

# Texas Commission on Environmental Quality

P.O. Box 13087 Austin, Texas 78711-3087



## GENERAL PERMIT TO DISCHARGE WASTES ASSOCIATED WITH OIL AND GAS EXTRACTION ACTIVITIES

under provisions of Chapter 26 of the Texas Water Code

This general permit is a state-only discharge general permit developed to authorize discharges under the State of Texas regulatory authority.

Separate U.S. Environmental Protection Agency (EPA) authorization is required to be obtained under National Pollutant Discharge Elimination System (NPDES) General Permit No. GMG290000 or an individual NPDES permit.

Wastes associated with oil and gas extraction activities located in the State of Texas, may be discharged into the Gulf of Mexico greater than three statute miles and within 10.357 statute miles from the Texas coastline as designated in the *Texas Surface Water Quality Standards*, only according to effluent and stock limitations, monitoring requirements, and other conditions set forth in this general permit, as well as the rules of the Texas Commission on Environmental Quality (TCEQ or Commission), the laws of the State of Texas, and other orders of the TCEQ. The issuance of this general permit does not grant the permittee the right for any violation of federal, state, or local laws or regulations.

This state-only discharge general permit and the authorization contained herein shall expire at midnight five years from the effective date.

EFFECTIVE DATE: *January 17, 2024*

ISSUED DATE: *January 17, 2024*

  
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For the Commission

TCEQ GENERAL PERMIT NUMBER WQG280000 RELATING TO DISCHARGES  
OF WASTES ASSOCIATED WITH OIL AND GAS EXTRACTION ACTIVITIES

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## **Part I. Definitions**

The following words and terms, for the purposes of this general permit, shall have the following meanings.

**Analytical methods for the oil and gas extraction point source category** – The EPA document “Analytical Methods for the Oil and Gas Extraction Point Source Category”, December 2011, EPA-821-R-11-004, that compiles analytical methods for Offshore Oil and Gas Extraction point source discharges.

**Areas of biological concern** – A portion of the Outer Continental Shelf in the Gulf of Mexico identified by EPA, in consultation with the U.S. Department of Interior as containing potentially productive or unique biological communities or as being potentially sensitive to discharges associated with oil and gas activities.

**Bacteria concentration (Enterococci, or Fecal Coliform)** – Colony Forming Units (CFU) or Most Probable Number (MPN) of bacteria per 100 milliliters effluent. The daily average bacteria concentration is a geometric mean of the values for the effluent samples collected in a calendar month. The geometric mean shall be determined by calculating the  $n$ th root of the product of all measurements made in a calendar month, where  $n$  equals the number of measurements made; or, computed as the antilogarithm of the arithmetic mean of the logarithms of all measurements made in a calendar month. For any measurement of bacteria equaling zero, a substituted value of one shall be made for input into either computation method.

**Ballast/bilge water** – Seawater added or removed to maintain proper draft (ballast water) or water from a variety of sources that accumulates in the lowest part of the vessel/facility (bilge water).

**Base fluid** – The continuous phase or suspending medium of a drilling fluid formulation.

**Base fluid retained on cuttings** – The “Determination of the Amount of Non-Aqueous Drilling Fluid (NAF) Base Fluid from Drill Cuttings by a Retort Chamber (Derived from API Recommended Practice 13B-2)”, EPA Method 1674, which is published as in Appendix 7 to 40 Code of Federal Regulation (CFR) Part 435, Subpart A and in “Analytical Methods for the Oil and Gas Extraction Point Source Category”, EPA-821-R-11-004, December 2011, Section 8.

**Biodegradation rate** – As applied to effluent limitations established in this state-only discharge general permit for drilling fluids and drill cuttings refers to the “Protocol for Determination of Degradation of Non-

Aqueous Base Fluids in a Marine Closed Bottle Biodegradation Test System: Modified ISO 11734:1995”, EPA Method 1647, supplemented with “Procedures for Mixing Base Fluids Sediments”, EPA Method 1646. Both EPA Methods 1646 and 1647 are published in Appendix 3 (EPA Method 1646) and Appendix 4 (EPA Method 1647) to 40 CFR Part 435, Subpart A and in “Analytical Methods for the Oil and Gas Extraction Point Source Category”, EPA 821-R-11-004, December 2011, Section 4 (EPA Method 1646) and Section 5 (EPA Method 1647).

**Blow-out preventer control fluid** – Fluid used to actuate the hydraulic equipment on the blow-out preventer. This includes fluid from the subsea wireline “grease-head”.

**Boiler blowdown** – Discharges from boilers necessary to minimize solids build-up in the boilers, including vents from boilers and other heating systems.

**C<sub>12</sub> – C<sub>14</sub> ester and C<sub>8</sub> ester** – The fatty acid/2-ethylhexyl esters with carbon chain lengths ranging from 8 to 16 and represented by the Chemical Abstracts Service (CAS) No. 135800-37-2.

**C<sub>16</sub> – C<sub>18</sub> internal olefin** – A 65/35 blend, proportioned by mass, of hexadecene and octadecene, respectively. Hexadecene is an unsaturated hydrocarbon with a carbon chain length of 16, an internal double carbon bond, and is represented by the Chemical Abstracts Service (CAS) No. 26952-14-7. Octadecene is an unsaturated hydrocarbon with a carbon chain length of 18, an internal double carbon bond, and is represented by the Chemical Abstracts Service (CAS) No. 27070-58-2.

**C<sub>16</sub> – C<sub>18</sub> internal olefin drilling fluid** – A C<sub>16</sub> – C<sub>18</sub> internal olefin drilling fluid formulated as specified in Appendix 8 of 40 CFR Part 435, Subpart A and in “Analytical Methods for the Oil and Gas Extraction Point Source Category”, EPA 821-R-11-004, December 2011, Section 10.

**Composite Sample** – A composite sample is a sample made up of a minimum of three effluent portions collected in a continuous 24-hour period or during the period of daily discharge if less than 24 hours, and combined in volumes proportional to flow, and collected at the intervals required by 30 TAC §319.9(c).

**Contaminated miscellaneous discharges** – Diatomaceous earth filter media; blowout preventer control fluid; ballast water; bilge water; freshwater discharge; sea water discharge; desalination unit discharge; boiler blowdown; source water and sand; excess cement slurry; and unused cement slurry which receive treatment via the use of treatment chemicals or come into contact with oil or petroleum waste.

**Daily average flow** – The arithmetic average of all determinations of the daily flow within a period of one calendar month. The daily average flow determination shall consist of determinations made on at least four separate days. If instantaneous measurements are used to determine the daily flow, the determination shall be the arithmetic average of all instantaneous measurements taken during that month. Daily average flow determination for intermittent discharges shall consist of a minimum of three flow determinations on days of discharge.

**Daily average limitations** – The arithmetic average of results of analyses for a parameter from a minimum of four samples of the discharges that occur in a single calendar month. When results of analyses of four samples are not available in a single calendar month, the arithmetic average of the most recent results, not to exceed four, must be reported as the daily average.

**Daily maximum flow** – The highest total flow for any 24-hour period in a calendar month.

**Daily maximum limitations** – The maximum value measured on a single day within a single calendar month as established by the unit of measurement. pH daily maximum limitations are established as a minimum and maximum range.

**De-minimis discharge** – A small unmeasurable amount of non-aqueous based drilling fluid allowed to be discharged by this state-only discharge general permit.

**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 40 CFR Part 435, Subpart A (Oil and Gas Extraction Point Source Category – Offshore Subcategory).

**Desalination unit discharge** – Wastewater associated with the process of creating freshwater from seawater.

**Development facility** – Any fixed or mobile structure that is engaged in the drilling of productive wells.

**Dewatering effluent** – Wastewater from drilling fluids and drill cuttings dewatering activities (including but not limited to reserve pits or other tanks or vessels, and chemical or mechanical treatment occurring during the drilling solids separation/recycle/disposal process).

**Diatomaceous earth filter media** – Filter media used to filter seawater or other authorized completion fluids and subsequently washed from the filter.

**Diesel oil** – The grade of distillate fuel oil, as specified in the American Society for Testing and Materials (ASTM) Standard Specification for Diesel Fuel Oils D975-91, that is typically used as the continuous phase in conventional oil-based drilling fluids.

**Discharge** – Deposit, conduct, drain, emit, throw, run, allow to seep, or otherwise release or dispose of, or to allow, permit, or suffer any of these acts or omissions.

**Domestic waste** – The materials discharged from sinks, showers, laundries, safety showers, eye-wash stations, hand-wash stations, fish cleaning stations, and galleys located within facilities subject to 40 CFR Part 435, Subpart A (Oil and Gas Extraction Point Source Category – Offshore Subcategory).

**Drill cuttings** – The particles generated by drilling into subsurface geologic formations including cured cement and carried out from the wellbore with the drilling fluid. Examples of drill cuttings include small pieces of rock varying in size and texture from fine silt to gravel. Drill cuttings are generally generated from solids control equipment and settle out and accumulate in quiescent areas in the solids control equipment or other equipment processing drilling fluid (i.e., accumulated solids).

**Drilling fluid** – The circulating fluid (mud) used in the rotary drilling of wells to clean and condition the hole and to counterbalance formation pressure.

**Dry drill cuttings** – The residue remaining in the retort vessel after completing the retort procedure specified in EPA Method 1674, which is published in Appendix 7 to 40 CFR Part 435, Subpart A and in “Analytical Methods for the Oil and Gas Extraction Point Source Category”, EPA 821-R-11-004, December 2011, Section 8.

**Enhanced mineral oil** – As applied to enhanced mineral oil-based drilling fluid means a petroleum distillate which has been highly purified and is distinguished from diesel oil and conventional mineral oil in having a lower polycyclic aromatic hydrocarbon (PAH) content. Typically, conventional mineral oils have a PAH content on the order of 0.35 weight percent expressed as phenanthrene, whereas enhanced mineral oils typically have a PAH content of 0.001 or lower of weight percent PAH expressed as phenanthrene.

**Enhanced mineral oil-based** – The continuous phase of the drilling fluid is enhanced mineral oil.

**End of well sample** – The sample taken after the final log run is completed and prior to bulk discharge.

**Excess cement slurry** – The excess mixed cement, including additives and wastes from equipment washdown, after a cementing operation.

**Exploratory facility** – Any fixed or mobile structure subject to 40 CFR Part 435, Subpart A (Oil and Gas Extraction Point Source Category - Offshore Subcategory) that is engaged in the drilling of wells to determine the nature of potential hydrocarbon reservoirs.

**Facility** – For the purposes of this state-only discharge general permit, a facility includes a Development Facility, an Exploratory Facility, or a Production Facility located in the Gulf of Mexico between 3.0 and 10.357 statute miles from the Texas coastline.

**Formation oil** – The oil from a hydrocarbon bearing formation and other oil which might enter the drilling fluid which is detected in the drilling fluid, as determined by the gas chromatography mass spectrometry (GC/MS) compliance assurance method, EPA Method 1655, when the drilling fluid is analyzed before being shipped offshore, and determined by the RPE method, EPA Method 1670, when the drilling fluid is analyzed at the offshore point of discharge. The GC/MS compliance assurance method and the RPE method approved for use with this state-only discharge general permit are published in Appendix 5 (EPA Method 1655) and Appendix 6 (EPA Method 1670) of 40 CFR Part 435, Subpart A, and in “Analytical Methods for the Oil and Gas Extraction Point Source Category”, EPA-821-R-11-004, December 2011, Section 6 (EPA Method 1655) and Section 7 (EPA Method 1670). Detection of formation oil by the RPE method may be confirmed by the GC/MS compliance assurance method, and the results of the GC/MS compliance assurance method shall supersede the RPE method.

**Formation test fluids** – The discharge that would occur if hydrocarbons are located during exploratory drilling and tested for formation pressure and content.

**Freshwater discharge** – Freshwater which is discharged. Included are (1) discharges of excess freshwater that permit the continuous operation of fire control and utility lift pumps, (2) excess freshwater from pressure maintenance and secondary recovery projects, and (3) water released during training and testing of personnel in fire protection, potable water and off-specification potable water.

**General permit** – A permit issued under the provisions of Title 30 Texas Administrative Code (TAC) Chapter 205, authorizing the discharge of waste into water in the state for one or more categories of waste discharge within a geographical area of the state or the entire state as provided by Texas Water Code (TWC), § 26.040.

**Grab sample** – An individual sample collected in less than 15 minutes.

**Hydrate control fluids or “Hydrate Inhibitors”** – Fluids used to prevent, retard, or mitigate the formation of hydrates in and on drilling equipment, process equipment, and piping.

**Hydrostatic test water** – Water resulting from testing the hydraulic and structural integrity of a vessel by either introducing water into the vessel or submerging the empty vessel in water.

**Inverse emulsion drilling fluid** – An oil-based drilling fluid which also contains a large amount of raw water.

**Land application** – The spraying or spreading of wastewater onto the land surface or the incorporation of wastewater into the soil in a way that causes no nuisance conditions and that uses the wastewater to either condition the soil or fertilize crops or vegetation grown in the soil.

**Live bottom areas** – Those areas which contain biological assemblages consisting of such sessile invertebrates as sea fans, sea whips, hydroids, anemones, ascidians sponges, bryozoans, seagrasses, or corals living upon and attached to naturally occurring hard or rocky formations with fishes and other fauna.

**M9IM** – An Outer Continental Shelf facility continuously manned by nine (9) or fewer persons or only intermittently manned by any number of persons.

**M10** – An Outer Continental Shelf facility continuously manned by ten (10) or more persons.

**Maximum** – As applied to drilling fluids and drill cuttings effluent/stock limitations established in this state-only discharge general permit means the maximum concentration allowed as measured in any single sample of the barite for determination of cadmium and mercury content.

**Maximum weighted mass ratio averaged over all NAF well sections** – For effluent limitations established in this state-only discharge general permit for base fluid retained on cuttings means the weighted average base fluid retention for all NAF well sections as determined by the modified API Recommended Practice 13B-2, using methods and averaging calculations presented in Appendix 7 of 40 CFR Part 435, Subpart A, EPA Method 1674, and in “Analytical Methods for the Oil and Gas Extraction Point Source Category”, EPA-821-R-11-004, December 2011, Section 8.

**Method 1654A** – Refers to the method “PAH Content of Oil by High Performance Liquid Chromatography with a UV Detector”, which was



published in “Methods for the Determination of Diesel, Mineral and Crude Oils in Offshore Oil and Gas Industry Discharges”, EPA-821-R-92, EPA Method 1654, Revision A, entitled “PAH Content of Oil by HPLC/UV”, December 1992, and in “Analytical Methods for the Oil and Gas Extraction Point Source Category”, EPA-821-R-11-004, December 2011, Section 9.

**Minimum** – As applied to drilling fluids and drill cuttings effluent limitations established in this state-only discharge general permit means the minimum 96-hour LC<sub>50</sub> allowed as measured in any single sample of the discharged waste stream. Minimum as applied to sanitary waste and domestic waste effluent limitations established in this state-only discharge general permit means the minimum concentration value allowed as measured in any single sample of the discharged waste stream.

**Muds, cuttings, and cement at the seafloor** – Discharges that occur at the seafloor prior to installation of the marine riser and during marine riser disconnect, well abandonment and plugging operations. Also included are discharges of drilling fluid and cuttings associated with the operation of a subsea drilling fluid pump.

**Non-aqueous drilling fluid (NAF)** – The continuous phase and suspending medium for solids is a water-immiscible fluid, such as oleaginous materials (e.g., mineral oil, enhanced mineral oil, paraffinic oil, C<sub>16</sub> - C<sub>18</sub> internal olefins, and C<sub>8</sub> - C<sub>16</sub> fatty acid/2-ethylhexyl esters).

**No discharge of free oil** – That waste streams may not be discharged that contain free oil as evidenced by the monitoring method for that particular waste stream, e.g., deck drainage or miscellaneous discharges cannot be discharged when they would cause a film or sheen upon or discoloration of the surface of the receiving water; drilling fluids or drill cuttings, and well treatment, completion, and workover fluids may not be discharged when they fail the static sheen test defined in Appendix 1 of 40 CFR Part 435, Subpart A, EPA Method 1617 (Static Sheen Test), and in “Analytical Methods for the Oil and Gas Extraction Point Source Category”, EPA-821-R-11-004, December 2011, Section 2.

**Notice of change (NOC)** – A written submission to the Executive Director from a permittee authorized under a general permit, providing information on changes to information previously provided to the Commission, or any changes with respect to the nature or operations of the regulated entity or the characteristics of the discharge.

**Notice of intent (NOI)** – A written submission to the Executive Director from an applicant requesting authorization under the terms of a general permit.

**Notice of termination (NOT)** – A written submission to the Executive Director from a permittee authorized under a general permit requesting termination of authorization.

**Oil-based** – The continuous phase of the drilling fluid consists of diesel oil, mineral oil, or some other oil, but contains no synthetic material or enhanced mineral oil.

**Operator** – The person responsible for the overall operation of a facility.

**Outer Continental Shelf Facility** – For the purpose of this general permit, an oil and gas extraction facility subject to 40 CFR Part 435, Subpart A and is located in the Gulf of Mexico between 3.0 and 10.357 statute miles from the Texas coastline.

**Owner** – The person who owns a facility or part of a facility.

**Packer fluids** – Low solids fluids between the packer, production string and well casing. They are considered to be workover fluids.

**PAH (as phenanthrene)** – Polynuclear aromatic hydrocarbons reported as phenanthrene with approved methods of analysis in Table 1B at 40 CFR § 136.3.

**Permittee** – Any person issued an individual permit, order, or is authorized by a general permit.

**Produced sand** – The slurried particles used in hydraulic fracturing, the accumulated formation sands and scales particles generated during production. Produced sand also includes desander discharge from the produced wastewater stream, and blowdown of the water phase from the produced wastewater treating system.

**Produced wastewater** – The water (brine) brought up from the hydrocarbon-bearing strata during the extraction of oil and gas, and can include formation water, injection water, and any chemicals added downhole or during the oil/water separation process.

**Production facility** – Any fixed or mobile structure subject to 40 CFR Part 435, Subpart A (Oil and Gas Extraction Point Source Category – Offshore Subcategory) that is either engaged in well completion or used for active recovery of hydrocarbons from producing formations. This

includes facilities that are engaged in hydrocarbon fluids separation even if located separately from wellheads.

**Sanitary waste** – The human body waste discharged from toilets and urinals located within facilities subject to 40 CFR Part 435, Subpart A (Oil and Gas Extraction Point Source Category – Offshore Subcategory).

**Seawater discharge** – Seawater which is returned to the sea. Included are (1) discharges of excess seawater which permit the continuous operation of fire control and utility lift pumps, (2) excess seawater from pressure maintenance and secondary recovery projects, (3) water released during the training and testing of personnel in fire protection, and (4) once through non-contact cooling water.

**Sediment toxicity** – As applied to effluent limitations established in this state-only discharge general permit for drilling fluids and drill cuttings refers to EPA Method 1644: “Method for Conducting a Sediment Toxicity Test with *Leptocheirus plumulosus* and Non-Aqueous Drilling Fluids or Synthetic-Based Drilling Muds” and sediment preparation procedures specified in EPA Method 1646. EPA Method 1644 is published in “Analytical Methods for the Oil and Gas Extraction Point Source Category”, EPA-821-R-11-004, December 2011, Section 10; and EPA Method 1646 is published in Appendix 3 to 40 CFR Part 435, Subpart A, and Analytical Methods for the Oil and Gas Extraction Point Source Category”, EPA-821-R-11-004, December 2011, Section 4.

**Sheen** – A silvery or metallic sheen, gloss, or increased reflectivity, visual color or iridescence on the water surface.

**Site** – For the purposes of this state-only discharge general permit, the water area where any facility or activity is physically located or conducted.

**Solids control equipment** – Shale shakers, centrifuges, mud cleaners, and other equipment used to separate drill cuttings and/or stock barite solids from drilling fluid recovered from the wellbore.

**Source water and sand** – Water from non-hydrocarbon bearing formations for the purpose of pressure maintenance or secondary recovery including entrained solids.

**Suspended Particulate Phase (SPP) toxicity** – As applied to effluent limitations established in this state-only discharge general permit for drilling fluids and drill cuttings refers to the bioassay test procedure, “Suspended Particulate Phase (SPP) Toxicity Test”, presented in EPA Method 1619, which is published in Appendix 2 to 40 CFR Part 435,

Subpart A and in “Analytical Methods for the Oil and Gas Extraction Point Source Category”, EPA 821-R-11-004, December 2011, Section 3.

**Static sheen test** – The standard test procedure that has been developed for Offshore Oil and Gas Extraction Point Source Category facilities for the purpose of demonstrating compliance with the requirement of no discharge of free oil. The methodology for performing the static sheen test, EPA Method 1617 is presented in Appendix 1 of 40 CFR Part 435, Subpart A, and in “Analytical Methods for the Oil and Gas Extraction Point Source Category”, EPA 821-R-11-004, December 2011, Section 2.

**Stock barite** – The barite that was used to formulate a drilling fluid.

**Stock base fluid** – The base fluid that was used to formulate a drilling fluid.

**Synthetic-based** – The continuous phase of the drilling fluid is a synthetic material or a combination of synthetic materials.

**Synthetic material** – As applied to synthetic-based drilling fluid means material produced by the reaction of specific purified chemical feedstock, as opposed to the traditional base fluids such as diesel and mineral oil which are derived from crude oil solely through physical separation processes. Physical separation processes include fractionation and distillation and/or minor chemical reactions such as cracking and hydro processing. Since they are synthesized by the reaction of purified compounds, synthetic materials suitable for use in drilling fluids are typically free of polycyclic aromatic hydrocarbons (PAH's) but are sometimes found to contain levels of PAH up to 0.001 weight percent PAH expressed as phenanthrene. Internal olefins and vegetable esters are two examples of synthetic materials suitable for use by the oil and gas extraction industry in formulating drilling fluids. Internal olefins are synthesized from the isomerization of purified straight chain (linear) hydrocarbons such as C<sub>16</sub> - C<sub>18</sub> linear alpha olefins. C<sub>16</sub> - C<sub>18</sub> linear alpha olefins are unsaturated hydrocarbons with the carbon-to-carbon double bond in the terminal position. Internal olefins are typically formed from heating linear alpha olefins with a catalyst. The feed material for synthetic linear alpha olefins is typically purified ethylene. Vegetable esters are synthesized from the acid-catalyzed esterification of vegetable fatty acids with various alcohols. These two branches of synthetic based materials are provided as examples, and the state-only discharge general permit does not exclude other synthetic materials that are either in current use or may be used in the future. A synthetic-based drilling fluid may include a combination of synthetic materials.

**Territorial seas** – The belt of seas measured from the line of ordinary low water along that portion of the coast which is in direct contact with the open sea and the line marking the seaward limit of inland waters and extending seaward a distance of three miles.

**Texas Pollutant Discharge Elimination System (TPDES)** – The state program for issuing, amending, terminating, monitoring, and enforcing permits, and imposing and enforcing pretreatment requirements, under the Clean Water Act (CWA) §§ 307, 402, 318, and 405, the Texas Water Code, and Title 30 of the TAC regulations. This state-only discharge general permit is not under authority of the TPDES program.

**Treatment chemicals** – Biocides, corrosion inhibitors, or other chemicals which are used to treat wastewater. Non-toxic scale inhibitors, dyes, and chlorine/bromine used for disinfection or biological growth control are not considered treatment chemicals for the purpose of this state-only discharge general permit.

**Uncontaminated miscellaneous discharges** – Diatomaceous earth filter media; blowout preventer control fluid; ballast water; bilge water; muds, cuttings, and cement at the sea floor; freshwater discharge; sea water discharge; desalination unit discharge; boiler blowdown; source water and sand; excess cement slurry; and unused cement slurry which do not receive treatment via the use of treatment chemicals or come into contact with oil or petroleum waste.

**Unused cement slurry** – Cement slurry used for testing of equipment or resulting from cement specification changes or equipment failure during the cementing job.

**Water area** – The water area and Gulf of Mexico floor beneath any exploratory, development, or production facility where such facility is conducting its exploratory, development, or production activities.

**Water in the State** – Groundwater, percolating or otherwise, lakes, bays, ponds, impounding reservoirs, springs, rivers, streams, creeks, estuaries, wetlands, marshes, inlets, canals, the Gulf of Mexico inside the territorial limits of the state, and all other bodies of surface water, natural or artificial, inland or coastal, fresh or salt, navigable or non-navigable, and including the beds and banks of all watercourses and bodies of surface water, that are wholly or partially inside or bordering the state or inside the jurisdiction of the state. For the purposes of this state-only discharge general permit, discharges to water in the state are only authorized to the Gulf of Mexico in Texas waters located between 3.0 and 10.357 statute miles from the Texas coastline.

**Water-based drilling fluid** – The continuous phase and suspending medium for solids is a water-miscible fluid, regardless of the presence of oil.

**Well completion fluids** – Salt solutions, weighted brines, polymers, and various additives used to prevent damage to the well bore during operations which prepare the drilled well for hydrocarbon production. These fluids move into the formation and return to the surface as a slug with the produced wastewater. Drilling muds remaining in the wellbore during logging, casing, and cementing operations or during temporary abandonment of the well are not considered well completion fluids and are regulated by drilling fluids requirements.

**Well treatment fluids** – Any fluid used to restore or improve productivity by chemically or physically altering hydrocarbon-bearing strata after a well has been drilled. These fluids move into the formation and return to the surface as a slug with the produced wastewater.

**Wet drill cuttings** – The unaltered drill cuttings and adhering drilling fluid and formation oil carried out from the wellbore with the drilling fluid.

**Workover fluids** – Salt solutions, weighted brines, polymers, or other specialty additives used in a producing well to allow safe repair and for maintenance, repair, or abandonment procedures. High solids drilling fluids used during workover operations are not considered workover fluids by definition and therefore must meet drilling fluids effluent limitations before discharge may occur. Packer fluids, low solids fluids between the packer, production string and well casing, are considered to be workover fluids and must meet only the effluent requirements imposed on workover fluids.

**4-day LC<sub>50</sub>** – As applied to sediment toxicity limitations established in this state-only discharge general permit means the concentration (milligrams /kilogram dry sediment) of the drilling fluid in sediment that is lethal to 50 percent of the *Leptocheirus plumulosus* test organisms exposed to that concentration of the drilling fluids after four days of constant exposure.

**10-day LC<sub>50</sub>** – As applied to the sediment toxicity limitations established in this state-only discharge general permit means the concentration (milligrams/kilogram dry sediment) of the base fluid in sediment that is lethal to 50 percent of the *Leptocheirus plumulosus* test organisms exposed to that concentration of the base fluids after ten days of constant exposure.

**96-hour LC<sub>50</sub>** – The concentration (parts per million) or percent of the suspended particulate phase (SPP) from a sample that is lethal to 50 percent of the test organisms exposed to that concentration of the SPP after 96 hours of constant exposure.

## **Part II. Permit Applicability and Authorization**

### **Section A. Discharges Authorized**

This state-only discharge general permit authorizes the discharge of wastes associated with oil and gas extraction activities into the Gulf of Mexico from Outer Continental Shelf (OCS) Facilities.

### **Section B. Limitations on Authorization**

1. Discharges shall not be authorized by this general permit, where prohibited by applicable rules or laws.
2. This general permit does not authorize discharges adjacent to water in the state (e.g., land application or evaporation) for wastes transported onshore from oil and gas extraction activities that are regulated by the Railroad Commission of Texas (RRC).
3. The Executive Director will deny an application for authorization under this general permit and may require that the applicant apply for an individual TCEQ state-only discharge permit, if the Executive Director determines that discharge activities will not maintain existing uses of the Gulf of Mexico. Additionally, the Executive Director may cancel, revoke, or suspend authorization for discharge under this general permit based on a finding of historical and significant noncompliance with the provisions of this general permit. The Executive Director shall deny or suspend a facility's authorization for discharge under this general permit based on a rating of "unsatisfactory performer" according to Commission rules in 30 TAC § 60.3, *Use of Compliance History*. An applicant who owns or operates a facility classified as an "unsatisfactory performer" is entitled to a hearing before the Commission prior to having its authorization denied or suspended, in accordance with TWC § 26.040(h). Denial of authorization for discharge under this general permit will be done according to Commission rules in 30 TAC Chapter 205, *General Permits for Waste Discharges*.
4. This general permit does not limit the authority of a home-rule municipality as established in Texas statute.
5. New sources or new discharges [as defined in 40 CFR § 122.2, 40 CFR § 435.11(w), and 40 CFR § 435.41(x)] of the constituent(s) of

- concern to impaired areas of the Gulf of Mexico are not authorized by this general permit, unless otherwise allowable under 30 TAC Chapter 305, *Consolidated Permits*, and applicable state law. Impaired areas of the Gulf of Mexico are those that do not meet applicable water quality standard(s) and are listed as category 4 or 5 in the current version of the *Texas Integrated Report of Surface Water Quality* on the CWA § 303(d) list. Constituents of concern are those for which the areas of the Gulf of Mexico are listed as impaired.
6. Discharges of the constituent(s) of concern to impaired areas of the Gulf of Mexico where there is a total maximum daily load (TMDL) implementation plan are not eligible for authorization under this general permit, unless they are consistent with the approved TMDL and the implementation plan. The Executive Director may amend this general permit for discharges to the Gulf of Mexico. For discharges not eligible for authorization under this general permit, the discharger must apply for and receive an individual TCEQ state-only discharge permit prior to discharging.
  7. Discharges that would adversely affect a listed endangered or threatened species or its critical habitat are not authorized by this general permit. Site-specific controls may be required to ensure that protection of endangered or threatened species is achieved.
  8. This general permit does not authorize discharges from oil and gas extraction facilities other than Outer Continental Shelf Facilities located in the Gulf of Mexico between 3.0 and 10.357 statute miles from the Texas coastline. Oil and gas extraction facilities defined in 40 CFR Part 435, Subpart A - Offshore Subcategory (located within three statute miles of the Texas coastline), Subpart C - Onshore Subcategory, Subpart D - Coastal Subcategory, Subpart E - Agricultural and Wildlife Water Use Subcategory, and Subpart F - Stripper Subcategory are not eligible for authorization to discharge under this general permit.
  9. This general permit does not authorize the discharge of hydrostatic test water into the Gulf of Mexico. Oil and gas extraction facilities seeking to discharge hydrostatic test water into the Gulf of Mexico have the option of obtaining coverage under TPDES General Permit No. TXG670000 (under state-only authority) or obtaining an individual TCEQ state-only discharge permit.
  10. This general permit regulates discharges into the Gulf of Mexico (between 3.0 and 10.357 statute miles from the Texas coastline). Activities associated with oil and gas extraction activities not



associated with discharges into the Gulf of Mexico are regulated by the RRC. Such activities include, but are not limited to drilling new wells, plugging and abandoning existing wells, blowout prevention control, spill prevention, surface coatings and preparation, and other activities not associated with discharges into the Gulf of Mexico.

11. This general permit does not authorize discharges into Areas of Biological Concern, including marine sanctuaries and live bottom areas.
12. This general permit does not authorize discharges of radiological substances or materials in excess of the amount regulated by 30 TAC Chapter 336, *Radioactive Substance Rules*, as required by 30 TAC § 307.4(c).
13. This general permit does not authorize discharges from centralized waste treatment (CWT) facilities as defined in 40 CFR Part 437 that receive wastes generated from oil and gas extraction facilities. Such CWT facilities seeking authorization to discharge into water in the state must obtain an individual permit.
14. This general permit does not authorize the discharge of wastewater generated at a location where that wastewater is prohibited from discharge to waters in the U.S. from a location where that wastewater is authorized for discharge to waters in the U.S., as established in 40 CFR Part 435, Subpart G (One example of what is not allowed under this restriction is drilling fluids and drill cuttings generated at a coastal facility, where drilling fluids and drill cuttings are prohibited from discharge, being transported to, and being discharged from, an Outer Continental Shelf facility, where such discharge is authorized).
15. Discharges authorized under this general permit into the Gulf of Mexico are restricted to oil and gas extraction activities as established in 40 CFR Part 435. Other offshore activities located in the Gulf of Mexico, such as carbon sequestration drilling activities, are not authorized by this general permit and are required to obtain an individual TCEQ state-only discharge permit.

### **Section C. Application for Authorization**

1. Facilities that seek to discharge under authority of this general permit shall submit a completed Notice of Intent (NOI) on a form approved by the Executive Director. Permittees authorized to discharge via an existing RRC authorization are required to submit

- a new NOI within 90 days of the effective date of this general permit to replace that authorization and to continue authorization to discharge to the Gulf of Mexico. The NOI shall, at a minimum, include: the legal name and address of the owner and operator, the facility name and address, specific description(s) of its location in the Gulf of Mexico, type of facility or discharges, and other contents established in the NOI. Each individual discharging facility (e.g., production platform, drilling rig) is required to submit an individual NOI. This general permit does not authorize multiple discharging facilities under a lease to be combined into one NOI. Should a facility contain all waste streams and transport them to another facility for subsequent treatment, management, and discharge, such a facility is not required to submit an NOI provided there are no resulting discharges to the Gulf of Mexico from the facility.
2. Submission of an NOI is an acknowledgment that the conditions of this general permit are applicable to the proposed discharge, and that the applicant agrees to comply with the conditions of this general permit.
    - a. Provisional authorization begins 48 hours after a completed NOI is postmarked for delivery to the TCEQ. The NOI shall be submitted to the address indicated on the NOI form. If the TCEQ provides for electronic submission of NOIs during the term of this general permit, authorization begins immediately after the TCEQ confirms receipt of the electronic NOI. Following review of the NOI, the Executive Director will:
      - (i) determine that the NOI is complete and confirm authorization by providing a written notification and an authorization number;
      - (ii) determine that the NOI is incomplete and request additional information needed to complete the NOI; or
      - (iii) deny authorization in writing. Denial of authorization will be made in accordance with 30 TAC § 205.4, *Authorizations and Notices of Intent*.
  3. Authorization under this general permit is not transferable. If either the owner or operator of the regulated entity changes, then both the present owner and operator must submit a Notice of Termination (NOT) and the new owner and operator must submit an NOI. The NOT and NOI must be submitted no later than 10 days before the change.

4. If the owner or operator becomes aware that he or she failed to submit any relevant facts, or submitted incorrect information, or if relevant information provided in the NOI changes (for example, phone number, address, outfall information, type of facility or discharges, movement of a production platform or drilling rig to a new location), the correct information must be provided to the Executive Director in a Notice of Change (NOC) within 14 days after discovery.

#### **Section D. Termination of Authorization**

A permittee shall terminate authorization under this general permit through the submittal of an NOT, on a form approved by the Executive Director, when the owner or operator of the facility changes; the discharge becomes authorized under an individual permit; the use of the facility changes and is no longer subject to regulation under this general permit; or the discharge becomes unnecessary, is delayed, or is completed. Authorization to discharge terminates on the day that an NOT is postmarked for delivery to the TCEQ. If electronic submission of the NOT is provided, authorization to discharge under this general permit terminates immediately after TCEQ confirms receipt of the NOT. Compliance with the conditions and requirements of this general permit is required until an NOT is submitted.

#### **Section E. Authorization Under a TCEQ State-Only Discharge Individual Permit**

1. Discharges eligible for authorization under this general permit may alternatively be authorized under an individual TCEQ state-only discharge permit according to 30 TAC Chapter 305, *Consolidated Permits*.
2. When an individual TCEQ state-only discharge permit is issued for a discharge that is currently authorized under this general permit, the permittee shall submit an NOT to the Executive Director. Authorization to discharge terminates on the day that an NOT is postmarked for delivery to the TCEQ. If electronic submission of the NOT is provided, authorization to discharge under this general permit terminates immediately after TCEQ confirms receipt of the NOT.

#### **Section F. Permit Expiration**

1. This general permit is effective until five years from the effective date. Authorizations for discharge under the provisions of this general permit may be issued until the expiration date of the

general permit. This general permit may be amended, revoked, cancelled, or renewed by the Commission after notice and comment as provided by 30 TAC § 205.3 and § 205.5.

2. If the Commission proposes to reissue this general permit before the expiration date, the general permit shall remain in effect after the expiration date for those existing discharges covered by the general permit in accordance with 30 TAC Chapter 205. The general permit shall remain in effect for these discharges until the date on which the Commission takes final action on the proposal to reissue this general permit. However, no new authorizations may be issued under the general permit after the expiration date.
3. Upon issuance of a renewed or amended general permit, all facilities, including those covered under the expired general permit, shall submit an NOI according to the requirements of the new general permit or obtain a TCEQ state-only individual discharge permit for those discharges.
4. If the Commission does not propose to reissue this general permit within 90 days before the expiration date, permittees must apply for authorization under an individual TCEQ state-only discharge permit. If the application for an individual TCEQ state-only discharge permit is submitted before the general permit expiration date, authorization under this expiring general permit remains in effect until the issuance or denial of an individual TCEQ state-only discharge permit.

### **Part III. Permit Requirements**

#### **Section A. Effluent Limitations and Monitoring Requirements**

1. **Prohibited Discharges:** The following waste streams are prohibited from discharge to the Gulf of Mexico under the terms and conditions of this general permit.
  - a. Non- Aqueous Drilling Fluids (NAFs) – including Dewatering Effluent and Formation Test Fluids
  - b. Produced Sand
2. **Authorized Discharges:** The following waste streams are authorized for discharge to the Gulf of Mexico subject to the following effluent and stock limitations and monitoring requirements:

## a. Produced Wastewater and Hydrate Control Fluids

Parameter	Daily Maximum Limitations	Daily Average Limitations	Sample Type	Monitoring Frequency
Flow	Report, MGD	0.252 MGD	Estimate	Once/day
Free Oil <sup>1</sup>	No discharge	N/A	Observation	Once/day
Oil & Grease	42 mg/L	29 mg/L	Grab	Once/month
Carbonaceous Biochemical Oxygen Demand (5-day)	N/A	1144 mg/L	Grab	Once/month
Ammonia (as N)	N/A	112 mg/L	Grab	Once/month
Temperature	145 °F	N/A	In-Situ	Once/quarter
Total Dissolved Solids	Report mg/L	N/A	Grab	Once/quarter
Total Barium	2258 mg/L	1068 mg/L	Grab	Once/month
Benzene	Report mg/L	N/A	Grab	Once/month
Total Copper	0.194 mg/L	0.092 mg/L	Grab	Once/month
Total Manganese	18.1 mg/L	8.54 mg/L	Grab	Once/month
Total Mercury	Report, mg/L	N/A	Grab	Once/month
Total Nickel	Report, mg/L	N/A	Grab	Once/month
Total Zinc	5.40 mg/L	2.55 mg/L	Grab	Once/month
pH	6.0-9.0 standard units	N/A	Grab	Once/week
Sublethal Whole Effluent Toxicity (WET) limit (Parameter 51712) <i>Menidia beryllina</i> (Chronic NOEC <sup>2</sup> )	2.1%	2.1%	Grab	Once/quarter
Sublethal Whole Effluent Toxicity (WET) limit (Parameter 51713) <i>Americamysis bahia</i> (Chronic NOEC <sup>2</sup> )	2.1%	2.1%	Grab	Once/quarter
Lethal Whole Effluent Toxicity (WET) limit (Parameter 51712) <i>Menidia beryllina</i> (24-hour acute LC50 <sup>3</sup> )	> 100%	> 100%	Grab	Once/six months

Parameter	Daily Maximum Limitations	Daily Average Limitations	Sample Type	Monitoring Frequency
Lethal Whole Effluent Toxicity (WET) limit (Parameter 51713) <i>Americamysis bahia</i> (24-hour acute LC50 <sup>3</sup> )	> 100%	> 100%	Grab	Once/six months

- <sup>1</sup> As determined by the presence of a film or sheen upon or discoloration of the surface of the receiving water (visual sheen).
- <sup>2</sup> The NOEC is defined as the greatest effluent dilution at which no significant sublethality is demonstrated. Significant sublethality is defined as a statistically significant difference between a specified effluent dilution and the control for the sublethal endpoint. See Appendix B for conditions associated with these effluent limitations. The daily maximum limitation established above is a 7-day minimum limitation.
- <sup>3</sup> The LC50 (Lethal Concentration 50) is defined as the effluent dilution at which 50% of the organisms survive. See Appendix C for conditions associated with these effluent limitations.

b. Well Treatment, Completion, and Workover Fluids

Parameter	Daily Maximum Limitations	Daily Average Limitations	Sample Type	Monitoring Frequency
Flow	Report, MGD	Report, MGD	Estimate	Once/day
Free Oil <sup>1</sup>	No discharge	N/A	EPA Approved Method <sup>1</sup>	Once/day
Oil & Grease	42 mg/L	29 mg/L	Grab	Once/month
pH	6.0-9.0 standard units	N/A	Grab	Once/week
Lethal Whole Effluent Toxicity (WET) limit (Parameter 51712) <i>Menidia beryllina</i> (24-hour acute LC50 <sup>2</sup> )	> 100%	> 100%	Grab <sup>3</sup>	Once/six months

Parameter	Daily Maximum Limitations	Daily Average Limitations	Sample Type	Monitoring Frequency
Lethal Whole Effluent Toxicity (WET) limit (Parameter 51713) <i>Americamysis bahia</i> (24-hour acute LC50 <sup>2</sup> )	> 100%	> 100%	Grab <sup>3</sup>	Once/six months

<sup>1</sup> As determined by the static sheen test utilizing EPA Method 1617 established in Appendix 1 to 40 CFR Part 435, Subpart A and in “Analytical Methods for the Oil and Gas Extraction Point Source Category”, EPA-821-R-11-004, December 2011, Section 2.

<sup>2</sup> The LC50 (Lethal Concentration 50) is defined as the effluent dilution at which 50% of the organisms survive. See Appendix C for conditions associated with these effluent limitations.

<sup>3</sup> Should the planned or actual discharge occur for a duration of 24 hours or greater, the sample type shall be a 24-hour composite.

c. Deck Drainage

Parameter	Daily Maximum Limitations	Daily Average Limitations	Sample Type	Monitoring Frequency
Free Oil <sup>1</sup>	No discharge	N/A	Observation	Once/day

<sup>1</sup> As determined by the presence of a film or sheen upon or discoloration of the surface of the receiving water (visual sheen).

d. Domestic Waste

Parameter	Daily Maximum Limitations	Daily Average Limitations	Sample Type	Monitoring Frequency
Flow	Report, MGD	Report, MGD	Instantaneous	Five/week
Floating Solids, and Foam	No discharge	N/A	Observation	Once/day
Biochemical Oxygen Demand (5-day)	65 mg/L	20 mg/L	Grab	Once/week
Total Suspended Solids	65 mg/L	20 mg/L	Grab	Once/week
Dissolved Oxygen	2.0 mg/L (minimum)	N/A	Grab	Once/week

Parameter	Daily Maximum Limitations	Daily Average Limitations	Sample Type	Monitoring Frequency
Enterococci	130 cfu or MPN/100 mL	35 cfu or MPN/100 mL	Grab	Once/quarter
Fecal Coliform	43 cfu or MPN/100 mL	14 cfu or MPN/100 mL	Grab	Once/quarter
Total Residual Chlorine	1.0 mg/L (minimum) and 4.0 mg/L (maximum)	N/A	Grab	Five/week
pH	6.0 - 9.0 standard units	N/A	Grab	Once/day

e. Sanitary Waste (M10 and M9IM)

Parameter	Daily Maximum Limitations	Daily Average Limitations	Sample Type	Monitoring Frequency
Flow	Report, MGD	Report, MGD	Instantaneous	Five/week
Floating Solids	No discharge	N/A	Observation	Once/day
Biochemical Oxygen Demand (5-day)	65 mg/L	20 mg/L	Grab	Once/week
Total Suspended Solids	65 mg/L	20 mg/L	Grab	Once/week
Dissolved Oxygen	2.0 mg/L (minimum)	N/A	Grab	Once/week
Enterococci	130 cfu or MPN/100 mL	35 cfu or MPN/100 mL	Grab	Once/quarter
Fecal Coliform	43 cfu or MPN/100 mL	14 cfu or MPN/100 mL	Grab	Once/quarter
Total Residual Chlorine	1.0 mg/L (minimum) and 4.0 mg/L (maximum)	N/A	Grab	Five/week
pH	6.0 - 9.0 standard units	N/A	Grab	Once/day

f. Uncontaminated Miscellaneous Discharges

Parameter	Daily Maximum Limitations	Daily Average Limitations	Sample Type	Monitoring Frequency
Free Oil <sup>1</sup>	No discharge	N/A	Observation	Once/day

<sup>1</sup> As determined by the presence of a film or sheen upon or discoloration of the surface of the receiving water (visual sheen).



g. Contaminated Miscellaneous Discharges

Parameter	Daily Maximum Limitations	Daily Average Limitations	Sample Type	Monitoring Frequency
Flow	Report, MGD	N/A	Estimate	Once/month
Free Oil <sup>1</sup>	No discharge	N/A	Observation	Once/day
pH	6.0-9.0 standard units	N/A	Grab	Once/week
Lethal Whole Effluent Toxicity (WET) limit (Parameter 51712) <i>Menidia beryllina</i> (24-hour acute LC50 <sup>2</sup> )	> 100%	> 100%	Grab	Once/six months
Lethal Whole Effluent Toxicity (WET) limit (Parameter 51713) <i>Americamysis bahia</i> (24-hour acute LC50 <sup>2</sup> )	> 100%	> 100%	Grab	Once/six months

<sup>1</sup> As determined by the presence of a film or sheen upon or discoloration of the surface of the receiving water (visual sheen).

<sup>2</sup> The LC50 (Lethal Concentration 50) is defined as the effluent dilution at which 50% of the organisms survive. See Appendix C for conditions associated with these effluent limitations.

h. Water-Based Drilling Fluids and Associated Drill Cuttings (including formation test fluids and dewatering effluent)

(i) Effluent Limitations

Parameter	Daily Maximum Limitations	Daily Average Limitations	Sample Type	Monitoring Frequency
Flow <sup>1</sup>	1.008 MGD	N/A	Estimate	Once/day
Free Oil <sup>2</sup>	No discharge	N/A	EPA Approved Method <sup>2</sup>	Once/week
SPP Toxicity <sup>3</sup>	3%	N/A	EPA Approved Method <sup>3</sup>	Once/month
Diesel Oil <sup>4</sup>	No discharge	N/A	Certification	Once/month

<sup>1</sup> Limitation does not apply prior to installation of the marine riser. The Executive Director reserves the ability to establish more restrictive flow limitations based on proximity to areas of biological concern and

will notify individual discharges of such more restrictive conditions or in the alternative require an individual state-only discharge permit.

- <sup>2</sup> As determined by the static sheen test utilizing EPA Method 1617 established in Appendix 1 to 40 CFR Part 435, Subpart A and “Analytical Methods for the Oil and Gas Extraction Point Source Category”, EPA-821-R-11-004, December 2011, Section 2.
- <sup>3</sup> As determined by the Minimum 96-hour LC<sub>50</sub> of the SPP Toxicity Test by volume. Bioassay test procedure - “Suspended Particulate Phase (SPP) Toxicity Test”, EPA Method 1619 established in Appendix 2 of 40 CFR Part 435, Subpart A and “Analytical Methods for the Oil and Gas Extraction Point Source Category”, EPA-821-R-11-004, December 2011, Section 3.
- <sup>4</sup> Drilling fluids to which any diesel oil has been added as a lubricant may not be discharged. Monthly effluent reports shall provide certification indicating compliance with this provision.

(ii) Stock Limitations

Parameter	Daily Maximum Limitations	Daily Average Limitations	Sample Type	Monitoring Frequency
Mercury <sup>1</sup>	1 mg/kg	N/A	EPA Approved Method <sup>2</sup>	Once/well <sup>4</sup>
Cadmium <sup>1</sup>	3 mg/kg	N/A	EPA Approved Method <sup>3</sup>	Once/well <sup>4</sup>

- <sup>1</sup> Dry weight maximum in the stock barite.
- <sup>2</sup> Sampling shall be conducted using EPA Method 245.5, Method 7471 A, or more recently EPA approved methods.
- <sup>3</sup> Sampling shall be conducted using EPA Method 200.7, Method 200.8, Method 3050 B followed by 6010B or 6020, or more recently EPA approved methods.
- <sup>4</sup> A representative sample of stock barite used once in drilling fluids shall be analyzed and results submitted prior to use in each new well drilled. If more than one well is being drilled at a site, new analyses are not required for subsequent wells, provided that no new supplies of barite have been received since the previous analysis. A new analysis is required when the composition of stock barite is altered from the previous analysis and prior to use. Alternatively, the permittee may provide stock barite analysis provided by the manufacturer/supplier which complies with the sampling methodologies identified above.

- i. Drill Cuttings Associated with Non-Aqueous Drilling Fluids
  - (i) Effluent Limitations

Parameter	Daily Maximum Limitations	Daily Average Limitations	Sample Type	Monitoring Frequency
Free Oil <sup>1</sup>	No discharge	N/A	EPA Approved Method <sup>1</sup>	Once/week
Diesel Oil <sup>2</sup>	No discharge	N/A	Certification	Once/month
SPP Toxicity <sup>3</sup>	3%	N/A	EPA Approved Method <sup>3</sup>	Once/month
Sediment Toxicity <sup>4</sup>	1.0 ratio	N/A	EPA Approved Method <sup>4</sup>	Once/month <sup>5</sup>
Formation Oil <sup>6</sup>	No discharge	N/A	EPA Approved Method <sup>6</sup>	Once/week <sup>7</sup>
Base Fluid Retained on Cuttings <sup>8</sup>	6.9 g/100 g	N/A	EPA Approved Method <sup>8</sup>	Once/day <sup>9</sup>
Base Fluid Retained on Cuttings <sup>10</sup>	9.4 g/100 g	N/A	EPA Approved Method <sup>10</sup>	Once/day <sup>9</sup>

- <sup>1</sup> As determined by the static sheen test utilizing EPA Method 1617 established in Appendix 1 to 40 CFR Part 435, Subpart A and “Analytical Methods for the Oil and Gas Extraction Point Source Category”, EPA-821-R-11-004, December 2011, Section 2.
- <sup>2</sup> Drill cuttings associated with drilling fluids to which any diesel oil has been added as a lubricant may not be discharged. Monthly effluent reports shall provide certification indicating compliance with this provision.
- <sup>3</sup> Minimum 96-hour LC<sub>50</sub> of the SPP Toxicity Test by volume. Bioassay test procedure - “Suspended Particulate Phase (SPP) Toxicity Test”, EPA Method 1619 established in Appendix 2 of 40 CFR Part 435, Subpart A and “Analytical Methods for the Oil and Gas Extraction Point Source Category”, EPA-821-R-11-004, December 2011, Section 3.
- <sup>4</sup> Drilling Fluid Sediment Toxicity Ratio = 4-day LC<sub>50</sub> of C<sub>16</sub> - C<sub>18</sub> internal olefin drilling fluid divided by 4-day LC<sub>50</sub> of drilling fluid removed from drill cuttings at the solids control equipment as determined by EPA Method 1644: “Method for Conducting a Sediment Toxicity Test with *Leptocheirus plumulosus* and Non-Aqueous Drilling Fluids or Synthetic-Based Drilling Muds” after sediment preparation procedures specified in EPA Method 1646 which are established in Appendix 3 (EPA Method 1646) and Appendix 8 (EPA Method 1644) of 40 CFR Part 435, Subpart A, and “Analytical Methods for the Oil and Gas Extraction

Point Source Category”, EPA-821-R-11-004, December 2011, Section 4 (EPA Method 1646) and Section 10 (EPA Method 1644).

- 5 Sampling shall be conducted on the drilling fluids removed from cuttings at the solids waste control equipment. The once/month monitoring frequency is applicable to drilling fluids which meet the stock limitations for a C<sub>16</sub> - C<sub>18</sub> internal olefin. For drilling fluids which meet stock limitations for C<sub>12</sub> - C<sub>14</sub> ester or C<sub>8</sub> ester, monitoring shall be performed at least once per well at the end of drilling.
- 6 As determined before drilling fluids are shipped offshore by the GC/MS compliance assurance method (EPA Method 1655), and as determined prior to discharge by the RPE method (EPA Method 1670) applied to drilling fluid removed from drill cuttings. If the operator wishes to confirm the results of the RPE method (EPA Method 1670), the operator may use the GC/MS compliance assurance method (EPA Method 1655). Results from the GC/MS compliance assurance method (EPA Method 1655) shall supersede the results of the RPE method (EPA Method 1670). EPA Methods 1655 and 1670 are established in Appendix 5 (EPA Method 1655) and Appendix 6 (EPA Method 1670) of 40 CFR Part 435, Subpart A, and “Analytical Methods for the Oil and Gas Extraction Point Source Category”, EPA-821-R-11-004, December 2011, Section 6 (EPA Method 1655) and Section 7 (EPA Method 1670).
- 7 Once per week monitoring frequency on the drilling fluid applies during drilling operations. Additionally, monitoring is required once prior to drilling operations.
- 8 For NAFs that meet the stock limitations (C<sub>16</sub> - C<sub>18</sub> internal olefin), the maximum weighted mass ratio (NAF base fluid divided by wet drill cuttings) averaged over all NAF well sections. Ratio is grams of non-aqueous base fluid divided by 100 grams of wet drill cuttings. Maximum permissible retention of non-aqueous drilling fluid (NAF) base fluid on wet drill cuttings averaged over drilling intervals using NAFs as determined by EPA Method 1674, which is established in Appendix 7 of 40 CFR Part 435, Subpart A and “Analytical Methods for the Oil and Gas Extraction Point Source Category”, EPA-821-R-11-004, December 2011, Section 8. This limitation is applicable for NAF base fluids that meet the base fluid sediment toxicity ratio (see footnote 4 above), biodegradation rate ratio (see footnote 8 in stock limitations table below); and the PAH, mercury, and cadmium stock limitations (C<sub>16</sub> - C<sub>18</sub> internal olefin) identified in the stock limitations table below.
- 9 Once per day monitoring frequency applies when generating new drill cuttings. Specific conditions associated with this requirement are established in 40 CFR Part 435, Subpart A, Appendix 7, Addendum A and B.

<sup>10</sup> For NAFs that meet the C<sub>12</sub> - C<sub>14</sub> ester or C<sub>8</sub> ester stock limitations, the maximum weighted mass ratio (NAF base fluid divided by wet drill cuttings) is averaged over all NAF well sections. Ratio is grams of non-aqueous base fluid divided by 100 grams of wet drill cuttings. Maximum permissible retention of NAF base fluid on wet drill cuttings average over drilling intervals using NAFs as determined by EPA Method 1674, established in Appendix 7 of 40 CFR Part 435, Subpart A, and “Analytical Methods for the Oil and Gas Extraction Point Source Category”, EPA-821-R-11-004, December 2011, Section 8. This limitation is applicable for NAF base fluids that meet the ester base fluid sediment toxicity ratio and ester biodegradation rate ratio stock limitations, as follows. Ester base fluid sediment toxicity ratio = 10-day LC<sub>50</sub> of C<sub>12</sub> - C<sub>14</sub> ester or C<sub>8</sub> ester divided by 10-day LC<sub>50</sub> of stock base fluid as determined by EPA Method 1644: “Method for Conducting a Sediment Toxicity Test with *Leptocheirus plumulosus* and Non-Aqueous Drilling Fluids or Synthetic-Based Drilling Muds” after sediment preparation procedures specified in EPA Method 1646 which are established in Appendix 3 (Method 1646) and Appendix 8 (Method 1644) of 40 CFR Part 435, Subpart A, and “Analytical Methods for the Oil and Gas Extraction Point Source Category”, EPA-821-R-11-004, December 2011, Section 4 (EPA Method 1646) and Section 10 (EPA Method 1644). Ester Biodegradation Rate Ratio = Cumulative headspace gas production (mL) of C<sub>12</sub> - C<sub>14</sub> ester or C<sub>8</sub> ester divided by Cumulative headspace gas production (mL) of stock base fluid, both at 275 days as determined by EPA Method 1647 which is established in Appendix 4 of 40 CFR Part 435, Subpart A, and “Analytical Methods for the Oil and Gas Extraction Point Source Category”, EPA-821-R-11-004, December 2011, Section 5. PAH Mass Ratio, Mercury, and Cadmium stock limitations (C<sub>16</sub> - C<sub>18</sub> internal olefin) are identified in footnotes above.

(ii) Stock Limitations (C<sub>16</sub> - C<sub>18</sub> Internal Olefins)

Parameter	Daily Maximum Limitations	Daily Average Limitations	Sample Type	Monitoring Frequency
Mercury <sup>1</sup>	1 mg/kg	N/A	EPA Approved Method <sup>2</sup>	Once/well <sup>3</sup>
Cadmium <sup>1</sup>	3 mg/kg	N/A	EPA Approved Method <sup>4</sup>	Once/well <sup>3</sup>
PAH <sup>5</sup>	1.0 x 10 <sup>-5</sup> ratio	N/A	EPA Approved Method <sup>5</sup>	Once/year <sup>6</sup>
Sediment Toxicity <sup>7</sup>	1.0 ratio	N/A	EPA Approved Method <sup>7</sup>	Once/year <sup>6</sup>
Biodegradation Rate <sup>8</sup>	1.0 ratio	N/A	EPA Approved Method <sup>8</sup>	Once/year <sup>6</sup>

- <sup>1</sup> Dry weight maximum in the stock barite.
- <sup>2</sup> Sampling shall be conducted using EPA Method 245.5, Method 7471 A, or more recently EPA approved methods.
- <sup>3</sup> A representative sample of stock barite used once in drilling fluids shall be analyzed and results submitted prior to use in each new well drilled. If more than one well is being drilled at a site, new analyses are not required for subsequent wells, provided that no new supplies of barite have been received since the previous analysis. A new analysis is required when the composition of stock barite is altered from the previous analysis and prior to use. Alternatively, the permittee may provide stock barite analysis provided by the manufacturer/supplier which complies with the sampling methodologies identified above.
- <sup>4</sup> Sampling shall be conducted using EPA Method 200.7, Method 200.8, Method 3050 B followed by 6010B or 6020, or more recently EPA approved methods.
- <sup>5</sup> PAH Mass Ratio = Mass (grams) of PAH (as phenanthrene) divided by Mass (grams) of stock base fluid as determined by EPA Method 1654, Revision A entitled "PAH Content of Oil by HPLC/UV", December 1992, which is established in "Analytical Methods for the Oil and Gas Extraction Point Source Category", EPA-821-R-11-004, December 2011, Section 9.
- <sup>6</sup> Monitoring frequency is on each base fluid blend.
- <sup>7</sup> Base Fluid Sediment Toxicity Ratio = 10-day LC<sub>50</sub> of C<sub>16</sub> - C<sub>18</sub> internal olefin divided by 10-day LC<sub>50</sub> of stock base fluid as determined by EPA Method 1644: "Method for Conducting a Sediment Toxicity Test with *Leptocheirus plumulosus* and Non-Aqueous Drilling Fluids or Synthetic-Based Drilling Muds" after preparing the sediment according to the procedure specified in EPA Method 1646, which are established in Appendix 8 (EPA Method 1644) and Appendix 3 (EPA Method 1646) of 40 CFR Part 435, Subpart A, and "Analytical Methods for the Oil and Gas Extraction Point Source Category", EPA-821-R-11-004, December 2011, Section 4 (EPA Method 1646) and Section 10 (EPA Method 1644).
- <sup>8</sup> Biodegradation Rate Ratio = Cumulative headspace gas production (mL) of C<sub>16</sub> - C<sub>18</sub> internal olefin divided by cumulative headspace gas production (mL) of stock base fluid, both at 275 days as determined by EPA Method 1647, which is established in Appendix 4 of 40 CFR Part 435, Subpart A, and "Analytical Methods for the Oil and Gas Extraction Point Source Category", EPA-821-R-11-004, December 2011, Section 5.

## Section B. General Requirements

1. There shall be no discharge of floating solids or visible foam other than in trace amounts, and no discharge of visible oil.
2. The discharge(s) shall not contain a concentration of taste or odor producing substances that interfere with the production of potable water by conventional water treatment methods, impart unpalatable flavor to food fish including shellfish, result in offensive odors arising from the Gulf of Mexico, or otherwise interfere with designated uses of the Gulf of Mexico.
3. Facilities which generate industrial solid wastes, as defined in 30 TAC § 335.1, shall comply with the provisions of 30 TAC Chapter 335, *Industrial Solid Waste and Municipal Hazardous Waste*. If the requirements of 30 TAC Chapter 335 do not apply, the solid wastes shall be disposed of in accordance with the Texas Health and Safety Code, Chapter 361. Management of industrial solid wastes not under the regulatory jurisdiction of the TCEQ shall be managed in accordance with regulations established by the RRC.
4. The permittee shall take necessary steps to prevent adverse effects to human health, safety, or the environment. The permittee shall immediately cease discharging whenever it is determined that the discharge may endanger human health, safety, or the environment.
5. Disposal of wastes shall be done in such a manner as to prevent nuisance conditions.
6. The permittee shall provide the following noncompliance notifications:
  - a. Any noncompliance that may endanger human health or safety, or the environment shall be reported by the permittee to the TCEQ. Report of such information shall be provided orally, by facsimile (FAX), or by email to the appropriate TCEQ regional office within 24 hours of becoming aware of the noncompliance. A written submission of such information shall also be provided by the permittee to the appropriate TCEQ regional office and the TCEQ Enforcement Division (MC-224) within five working days of becoming aware of the noncompliance. The written report shall contain a description of the noncompliance and its cause; the potential danger to human health or safety, or the environment, the period of noncompliance, including exact dates and times; if the noncompliance has not been

corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance and to mitigate its adverse effects.

- b. Any effluent violation that deviates from the permitted effluent or stock limitation by more than 40% shall be reported by the permittee in writing to the appropriate TCEQ regional office and the TCEQ Enforcement Division (MC-224) within five working days of becoming aware of the noncompliance.
  - c. Any noncompliance other than those specified in paragraphs (a) and (b) above, or any required information not submitted or submitted incorrectly, shall be reported to the TCEQ Enforcement Division (MC-224) as promptly as possible. For effluent or stock limitation violations, non-compliances must be reported on the approved Monthly Effluent Report (MER) form.
7. Applicants seeking authorization to discharge under this general permit and permittees that are authorized to discharge under this general permit are hereby issued a waiver from the electronic reporting requirements of 40 CFR Part 127 as authority to discharge under this general permit is under state-only authority. Therefore, applicants and permittees may submit NOI, NOT, and NOC forms to TCEQ in paper format. Likewise, electronic reporting requirements for monthly effluent reports (MERs) are not applicable and are required to be submitted in paper format unless TCEQ develops electronic MER submittal conditions.
  8. Facilities that generate wastes that are prohibited from discharge under Part III, Section A.1 are required to maintain records of the volumes of these wastes generated and their ultimate disposal location. Records shall be recorded on a monthly basis and shall be maintained on-site or another accessible location for review by TCEQ personnel.
  9. There shall be no discharge of halogenated phenolic compounds as part of any waste stream authorized for discharge under the terms and conditions of this general permit.
  10. Entities authorized to discharge under this general permit are placed on notice that separate authorization to discharge into the Gulf of Mexico between 3.0 and 10.357 statute miles from the Texas coastline is required from EPA under the NPDES program (via



either authorization under NPDES General Permit No. GMG290000 or an individual NPDES permit). Facilities located in the Gulf of Mexico greater than 10.357 statute miles from the Texas coastline are not eligible for authorization under this state-only general permit and are only required to obtain authorization to discharge from EPA under the NPDES program.

11. Permittees which operate a cooling water intake structure (CWIS) subject to Section 316(b) of the Clean Water Act and 40 CFR Part 125, Subpart N are subject to the requirements established in Appendix A of this general permit.
12. Monitoring requirements for the effluent limitation of no free oil for the discharge of produced wastewater, deck drainage, and contaminated/uncontaminated miscellaneous discharges shall be made 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. All other discharges (as well as stock monitoring) must be sampled in accordance with the monitoring frequencies established in Part III, Section A.2 of this general permit, and discharges are prohibited when the facility is unmanned.
13. This general permit does not authorize on-site disposal of sewage sludge, biosolids, or water treatment residuals. The permittee shall ensure that all sewage sludge, biosolids, and water treatment residuals which are not a hazardous waste (as defined in 30 TAC Chapter 335) are handled, transported, and disposed of in compliance with the applicable provisions of 30 TAC Chapter 312. The permittee shall ensure that all sewage sludge, biosolids, and water treatment residuals which are a hazardous waste (as defined in 30 TAC Chapter 335) are handled, transported, and disposed of in compliance with the applicable provisions of 30 TAC Chapter 335. The permittee shall keep records of all sewage sludge, biosolids, and water treatment residuals removed from the facility. Such records will include the following information:
  - a. Volume (dry weight basis) of sewage sludge, biosolids, and water treatment residuals disposed;
  - b. Date of disposal;
  - c. Identity and registration number of hauler/transporter;
  - d. Location and registration or permit number of disposal site; and
  - e. Method of final disposal.

14. Discharges from outfalls that combine multiple waste streams authorized for discharge under Part III, Section A.2 of this general permit are subject to all effluent limitations and associated monitoring requirements for such discharges.
15. The mixing zone for produced wastewater discharges; well treatment, completion, and workover fluids; and contaminated miscellaneous discharges is defined as a volume of water within a radius of 200 feet extending over the receiving water from the point where the discharge enters the Gulf of Mexico. Chronic toxic criteria apply at the edge of the mixing zone.

The zone of initial dilution (ZID) for produced wastewater discharges; well treatment, completion, and workover fluids; and contaminated miscellaneous discharges is defined as a volume of water within a radius of 50 feet extending over the receiving water from the point where the discharge enters the Gulf of Mexico. Acute toxic criteria apply at the edge of the ZID.

16. Adding seawater for the purpose of achieving compliance with whole effluent toxicity (WET) limitations for the discharge of produced wastewater; well treatment, completion, and workover fluids; and contaminated miscellaneous discharges is prohibited.
17. Discharges of domestic waste are subject to U.S. Coast Guard regulations established at 33 CFR Part 151.
18. Hydrate control fluids are authorized for discharge provided they are routed for treatment and discharged with produced wastewater.
19. Permittees which are currently authorized to discharge produced wastewater under NPDES General Permit No. GMG290000 and/or an individual RRC authorization shall comply with the following schedule of activities for the attainment of water quality-based final effluent limitations for total barium, total copper, total manganese, total zinc, 7-day chronic sublethal WET limitations, and 24-hour acute lethal WET limitations at the outfall(s) discharging produced wastewater. Additionally, permittees which are currently authorized to discharge either or both well treatment, completion, and workover fluids; and contaminated miscellaneous discharges under NPDES General Permit Number GMG290000 and/or an individual RRC authorization shall comply with the following schedule of activities for the attainment of water quality-based final effluent limitations for 24-hour acute lethal WET limitations. New permittees are subject to effluent limitations for the discharge

of produced wastewater; well treatment, completion, and workover fluids; and contaminated miscellaneous discharges upon authorization to discharge under the terms and conditions of this general permit:

- a. Determine exceedance cause(s);
- b. Develop control options;
- c. Evaluate and select control mechanisms;
- d. Implement corrective action; and
- e. Attain final effluent limitations no later than three years from the date of acknowledgment to discharge under this general permit.

The permittee shall submit quarterly progress reports in accordance with the following schedule. The requirement to submit quarterly progress reports expires three years from the date of acknowledgment to discharge under this general permit.

PROGRESS REPORT DATE

January 1  
April 1  
July 1  
October 1

The quarterly progress reports must include a discussion of the interim requirements that have been completed at the time of the report and must address the progress towards attaining the water quality-based final effluent limitations for total barium, total copper, total manganese, total zinc, 7-day chronic sublethal WET limitations, and 24-hour acute lethal WET limitations (produced wastewater discharges); and 24-hour acute lethal WET limitations (well treatment, completion, and workover fluids; and contaminated miscellaneous discharges) at the outfall(s) being discharged no later than three years from the date of acknowledgment to discharge under this general permit. Should compliance be obtained, the requirement to submit quarterly progress reports is waived, provided the permittee indicates such compliance in the latest quarterly progress report.

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this general permit must be submitted no later than 14 days following each schedule date. Any reports of noncompliance shall include the cause of noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirement.

All reports must be submitted to the appropriate TCEQ Regional Office and to the Compliance Monitoring Team (MC-224).

20. Minimum analytical levels (MALs) for produced wastewater discharges are established for the following parameters. By establishing MALs, TCEQ is not requiring use of a specific analytical test method, nor is TCEQ requiring analytical results to be submitted where the laboratory test was run to achieve the MAL. When an analysis of an effluent sample for a pollutant indicates no detectable levels above the MAL and the test method detection level is as sensitive as the specified MAL, a value of zero shall be used for that measurement. When an analysis of an effluent sample for a pollutant indicates no detectable levels and the test method detection level is not as sensitive as the specified MAL, the level of detection achieved shall be used for that measurement. A zero may not be used.

<b>Pollutant</b>	<b>MAL</b>
Benzene	0.01 mg/L
Total Barium	0.003 mg/L
Total Copper	0.002 mg/L
Total Manganese	0.0005 mg/L
Total Mercury	0.000005 mg/L
Total Nickel	0.002 mg/L
Total Zinc	0.005 mg/L

21. Discharges of produced wastewater are granted an exemption for compliance with hazardous metals effluent limitations established under 30 TAC § 319.23 per 30 TAC § 319.26, except in any case where there is a water quality-based effluent limitation for a metal listed in 30 TAC § 319.23 otherwise imposed in this general permit, in which case such discharges must adhere to the water quality-based effluent limitation.
22. Discharges of produced wastewater are restricted to discharge/outfall configurations of discharge pipe diameter no greater than six inches, and discharge depth to sea floor of no less than five meters.
23. Discharges of non-aqueous based drilling fluids (NAFs) are prohibited from discharge in Part III, Section A.1 in this general permit. Forced or intentional discharges of NAFs collected from drilling operations overboard from drilling rigs or production platforms are subject to this condition. De-minimis discharges of NAFs under the following conditions are not subject to such

prohibitions, however, such NAFs shall be contained to the maximum extent practicable to prevent discharge:

- a. NAFs may be used as a carrier fluid (transport fluid), lubricity additive or pill in water-based drilling fluids and discharged with those drilling fluids provided the discharge meets effluent limitations established in Part III.A.2.h and the pill is removed prior to discharge;
  - b. Wind blown NAFs from the pipe rack;
  - c. Residual NAFs that are adhered to marine risers;
  - d. Diverter systems testing after NAF displacement;
  - e. Blow-out preventers after NAFs displacement; and
  - f. Minor drips and splatters around mud handling and solids control equipment.
24. Discharges of drilling fluids comprised of the following are specifically prohibited by this general permit:
- a. Drilling fluids used for equipment/system test purposes or excess mixed fluids;
  - b. Oil-based drilling fluids and oil-based inverse emulsion drilling fluids;
  - c. Oil contaminated drilling fluids, including, drilling fluids which contain waste engine oil, cooling oil, gear oil, or any lubricants which have been previously used for purposes other than borehole lubrication;
  - d. Diesel oil; and
  - e. Mineral oil, with the exception for use as a carrier fluid (transport fluid), lubricity additive, or pill.
25. The permittee shall maintain a drilling fluids inventory to include a precise chemical inventory of all constituents and their total volume or mass added downhole for each well drilled. Such records shall be provided to the Executive Director upon request.

#### **Part IV. Standard Permit Conditions**

1. The permittee has a duty to comply with all conditions in this general permit. Failure to comply with any condition is a violation of the general permit and the statutes under which the general permit was issued. Any violation may be grounds for enforcement action, for terminating authorization under this general permit, or for requiring a permittee to apply for and obtain a TCEQ state-only discharge individual permit.

2. It is not a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted discharge to maintain compliance with conditions of the general permit.
3. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) installed or used by the permittee to achieve compliance with conditions of the general permit. Proper operation and maintenance also include adequate laboratory and process controls, and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with conditions of the general permit.
4. The permittee shall furnish any information, at the request of the Executive Director that is necessary to determine whether cause exists for revoking, suspending, or terminating authorization under this general permit. The requested information must be provided within a reasonable time frame and in no case later than 30 days from the date of the request.
5. The permittee shall give notice to the Executive Director before physical alterations or additions to the permitted facility if such alterations would result in a violation of the general permit requirements.
6. Inspection and entry shall be allowed under Chapter 26 of the TWC; Texas Health and Safety Code, §§ 361.032 - 361.033 and 361.037; and Title 40 of the Code of Federal Regulations (CFR) § 122.41(i). The statement in TWC, § 26.014 that Commission entry of a regulated entity shall occur in accordance with an establishment's rules and regulations concerning safety, internal security, and fire protection is not grounds for denial or restriction of entry to any part of the regulated entity, but merely describes the Commission's duty to observe appropriate rules and regulations during an inspection.
7. Standard monitoring and reporting requirements are as follows:
  - a. Samples shall be collected, measurements shall be taken, and visual observations shall be made at times and in a manner so as to be representative of the monitored and/or observed discharge. Specific and unique sampling requirements for effluent and stock limitations associated with the discharge of water-based drilling fluids and associated drill cuttings,

and drill cuttings associated with non-aqueous drilling fluids are established in Part III, Section A, Effluent Limitations and Monitoring Requirements.

- b. All samples must be collected according to the latest edition of "Standard Methods for the Examination of Water and Wastewater" (prepared and published jointly by the American Public Health Association, the American Water Works Association, and the Water Environment Federation), or the EPA's, "Methods for Chemical Analysis of Water and Wastes" (1979), or the EPA's, "Biological Field and Laboratory Methods for Measuring the Quality of Surface Waters and Effluents" (1973). The effluent limitations for the observation of free oil, floating solids, and foam are not subject to this condition. Specific and unique sampling requirements for effluent and stock limitations associated with the discharge of water-based drilling fluids and associated drill cuttings, and drill cuttings associated with non-aqueous drilling fluids are established in Part III, Section A, Effluent Limitations and Monitoring Requirements.
- c. Sample containers, holding times, preservation methods, and analytical methods, shall either follow the requirements in 40 CFR Part 136, or the latest edition of "Standard Methods for the Examination of Water and Wastewater". The effluent limitations for the observation of free oil, floating solids, and foam are not subject to this condition. Specific and unique sampling requirements for effluent and stock limitations associated with the discharge of water-based drilling fluids and associated drill cuttings, and drill cuttings associated with non-aqueous drilling fluids are established in Part III, Section A, Effluent Limitations and Monitoring Requirements.
- d. The permittee shall ensure that properly trained and authorized personnel monitor, sample, and as applicable, observe the discharge. Specific and unique sampling requirements for effluent and stock limitations associated with the discharge of water-based drilling fluids and associated drill cuttings, and drill cuttings associated with non-aqueous drilling fluids are established in Part III, Section A, Effluent Limitations and Monitoring Requirements.
- e. The sampling point and observation point (as applicable) must be downstream of any treatment unit or treatment technique that is used to improve or otherwise alter the quality of the discharge. Specific and unique sampling

requirements for effluent and stock limitations associated with the discharge of water-based drilling fluids and associated drill cuttings, and drill cuttings associated with non-aqueous drilling fluids are established in Part III, Section A, Effluent Limitations and Monitoring Requirements.

- f. Analytical results for determining compliance with effluent and stock limitations shall be submitted to the TCEQ Enforcement Division (MC-224) on an approved form established by the Executive Director. Effluent and stock sampling shall be conducted in accordance with the monitoring frequencies specified in this general permit. The Monthly Effluent Report (MER) for any given month shall be due by the 20th day of the following month. The MER for annual testing shall be due by March 31<sup>st</sup> of the following year. All MERs shall be signed in accordance with the requirements in Part IV.8 of this general permit. If non-compliance with a discharge limitation occurs, the permittee shall provide notification according to Part III.B.6 of this state-only general permit.
- g. All laboratory tests submitted to demonstrate compliance with this general permit must meet the requirements of 30 TAC Chapter 25, *Environmental Testing Laboratory Accreditation and Certification*. The effluent limitations for the observation of free oil, floating solids, and foam, are not subject to this condition. Specific and unique sampling and analytical testing requirements for effluent and stock limitations associated with the discharge of water-based drilling fluids and associated drill cuttings, and drill cuttings associated with non-aqueous drilling fluids are established in Part III, Section A, Effluent Limitations and Monitoring Requirements which may not be subject to these requirements.
- h. Records of monitoring and observation activities shall include:
  - (i) date, time, and place of sample, measurement, or observation;
  - (ii) identity of individual who collected the sample, made the measurement, or made the observation;
  - (iii) date and time of laboratory analysis (the effluent limitations for the observation of free oil, floating solids, and foam are not subject to this condition);



- (iv) identity of the individual and laboratory that performed the analysis (the effluent limitations for the observation of free oil, floating solids, and foam are not subject to this condition);
  - (v) the technique or method of analysis (the effluent limitations for the observation of free oil, floating solids, and foam are not subject to this condition);
  - (vi) the results of the analysis, measurement, or observation; and
  - (vii) quality assurance/quality control records (the effluent limitations for the observation of free oil, floating solids, and foam are not subject to this condition).
- i. If the permittee monitors any pollutant in a discharge or stock material more frequently than required by the general permit using approved analytical methods as specified in Part IV.7 of this general permit, all results of such monitoring shall be included in the calculation and recording of the values on the MER. Increased frequency of sampling shall be indicated on the MER.
8. All reports, NOIs, NOTs, NOCs, or other information requested by the Executive Director shall meet the requirements of 30 TAC § 305.44, *Signatories to Applications*.
9. The permittee shall retain copies of all records required by this general permit, including monitoring and observation records and records related to the application or any certification requirements, for a period of three years from the date of the record. This period may be extended at the request of the Executive Director. The records shall be retained at the facility or be readily available for review by TCEQ personnel upon request.
10. Authorization under this general permit may be suspended or revoked for the reasons stated in 30 TAC § 205.4. Notifying the TCEQ of planned changes or an anticipated noncompliance does not stay any general permit condition.
11. This general permit does not convey any property rights of any sort, or any exclusive privilege.
12. If the permittee becomes aware that it failed to submit any relevant facts in an NOI, or submitted incorrect information in an NOI or in any report to the Executive Director, it shall promptly submit such facts or information.

13. The permittee is subject to administrative, civil, and criminal penalties, as applicable, under TWC Chapter 7 for violations including, but not limited to, the following:
  - a. violating CWA §§ 301, 302, 306, 307, 308, 318, or 405, or any condition or limitation implementing any sections in a general permit issued under CWA § 402, or any requirement imposed in a pretreatment program approved under CWA § 402(a)(3) or (b)(8);
  - b. intentionally or knowingly tampering with, modifying, disabling, or failing to use pollution control or monitoring devices, systems, methods, or practices required under this general permit; and
  - c. intentionally or knowingly makes or causes to be made a false material statement, representation, or certification in, or omits or causes to be omitted material information from, an application, notice, record, report, plan, or other document, including monitoring device data, filed or required to be maintained by this general permit.

**Part V. Fees**

1. NOI fee: An NOI must include a \$800 application fee. A fee is not required for submission of a NOT or NOC.
2. Annual Water Quality Fee: Facilities with an active authorization on September 1 of each year (i.e., have not submitted a NOT prior to this date) will be billed \$100 for the following fiscal year.

## **Appendix A: Cooling Water Intake Structure (CWIS) Requirements**

### **Section I. Applicability and Limitations on Authorization**

#### **A. General Applicability**

This appendix applies to OCS Facilities that use or propose to use a CWIS.

#### **B. Specific Applicability**

1. A new facility which meets the following criteria is subject to the requirements of this appendix.
  - i. it is a point source that uses or proposes to use a CWIS either directly or indirectly via an independent supplier;
  - ii. it has at least one CWIS that uses at least 25 percent of the water withdrawn on an average monthly basis for cooling purposes; and
  - iii. it has a design intake flow greater than two million gallons per day (MGD).
2. A new facility which does not meet all criteria established under Section I, paragraph B.1 of this appendix or an existing facility is subject to the requirements of this appendix on a best professional judgment (BPJ) basis.

#### **C. Exemptions**

Use of water obtained from the following sources is exempted from the requirements of this appendix.

1. An active public water system; or
2. Treated effluent that would have otherwise been discharged into a Water of the U.S.

#### **D. Limitations on Coverage**

Facilities with a CWIS shall not be authorized under this general permit where:

1. Threatened or endangered or otherwise protected federal, state, or tribal species, or critical habitat for these species, are present within the hydraulic zone of influence of the CWIS;

2. Migratory and/or sport or commercial species of impingement concern to the Executive Director pass through the hydraulic zone of influence of the CWIS; or
3. The owner or operator of a new facility intends to comply with the Track II requirements established at 40 CFR § 125.134(c).

## **Section II. Specialized Definitions for Terms Used in this Appendix**

**Cooling water** - Water used for contact or noncontact cooling, including water used for equipment cooling, evaporative cooling tower makeup, and dilution of effluent heat content. The intended use of the cooling water is to absorb waste heat rejected from the process or processes used, or from auxiliary operations on the facility's premises. Cooling water that is used in another industrial process either before or after it is used for cooling is considered process water rather than cooling water for the purposes of calculating the percentage of a new facility's intake flow that is used for cooling purposes in Section I, paragraph B.1.ii of this Appendix.

**Fixed facility** - A bottom founded facility permanently attached to the seabed or subsoil of waters in the Gulf of Mexico (e.g., platforms, guyed towers, articulated gravity platforms) or a buoyant facility securely and substantially moored so that it cannot be moved without a special effort (e.g., tension leg platforms, permanently moored semi-submersibles) and which is not intended to be moved during the production life of the well. This definition does not include mobile offshore drilling units (MODUs) (e.g., drill ships, temporarily moored semi-submersibles, jack-ups, submersibles, tender-assisted rigs, and drill barges).

**Hydraulic zone of influence** - That portion of the Gulf of Mexico hydraulically affected by the CWIS withdrawal of water.

**New facility** - Any building, structure, facility, or installation that: meets the definition of a "new facility" at 40 CFR § 125.83; is regulated by 40 CFR Part 435 Subpart A; and it commenced construction after July 17, 2006.

**Sea chest** - The underwater compartment or cavity within the facility or vessel hull or pontoon through which sea water is drawn in (for cooling and other purposes) or discharged.

**Waters of the United States or Waters of the U.S.** - The term as defined in 40 CFR § 120.2.

Other special definitions can be found at 40 CFR §§ 125.83, 125.92 and 125.133.

### Section III. CWIS Requirements.

#### A. Operational Requirements.

Each CWIS utilized by a new or existing facility which is subject to this appendix based on Section I, paragraph B (of this appendix), must meet the following operational requirements to demonstrate compliance with CWA Section 316(b) under this general permit.

1. Design and construction of each CWIS must have a maximum through-screen design intake velocity of 0.5 feet/second.
2. CWISs authorized under this general permit are restricted to being located in the Gulf of Mexico between 3.0 and 10.357 statute miles from the Texas coastline. CWISs located in an estuary or tidal river or within 3.0 statute miles of the Texas coastline are required to be authorized under the TPDES program and subject to additional operating conditions.
3. A new facility which is a fixed facility *without* sea chests must also select and implement design and construction technologies or operational measures for minimizing entrainment of entrainable life stages of fish and shellfish.

#### B. Monitoring Requirements

A new facility which meets all criteria under Section I, paragraph B.1 of this appendix, must conduct the following monitoring activities for each CWIS to demonstrate compliance with CWA Section 316(b) under this general permit.

1. Biological monitoring. A new facility which is a fixed facility *without* sea chests must monitor for entrainment. The facility must collect samples to monitor entrainment rates (simple enumeration) for each species over a 24-hour period and no less than biweekly during the primary period of reproduction, larval recruitment, and peak abundance identified during the Source Water Baseline Biological Characterization required by Section IV, paragraph D.1 of this appendix below. Sampling must occur only when the CWIS is in operation.
2. Velocity monitoring. If the facility uses a surface intake screen system, it must monitor head loss across the screens and correlate the measured value with the design intake velocity. The head loss across the intake screen must be measured at the minimum ambient source water surface elevation (BPJ based on available hydrological data). The maximum head loss across the

screen for each CWIS must be used to determine compliance with the velocity requirement in Section III, paragraph A.1 of this appendix. If the facility uses devices other than surface intake screens, it must monitor velocity at the point of entry through the device. The facility must monitor head loss or velocity during initial facility startup, and thereafter, at a frequency of no less than once per quarter.

3. Visual or remote inspections. The facility must either conduct visual inspections or employ remote monitoring devices during the period the CWIS is in operation. The facility must conduct visual inspections at least weekly to ensure that any design and construction technologies required in Section III, paragraph A.3 of this appendix are maintained and operated to ensure that they will continue to function as designed. Alternatively, the facility may inspect via remote monitoring devices to ensure that the entrainment technologies are functioning as designed.

### **C. Record-Keeping Requirements.**

1. A new or existing facility which is subject to this appendix based on Section I, paragraph B, must keep records of the following for a period of at least three (3) years from the date of obtaining authorization to discharge under this general permit: all the data used to complete the NOI and show compliance with the requirements, any supplemental information developed under Section IV of this appendix, and any compliance monitoring data submitted under Section III, paragraph B of this appendix.
2. A new facility which meets all criteria under Section I, paragraph B.1 of this appendix, must also provide the following information to the Executive Director in a yearly status report:
  - i. for fixed facilities *without* sea chests, biological monitoring records for each CWIS as required by paragraph B.1 of this section;
  - ii. velocity and head loss monitoring records for each CWIS as required by paragraph B.2 of this section; and
  - iii. records of visual or remote inspections as required in paragraph B.3 of this section.

## Section IV. NOI Materials

The facility must submit the following application materials for each CWIS that is used to obtain water for cooling purposes.

### A. Applicability. This section applies to:

1. a new facility which meets all criteria under Section I, paragraph B.1 of this appendix and is:
  - i. a fixed facility which employs or will employ sea chests must submit information required by paragraphs B - F in this section;
  - ii. a fixed facility *without* sea chests must submit information required by paragraphs B - G of this section; or
  - iii. an unfixed facility must submit information required by paragraphs C (except C.2), D.2, E, and F of this section.
2. a new facility which does not meet all the criteria under Section I, paragraph B.1 of this appendix, but is not exempt from requirements for CWISs under Section I, paragraph C of this appendix, must submit information required by Section IV, paragraphs C (except C.2, if unfixed), D.2, E, and F of this appendix.
3. an existing facility that is not exempt from requirements for CWISs under Section I, paragraph C of this appendix must submit information required by Section IV, paragraphs C (except C.2, if unfixed), D.2, E, and F of this appendix.

### B. Required Information: Source Water Physical Data

The following source water physical data must be provided:

1. A narrative description and scaled drawings showing the physical configuration of the Gulf of Mexico used by the facility, including areal dimensions, depths, salinity and temperature regimes, and other documentation that supports this determination of the Gulf of Mexico where each CWIS is located;
2. Identification and characterization of the Gulf of Mexico's hydrological and geomorphological features, as well as the methods used to conduct any physical studies to determine the

intake's area of influence within the Gulf of Mexico and the results of such studies; and

3. Locational maps to support the descriptions provide in paragraphs B.1 and B.2 of this section.

**C. Required Information: CWIS data**

1. A narrative description of the configuration of each CWIS and its location in the Gulf of Mexico and in the water column;
2. Latitude and longitude in degrees, minutes, and seconds for each of the CWISs;
3. A narrative description of the operation of each of the CWISs, including design intake flows, daily hours of operation, number of days of the year in operation, and seasonal changes, if applicable;
4. A flow-distribution and water-balance diagram that includes all sources of water to the facility, recirculating flows, and discharges; and
5. Engineering drawings of the CWIS.

**D. Required Biological Information**

1. Source water baseline biological characterization data. This information is required to characterize the biological community in the vicinity of the CWISs and to characterize the operation of the CWISs. This supporting information must include existing data (if they are available). However, the facility may choose to supplement the data using newly conducted field studies. The information submitted must include:
  - i. a list of the data in paragraphs D.1.ii through v of this section that are not available, and efforts made to identify sources of the data;
  - ii. a list of species (or relevant taxa) for all life stages and their relative abundance in the vicinity of the CWIS;
  - iii. identification of the species and life stages that would be most susceptible to impingement and entrainment. Species evaluated should include the forage base as well as those most important in terms of significance to commercial and recreational fisheries;



- iv. identification and evaluation of the primary period of reproduction, larval recruitment, and period of peak abundance for relevant taxa;
  - v. data representative of the seasonal and daily activities (e.g., feeding and water column migration) of biological organisms in the vicinity of the CWIS;
  - vi. if supplementing the information requested in paragraph D.1.ii through v of this section with data collected using field studies, supporting documentation for the Source Water Baseline Biological Characterization must include a description of all methods and quality assurance procedures for sampling, and data analysis including a description of the study area; taxonomic identification of sampled and evaluated biological assemblages (including all life stages of fish and shellfish); and sampling and data analysis methods. The sampling and/or data analysis methods used must be appropriate for a quantitative survey and based on consideration of methods used in other biological studies performed within the same area in the Gulf of Mexico. The study area should include, at a minimum, the area of influence of the CWIS.
2. Documentation from any fishery management agency(ies) or other relevant information which demonstrates:
- i. there are no threatened or endangered or otherwise protected federal, state, or tribal species, or critical habitat for these species, within the hydraulic zone of influence of the CWIS; and
  - ii. there are no migratory and/or sport or commercial species of impingement concern to the Executive Director that pass through the hydraulic zone of influence of the CWIS.

**E. Required Velocity Information.**

Submit the following information to the Executive Director to demonstrate the facility is complying with the requirement at Section III, paragraph A.1 of this appendix to meet a maximum through-screen design intake velocity of no more than 0.5 feet per second at each CWIS:

- 1. a narrative description of the design, structure, equipment, and operation used to meet the velocity requirement; and

2. design calculations showing that the velocity requirement will be met at minimum ambient Gulf of Mexico surface elevations (based on BPJ using available hydrological data) and maximum head loss across the screens or other device.

**F. Required Design and Construction Technology Plan.**

To demonstrate compliance with Section III, paragraph A.3 of this appendix if applicable, the facility must submit to the Executive Director the following information in a Design and Construction Technology Plan:

1. A narrative description of the design and operation of the design and construction technologies that you will use to minimize entrainment of those species expected to be the most susceptible to entrainment. Provide species-specific information that demonstrates the efficacy of the technology; and
2. Design calculations, drawings, and estimates to support the descriptions provided in paragraph 1 of this subsection.

**Appendix B: 7-Day Chronic Marine WET Testing Requirements**

**CHRONIC BIOMONITORING REQUIREMENTS: MARINE**

The provisions of this Appendix apply to the outfall being tested for whole effluent toxicity (WET) testing.

1. Scope, Frequency and Methodology

- a. The permittee shall test the effluent for toxicity in accordance with the provisions below. Such testing will determine if an appropriately dilute effluent sample adversely affects the survival or growth of the test organisms.
- b. The permittee shall conduct the following toxicity tests using the test organisms, procedures, and quality assurance requirements specified below and in accordance with “Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms,” third edition (EPA-821-R-02-014) or its most recent update:
  - 1) Chronic static renewal 7-day survival and growth test using the mysid shrimp (*Americamysis bahia*) (Method 1007.0). A minimum of eight replicates with five organisms per replicate shall be used in the control and in each dilution. This test shall be conducted once per quarter.
  - 2) Chronic static renewal 7-day larval survival and growth test using the inland silverside (*Menidia beryllina*) (Method 1006.0). A minimum of five replicates with eight organisms per replicate shall be used in the control and in each dilution. This test shall be conducted once per quarter.

The permittee must perform and report a valid test for each test species during the prescribed reporting period. An invalid test must be repeated during the same reporting period. An invalid test is defined as any test failing to satisfy the test acceptability criteria, procedures, and quality assurance requirements specified in the test methods and general permit.

- c. The permittee shall use five effluent dilution concentrations and a control in each toxicity test. These effluent dilution

concentrations are 0.8%, 1.3%, 1.5%, 2.1%, and 2.7% effluent. The critical dilution, defined as 2.1% effluent, is the effluent concentration representative of the proportion of effluent in the Gulf of Mexico during critical mixing conditions.

- d. The sublethal NOEC effluent limitation of not less than 2.1% is effective for both test species (see Part III, Section A.2.a of the general permit). Compliance schedules for existing discharges is established in Part III, Section B.19.
- e. Should a test demonstrate significant toxicity (that is, there is a statistically significant difference in survival or growth at the critical dilution when compared to the survival or growth in the control), the testing frequency for that test species increases to monthly until three consecutive tests pass (do not demonstrate statistically significant toxicity), at which time the testing frequency of once per quarter resumes. A Notice of Change (NOC) as established in Part II, Section C.4 of the general permit is required to be submitted upon a demonstration of significant toxicity that requires an increase in monitoring frequency. Additionally, upon three consecutive tests passing, an NOC is required to be submitted to revert to the once per quarter monitoring frequency.
  - 1) If none of the first four consecutive quarterly tests demonstrates significant toxicity, the permittee may submit this information to the Standards Implementation Team (MC-150) and, upon approval, reduce the testing frequency to once per six months for the invertebrate test species and once per year for the vertebrate test species. A request for a monitoring frequency reduction shall be submitted in an NOC as established in Part II, Section C.4 of the general permit. The NOC shall include written correspondence from the Standards Implementation Team supporting the reduction in monitoring frequency.
  - 2) If one or more of the first four consecutive quarterly tests demonstrates significant toxicity, the permittee shall continue quarterly testing for that species until this general permit is reissued. If a testing frequency reduction had been previously granted and a subsequent test demonstrates significant toxicity, the permittee will resume a quarterly testing frequency for that species until this general permit is reissued.

2. Required Toxicity Testing Conditions

- a. Test Acceptance - The permittee shall repeat any toxicity test, including the control and all effluent dilutions, which fails to meet any of the following criteria:
- 1) a control mean survival of 80% or greater;
  - 2) a control mean dry weight of surviving mysid shrimp of 0.20 mg or greater;
  - 3) a control mean dry weight for surviving unpreserved inland silverside of 0.50 mg or greater and 0.43 mg or greater for surviving preserved inland silverside.
  - 4) a control coefficient of variation percent (CV%) between replicates of 40 or less in the growth and survival tests;
  - 5) a critical dilution CV% of 40 or less in the growth and survival endpoints for either growth or survival test. However, if statistically significant lethal or nonlethal effects are exhibited at the critical dilution, a CV% greater than 40 shall not invalidate the test;
  - 6) a percent minimum significant difference of 37 or less for mysid shrimp growth; and
  - 7) a percent minimum significant difference of 28 or less for inland silverside growth.
- b. Statistical Interpretation
- 1) For the mysid shrimp and the inland silverside larval survival and growth tests, the statistical analyses used to determine if there is a significant difference between the control and an effluent dilution shall be in accordance with the manual referenced in Part 1.b of this Appendix.
  - 2) The permittee is responsible for reviewing test concentration-response relationships to ensure that calculated test-results are interpreted and reported correctly. The document entitled "Method Guidance and Recommendation for Whole Effluent Toxicity (WET) Testing (40 CFR Part 136)" (EPA 821-B-00-004)

provides guidance on determining the validity of test results.

- 3) If significant lethality is demonstrated (that is, there is a statistically significant difference in survival at the critical dilution when compared to the survival in the control), the conditions of test acceptability are met, and the survival of the test organisms are equal to or greater than 80% in the critical dilution and all dilutions below that, then the permittee shall report a survival No Observed Effect Concentration (NOEC) of not less than the critical dilution for the reporting requirements.
  - 4) The NOEC is defined as the greatest effluent dilution at which no significant effect is demonstrated. The Lowest Observed Effect Concentration (LOEC) is defined as the lowest effluent dilution at which a significant effect is demonstrated. A significant effect is herein defined as a statistically significant difference between the survival, reproduction, or growth of the test organism in a specified effluent dilution compared to the survival, reproduction, or growth of the test organism in the control (0% effluent).
  - 5) The use of NOECs and LOECs assumes either a monotonic (continuous) concentration-response relationship or a threshold model of the concentration-response relationship. For any test result that demonstrates a non-monotonic (non-continuous) response, the NOEC should be determined based on the guidance manual referenced in Item 2 of this Appendix.
- c. Dilution Water
- 1) Dilution water used in the toxicity tests shall be standard, synthetic reconstituted seawater.
  - 2) Upon approval, the permittee may substitute other dilution water with chemical and physical characteristics similar to that of the Gulf of Mexico.
- d. Samples
- 1) The permittee shall collect a minimum of three grab samples from the outfall being tested. The second and

third grab samples will be used for the renewal of the dilution concentrations for each toxicity test.

- 2) The permittee shall collect the grab samples such that the samples are representative of any periodic episode of chlorination, biocide usage, or other potentially toxic substance being discharged on an intermittent basis.
- 3) The permittee shall initiate the toxicity tests within 36 hours after collection of the first grab sample. The holding time for any subsequent grab sample shall not exceed 72 hours. Samples shall be maintained at a temperature of 0-6 degrees Centigrade during collection, shipping, and storage.
- 4) If the outfall being tested ceases discharging during the collection of effluent samples, the requirements for the minimum number of effluent samples, and the sample holding time are waived during that sampling period. However, the permittee must have collected an effluent grab sample volume sufficient to complete the required toxicity tests with renewal of the effluent. The sample collection duration and the static renewal protocol associated with the abbreviated sample collection must be documented in the full report.

### 3. Reporting

- a. The permittee shall prepare a full report of the results of all tests conducted in accordance with the manual referenced in Part 1.b. of this Appendix for every test initiated.
- b. The permittee shall routinely report the results of each biomonitoring test in the Table 1 format of this Appendix to the Standards Implementation Team (MC-150).
- c. Enter the following codes for the appropriate parameters for valid tests only:
  - 1) For the mysid shrimp, Parameter TLP3E, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "0."
  - 2) For the mysid shrimp, Parameter TOP3E, report the NOEC for survival.

- 3) For the mysid shrimp, Parameter TXP3E, report the LOEC for survival.
  - 4) For the mysid shrimp, Parameter TWP3E, enter a "1" if the NOEC for growth is less than the critical dilution; otherwise, enter a "0."
  - 5) For the mysid shrimp, Parameter TPP3E, report the NOEC for growth.
  - 6) For the mysid shrimp, Parameter TYP3E, report the LOEC for growth.
  - 7) For the inland silverside, Parameter TLP6J, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "0."
  - 8) For the inland silverside, Parameter TOP6J, report the NOEC for survival.
  - 9) For the inland silverside, Parameter TXP6J, report the LOEC for survival.
  - 10) For the inland silverside, Parameter TWP6J, enter a "1" if the NOEC for growth is less than the critical dilution; otherwise, enter a "0."
  - 11) For the inland silverside, Parameter TPP6J, report the NOEC for growth.
  - 12) For the inland silverside, Parameter TYP6J, report the LOEC for growth.
- d. The permittee shall report the sublethal WET values for the 30-day average and the 7-day minimum under Parameter No. 51712 for the inland silverside and Parameter No. 51713 for the mysid shrimp. If more than one valid test was performed during the reporting period, the NOECs will be averaged arithmetically and reported as the daily average NOEC. The data submitted should reflect the lowest sublethal results during the reporting period.



TABLE 1 (SHEET 1 OF 4)

MYSID SHRIMP SURVIVAL AND GROWTH

Date      Time                  Date      Time

Dates and Times    No. 1 FROM: \_\_\_\_\_ TO: \_\_\_\_\_

Samples Collected    No. 2 FROM: \_\_\_\_\_ TO: \_\_\_\_\_

No. 3 FROM: \_\_\_\_\_ TO: \_\_\_\_\_

Test initiated: \_\_\_\_\_ am/pm \_\_\_\_\_ date

Dilution water used: \_\_\_\_\_ Synthetic dilution water \_\_\_\_\_ Other (approved)

MYSID SHRIMP SURVIVAL

Percent Survival in Replicate Chambers

Percent Effluent	A	B	C	D	E	F	G	H	CV% <sup>1</sup>
0%									
0.8%									
1.3%									
1.5%									
2.1%									
2.7%									

Mean Percent Survival

Percent Effluent	24h	48h	7 day	CV% <sup>1</sup>
0%				
0.8%				
1.3%				
1.5%				
2.1%				
2.7%				

<sup>1</sup> Coefficient of Variation = standard deviation x 100/mean

DATA TABLE FOR GROWTH OF MYSID SHRIMP

Mean dry weight in milligrams in replicate chambers

<b>Replicate</b>	<b>0%</b>	<b>0.8%</b>	<b>1.3%</b>	<b>1.5%</b>	<b>2.1%</b>	<b>2.7%</b>
A						
B						
C						
D						
E						

TABLE 1 (SHEET 2 OF 4)

MYSID SHRIMP SURVIVAL AND GROWTH

DATA TABLE FOR GROWTH OF MYSID SHRIMP (Continued)

Mean dry weight in milligrams in replicate chambers

Replicate	0%	0.8%	1.3%	1.5%	2.1%	2.7%
F						
G						
H						
Mean Dry Weight (mg)						
CV% <sup>1</sup>						
PMSD						

1. Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:

Is the mean survival at 7 days significantly less than the control survival for the % effluent corresponding to lethality?

CRITICAL DILUTION (2.1%): \_\_\_\_\_ YES \_\_\_\_\_ NO

2. Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:

Is the mean dry weight (growth) at 7 days significantly less than the control's dry weight (growth) for the % effluent corresponding to non-lethal effects?

CRITICAL DILUTION (2.1%): \_\_\_\_\_ YES \_\_\_\_\_ NO

3. Enter percent effluent corresponding to each NOEC\LOEC below:

a.) NOEC survival = \_\_\_\_\_% effluent

b.) LOEC survival = \_\_\_\_\_% effluent

c.) NOEC growth = \_\_\_\_\_% effluent

d.) LOEC growth = \_\_\_\_\_% effluent

TABLE 1 (SHEET 3 OF 4)

INLAND SILVERSIDE MINNOW LARVAL SURVIVAL AND GROWTH TEST

Date      Time                  Date      Time

Dates and Times    No. 1 FROM: \_\_\_\_\_ TO: \_\_\_\_\_

Samples Collected No. 2 FROM: \_\_\_\_\_ TO: \_\_\_\_\_

No. 3 FROM: \_\_\_\_\_ TO: \_\_\_\_\_

Test initiated: \_\_\_\_\_am/pm \_\_\_\_\_date

Dilution water used: \_\_\_\_\_ Synthetic dilution water \_\_\_\_\_ Other (approved)

INLAND SILVERSIDE SURVIVAL

Percent Survival in Replicate Chambers

Percent Effluent	A	B	C	D	E	F	G	H	CV% <sup>1</sup>
0%									
0.8%									
1.3%									
1.5%									
2.1%									
2.7%									

Mean Percent Survival

Percent Effluent	24h	48h	7 day	CV% <sup>1</sup>
0%				
0.8%				
1.3%				
1.5%				
2.1%				
2.7%				

<sup>1</sup> Coefficient of Variation = standard deviation x 100/mean

TABLE 1 (SHEET 4 OF 4)

INLAND SILVERSIDE LARVAL SURVIVAL AND GROWTH TEST

INLAND SILVERSIDE GROWTH

Average Dry Weight in milligrams in replicate

Percent Effluent	A	B	C	D	E	Mean Dry Weight (mg)	CV% <sup>1</sup>
0%							
0.8%							
1.3%							
1.5%							
2.1%							
2.7%							
PMSD							

<sup>1</sup> Weights are for: \_\_\_ preserved larvae, or \_\_\_ unpreserved larvae

- Dunnett’s Procedure or Steel’s Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:

Is the mean survival at 7 days significantly less than the control survival for the % effluent corresponding to lethality?

CRITICAL DILUTION (2.1%): \_\_\_\_\_ YES \_\_\_\_\_ NO

- Dunnett’s Procedure or Steel’s Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:

Is the mean dry weight (growth) at 7 days significantly less than the control’s dry weight (growth) for the % effluent corresponding to non-lethal effects?

CRITICAL DILUTION (2.1%): \_\_\_\_\_ YES \_\_\_\_\_ NO

- Enter percent effluent corresponding to each NOEC/LOEC below:

a.) NOEC survival = \_\_\_\_\_% effluent

b.) LOEC survival = \_\_\_\_\_% effluent

- c.) NOEC growth = \_\_\_\_\_% effluent
- d.) LOEC growth = \_\_\_\_\_% effluent

## Appendix C: 24-Hour Acute Marine WET Testing Requirements

### 24-HOUR ACUTE BIOMONITORING REQUIREMENTS: MARINE

The provisions of this section apply to the outfall being tested for whole effluent toxicity (WET) testing.

#### 1. Scope, Frequency, and Methodology

- a. The permittee shall test the effluent for lethality in accordance with the provisions in this Appendix. Such testing will determine compliance with *Texas Surface Water Quality Standards* 30 TAC § 307.6(e)(2)(B), which requires greater than 50% survival of the appropriate test organisms in 100% effluent for a 24-hour period.

The permittee may be exempted from complying with 30 TAC § 307.6(e)(2)(B) upon proving that toxicity is caused by an excess, imbalance, or deficiency of dissolved salts. This exemption excludes instances where individually toxic components (e.g., metals) form a salt compound. To obtain this exemption, a permittee is required to submit an individual permit application and obtain an individual TCEQ state-only discharge permit allowing an ion-adjustment protocol, alternate species testing, or single species testing.

- b. The toxicity tests specified shall be conducted once per six months. The permittee shall conduct the following toxicity tests using the test organisms, procedures, and quality assurance requirements specified in this Appendix of the general permit and in accordance with “Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms,” fifth edition (EPA-821-R-02-012) or its most recent update:
  - 1) Acute 24-hour static toxicity test using the mysid shrimp (*Americamysis bahia*). A minimum of five replicates with eight organisms per replicate shall be used in the control and each dilution.
  - 2) Acute 24-hour static toxicity test using the inland silverside (*Menidia beryllina*). A minimum of five replicates with eight organisms per replicate shall be used in the control and each dilution.

The permittee must perform and report a valid test for each test species during the prescribed reporting period. An

invalid test must be repeated during the same reporting period. An invalid test is defined as any test failing to satisfy the test acceptability criteria, procedures, and quality assurance requirements specified in the test methods and general permit.

- c. In addition to an appropriate control, a 100% effluent concentration shall be used in the toxicity tests. The control shall consist of standard, synthetic, reconstituted seawater.
- d. The WET limits of greater than 50% survival in 100% effluent (LC50 of greater than 100%) after 24-hours are effective for both test species (see Part III, Section A.2.a of the general permit). Compliance schedules for existing discharges is established in Part III, Section B.19.
- e. If a test fails to meet an LC50 of greater than 100%, the testing frequency for that test species will increase to monthly until such time compliance with the WET limit is demonstrated for three consecutive months, at which time the permittee may return to the semi-annual testing frequency. A Notice of Change (NOC) as established in Part II, Section C.4 of the general permit is required to be submitted upon a demonstration of lethality that requires an increase in monitoring frequency. Additionally, upon three consecutive tests passing, an NOC is required to be submitted to revert to the semi-annual monitoring frequency.

2. Required Toxicity Testing Conditions

- a. Test Acceptance - The permittee shall repeat any toxicity test, including the control, if the control fails to meet a mean survival equal to or greater than 90%.
- b. Samples
  - 1) The permittee shall collect one grab sample from the outfall being tested.
  - 2) The permittee shall collect the grab sample such that the sample is representative of any periodic episode of chlorination, biocide usage, or other potentially toxic substance being discharged on an intermittent basis.
  - 3) The permittee shall initiate the toxicity tests within 36 hours after collection of the grab sample. The sample



shall be maintained at a temperature of 0-6 degrees Centigrade during collection, shipping, and storage.

3. Reporting

- a. The permittee shall prepare a full report of the results of all tests conducted in accordance with the manual referenced in Part 1.b. of this Appendix for every test initiated.
- b. The permittee shall routinely report the results of each biomonitoring test in the Table 2 format of this Appendix to the Standards Implementation Team (MC-150).
- c. Enter the following codes for the appropriate parameters for valid tests only:
  - 1) For the mysid shrimp, Parameter TIE3E, enter a "0" if the mean survival at 24-hours is greater than 50% in the 100% effluent dilution; if the mean survival is less than or equal to 50%, enter a "1."
  - 2) For the inland silverside, Parameter TIE6J, enter a "0" if the mean survival at 24-hours is greater than 50% in the 100% effluent dilution; if the mean survival is less than or equal to 50%, enter a "1."
- d. The permittee shall report the LC50 WET values for the 30-day average and the 7-day minimum under Parameter No. 51712 for the inland silverside and Parameter No. 51713 for the mysid shrimp. If more than one valid test was performed during the reporting period, the LC50s will be averaged arithmetically and reported as the daily average LC50. The data submitted should reflect the lowest LC50 results during the reporting period.

TABLE 2 (SHEET 1 OF 2)  
 MYSID SHRIMP SURVIVAL  
 GENERAL INFORMATION

	Time	Date
Sample Collected		
Test Initiated		

PERCENT SURVIVAL

Percent	effluent	0%	6%	13%	25%	50%	100%
Time	Rep						
24h	A						
	B						
	C						
	D						
	E						
	MEAN						

Enter percent effluent corresponding to the LC50 below:

24 hour LC50 = \_\_\_\_\_% effluent

TABLE 2 (SHEET 2 OF 2)  
 INLAND SILVERSIDE SURVIVAL

	Time	Date
Sample Collected		
Test Initiated		

PERCENT SURVIVAL

Percent	effluent	0%	6%	13%	25%	50%	100%
Time	Rep						
24h	A						
	B						
	C						
	D						
	E						
	MEAN						

Enter percent effluent corresponding to the LC50 below:

24 hour LC50 = \_\_\_\_\_% effluent