



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

JAN 09 2012

OFFICE OF
ENFORCEMENT AND
COMPLIANCE ASSURANCE

Mr. James F. Bennett
Chief, Division of Environmental Assessment
Bureau of Ocean Energy Management Headquarters
381 Elden Street
Herndon, VA 20170

Dear Mr. Bennett:

In accordance with our responsibilities under Section 309 of the Clean Air Act and the National Environmental Policy Act (NEPA), the Environmental Protection Agency (EPA) has reviewed the Bureau of Ocean Energy Management's (BOEM) draft Programmatic Environmental Impact Statement (PEIS) on the Outer Continental Shelf (OCS) Oil and Gas Leasing Program for 2012 to 2017 (CEQ No. 20110382). The draft PEIS assesses the potential environmental impacts of a range of program alternatives aimed at establishing a schedule that will be used for considering where and when oil and gas leasing may be appropriate over a five year period. This draft PEIS proposes 15 lease sales in six of the OCS Planning Areas in the Gulf of Mexico and offshore Alaska during the period 2012 to 2017.

EPA believes that the draft PEIS provides an adequate discussion of the potential environmental impacts and we have not identified any potential environmental impacts requiring substantive changes. Overall, we support BOEM's approach of evaluating alternatives for areal and temporal exclusions and restrictions around sensitive areas and resources in subsequent lease sales and project-specific actions, subsequent to the PEIS. EPA also commends BOEM for including the evaluation of a catastrophic discharge event, the analysis of climate change, and the inclusion of health effects associated with the Alaska alternatives. Moreover, EPA appreciates the effort to reflect lessons learned from the Deepwater Horizon event in the draft PEIS, and agrees with BOEM that as relevant new information or data becomes available regarding the Deepwater Horizon event, it should be identified and evaluated in the final PEIS and in any subsequent lease sale and project-specific NEPA analyses.

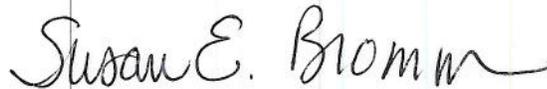
EPA also recommends that the final PEIS outline the air quality studies that will be needed for future leasing and exploration/production actions. Towards this end, EPA recommends that the air quality analysis for future, project-specific EISs include the following, as appropriate:

- An evaluation of how the actions will comply with the new short-term 1-hr NO₂/SO₂ NAAQS and PM_{2.5} standards, and
- An updated Class I increment analysis for the Breton National Wilderness area.

The draft PEIS indicates that NEPA analyses for subsequent lease sales will be tiered from this PEIS, and may be accomplished through preparation of either an EIS or an Environmental Assessment (EA). In addition, the PEIS indicates that following the lease sales, specific project activities such as exploration, production and decommissioning, would be evaluated either through an EIS, EA or a Categorical Exclusion Review (CER). While we recognize that BOEM is currently working with the Council on Environmental Quality to complete a comprehensive review of BOEM's NEPA process, with a specific emphasis on the use of categorical exclusions for OCS decisions, we believe it would be helpful for the final PEIS to provide more information on how BOEM will determine the appropriate level of NEPA documentation for actions "tiered" from this PEIS.

EPA has rated the draft PEIS as LO – "Lack of Objections" (a summary of EPA's ratings definitions is enclosed). In addition, we are also enclosing technical comments that provide recommendations for further clarification and additional discussion in the final PEIS. We appreciate the opportunity to review the draft PEIS, and look forward to reviewing the final PEIS related to this project. The staff contact for the review is Candi Schaedle and she can be reached at (202) 564-6121.

Sincerely,

A handwritten signature in cursive script that reads "Susan E. Bromm".

Susan E. Bromm
Director
Office of Federal Activities

Enclosures

**U.S. Environmental Protection Agency
Detailed Comments**

Outer Continental Shelf (OCS) Oil and Gas Leasing Program for 2012 to 2017 Draft PEIS

Air Quality - Gulf of Mexico (GOM)

Section 3 - Affected Environment

In Section 3.5.2.1 (p. 3-5), the PEIS states that: “Currently, all GOM States except Florida have adopted NAAQS. The State of Florida has ambient standards for 24-hour and annual average SO₂ that are more stringent than the NAAQS.” However, the State of Florida revised the State air quality standards and has the same SO₂ standards as the recently revised national standards. Please see the following link for additional information: http://www.dep.state.fl.us/air/rules/regulatory/NAAQS_Tables_12-9-10.pdf.

In addition, this section indicates that all coastal counties in the GOM are in attainment for all criteria pollutants except 8-hour ozone. However, Hillsborough, Florida, which is a coastal GOM county, is also non-attainment for lead, a criteria pollutant.

Section 4 – Environmental Consequences

Section 4.4.4.4 indicates that “routine Program operation in any of the GOM and Alaska Planning Areas would result in levels of NO₂, SO₂, PM₁₀ and CO that are well within the NAAQS. The incremental concentrations of NO₂, SO₂ and PM₁₀ would be within the maximum allowable PSD increases.” The PEIS concludes that “therefore, impacts to air quality from routine operations associated with the Program are expected to be minor.” In addition, the Summary of the DPEIS (p. xliii) concludes: “Concentrations would be well within the USEPA National Ambient Air Quality Standards and the Prevention of Significant Deterioration increments.”

Based on EPA’s review of the analyses provided, it is not clear that these conclusions are supported with respect to the short term NO₂ and SO₂ standards and the PM_{2.5} standards. In particular, the referenced studies and analyses do not evaluate or address compliance with the new short term 1-hr NO₂, and SO₂ Standards, nor do they address PM_{2.5} NAAQS and no studies were cited that include actual PM_{2.5} or PM₁₀ impact modeling.¹ Without these analyses, a conclusion cannot be reached that the project impacts are well within the NAAQS.

In EPA’s experience, exploratory drilling operations have relatively short stack heights and high concentrations of NO_x emissions. Given prevailing atmospheric conditions, especially in summer months, such activities could cause exceedances of the short term NO₂ standards in the adjacent states when such activities are located in close proximity to shore, i.e., the proposed leasing program includes areas immediately adjacent to the state seaward boundaries. Our review of source specific modeling for our recent permitting activities in the GOM leads us to believe that the short-term SO₂ NAAQS is not likely to be a concern due to the required use of low sulfur fuels. However, based on review of source specific modeling analysis, it appears that emissions of NO_x from facilities employing even the best available control technologies may have significant impacts on the NAAQS from near-shore drilling activities and possibly from sources beyond the state seaward boundaries that are exempt under BOEM

¹ The draft PEIS indicates that since PM₁₀ and PM_{2.5} emission rates are less than SO₂ and NO₂ emissions rates, the impacts for PM should be less than the results for SO₂ and NO₂. However, given that NO₂ and SO₂ are PM fine precursors, we do not believe this reasoning supports that conclusion.

rules from analysis due to distance threshold. In addition, the impacts on these short-term 1-hr standards cannot be evaluated by average emissions and average facility fuel use data, as provided in the studies.

Impacts or exceedances of the particulate matter standards would also be possible for near-shore operations. The studies provided do not address PM_{2.5}. Without source specific modeling using refined data, BOEM and the adjacent states will not have the necessary information to ensure compliance with the NAAQS and properly determine coastal consistency. EPA is also concerned that future NEPA analyses required for the Lease Sales and Project Plan approvals may, as has occurred in the past, rely upon the more generalized analysis conducted in the PEIS, rather than provide the more detailed analysis that is needed to ensure protection of the NAAQS and coastal consistency. Therefore, EPA recommends that BOEM discuss in the final PEIS how and when analyses will be conducted to ensure compliance with the short term 1-hr NAAQS and PM_{2.5} standards.

Likewise, the conclusion that the Program will be well within the PSD increments does not appear to be supported for Class I areas. The Class I increment analysis (p. 4-135) indicates that the '92 Gulf of Mexico Air Quality Study predicted NO₂ levels would exceed the Class I increment at Breton National Wilderness area. The highest predicted value is 3.6 ug/m³, and the maximum allowable increase for NO₂ concentration is 2.5 ug/m³. Updated information from a 2000 BOEMRE analysis for emissions sources within 100 km from Breton NWR revealed no exceedance. Given the year of the study, it does not incorporate recently permitted sources, nor include emissions from sources located within the lease blocks covered in this PEIS, several of which are previously undeveloped areas located upwind or adjacent to the Breton National Wilderness area. In addition, the analysis is reported to include only platforms and not exploratory operations. Hence, it is unclear whether it can be determined at this stage that impacts are "well within PSD increments" without more detailed analysis. EPA recommends that the final PEIS identify how the subsequent NEPA analyses for the Lease Sales for locations that may impact Breton will ensure protection of these sensitive Class I areas.

Air Quality – Alaska

On page 3-62, line 16, the statement that ambient air concentrations in Alaska, outside of the metropolitan areas, are below the NAAQS is not correct. Elevated levels of PM₁₀ concentrations have been measured in several Alaska communities (due to road dust), and elevated concentration of PM₁₀ from windblown dust, and PM_{2.5} from wildfires have been measured at various locations throughout the state (outside of the major metropolitan areas) during certain seasons of the year. Ambient air outside of the major Alaskan cities is relatively clean, but it may not always be in compliance with the PM₁₀ and PM_{2.5} NAAQS. We recommend revising this statement to reflect actual conditions.

Water Quality

EPA recommends the insertion of the following language on page 4-111 after the last sentence at line 35:

1. *Permits issued under Section 402 of the Clean Water Act for offshore activities must comply with any applicable water quality standards and/or federal water quality criteria as well as Section 403 of the Clean Water Act. Water Quality Standards consist of the water body's designated uses, water quality criteria to protect those uses and determine*

they are being attained, and antidegradation policies to help protect high quality water bodies. Discharges from offshore activities near state water boundaries must comply with all applicable State Water Quality Standards.

Section 403 of the Clean Water Act requires that NPDES permits for discharges to the territorial seas (baseline to three miles), the contiguous zone, and the ocean be issued in compliance with EPA's regulations for preventing unreasonable degradation of the receiving waters. Prior to permit issuance, ocean discharges must be evaluated against EPA's published criteria for determination of unreasonable degradation. Unreasonable degradation is defined in the NPDES regulations (40 CFR 125.121[e]) as the following.

- 1. Significant adverse changes in ecosystem diversity, productivity, and stability of the biological community within the area of discharge and surrounding biological communities.*
- 2. Threat to human health through direct exposure to pollutants or through consumption of exposed aquatic organisms.*
- 3. Loss of aesthetic, recreational, scientific or economic values, which is unreasonable in relation to the benefit derived from the discharge.*

In addition, we recommend that BOEM consider incorporating the water quality effects information contained in the EPA Region 10 Ocean Discharge Criteria Evaluations (ODCEs) previously developed for the 2006 Arctic Oil and Gas Exploration NPDES General Permit (<http://yosemite.epa.gov/r10/water.nsf/npdes+permits/arctic-gp>), as well as those that are currently being finalized for new Chukchi Sea and Beaufort Sea Exploration NPDES General Permits. EPA Region 10 can provide copies of the latter documents when complete if they become available prior to the publication of the final PEIS.

Lastly, the entry for dredging and marine disposal in Table 4.6.2-1 (page 4-512) should be clarified. EPA is responsible for identifying recommended ocean disposal sites. EPA and USACE are jointly responsible for management and monitoring of ocean disposal sites. USACE issues permits for ocean dumping of dredged material under the Marine Protection, Research, and Sanctuaries Act (MPRSA), subject to EPA review and concurrence.

Alternatives

We support BOEM's approach of evaluating alternatives for areal and temporal exclusions and restrictions around sensitive areas and resources in subsequent lease sales and project-specific actions, subsequent to the PEIS. Towards this end, EPA recommends, as appropriate, for BOEM's subsequent lease sale and project-specific NEPA analyses, the consideration of alternatives that exclude activities in environmentally sensitive areas, such as the Hannah Shoal and in the loop current in the Gulf of Mexico, as well as an evaluation of additional deferral areas for bowhead migration and Nuiqsut whaling in the Beaufort.

Appendix B – Assumed Mitigation Measures

EPA recommends that Appendix B, Section B.1.2, provide detail information about the mitigation measures assumed. For instance, eight air quality mitigation measures were assumed but the appendix does not provide information on what these mitigation measures are. At a minimum, the mitigation measures should be described or a reference cite provided. We also recommend that the final PEIS include a general discussion of the effectiveness of mitigation measures taken to date in the various leasing areas in order to better inform the public and decision-makers.

Spill Response Techniques

One of the response techniques employed during the Deepwater Horizon event was the construction of extensive coastal sand barrier berms, immediately to the east and west of the Mississippi River. When initially proposed and subsequently built, there were numerous concerns expressed regarding impacts to tidal inlet velocities, water quality, near shore hydrology, sediment budgets, natural sediment transport patterns, competing uses of near shore sand for coastal restoration projects, and potential ecological and financial cost effectiveness. The US Geological Survey is currently monitoring the sustainability (in terms of sea level rise and storm surge) of the berms and examining whether the sand is transported in a way that contributes positively to coastal processes. EPA recommends that the final PEIS provide information on the effectiveness and impacts of dredged sand berm construction as a spill response technique in light of the likelihood that this technique may be proposed in the event of a future oil spill.

Other Comments

- EPA understands that the Trans-Alaska Pipeline System (TAPS) cannot transport gas, only oil and gas condensates. We recommend that the final PEIS clarify in applicable discussions that gas from the Beaufort and Chukchi will not be transported via the TAPS but instead will likely be transported via a new gas line to the lower 48 or a port in south central Alaska, or directly from future North Slope infrastructure.
- EPA suggests the final PEIS clarify that in addition to re-gasifying LNG for import, an emerging trend in Gulf of Mexico LNG development is to liquefy the gas for export.
- Page 3-82, 3.6.1.4.8: The Snowmachines and Ice Roads section appears to be included in the wrong section (should be included in the section 3.6.3 Alaska-Arctic acoustic discussion, not Gulf of Mexico).
- Page 4-65, lines 35-36: *“Prior to the DWH event, the three largest spills on the OCS were 80,000, 65,000 and 53,000, and all occurred before 1971.”* Please provide units for “80,000, 65,000 and 53,000”.
- Page 4-66 to 4-67, lines 41-46 and lines 1-5: While catastrophic discharge event may be classified as a “spill of national significance”, spills that may not be classified as catastrophic discharge event may still be classified as a “spill of national significance”. 40 CFR 300.323 (Spills of national significance) provides that a discharge may be classified as a spill of national significance (SONS) by the Administrator of EPA for discharges occurring in the inland zone

and the Commandant of the USCG for discharges occurring in the coastal zone. EPA recommends that BOEM consider clarifying that a SONS may not necessarily be a “catastrophic discharge event”.

- Page 4-68, table 4.3.4-1: Under “Factors That Contribute to Catastrophic Consequences”, BOEM should consider revising “Capping at the well vs. drilling relief well vs. chemical and mechanical response” by removing the term “vs” since the current structure suggests that the different elements are trade-offs amongst each other.
- Page 4-69, line 25-27 suggests that frontier areas, such as the Arctic, are relatively underexplored and do not have long registries of geological data or previous attempts at well drilling. BOEM should consider providing a more detailed discussion on the available historical data, analyzing the water depths under which loss of well control occurred or its relevance to new frontier areas of exploration such as the Arctic.
- Pages 4-80 and 4-81: The references cited to USEPA are incorrect. Please review and revise as necessary.
- Page 4-109, Table 4.4.2-1 Oil Spill Assumptions for the Proposed Action (Alternative 1): The reference “Anderson” provided to support the data in Table 4.4.2-1 appears to be “in preparation” and therefore not available for review and comment. This reference is used solely or with other references elsewhere in the document to support spill sizes data (e.g., page 4-109, lines 13-14: “*Between 2000 and 2010, there were 2 platform spills and 4 pipeline spills $\geq 1,000$ bbl (Anderson, in preparation).*” Since the reference does not appear to be publically available to support the data provided, BOEM should consider removing it. If BOEM decides to retain the reference, then it should be made available in the final PEIS. Furthermore BOEM should indicate how the data was collected (e.g., industry reported data).