BOEM
Bureau of Ocean Energy Management

Peer Review Plan

Date: June 24, 2019

BOEM Funding Source or Author's Division: Office of Environmental Programs
Division of Environmental Studies
45600 Woodland Road
Sterling, VA 20166

Title: Air Quality Modeling in the Gulf of Mexico Study (NSL# GM-14-01)

Subject and Purpose: Air quality modeling needs to be conducted for the Gulf of Mexico Region (GOMR) to assess the Outer Continental Shelf (OCS) oil and gas development pre and post-lease impacts to the states, if any, as required by the Outer Continental Shelf Lands Act (1334 (a)(8)) (OCSLA). This information will be used by BOEM post-lease in the emissions exemption threshold analysis and pre-lease in the National Environmental Policy Act (NEPA) Environmental Impact Statement (EIS) cumulative analysis to support compliance with OCSLA.

Under the Clean Air Act (CAA), the U.S. Environmental Protection Agency (USEPA) is required to set the National Ambient Air Quality Standards (NAAQS) for pollutants considered harmful to public health and the environment. The USEPA has set NAAQS for six criteria pollutants: carbon monoxide (CO), lead (Pb), nitrogen dioxide (NO2), ozone (O3), particulate matter (PM2.5 and PM10), and sulfur dioxide (SO2). Because the CAA requires the USEPA to periodically review the science upon which the standards are based and the standards themselves, USEPA has issued a 24-hour PM2.5 standard in 2006, has lowered the NAAQS for the 8-hour ozone in 2008, and has issued two 1-hour standards, one for NO2 and another for SO2, in 2010.

Dispersion and photochemical modeling needs to be conducted to ensure that individual and cumulative OCS oil and gas exploration, development, and production activities do not significantly affect the air quality of any state as required under OCSLA. Air quality modeling requires various input datasets, including emissions estimates for all sources, meteorology, and pre-existing pollutant concentrations. This study would develop all necessary OCS GOMR air quality modeling inputs and conduct dispersion and photochemical modeling addressing OCS oil and gas related impacts to states.

Impact of Dissemination: This study is considered by BOEM to be highly influential scientific information as the study's findings may have a direct bearing on future air regulations.

Timing of Review: June – November 2019 (A six month review period is desired for this project.)

Manner of Review, Selection of Reviewers, and Nomination Process:
This peer review shall be conducted through the National Academy of Science (NAS) IDIQ Contract #140M0119D0001. The selected peer reviewers shall achieve an optimum level of expertise across the spectrum of issues, while minimizing any potential conflicts of interest.

Primary criteria for peer reviewers include the following:

- Calculation and pre-processing of an emissions inventory.
- Working with USEPA's dispersion and photochemical modeling.
- Conducting model performance evaluation.
- Familiarity with USEPA's Appendix W modeling guidelines.
- Analyzing air quality impact assessments.
- Understand air quality (meteorology, emissions) in the Gulf of Mexico Region.

The secondary tier of criteria should include the following:

- Not applicable

Reviewers may be selected from academia, industry, and federal government. The group of reviewers shall not include multiple reviewers from the same affiliation, and shall strive to include various perspectives on the issue considered.

Expected Number of Reviewers:
Five to seven independent peer reviewers.

Requisite Expertise:

- Oil and gas industry background.
- Modeling expertise in WRF meteorological modeling, OCD, AERMOD, and CALPUFF dispersion modeling and CAMx photochemical modeling.
- Experience with R statistical package.
- BOEM's air quality regulatory process.

Opportunity for Public Comment:

The report will be available on BOEM's Environmental Studies Program Information System (ESPIS) website located here: ÈÔÔÐÓ¢ŒŒ Í ÁÒÉÎÅÃÁÄÁÓÔÒÅ¢ÇÏÖŒÅÓÐÉÓŒΠŒ. B / % - welcomes public comment, especially from those with particular criteria mentioned, however the opportunity for public comment is not incorporated into the BOEM plan for the peer review of this document.

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