**READ ME File for the   
2021 OCS Emissions Inventory Lease Operations Database**

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# ACRONYMS AND ABBREVIATIONS

BOEM Bureau of Ocean Energy Management

CRIT criteria pollutants

EPA Environmental Protection Agency

GHG greenhouse gas

GIS geographic information system

GOM Gulf of Mexico

HAP hazardous air pollutant

MS Microsoft

OCS Outer Continental Shelf

OCS AQS Outer Continental Shelf Air Quality System

OPD Official Protraction Diagram

QA/QC Quality Assurance and Quality Control

# INTRODUCTION

The 2021 Outer Continental Shelf (OCS) Emissions Inventory for lease operations sources is a comprehensive inventory covering criteria pollutants (CRIT), greenhouse gases (GHG), and hazardous air pollutants (HAP) for source types drilling rigs, installation support vessels, well stimulation vessels, and domestic and self-propelled drill rigs on the Federal OCS waters. Operators and lessees were not required to report emissions from sources that were not a “facility” as defined in 30 CFR 550.302. Therefore, supply or crew transport vessels were not required to be submitted.

For the 2021 OCS Emissions Inventory, the scope of effort was to compile 2021 base year activity data and emissions for all active leases on the Gulf of Mexico OCS. Although BOEM’s air jurisdiction also includes the Alaska OCS, as of the 2021 reporting year, there was no activity located there.

The 2021 OCS Emissions Inventory was developed using BOEM’s Outer Continental Shelf Air Quality System (OCS AQS) web-application, where operators and their authorized consultants entered the necessary information to calculate and submit their emissions inventories to BOEM. After submission to BOEM, the 2021 emissions data underwent an extensive quality assurance and quality control (QA/QC) review before being finalized.

The 2021 OCS Emissions Inventory database files were exported using the OCS AQS software into MS Access file format (\*.mdb). MS Access provides a reliable, commonly used application that can be used to view the data and perform additional queries and reporting operations external to OCS AQS.

The Microsoft (MS) Access file contains the published final lease operations emissions data for the 2021 OCS Emissions Inventory. BOEM published the files to boem.gov for review and use by regulatory agencies, air quality modelers, environmental interest groups, and industry. This READ ME file provides important information for using these files.

# WHAT IS PROVIDED HERE?

Due to the size restrictions of the MS Access database, BOEM provides two .zip archives, each containing one MS Access file of one table of lease operations and emissions data for a group of pollutants. The following files are provided:

* 2021\_Lease\_Operations\_CAP\_GHG.zip
* 2021\_Lease\_Operations\_HAP.zip

# HOW CAN I REVIEW OR USE THE FILE?

The files can be accessed using MS Access or other available database file readers that can open MS Access files with support for \*.mdb file extensions. Emission estimates can be ordered, filtered, or summarized by operating company, lease, block, area**,** pollutant, and equipment type, including sub totals or summed annually. For users that have working knowledge of geographic information system (GIS) applications, lease emissions can be plotted to evaluate geospatial patterns.

# HOW IS THE DATA FILE ORGANIZED?

The 2021 OCS Emissions Inventory for lease operations sources is organized into a single MS Access table of emission records. Each record contains the supporting lease, emissions source, and process information. Table 1 provides a list of all parameters included in the database as well as their field descriptions.

**Table 1: Descriptions of database parameters (column headers)**

| **Field Name** | **Description** |
| --- | --- |
| LEASE\_NUMBER | Lease number issued by BOEM to the operator |
| AREA\_BLOCK | Official Protraction Diagram (OPD) Area and Outer Continental Shelf (OCS) Block |
| AREA | OPD area in which the lease operation is located |
| BLOCK | OCS block in which the lease operation is located |
| COMPANY\_NAME | Name of the company operating the lease |
| COMPANY\_NUMBER | ID assigned by BOEM for the designated operator of the lease |
| COMPLEX\_ID | Unique identifier code that is assigned by BOEM to a group of related structures prior to construction |
| VESSEL\_NAME | Name of the vessel |
| SOURCE\_TYPE | Type of the emission source |
| RIG\_NAME | Drilling rig name |
| RIG\_TYPE\_CODE | Code description of the rig type |
| RIG\_TYPE | Type of the rig |
| RIG\_YEAR | Rig commission year |
| RIG\_MAIN\_KW | Rig main engine size in KW |
| RIG\_ENG\_CONFIG | Rig engine configuration |
| DATE\_CONNECTED | Date when the source arrived |
| DATE\_DISCONNECTED | Date when the source departed |
| LATITUDE\_DEG | Measure of the angular distance on a meridian north or south of the equator |
| LONGITUDE\_DEG | Measure of the angular distance on a meridian east or west of the prime meridian |
| SOURCE\_ID | Unique ID assigned to the source by the lease operator |
| SOURCE\_DESCRIPTION | Brief description of the source |
| WATER\_DEPTH\_FT | Distance in feet from mean sea level to the mud line |
| SCC | Environmental Protection Agency (EPA) Source Classification Code |
| PROCESS\_DESCRIPTION | Description of the emissions process |
| PROCESS\_ID | Emission process ID |
| HOURS\_PER\_PERIOD | Number of hours the process is active within the specified period |
| KW\_TOTAL | Vessel power (totaling individual propulsion engines) in KW |
| LOAD\_FACTOR | Engine load factor |
| MODEL\_YEAR | Engine model year |
| MODEL\_YEAR\_CODE | Code description of the engine model year |
| MATERIAL\_DESCRIPTION | Description of material processed |
| MATERIAL\_CODE | Code description of material processed |
| THROUGHPUT\_VALUE | Numeric value of the throughput |
| THROUGHPUT\_UNIT | Unit of measure for the throughput value |
| OPERATING\_HP | Operating horsepower during the survey period |
| MAX\_HP\_DIESEL | Manufacturer’s maximum rated horsepower output for diesel-fired engine |
| MAX\_FUEL\_USAGE\_RATE\_DIESEL | Manufacturer’s maximum rate of diesel fuel usage |
| MAX\_FUEL\_USAGE\_RATE\_DIESEL\_UNIT | Unit of measure for the manufacturer’s maximum rate of diesel fuel usage |
| FUEL\_USAGE\_RATE | Average rate of fuel usage during the survey period |
| FUEL\_USAGE\_RATE\_UNIT | Unit of measure for the average rate of fuel usage during the survey period |
| SULFUR\_CONTENT | Sulfur content of a fuel |
| SULFUR\_CONTENT\_UNITS | Unit of measure for the sulfur content of a fuel |
| HEAT\_CONTENT | Heat content of a fuel |
| FUEL\_HEAT\_VALUE\_UNIT | Unit of measure for the heat content of fuel |
| MONTH | Month when emissions occurred |
| START\_DATE | Start date of the period in which reported emissions occurred |
| END\_DATE | End date of the period in which reported emissions occurred |
| POLLUTANT\_CODE | Pollutant code |
| POLLUTANT\_DESCRIPTION | Description of the pollutant |
| EMISSION\_FACTOR\_NUMERIC\_VALUE | Numeric value of the emission factor |
| EMISSION\_FACTOR\_NUMERATOR | Unit of measure for emission factor numerator |
| EMISSION\_FACTOR\_DENOMINATOR | Unit of measure for emission factor denominator |
| EMISSIONS\_VALUE | Numeric value of emission |
| EMISSIONS\_VALUE\_UNIT | Unit of measure for emission value |