

Final NPDES General Permit for Discharges from New and Existing Sources in the Offshore Subcategory of the Oil and Gas Extraction Point Source Category to the Territorial Seas off Texas (Permit No. TXG260000)

Agency: United States Environmental Protection Agency

Action: Final Issuance of a National Pollutant Discharge Elimination System Permit

Summary: Region 6 of the United States Environmental Protection Agency (EPA) today issues a National Pollutant Discharge Elimination System (NPDES) general permit for discharges in the Oil and Gas Extraction Point Source Category which are located in the Territorial Seas off Texas (TXG260000). The permit authorizes discharges from new and existing sources and new discharges in the Offshore Subcategory of the Oil and Gas Extraction Point Source Category (40 CFR Part 435, Subpart A) located in and discharging pollutants to State waters within three miles of the coastline of Texas. Discharges of produced water to the territorial seas off Texas are also authorized from offshore subcategory facilities located outside State waters. This final permit replaces the expired general permit issued September 15, 1983 (48 FR 41494).

Dates: All limits, prohibitions, and monitoring requirements shall become effective thirty days after the publication date of the permit in the Federal Register.

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Supplemental Information: Pursuant to section 402 of the Clean Water Act (CWA), 33 U.S.C. section 1342, EPA proposed and solicited comments on the reissued NPDES general permit TXG260000 at 66 FR 29948 (November 17, 2003). Notice of this proposed permit was also published in the Houston Chronicle on November 20, 2003. The comment period closed on January 16, 2004.

The permit issued today authorizes discharges resulting from oil and gas exploration, development, and production. Discharges of drilling fluids, drill cuttings, and produced sand are prohibited.

EPA received comments from the Offshore Operators Committee (OOC), the International Association of Drilling Contractors, and the Railroad Commission of Texas. In response to those comments, clarifications were made in the permit's language. In addition, toxicity identification evaluation requirements were included for operators wishing to obtain an exemption under the Texas Water Quality Standard for 24-hour acute toxicity. The 48-hour acute toxicity limits contained in the proposed permit were changed to chronic toxicity limits, and the critical dilutions for the limits were recalculated based on information provided in comments. The sample type for toxicity testing was changed to allow collection of a single grab sample. The State lease and well numbers are required to be reported on the notice of intent to

be covered. A number of minor typographical corrections and clarifications were also made to the permit's language.

A summary of the comments received on the proposed permit and EPA's responses to those comments follows.

Response to Comments.

Comment Number 1:

The Offshore Operators Committee (OOC) noted that a newer version of CORMIX was used to develop critical dilutions for the 48-hour toxicity limits. Since the dilutions varied by as much as 50% in some cases, the OOC questioned whether attempts were made to verify the model results to determine if the newer version contains technical improvements compared to previous versions.

Response:

Like any other software, the developers of CORMIX continually update the model with the goal of improving its accuracy and ease of use. Both input from users and information produced by current research are used as they become available to improve the model. A list of the changes which were made in the most current version of CORMIX is available at www.mixzon.com. EPA agrees that verification of model results to available data is an important step in any modeling exercise, regardless of whether a model is a new version. The results produced by the CORMIX model have been verified using relevant available data. A high level of correlation between the model results and pertinent data was found.

Comment Number 2:

The Offshore Operators Committee reviewed available density stratification data for the Gulf of Mexico and commented that an appropriate gradient for use in developing dispersion modeling is $0.03 \text{ kg/m}^3/\text{m}$ rather than the value of $0.182 \text{ kg/m}^3/\text{m}$ used to develop the proposed permit limits.

Response:

EPA reviewed available density stratification data in response to OOC's issue. The issue was also discussed with the Texas Commission on Environmental Quality to determine the most appropriate use of density stratification for implementation of the State Water Quality Standards. Based on that information it was found that dispersion modeling should be conducted at both the estimated 10th and 90th percentile density stratification. The results would then be used to determine which stratification represents a reasonable worst case scenario and is protective of State Water Quality Standards.

Density stratification is not typically monitored in the territorial seas off Texas; therefore,

most previous permitting efforts relied on data obtained at the West Hackberry brine disposal site located offshore of Holly Beach, Louisiana. The West Hackberry site is fairly shallow (5.5 meters) and is thought to be representative of conditions in the territorial seas offshore of Texas. From those data, a density stratification of 0.182 kg/m³/m was determined to be represent the 75th percentile. Based on data from monitoring stations located offshore of the territorial seas, OOC suggested that the density stratifications representing the 10th and 90th percentile are 0.0043 kg/m³/m and 0.2291 kg/m³/m, respectively. Those density stratifications were used to determine the reasonable worst case scenario for the final permit's toxicity limitations.

Comment Number 3:

The Offshore Operators Committee commented that the 1991 Technical Support Document for Water Quality-based Toxics Control does not recommend acute toxicity limits at dilutions which are greater than 100% effluent and requested that the 24-hour acute toxicity limits are removed from the permit. OOC noted that the limits, as applied, are not water quality based and appear to be overly stringent for the open ocean.

Response:

The 24-hour acute toxicity limits are required by State Water Quality Standards (see Texas Administrative Code, Title 30, Chapter 307.6(e)(2)(b)) and thus are considered to be water quality-based. Since the 24-hour acute toxicity limits are required by State Water Quality Standards, EPA does not have the flexibility to remove the requirement as requested. The proposed permit was reexamined based on this comment. No toxicity limits were found at dilutions which are greater than 100%. It was also found that all relevant permit requirements appear to be consistent with the Technical Support Document for Water Quality Based Toxics Control.

Comment Number 4:

The Offshore Operators Committee requested use of grab samples for toxicity testing requirements rather than a flow weighted composite sample. OOC also requested that EPA change the list of intermittently discharged additions to the produced water waste stream to be consistent with the Western Gulf of Mexico Outer Continental Shelf general permit.

Response:

EPA agrees. The changes were made as requested and are consistent with other offshore oil and gas permits issued within Region 6.

Comment Number 5:

The Offshore Operators Committee requested a change in the permit's language to show that de minimis discharges of non-aqueous based drilling fluids, such as those which are wind blown from the pipe rack, are clearly authorized.

Response:

EPA agrees with the request. The changes were made as requested.

Comment Number 6:

The Offshore Operators Committee supplied data for the acute to chronic toxicity ratio of produced water discharges from platforms located in the Outer Continental Shelf. OOC commented that the data do not support the acute to chronic ratio of 10 to 1, which was used to derive the proposed permit's limits for toxicity. In order to resolve this issue, OOC requested that chronic toxicity limits be included in the final permit rather than the acute limits which were proposed.

Response:

The acute to chronic ratio used to derive that proposed permit limits was intended to protect aquatic life from sub-lethal effects of produced water discharges. Data supplied by OOC seem to support the acute to chronic ratio of 10 to 1. However, EPA agrees that chronic toxicity limits as required under the Outer Continental Shelf general permit are allowed by the state's implementation plan. Therefore, chronic toxicity limits are included in the final permit as requested.

Comment Number 7:

The Offshore Operators Committee noted that the implementation plan for the Texas Surface Water Quality Standards allows an exemption from testing when the 24-hour acute toxicity test is failed because of high concentrations of total dissolved solids in the effluent. OOC requested that the final permit allow use of the testing exemption when it is shown that total dissolved solids are the cause of toxicity testing failures.

Response:

Use of the exemption is allowed by the final permit as requested. If operators follow the procedures of the implementation plan and show that toxicity is solely caused by total dissolved solids, they will be exempt from the test requirements.

Comment Number 8:

The International Association of Drilling Contractors commented that many mobile offshore drilling units are registered to countries that are party to Annex IV of the International Convention for the Prevention of Pollution from Ships (MARPOL 73/78). Although the United State is not yet a party to MARPOL, regulations for marine sanitation devices established under Annex IV, meet or exceed the standards promulgated at 33 CFR Part 159. The commentor noted that the Coast Guard considers the regulations to be equivalent and requested that EPA consider compliance with the Annex IV regulations to be equivalent to compliance with the regulations

under section 312 of the Clean Water Act.

Response:

A determination of whether a marine sanitation device which complies with MARPOL 73/78 Annex IV also complies with the Coast Guard's regulations is beyond EPA's jurisdiction. Operators of such vessels will need to seek certification from the Coast Guard to determine compliance with the regulations at 33 CFR Part 159.

Comment Number 9:

The International Association of Drilling Contractors commented that the Coast Guard and EPA are presently developing ballast water treatment standards for controlling the spread of aquatic nuisance species. Those new standards may potentially include requirements for some sort of physical or chemical treatment of ballast water. The commentor requested that ballast water receiving such treatment would still be considered uncontaminated under the permit.

Response:

EPA is required, both by Texas Water Quality Standards and Federal Ocean Discharge Criteria to ensure that discharges authorized by the permit do not cause conditions in the receiving water which are toxic to aquatic life. Accordingly, the proposed permit included toxicity limitations for ballast water to which treatment chemicals are added. Many of the treatment chemicals traditionally added to such discharges can be toxic to aquatic life and have been limited for toxicity for a number of years in other offshore oil and gas permits issued by EPA Region 6. However, the operators typically do not have difficulty in complying with the toxicity limits if they do not over apply the treatment chemicals.

Comment Number 10:

The International Association of Drilling Contractors requested clarification on whether several potential pollutant sources incidental to ship operations, which are not included in the permit's list of miscellaneous discharges, are authorized to be discharged under the permit. Those pollutant sources include: cathodic protection, chain locker effluent, controllable pitch propeller hydraulic oil, hull coating leachate, rudder bearing lubrication, small boat engine wet exhaust, and underwater ship husbandry.

Response:

A number of the discharges in question are only made when platforms or ships are in a transportation mode. Vessels which are being used for transportation are exempt from NPDES permitting; therefore, EPA does not have the authority to regulate those discharges under this permit. The discharges which are exempt include: chain locker effluent, hull coating leachate, rudder bearing lubricant, and small boat wet engine exhaust.

Cathodic protection may be associated with several of the miscellaneous discharges authorized by the permit but is not itself considered to be a discharge. Therefore, no changes to the final permit are necessary.

Controllable pitch propeller hydraulic oil is a potential discharge from drill ships using dynamic positioning. Such drill ships are used exclusively for deep water drilling and will not be operating in the area covered under the Texas Territorial Seas general permit.

Underwater ship husbandry consists of using scraping or similar means to remove barnacles and other obstructions, such as corrosion, so that a ship or platform may be repaired or inspected. That activity is not normally expected to meet the definition of a point source discharge of pollutants and is neither authorized nor prohibited under the Texas Territorial Seas general permit.

Comment Number 11:

The Railroad Commission of Texas requested that the permit require operators to submit the lease and well number assigned by the State in the notice of intent to be covered.

Response:

The change was made as requested.