



OFFSHORE OPERATORS COMMITTEE
2400 Veterans Memorial Blvd., Suite 206
Kenner, LA 70062
(504) 904-7966

October 9, 2020

Submitted via email

Anna Atkinson
Information Collection Clearance Officer
Bureau of Ocean Energy Management
45600 Woodland Road, VAM-DIR
Sterling, VA 20166

SUBJECT: COMMENTS IN RESPONSE TO NOTICE OF INFORMATION COLLECTION
POLLUTION PREVENTION AND CONTROL
EMISSION INVENTORIES
OMB CONTROL NUMBER: 1010-0057

Ms. Atkinson,

The Offshore Operators Committee (OOC) is respectfully providing the attached comments on the above-captioned regulatory action. Specifically, OOC is offering comments on the burden estimates and functionality of the Bureau of Ocean Energy Management's (BOEM) Air Quality System (AQS).

The OOC is an offshore oil and natural gas trade association that serves as a technical advocate for companies operating on the US Outer-Continental Shelf (OCS). Founded in 1948, the OOC has evolved into the principal technical representative regarding regulation of offshore oil and natural gas exploration, development, and producing operations. The OOC's member companies are responsible for more than 90% of the oil and natural gas production from the OCS. The comments contained in this letter are submitted without prejudice to any of our members who may have differing or opposing views.

OOC responded to each of the following questions, as applicable, for each topic in the attached comments (see Sections A through I):

1. Is the collection necessary to the proper functions of BOEM?
2. What can BOEM do to ensure this information will be processed and used in a timely manner?
3. Is the estimate of burden accurate?
4. How might BOEM enhance the quality, utility, and clarity of the information to be collected?
5. How might BOEM minimize the burden of this collection on the respondents, including minimizing the burden through the use of information technology?

In addition, we have also included (in Sections J and K) specific comments and questions highlighting errors and functionality issues with the AQS data system. These comments are based upon OOC members conducting "hands on" evaluations of the new system.

Of particular concern to OOC and its members, is the requirement for operators to provide non-platform air emissions data in AQS (detailed in Section A). Historically, collection of non-platform air emission data was the responsibility of BOEM. By shifting the responsibility of collecting and reporting non-platform

source data to operators, BOEM is increasing the burden of reporting. For example, the Burden Table included in the Notice of Information Collection estimates 44 hours per facility to collect and report emissions data. As described in the attached comments, we estimate that for drilling rigs alone (exclusive of platforms and other support vessels) the estimated reporting burden is 117 hours per facility.

Also, as discussed in Section A, it appears that BOEM is requiring the reporting of data from drilling rigs and construction vessels underway within 25 miles of a facility. It is our position that drilling rigs and vessels underway do not meet the definition of “facility” in 30 CFR 550.302 because when underway, the rig or vessel is not attached to the seabed. Therefore, the rig or vessel does not fall under BOEM’s OCS Lands Act (OCSLA) authority.

The reporting of non-platform air emissions data is of paramount importance and we strongly recommend these issues be resolved prior to the planned 2021 emissions reporting year.

In addition to reporting of non-platform emissions data, OOC has also developed important comments on the following issues:

- Potential Changes to Reporting Frequencies (Section B)
- Complexities of Reporting Flare Information (Section C)
- Oil and Gas Operations Report (OGOR) Reconciliations (Section D)
- Functionality of QA/QC of Data Prior to Report Submittal (Section E)
- Confidentiality of Data and Defined User Roles (Section F)
- File Naming Conventions Associated with Import/Export (Section G)
- 2021 Initial AQS and Transfer of GOADS Data (Section H)
- Clarification on Reporting Storage Tank Emissions (Section I)
- Potential Errors Identified in AQS (Section J)
- Additional Observations and Items that Require Clarification (Section K)

OOO appreciates the efforts of BOEM to improve and modernize air emissions reporting for the offshore oil and gas industry. The new AQS has many positive attributes and features. All of the comments included here are intended as constructive feedback to further enhance and improve the reporting process, as well as to accurately assess the associated reporting burden.

If you have any questions or require additional information please contact me at greg@theooc.org.

Sincerely,



Greg Southworth
Associate Director
Offshore Operators Committee

cc: (via email)

Holli Ensz, Office of Environmental Programs, BOEM
Margaret Metcalf, Office of Environment, BOEM
Arie Kaller, Office of Environment, BOEM
James Schindler, Senior Advisor, BOEM
Michael Celata, Director, Gulf of Mexico Office, BOEM
Walter Cruikshank, Acting Director, BOEM

A. Reporting of Non-Platform Data: Significant Additional Burden and Beyond OCSLA Authority

Requiring operators to collect, compile, and submit activity data for non-platform emission sources is a change from historical practices. The additional burden and associated costs to collect this data are significant, have not been evaluated by the agency, and any supposed benefits have not been substantiated. OOC recommends that BOEM continue the historical practice for collecting non-platform data, and not shift the burden to the regulated community, especially for sources that fall outside of BOEM's OCSLA authority.

1. *Is the collection necessary to the proper functions of BOEM?*

No – Operators have never been required to report non-platform sources emissions to the Gulf of Mexico (GOM) air emissions inventory; formerly the Gulf-wide Offshore Activity Data System (GOADS), now AQS. BOEM has always obtained activity information for non-platform emissions from other resources. By shifting these reporting requirements to operators, the agency is creating additional burdens on the regulated community that are not included in the published Burden Table¹.

The requirement to provide monitoring information in 30 CFR 550.303(k) and 550.304(g) only applies to emissions sources on “facilities” as defined in 30 CFR 550.302, and, accordingly, operators and lessees are not required to report emissions sources which are not a part of a “facility” in OCS AQS. BOEM stated in the AQS training sessions held on August 17-19, 2020 and the OCS AQS Training Guide that operators were expected to provide information for drilling rigs that are contracted to a facility within 25 miles of the facility, drill rigs attached to the seabed conducting drilling operations as well as construction support vessels within 25 miles of a facility. A facility is defined in 30 CFR 550.302 as

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

The definition does not include drilling rigs that are contracted to a facility (underway) nor construction support vessels within 25 miles of an installation or a device if not attached to the seabed. Therefore, requesting this information is outside of the BOEM's regulatory jurisdiction.

In addition to collection of this information being beyond BOEM's authority, the Preamble of the Final Air Rule published on June 6, 2020 states,

“The CAA explicitly authorizes the Administrator of the USEPA to regulate emissions from vessels servicing or associated with an OCS source within 25 miles of the OCS source in

¹ *Federal Register*, Volume 85, Number 154, August 10, 2020, pages 48261 to 48263.

specific areas of the OCS. 42 U.S.C. 7627. In contrast, OCSLA only authorizes the Secretary to regulate air pollutants from “activities authorized” by OCSLA. OCSLA, section 5(a)(8). The Office of the Solicitor has previously opined that vessel traffic to and from OCS facilities is not an activity “authorized” under OCSLA, rendering requirements to count vessel emissions in regulating facilities potentially beyond the scope of the Secretary’s statutory authority.”

Consistency should be maintained between what sources are included in an Air Quality Report (AQR) that is included with plans required for proposed OCS activities for comparison to Emission Exemption Thresholds and what is included in an AQS used to calculate actual emissions. Inconsistencies can result in confusion for operators, regulators, and the public as to what is required to implement the regulations. Although BOEM may desire the vessel emissions data from operators, it is not necessary, as multiple environmental studies and NEPA analyses provide ample information to use in decision-making.

In addition, we recommend that BOEM provide additional guidance or clarity on what the agency considers to be a “transiting vessel” and a “construction vessel” within BOEM’s scope of authority under OCSLA. Further definition of this term will assist the regulated community in determining what types of vessels are expected to be included in reporting.

2. *Is the estimate of burden accurate?*

No - BOEM has estimated the total burden for this activity to be 44 hours for a new or revised Exploration Plan (EP), Development Operations Coordination Document (DOCD), or Development and Production Plan (DPP) and has not accounted for any burden for an existing facility. Industry takes issue with this estimate, as tracking any vessel (construction or drilling) operations within 25 miles of a facility is beyond existing monitoring systems and has not been included in the burden estimates. This new requirement will impact owners of drilling rigs and vessels in addition to operators who will now have responsibility for establishing tracking systems for reporting new information in a few short months for historical data to be prepared for reporting in January 2021. In addition, activities of exploratory drilling rigs are often not associated with existing platforms. In this case, operators will be required to create new “platforms” in the AQS as these will not be added from the previous GOADs reporting cycle. Additionally, as a drilling rig relocates throughout the year, multiple new platforms may be required for the same vessel.

A burden estimate has been prepared separately for construction vessels and drilling rigs (see Tables 1 and 2). While drilling rigs typically are contracted for extended periods of time, other vessels may be contracted for very finite time periods to perform specific tasks. This variation can have a significant impact in the time required to gather the required data for the duration of the reporting year depending on the work being performed. Table 1 is an estimate of time required to gather the information required for a single construction vessel for a single operation. This time estimate would be multiplied for multiple vessels utilized throughout the reporting year for multiple operations for a single facility to accurately calculate the burden:

Table 1: Estimated Burden for Reporting Construction Vessels

Construction Vessels	Hours per vessel per occurrence	Estimate Comments
Identification of construction vessels	2	Requires understanding of definition of construction vessel, communication with projects and/or field personnel to identify construction vessels being used. Assumes 2 persons for one hour discussion/data review.
Gathering requested information about engines	4-8	Requires coordination with vessel owners to identify the required information about vessel engines. Time estimate may vary based on data availability. Assumes one hour discussion for 2 persons plus time to research and gather data based on previous experience.
Establishing 25-mile perimeter around facilities and training personnel responsible for recording data	4	Requires development of maps/communication for field personnel and vessel operators to establish log system for personnel to record information accurately for the time vessels are within perimeter. Training for at least 2 shifts of personnel per vessel.
Tracking construction vessel movement and fuel usage	2-4	Vessel operator fuel tracking - estimate is based on vessel topping off fuel tank upon entry and exit of perimeter to calculate fuel usage.
Summarizing and entering monthly fuel data for entry into AQS	1-2	AQS reporter will compile fuel usage data provided by various vessel owners/operators - includes time to compile data received and enter data into AQS.
Total	13-20	Note that this total is for a single construction vessel entering the 25-mile perimeter of a single facility. Total hours for the reporting period could potentially require multiplication by the number of vessels used in the reporting year and/or to reflect multiple trips in/out of the perimeter.

Because drilling rigs are typically contracted for longer periods of time and tend to operate for the entirety of a year for a single operator, Table 2 represents time estimate has been prepared for a single drilling rig for the duration of the reporting year:

Table 2: Estimated Burden for Reporting Drilling Rigs

Drilling Rigs	Hours per drilling rig per year	Estimate Comments
Gathering requested information about engines	2	Requires coordination with rig owners to identify the required information about engines. Assumes one hour discussion for 2 persons plus time to research and gather data based on previous experience. In addition, it is uncertain if drilling rig owners can provide some of the needed information, such as total kilowatt-hours for each rig engine, especially in a usable electronic data format.
Establishing 25-mile perimeter around facilities and training personnel responsible for recording movement	4	Requires development of maps/communication for field personnel and drilling rig operators to track fuel usage when within perimeter and establish log system to record data accurately for the duration within the perimeter. Training for at least 2 shifts of personnel per drilling rig.
Tracking drilling rig movement and fuel usage	15	Drilling rig operator fuel tracking - estimate is based on vessel topping off fuel tank upon entry and exit of perimeter or daily to calculate fuel usage.
Summarizing and entering monthly fuel data for entry into AQS	96	AQS reporter will compile fuel usage data provided by various rig owners/operators - assumes 8 hours per month for compiling data and entering into AQS
Total	117	

3. *How might BOEM enhance the quality, utility, and clarity of the information to be collected?*

Operators were unaware of the new requirement to include non-platform sources in the 2021 reporting year prior to the training held August 17-19, 2020. This additional requirement will lead to low quality data because tracking systems are not in place to accurately capture this type of information that BOEM is now requiring. In addition, the new requirements are unclear and, in some cases, are beyond BOEM's regulatory authority.

Figure 1 and Figure 2 are from the OCS AQS Training Guide provided by BOEM. The highlighted areas in these figures generate additional questions and concerns among the regulated community:

Figure 1: Excerpt from BOEM’s OCS AQS Training Guide

Non-Platform Sources include all sources that support offshore activities but are not fixed to the platforms. These include ocean going vessels, helicopters, and biogenic releases. While most emissions from Non-Platform Sources will be input into the OCS AQS by BOEM, some source emissions are the responsibility of the operators. These include:

- Drilling rigs contracted to a facility within 25 miles of the facility
- Construction support vessels for a facility within 25 miles of the facility

Other ocean-going vessels and non-platform sources directly supporting a facility and within 25 miles of the facility may also be reported by the operator but are not required.

A summary of required reporting is shown in Figure 31. Drilling rig attached to the seabed and conducting drilling operations are considered a Platform Source as discussed in Section 3.1.9.

The diagram illustrates a 25-mile exclusion zone (EIZ) around a central facility. A blue arrow indicates the 25-mile radius. Within this zone, there are three categories of vessels:

- Required (Green Checkmarks):**
 - Drilling & Construction support vessels within 25 mi EIZ
 - Drilling vessels attached to seabed
- Optional (Red X):**
 - Non-construction support vessels within 25 mi EIZ

Figure 2: Excerpt from BOEM’s OCS AQS Training Guide

- Select Type of Non-Platform Source category. The three categories include:
 - Drilling Rig underway, within 25 miles of the contracted facility (Required)
 - Construction support vessel underway, within 25 miles of the contracted facility (Required)
 - Other ocean-going vessel within 25 miles of the contracted facility (Optional)
- Input Data Request parameters. Based on the calculator selected, different parameters are required as shown in Figure 32.

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    graph TD
      A[1. Select Facility] --> B[2. Select Category]
      B --> C[3a. Drilling Rig, underway <25 mi]
      B --> D[3c. Construction support vessel, underway <25 mi]
      B --> E[3d. Optional vessel, underway <25 mi]
      C --- F[Required]
      D --- F
      E --- G[Optional]
      
```


The following is a summary of the clarifications requested related to Figure 1 and Figure 2 above:

- Figure 1 references the requirement to include emissions from a drilling rig attached to the seafloor. Figure 2 requires emissions from drilling rigs “underway”. Underway presumes something in motion, if a drilling rig is attached to the seafloor it cannot be underway. This inconsistency in the training guide makes it unclear what drilling rig emissions BOEM is trying to require and how the emissions would even be inputted into the system for these emission sources.
- Figure 1 uses the acronym “EIZ”, but this acronym is not defined anywhere.
- Please clarify what “contracted to a facility” means. Typically, vessels and drilling rigs are not contracted to each individual facility, but rather are contracted to the Operator company and may be used to support multiple facilities.
- Construction support vessels are not defined in any current regulation nor in the OCS AQS Training Guide. It is unclear on what specific vessels BOEM is trying to require data to be reported. Without a clear definition of these construction vessels, it is left to each operator to determine which vessels to include, leading to largely inconsistent reporting. Also, BOEM will still be capturing and reporting other vessel data in the system. If there is not a clear definition for construction support vessel, BOEM’s vessel data will either duplicate some of these emissions or these emissions would be omitted due to lack of clarity. Any definition provided should be consistent with BOEM’s authority under OCSLA which excludes the authority to regulate vessels as confirmed in the Preamble to the Final Air Rule published on June 6, 2020, as discussed in Item 1 above.

4. *How might BOEM minimize the burden of this collection on the respondents, including minimizing the burden through the use of information technology?*

Historically, BOEM has collected vessel and drilling rig data from sources other than oil and gas operators for emission estimates as part of the GOM emissions inventory process. OOC recommends that BOEM continue to collect this information from those sources. BOEM should not require non-platform data from operators.

B. Potential Changes to Reporting Frequencies

1. *Is the estimate of burden accurate?*

It is unclear whether BOEM intends to alter the emissions inventory frequency from requiring data to be reported every 3 years to an annual requirement. 30 CFR 550.303 says:

“The lessee shall monitor, in a manner approved or prescribed by the Regional Supervisor, emissions from the facility. The lessee shall submit this information monthly in a manner and form approved or prescribed by the Regional Supervisor.”

Historically, “the manner approved and prescribed by the Regional Supervisor” has been for operators to collect monthly data every 3rd year (the “reporting year”) and submit that monthly data to BOEM at the end of the reporting year.

It is unclear if the 3-year reporting frequency will change with the implementation of AQS. For example, will operators be required to submit monthly data on an ongoing basis? If that is the case, then the estimated burden will increase substantially, at least by a factor of 3 because reporting will

no longer be required every 3 years. If this is the intent of the agency, then a new burden estimate must be completed prior to implementation of the new system.

C. Complexities of Reporting Flare Information

Collection of flare information for emissions inventories is appropriate and necessary. However, the complexity of how flare emissions data is constructed in AQS raises concerns.

1. *Is the collection necessary to the proper functions of BOEM?*

NO - While the collection of flare emissions data is necessary, OOC takes exception to the complexity proposed in the AQS. During BOEM training held on August 17-19, 2020, it was stated that each flare may require the creation of 4 sources for a single flare. The Training Guide states the following:

“To account for different flare operating conditions in OCS AQS it is recommended to create at least three (3) different emission units and release points for each flare. Depending on the gas compositions being flared, it may be necessary to make more than three emission units. Effective emission release heights and diameters can be estimated using published equations.”

The complexity and cost of creating/reporting multiple emission sources per flare is unnecessary and unduly burdensome to meet the obligations of BOEM. The material flared in offshore operations is of a consistently high heating value to support a 98% destruction efficiency, and the basic flare design used for the majority of offshore operations do not warrant the level of detail being prescribed. Operators typically measure total flare flow or high pressure and low pressure flare flow and are not required to measure flare volumes for varying compositions.

2. *How might BOEM enhance the quality, utility, and clarity of the information to be collected?*

Flare gas composition may vary during routine operations but have minimal impact on emissions. Guidance is needed to clarify what level of variation would require a separate emission unit and release point. Guidance is also necessary to clarify the level of accuracy expected as the majority of operators do not measure flare gas volume for individual contributors to the flare system, but rather measure total combined volume to the flare and flaring durations, in compliance with BSEE’s Subpart K (30 CFR 250.1160-1164, Flaring, Venting, and Burning Hydrocarbons).

In addition, it is unclear how the methodologies proposed align with the subjective “smoke” categories in the AQR. At a minimum, objective definitions would be necessary to clarify when a flare is considered to be in one of these smoking categories. EPA Methods 9 and 22, which are used for visible observation of flare opacity/smoking, do not use the terminology of “no, light, medium, or heavy” smoking as referenced by BOEM. Historically, only total flare volume has been required to calculate emissions from flares. BOEM’s Subpart C and BSEE’s Subpart K do not require observation or recordkeeping for presence of and quality of smoke. Systems already exist to allow operators to provide the volume of gas that is being flared, but these systems do not differentiate among varying compositions or subjective levels of potential smoking.

3. *Is the estimate of burden accurate?*

NO - BOEM has estimated the total burden for this activity to be 44 hours per platform. Industry takes issue with this estimate, as operators do not currently have the ability to track information, such as

flare gas volume based on composition or flare flame height, at the requested level of detail. This new requirement will require operators to establish tracking systems for reporting new information in a few short months to be prepared for reporting in January 2021. A rough burden estimate for this detailed flare data collection and allocation would exceed 400 hours per year per facility based upon the following estimates:

- Operations: Data Entry (1 hr/day/facility, 365 days/year)
- Sampling: (4 hrs/process/facility, 6 processes/year]
- Environmental professional staff: 1.5 hrs/month/facility), excluding system development and implementation.

If flare flame height or level of smoking is necessary, operators may be required to have a representative responsible for watching the flare flame for the duration of the AQS reporting period to be able to provide accurate data. This representative may require training as well. Per EPA Method 22 for monitoring visible emissions from flares, at a minimum, the observer must be trained and knowledgeable regarding the effects of background contrast, ambient lighting, observer position relative to lighting, wind, and the presence of uncombined water (condensing water vapor) on the visibility of emissions to monitor flare smoking. Given the remote locations and extremely small footprint of an offshore facility, as compared to an onshore facility, an observer's ability to attain correct positioning would have a very low likelihood. A rough burden estimate for this detailed smoke quality data collection would exceed 430 hours per year per facility, assuming a representative is present during all flaring events and a facility flares for 25% of the BSEE-allowed flaring duration of 144 hours/month (30 CFR 250.1160(a)(6)(iii) and 7(iii)), excluding training, system development, and implementation.

4. *How might BOEM minimize the burden of this collection on the respondents, including minimizing the burden through the use of information technology?*

For the reasons discussed above, we strongly recommend that the requirement to enter flare data for a single flare as separate sources be abandoned and a calculation for flaring be based on total flare volume for a single flare. The requirements shall remain consistent with the requirements of with 30 CFR 250.1160-1164.

D. Oil and Gas Operations Report (OGOR) Reconciliation

Historically, an OGOR reconciliation was required to be submitted with the GOADS emissions inventory. However, OGOR reports should **not** be utilized for emissions calculations or emissions data QA/QC because the accounting standards and requirements applicable to OGORs do not yield technically correct emissions estimates.

Examples of issues reported historically:

- Company A, Platform A processes wells from Company B. OGOR will report the volumes allocated to Company A **but** emissions must be based on volumes from Company A and Company B.
- Total facility flare volume on an OGOR does not match a facility's high pressure (HP) and low pressure (LP) flares volumes due to the HP and LP flare tips being separate emission points and reported as such in GOADS (or AQS), and subsequent mathematical rounding of the separate volumes.

- OGORs are submitted two months after the reported month (e.g. January's report is submitted in March), so there will be a delay in volumes reported. This is an additional time burden on the reporting company.

Many flares and vents already have meters capturing volumes. At a minimum, platforms have flaring and venting reports in accordance with 30 CFR 250 and NTL No. 2011-N04. This eliminates the need to use OGORs and reduces inaccuracy of data reported.

1. *What can BOEM do to ensure this information will be processed and used in a timely manner? Since* Eliminate the use of OGOR data for emissions reporting purposes. The annual reporting of emissions in AQS to BOEM is sufficient to meet BOEM's needs for emissions studies.
2. *How might BOEM enhance the quality, utility, and clarity of the information to be collected?* Eliminate the use of OGOR data for emissions reporting purposes. There are existing mechanisms in place to capture and account for all reported volumes.
3. *How might BOEM minimize the burden of this collection on the respondents, including minimizing the burden through the use of information technology?* Eliminate the use of OGOR data for emissions reporting purposes. This is an emissions report; therefore, emissions are based on a total volume processed.

E. Functionality of QA/QC of Data Prior to Submittal

Quality Assurance/Quality Control (QA/QC) functionality built in to AQS could be streamlined to improve system effectiveness and reduce burden.

1. *How might BOEM enhance the quality, utility, and clarity of the information to be collected?*
The Training Guide states the following regarding final submittal of the data:

“Step 10: Note that in the course of their review, the Government may identify gaps in your data, quality concerns, or other issues that require further information or corrections on your part. In this case, you will receive a notice from the Government that you need to make changes in your emissions inventory, along with a summary identifying these issues. When this occurs, the status of your submission will change to being open, which allows you to submit again once the issues have been addressed. The submission – review – revision – submit cycle can occur as many times as required until the Government accepts the emissions inventory.”

The iterative process described above is inefficient. It is suggested that the system, at a minimum, provide for a final quality assurance check prior to submittal of all data that would proactively identify data gaps and data quality concerns. This additional functionality to QA/QC during the final submittal process will allow operators to correct deficiencies prior to submitting and locking the inventory. This functionality can minimize the burden of the Government's review as well as reducing the number of “submission – review – revision – submit” cycles required to complete the reporting process.

2. *How might BOEM minimize the burden of this collection on the respondents, including minimizing the burden through the use of information technology?*

The additional functionality of a final quality assurance check to identify data gaps and data quality concerns before final submittal will allow operators to correct deficiencies prior to submittal and minimize the burden on the Government's review and on respondents by reducing the number of "submission – review – revision – submit" cycles required to complete the reporting process.

3. *What can BOEM do to ensure this information will be processed and used in a timely manner?*

The additional functionality of a final QA/QC can reduce the number of "submission – review – revision – submit" cycles required to complete the reporting process and allow for the information to be processed and used in a more timely manner.

F. Confidentiality of Data and Defined User Roles

BOEM should clarify and ensure controls are integrated into AQS that data remains confidential and available only to the organization reporting the data.

1. *How might BOEM minimize the burden of this collection on the respondents, including minimizing the burden through the use of information technology?*

During the training sessions held on August 17-19, 2020, participants were able to access all data regardless of operator. While it is understood that this training took place in a testing environment, OOC would like to clarify the expectation that adequate controls be included in the final system to ensure confidentiality of data. This control should include defined user roles to ensure only authorized personnel for both BOEM and reporting companies are able to access and/or update each facility's data. OOC recommends that BOEM consider a system similar to that currently used by EPA's electronic Greenhouse Gas Reporting Tool (e-GGRT) system used to collect greenhouse gas (GHG) emissions data. This system has the following defined roles and access:

- *Designated Representative* - Each facility has one and only one Designated Representative (DR), who shall be responsible for submitting reports.
- *Alternate Designated Representative* - The facility may designate one Alternate Designated Representative (ADR), who shall be an individual selected by an agreement binding on the owners and operators, and may act on behalf of the designated representative, of such facility.
- *Agent* - A DR or ADR may delegate his or her authority to one or more individuals, known as Agents, to submit an electronic report.

All roles are able to enter and see data for their assigned facility only.

G. File Naming Conventions Associated with Import/Export

Enhancements to AQS that would allow users to define file names during data import and export would reduce burden and improve system functionality.

1. *How might BOEM minimize the burden of this collection on the respondents, including minimizing the burden through the use of information technology?*

During the training sessions held on August 17-19, 2020, participants were shown how to export/import data files from AQS. As files are exported, AQS does not have the ability for the user to assign a custom file name to the exported file (the system assigns an auto-generated name). If a user is exporting multiple files or sets of data, it will become confusing to the user what data is contained in each file. By modifying AQS to allow the user to assign a user-defined, unique file name during the export process burden would be eliminated. Users could, if so desired, assign file names that provide an indication of what types of data are contained within the exported file in addition to other information such as date exported to allow the user to organize multiple exported files, as well as readily-identify the contents of the file based on the assigned name.

H. 2021 Initial Inventory and Transfer of GOADS Data

It is unclear what data from the 2017 GOADS (the last reporting year using GOADS) will be transferred for the initial 2021 AQS inventory. Historical activity data does not need to be included, but all historical descriptive, static data should be transferred over to minimize company burden to populate.

1. Is the estimate of burden accurate?

If a company has to start with only an EPN and source type, an additional burden of 5 or more hours per facility would occur. Activity data would not need to be transferred because the operating data will change from year to year and will eliminate the chance for inaccurate operating data being reported. Historically, a company was supplied with the last reported inventory database every new GOADS reporting year. The descriptive, static data was included in the database with the activity data fields ready to populate.

I. Clarification on Reporting Storage Tank Emissions

Reporting of data to estimate storage tanks emissions is appropriate and necessary. However, changes to the types of storage tank data and the calculations within AQS would reduce burden.

1. Is the collection necessary to the proper functions of BOEM?

YES - While the estimation of volatile organic compounds (VOC) emissions and collection of crude oil tank emissions data is necessary, OOC takes exception to the potential inaccuracies proposed in the AQS through collection of non-crude oil data. During the June 25, 2020 BOEM Air Quality workshop and the BOEM AQS training held on August 17-19, 2020, BOEM indicated the intent for operators to provide tank-related data that would include all sources of potential VOC emissions. OOC acknowledges offshore facilities use and store non-crude oil fluids in tanks with varying emission controls.

2. How might BOEM enhance the quality, utility, and clarity of the information to be collected?

For crude oil tanks, neither GOADS nor AQS appear to have an emission factor adjustment for tanks receiving partial or no direct sunlight (due to being under deck or in a hull). Other than crude oil, products contained in storage tanks vary from aviation fuel to asphaltene inhibitor to demulsifiers. As such emission factors and related, necessary emissions' estimation methodology variables are not the same as those for crude oil, AQS would not properly estimate storage tank VOC emissions. If the AQS calculation basis is crude oil, BOEM should limit reporting of storage tank data in AQS to crude oil tanks until such time BOEM can propose and incorporate the necessary changes in AQS for

non-crude oil, VOC-containing fluids. Additionally, the estimation methods for storage tank VOC emissions on AQRs (BOEM Form-0139) and in AQS should have the same fluid type basis, which is indicated to be crude oil through correspondence with BOEM. Historically, AQR and GOADS calculations have only accounted for storage tanks the crude oil product type (BOEM 2017-044, Year 2014 Emissions Inventory Study, June 2017; BOEM 2019-072, Year 2017 Emissions Inventory Study, Oct. 2019).

3. *Is the estimate of burden accurate?*

NO - BOEM has estimated the total burden for this activity to be 44 hours per platform. Industry takes issue with this estimate, as operators do not currently have or collect the data for required parameters, e.g. Tank VOC Molecular weight and Reid Vapor Pressure, as most are purchased products with Safety Data Sheets (SDS) that do not provide this data. For other required parameters, e.g. liquid bulk temperature and tank average liquid height, some facilities lack the instrumentation or data systems to collect this data. This new requirement will require operators to establish tracking systems for reporting new information in a few short months to be prepared for reporting in January 2021. A rough burden estimate for this detailed data would exceed 40 hours per year per facility based on the following estimates:

- Operations: Data Collection (2 hr/month/facility)
- Environmental professional staff: 2 hrs/month/facility]], excluding system development and implementation. System development is likely a significant time requirement as well to ensure the appropriate data is gathered, personnel are trained properly, and recordkeeping protocols are implemented.

4. *How might BOEM minimize the burden of this collection on the respondents, including minimizing the burden through the use of information technology?*

For the reasons discussed above, we strongly recommend BOEM incorporate the necessary emissions estimation methodology changes in AQS to accommodate reporting of non-crude oil, VOC containing fluids, which could include a populated data set of common, VOC-containing fluids used offshore or limit the requirement to only crude oil tanks.

J. Potential Errors Identified in AQS

The following represents potential errors in the calculation methodologies within AQS. OOC strongly recommends that these errors be addressed prior to the 2021 reporting year.

A “mock” inventory for one facility was completed in the AQS online system. All data used for this facility was taken from 2017 so that a comparison could be made between calculated emissions from the GOADS system and the new AQS. The following items were noted as either errors or areas of concern.

1. “Non-calculated” values present when calculating emissions. As mentioned during the August 17-19, 2020 AQS training, these values should **not** appear once the program is released in its final form.
2. Amine and glycol dehydrator emissions are not calculating correctly using the upload function and reports from AmineCalc and GRI-GLYCalc. The function should be updated to correctly pull only the appropriate emission streams.
3. In the current system, there is no way to edit the sales gas composition.

4. Storage tank and losses from flash temperature data is currently in degrees Rankine. This should be changed to Fahrenheit.
5. When deleting an emission unit and trying to add the same emission unit back, the following error is received: "There are problems with the input. Emission Unit already exists". However, there is no emission unit by that name listed on the emission unit table (as it was deleted).
6. Field ranges set for "Controls Vertical" are causing QA/QC errors for equipment that correctly has data outside of those ranges. For example, the field range for the Control Request: Vertical, STACK_HEIGHT_FT [0,100] is causing QA/QC errors for equipment that actually have higher stack height ranges (Control Request: NGT-C01 [1,360], Control Request: FLA-C01 [1,437], Control Request: NGE-C01 [1,300] but all are being limited to 100 due to the Vertical Control Request range). Emissions will not calculate with this QA/QC error. Emissions should still calculate with the requirement to comment on the error.
7. In the current system, emissions must be calculated for *each* emission unit within a facility. When using the Import/export function specifically, this is extremely burdensome. An option should be added to calculate emissions for all units at once.
8. When choosing a release point ID under "Control Requests", there should be a drop-down list of available release points for ease and to avoid errors. Also, for ease, if a release point is chosen that is different than that particular emissions unit, the physical attributes of the release point could auto-populate to avoid errors.
9. If the release point is something other than that emissions unit (i.e., not vented locally), other control request data points should be "greyed out" to signify the data is not needed.
10. Emissions are still being calculated for emission units that are not vented locally. For example, if flash losses are routed to flare, that volume is reported under total flare volume and emissions are accounted for under the flare. They should not be accounted for again under flash losses. It cannot be expected that operators allocate a portion of total vent or flare volumes back to the emission source, especially when these volumes are metered (see Section C above).

K. Additional Observations and Items that Require Clarification

Similar to Section J, as members of the regulated community have used the system after the August 2020 AQS training, additional observations and clarifications have been identified. OOC strongly recommends that BOEM address each of the following items prior to the beginning of the 2021 reporting year.

GENERAL OBSERVATIONS AND QUESTIONS

- For GHG e-GGRT submittals, a monthly sales gas analysis (BTU value) can be entered. The BTU value can be entered as the reporter chooses (one month, 5 months, 12 months, etc.). AQS should include BTU value in the sales gas analysis area and make it a monthly "source" so it can be updated as needed.
- Reporting companies need the ability to save monthly changes *without* having data in every month (zeros or otherwise).
- Emission factors/Calculators – default to most recent version based on reporting year.
- How do reporting companies access previous years' reports and inventories? Will each year be locked?
- "Add Emission Unit" includes Drilling Equipment and Muds. Should those be removed since drilling is accounted for separately as Non-Platform Sources? Or are these strictly for drilling operations built into the platform?

- How will FUG populate from 2017 inventory? The testing environment inventory is incorrect.
- FUG includes Natural Gas Liquids (NGLs). Why? Has anyone ever reported FUG NGLs from offshore operations?
- Will deleting a source in 2021 affect historical data? Or will reporting companies need to make it inactive somehow?
- Add a “Copy equipment function” – not a monthly copy, but an inventory emissions source copy to be used when identical sources are added (identical engines, pumps, controllers, etc.).
- What is the difference between flare and flare pilot? There is one volume reported, and it can include a pilot stream.
- Add “source maintenance” as reason for no activity.
- Add fields for monthly production and throughput (Oil, Natural Gas, Water) and fuel usage rates (Natural Gas, Diesel, Gasoline) at the facility level.
- How will caissons and wellhead protectors be handled? Historically, a minimum of production rates were reported when no emission sources are at the location.
- Is there a Master Source export for all source types, blank?
- When will the updated User Manual be released?
- Will industry have the opportunity to review the system before it is live?
- How will temporary sources be handled?
- Release Point ID equals Emissions Unit ID unless routed to a control device. Do reporting companies have to define a Release Point?
- Are each individual sources’ coordinates **required**? Will be difficult to get this info for every facility, for every source.
- Can velocity and flow rate be system calculations? GOADS would run the calculation internally and have an error if values were not within a range of valid numbers. Estimates will likely be more accurate if the system runs the calculations.
- Will BOEM audit the data within the system periodically to see what operators are reporting?

AMINE UNITS

- Throughput Value – recommend that this field is labeled MMSCF and remove subsequent field.
- Throughput Numerator: Default to MMSCF (or see above)
- What are:
 - Material Code
 - Material Description
 - Material I O
 - Augmentation Flag
 - Primary Device Code
 - Test (dropdown is empty)
- Include source specific parameters needed to run simulation, such as:

Number of Absorber Stages:
Unprocessed sour gas feed pressure (psia):
Unprocessed sour gas feed temperature (°F):
Inlet Analysis Available:

Amine & Pump Data:

Amine Type:
Reason for Sweetening:
Lean amine feed pressure (psia):

Lean amine feed temperature (°F):
Lean amine feed flowrate (gpm):
Lean amine feed H ₂ S Content (mole %):
Lean amine feed amine content (% by weight):
Lean amine feed CO ₂ Content (mole %):
Inlet concentration of H ₂ S (ppmv):
Inlet concentration of CO ₂ (ppmv):
Exit concentration of H ₂ S (ppmv):
Exit concentration of CO ₂ (ppmv):

Flash Tank Data:

Equipped with Flash Tank?
Flash Tank Pressure (psig):
Flash Tank Temperature (°F):
Flash Tank Routed to:
Efficiency of Flash Tank gas recovery (%):

Exhaust Data:

Emissions Destination:
Remote Vent/Flare ID:
Outlet Height (ft above msl):
Outlet Inner Diameter (inches):
Exit Temperature(°F):
Outlet Orientation (0 = up; 180 = down):

Control Data:

VRU ID:
Emission destination when VRU down:
Remote Vent/Flare ID when VRU down:
Condenser Temperature (°F):
Condenser Pressure (psia);
Sulfur Recovery Efficiency (%):

- Can emissions be entered manually in AQS and attach simulation data for documentation? Or do the emissions have to come from the AMI text file?
- Include default pollutants on emissions table to C10+ (including BTEX) analysis.
- Inlet amine analysis does not equal sales gas analysis. The ability to change analysis input when available is needed.

BURNER (NATURAL GAS, DIESEL & WASTE OIL)

- Fuel Usage - Burners typically do not have individual fuel meters. Fuel usage is usually a calculated volume.
- What are:
 - Material Processed Code
 - Material Processed Description
 - Was Record Augmented?
 - Average fuel used during survey period (lb) – is this supposed to be in gallons?
 - Average fuel used during survey period (MMBTU/h) – is this supposed to be Heat Rating?
 - Description of Control Equipment Chain
 - Section labeled “Requests not Required”

- Is material used (input) or produced (output) used for emissions calculations? What is the purpose of this field?
- Why is process control information on Data Request and not Control Request?
- What is the difference between Stack Diameter and Outlet Inner Diameter? There should be only one used.
- Emissions Destination – should be a drop down (Routed to System, Vented locally, Vented remotely, Flared locally, Flared remotely)

DIESEL ENGINES

- Fuel Usage – Diesel engines typically do not have individual fuel meters. Fuel usage is usually a calculated volume based on total facility fuel used and hours operated per source, average fuel usage (per hour).
- What are:
 - Material Processed Code
 - Material Processed Description
 - Was Record Augmented?
 - Description of Control Equipment Chain
 - Section labeled “Requests not Required”
- Is material used (input) or produced (output) used for emissions calculations? What is the purpose of this field?
- Average Fuel Used During Survey Period = Fuel Usage
- Max rated fuel usage (BTU/hp-hr) should be labeled Engine Heat Input (BTU/hp-hr). This parameter will not change monthly.
- Are calculations rated on Max Rated HP or Operating HP?
- Why is process control information on Data Request and not Control Request?
- What is the difference between Stack Diameter and Outlet Inner Diameter? There should be only one used.
- Emissions Destination – should be a drop down (Routed to System, Vented locally, Vented remotely, Flared locally, Flared remotely)

FLARES

- What are:
 - Material Processed Code
 - Material Processed Description
 - Was record augmented?
 - Section labeled “Requests not Required”
- Is material used (Input) or produced (Output) will not be used for emissions. What is the purpose of this field?
- Do not need Average Fuel Used during survey period
- Flares are the control device, therefore, do not need process control information.
- What is the difference between Stack Diameter and Outlet Inner Diameter? There should be only one used.
- The flare is the emissions destination, so this field is not needed.

FUGITIVES

- Are skid/unit-based fugitive component count estimation methods available for use?

- What are:
 - Component Description
 - Component Code
 - Was Record Augmented?
 - Description of Control Equipment Chain
 - Section labeled “Requests not Required”
- Does Operating Time correspond LDAR? Request one or the other (days per month or hours per month) if operating time is not part of LDAR.
- Control Request is not a stack. It is an area source, so these parameters are not valid.

GLYCOL DEHY UNITS

- Throughput Numerator - Not sure why this is needed if Throughput Value is labeled with MMSCF.
- Controlled Status should be a dropdown of options.
- What are:
 - Material Code
 - Material Description
 - Material I O
 - Augmentation Flag
 - Primary Device Code
- Include source specific parameters all needed to run simulation, such as:

Number of Absorber Stages:
Wet Gas/Contactor Inlet Pressure (psig):
Wet Gas/Contactor Inlet Temperature (°F):
Saturated Gas?
Inlet Analysis Available:

Glycol & Pump Data:

Glycol Type:
Glycol Pump Type:
Glycol Pump Make:
Glycol Pump Model:
Number of Pumps:
Lean Glycol Recirculation Ratio (gal glycol/lb):
Glycol Flowrate (gpm):
Strokes per Minute:
Lean Glycol H ₂ O Content (% by weight):
Wet Gas H ₂ O Content (lb/MMSCF):
Dry Gas H ₂ O Content (lb/MMSCF):

Flash Tank Data:

Equipped with Flash Tank?
Flash Tank Pressure (psia):
Flash Tank Temperature (°F):
Flash Tank Routed to:
Efficiency of Flash Tank gas recovery (%):

Stripping Gas Data:

Stripping Gas Used?
Stripping Gas Flowrate (SCFM):

Regenerator Column Data:

Regenerator Column Control:
Condenser Temperature (°F):
Condenser Pressure (psia):
Condenser Routed To:
Ambient Air Temperature (°F):
Excess Oxygen (%):
Destruction Efficiency (%):

Exhaust Data:

Emissions Destination:
Remote Vent/Flare ID:
Outlet Height (ft above msl):
Outlet Inner Diameter (inches):
Exit Temperature(°F):
Stack Gas Flow (ACFM):
Exit Velocity (ft/s):
Outlet Orientation (0 = up; 180 = down):

VRU Control Data:

VRU ID:
Emission destination when VRU down:
Remote Vent/Flare ID when VRU down:

- Can emissions be entered manually in AQS and attach simulation data for documentation?
- Include default pollutants on emissions table to C10+ (including BTEX) analysis. Or do the emissions have to come from the GLY text file?
- Inlet dehy analysis does not always equal sales gas analysis. The ability to change analysis input when available is needed.

LOADING

- Temperature should be reported in Fahrenheit, not Rankine.
- What are:
 - Material Processed Code
 - Material Processed Description
 - Description of Control Equipment Chain
 - Section labeled "Requests not Required" – remove or hide these sections
- Is material used (Input) or produced (output) used for emissions calculations? What is the purpose of this field?
- Why is process control information on Data Request and not Control Request?
- What is the difference between Stack Diameter and Outlet Inner Diameter? There should be only one used.

FLASH LOSSES

- Temperature should be reported in Fahrenheit, not Rankine.
- What are:
 - Material Processed Code
 - Material Processed Description
 - Was record augmented?

- Description of Control Equipment Chain
 - Section labeled “Requests not Required” – remove or hide these sections
- Is material used (Input) or produced (output) used for emissions calculations? What is the purpose of this field?
- Why is process control information on Data Request and not Control Request?
- What is the difference between Stack Diameter and Outlet Inner Diameter? There should be only one used.
- Include default pollutants on emissions table to C10+ (including BTEX) analysis.

NATURAL GAS ENGINES and NATURAL GAS TURBINES

- Fuel Usage – NG engines typically do not have individual fuel meters. Fuel usage is usually a calculated volume based on total facility fuel used and hours operated per source, average fuel usage (per hour).
- What are:
 - Material Processed Code
 - Material Processed Description
 - Was Record Augmented?
 - Description of Control Equipment Chain
 - Section labeled “Requests not Required” – remove or hide these sections
- Is material used (Input) or produced (output) used for emissions calculations? What is the purpose of this field?
- Average Fuel Used During Survey Period = Fuel Usage
- Max rated fuel usage (BTU/hp-hr) should be labeled Engine Heat Input (BTU/hp-hr). This parameter will not change monthly.
- Are calculations based on Max Rated HP or Operating HP?
- Do not use Fuel Sulfur Content for NG engines and turbines. An appropriate default value is 5 ppm because NG engines and turbines use sweet gas.
- Why is process control information on Data Request and not Control Request?
- What is the difference between Stack Diameter and Outlet Inner Diameter? There should be only one used.
- Emissions Destination – should be a drop down (Routed to System, Vented locally, Vented remotely, Flared locally, Flared remotely)

PNEUMATIC PUMPS

- Fuel usage rate - default dropdown table selection to populate?
- What are:
 - Material Processed Code
 - Material Processed Description
 - Was Record Augmented?
 - Description of Control Equipment Chain
 - Section labeled “Requests not Required” – remove or hide these sections
- Is material used (Input) or produced (output) used for emissions calculations? What is the purpose of this field?
- What is the difference between Stack Diameter and Outlet Inner Diameter? There should be only one used.
- Emissions Destination – should be a drop down (Routed to System, Vented locally, Vented remotely, Flared locally, Flared remotely)

- Include default pollutants on emissions table to C10+ (including BTEX) analysis.

PNEUMATIC CONTROLLERS

- Fuel usage rate - default dropdown table selection to populate?
- Is the total fuel usage rate (individual rate * quantity) reported or the individual rate?
- Fuel Usage Rate is listed twice.
- What are:
 - Material Processed Code
 - Material Processed Description
 - Was Record Augmented?
 - Description of Control Equipment Chain
 - Section labeled "Requests not Required"
- Is material used (Input) or produced (output) used for emissions calculations? What is the purpose of this field?
- Include default pollutants on emissions table to C10+ (including BTEX) analysis.

STORAGE TANK

- Temperatures should be reported in Fahrenheit, not Rankine.
- Net Working Loss Throughput is calculated volume and should not be a required field.
- What are:
 - Material Processed Code
 - Material Processed Description
 - Was Record Augmented?
 - Section labeled "Requests not Required"
- Is material used (Input) or produced (output) used for emissions calculations? What is the purpose of this field?
- No control requests fields are listed. These should be the same as all other emissions sources.
- Emissions – tank emissions can be determined using different simulations and calculation methods. Are users locked into the method listed in the calculator or can a different method be chosen?

COLD VENT

- What are:
 - Material Processed Code
 - Material Processed Description
 - Was Record Augmented?
 - Description of Control Equipment Chain
 - Section labeled "Requests not Required"
- Is material used (Input) or produced (output) used for emissions calculations? What is the purpose of this field?
- A vent will not have its own control device.
- What is the difference between Stack Diameter and Outlet Inner Diameter? There should be only one used.
- Include default pollutants on emissions table to C10+ (including BTEX) analysis.