Field	Study Information
Title	Outer Continental Shelf Air Quality System (OCS AQS)—Plan and Compliance Modules (NT-26-03)
Administered by	Office of Environmental Programs
BOEM Contact(s)	Holli Wecht (Holli.Wecht@boem.gov)
Procurement Type(s)	Contract
Conducting Organization(s)	TBD
Total BOEM Cost	TBD
Performance Period	FY 2026–2036
Final Report Due	TBD
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Problem	The current air spreadsheets (BOEM-0138 and BOEM-0139 forms) used to calculate emissions for the plan submittal for EPs, DOCDs, and DPPs are not efficient. In addition, two current tools exist for calculation of emissions, plans (Excel spreadsheets) and emission inventories (OCS AQS), potentially leading to inconsistencies between the two tools causing compliance issues.
Intervention	Using the existing OCS AQS emissions inventory tool, which was developed for operators to calculate and report actual emissions to BOEM, and creating a new plan module to calculate plan emissions will achieve consistency between plan and emission inventories. The new compliance module could be utilized for automatic comparison of plan and emission inventories to notify the operator and BOEM/BSEE of these comparison results.
Comparison	Plan emissions in the new plan module can be compared directly to actual emission inventories reported to determine if a revised plan is needed and/or inspection action should occur.
Outcome	Emissions are calculated using the same emissions factors and calculations for efficiency and comparison by users such as operators, BOEM and BSEE.
Context	Gulf of America and Alaska planning areas.

BOEM Information Need(s): BOEM's air quality spreadsheets (BOEM-0138 and BOEM-0139 forms) for calculation of emissions in the plan submittals are not efficient for both operators, and BOEM staff. BOEM already operates an emissions calculation tool for operators to report actual facility emissions, OCS AQS, which could potentially be used to calculate the plan proposed emissions as well. In addition, compliance verification is difficult when using two tools to calculate emissions with potentially different emissions factors and calculations.

Background: Operators submit proposed emissions data to BOEM in the plan (EPs, DOCDs, and DPPs) submittal according to 30 CFR 550.218 and 550.249 through Excel Spreadsheets (BOEM-0138 and BOEM-0139 forms). These spreadsheets include a detail list of the proposed emissions sources that will be utilized on a facility for ten years including those emissions sources proposed worse case horsepower

ratings (or volumes vented/flared), hours of operation and fuel usage. In addition, the spreadsheets include emissions factors per each source type per pollutant. The spreadsheets then calculate proposed emissions for all criteria pollutants for the next ten years. Lastly, by inputting distance to shoreline, the spreadsheets calculate emissions exemption thresholds according to 30 CFR 550.303(d) and 550.304(b). Additional air reviews, usually modeling, are required if the proposed emissions exceed the thresholds.

These forms are cumbersome, and time consuming to use. The complicated spreadsheets have reached the maximum capacity of the Excel platform, they can be manipulated by the operator which means that subject matter experts (SMEs) must conduct very detailed reviews and often even recalculate values to have confidence in the results, and pollutants and emissions factors can't be easily updated.

These spreadsheets/forms can be replaced by building onto an existing user-friendly reporting tool called OCS AQS. OCS AQS has been successfully used by operators in submitting emission inventory information. OCS AQS was initially developed to fulfill 30 CFR 550.303(k) and 550.304(g) emissions monitoring requirements. The inventory data is actual emissions based on actual hours of operation and fuel usage as opposed to the plan submittal which are worse case projected emissions. However, the inventory data type is similar to the data type collected in the BOEM-0138 and BOEM-0139 forms. Thus, OCS AQS can be used for calculation of plan emissions in place of the excel spreadsheets, BOEM-0138 and BOEM-0139 forms. OCS AQS can export documents to be used in the plan submittal. Several advantages of OCS AQS over the excel format are:

1. Increased efficiency using one, user-friendly tool with updated software, manual instructions, and help information. OCS AQS also includes mapping and tables features.
2. Help operators achieve consistency between planned and actual emissions.
3. Allows automated compliance checks between planned and actual emissions inventories.
4. Track historical information, trends, and do data comparisons.
5. Conduct quality control and range checks for errors before plan submittal.
6. Reduced staff effort to update emissions factors or pollutants.
7. Once an operator enters facility information such as physical information and emissions sources in the Plan Module, that facility will be auto populated in the Emissions Module reducing operator burden and ensuring consistency between planned and actual emissions sources.
8. Potential for a future modeling module, which would further reduce BOEM and operator burden.
9. Allows for the impact assessment of plan emissions and nearby sources under 30 CFR 550.303(j) and 550.304(f) thus eliminating the operator's current ability to "piecemeal" plans. OCS AQS can model the plan emissions with pre-populated meteorological data in the Modeling Module and actual emissions in the Emissions Module, which then can be pulled in as "nearby" sources.
10. Coordination with the Fish and Wildlife Service over impacts at Breton Sound Class I area will be enhanced because OCS AQS will flag the facilities within the given area around Breton and the operator or the dispersion modeling of the plan emissions can be conducted on the same platform.
11. The tool can automatically flag high H_2S facilities (using BOEM's database of high H_2S blocks), or any other flag BOEM wants to consider including nearby Breton, and email BOEM staff if flagged data is submitted. In addition, the tool can be used for H_2S modeling.

BOEM can develop Plan and Compliance Modules in OCS AQS to calculate proposed plan emissions and comparing those plan emissions to actual emission inventories submitted by operators. This study would tie into the existing OCS AQS web-based emissions reporting tool. In fact, BOEM/BSEE ensured future development of the plan and compliance modules were included in the current contract #140E0119C0006 as C.6.1.2 "OCS AQS Advanced Solution Capabilities". However, advanced features were not funded. Lastly, ITLB approved this Business Case in May 2024.

BOEM has regulatory authority of air quality in OCSLA and promulgated at 30 CFR 550. The impact of not building OCS AQS Plan and Compliance Modules is the continuation of using outdated and inefficient spreadsheets for plan submittals. In addition, because of potential operator manipulation of these spreadsheets, the AQ SME has to invest additional time to conduct plan reviews even having to recalculate the values. Lastly, because the plan and actual emissions aren't calculated in the same manner, compliance is often difficult. Increasing the difficultly for operators to comply with regulations, and for BOEM and BSEE to meet our regulatory responsibilities.

Objective(s): To develop Plan and Compliance Modules in BOEM's existing web-based emissions tool, OCS AQS, replacing the BOEM-0138 and BOEM-0139 forms, and allowing direct comparison of plan to actual emissions.

Methods: Using contract #140E0149C0006 to develop advanced solution capabilities as stated in C.6.1.2, Plan Module and Compliance Module.

The plan module will replace BOEM-0138 and BOEM-0139 forms allowing operator input of company and facility information, plan activity data for facility sources including (drilling, pipeline and facility installation, production, drilling well test), perform QA/QC on all data, and calculate emissions out ten years, with summary table comparing proposed emissions for all ten years to emissions exemption thresholds (EETs), which are based on distance to shoreline (this can be prepopulated based on lats/longs). OCS AQS will prompt modeling if the EETs are exceeded, and the operator can perform dispersion modeling of the plan emissions in the OCS AQS modeling module (everything in one tool). All results, proposed emissions and modeling results, would be exported in a form for operators' usage in the plan submittal process.

The compliance module will automatically compare the plan emissions with the actual emissions, prompting operators (BOEM, BSEE) to revise their plan if necessary.

Specific Research Question(s): N/A

Current Status: N/A

Publications Completed: N/A

Affiliated WWW Sites:

https://ocsaqs.doi.gov/boem/Account/LogIn

https://www.boem.gov/boem-ocs-operation-forms#AQ

References: None