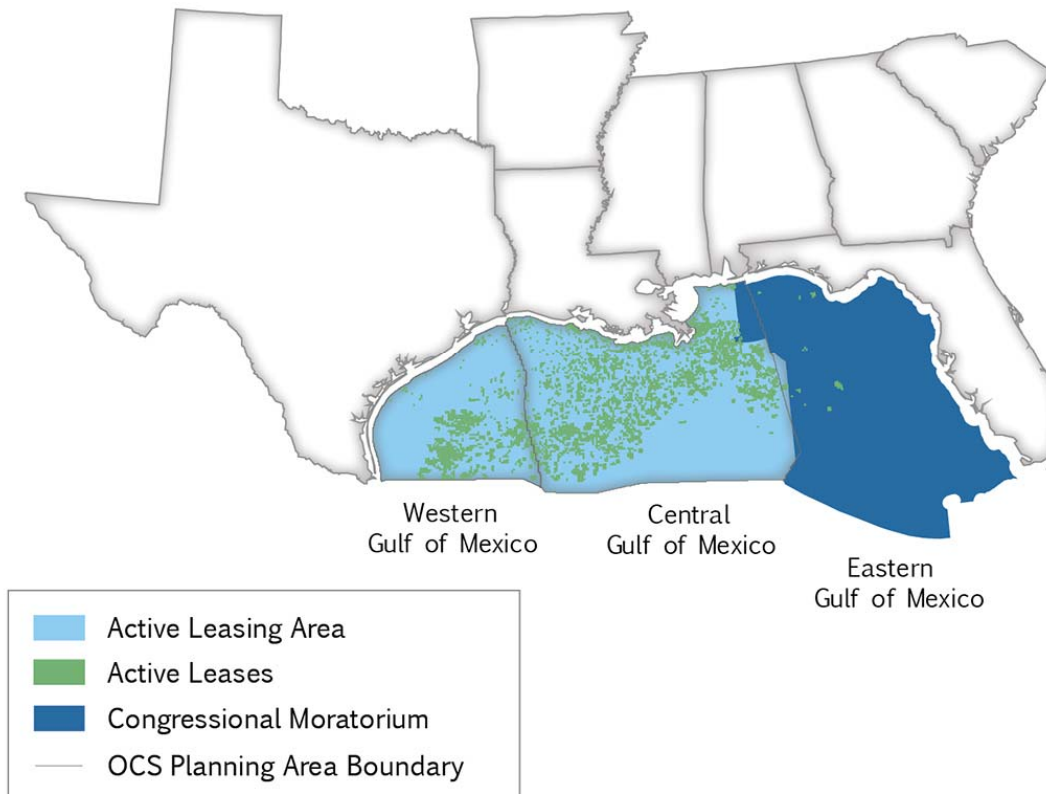




Jennifer Griffith  
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# An Overview of the Changes Made to the Current Region 6 GMG 290000 Permit

Department of the Interior Outer Continental Shelf Oil and Gas Strategy  
Gulf Region



# GMG290000 OPERATIONS

## **PART I. REQUIREMENTS FOR NPDES PERMITS**

### **Section A. Permit Applicability and Coverage Conditions**

#### **1. Operations Covered**

This permit establishes effluent limitations, prohibitions, reporting requirements, and other conditions on discharges from oil and gas facilities, and supporting pipeline facilities, engaged in production, field exploration, developmental drilling, facility installation, well completion, well treatment, well workover, and abandonment/decommissioning operations. **Facilities (MODUS) that are temporarily idle may also be authorized.**

## PERMIT COVERAGE

- All facilities must be permitted through the EPA electronic permitting system in CDX, in advance of operations.
- The 2017 permit also required that all existing facilities that wished to remain covered, re-apply for coverage under the re-issued permit by completing the renewal process before April 1, 2018.

# DRILLING OPERATIONS



# DRILLING OPERATIONS

## WATER BASED MUD & CUTTINGS

**BARITE** – Vendor Certification, once per lot

Permit Limits: Mercury – Maximum 1.0 mg/kg & Cadmium – Maximum 3.0 mg/kg

**TOXICITY** – AQUATIC SPP 96-hour LC50 using *Americamysis bahia*, once per month & at the EOW (after final logging run, before bulk discharge)

Permit Limit: Minimum 30,000 ppm

**FREE OIL** – Static Sheen Test, weekly when discharging, on both fluid & cuttings (not required for discharges at the seafloor before the riser is set)

Permit Limit: No Free Oil (passing Static Sheen Test)

**DISCHARGE RATE** – estimated hourly

Permit Limit: 1,000 bbls per hour for fluid only (not applicable to cuttings or discharges at the seafloor before the riser is set)

Discharge of Excess Drilling Fluid is prohibited.

# DRILLING OPERATIONS

## SYNTHETIC BASED FLUID (SBF)

Prior to use:

**BASE FLUID** – Vendor Certification, once per year/per base fluid

**PAH** – Maximum of 0.00001; Mass ratio in grams of PAH divided by the mass in grams of Base Fluid

**SEDIMENT TOXICITY** – Maximum Ratio of 1.0; 10-day LC50 of Reference Fluid divided by 10-day LC50 of Base Fluid

**BIODEGRADATION RATE** – Maximum Ratio of 1.0; cumulative gas production of Reference Fluid divided by cumulative gas production of Base Fluid at 275 days

# DRILLING OPERATIONS

CUTTINGS GENERATED USING NON AQUEOUS FLUID/SYNTHETIC BASED MUD

**DRILLING FLUID - FORMATION OIL** – Vendor Certification, once prior to use; GC/MS  
Permit Limit: No Formation Oil (<1.0)

**BARITE** – Vendor Certification, once per lot  
Permit Limit: Mercury – Maximum 1.0 mg/kg & Cadmium – Maximum 3.0 mg/kg

**TOXICITY** – **AQUATIC SPP** 96 HOUR LC50 using *Americamysis bahia*, once per month  
Permit Limit: Minimum 30,000 ppm

**SEDIMENT TOXICITY**, 96 Hour LC50 using *Leptocheirus plumulosus*, once per month  
Permit Limit: Maximum Ratio of 1.0; Reference Mud LC50 divided by Field Sample LC50

**FREE OIL** – **STATIC SHEEN TEST**, weekly when discharging cuttings or  
Small Volume Discharges  
Permit Limit: No Free Oil (passing Static Sheen Test)

# DRILLING OPERATIONS

## CUTTINGS GENERATED USING NAF/SBM

**RETENTION ON CUTTINGS (ROC)** – Daily % measurement of Base Fluid retained on Cuttings including SVDs. ROC monitoring may be discontinued after the first 1/3 of the well if a Best Management Practices Plan (BMP) is certified prior to drilling, followed to minimize NAF waste, and the ROC value is not greater than the final well average limit below.

Permit Limit: Final well average Maximum of 6.9% for C16C18 Internal Olefin blends; 9.4% for C12C14 or C8 Ester blends

**REVERSE PHASE EXTRACTION (RPE) (or optional GC/MS)** – Weekly when discharging for Formation Oil. A GC/MS test can also be done in the event of a failed RPE. If the GC/MS test passes, the failed RPE does not count as a permit exceedance.

Permit Limit: No Formation Oil (<1.0)

# PRODUCTION OPERATIONS



# PRODUCTION OPERATIONS

## PRODUCED WATER DISCHARGES

**FLOW VOLUME** – Monthly estimate of discharge volume in barrels per day (bpd)

Permit Limit: None, except that facilities discharging > 75,000 bpd must use CORMIX (version 7.0 or later) to determine Critical Dilution for testing instead of permit tables.

**TOXICITY** – Annually (0-4,599 bpd) or Quarterly (>4,599 bpd); frequency is based on highest monthly average flow in the previous 3 months before the test. Critical Dilution is determined by this flow rate, pipe diameter & depth difference.

Permit Limit: 7 day NOEC results equal to or greater than the critical dilution for both survival & growth.

▪ New Discharges may toxicity test after the first 3 months of discharge.

# PRODUCTION OPERATIONS

## PRODUCED WATER DISCHARGES

**FREE OIL** – Daily observation during daylight hours for sheens on the surface of the water.

Permit Limit: No Free Oil (sheen). If a sheen is noted, an oil & grease sample must be collected within 2 hours of the observation or within 2 hours of restart if discharge was immediately stopped.

**OIL & GREASE** – Monthly or Sheen Oil & Grease gravimetric N-Hexane test. Sample type is a single grab or a **composite of 4 or more grab samples collected at even intervals within 24 hours or less**. (Old permit defined composite as any number of samples evenly spaced over 24 hours.)

Permit Limit: Daily Maximum of 42 mg/L, Monthly Average Maximum of 29 mg/L

# WORKOVER & COMPLETION OPERATIONS

## WELL FLUIDS

(FROM RIG OR PLATFORM WELL WORK)

**COMPLETION FLUID** – salt solutions, weighted brines, polymers & various additives used to prevent damage to the well bore during operations which prepare the well for production.

**WELL TREATMENT FLUID** – any fluid used to restore or improve productivity by chemically or physically altering hydrocarbon bearing strata after a well has been drilled. Includes stimulation fluids such as acids, solvents, and propping agents.

**WORKOVER FLUID** – salt solutions, weighted brines, polymers & other specialty additives used in a producing well to allow safe repair and maintenance or abandonment procedures, including packer fluids.

# WORKOVER & COMPLETION OPERATIONS

## WELL FLUIDS

(FROM RIG OR PLATFORM WELL WORK)

**FREE OIL** – Static Sheen Test, Daily when discharging

Permit Limit: No Free Oil (passing Static Sheen Test)

**OIL & GREASE** – Monthly Oil & Grease gravimetric N-Hexane test

Permit Limit: Daily Maximum of 42 mg/L, Monthly Average Maximum of 29 mg/L

# WORKOVER & COMPLETION OPERATIONS

## WELL FLUIDS

(FROM RIG OR PLATFORM WELL WORK)

- Discharge of Excess Well Fluids is prohibited
- No discharge of priority pollutants except in trace amounts.
- Limitations also apply to well treatment or workover fluids used on the production side that are NOT discharged through the production system with produced water.
- High solids drilling fluids used during workover operations and drilling fluids left in the wellbore during logging, casing, cementing operations or during temporary abandonment are considered drilling fluids and must meet drilling fluids limitations.

# WORKOVER & COMPLETION OPERATIONS

## WELL FLUIDS

(FROM RIG OR PLATFORM WELL WORK)

### **Characteristic Assessment**

- Operators must conduct assessments on well treatment fluids, completion fluids, and workover fluids for each fluid on each well.
- Assessment may be conducted individually or by participation in an Industry Wide Study.
- Required testing for the assessment will be a 48-hour acute static renewal definitive toxicity test using EPA-821-R-02-12 for both *Americamysis bahia* and *Menidia beryllina*. Each test must have a minimum of five replicates with eight organisms per replicate.

## Characteristic Assessment (Cont.)

Each fluid assessment shall include the following information:

- Lease and block number
- API well number
- Type of well treatment or workover operation conducted
- Date of discharge
- Time discharge commenced
- Duration of discharge
- Volume of well treatment
- Volume of completion or workover fluids used
- The common names and chemical parameters for all additives to the fluids
- The volume of each additive
- Concentration of all additives in the well treatment, completion, or workover fluid
- The NOEC of 48-hour acute WET test for well treatment fluids discharged separately from the produced water discharge.

## Characteristic Assessment (Cont.)

### Industry-Wide Study Alternative

- Operators may elect to participate in the EPA approved industry wide study as an alternative to conducting monitoring required by the fluids Characteristic Assessment and reporting that information on all operations conducted after 9/30/17.
- The industry-wide study plan is to be submitted to the EPA for approval within 18 months after the effective date of the permit. Once approved, the plan will become an enforceable part of the permit. The study must commence within 6 months of approval.
- The study area will include the Western and Central Areas of the GOM and may also include the Easter GOM which is under the permitting jurisdiction of EPA Region 4.
- Operators may join the study after the start date. Contact the Offshore Operators Committee for more information. [www.theooc.org](http://www.theooc.org)

# Characteristic Assessment (Cont.)

## Individual Assessment Report

- If EPA does not approve the study plan or if an Operator elects not to participate in the study, the Characteristic Assessment, including toxicity results should be submitted to EPA on the following schedule:

| Due Date        | Assessment Period                                |
|-----------------|--------------------------------------------------|
| March 30, 2019  | Effective date of the permit through 2018        |
| March 30, 2020  | 2019                                             |
| March 30, 2021  | 2020                                             |
| October 1, 2021 | 2021 (Assessment requirements end July 31, 2021) |

**If you have not committed to participating in the study and have been or are discharging well treatment, completion, and/or workover fluids, you should be submitting samples for toxicity testing on every fluid for every well.**

# OTHER NPDES DISCHARGES – ALL OPERATIONS

## DECK DRAINAGE

Any waste resulting from deck washings, spillage, rainwater and runoff from gutters and drains including drip pans and work areas within facilities subject to this permit, including but not limited to deck sump discharges.

**FREE OIL** – Daily observation for sheens on the surface of the water

Permit Limit: No Free Oil (sheen)

Quarterly Totals must be reported on the DMR

Sheens are defined as any silvery or metallic sheen, gloss, or increased reflectivity, visual color, or iridescence on the water surface

# OTHER NPDES DISCHARGES – ALL OPERATIONS

## SANITARY WASTE

Human body waste discharged from toilets and urinals (black water)

Manned by 10 or more people continuously for 30 consecutive days:

**FLOATING SOLIDS** – Daily observation during daylight hours at the time of maximum discharge for floating solids on the surface of the water

Permit Limit: No Floating Solids

**RESIDUAL CHLORINE** – Monthly Total Residual Chlorine test done on location using a HACH CN-66-DPD

Permit Limit: Minimum of 1.0 mg/L

*EXCEPTION: If a U.S. Coast Guard approved Marine Sanitation Device is properly maintained and tested annually, daily solids observations and monthly TRC tests are not required. The operator is required to demonstrate proper operation via USCG approval, annual inspections, Class/Flag State inspections and/or the International Sewage Pollution Prevention Certificate (ISCCP) and maintenance logs/records.*

# OTHER NPDES DISCHARGES – ALL OPERATIONS

## SANITARY WASTE

Manned by 9 or fewer people continuously or by any number intermittently (intermittently is defined as less than 30 consecutive days)

**FLOATING SOLIDS** – Daily observation during daylight hours at the time of maximum discharge of floating solids on the surface of the water

Permit Limit: No Floating Solids

*EXCEPTION: If a U.S. Coast Guard approved Marine Sanitation Device is properly maintained and tested annually, daily solids observations and monthly TRC tests are not required. The operator is required to demonstrate proper operation via USCG approval, annual inspections, Class/Flag State inspections and/or the International Sewage Pollution Prevention Certificate (ISCCP) and maintenance logs/records.*

# OTHER NPDES DISCHARGES – ALL OPERATIONS

## DOMESTIC WASTE

Material discharges from galleys, sinks, showers, safety showers, eye wash stations, hand washing stations, fish cleaning stations and laundries (grey water)

**FLOATING SOLIDS** – Daily observation during daylight hours at the time of maximum discharge for floating solids on the surface of the water

Permit Limit: No Floating Solids

Quarterly Totals must be reported on the DMR

- No foam discharge except in trace amounts
- No discharge of garbage, except food waste able to pass through a screen mesh no larger than 25 mm (approximately 1 inch) if 12 nautical miles or more from land.

# OTHER NPDES DISCHARGES – ALL OPERATIONS

## MISCELLANEOUS DISCHARGES

### **TYPES OF MISCELLANEOUS DISCHARGES**

- Desalinization Unit Discharge
- Diatomaceous Earth Filter Media
- Blowout Preventer Control Fluid
- Uncontaminated Ballast Water
- Uncontaminated Bilge Water
- Mud, Cuttings & Cement at the Seafloor
- Uncontaminated Freshwater
- Uncontaminated Seawater
- Boiler Blowdown
- Source Water & Sand
- Hydrate Control Fluid
- Pipeline Brine
- Subsea Fluids

# OTHER NPDES DISCHARGES – ALL OPERATIONS

## MISCELLANEOUS DISCHARGES

- **FREE OIL** – **Daily** observation for sheens on the surface of the water when discharging. (Old permit requirement was weekly observation.)

Permit Limit: No Free Oil (sheen)

**Quarterly Totals must be reported on DMR**

*Exception:* Not required for Mud, Cuttings & Cement (including cement tracer) at the seafloor

**Unused Cement Slurry Prohibited except:**

- 1) due to equipment failure during cementing operations - limited to once per year per facility
- 2 due to off-specification during a cementing job - limited to once per well.

# OTHER NPDES DISCHARGES – ALL OPERATIONS

## MISCELLANEOUS DISCHARGES—HYDRATE CONTROL FLUIDS

If discharged separate from Produced Water or other Miscellaneous Discharges that have not been tox tested when including hydrate fluids, the following is required:

**TOXICITY** – A 7-day NOEC Test, Critical Dilution based on CORMIX modeling (version 7.0 or later). The results are good for 1 year. Samples must be representative of the discharge.

*EXCEPTION- For methanol discharges of less than 20 bbls over a 7-day period, or ethylene glycol discharges of less than 200 bbls over a 7-day period, no testing is required.*

Hydrate control fluids may be considered Chemically Treated Discharge when included with other chemical treatments.

# OTHER NPDES DISCHARGES – ALL OPERATIONS

## ADDITIONAL MISCELLANEOUS DISCHARGES

**Aqueous Film Forming Foam (AFFF)** – Discharges due to an emergency not subject to permit limitations. All discharges associated with regulatory certification and inspection must be minimized and a substitute foaming agent (non fluorinated) must be used if possible. For maintenance and training AFFF is required to be collected and stored for onshore disposal unless a non-fluorinated or alternative foaming agent is used.

**Bulk Transfer Operations Powder** – dust emitted from vents that fall into the water directly.

NOTE: Discharge of *collected* dust powder is prohibited.

# OTHER NPDES DISCHARGES – ALL OPERATIONS

## ADDITIONAL MISCELLANEOUS DISCHARGES

**PIPELINE BRINE:** used for pipeline/equipment preservation

**FREE OIL** – Static Sheen Test, prior to use

Permit Limit: No Free Oil (passing Static Sheen Test)

**OIL & GREASE** – Oil & Grease gravimetric N-Hexane, prior to use

Permit Limit: Daily Maximum of 29 mg/L

Must contain no priority pollutants except in trace amounts.

**TOXICITY** – Prior to use.

- Permit Limit: Discharges >48 hours: 7 day NOEC results equal to or greater than the critical dilution for both survival & growth.
- Permit Limit: Discharges 48 hours and less: 48 Hour Acute NOEC results greater than the critical dilution for survival.

Critical Dilution to be determined by CORMIX 7 modeling

# OTHER NPDES DISCHARGES – ALL OPERATIONS

## MISCELLANEOUS DISCHARGES

### **SUBSEA DISCHARGES**

Subsea Wellhead Preservation Fluids

Subsea Production Control Fluid

Umbilical Steel Tube Storage Fluid

Leak Tracer Fluid

Riser Tensioner Fluid

**FREE OIL** – Daily observation for sheens on the surface of the water

Permit Limit: No Free Oil (sheen)

Quarterly Totals must be reported on DMR

**TOXICITY** – Annual 7-day NOEC Test, product can be Vendor Certified

Permit Limit: 7-Day NOEC of 50 mg/L or greater (Survival & Growth)

# OTHER NPDES DISCHARGES – ALL OPERATIONS

## CHEMICALLY TREATED MISCELLANEOUS DISCHARGES

### **TYPES OF CHEMICALLY TREATED MISCELLANEOUS DISCHARGES**

Excess seawater used in continuous operation of fire control & utility lift pumps

Excess seawater from pressure maintenance & secondary recovery projects

Water released during fire protection training

Seawater used to pressure test new & existing piping & pipelines

Ballast Water

Once Through Non-contact cooling water

Treatment Chemicals: Biocides, corrosion inhibitors or other chemicals which are used to treat seawater or freshwater to prevent corrosion or fouling of piping of equipment. Non toxic scale inhibitors and dyes are not considered treatment chemicals. Discharges treated by bromide, chlorine, or hypochlorite or which contain only electrically generated forms of chlorine, hypochlorite, copper ions, iron ions, and aluminum ions are exempted from toxicity testing. *(but still reported as Chemically treated water)*

Hydrate fluids when included with other treatment chemicals may be considered Chemically Treated Discharge.

# OTHER NPDES DISCHARGES – ALL OPERATIONS

## CHEMICALLY TREATED MISCELLANEOUS DISCHARGES

**Concentration of the treatment chemicals shall not exceed the most stringent of the following:**

1. Maximum concentration & any other conditions specified in EPA product registration labeling (if registered product)
2. Maximum of manufacturer's recommended concentration
3. 500 mg/L

**FREE OIL** – **Daily** observation for sheens on the surface of the water when discharging for new pipelines; 3 times per discharge for existing pipelines  
Permit Limit: No Free Oil (sheen)

**Quarterly Totals must be reported on DMR**

# OTHER NPDES DISCHARGES – ALL OPERATIONS

## CHEMICALLY TREATED MISCELLANEOUS DISCHARGES

**FLOW VOLUME** – Monthly estimate of discharge volume in barrels per day (bpd)

**TOXICITY** – 48-Hour NOEC, Annually (0-499bpd), Quarterly (500-4,599bpd), or Monthly (>4,599bpd); frequency dependent on flow rate. Critical Dilution is determined by flow rate, pipe diameter & depth difference. Intermittent or Batch discharges shall be monitored once per discharge but no more often than the frequencies above.

Permit Limit: 48 Hour NOEC equal to or greater than the Critical Dilution for survival only

*If discharge point is sub sea, operators may collect & test a sample prior to use*

# OTHER NPDES DISCHARGES – ALL OPERATIONS

## MAINTENANCE WASTE

Includes all wastes associated with maintenance activities such as surface preparation and coating.

Maintenance waste such as removed paint and materials associated with surface preparation and coating applications must be contained to the maximum extent practicable to prevent discharge. This includes airborne material such as spent or oversprayed abrasives, paint chips, and paint overspray. All collected materials must be disposed of at an appropriate shore based facility.

Operators must develop and implement a Best Management Practices Plan (BMP) for the containment of waste materials. The BMP must include specific containment measures. (NOTE: although mentioned in the permit, API's Recommended Practice RP91 was not approved by EPA for use in lieu of a BMP)

# COOLING WATER INTAKE STRUCTURES

Built after 7/17/2006 with intake greater than 2million gpd, 25% used for cooling

## Non Fixed Facilities & Fixed Facilities **with Sea Chests**

- **Information Collection:** Maintain source water physical data, intake structure data, & velocity information.
- **Maintenance:** Visual inspection **once per 6 months** to ensure required design & construction technologies are maintained & operated to function as designed. Report down time.
- **Velocity:** Measure velocity at point of entry, or measure head loss for surface screens. **Frequency based on Velocity Table.**
  - Velocity  $<0.300$  = Quarterly;  $0.300 - 0.38$  = Monthly;  $>0.38$  = Daily
  - Permit Limit: Maximum of 0.5ft/s

# COOLING WATER INTAKE STRUCTURES

Built after 7/17/2006 with intake greater than 2million gpd, 25% used for cooling

Non Fixed Facilities & Fixed Facilities **with Sea Chests**

- **Additional Reporting:**

- Number of fish/shellfish impinged & estimated area of blockage for each screen.
- Number of days maximum intake velocity is greater than 0.5 ft/s
- Reporting now only required once per year in a written report to EPA, due by March 31 following the monitoring period.
- DMR now only includes reporting failure to conduct semi-annual visual inspections

# COOLING WATER INTAKE STRUCTURES

Built after 7/17/2006 with intake greater than 2million gpd, 25% used for cooling

## Fixed Facilities **without Sea Chests**

- **Information Collection:** Maintain source water baseline biological characterization data, source water physical data, intake structure date & velocity information.
- **Maintenance:** Visual inspection once per **6 months** to ensure required design & construction technologies are maintained & operated to function as designed. Report down time.
- **Velocity:** Measure velocity at point of entry, or measure head loss for surface screens. **Frequency based on Velocity Table.**
  - Velocity  $<0.300$  = Quarterly;  $0.300 - 0.38$  = Monthly;  $>0.38$  = Daily
  - Permit Limit: Maximum of 0.5ft/s

# COOLING WATER INTAKE STRUCTURES

Built after 7/17/2006 with intake greater than 2million gpd, 25% used for cooling

## Fixed Facilities **without Sea Chests**

- **Entrainment:** Sampling required one, two, or three times per year based on depth, or submission of SEAMAP data.

| Intake Screen or Opening<br>Located Below Water Surface | < = 100 Meters (M)                                        | > 100 M, but < =<br>200 M  | >200 M         |
|---------------------------------------------------------|-----------------------------------------------------------|----------------------------|----------------|
| Frequency                                               | 3 Samples/Year                                            | 2 Samples/Year             | 1 Sample/Year  |
| Months                                                  | March or April, and June,<br>and December                 | March or April and<br>June | March or April |
| Reporting                                               | Entrainment per Sample Event and Total Annual Entrainment |                            |                |

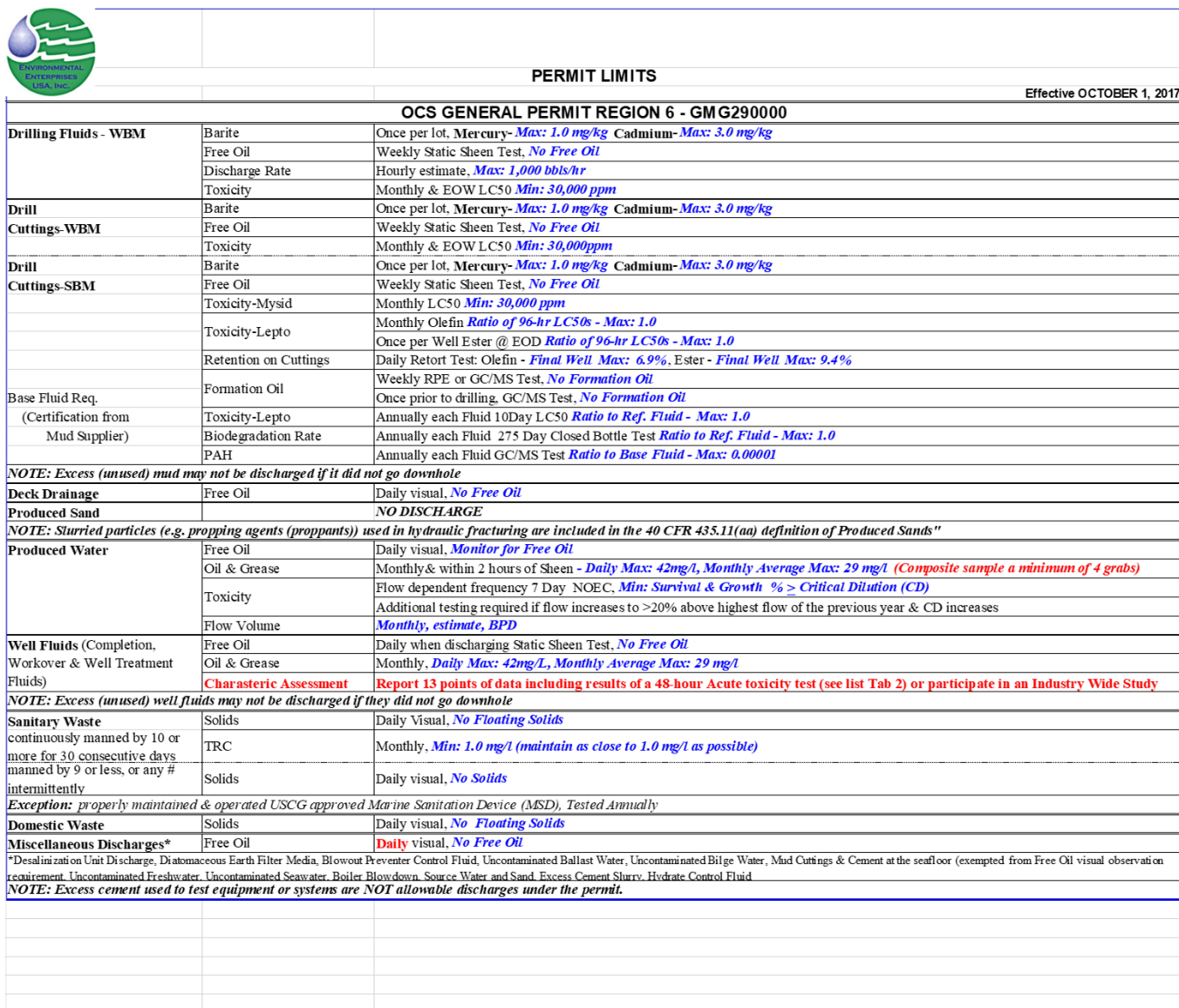
- **Additional Reporting:**
  - Number of fish/shellfish impinged & estimated area of blockage for each screen.
  - Number of days maximum intake velocity is greater than 0.5 ft/s.
  - Reporting now only required once per year in a written report to EPA, due by March 31 following the monitoring period.
  - DMR now only includes reporting failure to conduct semi-annual visual inspections

# OTHER NPDES DISCHARGES – ALL OPERATIONS

## PIT OR TANK CLEAN OUT

Dispersant, surfactant and detergent discharges must be minimized except as necessary to comply with the safety requirements of the Occupational Safety and Health Administration (OSHA) and the Minerals Management Service (currently known as BOEMRE)

Waste water associated with tank and pit cleaning operations shall be classified the same as the former contents of the tank or pit (i.e. wash water generated from cleaning drilling fluid pits would be subject to drilling fluid limitations). Waste water is deemed to have the same compliance status as the whole fluid that was originally in the tank or pit. **No additional sampling or monitoring of the waste water is required.**





# PERMIT LIMITS

Effective OCTOBER 1, 2017

## OCS GENERAL PERMIT REGION 6 - GMG290000

|                                                                                                                                                                                                                                                                                                                                                                       |                         |                                                                                                                                                                                                                                                                                                                |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Misc. Disc: Subsea**                                                                                                                                                                                                                                                                                                                                                  | Free Oil                | Daily visual, <b>No Free Oil</b>                                                                                                                                                                                                                                                                               |
|                                                                                                                                                                                                                                                                                                                                                                       | Toxicity                | 7 Day NOEC, once/yr for each fluid, <b>Survival &amp; Growth Min: 50 mg/l</b>                                                                                                                                                                                                                                  |
| **Subsea Wellhead Preservation Fluids, Subsea Production Control Fluid, Umbilical Steel Tube Storage Fluid, Leak Tracer Fluid, Riser Tensioner Fluid                                                                                                                                                                                                                  |                         |                                                                                                                                                                                                                                                                                                                |
| Misc. Disc: Pipeline Brines<br>(Applied as preservation fluid)                                                                                                                                                                                                                                                                                                        | Free Oil                | Prior to application, Static Sheen Test, <b>No Free Oil</b>                                                                                                                                                                                                                                                    |
|                                                                                                                                                                                                                                                                                                                                                                       | Oil & Grease            | Prior to application, <b>Result &lt;29 mg/l</b>                                                                                                                                                                                                                                                                |
|                                                                                                                                                                                                                                                                                                                                                                       | Toxicity                | <b>Prior to application: Discharges &gt;48 hours - 7 Day Chronic NOEC, Min: Survival &amp; Growth % <math>\geq</math>Critical Dilution determined by CORMIX 7 modeling, Discharges 48 hrs or less - 48 Hour Acute NOEC, Min: Survival % <math>\geq</math>Critical Dilution determined by CORMIX 7 modeling</b> |
| Misc. Disc: Hydrate Inhibitors                                                                                                                                                                                                                                                                                                                                        | Toxicity                | Prior to discharge 7 Day NOEC, <b>Min: Survival &amp; Growth % <math>\geq</math>Critical Dilution determined by CORMIX 7 modeling</b>                                                                                                                                                                          |
|                                                                                                                                                                                                                                                                                                                                                                       |                         | Added to Produced Water - <b>No additional testing required</b>                                                                                                                                                                                                                                                |
|                                                                                                                                                                                                                                                                                                                                                                       |                         | Added to a Miscellaneous Discharge - <b>Test per Miscellaneous Discharge requirement (see pg. 28 of the permit)</b>                                                                                                                                                                                            |
|                                                                                                                                                                                                                                                                                                                                                                       |                         | If discharge of methanol is < 20 bbls per 7-day period - <b>No testing required</b>                                                                                                                                                                                                                            |
| Misc. Disc: AFFF                                                                                                                                                                                                                                                                                                                                                      | Testing & Certification | If discharge of ethylene glycol is < 200bbls per 7-day period - <b>No testing required</b>                                                                                                                                                                                                                     |
|                                                                                                                                                                                                                                                                                                                                                                       | Emergency               | Minimize use; and use a substitute foaming agent (i.e. non-fluorinated) if possible                                                                                                                                                                                                                            |
|                                                                                                                                                                                                                                                                                                                                                                       |                         | Not subject to permit limitations during emergency situations                                                                                                                                                                                                                                                  |
| Chemically Treated Waters                                                                                                                                                                                                                                                                                                                                             | Free Oil                | Daily visual, <b>No Free Oil</b>                                                                                                                                                                                                                                                                               |
| Miscellaneous Discharge                                                                                                                                                                                                                                                                                                                                               | Toxicity                | Flow dependent, 48hr NOEC, <b>Min: Survival % <math>\geq</math>Critical Dilution</b>                                                                                                                                                                                                                           |
|                                                                                                                                                                                                                                                                                                                                                                       |                         | Additional testing required if flow increases to >20% above highest flow of the year & CD increases.                                                                                                                                                                                                           |
|                                                                                                                                                                                                                                                                                                                                                                       | Volume                  | Monthly estimate, <b>BPD</b>                                                                                                                                                                                                                                                                                   |
| ***Excess seawater which permits the continuous operation of fire control & utility lift pumps; Excess seawater from pressure maintenance & secondary recovery projects; Water released during training of personnel in fire protection; Seawater used to pressure test new & existing piping & pipelines; Ballast water; and Once through non-contact cooling water. |                         |                                                                                                                                                                                                                                                                                                                |
| Painting & Sandblasting                                                                                                                                                                                                                                                                                                                                               | BMP                     | Required - Report BMP in place and being followed on each lease where activity occurs                                                                                                                                                                                                                          |
|                                                                                                                                                                                                                                                                                                                                                                       | API RP91                | <b>Not yet approved for use by EPA</b>                                                                                                                                                                                                                                                                         |
| Cooling Water: for new facilities built after 7/17/06 Non-Fixed Facilities built after 7/17/06 & Fixed Facilities built after 7/17/06 with Sea Chests                                                                                                                                                                                                                 | Information Collection  | Maintain Source Water Physical Data, Intake Structure Data, & Velocity Information                                                                                                                                                                                                                             |
|                                                                                                                                                                                                                                                                                                                                                                       | Maintenance             | Visual inspection <b>once per 6 months</b> to ensure required design & construction technologies are maintained & operated to function as designed. Report down time.                                                                                                                                          |
|                                                                                                                                                                                                                                                                                                                                                                       | Velocity                | Measure velocity at point of entry, or measure head loss for surface screens, Frequency based on Velocity Table* <b>Max: 0.5ft/s or less</b>                                                                                                                                                                   |
|                                                                                                                                                                                                                                                                                                                                                                       | Additional Reporting    | Number of fish/shellfish impinged & estimated area of blockage for each screen                                                                                                                                                                                                                                 |
| Cooling Water: for new facilities built after 7/17/06 Fixed Facilities built after 7/17/06 without Sea Chests                                                                                                                                                                                                                                                         | Additional Reporting    | Number of days maximum intake velocity is greater than 0.5 ft/s                                                                                                                                                                                                                                                |
|                                                                                                                                                                                                                                                                                                                                                                       |                         | Maintain Source Water Baseline Biological Characterization Data, Source Water Physical Data, Intake Structure Data, & Velocity Information                                                                                                                                                                     |
|                                                                                                                                                                                                                                                                                                                                                                       |                         | Visual inspection <b>once per 6 months</b> to ensure required design & construction technologies are maintained & operated to function as designed. Report down time.                                                                                                                                          |
|                                                                                                                                                                                                                                                                                                                                                                       |                         | Measure velocity at point of entry, or measure head loss for surface screens, <b>Frequency based on Velocity Table*, Max: 0.5ft/s or less</b>                                                                                                                                                                  |
|                                                                                                                                                                                                                                                                                                                                                                       | Entrainment             | <b>Sampling required one, two or three times per year based on depth, OR submission of SEAMAP data</b>                                                                                                                                                                                                         |
| Additional Reporting                                                                                                                                                                                                                                                                                                                                                  | Additional Reporting    | Number of fish/shellfish impinged & estimated area of blockage for each screen                                                                                                                                                                                                                                 |
|                                                                                                                                                                                                                                                                                                                                                                       |                         | Number of days maximum intake velocity is greater than 0.5 ft/s                                                                                                                                                                                                                                                |

\*Velocity <0.300 = Quarterly; 0.300-0.38 = Monthly; >0.38 = Daily)

### IMPORTANT NOTES:

- 1) New eNOIs (electronic only) are required by April 1, 2018 to continue coverage under the GMG290000 permit. Until the time an eNOI is successfully submitted, coverage continues under the 2012 permit (up until 4/1/18 only). If no eNOI is submitted, coverage will be automatically terminated by EPA). Operator Permit numbers (GMG29####) will remain the same, but each facility will be assigned a unique Permitted Feature number. (formerly known as lease block outfall number).
- 2) Coverage & reporting will be done by each facility (i.e. platform, MODU or sub sea well) within a lease block [MODU's working multiple wells for the same operator can submit 1 NOI for a lease area block]
- 3) First 2017 permit DMR submittal in NetDMR only (no paper forms) is due May 30, 2018 (reporting data through March 31, 2018)





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