our comments, RUE and ROW applications do not require air emissions data to be included under the current regulations and BOEM has not demonstrated that these activities significantly affect onshore air quality or threaten compliance with the NAAQS in onshore areas. Therefore, it is requested that this provision be deleted.	<del>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:</del>
	550.1012(a)(1)	Include in your application the information required by § 550.205; and	See comments to § 550.1012(a) above.	<del>Include in your application the information required by § 550.205; and</del>
	550.1012(a)(2)	Demonstrate that your activities will comply with the requirements of subpart C of this part.	See comments to § 550.1012(a) above.	<del>Demonstrate that your activities will comply with the requirements of subpart C of this part.</del>
	550.1012(b)	For the purpose of this section:	See comments to § 550.1012(a) above.	<del>For the purpose of this section:</del>
	550.1012(b)(1)	Any requirement in either § 550.205 or subpart C of this part that refers to plans should be interpreted to apply equally to ROW applications except for the provision regarding the consolidation of multiple facilities (§ 550.303(d)) and for the periodic resubmission of plans (§ 550.310(c));	See comments to § 550.1012(a) above.	<del>Any requirement in either § 550.205 or subpart C of this part that refers to plans should be interpreted to apply equally to ROW applications except for the provision regarding the consolidation of multiple facilities (§ 550.303(d)) and for the periodic resubmission of plans (§ 550.310(c));</del>



<b><i>New Rule Section Title</i></b>	<b><i>New Rule Reference</i></b>	<b><i>New Rule Text</i></b>	<b><i>Comments/Issues/Questions</i></b>	<b><i>Proposed Alternate Language</i></b>
	550.1012(b)(2)	Any requirement in either § 550.205 or subpart C of this part 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.	See comments to § 550.1012(a) above.	<del>Any requirement in either § 550.205 or subpart C of this part 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.</del>
	550.1012(b)(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.	See comments to § 550.1012(a) above.	<del>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.</del>

**APPENDIX B: COMMENTS ON INITIAL REGULATORY  
IMPACT ANALYSIS**

# **Comments on the Initial Regulatory Impact Analysis**

**30 CFR 550 - Air Quality Control, Reporting, and Compliance; Proposed Rules**

Docket ID No. BOEM-2013-0081

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## **EXECUTIVE SUMMARY**

The Bureau of Ocean Energy Management (BOEM) has prepared an Initial Regulatory Impact Analysis (IRIA) of the proposed Air Quality Control, Reporting, and Compliance rules which aim to reduce NO<sub>x</sub> (including nitrogen dioxide and nitric oxide) emissions and concentrations of pollutants associated with NO<sub>x</sub> (including VOCs, SO<sub>x</sub>, CO, and PM) generated from oil and gas operations within the Outer Continental Shelf (OCS). The changes proposed by BOEM for the Outer Continental Shelf alter the measurement periods, create unprecedented requirements for monitoring and photochemical dispersion modelling, and could impose costly new emission reduction measures.

Ramboll Environ (RE) was retained to assist in the development of comments on the economic arguments put forward by BOEM regarding anticipated costs and benefits of the proposed regulations. As part of this effort Ramboll Environ staff conducted a survey of the potential costs of compliance with the proposed rule, based on historical cost data from OCS operators and vendors. In addition, Ramboll Environ incorporated independent research and other publicly available information, when available, to validate and supplement the information provided by industry stakeholders. Where not otherwise cited, the results presented in this report are based on the survey conducted by Ramboll Environ.

The comments on the IRIA are organized into four categories: general comments, comments on the regulatory review process, comments on regulatory costs, and comments on regulatory benefits. Each comment section is summarized below.

## **GENERAL COMMENTS**

1. Overall, Ramboll Environ finds that the costs of the rule significantly outweigh the benefits for a net cost of \$3.4 billion over the 10 year period.
2. BOEM estimates that the ten year net present value of the proposed regulation is negative \$97 million using a discount rate of three percent - which indicates that the cost of the regulation will exceed the benefit. This represents a government policy that is doing more harm than good.
3. The current BOEM benefit-cost analysis (BCA) overlooked or did not quantify many costs, such as the costs of installation and maintenance of emission reduction measures, and the cost of using Selective Catalytic Reduction (SCR) as a Best Available Control Technology (BACT) for NO<sub>x</sub> emissions.
4. The rule is premature since ongoing studies can affect the magnitude and direction of the proposed rule and its associated benefits and costs. As BOEM states on page 21 of the IRIA, "The results of the ongoing GOM and Alaska regional exemption studies will significantly change the number of plans required to model. BOEM does not have a basis at this time to estimate the direction or magnitude of this change".
5. The analysis assumes without justification that few, if any, operators will have to install BACT, but rather will be able to purchase NO<sub>x</sub> emission credits in an emission trading market. Yet for most of the Air Quality Control Regions (AQCR) potentially affected, no markets currently exist. For those markets that do exist, should the rule be adopted as



proposed, the NO<sub>x</sub> market would be flooded with demand for emission credits with no known source for increased supply. The result of this could be a significant increase in the price of emission credits thereby increasing the costs of buying offset credits. No analysis of these markets was conducted.

6. The regulation requires governmental approvals for many operational activities, yet there is no accounting for the cost of down time and delays, along with corresponding costs, while awaiting approvals.
7. There is no evidence provided by BOEM that NO<sub>2</sub> or ozone attainment levels are improved by the implementation of this rule. According to the IRIA the USEPA expects continued improvements over the next decade for air quality. By 2025, all of the Louisiana, Mississippi, Alabama and Florida coastal political subdivisions are expected to be in attainment for ozone (IRIA, page 33).
8. There is no accounting for uncertainty in the analysis, such as uncertainty in future oil prices, uncertainty in markets, uncertainty in future regulatory policies, or uncertainty in the values of key parameters in the modeling analysis.

### ***REGULATORY REVIEW PROCEDURES***

1. Executive Order 12866, which governs regulatory review, requires that agencies promulgating regulations must identify a problem that the rule will remedy. The IRIA fails to identify such a problem.
2. The best available scientific research on air quality in the OCS is still underway, thus making the regulation premature.
3. The proposed regulation duplicates regulatory efforts such as those under the International Convention for the Prevention of Pollution from Ships (MARPOL). The rule fails to incorporate USEPA and US Coast Guard enforcement of MARPOL Annex VI Air Pollution Prevention Requirements.
4. Consistent with the Regulatory Flexibility Act, the agency has acknowledged that there will be differential impacts on small firms but has failed to provide detailed analysis of these impacts or modify the proposed regulation to mitigate this impact.

### ***TECHNICAL ANALYSIS OF COSTS***

1. BOEM's IRIA includes inaccurate and limited cost information, which results in an underestimate of total costs (see Section 3 of this report). For example, where BOEM anticipates the first year of the regulation will cost \$22.9 million, Ramboll Environ estimates that the first year could cost more than \$529 million.
2. Over ten years, BOEM estimates that the present value of costs (at a 3 percent discount rate) will be \$289 million, while Ramboll Environ estimates the costs could be over \$3.4 billion.
3. The ten year timeframe of the BOEM analysis hides the fact that net losses to society will continue well after the year 2027, and will continue to grow.

4. The results of Ramboll Environ estimates of the true cost of the proposed regulation are shown in Table ES-1 below.

<b>Table ES.1 – Comparing BOEM Cost Estimates and Ramboll Environ Estimates*</b>				
<b>Regulation Change</b>	<b>BOEM</b>		<b>RAMBOLL ENVIRON</b>	
<b>550 Subpart B</b>	<b>Year 1 Cost</b>	<b>10-Year Cost (3%)</b>	<b>Year 1 Cost</b>	<b>10-Year Cost (3%)</b>
Contents of Exploration Plans	\$260,400	\$2,714,231	\$2,728,000	\$23,270,393
Contents of DPP and DOCD	\$444,154	\$4,402,546	\$5,766,000	\$49,185,150
Total Subpart B	<b>\$704,554</b>	<b>\$7,116,777</b>	<b>\$8,494,000</b>	<b>\$72,455,543</b>
<b>550 Subpart C</b>				
Air Quality Analyses in Plans	\$1,721,624	\$76,999,522	\$14,848,700	\$112,075,776
Emission Reduction Measures	\$17,290,668	\$139,946,251	\$66,143,391	\$600,498,895
Monitoring & Reporting	\$3,161,244	\$65,248,849	\$439,556,749	\$2,633,021,132
General	\$1,240	\$10,577	\$1,240	\$10,577
Total Subpart C	<b>\$22,174,776</b>	<b>\$282,205,199</b>	<b>\$520,550,080</b>	<b>\$3,345,606,381</b>
<b>550 Subpart J</b>				
Collect, maintain & submit all air quality records	<b>\$62,496</b>	<b>\$533,104</b>	<b>\$62,496</b>	<b>\$533,104</b>
<b>TOTAL</b>	<b>\$22,941,826</b>	<b>\$289,855,080</b>	<b>\$529,106,576</b>	<b>\$3,418,595,027</b>

\*Totals may not sum due to rounding

### **TECHNICAL ANALYSIS OF BENEFITS**

1. BOEM estimates the benefits of offshore emission reductions through the use of the data contained in the Offshore Economic Cost Model (OECM). However, the resolution of the OECM results is very wide (e.g. the same \$5,000/ton value of impact is assumed within a band of more than 100 miles in terms of the distance to the shore). Hence, it is difficult to see how the agency can justify claiming that moving the measurement boundary out from the coast to the state submerged boundary (a distance of a few miles) would actually increase the benefits; the model resolution is too coarse.
2. BOEM needs to estimate the impacts to onshore residents from offshore sources. The Agency used data generated from the Air Pollution Emissions Experiments and Policy (APEEP) model which contains data for only onshore impacts. APEEP uses data from within the contiguous US only and has no offshore component. In addition, uncertainties associated with the dose-response functions used from the APEEP model are not

considered. The standard errors associated with each of these components are not taken into account and no sensitivity analysis is provided.

3. BOEM needs to justify the theoretical basis of their approach using data drawn from the APEEP model and to calibrate the parameters of the model to actual offshore data. As it currently stands, BOEM is using observations drawn from a population of onshore impacts only with two variables, distance and compass bearing location, to predict offshore impacts. There is no rationale provided that the approach selected is correct nor is there any theoretical underpinning supporting the model specification provided. The model needs to be calibrated against actual offshore data. Otherwise, it is merely speculative and provides no basis for the rule.
4. Qualitative benefits are assessed by BOEM to ultimately outweigh the quantified net costs. These benefits include “reductions in lessee/operator costs,” and “increased compliance” through improved information. Both of these statements can and should be quantified, especially if assumed to be sufficiently significant to overwhelm the net costs (negative \$122 million over 10 years). Without this quantification, BOEM’s analysis does not support the promulgation of the rule.

# 1 General Comments

The Bureau of Ocean Energy Management (BOEM) has prepared an Initial Regulatory Impact Analysis<sup>1</sup> (IRIA) of the proposed Air Quality Control, Reporting, and Compliance rules for reducing NO<sub>x</sub> (including nitrogen dioxide and nitric oxide) emissions and concentrations of pollutants associated with NO<sub>x</sub> (including VOCs, SO<sub>x</sub>, CO, and PM). The changes proposed by BOEM for the Outer Continental Shelf (OCS) alter the measurement periods, create unprecedented requirements for monitoring and modeling of air dispersion or photochemistry, and impose costly new emission reduction measures attributed to plan emissions. Comments on the IRIA have been collected by Ramboll Environ (RE) on behalf of certain trade organizations and are expressed in this document. The remainder of this section provides an overview of our findings. Section 2 describes BOEM's failure to follow regulatory procedures, Section 3 includes our technical summary and review of cost estimates, and Section 4 concludes with our technical analysis of benefit estimates.

This section provides some background on the proposed regulation and IRIA process. It then addresses the benefit-cost analysis and conclusions drawn in the IRIA and provides a summary of RE's assessment of the costs, as developed from OCS operator and vendor inputs. Other key general comments explained below in greater detail are:

- the failure of the agency to identify a problem that justifies the new regulation,
- the failure to demonstrate that this rule would hasten the progress toward attainment of air quality goals,
- dependence upon emissions trading markets without considering market capacity limitations,
- failure to address impacts on small firms,
- shortcomings of the IRIA with regard to incorporating uncertainty (or lack thereof),
- failure to address the potential for regulatory delays and resultant downtime in OCS production, and
- regulatory overreach presented by the proposed action.

## 1.1 Background Information

The Outer Continental Shelf Lands Act mandates that the OCS, which was deemed by Congress to be "a vital national resource," be "made available for expeditious and orderly development, subject to environmental safeguards . . ." 43 U.S.C. § 1332(3). A reasoned balancing is thus required of Congress' goal of expeditious development with appropriate environmental safeguards. Yet such a balancing is impossible when estimates of the impact and compliance costs are "tremendously uncertain," or have negative benefits, as BOEM has acknowledged in the IRIA.

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<sup>1</sup> <https://www.regulations.gov/document?D=BOEM-2013-0081-002>, Air Quality Control, Reporting, and Compliance, Initial Regulatory Impact Analysis, March 3, 2016

In addition to this OCLSA requirement of weighing costs against benefits, a particularly stringent quantitative analysis is required for rules that will have an annual effect to the economy in excess of \$100 million. Due to Executive Orders 12866 and 13563, BOEM is required to use the best available information to calculate the benefits and costs of the proposed rule. This quantitative benefit-cost analysis will, by law, form a primary component of the rulemaking process.

BOEM used monetary values from the Air Pollution Emissions Experiments and Policy (APEEP) analysis model results to determine benefits from offshore NO<sub>x</sub> reductions. The APEEP results are based on estimated onshore emissions impacts only associated with NO<sub>x</sub>, particulate matter (PM), volatile organic compound (VOC) and sulfur dioxide (SO<sub>2</sub>) emissions. The model was not used directly; rather some results from the model were used in an *ad hoc* specification to predict onshore impacts from offshore effects for NO<sub>x</sub> only.

In addition, BOEM asserts that the rules will also improve air quality and reduce health expenditures from exposure to other air pollutants, but did not monetize their impacts because of the uncertain nature of their reductions and overall uncertainties related to their assessment.

## **1.2 Summary of Benefit-Cost Estimates showing Benefits do not Exceed Costs**

BOEM's estimate of annualized costs presented in the IRIA are developed based on some (but not all) capital costs, one-time labor costs, on-going annual costs, and other emissions reduction costs. BOEM projects both the total costs and benefits for the first full year the rule is in effect (2017) and for each subsequent year until 2026. The net benefits are the difference between the total benefits and the total costs.

BOEM estimates a positive net benefit for only the period 2017 to 2019, and an increasingly negative net benefit from 2020 to 2026. In sum, BOEM estimates the net benefit over 10 years is -\$122 million (not discounted), showing the rule has an overall net cost.

Had BOEM more fully analyzed the costs and benefits, the negative benefits (net costs) would have been greater. Ramboll Environ reviewed BOEM's assumptions, calculations and analysis and updated the cost estimates. Our review finds significant errors in BOEM's IRIA cost and benefit estimates and that BOEM's net cost is significantly underestimated.

Overall, Ramboll Environ finds that the costs of the rule could significantly outweigh the benefits, and to a greater degree than that estimated by BOEM. Specifically:

- After correcting for BOEM's underestimated cost estimations, our estimate for total costs for the first year is \$529 million with no certainty of any benefits.
- This leads to a net cost of \$3.4 billion over the 10 year period.
- One of the most significant cost factors are for measurement of emissions using Parametric Emission Monitoring System (PEMS), costing up to \$785.7 million over the 10-year period of analysis.
- The costs of Selective Catalytic Reduction (SCR) as a Best Available Control Technology (BACT) are estimated by Ramboll Environ to be \$397.7 million over the

10-year period of analysis assuming only 5 units are required to install SCR per year. The number of units requiring BACT could be much higher.

- While the time frame in the IRIA is for 10 years, the true net cost to society could be much greater than that, as each year after the first 10 could present a significant additional net cost to the nation.

While BOEM concludes that the benefits of the rule do not exceed the costs, this acknowledgement is understated since the IRIA underestimates costs by only including information collection (IC) costs, and ignoring the costs of installation and maintenance of emission reduction measures, among other oversights. Furthermore, BOEM's cost estimates do not include the cost of using Selective Catalytic Reduction (SCR) as a Best Available Control Technology (BACT) for NO<sub>x</sub> emissions, and assumes without justification that few, if any, operators will have to install BACT of any type. BOEM assumes that NO<sub>x</sub> emission credit trading will be a cheaper alternative and that credit trading at \$3,000 per ton will be easy and possible throughout the different Air Quality Control Regions (AQCRs) even though for most of those regions credit trading markets do not exist. There are numerous flaws in these assumptions and assertions which we detail in this report.

On page 5 of the IRIA, BOEM states that

“The net quantified benefits for this proposed rule are estimated to be positive in the first three years and **negative in all subsequent years of the 10-year window of this analysis.**” (emphasis added)

IRIA, page 5

In fact, the agency's analysis shows that over the course of the 10 year window of analysis, the total net cost of the proposed rule approaches \$122 million dollars, compared with a benefit that declines to zero after eight years (see Figure 1).

**Figure 1 - BOEM Estimates of Benefits and Costs for the Proposed Rule**

Based on the cost and benefit data presented in Figure 1, promulgation of the proposed rule would violate OCSLA's mandate of a reasoned balancing of "expeditious and orderly development" and environmental safeguards. It also would contravene the updated Executive Order (E.O.) 13563, which reaffirms E.O. 12866 and further states that agencies must,

*(1) propose or **adopt a regulation only upon a reasoned determination that its benefits justify its costs** (recognizing that some benefits and costs are difficult to quantify); (2) tailor its regulations to **impose the least burden on society**, consistent with obtaining 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 impacts; and equity).*

E.O. 13563, (emphasis added)<sup>2</sup>

If the benefit-cost analysis (BCA) determines that none of the proposed regulatory configurations provides an environmental or social benefit that is greater than the cost of executing the components of the rule, then OMB has the obligation to return the proposed rule.

<sup>2</sup> The President. "Executive Order 13563, Improving Regulation and Regulatory Review." 76 Fed. Reg. 3821 (Jan. 18, 2011). Available at (<http://www.gpo.gov/fdsys/granule/CFR-2012-title3-vol1/CFR-2012-title3-vol1-eo13563/content-detail.html>).

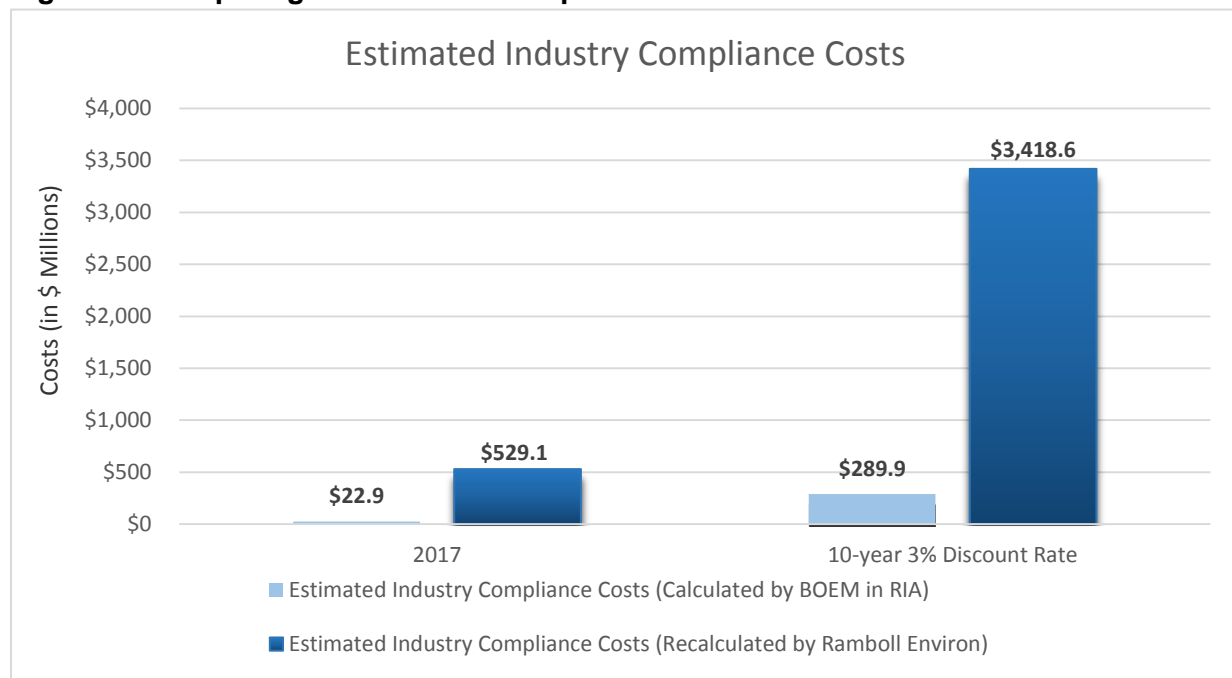


Ramboll Environ conducted a survey of OCS operators and vendors to assist in its analysis of the accuracy of the cost estimates presented in the IRIA. Where costs estimates varied from the BOEM estimates, Ramboll Environ conducted research to verify the estimates and understand where and why the estimate departs from the BOEM estimate. The results of our research provide the basis of these comments on the IRIA, with details of the cost estimates provided in Chapter 3. Where estimates varied between firms, and between different potential interpretations of the proposed rule, we have provided a range of estimates but conservatively applied a lower value in our revision of BOEM's calculations.

Table 1 shows a comparison of BOEM's calculation of compliance costs compared to the compliance costs as recalculated within this analysis. The first year costs are estimated to be approximately \$23 million by BOEM, and over \$529 million by Ramboll Environ, representing a 23 fold increase. The ten year costs similarly represent a 12 fold increase over the BOEM estimates. The same data are shown graphically in Figure 2.

<b>Table 1.1 – Industry Compliance Costs</b>		
	<b>Annual Cost in 2017 (Millions)</b>	<b>10-year Cost (Millions, using 3% Discount Rate)</b>
BOEM Estimate	\$23	\$289
Ramboll Environ Estimate	\$529	\$3,418
Increase Factor (Ramboll Environ/BOEM)	<b>23</b>	<b>12</b>

**Figure 2 –Comparing Estimates of Compliance Costs**



### 1.3 Regulation is not Justified and is Premature

The regulatory review process follows guidance from E.O. 12866, which explains the federal regulatory philosophy and principles. The very first of these principles states,

“Each agency shall identify the problem that it intends to address (including, where applicable, the failures of private markets or public institutions that warrant new agency action) as well as assess the significance of that problem.”

E.O. 12866<sup>3</sup>

Yet BOEM has failed wholly to identify any substantial deficiencies with the current regulatory system. Neither has the agency addressed the significance of this unstated defect.

As part of the IRIA analysis, agencies are required to assess a range of regulatory alternatives as well as non-regulatory actions. As required under E.O. 12866, Section 6(a)(3)(C)(iii), the agency shall also provide to OIRA the following additional information developed as part of the agency’s decision-making process (unless prohibited by law):

“An assessment, including the underlying analysis, of costs and benefits of potentially effective and reasonably feasible alternatives to the planned regulation, identified by the agencies or the public (including improving the current regulation and **reasonably viable non-regulatory actions...**”<sup>4</sup> (emphasis added)

E.O. 12866

In this instance, the “no action” or baseline alternative for the IRIA specifies delaying the publication of the proposed regulatory changes until 2018 or 2019, when BOEM has completed the process of evaluating the current exemption threshold equations (IRIA pg. 64).

The IRIA offers several justifications as to why the proposed modifications to the rule should be adopted prior to the 2018 time frame. All of the provided justifications are vague and insufficient.

- The IRIA asserts that by waiting, the proposed revisions would “not be incorporated” into BOEM’s regulations and that benefits would not be realized (page 64 of the IRIA). Yet, BOEM’s own analysis indicates that the benefits of the proposed revisions even ignoring the costs are not significant, so it seems that waiting would save costs.

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<sup>3</sup> The President. “Executive Order 12866, Regulatory Planning and Review.” 58 Fed. Reg. 51735 (Sept. 30, 1993), page 1. *Amended by* Executive Order 13258 and Executive Order 13422. Executive Order 13497, signed January 30, 2009, revoked those amendments. Available at (<http://www.archives.gov/federal-register/executive-orders/pdf/12866.pdf>).

<sup>4</sup> *ibid*

- The IRIA asserts that waiting until the 2018 results are published would “make it more difficult” for BOEM to meet its statutory duties. However, the IRIA offers no further explanation for, or evidence of, the source of this increased difficulty, or an explanation as to how a delay would impede BOEM from executing its statutory duties. In fact, the IRIA explicitly states that,

*...it is BOEM’s current practice to update the SILs and AAls and add the additional air pollutants for which standards have been established by the USEPA even without changes in BOEM’s regulations*

And,

*Regardless of whether the current regulatory action occurs now or is postponed, once these studies have been completed, BOEM anticipates that it will update the exemption threshold (currently at § 550.303(c) and § 550.303(d) in the proposed regulations.*

IRIA, pg. 64 & 65

This suggests that under current conditions, BOEM is already capable of making updates and/or meeting its statutory obligations without the need for the inefficient and costly revisions proposed by this rule.

#### **1.4 No Evidence that Attainment Levels are Expected to Improve**

Originally passed in 1953, the Outer Continental Shelf Lands Act (OCSLA) (43 U.S.C. §§ 1331-1356(a)) was designed to ensure that the United States had jurisdiction over the seabed floor, and the right to lease, explore, and develop and produce the associated mineral resources. In its initial configuration, OCSLA did not address air quality on the OCS. However, in September 1978, Congress amended the OCSLA, adding a new Section 5(a)(8) that grants the Secretary of the Interior authority to promulgate regulations

*for 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 this Act significantly affect the air quality of any State**” (emphasis added).*

This authority is further limited by a requirement to weigh expeditious and orderly development with environmental safeguards. In 1980, BOEM used these authorities to develop the Air Quality Regulatory Program (AQRP) whose proposed revisions are the subject of this IRIA.

No evidence exists that the proposed rule will increase the number of areas that transition from non-attainment to attainment and/or an improvement in the rate at which attainment designations are achieved.

Indeed, according to data presented in the IRIA (pg. 34 and 35), BOEM expects continued improvements in air quality over the next decade so that by 2025 the affected GOM coastal political subdivisions will be in attainment before factoring in any of the benefits purported to be associated with the proposed rule changes.

### 1.5 Credit Market not a Viable Alternative

BOEM failed to study the true costs of a NO<sub>x</sub> credit market and other allowances and failed to determine the impacts of this rule on the existing credit markets. The rule assumes that NO<sub>x</sub> allowance credits exist and will be a less expensive alternative to BACT, costing only \$3,000 per ton. In fact, emission credit markets for most of the AQCRs do not exist.

Considering past credit prices, which have regularly exceeded **\$50,000 per ton in the Houston-Galveston ozone non-attainment area**<sup>5</sup>, BOEM's estimate of a \$3,000 allowance price in a market where demand exceeds supply is very unlikely. In reality, the cost of NO<sub>x</sub> credits could far exceed the magnitude of BOEM's assumed benefit of \$5,000 per ton. Furthermore, the impact of adding so many new entrants to the credit markets could have considerable impacts on existing market participants.

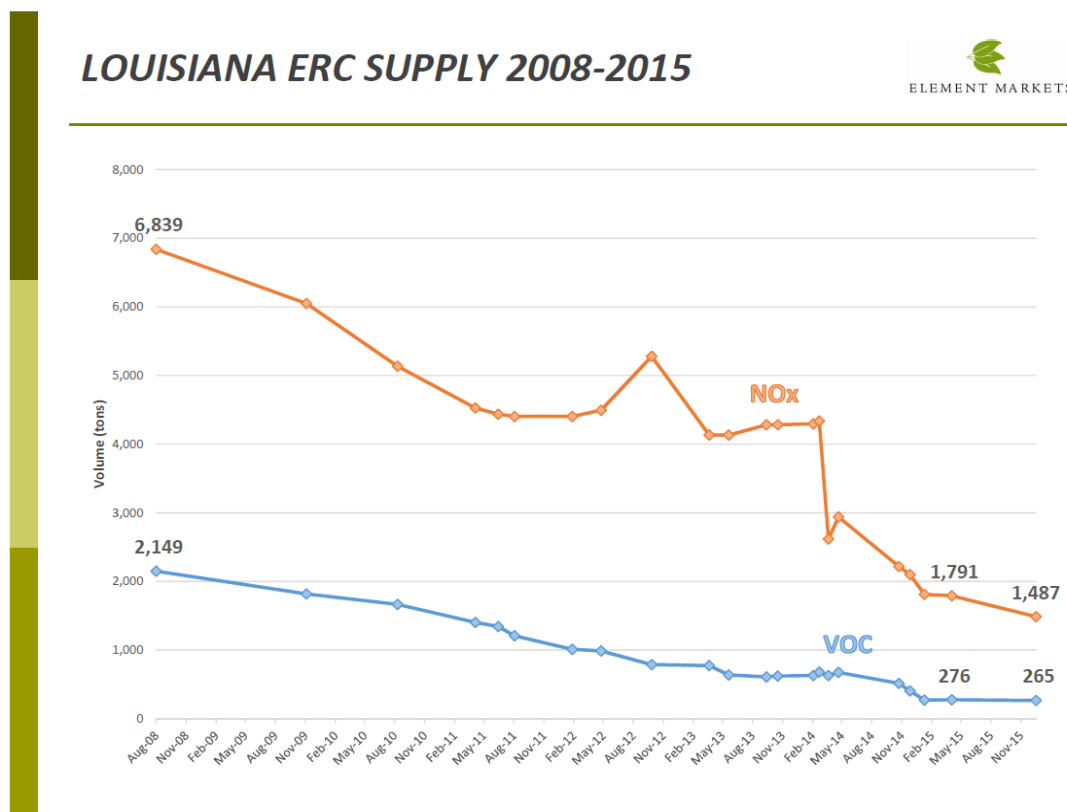
For ozone non-attainment areas in Louisiana, the price of NO<sub>x</sub> allocation credits has fluctuated between \$3,000-5,000 per ton for fifteen years, until recent expansions in the non-attainment area. Since the expansions, the availability of credits has dropped by nearly 80 percent, and **NO<sub>x</sub> allocation credits have now ranged in price from \$18,000-25,000 per ton** for credits expiring in ten years<sup>6</sup>. Figure 3 shows the dramatic decline in availability of NO<sub>x</sub> emission reduction credits (ERC) in Louisiana over the last seven years. The decreased supply correlated to increased difficulty and expense in obtaining credits. If more firms decide to participate in a NO<sub>x</sub> trading market due to this rule, general economic theory suggests that demand for credits will increase, the availability of credits decrease, and the price increase. There could be a disproportionately negative impact on smaller firms.

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<sup>5</sup> Michael Taylor, President of Emission Advisors, Inc., personal communication, April 26, 2016

<sup>6</sup> Michael Taylor, President of Emission Advisors, Inc., personal communication, April 26, 2016

**Figure 3 –Available Air Quality Credits in Louisiana**



Source: Element Markets. Baton Rouge ERC Market Overview. May 21, 2015.7

The NO<sub>x</sub> allowance markets in Texas are significantly more complex. The Mass Emissions Cap and Trade Program (MECT) started in 2002 and allows for banking and trading of NO<sub>x</sub> credits between regulated facilities in the Houston-Galveston nonattainment area<sup>8</sup>. New facilities do not receive an allocation and must purchase allowances from the market. Also in existence is the older Emission Reduction Credit (ERC) program, which allows participants to purchase a credit to emit<sup>9</sup>. Until 2002, NO<sub>x</sub> ERCs were available for \$5,000 to \$10,000 per ton. After 2002, facilities producing greater than 10 tons of NO<sub>x</sub> were required to join the MECT. Few NO<sub>x</sub> ERCs have been available<sup>10</sup>, and many sources have chosen to temporarily shut down and bank credits while the prices are high.

<sup>7</sup> Accessible at <http://la-awma.org/files/AWMA+presentation+by+Element+Markets+-+Louisiana+ERCs+5-21-2015.pdf>

<sup>8</sup> Texas Commission on Environmental Quality. Discrete Emission Credit Banking and Trading Program Audit. 2013. Accessible at <http://www.tceq.texas.gov/assets/public/implementation/air/banking/reports/2013decprogramaudit.pdf>

<sup>9</sup> Element Markets. The Scarcity and Expense of HGB Emission Reduction Credits: Issue and Opportunity. October 1, 2013. Accessible at <http://www.awma-gcc.org/docs/HGB%20-%20AWMA%20Presentation%20by%20Element%20Markets%2010-1-2013.pdf>

<sup>10</sup> Element Markets. The Scarcity and Expense of HGB Emission Reduction Credits: Issue and

NO<sub>x</sub> ERCs can be used for VOCs at a trading ratio, but MECT NO<sub>x</sub> allowances cannot be used for VOC, causing NO<sub>x</sub> ERCs to be more valuable. **NO<sub>x</sub> ERCs have fluctuated between \$90,000 to \$125,000 per ton in Houston** and in 2014, the NO<sub>x</sub> ERCs reached a high of **\$300,000 per ton** when very few were available<sup>11</sup>. MECT NO<sub>x</sub> stream credits range from **\$53,000 to \$65,000 per ton** with 40,000 tons traded annually. Roughly 28,000 tons of NO<sub>x</sub> ERCs are available, but, based on past experience, the price can change dramatically as the availability of credits fluctuates<sup>12</sup>.

**In most attainment areas along the Gulf Coast, there are no credits available for purchase**, but the Texas Commission on Environmental Quality (TCEQ) operates a voluntary Discrete Emission Credit (DEC) program, issuing Discrete Emission Reduction Credits (DERCs) for both mobile and stationary sources<sup>13</sup>. We are not aware of any similar programs in Mississippi, Alabama, Florida, or Louisiana, although Louisiana has proposed regulation to do just that.

Due to the existence of the MECT program in Texas, there is very low generation of NO<sub>x</sub> DERCs<sup>14</sup>. In 2012, the average price of a NO<sub>x</sub> DERC was \$4,750, but sold for a high of \$11,266 per ton in 2009<sup>15</sup>. Note that these are the NO<sub>x</sub> allowance prices in the **voluntary trading program in attainment areas**, indicating that NO<sub>x</sub> allowances in **non-attainment areas** could be much more expensive than the \$3,000 per ton assumed in the IRIA. This indicates that, contrary to BOEM's assertions in the IRIA, BACT may be the cheapest emissions control alternative, but BACTs is still significantly more costly than the benefit of \$5,000 per ton from NO<sub>x</sub> emissions reductions claimed by BOEM.

Regarding other criteria air pollutants, there are two non-attainment areas for the 8-hour ozone EPA standard in the Gulf of Mexico and two for the 1-hour sulfur dioxide (SO<sub>2</sub>) EPA standard. Baton Rouge (LA) and Houston-Galveston (TX)<sup>16</sup> are non-attainment areas for ozone and

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Opportunity. October 1, 2013. Accessible at <http://www.awma-gcc.org/docs/HGB%20-%20AWMA%20Presentation%20by%20Element%20Markets%2010-1-2013.pdf>

<sup>11</sup> Michael Taylor, President of Emission Advisors, Inc., personal communication, April 26, 2016.

<sup>12</sup> Michael Taylor, President of Emission Advisors, Inc., personal communication, April 26, 2016.

<sup>13</sup> Texas Commission on Environmental Quality. Discrete Emission Credit Banking and Trading Program Audit. 2013. Accessible at

<http://www.tceq.texas.gov/assets/public/implementation/air/banking/reports/2013decprogramaudit.pdf>

<sup>14</sup> Texas Commission on Environmental Quality. Discrete Emission Credit Banking and Trading Program Audit. 2013. Accessible at

<http://www.tceq.texas.gov/assets/public/implementation/air/banking/reports/2013decprogramaudit.pdf>

<sup>15</sup> Texas Commission on Environmental Quality. Discrete Emission Credit Banking and Trading Program Audit. 2013. Accessible at

<http://www.tceq.texas.gov/assets/public/implementation/air/banking/reports/2013decprogramaudit.pdf>

<sup>16</sup> Environmental Protection Agency. Current Nonattainment Counties for All Criteria Pollutants. Updated April 22, 2016. Accessible at <http://www3.epa.gov/airquality/greenbook/ancl.html>

Tampa-Hillsborough County (FL) and New Orleans-St. Bernard Parish (LA) are non- attainment areas for SO<sub>2</sub><sup>17</sup> .

**A SO<sub>x</sub> market does not currently exist in Louisiana or Texas**, but default allowance prices are roughly \$5,000 per ton when starting a market. As a point of comparison, SO<sub>x</sub> prices in California now reach \$18,000-20,000 per ton, but are less in New Jersey, where they are often bought at a 40-to-1 ratio for Particulate Matter (PM)) credits (\$10,000 per ton)<sup>18</sup>.

The rule as proposed would require operators to seek ERCs in the affected AQCR. Although not accounted for in the rule, the use of emission credits offshore would likely require additional modelling to document that the reductions would positively impact the affected AQCR. This suggests the vast majority of potential ERCs that would be needed would be supplied in markets that have yet to be established and agencies responsible for tracking, maintaining and overseeing the markets have little or no experience in these types of markets. BOEM appears to underestimate the start-up time and transactions costs associated with establishing a smoothly running market with liquidity and stable prices. Rather BOEM is assuming credits can be bought within all of the AQCRs for an average price of \$3,000 per ton within three years of rule implementation.

The fact that credit markets for other criteria air pollutants (excluding NO<sub>x</sub>) do not yet exist and that establishing these markets is costly from both a financial and temporal perspective indicates that it will not be feasible for these pollutants to be offset using emissions credits as an ERM.

## 1.6 Differential Impacts on Smaller Firms

BOEM acknowledges in the IRIA that the proposed changes have the potential to unduly burden small businesses.

*...Based on this initial analysis, BOEM expects the implementation of this proposed rule to have **an economic impact on a substantial number of small entities** under 5 U.S.C. 605(b).*

IRIA, page 84 (emphasis added)

BOEM estimates that the proposed rule changes will affect 130 companies operating in the GOM, 69 percent of which (90 firms) meet the Small Business Administration's North American Industry Classification System (NAICS) criteria for classification as a small business. The IRIA suggests that for small firms that are well-capitalized the incremental cost of additional or consolidated reporting is "a small cost in the context of an exploration or development project" (IRIA pg. 86). The potential implication of these statements is that because the operations are well capitalized the additional cost burdens will not be unreasonable or unbearable. However, no information is presented that indicates that any type of marginal analysis was conducted to

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<sup>17</sup> Environmental Protection Agency. Current Nonattainment Counties for All Criteria Pollutants. Updated April 22, 2016. Accessible at <http://www3.epa.gov/airquality/greenbook/ancl.html>

<sup>18</sup> Michael Taylor, President of Emission Advisors, Inc., personal communication, April 26, 2016



determine the magnitude of the impact of these additional costs or to evaluate whether, and at what point, the additional costs of the new requirements might push a small business beyond the break-even point of operations. Further, the notion that small firms are well capitalized is unsupported and ignores current economic conditions.

The analysis takes a very broad approach, suggesting that since 37 percent of the historically submitted plans can be attributed to small businesses, 37 percent of the total anticipated calculated costs of reporting and compliance can also be attributed to operations that meet the small business criteria (IRIA pg. 86). If the assumption is that costs of the proposed rule are the same per firm, then it stands to reason that such a cost represents a much higher share of total cost to a small firm than it does to a large firm and as such, would differentially impact small firms.

Beyond the failure to fully examine the direct impacts of the costs associated with the proposed rule on small businesses operating in the industry directly, the analysis presented does not look at the second or third order impacts on second and third tier support industries, many of which are small businesses.

For example, in the context of the emission credit trading markets, the IRIA fails to consider the impacts of the rule on existing market participants, some of which are small firms. Adding a large influx of demand for emission credits and allowances could dramatically increase the cost of emission credits, which could hurt the smallest market participants the most. If small, onshore industries are unable to procure emission credits in the market, they will be forced to shut down, impacting the community and the region. This will have extrapolating effects on employment and quality of life for the people in these regions. None of these impacts were considered in the IRIA but could be significant.

Even without the level of detail suggested above, the BOEM IRIA analysis concludes that small businesses will in fact be unduly affected by the proposed rule changes. In light of this conclusion, BOEM is statutorily obligated to explore and quantify the magnitude of that impact. BOEM failed to complete this work.

## **1.7 Uncertainty**

The Initial Regulatory Impact Analysis recognizes uncertainties may exist regarding the availability and price of emissions offsets (pg. 43); uncertainty over exemption thresholds (pg. 43); and uncertainty associated with industry activity, technological innovation and future air quality standards (pg. 59). However little attempt is made in the IRIA to characterize and assess the level and impact uncertainty may have on the estimation of benefits and costs.

OMB suggests because uncertainty is basic to many analyses, its effects should be analyzed and reported.

*Useful information in such a report would include the key sources of uncertainty; expected value estimates of outcomes; the sensitivity of results to important sources of uncertainty; and where possible, the probability distributions of benefits, costs, and net benefits.*

On page 42 the IRIA states:

*While the price of NO<sub>x</sub> credits can vary widely, credits are assumed to be offsets that cost an average of \$3,000 per ton of NO<sub>x</sub> reduced in this analysis.*

No attempt is made to characterize the uncertainty or understand the nature of the volatility in emission credit prices but rather it is assumed prices are constant for the analysis. In fact, for most of the AQCRs, markets do not exist. Data presented in Section 1.5 of this document for existing markets shows high volatility of prices. Uncertainties associated with establishing emission credit markets within the AQCRs were not presented in the IRIA. Rather it is assumed the NO<sub>x</sub> emission credit price will stay at the low end of the historic range and not vary much even though existing emission credit markets have shown significantly higher average prices with large variances.

On the benefits assessment, BOEM failed to account for the uncertainties surrounding the estimates which include ambient air quality impacts, dose-response function values and monetized values. All these inputs and parameters are highly uncertain which BOEM failed to properly account in their analyses. For example, uncertainties associated with the dose-response functions used from the APEEP model are not considered. These relate changes in ambient pollutant concentrations to changes in the risk or probability of a given health effect. For example, ambient concentrations are highly variable for a specific area. Population effects are highly variable as well, depending on age and exposure profiles. The standard errors associated with each of these components are not taken into account and no sensitivity analysis is provided.

Given that the rule addresses offshore impacts, an offshore model is required. In particular, BOEM was required to estimate the impacts to onshore residents from offshore sources. However, BOEM used data generated from APEEP, which contains data for only onshore impacts. APEEP uses data from only within the contiguous US and has no offshore component. To estimate offshore effects, BOEM developed a "regression model" that describes the Gaussian transfer coefficients in APEEP as a function of the distance and compass direction between source and receptor locations. BOEM then used this regression model to predict the impacts from offshore locations. BOEM has essentially drawn observations from a population of onshore impacts only and is using only two variables - distance and compass bearing - to predict offshore impacts using a third order fitted polynomial equation.<sup>19</sup> This approach is problematic for a number of reasons. First, the approach lacks any theoretical basis. There is no theory supporting the model specification, assuming other functional forms or additional variables will change the results. Moreover, the regression results explain less than twenty

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<sup>19</sup> U.S. Department of the Interior Bureau of Ocean Energy Management. Forecasting Environmental and Social Externalities Associated with OCS Oil and Gas Development: The Revised Offshore Environmental Cost Model (OECM). OCS Study BOEM 2012-025. Appendix C

percent of the variance. It is very likely that the model is mis-specified and given the lack of theoretical basis also suffers from issues such as omitted variable errors. At a minimum, a sensitivity analysis should be conducted to better understand the implications of adding other variables and testing of various functional forms. This will help to better understand whether offshore impacts are affecting onshore populations. Finally, the model needs to be calibrated against actual offshore data. Otherwise it is merely speculative and provides no basis for the rule.

It is important to recognize that such price, modeling, and regulatory uncertainties can complicate objective, reliable, and meaningful quantitative measurement of the effects of new regulations. The IRIA fails to provide any analysis for handling price and market uncertainty and variability in the context of demonstrating impact to the oil and gas industry.

### **1.8 Failure to Include Potential Costs of Delays and Down Time**

Economic costs include all costs and not simply financial expenditures. Additional monitoring, data collection, and permitting processes can result in additional down time or days of lost production. It has been demonstrated that these opportunity costs can be a significant component of overall costs.<sup>20</sup> As such, BOEM should evaluate these costs and include them in the benefit-cost calculation.

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<sup>20</sup> Graham, J and C. Liu. Regulatory and quasi-regulatory activity without OMB and cost-benefit review. Harvard Journal of Law & Public Policy 37(2):425-445 · December 2013. ENVIRON International Corporation. Arctic Regulations Benefit Cost Analysis. 2014.  
[www.reginfo.gov/public/do/eoDownloadDocument?pubId=&eodoc=true...770](http://www.reginfo.gov/public/do/eoDownloadDocument?pubId=&eodoc=true...770)

## 2 Failure to Follow Regulatory Procedures

Prior to the public release of draft regulations, the Office of Information and Regulatory Affairs, a division of the Office of Management and Budget (OMB) conducts a review, pursuant to Executive Order 12866. E.O. 12866 sets forth the broad principles agencies are required to adhere to when proposing new regulations. The order provides that agencies,

*shall assess both the costs and the benefits of the intended regulation and, recognizing that some costs and benefits are difficult to quantify, propose or adopt a regulation only upon a reasoned determination that the benefits of the intended regulation justify its costs.*

E.O. 12866, page 2

Pursuant to this guidance, it is the responsibility of the agency proposing a regulatory action to provide OMB with an analysis that describes and justifies the need for the proposed regulatory action and includes a BCA. As part of the BCA, agencies are required to assess a range of regulatory alternatives as well as non-regulatory solutions before proposing a regulatory action.

If OMB's review of the agency's BCA indicates that the proposed rule does not provide an environmental or social benefit that equals or exceeds the cost of executing the new rule, OMB has the authority to reject the proposed modification or to return the proposed rule to the agency for review and modification.

The draft IRIA and the proposed rule fail to analyze the impacts of the rule in a manner that is consistent with the 12 principles of good regulation as outlined in EO 12866. The most concerning of these failures of the 12 principles are as follows:

### 2.1 Principle 1: Identify the Existence of a Problem

E.O. 12866 requires that BOEM identify a problem of significance and demonstrate that the emissions from OCS facilities cause or contribute to violations of NAAQS. BOEM did not provide a rationale or demonstrate a need for the proposed new rule elements.

No data or examples are included that demonstrate an OCS facility has caused or contributed to a violation of the NAAQS onshore. The Environmental Assessment accompanying the proposed rule finds that the impact of the proposal would be "minimal," because "on the whole...OCS operations have a minimal impact on the air quality onshore."<sup>21</sup> In the IRIA, BOEM states,

*...air dispersion modeling does not show an impact to state air quality or the need for emission reduction measures.*

IRIA, page 75

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<sup>21</sup> BOEM, March 2016 Environmental Assessment, Section 4.2 – Alternative B: No Action Alternative, Pg. 17

A review of the National Environmental Policy Act (NEPA) documents prepared by BOEM further confirms that OCS sources are not significantly affecting the air quality of any state. For example:

- BOEM's most recent Final Programmatic Environmental Impact Statement (PEIS) was published in 2012 and addressed the 2012-2017 OCS oil and gas leasing program in the Gulf of Mexico. The 2012-2017 PEIS concludes that emissions due to the oil and gas leasing program would not result in any exceedance of the NAAQS.
- The Draft PEIS for BOEM's 2017-2022 leasing program also concludes that the 2017-2022 program will result in a minor contribution to criteria pollutant concentrations, that the NAAQS will not be violated, and that the PSD increments will not be exceeded.

These findings by BOEM demonstrate that the rule is unnecessary. Additional information on this topic is found in Section 1.3 above and in the primary comment document.

## **2.2 Principle 3: Identification of Alternatives to Regulation**

E.O. 12866 further requires that BOEM identify and explore alternatives. BOEM's IRIA focused on credit trading and the use of offsets but did not explore the costs of alternatives or even the cost of the No Action Alternative. Furthermore, BOEM did not research the true costs of NO<sub>x</sub> credit trading.

It appears unlikely that affected entities can access \$3,000 per ton NO<sub>x</sub> credits, as cited in the IRIA (see Section 1.5 of this report for a description of existing NO<sub>x</sub> credit markets). Furthermore, BOEM neglected to consider the impacts of this rule on existing NO<sub>x</sub> emission trading markets, and how the rule would impact demand for NO<sub>x</sub> credits.

## **2.3 Principle 5: Design a Regulation that is Cost-effective and Predictable**

E.O. 12866 necessitates that BOEM design regulation in the most cost-effective manner, with a focus on incentives to innovation, consistency, predictability, costs of enforcement and compliance, flexibility, distributive impacts, and equity. Predictability is absent in this rule, largely due to the lack of clarification in the rule and the uncertainty over its true costs of implementation (see Section 3 of this document). In the IRIA, BOEM states that "the estimated impact and proposed rule compliance costs are tremendously uncertain" (page 17 of the IRIA).

BOEM failed to consider distributive impacts and impacts to small businesses in its IRIA, although BOEM acknowledges that the true costs of implementation may have considerable distributive impacts, "Based on this analysis, BOEM concludes that this proposed rule may have a significant economic impact on a substantial number of small entities" (page 87 of the IRIA).

While BOEM believes it is introducing regulatory flexibility by allowing for participation in NO<sub>x</sub> markets, such markets are nonexistent or lack sufficient volume to accommodate the increased usage that the rule may generate. Consequently, this solution could be more expensive and have less regulatory certainty than BOEM suggests.

## **2.4 Principle 6: Demonstrate that the Benefits of the Regulation Exceed the Costs**

E.O. 12866 mandates that the benefits of the regulation exceed the cost. While noting that there are many uncertainties in its analysis, BOEM calculates that the cost of the rule exceeds the benefits, and acknowledges that the benefits are difficult to determine with any degree of certainty.

## **2.5 Principle 7: Use the Best Reasonably Available Science Information**

E.O. 12866 dictates that BOEM must base its decisions using the

*best reasonably obtainable scientific, technical, economic, and other information concerning the need for, and consequences of, the intended regulation (p. 2).*

In preparing this rule, BOEM failed to justify the necessity of the rule using best science and also failed to use best economics to consider the true impacts of the rule. Some of the science is still under review for the Offshore Emissions Cost Model.

*It is impossible to know the future result of the exemption studies for the GOM or Arctic OCS. Accordingly, BOEM is not estimating the potential results or impact of this ongoing study in the estimated compliance costs for this rulemaking.*

IRIA, page 20

*The results of the ongoing GOM and Alaska regional exemption studies will significantly change the number of plans required to model. BOEM does not have a basis at this time to estimate the direction or magnitude of this change.*

IRIA, page 21

The ongoing environmental studies in the GOM and Alaska will determine if the current exemption formulas should be revised to be protective of the current NAAQS. The proposed rule should not be considered until after the results of the studies are available.

## **2.6 Principle 10: Avoid Regulations that are Duplicative with Other Regulations**

The tenth principle in E.O. 12866 states that agencies are to “avoid regulations that are inconsistent, incompatible, or duplicative with its other regulations or those of other Federal agencies” (p. 2). This rule proposes modifications to definitions and procedures that exceed BOEM’s mandate under OSCLA. BOEM’s proposed revisions further conflict with MARPOL governance of support vessels as administered by the USEPA and US Coast Guard.

## 2.7 Table Summary of Key E.O. 12866 Principles

<b>Table 2.1 - Summary of Failure to Meet Principles of Regulation</b>	
<b>E.O. 12866 Principle</b>	<b>Draft IRIA</b>
1: Justify need for the rule	BOEM does not provide justification for the rule (Sections 1.1- 1.3, 2.1)
3: Consider alternatives	BOEM does not thoroughly consider alternatives (including a No Action Alternative) (Section 1.4, 1.6, 2.2)
5: Design cost effective and predictable regulation	The rule is not cost effective BOEM does not consider all cost, distributive, or equity impacts BOEM acknowledges considerable uncertainty in regulatory design and impacts (Section 1.4-1.9, 2.3)
6: Benefits must exceed costs	By BOEM's own calculation, the costs exceed the benefits (Section 2.4)
7: Base decisions on best available science and economics	BOEM does not use best available science to determine necessity of rule BOEM does not use best available economics to determine consequences of rule Science is still under review (Section 1.2-1.5, 2.5)
10: Avoid duplicative regulations	Regulation of support vessels is duplicative of MARPOL regulations Duplicates existing successful regulations (Section 2.6)

### 3 Technical Analysis of Cost Estimates

Throughout the IRIA, BOEM requested industry estimates of compliance costs. The costs set forth below were developed by a survey conducted by RE of industry representatives. Note that not all compliance costs are represented in this section, primarily those where RE has calculated costs that differ from BOEM.

BOEM provides their estimated industry compliance costs in Table 15 of the IRIA. The estimates presented in this section refer to and can be compared to costs included in Table 15 (unless otherwise noted) and were developed by RE based on past industry experience. In cases where ranges have been identified for cost estimates, the lower end of the cost range is used in the calculations, providing a conservative cost estimate. A summary and comparison of the IRIA estimates and RE estimates is presented in Table 3.1 below.

<b>Table 3.1 – Comparison of BOEM Cost Estimates and Ramboll Environ Aggregate Cost Estimates<sup>22</sup></b>				
<b>Regulation Change</b>	<b>BOEM</b>		<b>Ramboll Environ</b>	
<b>550 Subpart B</b>	<b>Year 1 Cost</b>	<b>10-Year Cost (3%)</b>	<b>Year 1 Cost</b>	<b>10-Year Cost (3%)</b>
Contents of Exploration Plans	\$260,400	\$2,714,231	\$2,728,000	\$23,270,393
Contents of DPP and DOCD	\$444,154	\$4,402,546	\$5,766,000	\$49,185,150
<b>Total Subpart B</b>	<b>\$704,554</b>	<b>\$7,116,777</b>	<b>\$8,494,000</b>	<b>\$72,455,543</b>
<b>550 Subpart C</b>				
Air Quality Analyses in Plans	\$1,721,624	\$76,999,522	\$14,848,700	\$112,075,776
Emission Reduction Measures	\$17,290,668	\$139,946,251	\$66,143,391	\$600,498,895
Monitoring & Reporting	\$3,161,244	\$65,248,849	\$439,556,749	\$2,633,021,132
General	\$1,240	\$10,577	\$1,240	\$10,577
<b>Total Subpart C</b>	<b>\$22,174,776</b>	<b>\$282,205,199</b>	<b>\$520,550,080</b>	<b>\$3,345,606,381</b>
<b>550 Subpart J</b>				
Collect, maintain & submit all air quality records	\$62,496	\$533,104	\$62,496	\$533,104
<b>TOTAL</b>	<b>\$22,941,826</b>	<b>\$289,855,080</b>	<b>\$529,106,576</b>	<b>\$3,418,595,027</b>

<sup>22</sup> Note that costs in Table 3.1 have been aggregated for easier comparison with BOEM's Table 15 in the IRIA. The subsequent tables below (Table 3.2 through Table 3.25) show direct comparison of costs within the disaggregated category, so the totals do not match-up with Table 3.1. For example, under "Contents of Exploration Plans" cost category, we only compare the cost estimates for "Collect, maintain & submit all air quality & modeling documentation."



### 3.1 Air Quality Modeling and Analyses Costs

There are several sources of air dispersion modeling costs recognized by BOEM. These are costs for collecting, maintaining and submitting modeling documentation; for submitting expanded air emissions and compliance data for Exploration Plans (EPs), Development and Production Plans (DPPs), and Development Operations Coordination Documents (DOCDs) above the emission exemption threshold (EET); and for air quality analyses in plans. Each is described below citing the estimates developed by BOEM and RE.

#### 3.1.1 Collecting, Maintaining, and Submitting Air Quality and Modeling Documentation

For the exploration plans, BOEM estimates that the collection, maintenance, and submittal of all air quality and modeling documentation will result in 2,200 annual burden hours, or 20 hours for 110 changed plans. Note that while BOEM estimates the annual number of changed plans as 110, it is possible that the number of plan re-submittals will increase significantly due to new proposed rule section 550.280(a) that prohibits use or substitution of any emission source that is not identified in the plan. Based on historical industry experience, we estimate that the hour burden is 100-200 per plan, resulting in 11,000 to 22,000 annual burden hours. This is an estimate of the burden to collect the considerable amount of data for each emission source, estimate emissions, prepare plans, and identify the maximum projected emissions for each criteria and major air pollutant by calculating the annual rate, maximum 12-month rolling sum, and the maximum peak hourly rate as required by proposed rule section 550.205(e). This estimate does not include modeling analyses and ERM/BACT evaluations. For consistency, throughout this analysis we utilize the same hourly cost used by BOEM of \$124 per hour. Based on industry experience, which has informed our calculations, assuming 110 changed plans, each with an hour burden of 100-200 hours annually, the additional hour burden will result in a 10 year cost of \$13.6 million. This equates to a net present value (NPV) cost of \$11.6 million when discounted at three percent. By comparison, BOEM estimated a 10 year cost of or NPV cost of \$2.2 million (see Table 3.2), which is significantly underestimated.

<b>Source</b>	<b>Type of Actions</b>	<b>Number of Actions Year 1</b>	<b>Year 1 Cost</b>	<b>10-Year Cost (3%)</b>
<b>BOEM</b>	Contents of EPs	110	\$198,400	\$2,185,358
<b>RE</b>	Contents of EPs	110	\$1,364,000	\$11,635,197

For DPP and DOCD, BOEM estimates that the collection, maintenance, and submittal of all air quality and modeling documentation will result in 3,100 annual burden hours, or 20 hours for 155 changed plans. While we agree that approximately 155 plans will need to be updated, based on industry experience, we estimate that the hour burden is 200-400 per plan, resulting in 31,000 to 62,000 annual burden hours. This is an estimate of the burden to collect the considerable amount of data for each emission source, estimate emissions, and prepare the air quality portion of the plans. This estimate does not include modeling analyses and ERM/BACT evaluations, but does include burdens for collecting emissions information from installation

vessels and additional hours for determining if consolidation of facilities is required. Based on historical industry experience, the additional hour burden will result in a 10 year cost of \$38.4 million (\$32.8 million NPV). BOEM's estimate of a 10 year cost of \$3.6 million (\$3.1 million NPV) is therefore inaccurate (see Table 3.3).

<b>Table 3.3 - Collect, Maintain, and Submit Air Quality and Modeling Documentation</b>				
<b>Source</b>	<b>Type of Actions</b>	<b>Number of Actions Year 1</b>	<b>Year 1 Cost</b>	<b>10-Year Cost (3%)</b>
<b>BOEM</b>	Contents of DPP and DOCD	155	\$289,154	\$3,080,364
<b>RE</b>	Contents of DPP and DOCD	155	\$3,844,000	\$32,790,100

### 3.1.2 Submitting Expanded Air Emissions and Compliance Data for EPs with Air Emissions Above Exemption

For the EPs, BOEM estimates that only 20 plans will be subject to submitting expanded air emissions and compliance data. It is uncertain if the proposed requirements will increase the number of plans that exceed EETs because new EETs will not be completed until 2020. The change in accounting for Mobile Support Craft (MSC) emissions will increase facility totals, and consolidating facilities will likely cause more plans to exceed thresholds. Therefore, the number of plans affected may be closer to the estimated total number of plans (110, as estimated by BOEM). It is possible that a greater number of resubmittals will be required due to new proposed rule section 550.280(a), which prohibits use or substitution of any emissions source not identified in the plan. Furthermore, there is an additional burden required for a plan that exceeds EETs (i.e. over and above a "base plan" that does not exceed thresholds), resulting in an hour burden of 100 hours per plan, not the 25 hours estimated by BOEM. This increases the annual burden hours from the 500 (estimated by BOEM) to 11,000. Due to these increases, BOEM's 10-year cost estimate of \$620,000 (\$528,873 NPV) is actually closer to \$11.6 million NPV (see Table 3.4). Also, this estimate does not take into account the unclear regulatory framework. Under the current regulatory framework, operators may self-mitigate their air emissions such that the plan emissions remain under the EET. It is not clear if the proposed rule will allow such self-mitigation and as such, more plans may exceed the EET and would require additional analysis (e.g., modeling, ERM, etc.).

<b>Table 3.4 - Submitting Expanded Data for Plans Above Exemption</b>				
<b>Source</b>	<b>Type of Actions</b>	<b>Number of Actions Year 1</b>	<b>Year 1 Cost</b>	<b>10-Year Cost (3%)</b>
<b>BOEM</b>	Exploration Plans	20	\$62,000	\$528,873
<b>RE</b>	Exploration Plans	110	\$1,364,000	\$11,635,197

For DPPs and DOCDs, BOEM estimates that only 50 plans will be subject to submitting expanded air emissions and compliance data. It is uncertain if the proposed requirements will increase the number of plans that exceed EETs because new EETs will not be completed until 2020. The change in accounting for MSC emissions will increase facility totals, and consolidating facilities will likely cause more plans to exceed thresholds. Therefore, the number of plans affected may be closer to the estimated total number of plans (155, as estimated by BOEM). Furthermore, there is an additional burden required for a plan that exceeds EETs (i.e. over and above a “base plan” that does not exceed thresholds), resulting in an hour burden of 100 hours per plan, not the 25 estimated by BOEM. This increases the annual burden hours from the 1,250 (estimated by BOEM) to 15,500. Due to these increases, BOEM’s 10-year cost estimate of \$1.5 (\$1.3 million NPV) is actually closer to \$16.4 million NPV (see Table 2.4).

<b>Table 3.5 - Submitting Expanded Data for Plans Above Exemption</b>				
<b>Source</b>	<b>Type of Actions</b>	<b>Number of Actions Year 1</b>	<b>Year 1 Cost</b>	<b>10-Year Cost (3%)</b>
<b>BOEM</b>	DPPs and DOCDs	50	\$155,000	\$1,322,181
<b>RE</b>	DPPs and DOCDs	155	\$1,922,000	\$16,395,050

### 3.1.3 Air Quality Analyses in Plans

BOEM estimates that across all reporting and recordkeeping requirements only 406 new plans and consolidations of existing plans will need to be submitted to meet the air quality analysis requirements in the proposed rule. This encompasses:

- conducting the required analysis and modelling for expanded air emissions and for those criteria and major precursor air pollutants that exceed the threshold and compliance requirements;
- submitting modelling reports;
- reporting/consolidating emissions data from multiple facilities if required;
- submitting revised air emissions plans, as required;
- requesting exceptions and obtaining approvals;
- providing additional information and analysis as required for plan approval;
- obtaining approval of all modelling protocols and meteorological data sets; and
- providing BOEM with copies of and access to protocols and all required information.

We believe that as a result of these requirements, two to three times as many responses as estimated by BOEM will be required, roughly 924 -1,272 in total. This is for multiple reasons outlined below.

The IRIA estimates up to 110 EPs and 235 DOCDs (a total of 345 plans) will receive annual air quality reviews, and therefore require modeling analysis for air pollutants over the analysis period. We believe 50-100% of these plans will require modeling analysis, not just 87 of them, due to the change in accounting for MSC emissions effectively increasing facility totals, the requirements for consolidating, and the uncertainty of changing EETs, which collectively will

likely cause more plans to exceed thresholds. The range of hours is wide (increased to 80-200 hours per plan, from a BOEM estimate of 38 hours per plan) because it is unreasonable to assume that 38 hours is sufficient to manage the air quality modeling and gather all input data from relevant vessels. There is uncertainty in the mechanisms to prepare modeling (changing dispersion models), new modeling requirements (AAI modeling), and changing compliance points (receptors in non-attainment areas and on the State seaward boundary), which leads to the large estimated range in hour burden per plan.

In addition to the hour burden on operators to collect data, there is an additional cost for third party consultants to perform the modeling work. For additional plans that will now require modeling and analysis under the proposed rule, this could cost an additional \$20,000 to \$100,000 per plan, resulting in an additional cost burden of \$14.5 million NPV (see Table 3.6). These costs differ slightly from the IC Burden estimate contained in previously submitted comments by the American Petroleum Institute (API)<sup>23</sup> and the Offshore Operators Committee (OOC)<sup>24</sup> in that the previous IC Burden comments included a \$10,000 cost estimate for incremental modelling/analysis for the full amount of plans (171-345). It was determined that \$10,000 amount was already included for those 171-345 plans in the \$20,000 to \$100,000 cost range for additional plans requiring modelling / analysis. The double counting error due to the uncertainty of how many of the total plans would be included in which category has been corrected.

<b>Table 3.6 - Air Quality Analyses in Plans</b>				
<b>Source</b>	<b>Type of Actions</b>	<b>Number of Actions Year 1</b>	<b>Year 1 Cost</b>	<b>10-Year Cost (3%)</b>
<b>BOEM</b>	Conduct Analysis and Modeling	87	\$409,944	\$3,496,905
<b>RE</b>	Conduct Analysis and Modeling	171	\$1,696,320	\$14,469,954

BOEM estimates that reporting and consolidating air emissions data from multiple facilities will only require 15 consolidations. We estimate that roughly 282, or 80% of DOCDs and 50% of EPs will require consolidation, again due to the change in accounting for MSC emissions effectively increasing facility totals, the requirements for consolidating facilities, and the uncertainty of changing EETs, collectively will likely cause more plans to exceed thresholds, which, in turn, will increase the number of plans that will require consolidation. Furthermore, the proposed rule requires that plans be recertified every ten years, such that the existing facility would have to reassess total complex emissions considering attributed emissions from MSCs and emissions from other facilities if consolidation is required. This again increases the likelihood of exceeding the EET. Consolidating plans could result in an additional cost of \$6 million NPV (see Table 3.7).

<sup>23</sup> <https://www.regulations.gov/document?D=BOEM-2013-0081-0042>

<sup>24</sup> <https://www.regulations.gov/document?D=BOEM-2013-0081-0041>

<b>Source</b>	<b>Type of Actions</b>	<b>Number of Actions Year 1</b>	<b>Year 1 Cost</b>	<b>10-Year Cost (3%)</b>
<b>BOEM</b>	Consolidations	15	\$37,200	\$317,324
<b>RE</b>	Consolidations	282	\$699,360	\$5,965,683

We agree with BOEM that it will be 20 hours per consolidation. We stress that this 20 hours does not include any additional modeling, ERM/BACT evaluations, or plan resubmissions that may be required a consolidation of plans that results in an exceedance of an EET. Additionally, BOEM underestimates the significant cost for air emissions consultants to prepare modeling protocols. For these reasons, we reiterate that the 20 hours burden does not encompass all the requirements that may be necessitated by the proposed rule.

Additional information may be required to be submitted for a plan to be approved. This could result in added cost, estimated by BOEM to be \$3.2 million NPV. We agree with BOEM estimates for this calculation (see Table 3.8)

<b>Source</b>	<b>Type of Actions</b>	<b>Number of Actions Year 1</b>	<b>Year 1 Cost</b>	<b>10-Year Cost (3%)</b>
<b>BOEM</b>	Additional approval information	300	\$372,000	\$3,173,235
<b>RE</b>	Provide Additional Info	300	\$372,000	\$3,173,235

While BOEM assumes only 4 submissions will require approval of all modeling protocols and meteorological data sets, industry experience indicates that the number of submissions that will require full approval will be from 171 to 345. This aligns with the estimated number of plans that may potentially require modeling under the proposed new requirements. We agree with BOEM that it will take 5 hours for operators to review modeling protocols, but there is an additional \$5,000 to \$20,000 cost per plan for a consultant to prepare the protocols. The increase in number of submissions, and additional third party cost for developing the protocols, results in an additional 855-1,725 hours of burden to the operator, and an additional \$947,023 (NPV) worth of external cost for developing the modeling protocols (see Table 3.9).

Source	Type of Actions	Number of Actions Year 1	Year 1 Cost	10-Year Cost (3%)
BOEM	Protocol approval submittals	4	\$2,480	\$21,155
RE	Protocol approval submittals	171	\$111,020	\$947,023

In total, this increases the 10-year cost for air quality analyses in plans to \$112 million NPV as compared to BOEM's estimate of \$77 million NPV. (See Table 3.1).

### 3.1.4 Additional Modeling Costs

On page 19 of the IRIA, BOEM states, "If modeling shows projected emissions at 95% or more of a SIL, operators must remodel following any emission reduction measures or addition of aircraft emissions and applicable emissions from onshore support facilities". This iterative modeling process could imply additional modeling costs that are not considered.

On page 23 of the IRIA, BOEM states,

*[The] modelling of MSC emissions may require multiple model runs with MSCs modelled in different possible locations to identify the worst-case impact on the receptor points.*

This procedure is imprecise and could result in uncertain costs.

### 3.2 Cost of Photochemical Grid Modeling

The number of instances where photochemical modeling may be required will likely be driven by exceedances of NO<sub>x</sub> and VOC thresholds, which are considered ozone precursors. Although it is difficult to estimate how many NO<sub>x</sub> or VOC exceedances will occur, an assigned value of "0 instances" is clearly inappropriate. Due to the significant changes in the proposed rule, exceedances of NO<sub>x</sub> and VOC thresholds will increase and may impact 50-100% of all plans. The range of impacted plans is large due to uncertainty in the proposed rule. In addition, photochemical modeling costs could range from \$40,000 to \$80,000 per analysis, based on industry modeling expert analysis<sup>25</sup>. Assuming 50-100% of plans are impacted, this results in an

Source	Type of Actions	Number of Actions Year 1	Year 1 Cost	10-Year Cost (3%)
BOEM	Photochemical Grid Modeling	0	\$0	\$57,015,915
RE	Photochemical Grid Modeling	171	\$6,840,000	\$58,346,587

additional cost of up to \$58 million NPV (see Table 3.10).

<sup>25</sup> RE expert provided the estimate based on industry experience.



### 3.3 Emissions Credits Costs

An analysis of NO<sub>x</sub> emission credit markets and costs is completed in Section 1.5, and is summarized here.

While BOEM assumes a NO<sub>x</sub> emission credit price of \$3,000 per ton in the IRIA, this price is not reflective of existing NO<sub>x</sub> emission credit markets. In Louisiana non-attainment areas, NO<sub>x</sub> emission credits range from \$18,000 – \$25,000 per ton. In Texas non-attainment areas, NO<sub>x</sub> emission credits cost \$53,000 to \$65,000 per ton, and NO<sub>x</sub> emission credits that can be used for VOC attainment cost \$90,000 to \$125,000 per ton.

No markets for SO<sub>x</sub> emissions currently exist in Louisiana or Texas and the costs of establishing a new market can be significant and have not been studied by BOEM. And there are currently no markets for PM<sub>2.5</sub> emissions in any state. Furthermore, BOEM has not studied the impact of this proposed rule on existing NO<sub>x</sub> emission credit markets and other market participants.

#### 3.3.1 Requesting VOCs or NO<sub>x</sub> Waiver for ERM

BOEM assumes that only one request for VOCs or NO<sub>x</sub> waivers will be filed annually. The requirements for VOC and NO<sub>x</sub> waivers described in the proposed rule are vague and unclear. Based on the proposed rule text, it is impossible to estimate the associated burden, so we use BOEM's estimate for this calculation (see Table 3.11).

Source	Type of Actions	Number of Actions Year 1	Year 1 Cost	10-Year Cost (3%)
BOEM	Request Waivers	1	\$124	\$1,058
RE	Request Waivers	1	\$124	\$1,058

#### 3.3.2 Notify BOEM if ERM are Disabled or Unavailable

BOEM assumes that there will be 2 notifications annually. It is extremely difficult to estimate the number of times an ERM may become disabled. The proposed rule will likely significantly increase the number of ERMs required and operators will establish compliance programs to ensure they are implemented and maintained. Yet, the reliability of ERMs is unknown for offshore operations (where conditions are harsher than onshore and space is extremely constrained for spare parts, support personnel, etc.). The proposed rule does little to clarify the consequences of exceeding a 90-day extension and it is unclear what the cost implications of this notification will be. For completeness we use BOEM's estimate for this calculation (see Table 3.12).

Source	Type of Actions	Number of Actions Year 1	Year 1 Cost	10-Year Cost (3%)
BOEM	BOEM Notifications	2	\$496	\$4,231
RE	BOEM Notifications	2	\$496	\$4,231

### 3.3.3 Notify Appropriate State Air Quality Control Jurisdiction of Proposal to Require Emission Offsets. Revise SIP to Include New Information

BOEM estimates that there will be one notification with one hour of burden. We believe that the annual burden hours are 2 to 4 hours, since a qualitative analysis will be required to justify why a previously submitted plan should be approved according to the old standard (see Table 3.13).

Source	Type of Actions	Number of Actions Year 1	Year 1 Cost	10-Year Cost (3%)
BOEM	State Notifications	1	\$124	\$1,058
RE	State Notifications	1	\$248	\$2,115

Note that this does not reflect the complexity of emissions offset markets. As described further in Section 1.5, the use of emissions offsets is a highly complex process that involves requirements well beyond a notification to a State air quality control body. The mechanisms for obtaining and using emissions offsets are vague and unclear in the proposed rule, raising numerous questions on the associated impact.

### 3.3.4 Request a Departure from Compliance with the New or Revised Ambient Air Quality Standards and Benchmarks (AAQSB)

BOEM estimates that 2 requests will be filed annually with an annual hour burden of 2 hours per plan. We think that it is more likely that 10 plans will be filed annually with an annual hour burden of 20 to 200 hours per plan, but this estimate is highly dependent on how often the AAQSB are revised and the scope of any future revisions. This could increase the 10 year cost from \$4,231 NPV (assumed by BOEM) to RE's estimate of \$211,549 (see Table 3.14). In addition, the number of affected plans will depend on the timing of any future AAQSB revisions, which is difficult to predict and plan for in advance.

Source	Type of Actions	Number of Actions Year 1	Year 1 Cost	10-Year Cost (3%)
BOEM	Request Departures	2	\$496	\$4,231
RE	Request Departures	10	\$24,800	\$211,549

### 3.4 Cost to Add SCR for Gulf of Mexico (GOM)

BOEM estimates that documenting results of ERM analysis will require 50 hours per submission and that there will be 12 submissions per year. ERM and BACT analysis are highly case-by-case specific. 50 hours represents a reasonable burden estimate for a relatively simple case; however, more complex cases (e.g. for consolidated facilities) likely will require more complex and time-consuming analysis, potentially up to 500 hours per plan. In addition, revised



estimates are aligned with the number of plans that may potentially require ERM and BACT review under the proposed new requirements (50-100% of the total number of plans). This hourly burden is estimated to equate to a cost burden of \$10,000-\$75,000 per ERM and BACT evaluation because it is expected that third-party consultants will be utilized to conduct such analyses. This could increase BOEM's 10-year cost for documenting results of ERM analysis from \$25.6 million (\$21.4 million NPV) to \$128.3 million (\$109.4 million NPV) (Table 3.15).

<b>Source</b>	<b>Type of Actions</b>	<b>Number of Actions Year 1</b>	<b>Year 1 Cost</b>	<b>10-Year Cost (3%)</b>
<b>BOEM</b>	Submissions	12	\$1,400,000	\$21,436,378
<b>RE</b>	Submissions	171	\$12,825,000	\$109,399,851

There are four primary concerns about the selective catalytic reduction (SCR) BACT cost calculations BOEM provides in the IRIA. These concerns include 1) assuming SCR would be the only type of BACT required, 2) the underestimation of assumed capital costs of applying SCR to vessel engines for each of the three vessel types for which BACT may be required (drillships, semisubmersibles, and jackups), 3) the inconsistencies in BOEM's calculations of SCR day rate increases for all three vessel types, and 4) excluding in the cost estimations the potential need to include ERM for production platforms.

First, BOEM included the cost of implementing SCR as the only BACT option, stating that NO<sub>x</sub> is the most likely pollutant to require reductions under the proposed rule. If other pollutants trigger BACT, different types of controls would be required. For example, although there is no official SIL for PM<sub>2.5</sub> at present, the NAAQS is very stringent and the SIL (when established) is likely to also be very stringent. Therefore, as the costs to apply the required BACT for other pollutants have not been considered in BOEM's analysis, the cost to add BACT may be underestimated.

Second, the SCR capital costs that BOEM did include in the analysis are not necessarily representative for the types of vessels for which BACT may be required. For example, although BOEM provided three example capital costs of applying SCR to drillship engines, all of which were greater than \$30,000 per day as a day rate premium per drillship (ranging between \$32,900 and \$37,500 in 2013 or 2014 dollars), it assumed a lower cost of \$30,000 per day (in 2015 dollars) as the representative cost. This underestimates the true cost of the proposed rule for each drillship requiring SCR, as well as the full fleet of drillships (assumed to include 30 in the GOM) by a large degree.

For semisubmersibles and for jackup rigs, BOEM developed the cost premium by using a slightly lower percentage increase than for drillships due to less complicated installation of SCR units on these vessels. These estimates seem to be arbitrary, and offer a poor justification for the costs estimates provided. Based on industry experience installing and operating SCR controls, more representative costs for SCR installation by rig type (converted to day rate

premiums for comparison to BOEM's estimates by dividing the total of the annualized capital costs plus annual operation costs by 365) are reflected in Table 3.16 below.

<b>Rig Type</b>	<b>RE Day Rate Premium</b>	<b>MODUs</b>	<b>GOM Cost Per Day</b>
Jackup	\$6,083	10	\$60,826
Semisubmersible	\$21,289	10	\$212,890
Drillship	\$39,537	30	\$1,186,100
Total			\$1,459,816

Third, the costs shown in Table 8 of the IRIA and stated to be the “relevant costs used in the analysis” are not consistent with the process BOEM states it used. Table 8 as it appears in the IRIA is shown below:

<b>Cost Category</b>	<b>Cost</b>
Jackup Unloaded Day Rate	\$150,000
Semisubmersible Unloaded Day Rate	\$470,000
Drillship Unloaded Day Rate	\$550,000
BACT Jackup Day Rate Cost Increase (%)	2.5%
BACT Semisubmersible Day Rate Cost Increase (%)	1.9%
BACT Drillship Day Rate Cost Increase (%)	2.7%
BACT Jackup SCR Day Rate Cost Increase (\$)	\$7,500
BACT Semisubmersible SCR Day Rate Cost Increase (\$)	\$20,000
BACT Drillship SCR Day Rate Cost Increase (\$)	\$30,000

However, when attempting to calculate the day rate cost increase for each of the three types of vessels (Jackup, Semisubmersible, and Drillship) using the figures in Table 8, the calculations do not provide the results shown in Table 8, as shown in the following equations:

- 1) BACT Jackup SCR Day Rate Cost Increase (\$) = Jackup Unloaded Day Rate \* BACT Jackup Day Rate Cost Increase (%), but  
 $\$7,500 \neq \$150,000 * 2.5\%$ ;  $\$3,750 = \$150,000 * 2.5\%$  OR  $\$7,500 = \$150,000 * 5.0\%$
- 2) BACT Semisubmersible SCR Day Rate Cost Increase (\$) = Semisubmersible Unloaded Day Rate \* BACT Semisubmersible Day Rate Cost Increase (%), but

$\$20,000 \neq \$470,000 * 1.9\%$ ;  $\$8,930 = \$470,000 * 1.9\%$  OR  $\$20,000 = \$470,000 * 4.3\%$

- 3) BACT Drillship SCR Day Rate Cost Increase (\$) = Drillship Unloaded Day Rate \* BACT Drillship Day Rate Cost Increase (%), but  $\$30,000 \neq \$550,000 * 2.7\%$ ;  $\$14,850 = \$550,000 * 2.7\%$  OR  $\$30,000 = \$550,000 * 5.5\%$

These apparent inconsistencies need to be addressed and corrected, or documented by BOEM.

Finally, the IRIA states on page 27, “BOEM’s analysis of operator submitted plans indicates that MODU drilling is the primary activity causing plan’s emissions to exceed the emission threshold. Therefore, the analysis of required ERM is closely related to the expected drilling activity.” However, considering that MODU drilling will many times be consolidated with a production platform, it would seem that the production facility may also be subject to ERMs and/or BACT. Therefore, the analysis included in the IRIA is incomplete and BOEM’s supposition that MODUs are the only impacted activity is not realistic, resulting in an underestimation of costs associated with the proposed rule. BOEM only included the purchase of emission credits in its cost analysis, resulting in a 10-year NPV of \$117.2 million. RE included SCR costs as the most likely alternative (BACT), which have a 10-year NPV of \$397.7 million (Table 3.18).

<b>Table 3.18 - Cost of ERM / BACT for Gulf of Mexico (GOM)</b>				
<b>Source</b>	<b>Type of Actions</b>	<b>Number of Actions Year 1</b>	<b>Year 1 Cost</b>	<b>10-Year Cost (3%)</b>
<b>BOEM</b>	Emissions Credits purchased	5,294	\$15,880,500	\$117,150,543
<b>RE</b>	SCR Systems Installed	5	\$43,293,015	\$397,744,212

### 3.5 Cost to Install and Operate PEMS

BOEM estimates that there will be 12 submissions required to demonstrate actual emissions data or other information to verify compliance with a previous approved plan, each requiring 16 hours. However, based on historical industry experience, the hours required to report actual emissions data is estimated as two hours per month or 24 hours annually. The number of potentially affected facilities is estimated to be 858 to 1,143 facilities annually over the first three years. This estimate is based upon the number of platforms in the Gulf of Mexico (2,480) plus the estimated number of MODUs (50) plus the estimated number of vessels (900). RE assumes that all required compliance demonstrations would be required within the first 3 years after the rule is finalized. Under the proposed rule, potentially 75-100% of those total facilities could require some type of compliance demonstration. Therefore, the 10-year NPV for reporting actual emissions data is not \$4.4 million as estimated by BOEM, but at least \$21.8 million, based on the lower end of the range (858) (Table 3.19).

<b>Source</b>	<b>Type of Actions</b>	<b>Number of Actions Year 1</b>	<b>Year 1 Cost</b>	<b>10-Year Cost (3%)</b>
<b>BOEM</b>	reports submitted	12	\$126,159	\$4,445,190
<b>RE</b>	reports submitted	858	\$2,553,408	\$21,781,088

BOEM assumes that only non-certified engines on vessels would require PEMS, and assumes there are 682 GOM vessels. As such, on average three (3) engines per year may require PEMS (page 52), or 30 total engines over the 10-year analysis. BOEM further states that there is uncertainty in that number but that it believes the number is very small. BOEM estimates an annual hour burden of 36 hours per engine. We estimate the hours required to install and operate a PEMS are more likely 80-100 hours for engineering and installation and an additional 1 hour per day per system for operation and maintenance, resulting in 445-465 hours per year for each system installed. Based on current industry estimates of 2,480 platforms, 50 MODUs, and 900 vessels, and 75-100% of facilities potentially requiring a PEMS, the estimated number of total PEMS installations ranges from 2,573-3,430 over the analysis period. The annual Offshore Marine Service Association member vessel census (which excludes nonmembers vessels) is typically around 800 - 900 vessels. Therefore, the BOEM estimate of 682 is too low. RE believes 900 GOM vessels is a reasonable estimate. Our cost estimate is based on the number of facilities rather than number of impacted engines because multiple engines on a single facility could be monitored with a single PEMS. However, in some cases individual engines may require a dedicated PEMS, resulting in estimates that would be potentially higher than what is included in our cost estimate. The analysis provided herein assumes the lower value of 858 PEMS systems installations per year for the first three years, as a conservative estimate, and that all required PEMS systems would be installed within the first three years after the rule is finalized. BOEM provides an estimate for PEMS installation costs ranging between \$100,000 and \$156,250 per system, with annual operating costs of \$3,750. This estimate is lower than historical industry experience indicates. BOEM developed its estimate by dividing the total cost of a PEMS by the number of engines it monitors to calculate a cost per engine. RE developed a per system estimate. The largest cost of a PEMS is the system itself and its installation. As the number of engines is added to the system the cost per engine will go down. BOEM made an error in their estimate on a per engine basis since cost and engine are not a linear relationship. The cost estimate should be calculated per facility and system.

<b>Source</b>	<b>Type of Actions</b>	<b>Number of Actions Year 1</b>	<b>Year 1 Cost</b>	<b>10-Year Cost (3%)</b>
<b>BOEM</b>	Engines (systems installed)	3	\$78,000	\$3,497,441
<b>RE</b>	Facilities (systems installed)	858	\$222,993,333	\$785,691,267

We believe a more accurate estimate for PEMS capital cost is \$250,000 to \$750,000, based on actual historical industry installation costs<sup>26</sup>. All PEMS systems are assumed to be installed within the first three years, and maintenance and calibration costs are expected to be approximately \$10,000 per system annually for each of the 10 years included in the analysis. This results in a 10-year NPV of \$785.7 million, compared to the low estimate provided by BOEM of \$3.5 million (Table 3.20) An additional concern is whether the PEMS and stack testing industry have the capacity to manufacture, install, and test so many systems within such a short timeframe. Even if it does, it will not be a seamless process and it could be costly, the extent of which has not been evaluated by BOEM.

While RE's cost estimates are highly variable and each facility will differ based on the size of the system, the number of engines being monitored, facility space and weight constraints, as well as a number of additional variables, we believe these estimates are considerably more accurate than those posited by BOEM.

It should also be noted that BOEM states,

*While the monitoring of actual emissions is likely to be more accurate than calculating emissions through emissions factors and fuel consumption, BOEM does not have a basis at this time to estimate the accuracy improvement for CEMS and PEMS compared to the current standard practice,*

IRIA, page 51

and

*BOEM does not expect that emissions would be reduced by any material amount through monitoring of actual emissions (with PEMS) versus estimating plan emissions with emissions factors and fuel/activity information provided under § 550.312*

IRIA, page 71.

These statements appear to support **not** requiring PEMS. These statements need to be reconciled with the elements of the proposed rule which are unclear as to the specific monitoring required by the rule.

### **3.6 Costs to Monitor/report Fuel Usage and Activity Data in GOM**

BOEM estimates that retaining monthly fuel information for each source on a determined schedule for 10 years will result in 48 hours of burden per facility per year, with 265 responses required annually resulting in an annual burden of 12,720 hours. Based on this, the first year cost is estimated at over \$1.1 million dollars, amounting to the 10-year NPV of more than \$40.0 million (Table 2.20).

Forty-eight hours is a reasonable burden estimate if fuel usage is tracked at the facility level (total fuel consumed). However, the proposed rule language seems to indicate that fuel tracking will be required for each engine or other emission source. Under this scenario, a more

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<sup>26</sup> Provided by OCS operators and vendors through a survey conducted by RE.

appropriate estimate would be 300 to 600 hours for fuel tracking, resulting in an annual burden of 257,400 to 685,800 hours. The number of potentially affected facilities is the same as the estimated number of PEMS. As presented previously, RE estimates 858 to 1,143 facilities annually would require PEMS, which is based on our current GOM estimate of up to 2,480 platforms, 50 MODUs, and 900 vessels.

The analysis provided herein assumes the lower value of 858 facilities per year for the first three years. However, this is a conservative estimate since some facilities will have multiple engines. An estimate of the total number of engines in the GOM would require significantly more time to estimate than the comment period made available. Based on the conservative estimate of 300 hours in 858 facilities, and using BOEM’s hourly rate of \$124, the cost of retaining monthly fuel information for each source is estimated at \$31,917,600 for the first year (Table 3.21). Therefore, the 10-year NPV for retaining this monthly fuel information for each source for 10 years is not \$40.0 million as estimated by BOEM, but about \$272.3 million, based on the low end of the range (858) (Table 3.21).

<b>Table 3.21 - Costs to Monitor/Report Fuel Usage and Activity Data</b>				
<b>Source</b>	<b>Type of Actions</b>	<b>Number of Actions Year 1</b>	<b>Year 1 Cost</b>	<b>10-Year Cost (3%)</b>
<b>BOEM</b>	Retain monthly fuel information	265	\$1,135,430	\$40,006,709
<b>RE</b>	Retain monthly fuel information	858	\$31,917,600	\$272,263,602

Based on BOEM’s estimates, the submittal of fuel logs or collection of facility and equipment usage information for MSCs will result in eight hours of burden per year, with 80 responses required annually, resulting in an annual burden of 640 hours. The first year cost of this is estimated at \$63,079 dollars, amounting to the 10-year NPV of about \$2.3 million (Table 3.22). These estimates are unrealistic. We estimate this burden to be 20 to 200 hours annually per vessel. The low end of the range of is based on monitoring total fuel consumption per vessel, while the high end of the range is based on monitoring fuel for each engine on each vessel. There could be 20 engines on one vessel, so the level of effort is much higher than BOEM estimates. MSCs also service multiple platforms so the apportionment of service for different facilities needs to be factored in which will takes additional time and effort. Given the low range estimate of the annual burden, the estimated number of vessels, and BOEM’s hourly rate of \$124, we estimate the cost of submittal of fuel logs or collection of facility and equipment usage information for MSCs at \$2,232,000 for the first year (Table 3.22). Therefore, the 10-year NPV for this requirement is not \$2.3 million as estimated by BOEM, but over \$19.0 million (Table 3.22).

<b>Source</b>	<b>Type of Actions</b>	<b>Number of Actions Year 1</b>	<b>Year 1 Cost</b>	<b>10-Year Cost (3%)</b>
<b>BOEM</b>	Submittals	80	\$63,079	\$2,298,499
<b>RE</b>	Submittals	900	\$2,232,000	\$19,039,413

Most individual engines are not equipped to monitor individual fuel usage. In order to accomplish this, individual engine fuel meters will need to be installed on each engine. According to RE's research, the estimated capital costs to install a fuel flow monitor and data logger system could range from \$10,000 to \$15,000 per engine. Offshore Service Vessels ("OSV", which are MSCs) have at least two to as many as five main engines plus at least two generator engines. Based on data provided in Table 20 of the IRIA, there are close to 2,200 engines onboard OSVs utilized in the GOM. If fuel meters were installed on each engine onboard the fleet of OSVs servicing the GOM, the additional capital costs could be \$22,000,000 to \$33,000,000 greater than the cost outlined in Appendix A of the IRIA. This also does not include the costs to install fuel meters on the MODUs and Platform engines, which include an additional 4,500 engines as estimated in Tables 21 and 22 of the IRIA. Assuming the same estimated capital costs for installing fuel meters on OSVs, the total costs to install fuel meters on all MODUs, Platform, and OSV engines (6,750) could be an additional \$67,500,000 to \$101,250,000 over 10 years in nominal terms. Using a conservative estimate of capital costs to install a fuel flow monitor and data logger system of \$10,000 per engine, and assuming that these are installed on one-tenth of the total 6,750 engines in the first year, the cost for the first year is estimated at about \$6.8 million (Table 3.23). This amounts to the 10-year NPV of approximately \$57.6 million using a three percent discount rate.

<b>Source</b>	<b>Type of Actions</b>	<b>Number of Actions Year 1</b>	<b>Year 1 Cost</b>	<b>10-Year Cost (3%)</b>
<b>BOEM</b>	Did not estimate	0	\$0	\$0
<b>RE</b>	Fuel flow meter installations	6,750	\$6,750,000	\$57,578,869

In addition to the equipment required to monitor fuel usage on each engine, Section 312(b) of the proposed rule requires the collection of hours of operation at each percent of capacity for each emission source, as well as other non-specified data for sources that would not otherwise be accounted for by fuel consumption logs. Due to the limited time available to prepare these comments, cost data for this equipment could not be collected; however, RE estimates that the actual costs could be significant. For example, for one newer vessel, according to industry experts it could cost approximately \$250,000 to install the software. There could be production losses as well.



### 3.6.1 Cost to Conduct Stack Testing

BOEM estimates that conducting stack testing and reporting stack testing results every three years will result in a 48-hour burden per test, with the 67 tests required resulting in an annual burden of 3,216 hours. The cost estimates provided by BOEM assume \$25,000 per stack test, resulting in a cost of \$1,675,000 annually for the estimated 67 stack tests. Based on this, the 10-year NPV for conducting stack testing and reporting results is about \$14.3 million using a three percent discount rate (Table 3.24).

BOEM underestimates these costs, and uses an unrealistic hourly burden to design, plan, conduct, and report each stack test. Also, BOEM's estimates do not take into account the fact that stack testing costs are not limited to the cost of the test operations alone. BOEM developed its estimate by dividing the total cost of a stack test by the number of engines. This is not an appropriate calculation since the cost of stack testing and engines is not a linear relationship. A significant cost component is the equipment and mobilization of the stack testing company. The cost estimates for stack testing should be based off of the number of facilities stack tested and then the number of engines tested at those facilities.

Stack test equipment and personnel will need to be mobilized leading to mobilization fees, and modifications to stacks and emissions sources may be required to enable stack testing to be performed, potentially resulting in additional costs. These modifications include installation of ports for testing, scaffolding and construction to access the stacks for port installation and testing and, in some cases, adding flume/lengths to stacks to allow testing. It is important to note that, practically speaking, stack testing will be a continuous process year to year given the extensive preparations (planning, test protocol development and approval, staff training of vendors, etc.), weather delays, disallowance of testing while drilling, etc. Many of these costs are not captured in BOEM's estimates.

RE estimates the hours required to design and plan one stack test at 80-120 hours, and actual stack tests are estimated to require 120-240 hours per test depending on the pollutants being tested and the number of engines included. Therefore, each stack test requires 200-360 hours.

The number of potentially affected facilities is the same as the number of PEMS that we estimate will be installed within the first three years following approval of the proposed rule, given that each PEMS will require a stack test at initial installation. RE estimates 858 to 1,143 facilities annually, which includes up to 2,480 platforms, 50 MODUs, and 900 vessels. It is assumed that all required PEMS systems would be installed within the first three years after the rule is finalized. Based on the number of facilities requiring stack testing and the number of hours needed to plan and conduct these, we estimate the annual burden at 171,600-411,480 hours. Using the conservative estimate of 200 hours required for each stack test, the lower value of 858 facilities per year for the first 3 three years, and the hourly rate of \$124, we estimate that conducting and reporting stack testing results every three years will cost \$21,278,400 in the first year (Table 3.24). Therefore, the 10-year NPV for conducting stack testing and reporting results is not \$14.3 million as estimated by BOEM, but over \$181.5 million, based on the low end of the range (858) (Table 3.24).



<b>Table 3.24 - Cost to Conduct Stack Testing</b>				
<b>Source</b>	<b>Type of Actions</b>	<b>Number of Actions Yr. 1</b>	<b>Year 1 Cost</b>	<b>10-Year Cost (3%)</b>
<b>BOEM</b>	Testing and reporting results	67	\$1,675,000	\$14,288,090
<b>RE</b>	Testing and reporting results	858	\$21,278,400	\$181,509,068

As noted above, in addition to the hours required to design, plan, conduct, and report stack testing, there could be additional costs to mobilize engines and modify stacks and emissions sources to enable stack testing. A breakdown of estimated mobilization and modification costs are provided below:

- A. Modification of equipment to enable stack testing = \$15,000 per stack
- B. Mobilization Costs and One Engine test with 3 test runs per load and 3 engine loads (9 test runs per engine):
  - Gaseous Criteria Pollutants Only = \$120,000
  - Particulate Matter Additional Cost = \$25,000
- C. Each Additional Engine During the Same Mobilization:
  - Gaseous Criteria Pollutants Only = \$15,000
  - Particulate Matter Additional Cost = \$20,000

Based on these estimates, the cost for each engine to be tested is estimated at \$160,000 (\$145,000 for mobilization and testing, \$15,000 for modification of equipment to enable stack testing). Using the conservative estimate of 858 facilities tested per year, we estimate these costs at \$137,280,000 for the first year (Table 3.25). This differs from the previous estimate in IC Burden comments submitted by API and OOC. In those comments, we utilized the same number of facilities as estimated by BOEM and as were included in Tables 20, 21, and 22 of the IRIA. After further consideration, this updated cost includes our revised estimate of the number of facilities requiring stack testing (858 to 1,143). Based on this, the 10-year NPV for mobilization and modification costs associated with stack testing amounts to about \$1.2 billion using a three percent discount rate (Table 3.25).

<b>Table 3.25 - Cost to Conduct Stack Testing</b>				
<b>Source</b>	<b>Type of Actions</b>	<b>Number of Actions Yr. 1</b>	<b>Year 1 Cost</b>	<b>10-Year Cost (3%)</b>
<b>BOEM</b>	Tests conducted / results reported	67	\$66,464	\$566,951
<b>RE</b>	Tests conducted / results reported	858	\$137,280,000	\$1,171,026,245

In addition, normal production operations may have to be curtailed or shut-in to execute the testing, which could result in deferred production, or unproductive rig time (these costs are not addressed here). For MODUs, safety requirements limit stack testing to those periods between well drilling programs, which do not occur often. If an operator is forced to delay MODU drilling to make time to test, the operator could incur idle rig time costs. These costs are equivalent to the rig day rate which have typically been more than \$100,000/day.

Another issue not addressed in the IRIA is the availability of stack test vendors. There are few such companies prepared to test or that have experience with offshore installations, and, given industry experience, many delays complicating the mobilization of personnel are possible (weather delays or drilling program changes during a well, etc.). It is likely the stack test vendor population is not large enough in the GOM vicinity to support this testing in the short three year window required by the proposed rule. There could be additional costs to get this type of support from outside of the GOM and these costs are not addressed.

As presented in this section, it is clear that BOEM's total estimated costs differ substantially from RE's cost estimates. BOEM clearly understated the costs and overestimated the benefits.

## 4 Technical Analysis of Benefit Estimates

The following sections discuss BOEM's benefits estimates from the IRIA. As discussed in Sections 1.2 and 2.1 of this report, it is unclear how BOEM's defined benefits justify the costs of this rule. The shortcomings of BOEM's benefit estimates are discussed below.

### 4.1 Failure to Assess and Adequately Calculate Benefits

BOEM estimates the benefits of offshore emission reductions through use of the Offshore Economic Cost Model (OECM). Data contained in the model results were used to estimate the benefits of the new regulation. However, the resolution of the OECM model results is very wide (e.g. the same \$5,000/ton value of impact is assumed within a band of more than 100 miles in terms of the distance to the shore). Hence it is difficult to see how the agency can justify moving the measurement boundary out from the coast to the state submerged boundary (a distance of a few miles). The model resolution is too coarse to determine whether an actual change in distance will genuinely provide adequate benefits, if any.

BOEM acknowledges the uncertainty involved in quantifying these benefits:

*It is very difficult to estimate and monetize benefits for NO<sub>x</sub> emissions reductions offshore because of the distance of OCS operations from onshore population centers.*

IRIA page 44

BOEM needed to estimate the impacts to onshore residents from offshore sources. The Agency used data generated from APEEP which contains data for only onshore impacts. That is APEEP uses data from within the contiguous US only and has no offshore component. Uncertainties associated with the dose-response functions used from the APEEP model are not considered. The standard errors associated with each of these components are not taken into account and no sensitivity analysis is provided.

BOEM has essentially drawn observations from a population of onshore impacts only and is using two variables - distance and compass bearing location - to predict offshore impacts using a third order fitted polynomial equation. There is no theory supporting the model specification. The model needs to be calibrated against actual offshore data. Otherwise it is merely speculative and provides no basis for the rule.

### 4.2 Qualitative Benefits

Some of the benefits that BOEM has identified are unlikely to be realized and the value of these benefits is indeterminate. For example, BOEM believes that one of the benefits of the rule is the increased flexibility in meeting emissions reductions because of the ability to purchase emission credits. As discussed earlier in this document, it is unlikely that NO<sub>x</sub> emission credits will be less expensive than BACT, greatly increasing the cost of the rule.

BOEM also claims a benefit of increased oil and gas development potential in the States, stating,

*To the extent that OCS emissions do not impact the States (due to effective air quality management by BOEM), the States would have a greater ability to approve new or incremental oil and gas development over state submerged lands or onshore*

IRIA, page 83.

This is at best a counterintuitive argument since it seems to indicate that reduced OCS impacts to onshore areas will allow for more emissions to occur nearer to onshore areas.

Other items that are listed on pages 82 and 83 of the IRIA are qualitative benefits that “may” result from the adoption of the proposed rule. There are seven categories, each with a list of potential benefits. Despite the length of this list of purported benefits, not one is identified as a benefit that **will** occur. Instead, the suggestion is that the volume of additional reporting, data collection, paperwork, and increased cost to industry and the agencies, will possibly result in a net benefit.

It is inappropriate to justify this rule on the basis of these purported qualitative benefits, particularly where BOEM acknowledges the costs exceed these benefits.

BOEM claims that:

*There are numerous non-monetized, qualitative benefits attributable to the rule that would provide for more regulatory certainty and an overall cleaner environment<sup>27</sup>.*

IRIA, page 83

BOEM should not use unquantified benefits to justify a rule where the costs exceed the benefits. It appears that BOEM did not attempt to quantify most of the benefits they identified, leaving the question of whether these benefits are actually significant enough to justify the heavy costs imposed by the rule.

Further, it is unclear if many of the unquantified benefits identified by BOEM would actually lead to realized benefits. For example, BOEM claims that the rule

*could result in the reduction of VOCs, SO<sub>x</sub>, CO, and PM emissions, which have not been quantified”, but acknowledges that “Co-benefits, such as emissions reductions of other pollutant emissions associated with the proposed controls for NO<sub>x</sub>, have not been evaluated or quantified in this analysis.*

IRIA, page 5

Later in the IRIA, however, BOEM raises concern that the unquantified benefits may not occur as a result of the rule:

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<sup>27</sup> Department of the Interior. Air Quality Control, Reporting, and Compliance Initial Regulatory Impact Analysis. RIN: 1010-AD82. March 3, 2016. Page 83.

*Similar to engine performance management systems, BOEM is not estimating co-benefits for other pollutant reductions other than NO<sub>x</sub> due to the uncertain nature of these reductions and the uncertainty about when these reductions could be credited to the proposed rule.*

IRIA, page 80

This acknowledgement reinforces that the unquantified benefit of a reduction of criteria air pollutant concentrations cannot be used to justify the heavy costs of this rule, since BOEM acknowledges that the rule may not actually cause these reductions.

BOEM concludes that:

*Based on a consideration of the qualitative as well as quantitative factors related to the rulemaking proposal, BOEM's assessment is that the proposed regulation is necessary to achieve compliance with the requirements of the OCSLA and that its adoption would provide a net benefit to the public. However, BOEM estimates the quantified net benefits from emissions reductions measures are exceeded by the cost of the emissions reduction measures and the increased modelling and monitoring costs.*

IRIA, page 83

BOEM insists that the qualitative benefits in addition to the quantitative benefits provide a net positive benefit to the public. This is unreasonable and speculative, considering that many of the qualitative benefits result in increased costs and other claimed benefits cannot actually be attributed to the rule. Furthermore, BOEM has not demonstrated that there is a problem that needs to be resolved, making the “benefits” and costs of the rule unjustified.

**APPENDIX C: RESPONSES TO BOEM'S SPECIFIC REQUESTS  
FOR COMMENT ON RULE PROVISIONS**

In the preamble, BOEM has specifically solicited comments on approximately forty issues in the proposed rule that have not been fully developed or concretely proposed. Many of the issues that are undeveloped would be critical components of any final air quality regulatory program, and may have significant impact to offshore operators. Without fully developed proposals on these issues, the regulated community does not have a clear understanding of the scope of the proposed regulation and cannot provide meaningful stakeholder comment. Constructive feedback on many, if not most, of these requests involves detailed technical review and significant information gathering. Due to the compressed comment period, we were not afforded enough time to give these requests the full consideration and/or the technical analysis they warrant.

<b>81 Federal Register</b>	<b>BOEM Request for Comment</b>	<b>Response and Comment Reference</b>
Pg. 19724	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.	As discussed in Section 12.7, because black carbon is not related to compliance with the NAAQS, BOEM lacks the authority to regulate it.
Pg. 19731	BOEM would like comments on the appropriateness of potentially distinct emissions thresholds or threshold formulas for Alaska and GOM, and/or how these thresholds should be structured.	As discussed in sections 2.4 and 6.1, consistent with our overall position on revising EETs, BOEM should delay this decision until the scientific bases for EETs have been established. Until then, we have no basis for making a decision on this important issue. That said, we anticipate that different EETs will be appropriate for Alaska and the GOM.
Pg. 19731	The USEPA recently established new one-hour NAAQS for NO <sub>2</sub> , and SO <sub>2</sub> , as well as changes to the 8-hour O <sub>3</sub> and annual PM <sub>2.5</sub> NAAQS, and also given that the USEPA has recommended an interim SIL for one-hour NO <sub>2</sub> at 8mg/ m <sup>3</sup> 30 and an interim SIL for one-hour SO <sub>2</sub> at 3 parts per billion, <sup>31</sup> but has not proposed to add these SILs (or any SILs for PM <sub>2.5</sub> 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.	As discussed in more detail in Section 9.1, BOEM should adopt its own SILs once the scientific studies are complete. In Section 9.1, we propose that BOEM continue applying only the promulgated EPA regulatory SILs (40 CFR 51.165(b)(2)) until the Gulf of Mexico and Alaska regional air quality studies are completed. If those studies conclude that changes to the AQRP are warranted, the results of the studies may inform selection of appropriate SILs. There does not appear to be a particular standard or formula used by EPA to establish SILs, as they range from 1 to 5 percent of the NAAQS. BOEM has the option of identifying SILs based on a scientific rationale, or some percentage of the NAAQS it deems to be significant. Selection of SILs is another opportunity to involve the regulated community.  If BOEM elects to continue use of EPA SILs, we recommend that BOEM adopt, in lieu of any EPA interim SILs, SILs set at no less than 5 percent of the applicable NAAQS. When EPA promulgates a SIL that is incorporated in the affected state's SIPs, then the new regulatory SIL would apply.
Pg. 19735	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.	We support BOEM's proposal to collect decommissioning emissions data for a period of time in order to craft an informed approach to address these unique activities. However, emissions from decommissioning should not be included in plan emissions inventories at the onset of an offshore project.  It is impossible to predict or quantify emissions associated with decommissioning at the onset of a project. Production and development platforms may operate for 20-30 years, or longer, before decommissioning would occur, far beyond the ten year plan projection established in the proposed rule. During the operation of the platform, there may be various modifications and additions that may require revisions to plans. Consequently, predictions of decommissioning activities and emissions estimated during the initial planning stage will be obsolete when decommissioning actually occurs. Therefore, to require the collection of decommissioning emissions during initial plan preparation provides no useful information to BOEM.

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Pg. 19737	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.	See Section 1.2.4 and chapters 3 and 8 for detailed discussion regarding MSC.
Pg. 19738	BOEM requests comments on the various types of modelling 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 modelling would be appropriate or inappropriate.	As discussed in sections 1.2 and Chapter 3, OCSLA does not grant BOEM the authority to regulate MSC unless they are attached to the OCS facility and used for the transport of production. However, we have provided in Section 8.3, an assessment of the appropriateness of BOEM's proposed method of analysis.
Pg. 19739	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.	See sections 1.2.5 and 8.6 for further discussion regarding point of compliance at the state seaward boundary and the availability of modelling tools and monitoring data.  As discussed in sections 1.1 and 2.3, BOEM has not demonstrated that offshore activities significantly affect onshore air quality and prevent attainment or maintenance of NAAQS.
Pg. 19740	Because of this, the proposed regulations specify the effects of emissions, for modelling 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 nonattainment 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 O3, 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 modelling should present any technical difficulty but welcomes comments on how this requirement could be implemented most effectively.	As discussed in Section 8.9, in order to meet these requirements, all applicants will need to perform long-range transport modelling as such receptors are much further than 50 km from areas in the GOM or the Arctic Ocean. BOEM should limit the domain of the required modelling.
Pg. 19741	BOEM requests comments on the EET formulas and the underlying analysis used in this rulemaking or whether absolute values may be more appropriate.	As documented in Section 6.3, mass or absolute values thresholds conflict with the authority granted by OCSLA because there is no direct connection to onshore impacts. At the very least, distance from shore must be considered when establishing EETs.
Pg. 19742	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 appropriate alternative to defining the offset-generating areas or how to best refine the approach of applying AQCRs in this context.	In concept, the emissions credit provision provides benefit to the OCS operators. However, as discussed in Section 7.1, because BOEM has not established any specific emission credit regulatory requirements and states do not generally have banking systems for areas designated as attainment, the usefulness of the emissions credit program is significantly limited and would be burdensome, likely impossible, to implement solely on a case-by-case basis. In consultation with the regulated community and the adjacent states, BOEM must fully develop and propose an emissions credits system that addresses this issue and others.
Pg. 19743	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	As discussed in Section 7.1, we conditionally support a presumptive ERM program. However, any finalized rule must allow an option for OCS operators to prepare an emission source-specific ERM analysis, taking into consideration technical, economic, and safety considerations specific to their facility.



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	<p>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.</p>	
Pg. 19744	<p>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.</p>	<p>As discussed in Section 7.1, BOEM must fully define and develop an emissions reductions measures program and ensure that it is appropriate for OCS operations.</p>
Pg. 19745	<p>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 welcomes comments on the potential application of PEMS and/or the best approaches for selecting and evaluating monitoring systems</p>	<p>As discussed in Chapters 1 and 11 and in ICR Comments submitted by OOC and API, BOEM has proposed extensive and costly emissions monitoring, recordkeeping and reporting requirements as part of the proposed OCS regulations. BOEM lacks the legal authority to impose a majority of these requirements on OCS lessees and operators, and to impose any requirement with respect to MSC. However, should BOEM retain these impermissible provisions in any final rule, the monitoring, recordkeeping, and reporting requirements should be significantly reduced to reflect the minimal impact OCS operations have on onshore air quality.</p>
Pg. 19746	<p>BOEM solicits comments on various alternatives that could be used to achieve the Bureau’s objective of monitoring large emitters. BOEM lists four potential alternative methods of doing so.</p>	<p>As discussed in Chapters 1 and 11 and in ICR Comments submitted by OOC and API, BOEM has proposed extensive and costly emissions monitoring, recordkeeping and reporting requirements as part of the proposed OCS regulations. BOEM lacks the legal authority to impose a majority of these requirements on OCS lessees and operators, and to impose any requirement with respect to MSC. However, should BOEM retain these impermissible provisions in any final rule, the monitoring, recordkeeping, and reporting requirements should be significantly reduced to reflect the minimal impact OCS operations have on onshore air quality.</p>
Pg. 19747	<p>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. 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.</p>	<p>We believe that the provided public comment periods provide sufficient opportunity for interested parties to comment. Furthermore, the OCS Program allows for extensive public engagement through the opportunity to provide comment during each major stage of energy development planning, including programmatic EIS, lease sale EIS, as well as Exploration and Development and Production Plans.</p> <p>In addition, the proposed rule requirements could jeopardize BOEM’s ability to effectively review, process and approve plans during the specified timelines (see Section 10.2 for detailed discussion).</p>
Pg. 19747	<p>BOEM is also proposing that lessees and operators resubmit their plans approximately every ten years to confirm compliance with all applicable requirements in effect on the date of resubmission. BOEM requests comments on this provision, particularly with respect to the potential impact on lessees and operators</p>	<p>As discussed in 1.3.2, the requirement to resubmit and obtain re-approval of previously approved plans is problematic and presents potential breach of contract and takings issues. As discussed in sections 10.1 and 10.3, we believe the current program is protective of onshore air quality. Contributions from existing facilities are accounted for in background concentrations when new facilities conduct air quality modelling to demonstrate compliance with the NAAQS. Consequently, BOEM should not require plan resubmittals. Furthermore, as detailed in ICR Comments submitted by OOC</p>

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		and API, the costs and burden associated with plan submittals and resubmittals could be significant.
Pg. 19748	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. Several alternatives are presented	As discussed in sections 1.2 and 2.2, applying USEPA’s PSD program, including comparison to the increments, to the OCS is inappropriate and beyond the scope of BOEM’s authority under OCSLA. However, sections 8.7 and 8.8 present comments on BOEM’s proposed process.
Pg. 19750	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.	As discussed in Section 12.6, emissions from RUE are not regulated under BOEM’s current AQRP and BOEM has not demonstrated that RUE activities significantly affect onshore air quality or threaten compliance with the NAAQS in onshore areas. Nor have RUE emissions (or any other OCS authorized activity emissions) been identified as significant sources in any affected state SIPs. Consequently, there is no compelling reason to regulate emissions from RUE activities.  In regard to establishing and reporting air quality requirements associated with the removal of any facility, decommissioning or removal of a facility installed pursuant to a RUE would occur beyond the ten year plan projection established in the proposed rule. Predictions of removal activities and emissions estimated during the initial planning stage will be obsolete when decommissioning actually occurs. Therefore, to require the collection of decommissioning emissions during initial plan preparation provides no useful information to BOEM.
Pg. 19750	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.	We support the continued use of GOADS and its expansion to all OCS regions under BOEM jurisdiction. However, as discussed in sections 2.6 and 11.6, the proposed monitoring and recordkeeping requirements in the proposed rule extend beyond what is currently required for GOADS reporting. We propose that BOEM require that operators monitor fuel and activity in accordance with their approved plan.
Pg. 19754	BOEM seeks comment on: (1) Whether this fifth [see above] alternative would be appropriate or is 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 NOX 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 NOX emission factors from those other approaches should be used and this fifth alternative be not adopted.	BOEM assertion that “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);” is not accurate. The emission factors used in USEPA’s marine and nonroad emission models only apply to U.S. flagged vessels. Foreign flagged vessels comply with MARPOL when operating in the ECA.  BOEM’s proposed regulations seem to conflate two distinct and separate issues: emissions of SO <sub>x</sub> and emissions of NO <sub>x</sub> . SO <sub>x</sub> emissions are a product of fuel sulphur content and are not an engine certification matter. Emissions of NO <sub>x</sub> , however, are an engine certification matter, and marine engines are tested with a reference fuel. The emission factors for engines are approved in accordance with test cycles defined in the NO <sub>x</sub> Technical Code. The means of SO <sub>x</sub> compliance for ships subject to MARPOL VI is stated on the IAPPC and are approved in accordance with IMO guidelines such as MEPC Resolution 259(68). NO <sub>x</sub> emissions are the subject of the EIAPPC, which is then used to endorse the IAPPC.

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		<p>Under the BOEM proposals, however, the fuel sulphur content used for engine testing would form part of the engine approval. This would represent a major deviation from the IMO NO<sub>x</sub> Technical Code requirements, and would create difficulties in terms of demonstrating compliance. In addition, SO<sub>x</sub> emissions should be decreasing already from oil and gas sources, particularly MSCs, in the OCS due to the use of ultra-low sulfur diesel fuel.</p> <p>BOEM has not demonstrated that the current method for determining emissions factors is ineffective. As discussed in Section 12.3, the proposed hierarchy will require a significant amount of work to evaluate the required method for determining the emissions factor for each pollutant and each emissions source, thereby exponentially increasing the amount of time required to prepare emissions inventories.</p>
Pg. 19755	<p>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.</p>	<p>We have reviewed multiple state agency permitting programs and the EPA's permitting program for the Eastern Gulf of Mexico. We have not identified an analogue for the age-based adjustments that the BOEM has proposed in the NPRM.</p> <p>As explained in Appendix A, Section 550.205(b)(2)(vii), we are not aware of data that can reasonably be relied upon in making such age-based emission adjustments. We offer the following comments:</p> <ul style="list-style-type: none"> <li>- It is not feasible to make appropriate upward adjustments in emission estimates for older equipment. Emissions of a completely overhauled engine may match that of a relatively new engine so an engine's age may not necessarily result in deterioration of an engine's emissions performance;</li> <li>- There is little to no actual emissions test data that supports BOEM's assertion that emissions increase on older equipment. The USEPA's compilation of emission factors for various emissions sources (AP-42) does not provide for age-based deterioration adjustments to emission factors. We request BOEM to remove language related to age-based adjustments to emission factors.</li> <li>- If BOEM requires an age-based adjustment of emission factors, we request BOEM to only require the use of deterioration factors when they have been developed by the manufacturer. For example, 40 CFR 1042.245 requires manufacturers to develop deterioration factors for certain categories of engines. Consistent with EPA's approach, the requirement to develop such factors should be placed on the engine manufacturers, not the engine purchaser.</li> <li>- For engines certified under Regulation 6 of MARPOL Annex VI, and Chapter 2 of the NO<sub>x</sub> Technical Code (NTC), the NTC specifies that the engine maintenance shall conform to its provisions and as such, if the maintenance complies (regardless of the years of operation) with the original equipment manufacturer's maintenance requirements, then the certificate remains valid and any emissions derived from the NTC are also valid.</li> </ul>
Pg. 19755	<p>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</p>	<p>In order to reduce confusion regarding differing definitions or uses of the same term by USEPA and BOEM, we support the use of "facility emissions" and "projected emissions" rather than "PTE".</p>

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	<p>unattached non-stationary sources.<sup>73</sup> 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: <a href="http://www3.epa.gov/airtoxics/1998sbapptebroc.pdf">http://www3.epa.gov/airtoxics/1998sbapptebroc.pdf</a>. BOEM is considering whether to use the term PTE instead of facility emissions, and BOEM invites comment on this question.</p>	
Pg. 19757	<p>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.</p>	<p>In order to reduce confusion regarding differing definitions or uses of the same term by USEPA and BOEM, we do not support the use of “PTE”. Furthermore, as discussed in sections 1.2.4 and 3, BOEM cannot regulate emissions from MSC, which are outside the scope of BOEM’s jurisdiction.</p>
Pg. 19758	<p>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<sub>3</sub>. BOEM solicits comments on this proposed exclusion and on how BOEM should address the effects of methane emissions on secondary O<sub>3</sub> formation and under what circumstances it would be appropriate, in the event it decides to do so.</p>	<p>Methane is not a pollutant regulated by the NAAQS and therefore should not be included in any BOEM rule.</p> <p>Furthermore, BOEM should consider the same ozone precursors that are considered by states in preparing State Implementation Plans for ozone in nonattainment areas, namely NO<sub>x</sub> and VOC. EPA’s definition of VOC excludes both methane and ethane because they react very slowly in the atmosphere and therefore can only form ozone very slowly which allows time for emissions to be greatly diluted. Focusing on the same ozone precursors (NO<sub>x</sub> and VOC) promotes consistency in analyses performed by BOEM and states and reduces burden on the regulated community to provide data.</p>
Pg. 19758	<p>The proposed rule would not immediately require analysis or reporting of O<sub>3</sub>. Rather, once the new emissions exemption studies have been completed, new EETs would likely be established to address O<sub>3</sub> impacts to the State. Proposed paragraph 550.304(b) details the circumstances when O<sub>3</sub> modelling 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.</p>	<p>As discussed in Section 8.2, expensive and complex photochemical modelling is not warranted given the minimal impact of OCS operations on onshore air quality. As discussed in Section 2.4, we concur that implementation of any new EETs and modelling requirements should be postponed until the BOEM scientific studies have been concluded and BOEM approved photochemical models are available.</p> <p>In addition, any new EETs should be subject to the public review and comment process before adoption by BOEM.</p>
Pg. 19759	<p>(footnote) 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.</p>	<p>See Section 12.4 and ICR Comments submitted by OOC and API for detailed comments regarding BOEM’s draft forms. Due to the limited time available to comment, it was not feasible to provide more detailed comments on the AQR forms at this time.</p>
Pg. 19759	<p>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.</p>	<p>We support the continued use of the AQR forms, which will standardize the data submitted to the agency, which will reduce complexity and future costs and burden to the regulated community and to BOEM. However, as discussed in Section 12.4, BOEM must update the functionality of the AQR spreadsheets prior to publication of the final rule and allow for additional comment.</p> <p>However, should BOEM elect to partner on this E-Enterprise solution, reporting must be limited to those data required under BOEM’s regulation that are warranted to ensure compliance with NAAQS, and sufficient public input should be sought before any E-Enterprise solution is implemented.</p>

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Pg. 19761	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 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.	As explained in Section 12.5 of the comments, BOEM does not have authority to require inclusion of onshore support facilities or aircraft emissions in the air emissions evaluations.  Onshore support emissions are sufficiently addressed by state and/or EPA regulatory programs.
Pg. 19761	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 modelling 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. 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 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.	As explained in Section 12.5 of the comments, BOEM does not have authority to require inclusion of onshore support facilities or aircraft emissions in the air emissions evaluations.  Onshore support emissions are sufficiently addressed by state and/or EPA regulatory programs.
Pg. 19769	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.	We support the continued use of BOEM's classification that short-term facility means a facility that is located at the same location for no more than three years.
Pg. 19769	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.	See Section 7.1 for a detailed discussion regarding ERM and technical feasibility. We believe it would benefit the regulated community, and BOEM, if BOEM would establish and update an approved presumptive ERM data repository or clearinghouse. However, as discussed above, because technical and economic feasibility may vary significantly between OCS facilities, any finalized rule or guidance must allow an option for OCS operators to prepare an emission source-specific ERM analysis, taking into consideration technical, economic, and safety considerations specific to their facility.
Pg. 19770	At the present time, BOEM does not have EETs for Pb, PM2.5, or PM10, nor has it established EETs that would apply to anything other than the projected annual emissions. 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 alternative threshold, keeping in mind that the key goal is to ensure that offshore projected emissions of Pb, PM2.5, or PM10 do not "cause or contribute to a violation" of their corresponding NAAQS.	As discussed in sections 2.4 and 6.1, BOEM should not finalize emissions exemption threshold ranges prior to completing its scientific studies. Furthermore, as discussed in Section 6.3, EETs must account for distance to the onshore area of a State
Pg. 19772	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 modelling) and minimum EETs (below which	As documented in Section 6.3, mass or absolute value thresholds conflict with the authority granted by OCSLA because there is no connection to onshore impacts. Furthermore, BOEM should delay this decision until the scientific bases for EETs have been established. Also, as discussed in Section 6.6, the proposed minimum EETs in Table 1 are in error.



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	BOEM would not establish any new EETs). 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	
Pg. 19773	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.	Please see sections 1.4 for discussion of consolidation of multiple facilities.
Pg. 19777	There are some circumstances where the USEPA has not established a SIL for a given CP or 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 modelling 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).	<p>As discussed in more detail in Section 9.1, BOEM should adopt its own SILs once the scientific studies are complete. In Section 9.1, we propose that BOEM continue applying only the promulgated EPA regulatory SILs (40 CFR 51.165(b)(2)) until the Gulf of Mexico and Alaska regional air quality studies are completed. If those studies conclude that changes to the AQRP are warranted, the results of the studies may inform selection of appropriate SILs. There does not appear to be a particular standard or formula used by EPA to establish SILs, as they range from 1 to 5 percent of the NAAQS. BOEM has the option of identifying SILs based on a scientific rationale, or some percentage of the NAAQS it deems to be significant. Selection of SILs is another opportunity to involve the regulated community.</p> <p>If BOEM elects to continue use of EPA SILs, we recommend that BOEM adopt, in lieu of any EPA interim SILs, SILs set at no less than 5 percent of the applicable NAAQS. When EPA promulgates a SIL that is incorporated in the affected state's SIPs, then the new regulatory SIL would apply.</p> <p>Finally, as discussed in Section 2.3.1, all the SIPs developed by the states bordering the Gulf of Mexico and Alaska, show OCS-based contributions to onshore pollutant concentrations as small. In all cases, the SIPs indicate that the states responsible for achieving NAAQS compliance do not consider OCS sources to be significant contributors.</p>
Pg. 19777	In contrast to the other criteria air pollutants, the USEPA's current regulations do not set a SIL or AAI for O3. Rather than determine equivalent standards for O3 at the present time, BOEM is proposing to require ERM based on emissions precursors of O3 when modelling would indicate the NAAQS for O3 would be exceeded. Accordingly, lessees and operators would be required to add the results of their photochemical modelling, if required under section 550.304, to the existing background concentrations and determine if a NAAQS for O3 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 modelling 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 O3, 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.	As discussed in sections 1.1 and 2.3, BOEM has not provided any study or evidence to demonstrate offshore emissions significantly affect ozone concentrations onshore or within the state seaward boundary. Emission reduction measures for VOCs should not be required unless BOEM's ongoing studies conclude there is a significant onshore impact. Finally, there is no current justification for requiring facilities to perform complex photochemical modelling to address ozone compliance with the NAAQS. Any rulemaking is premature until BOEM's studies are complete.

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Pg. 19779	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.	Please see Section 9 for a detailed discussion of our proposed definition of “affect the air quality of any State”
Pg. 19779	As discussed earlier, the current regulations use the MACIs in place of the AAIs for determining whether longterm 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.	As discussed in sections 1.2 and 2.2 applying USEPA’s PSD program, including comparison to the increments, to the OCS is inappropriate and beyond the scope of BOEM’s authority under OCSLA. Please see Section 9 for a detailed discussion of our proposed definition of “ <i>Affect the air quality of any State</i> ”
Pg. 19782	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.	<p>As discussed in Section 7.6, Section 550.309(e)(6) requires operators to notify states of a need to revise their State Implementation Plans (SIP) when operators acquire emission reduction credits from onshore sources. We are not aware of any SIPs in the Gulf States or Alaska that include emission controls from OCS sources as part of attainment demonstrations. Furthermore, we are not aware of requirements for onshore facilities to notify states when reducing emissions at a facility in order for the state to update its SIP. States and federal agencies will be notified of emissions reductions at onshore facilities through typical permitting processes; therefore, there is no need to provide this additional information to states. This creates a situation which is unnecessarily duplicative and redundant. As discussed above, BOEM must fully develop its emissions credits scheme prior to finalizing the rule, which would include a mechanism for states to access the emissions credits banking database.</p> <p>Furthermore, the requirement is vague. If BOEM elects not to remove this requirement, BOEM must clarify and specify what information and data the designated operator would be required to submit, and to whom.</p>
Pg. 19782	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.	<p>As discussed in Section 1.3 and Chapter 10, we believe the current program is protective of onshore air quality. BOEM has not demonstrated that offshore activities significantly affect onshore air quality and prevent attainment or maintenance of NAAQS. Contributions from existing facilities are accounted for in background concentrations when new facilities conduct air quality modelling to demonstrate compliance with the NAAQS. Consequently, BOEM should not require plan resubmittals. Furthermore, as detailed in ICR Comments submitted by OOC and API, the costs and burden associated with plan submittals and resubmittals could be significant.</p> <p>As discussed in Section 1.3.2, the requirement to resubmit and obtain re-approval of previously approved plans is problematic and presents potential breach of contract and takings issues.</p>

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Pg. 19784	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.	As discussed in Chapters 1 and 11 and in ICR Comments submitted by OOC and API, BOEM has proposed extensive and costly emissions monitoring, recordkeeping and reporting requirements as part of the proposed OCS regulations. BOEM lacks the legal authority to impose a majority of these requirements on OCS lessees and operators, and to impose any requirement with respect to MSC. However, should BOEM retain these impermissible provisions in any final rule, the monitoring, recordkeeping, and reporting requirements should be significantly reduced to reflect the minimal impact OCS operations have on onshore air quality.
Pg. 19784	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.	As discussed in Chapters 1 and 11 and in ICR Comments submitted by OOC and API, BOEM has proposed extensive and costly emissions monitoring, recordkeeping and reporting requirements as part of the proposed OCS regulations. BOEM lacks the legal authority to impose a majority of these requirements on OCS lessees and operators, and to impose any requirement with respect to MSC. However, should BOEM retain these impermissible provisions in any final rule, the monitoring, recordkeeping, and reporting requirements should be significantly reduced to reflect the minimal impact OCS operations have on onshore air quality.
Pg. 19784	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.	BOEM should recognize that submitting stack testing data to USEPA's electronic reporting tool and submitted via CDX adds additional costs to stack testing. Therefore, BOEM must propose and allow the regulated community to comment on how they intend to use the information in WebFIRE prior to requiring it. We recognize that it could be beneficial to compile all of the test data for each make / model of engine and establish emission factors that an operator could use in a plan in lieu of stack testing. In such a case, BOEM could use an identifier in ERT or WebFIRE that could make it easier to identify offshore source testing.
Pg. 19784	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.	As discussed in Chapters 1 and 11 and in ICR Comments submitted by OOC and API, BOEM has proposed extensive and costly emissions monitoring, recordkeeping and reporting requirements as part of the proposed OCS regulations. BOEM lacks the legal authority to impose a majority of these requirements on OCS lessees and operators, and to impose any requirement with respect to MSC. However, should BOEM retain these impermissible provisions in any final rule, the monitoring, recordkeeping, and reporting requirements should be significantly reduced to reflect the minimal impact OCS operations have on onshore air quality.
Pg. 19791-19792	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.  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	Appendix B and ICR Comments submitted by OOC and API provide a detailed discussion of the potential economic impact of the proposed rule.



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	<p>compliance cost estimates as well as regulatory alternatives that would reduce the burden on small entities.</p>	
<p>Pg. 19796</p>	<p>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.</p>	<p>The proposed rule is repetitive and in some cases contradictory. Therefore, its logical organization could be greatly improved. Our recommended comments address these organizational issues.</p> <p>New designations and jargon are introduced by the proposed rule. For example, MSC is a new term that is not typically recognized in the regulated community and is unique to the proposed rule. Likewise, the term ERM is a new term and unique to the proposed rule.</p> <p>In addition, other than the plan resubmittal schedule, tables are non-existent in the proposed rule.</p>