

# **NPDES PERMIT NO. GM0000002**

## **FACT SHEET**

FOR THE DRAFT NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM  
(NPDES) PERMIT TO DISCHARGE TO WATERS OF THE UNITED STATES

### **APPLICANT**

Freeport-McMoRan Energy LLC  
1615 Poydras Street  
New Orleans, LA 70112

### **ISSUING OFFICE**

U.S. Environmental Protection Agency  
Region 6  
1201 Elm Street, Suite 500  
Dallas, Texas 75270

### **PREPARED BY**

Nichole Young  
Physical Scientist  
NPDES Permits & TMDLs Branch 6WDPE  
Water Division  
VOICE: 214-665-6447  
FAX: 214-665-2191  
EMAIL: [young.nichole@epa.gov](mailto:young.nichole@epa.gov)

### **DATE PREPARED**

January 16, 2024

### **PERMIT ACTION**

Proposed reissuance of a permit that was issued July 31, 2019, effective on August 1, 2019, and expires September 30, 2023.

### **RECEIVING WATER – BASIN**

Gulf of Mexico – Gulf of Mexico

**DOCUMENT ABBREVIATIONS**

In the document that follows, various abbreviations are used. They are as follows:

BAT	Best available technology economically achievable
BCT	Best conventional pollutant control technology
BOD	Biochemical oxygen demand (5-day)
BPT	Best practicable control technology currently available
BMP	Best management plan
BPJ	Best professional judgment
° C	Celsius, degrees
CFR	Code of Federal Regulations
cfs	Cubic feet per second
COD	Chemical oxygen demand
COE	United States Corp of Engineers
CWA	Clean Water Act
DMR	Discharge monitoring report
EA	Environmental Assessment
EIS	Environmental Impact Statement
ELG	Effluent limitation guidelines
EFH	Essential fish habitat
EPA	United States Environmental Protection Agency
ESA	Endangered Species Act
° F	Fahrenheit, degrees
FCB	Fecal coliform bacteria
GOM	Gulf of Mexico
gpm	Gallons per minute
LNG	Liquefied natural gas
mg/l	Milligrams per liter (part per million)
ug/l	Micrograms per liter (part per billion)
MARAD	United States Maritime Administration
MGD	Million gallons per day
ML	Minimum quantification level
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
NOAA	National Oceanographic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
ODC	Ocean Discharge Criteria
O&G	Oil and grease
RP	Reasonable potential
SIC	Standard industrial classification
s.u.	Standard units (for parameter pH)
TDS	Total dissolved solids
TMDL	Total maximum daily load
TOC	Total organic carbon
TRC	Total residual chlorine
TSS	Total suspended solids
USCG	U.S. Coast Guard
USFWS	United States Fish & Wildlife Service
USGS	United States Geological Service
WLA	Wasteload allocation
WET	Whole effluent toxicity
WQMP	Water Quality Management Plan

**I. CHANGES FROM THE PREVIOUS PERMIT**

- A. Added electronic reporting requirements.
- B. Added Sufficiently Sensitive Methods monitoring requirements.
- C. Added acute 48hr toxicity testing requirements to Outfall 009.
- D. Clarified that Outfall 005 has a chronic toxicity testing requirement per discharge.

**II. APPLICANT LOCATION AND ACTIVITY****A. FACILITY LOCATION**

The location of the Main Pass Mine is located in federal waters, Main Pass Block 299, in the GOM approximately 17 miles off the coast of Louisiana. The known uses of the GOM are marine water, propagation of fish and wildlife, shipping and contact recreation.

**B. FACILITY DESCRIPTION**

This is a reissuance action for a permit that expired September 30, 2023, but is administratively continued under 5 U.S.C. 558(c) until the effective date of a new permit. The 2007 issued permit was for an LNG import terminal licensed under MARAD as authorized by the Deepwater Port Act (DPA). Natural gas price decline since the 2007 permit issuance had negatively affected the LNG importation industry. The record of decision to construct and operate the LNG terminal expired on January 2, 2012, and the LNG terminal was no longer part of the 2012 permit renewal process. The site continued however as a sulphur and brine production terminal. Because Lease OCS-G 09372, which covered the operations associated with the exploration for and production of sulphur and salt at Main Pass Mine, Main Pass Block 299, has expired, this permit renewal is needed for discharges associated with the existing unmanned structures and decommissioning the Main Pass Mine platforms and associated wells and pipelines.

**C. OUTFALL DESCRIPTIONS AND CURRENT OPERATIONS****Main Pass Mine Platforms**

The following list includes platforms associated with the Main Pass Mine facility.

- Production Platform No. 1 (aka PRD1RIG per BSEE nomenclature)
- Production Platform No. 2 (aka PRD2RIG per BSEE nomenclature)
- Control Platform (aka BW per BSEE nomenclature)
- BS-2
- BS-8
- BS-9
- BS-Y7

Because Lease OCS-G 09372, covering Main Pass Mine operations, has expired, normal operations will consist of only those operations associated with decommissioning of the platforms, wells and pipelines associated with the Main Pass Mine. During normal operations,

the platforms will be unmanned, and no routine operations will occur at the platforms except during times that decommissioning operations are undertaken. Production Platform No. 1, Production Platform No. 2, BS-2, BS-Y7 and Control Platform may be temporarily manned during decommissioning operations.

The decommissioning activities are currently underway at Main Pass Mine. The outfall discharge parameters have not changed from what is currently permitted for this facility. Outfalls 005 Salt Cavern Brine (other than discharges for application toxicity sampling and testing), 006 Drilling Fluids, 007 Drill Cuttings, 008 Cooling Water have not discharged since the last permit renewal when new requirements were implemented.

Since the last permit renewal, there have not been any discharges from the Salt Cavern Brine outfall except on March 14, 2023, to collect a biomonitoring toxicity sample for the renewal permit application. In the future, discharges are expected during decommissioning operations. The 7-day chronic toxicity testing will assess the acute and chronic toxicity of the salt cavern brine discharge. This report will be sent to EPA Region 6 when the results are finalized.

### **Decommissioning Operations**

Decommissioning operations will consist of the following:

1. Removal of platform structures
2. Abandonment of the wells
3. Decommissioning of pipelines

This decommissioning work will involve the use of drilling rigs, derrick barges and associated equipment in essentially the same manner as this equipment was used for operations covered by the expiring permit. Discharges from the decommissioning work is requested to be included in the renewed permit. As with the expiring permit, outfalls included in this permit renewal include these discharges. No new outfalls from those already included in the current permit are needed for decommissioning.

### **List of Proposed Outfalls**

Outfall 001 - Deck Drainage  
Outfall 003 - Sanitary Waste  
Outfall 005 - Salt Cavern Brine  
Outfall 006 - Drilling Fluid  
Outfall 007 - Drill Cuttings  
Outfall 008 - Rig Cooling Water  
Outfall 009 - Miscellaneous Discharges

### **Outfall Name Designation Changes**

The following changes to the outfall name designation are requested for the permit renewal.

- Rename “Outfall 001 - Oil/Water Separators” to “Outfall 001 - Deck Drainage”
- Rename “Outfall 003 - Sewage Treatment Units” to “Outfall 003 - Sanitary Waste”
- Rename “Outfall 005 - Salt Cavern Development and Brine Return” to “Outfall 005 - Salt Cavern Brine”

### **Outfall 001 – Deck Drainage**

This outfall covers deck drainage and stormwater runoff from the platforms that will be decommissioned and removed. Platform upper decks typically consist of treated wood boards with spaces between each board. Platform lower decks are typically made of metal grating. Multiple discharge locations are required for this outfall.

Although operations associated with the exploration for, and production of, sulphur and salt have

ceased from the facility, there may be residual oil contained in the equipment on the facility. Secondary containment remains in place for oil containing equipment. In the course of decommissioning operations, oily stormwater and any oil from the secondary containment may be pumped to a storage tank. Oil free water will then be discharged from the tank. Stormwater is also discharged directly from the secondary containment if no oil is present. Oil in the tank will then be periodically transported to onshore to a reclaiming facility during the decommissioning operations.

Also, the outfall will include deck drainage from drilling rigs and derrick barges used to abandon the wells and for platform removal. Drilling rigs and derrick barges will use a combination of secondary containment and/or oil and water separators to treat any deck drainage discharged overboard to the water.

No free oil shall be discharged, as determined by the visual sheen method on the surface of the receiving water. Monitoring shall be performed once per day when discharging, during conditions when an observation of a visual sheen on the surface of the receiving water is possible in the vicinity of the discharge, and the facility is manned. The number of days a sheen is observed will be recorded.

The estimated discharge from deck drainage is a combined maximum rate of 1.95 million gallons per day (mgd) and an average rate of 0.52 mgd.

### **Outfall 003 – Sanitary Waste**

This outfall discharges treated wastewater from sanitary waste and/or commingled domestic wastewater (graywater) from multiple locations prior to discharge overboard. The treated water from the sewage treatment units is chlorinated to a minimum of 1 milligram per liter (mg/L) before it is discharged to the Gulf of Mexico. Non-commingled domestic wastewater (graywater) is not treated prior to discharge overboard. In the event that facilities are continuously manned for thirty or more consecutive days by 9 or fewer persons or intermittently by any number, the sanitary waste discharge will meet requirements for no floating solids.

The 003 Sanitary Waste Outfall is requested for the permit renewal in the event that it is needed to complete the decommissioning. At this time the sanitary waste system is not in service

Outfall 003 will discharge at a combined maximum rate of 127,200 gallons per day (gpd) with an average of 34,560 gpd. Multiple outfalls from the facility are required.

### **Outfall 005 - Salt Cavern Brine**

Salt Cavern Development activities and brine production are no longer anticipated to be performed under this permit. As a part of the previous Sulphur and Salt Lease operations, the facility has two existing brine wells (Wells BR-01-A and BR-05-A). Brine wells typically experience pressure increases over time due to normal salt creep. To ensure that the maximum allowable wellhead pressure is not exceeded, brine fluid is periodically removed to reduce wellhead pressure. Displacement of brine during well abandonment activities will result in periodic brine discharges. Water may also be pumped into and circulated through the well tubulars to remove salt buildup, resulting in brine returns to the surface.

During the initial development of the salt caverns, controlled dissolution of certain sections of the salt dome underlying the lease was undertaken. No further expansion of the salt caverns will occur in the future. To create or enlarge caverns, seawater was circulated down the wellbore to dissolve the solid salt. This created brine in the formation. The injected seawater was chlorinated prior to injection into the formation. There will not be any chlorination treatment of

brine as part of the decommissioning activities covered by this permit prior to discharge to the Gulf of Mexico.

Decommissioning activities may also utilize brine from the well for well remediation activities and final abandonments. The excess brine fluid removed is discharged to the Gulf of Mexico as is currently approved in the existing water permit.

The salinity of the brine solution can vary from that of normal seawater (approximately 3% or less) to saturated (approximately 26%).

Effluent from these processes will be discharged at a combined maximum rate of 20.16 mgd from multiple outfalls.

### **Outfall 006 - Drilling Fluid**

Discharges of drilling fluid occurred previously under this permit during well drilling, remedial well work, and well servicing and abandonment operations on the wells, and will occur again during abandonment operations conducted under this renewed version of the permit.

Drilling fluid effluent from Outfall 006 consists of generic, non-oil-based seawater and fresh water muds, cement, solids and additives typical to the drilling industry. Drilling fluid discharges during abandonment are intermittent in nature and are primarily comprised of small volumes (up to 100 barrels) of mud discharged to balance the mud systems, condition the mud, cleaning, testing, and occasional bulk mud discharges from multiple outfalls (combined volume of 126,000 gpd average; 252,000 gpd maximum).

Spud mud consists of large volumes of seawater, small volumes of gel and drilled native solids. It is produced during initial shallow well drilling, prior to the use of an engineered drilling fluid system, or to regain lost circulation. Spud mud is intermittently discharged to the surface of the Gulf or at the sea floor without retention during abandonment operations (3.0 mgd average; 9.5 mgd maximum).

Multiple outfalls from the facility are required. The locations for drilling fluid outfall will depend on the drilling rig or type of well servicing equipment used and can change during the permit duration. The drilling fluid discharges will be similar regardless of the drilling rigs and well servicing equipment used for the abandonment operations.

### **Outfall 007 - Drill Cuttings**

Discharges of drill cuttings occurred previously under this permit during well drilling, remedial well work, and well servicing and abandonment operations on the wells, and will occur again during abandonment operations conducted under this renewed version of the permit.

This effluent results from well drilling remedial work and consists of solids brought up from the associated well activities, wastes from the shale shakers, desanders, and drill cuttings with some adhering drilling fluids as described in the description of Drilling Fluid Outfall 006. Maximum combined discharge during abandonment operations will be 225,000 gpd with an average discharge of 60,000 gpd.

Multiple outfalls from the facility are required. The locations for drill cuttings outfall will depend on the rig or type of well servicing equipment used and can change during the permit duration.

The drill cuttings discharges will be similar regardless of the drilling rigs and well servicing equipment used for the abandonment operations.

#### **Outfall 008 - Rig Cooling Water**

Discharges of rig cooling water occurred previously under this permit during well drilling, remedial well work, and well servicing and abandonment operations on the wells, and will occur again during abandonment operations conducted under this renewed version of the permit.

This effluent will consist of non-contact cooling seawater for drilling rig operations that can have varying discharge rates based on rig type and size. The intermittent discharge volumes are estimated to be 3.0 mgd average and 5.0 mgd maximum during the abandonment operations.

Multiple outfalls from the facility are required. The location of these rig cooling water outfalls will depend on the drilling rig or type of well servicing equipment used and can change during the permit duration. The rig cooling water discharges will be similar across the typical drilling rigs and well servicing equipment that could be used for the abandonment operations.

At the time of this permit renewal application, Freeport-McMoRan Energy LLC (FME) does not know the exact drilling rig or drilling rigs that would be used for abandonment operations. Depending on the drilling rig or drilling rigs used, rig cooling water may or may not be chlorinated.

#### **Outfall 009 - Miscellaneous Discharges.**

Miscellaneous discharges include fresh water, treated or untreated seawater and brine from numerous sources including, but not limited to: rig and structure washdowns; seawater overflows; water drained for normal maintenance; fresh water, seawater and/or brine overflows or oil-free water drained from storage tanks; seawater, firewater and other pumps and systems testing; pump packing leakage; pipeline hydrotest and maintenance water; brine, ballast, cooling water and fresh water from other sources; and miscellaneous drips and drains. During well abandonment work, a submersible pump that is deployed overboard may be used to supply seawater for washdown water and firewater rather than using the existing platforms' firewater system. The intermittent discharge volumes are estimated to be 5.9 mgd average and 10.8 mgd maximum.

Multiple outfalls are required throughout the property, including the unmanned platforms. Monitoring will be performed during conditions when an observation is possible in the vicinity of the discharge and the facility is manned. Locations, and consequently miscellaneous effluent outfalls, will change during the life of the project, but the volume and nature of the effluent should not.

Actual flow data recorded for Outfalls 001, 003, and 009 between March 2021 and February 2023 are as follows:

#### **Percent Daily Maximum Flow Used**

<b>Outfall</b>	<b>001</b>	<b>003</b>	<b>009</b>
Actual Daily Max Flow (MGD)	0.014702	0.002700	0.172366
Permitted Daily Max Flow (MGD)	1.95	0.1272	10.8
Percent Daily Max Flow (%)	0.75%	2.12%	1.6%

### III. EFFLUENT CHARACTERISTICS

Data presented in the Application Form 2C for the outfalls without discharges under the current permit, (006, 007 and 008) are based on anticipated pollutants and estimated concentrations. Outfalls 001, 003, 005 and 009 had actual discharges rates over the past 25 months that were 0.5%, 0.9%, 0.3% and 0.6% of the permitted discharge rates, respectively. Due to this minimal volume and the fact that the facility has been unmanned since November 2016, Outfalls 001, 003, 005 and 009, are based on anticipated pollutants and estimated concentrations for the facility at its future operations. The results of the data supplied in the permit application are:

<b>POLLUTANT Outfall 001</b>	<b>Max mg/l, unless noted</b>	<b>Mass lbs, unless noted</b>
BOD	7	114
COD	20	325
TOC	15	244
TSS	40	650
Flow, MGD	1.95	N/A
O&G	15	244
pH	9.00 max	6.00 min
<b>POLLUTANT Outfall 003</b>	<b>Max mg/l, unless noted</b>	<b>Mass lbs, unless noted</b>
BOD	45	48
COD	75	80
TOC	35	37
TSS	45	48
Ammonia	5	5
TRC	1	1
FCB	100	N/A
Flow, MGD	0.13	N/A
pH	8.50 max	6.50 min
<b>POLLUTANT Outfall 005</b>	<b>Max mg/l, unless noted</b>	<b>Mass lbs, unless noted</b>
BOD	20	1.7 tons
COD	0	0
TOC	20	1.7 tons
TSS	50,000	4,202 tons
Sulfite	21,500	1,807 tons
Magnesium	10,500	882 tons
TRC	1	168
Flow, MGD	20.16	N/A
pH	9.00 max	6.00 min



<b>POLLUTANT Outfall 006</b>	<b>Max mg/l, unless noted</b>	<b>Mass lbs, unless noted</b>
BOD	2,050	2.2 tons
COD	0	0
TOC	3,420	3.6 tons
TSS	530,000	556.8 tons
Ammonia	0.4	0.8 lbs
Bromide	24	50.4
Fluoride	139	292
O&G	100	210
Sulfate	1,530	1.6 tons
Flow, MGD	0.25	N/A
pH	11.00 max	6.00 min
Cadmium mg/kg	3.0	
Mercury mg/kg	1.0	
<b>POLLUTANT Outfall 007</b>	<b>Max mg/l, unless noted</b>	<b>Mass lbs, unless noted</b>
BOD	3,100	2.9 tons
COD	0	0
TOC	6,300	5.9 tons
TSS	950,000	891 tons
Flow, MGD	0.23	N/A
Bromide	43	81
Fluoride	100	188
O&G	100	188
Sulfate	1,090	1.02
pH	11.00 max	6.00 min
Cadmium mg/kg	3.0	
Mercury mg/kg	1.0	
<b>POLLUTANT Outfall 008</b>	<b>Max mg/l, unless noted</b>	<b>Mass lbs, unless noted</b>
BOD	20	834
COD	0	0
TOC	20	834
TSS	20	834
Flow, MGD	0.000005	N/A
TRC	1	47
O&G	15	244
pH	9.00 max	6.00 min
<b>POLLUTANT Outfall 009</b>	<b>Max mg/l, unless noted</b>	<b>Mass lbs, unless noted</b>
BOD	20	1,801
COD	0	0
TOC	20	1,081
TSS	20	1,801
Flow, MGD	0.000011	N/A
TRC	0	0
pH	9.00 max	6.00 min

#### **IV. REGULATORY AUTHORITY/PERMIT ACTION**

In November 1972, Congress passed the Federal Water Pollution Control Act establishing the NPDES permit program to control water pollution. These amendments established technology-based or end-of-pipe control mechanisms and an interim goal to achieve “water quality which provides for the protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the water,” more commonly known as the “swimmable, fishable” goal. Further amendments in 1977 of the CWA gave EPA the authority to implement pollution control programs such as setting wastewater standards for industry and established the basic structure for regulating pollutants discharges into the waters of the United States. In addition, it made it unlawful for any person to discharge any pollutant from a point source into navigable waters, unless a permit was obtained under its provisions. Regulations governing the EPA administered NPDES permit program are generally found at 40 CFR §122 (program requirements & permit conditions), §124 (procedures for decision making), §125 (technology-based standards) and §136 (analytical procedures). Other parts of 40 CFR provide guidance for specific activities and may be used in this document as required.

The current permit expired September 30, 2023 and a complete application was received July 11, 2023. The EPA proposes that the permit be reissued for a 5-year term following regulations promulgated at 40 CFR §122.46(a).

#### **V. DRAFT PERMIT RATIONALE AND PROPOSED PERMIT CONDITIONS – TECHNOLOGY BASED LIMITATIONS**

##### **A. OVERVIEW of TECHNOLOGY-BASED VERSUS WATER QUALITY STANDARDS-BASED EFFLUENT LIMITATIONS AND CONDITIONS**

Regulations contained in 40 CFR §122.44 require that NPDES permit limits are developed that meet the more stringent of either technology-based effluent limitation guidelines, numerical and/or narrative water quality standard-based effluent limits, or the previous permit.

Technology-based effluent limitations are established in the proposed draft permit for no free oil, pH, TRC, TSS, total cadmium, total mercury, suspended particulate phase toxicity and halogenated phenolic compounds. No water quality-based effluent limitations are established in the proposed draft permit.

##### **B. TECHNOLOGY-BASED EFFLUENT LIMITATIONS**

###### **1. General Comments**

Regulations promulgated at 40 CFR §122.44 (a) require technology-based effluent limitations to be placed in NPDES permits based on ELGs where applicable, on BPJ in the absence of guidelines, or on a combination of the two. In the absence of promulgated guidelines for the discharge, permit conditions may be established using BPJ procedures. EPA establishes limitations based on the following technology-based controls: BPT, BCT, and BAT. These levels of treatment are:

BPT - The first level of technology-based standards generally based on the average of the best existing performance facilities within an industrial category or subcategory.

BCT - Technology-based standard for the discharge from existing industrial point sources of

conventional pollutants including BOD, TSS, fecal coliform, pH, and O&G.

BAT - The most appropriate means available on a national basis for controlling the direct discharge of toxic and non-conventional pollutants to navigable waters. BAT effluent limits represent the best existing performance of treatment technologies that are economically achievable within an industrial point source category or subcategory.

## 2. Effluent Limitation Guidelines

Technology-based effluent limitations are pollutant specific and vary depending on the type of pollutant and facility in question. See 40 CFR §125.3. 40 CFR §122.44 (a) requires inclusion of technology-based ELGs in NPDES permits based on ELGs where applicable, or on BPJ in the absence of guidelines. In the absence of promulgated guidelines for the discharger's category or subcategory, permit conditions may be established using BPJ procedures.

Several of the activities conducted at the site are typical of offshore gas and oil platform/rig operations and technology-based ELGs established at 40 CFR §435, Subpart A; Offshore Subcategory of the Oil and gas Extraction Point Source Category and will be used to establish limits in the draft permit. In addition, the EPA Region 6 has established limits in the Outer Continental Shelf General Permit for the Western GOM (permit number GMG290000) for discharges from some of these activities not addressed by the ELGs of 40 CFR §435. Limits in the draft permit will be established using BPJ from both of these sources for applicable activities consistent with the scope of each of the two abovementioned ELGs.

In addition, regulations contained in 40 CFR §140; Marine Sanitation Device Standards (MSDs), address discharges from these devices used offshore. Appropriate limits where specified will be applied from this regulation.

## 3. Outfall Limitations

Outfall 001 changes discharges from oil/water separators from various sources and various locations on the lease block to deck drainage. The ELGs contained in 40 CFR §435 Subpart A have a no free oil discharge prohibition for discharges of deck drainage. The previous permit contained a no free oil limit that will be continued in the draft permit.

Outfall 003 discharges sanitary wastewater and domestic wastewater. The ELGs contained in 40 CFR §435 Subpart A, BCT establish TRC to be a minimum 1.0 mg/l and maintained close to that level as practicable for sanitary waste discharges from facilities continuously manned by ten (10) or more persons. In addition, BCT guidelines require no discharge of floating solids for facilities manned continuously by nine (9) or fewer persons or intermittently manned by any number of persons. The previous permit contained these requirements, and they will be continued in the draft permit.

EPA proposes to add proper operation and maintenance requirements for operations of marine sanitation device (MSD) for any facility which already has such MSD in place. The MSD shall be tested yearly for proper operation and the test results maintained for three years at the facility or at an alternate site if not practicable. The operator is required to demonstrate proper operation of MSD via US Coast Guard approval, annual inspections, Class/Flag State inspections and/or the International Sewage Pollution Prevention Certificate (ISPPC) and maintenance logs/records.

Outfall 005 discharges salt cavern brine. The previous permit contained no free oil in the discharge and that will be continued in the draft permit. To be consistent with other permits for similar discharges, the operator must conduct a 7-day chronic toxicity test and determine the

specific NOEC prior to discharge of brine. The Operator must control the discharge rate to ensure the applicable critical dilution at the edge of 100 meters from the point of discharge (using CORMIX or other dispersion modelling) will not exceed its NOEC. This proposed toxicity testing requirement is consistent with the permit requirement for Offshore Oil and Gas General Permit Number GMG290000 for pipeline brine discharges.

Outfall 006 discharges drilling fluids. The applicant specified generic, non-oil-based seawater and fresh water mud, cement, solids and additives typical to the drilling industry. The discharges are intermittent. 40 CFR §435 Subpart A establishes BAT requirements of no free oil, no discharge of diesel oil, a minimum toxicity limit of 30,000 ppm by volume and limited total cadmium and total mercury in stock barite to 3 mg/kg and 1 mg/kg dry weight respectively. Free oil when limiting for drilling fluids is measured using the static sheen test method. Toxicity is measured with a 96-hour LC50 on the suspended particulate phase using *Mysidopsis bahia*. The previous permit limited no free oil, toxicity, cadmium and mercury and those limits will be continued in the draft permit. In addition, the permit has a rate of discharge limitation of 1000 bbls/hr that ensures adequate dispersion and helps prevent unreasonable degradation of the marine community. The permit does not authorize discharges of synthetic, diesel or non-aqueous-based muds.

Outfall 007 discharges waste from the shale shakers, desanders and drill cuttings that have some drilling fluids adhering to them. The source of contamination in this discharge is drilling mud that adheres to the cuttings and other solids produced during drilling activities. The same limits established for Outfall 006 above will also be established and continued from the previous permit to this outfall.

Outfall 008 discharges rig cooling water which is non-contact cooling water. The limits of no free oil established in the previous permit are continued in the draft for the activities described in the application.

Outfall 009 discharges fresh water, seawater, brine, and waters from other sources. The sources are from numerous sites and the previous permit established no free oil which will be continued in the draft permit. Because the applicant does not include domestic wastewater in the description of miscellaneous discharges, domestic wastewater is not authorized for discharge at this outfall. The operator must conduct a 48-hour toxicity test and be compliant with the critical dilution determined based on the estimated discharge rate when the discharge occurs, using Appendix D (Table 2). This proposed toxicity testing requirement is consistent with the permit requirement for Offshore Oil and Gas General Permit Number GMG290000 for miscellaneous chemically treated discharges.

#### 4. Other Requirements

For all permitted outfalls, the current permit requires no discharge of halogenated phenols based on CWA §403 (c), no discharge of rubbish, trash and other refuse based on International Convention for the Prevention of Pollution from Ships (MARPOL), no discharge in areas of biological concern based on CWA §403(c) and the minimization of discharge of surfactants, dispersants and detergents based on CWA §403(c).

In addition, the applicant is required to use phosphate free and non-toxic soaps and detergents for any purpose if they will be discharged into waters subject to this permit. These detergents must be free from toxic or bioaccumulative compounds and not lead to extreme shifts in receiving water pH. "Non-toxic" soaps, cleaners, and detergents means these materials which do not exhibit potentially harmful characteristics as defined by the Consumer Product Safety

Commission regulations found at 16 CFR Chapter II, Subchapter C, Part 1500. "Phosphate Free" soaps, cleaners, and detergents means these materials which contain, by weight, 0.5% or less of phosphates or derivatives of phosphates.

Further, minimization on the use of any detergents or emulsifiers for activities that do not comply with safety requirements of the Occupational Safety and Health Administration and the Bureau of Ocean Energy Management are required. These restrictions apply to tank cleaning and other operations which do not directly involve the safety of workers. The restriction is imposed since detergents disperse and emulsify oil, thereby increasing toxicity and making detection of a discharge of oil more difficult. 40CFR110.4 prohibits the addition of dispersants or emulsifiers to oil to be discharged that would circumvent any provision at 40CFR110. Waste water associated with tank and pit cleaning operations shall be classified as the former contents of the tank or pit; for example, wash water generated from cleaning drilling fluid pits would be subject to the same discharge limitation as the drilling fluid formerly contained in those pits.

The discharge of garbage including maintenance waste is prohibited. Comminuted food waste, (able to pass through a screen mesh no larger than 25 mm, approx. 1 inch) may be discharged when 12 nautical miles or more from land.

Language for floating solids compliance and reporting purposes as noted in 40 CFR §435 Subpart A for floating solids contained requires that an observation must be made daily when the platform is manned for floating solids. The observation must be made during daylight in the vicinity of sanitary waste outfalls at a time during discharge.

## **VI. WATER QUALITY BASED LIMITATIONS**

### **A. GENERAL COMMENTS**

Pursuant to CWA §301(b)(1)(C), NPDES permits must contain water quality-based limitations if technology-based limits are insufficient to maintain or achieve applicable federal or state water quality requirements. In this permit action, Ocean Discharge Criteria at 40 CFR §125, Subpart M imposes such requirements.

### **B. IMPLEMENTATION**

The permit contains technology-based effluent limitations reflecting the best controls available. Where these technology-based permit limits do not protect water quality or the designated uses, additional water quality-based effluent limitations and/or conditions are included in the NPDES permits. EPA narrative and numerical water quality standards are used in conjunction with other available toxicity information to determine the adequacy of technology-based permit limits and the need for additional water quality-based controls.

### **C. OCEAN DISCHARGE CRITERIA**

When issuing permits for discharges into waters of the territorial sea, contiguous zone, or oceans, CWA §403 requires EPA to consider guidelines for determining potential degradation of the marine environment. These Ocean Discharge Criteria (40 CFR §125, Subpart M) are intended to "prevent unreasonable degradation of the marine environment and to authorize imposition of effluent limitations, including a prohibition of discharge, if necessary, to ensure this goal. To make the determination of unreasonable degradation of the marine environment, the director shall determine whether a discharge will cause unreasonable degradation of the marine

environment based on consideration of: (1) The potential for bioaccumulation or persistence of the pollutants to be discharged; (2) The potential transport of such pollutants by biological, physical or chemical processes; (3) The composition and vulnerability of the biological communities which may be exposed to such pollutants, including the presence of unique species or communities of species, the presence of species identified as endangered or threatened pursuant to the Endangered Species Act, or the presence of those species critical to the structure or function of the ecosystem, such as those important for the food chain; (4) The importance of the receiving water area to the surrounding biological community, including the presence of spawning sites, nursery/forage areas, migratory pathways, or areas necessary for other functions or critical stages in the life cycle of an organism; (5) The existence of special aquatic sites including, but not limited to marine sanctuaries and refuges, parks, national and historic monuments, national seashores, wilderness areas and coral reefs; (6) The potential impacts on human health through direct and indirect pathways; (7) Existing or potential recreational and commercial fishing, including fin fishing and shell fishing; (8) Any applicable requirements of an approved Coastal Zone Management plan; (9) Such other factors relating to the effects of the discharge as may be appropriate, and (10) Marine water quality criteria developed pursuant to section 304(a)(1).

The discharge authorized by this permit which may have potential to cause a short-term and localized environmental impact is the brine at Outfall 005, if discharge of mass volume occurs. The operator is required to conduct toxicity test and comply with discharge volume limits to minimize environmental impacts.

Previously, limitations of no free oil were established as technology-based limitations and they are also established for Ocean Discharge Criteria as required by CWA §403(c).

The proposed permit contains limitations no less stringent than previous permits. EPA has determined that discharges proposed to be authorized by this reissued permit will not cause unreasonable degradation of the marine environment. The proposed permit contains a reopener clause that the permit may be modified or revoked at any time if on the basis of any new data the permitting authority determines that continued dischargers may cause unreasonable degradation of the marine environment.

#### D. CROSS-CUTTING ENVIRONMENTAL REQUIREMENTS

This NPDES permit action is subject to the environmental review and consultation requirements of various federal laws, the Marine Mammal Protection Act, 33 U.S.C. §1401, *et seq*, the Endangered Species Act, 16 U.S.C. §1531, *et seq*, the Magnuson-Stevens Fishery Management and Conservation Act, 16 U.S.C. §1801, *et seq*, and the National Historic Preservation Act, 16 U.S.C. §470, *et seq*. The United State Coast Guard was the lead agency in the development of previous Final Environmental Impact Statement pursuant to the NEPA process and it concluded the requirements for all of the cross-cutting issues. In the 1990 Final Site-specific Environmental Assessment (SEA), the Minerals Management Service (MMS) determined “Finding of No Significant Impact” (FONSI) for the planned sulphur. The MMS issued a supplemental document to the SEA in 2001. In that SEA, environmental impacts including discharges authorized under EPA’s NPDES programs were evaluated. The scope of activities evaluated in the SEA was much broader than expecting discharges under this proposed permit action. For instance, the estimated average daily discharge rate for brine was 9 mgd (compared with 0.0164 mgd under this permit action), 388 wells were planned to be drilled (compared with zero well drilling under this permit action), and facilities were designed to operate 24-hr/7-day for 30 years (compared with an estimated 6 month period under this permit action). The action of this draft permit will not change the environmental baseline that would negatively change

any determination made during the previous NEPA consultation. Based on previous and new information available to EPA and the proposed permit conditions, EPA concludes that the reissuance of the draft permit will (1) have no effect on endangered species or their habitat; (2) have no adverse effect on essential fish habitat; and (3) be consistent with State coastal management programs.

Letter from Nancy Rodriguez (State of Louisiana Department of Natural Resources) to Darren Hewston (Freeport-McMoRan) was received, dated November 2, 2023, that states that the project was found to be consistent with the Louisiana Coastal Resources Program as required by Section 307(c) (3) (B) of the Coastal Zone Management Act of 1972 as amended.

#### E. MONITORING FREQUENCY FOR LIMITED PARAMETERS

NPDES permits must include monitoring requirements to yield data representative of the monitored activity, 40 CFR §122.48(b), and to assure compliance with permit limitations, 40 CFR §122.44(i)(1). For all the outfalls, monitoring frequency and type shall be the same as the previous permit. The draft permit requires the applicant to monitor the facility's discharge on a regular basis; and report the results quarterly. The monitoring results will be available to the public.

### VII. FACILITY OPERATIONAL PRACTICES

#### A. OPERATION AND REPORTING

The permittee must submit Discharge Monitoring Report's (DMR's) quarterly, beginning on the effective date of the permit, lasting through the expiration date of the permit or termination of the permit, to report on all limitations and monitoring requirements in the permit.

##### Electronic Reporting Rule

The EPA published the electronic reporting rule in the federal register (80 FR 64063) on October 22, 2015. The rule became effective on December 21, 2015. One year after the effective date of the final rule, NPDES regulated entities that are required to submit DMRs (including majors and non-majors, individually permitted facilities and facilities covered by general permits) must do so electronically. All DMRs shall be electronically reported effective December 21, 2016, per 40 CFR 127.16. To submit electronically, access the NetDMR website at [www.epa.gov/netdmr](http://www.epa.gov/netdmr) and contact the [R6NetDMR@epa.gov](mailto:R6NetDMR@epa.gov) in-box for further instructions. PA and authorized NPDES programs will begin electronically receiving these DMRs from all DMR filers and start sharing these data with each other.

##### Sufficiently Sensitive Analytical Methods (SSM)

As required by 40CFR 122.44(a)(i)(1)(iv) the permittee must use sufficiently sensitive EPA-approved analytical methods (SSM) (under 40CFR part 136 or required under 40 CFR chapter I, subchapters N or O) when quantifying the presence of pollutants in a discharge for analyses of pollutants or pollutant parameters under the permit. In case the approved methods are not sufficiently sensitive to the limits, the most SSM with the lowest method detection limit (MDL) must be used as defined under 40 CFR 122.44(i)(1)(iv)(A). If no analytical laboratory is able to perform a test satisfying the SSM in the region, the most SSM with the lowest MDL must be used after adequate demonstrations by the permittee and EPA approval.

### VIII. ANTIBACKSLIDING

The proposed permit is consistent with the requirements to meet antibacksliding provisions of the Clean Water Act, Section 402(o) and 40 CFR §122.44(l)(i)(A), which state in part that interim or final effluent limitations must be as stringent as those in the previous permit, unless material and substantial alterations or additions to the permitted facility occurred after permit issuance which justify the application of a less stringent effluent limitation. The draft permit is at least as stringent as the previous permit.

## **IX. ENVIRONMENTAL JUSTICE**

Executive Order 13985, Advancing Racial Equity and Supporting for Underserved Communities through the Federal Government signed on January 20, 2021, directs each federal agency to “make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high, and adverse human health or environmental effects of its programs, policies, and activities.” The EPA strives to enhance the ability of overburdened communities to participate fully and meaningfully in the permitting process for EPA-issued permits, including NPDES permits. “Overburdened” communities can include minority, low income, tribal, and indigenous populations, or communities that potentially experience disproportionate environmental harms and risks. As part of an agency-wide effort, the EPA Region 6 will consider prioritizing enhanced public involvement opportunities for EPA-issued permits that may involve activities with significant public health or environmental impacts on already overburdened communities. For more information, please visit <http://www.epa.gov/ejscreen>.

As part of the Permit development process, the EPA conducted a screening analysis to determine whether this Permit action could affect overburdened communities. The EPA used EJScreen 2.1 a nationally consistent geospatial tool that contains demographic and environmental data for the United States at the Census block group level. This tool is used to identify Permits for which enhanced outreach may be warranted.

EJScreen data is not available in the GOM. On the coast of Louisiana, there is one federally recognized tribe, the Chitimacha Tribe of Louisiana, and three state-recognized tribes, the Biloxi-Chitimacha Confederation of Muskogee, the PointeAuChien Indian Tribe, and the United Houma Nation, all residing in Lafourche, Terrebonne, and Jefferson Parishes. These tribes are especially vulnerable to impacts from increasing shoreline erosion and saltwater intrusion due to their location on the coast. Additional geographic vulnerabilities for this area are increasing frequency of storms and storm surge as well as shoreline erosion and accretion.

Impacts to GOM populations are immeasurable for environmental justice since low-income and minority communities are located onshore and the discharges that would be regulated by this permit are located 17 miles offshore. As a result, Freeport-McMoRan Energy LLC is not considered to be discharging in a community with high EJ indices and no enhanced outreach is necessary at this time.

## **X. PERMIT REOPENER**

The permit may be reopened and modified during the life of the permit if relevant portions of water quality requirements are revised or remanded. In addition, the permit may be reopened and modified during the life of the permit if relevant procedures implementing such water quality requirements are revised or promulgated. Modification of the permit is subject to the provisions of 40 CFR §124.5.

## **XI. CERTIFICATION**

EPA is the certifying authority because the permit authorizes discharges only to Federal waters. The draft permit will be provided to other resource agencies, including NOAA, NMFS, the



USCG, and the State of Louisiana Department of Natural Resources, for review, however.

## **XII. FINAL DETERMINATION**

The public notice describes the procedures for the formulation of final determinations.

## **XIII. ADMINISTRATIVE RECORD**

The following information was used to develop the proposed permit:

### **a. APPLICATION(s)**

EPA Application Forms 1 and 2C received July 11, 2023.

### **b. CWA/40 CFR /FEDERAL REGISTER CITATIONS and FEDERAL CRITERIA**

CWA §§'s 301, 304, 316, 402, 403, and 502

Citations to 40 CFR are as of November 1, 2017.

Sections 122, 124, 125, 136, 401, and 435

Quality Criteria for Water, <http://www.epa.gov/waterscience/criteria/library/goldbook.pdf>