Final NPDES General Permit for Discharges from the Offshore Subcategory of the Oil and Gas Extraction Point Source Category To the Territorial Seas of Louisiana (LAG260000)

Agency: United States Environmental Protection Agency

Action: Final Issuance of NPDES General Permit

Summary: Region 6 of the United States Environmental Protection Agency (EPA) today issues a National Pollutant Discharge Elimination System (NPDES) general permit for existing source facilities and new source facilities in the Offshore Subcategory of the Oil and Gas Extraction Point Source Category (40 CFR Part 435, Subpart A) located in and discharging to lease blocks in the territorial seas offshore of Louisiana. That permit also authorizes discharges of produced water to the territorial seas offshore of Louisiana from wells located in the outer continental shelf (OCS).

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

FOR FURTHER INFORMATION CONTACT: Ms. Wilma Turner, EPA Region 6, 1445 Ross Avenue, Dallas, Texas 75202, Telephone: (214) 665-7516.

SUPPLEMENTARY INFORMATION: Pursuant to section 402 of the Clean Water Act (CWA), 33 U.S.C. section 1342, EPA proposed and solicited comments on NPDES general permit LAG260000 at 61 FR 37746 (July 19, 1996). Notice of this proposed permit was also published in the New Orleans Times Picayune on July 27, 1996. The comment period closed on September 17, 1996.

Region 6 received comments from the Offshore Operators Committee, American Petroleum Institute, Louisiana Department of Environmental Quality, Willie R. Taylor - United States Department of Interior, Abraham E. Haspel - United States Department of Energy, Flores & Rucks, Inc., Exxon Company, U.S.A., and the Louisiana Mid-Continent Oil and Gas Association.

EPA has considered all comments received. In some instances minor wording changes were made in the final permit in order to clarify some points as a result of comments or to correct typographical errors. In response to the comments submitted the following changes were made to the permit: Language showing that new sources are covered was added. The critical dilution tables for toxicity limitations and numeric water quality based limits were recalculated and expanded to account for additional discharge rates and pipe diameters. Limits for arsenic were removed from the permit and replaced with limitations for thallium. A period of six months was given to come into compliance with water quality based limits for produced water. Model input parameters for diffuser modeling were updated based on site specific data. The table specifying vertical separation between discharge ports has been updated to account for greater volume discharges. Produced water discharges are prohibited in some instances in accordance with State

regulations (LAC 33:IX.708.C.2.c.iii, iv, and v.). Biochemical oxygen demand and total suspended solids limitations and monitoring were added for all sanitary water discharges under 2500 gallons per day, and chlorine limitations were added for sanitary waste water discharges from platforms which are manned by nine or fewer persons or which are intermittently manned. 24-hour reporting requirements and unauthorized discharge requirements were changed to reflect State regulations. The permit requires operators to submit notification of intent to be covered and discharge monitoring reports to the State instead of EPA. The State's field designation is also required to be included in notifications of intent to be covered.

RESPONSE TO COMMENTS.

(1) Comment: Exxon Company, U.S.A. commented that EPA should depart from the jurisdictional boundaries, set according to the international Convention of the Territorial Seas and the Contiguous Zone, along sections of the coast where more logical boundaries for the purposes of discharge permits can be established. Several facilities located immediately west of the Mississippi River delta are significantly more than three nautical miles from shore and would not be allowed to discharge drilling fluids and drill cuttings under the present permit boundaries. In broad areas of the Gulf, such as Texas, where political boundaries do not coincide with the three nautical mile boundary EPA selected the three mile criteria as the boundary between the OCS permit and the territorial seas permit. Exxon stated that the permit needs to allow those facilities located in open Gulf waters, more than three nautical miles from shore, to be covered by the OCS permit rather than the territorial seas permit.

RESPONSE: The request is denied. The inner boundary of the territorial seas is an existing boundary which has been followed by general permits covering the Gulf of Mexico since 1981. Due to the geography of southern Louisiana that boundary does not always consist of dry land. The boundary does however correspond with the 1975 Supreme Court decision, which settled conflicting claims to submerged lands mineral ownership. That boundary was used in development of Effluent Limitations Guidelines and is the boundary between the Coastal Subcategory and the Offshore Subcategory of the Oil and Gas Extraction Point Source Category Effluent Limitations Guidelines. Therefore, there is no reason to change the area of coverage of the permit. It is consistent with the prohibition of the discharge of drilling fluids and drill cuttings under Offshore Subcategory Guidelines.

(2) COMMENT: The Offshore Operators Committee (OOC) commented that language should be added to the permit stating that it covers existing sources and new sources. Also, the notification requirements should be modified to require that new sources are clearly identified. In this way, the agency will more easily be able to identify which facilities fall under the ten-year exemption from more stringent effluent standards that the Clean Water Act provides new Sources.

RESPONSE: The changes were made as requested.

(3) COMMENT: The OOC requested that EPA change the notice of intent to be covered by a subsequent permit requirement to specify a calender date rather than 180 days prior to the

expiration date. This would avoid confusion as to exactly what is the deadline.

RESPONSE: This comment is no longer relevant due to a change in the permit discussed later in this response to comments.

(4) COMMENT: The OOC requested a change in the permit which would delay the prohibition of the discharge of drilling fluids and drill cuttings for 180 days after its effective date. The expired Territorial Seas permit allowed discharge of drilling fluids and cuttings. Time is needed to convert rigs from a discharge scenario to meet the new permit prohibitions. Also, additional waste handling barges will need to be procured.

RESPONSE: The request is denied. National Effluent Limitations Guidelines which prohibit this discharge have been in effect since March 4, 1993. Permittees have had over four years to prepare for this permit requirement. The basis for the prohibition is also not a new technology which will require design and construction of treatment equipment. Additionally, operators are already barging drilling fluids and cuttings to shore in instances where they are using oil based drilling fluids or are located in areas such as live oyster beds where Louisiana prohibits discharge under LAC 33:IX.708.C.3.e.

(5) COMMENT: The OOC commented that produced water limitations for lead and total phenols should be removed from the permit. They stated that monitoring for short term aquatic

toxicity is adequate to ensure the protection of aquatic life.

RESPONSE: Although toxicity testing is deemed to be a good measure of the toxic effects of the effluent, it does not ensure compliance with numeric water quality criteria as required by both Ocean Discharge Criteria (40 CFR Part 125 Subpart M) and State water quality standards. The permit contains numeric limits for two metals and two organics to ensure that the discharges it authorizes will not cause violations of those numeric criteria.

(6) COMMENT: The OOC commented that the monitoring requirements for arsenic and benzene in produced water should be waived based on the results of the industry-wide bioaccumulation study. Actual data on the edible tissue, as gathered by the bioaccumulation study, is a more direct measure for assessing the potential to impact human health.

RESPONSE: The Industry-wide Bioaccumulation Study has provided detailed information about bioaccumulative effects of produced water discharges at several offshore platforms; however, none of those platforms are located in shallow water, such as that which makes up a great percentage of the territorial seas off Louisiana. The potential for bioaccumulation is expected to be much greater in shallow water where the effluent receives less dilution, than it is

in the deeper water examined under the Industry-wide Bioaccumulation Study. Therefore, the study did not provide information which can be applied to discharges authorized by this permit to

ensure compliance with Ocean Discharge Criteria and water quality standards.

Permits are required to have monitoring for limited parameters in order to determine that the discharge is in compliance with the limits. 40 CFR 122.44 (i)(2) requires permits to contain monitoring frequencies to gather data representative of the discharge but in no case less frequent than once per year. Therefore, monitoring for benzene and arsenic have not been removed from the permit as requested.

(7) COMMENT: The Offshore Operators Committee stated that thallium would be a better indicator parameter than arsenic for human health based water quality criteria. Fish consumption criteria for arsenic is based on carcinogenic risk to humans from consumption of inorganic arsenic in drinking water. Arsenic found in marine organisms is predominantly organic arsenic which is known to be less toxic than inorganic arsenic. Also, inorganic arsenic is considered a Class A Human Carcinogen; whereas, there is no evidence that any organic form of arsenic is carcinogenic.

RESPONSE: EPA disagrees that the water quality criterion for human health protection is based on arsenic in drinking water. The criterion used for the water quality analysis in the Fact Sheet (0.14 ug/l) is for fish consumption only, and was developed using the hazard assessment in EPA's Integrated Risk Information System database.

EPA does, however agree, that arsenic in marine organisms is primarily present as organic

compounds such as arsenobetaine and arsenocholine, which pose less of a human health risk than inorganic arsenic. The organic portion of arsenic has been found to be approximately 74% to 91% of the total arsenic present in marine fish tissue. Based on that information, EPA agrees that thallium is a better indicator parameter for other human health based metals criteria than is arsenic. The human health based metal limit in the permit has been changed to thallium as requested. Thallium was found to be present in produced water in measurable qualities at least as often as arsenic and was also shown to exceed the criteria in the worst case scenario. Like the proposed arsenic limits, the thallium limits are based on EPA criteria published in the National Toxics Rule (57 FR 60848, 12/22/92).

(8) COMMENT: The OOC commented that the permit should allow operators the alternative to monitor dissolved metals instead of the total form for compliance with water quality criteria based limitations. They stated that the origin and validity of the total to dissolved ratio used in developing permit limits is not documented in the Fact Sheet.

RESPONSE: The method for calculating the total to dissolve ratio of metals is consistent with Guidance Document Concerning Permitting Implementation of Louisiana Surface Water Quality Standards. This method has been used consistently in NPDES permits authorizing discharges from facilities located in Louisiana.

(9) COMMENT: The OOC requested a period of six months to be allowed to come into compliance with the permit's water quality based limits. That time is needed to add diffusers or

make other modifications to discharges in order to become compliant with the new limits.

RESPONSE: The permit was changed to give operators six months to come into compliance with the new water quality based limits for benzene, total lead, total phenols, and total thallium. NPDES permits issued to facilities located in Louisiana commonly give such a period for the facility to come into compliance with new water quality based limits. This allowance is consistent with State water quality standards.

(10) COMMENT: The Offshore Operators Committee commented that the minimum quantification levels (MQLs) for arsenic, lead, benzene, and total phenols should be increased to 30 ug/l. They stated that commercial labs will have difficulty consistently meeting these stringent limits because of the many ionic constituents in produced water which could interfere with measurements.

RESPONSE: The MQLs required for permit compliance are from Louisiana's Implementation Plan and have been consistently used in NPDES permits issued to facilities located in the State of Louisiana. Although the development of a site specific MQL is allowed, no data is available which would justify such an allowance in this permit. Data examined in development of this permit show measurement of produced water pollutant concentrations to Louisiana's MQLs to be achievable. It should be noted that the concentration limits in the final permit are not low enough that MQLs will be at issue.

(11) COMMENT: The OOC commented that the input parameters required to be used for horizontal diffuser modeling should be the same as those used for modeling single port discharges.

RESPONSE: EPA agrees. The permit has been changed as requested.

(12) COMMENT: The OOC requested changes in the monitoring frequencies for arsenic, benzene, lead, and total phenols from once per two weeks/monthly/quarterly to monthly/quarterly/annually. They stated that EPA did not show that effluent variability would justify the high sampling frequency. The less frequent monitoring required for produced water toxicity testing should be sufficient to ensure that samples are representative of the discharge and are in compliance with the permit. The OOC also stated that it is difficult in the offshore setting to collect samples and have them analyzed onshore more frequently than once per month.

RESPONSE: EPA disagrees that the sampling frequency should be reduced as requested. Typically, in individual NPDES permits for industrial facilities, the monitoring frequency for water quality based numerical limits is once per week for the life of the permit. Less frequent monitoring of once per two weeks is required by this permit since the effluent quality is not expected to be highly variable and due to the logistical constraints of sampling offshore and transporting the sample to an onshore laboratory. Additionally, the permit allows the monitoring frequency to be reduced to once per quarter after the permittee has demonstrated compliance for a full year.

It should also be noted that once per two weeks is the monitoring frequency required for only the largest produced water flow rates. Very few discharges are expected to have flow rates that high. Most are expected to be required to be monitored once per month or once per quarter. The permit also gives permittees several options to reduced the critical dilution, all of which will also have the affect of decreasing the required monitoring frequency for the numeric water quality based limits.

(13) COMMENT: The OOC requested a change in the discharges included under treated seawater and freshwater discharges and under the definitions for uncontaminated seawater and uncontaminated freshwater. They commented that the lists of covered discharges should be open ended instead of listing the specific discharges covered by the permit. This change would eliminate the problem of how to handle new discharges in the future, and would allow coverage of existing discharges which may have been overlooked at the time of permit issuance.

RESPONSE: EPA disagrees. While a permit which automatically covers discharges not reported to EPA would be convenient to permittees, it would circumvent the public participation and permit issuance requirements of the NPDES permitting process. Such an allowance would not be consistent with public notice requirements under 40 CFR 124.10, fact sheet requirements under 40 CFR 124.8, and permit issuance requirements under 40 CFR 124.6. Additionally, there is no way of knowing whether such a permit is compliant with Ocean Discharge Criteria or water quality standards. The requested open-ended permit would also be very difficult to enforce, since it would not clearly state what is a permitted discharge.

(14) COMMENT: The OOC commented that EPA should require toxicity monitoring only and not toxicity limits on treated seawater and treated freshwater discharges. A reasonable potential to exhibit toxic effects has not been documented; therefore, a monitoring requirement is reasonable to evaluate toxicity prior to a limit being imposed.

RESPONSE: The OOC provided EPA information on treated seawater and freshwater discharges which show that many of the discharges are extremely large and contain highly toxic chemicals. They reported continuous discharges as high as 54,600 barrels per day (bbl/day) or 2.3 million gallons per day (MGD) with the potential to discharge well over 100,000 bbl/day (4.2 MGD) from a single platform. Toxicity data submitted by the OOC show the "treatment" chemicals to be acutely toxic in concentrations as low as 3 ug/l. Based on that information, the discharges have a high potential to exhibit toxic effects in the receiving water. Therefore, toxicity limitations are needed to ensure compliance with Ocean Discharge Criteria and Louisiana water quality standards.

(15) COMMENT: The OOC requested a change in the toxicity testing frequency for both continuous and batch discharges of treated seawater and freshwater. A one time test was suggested which would be done only once for each chemical type and concentration.

RESPONSE: The request has been denied. Permits must require monitoring at a frequency sufficient to yield data which are representative of the monitored activity but in no case less frequent than once per year (see 40 CFR 122.44. (i)(2) and 40 CFR 122.48). A monitoring

frequency of once per month was chosen for the discharges with the greatest potential to exhibit toxic effects. Less frequent intervals are required for smaller discharges, which are less likely to exhibit toxic effects. If the discharges has been compliant with the limit for one full year the permit allows a decrease in the monitoring frequency to once per year.

(16) COMMENT: The Offshore Operators Committee requested an exemption from the toxicity testing requirements for treated seawater and treated freshwater discharges which are only treated with chlorine. They stated that chlorine is commonly used to treat sewage discharges, and it makes no sense to require toxicity testing on one waste stream treated with chlorine and not another which is treated with a similar concentration.

RESPONSE: The monitoring requirements and limitations contained in the permit for miscellaneous discharges of seawater and freshwater which have been chemically treated are designed to allow permittees as much flexibility in operations as possible. Toxicity limitations were included in the permit instead of limits on specific chemicals in order to ensure compliance with the narrative water quality standards and Ocean Discharge Criteria and, at the same time, not limit permittees to the use of specific treatment chemicals. Although, the commentor is correct that sanitary waste water from these facilities is presently discharged with added chlorine, those discharges are relatively small in comparison to other discharges to which chlorine is commonly added. According to data supplied by the Offshore Operators Committee, chemically treated seawater and freshwater discharges can be at least as large as 1,890,000 gallons per day. Sanitary waste water discharges are expected to be less than 2,500 gallons per day. The much larger

discharges have a higher potential to cause toxic effects and the toxicity limits are thus justified.

(17) COMMENT: The OOC and the Department of Energy (DOE) commented that the endpoint of the 48-hour toxicity test for treated seawater and freshwater should be the lethal concentration at which 50% of the organisms survive (LC50) and not the No Observable Effect Concentration (NOEC). Proposed permit limits were derived using a ten to one acute to chronic ratio. Data show that the 48-hour NOEC to 7-day NOEC ratio for produced water is considerably less than ten to one. Also, the technical support document recommends a default acute to chronic ratio of ten to one based on a 48-hour LC50 not a 48-hour NOEC.

RESPONSE: The acute to chronic ratio used to develop the treated seawater and freshwater permit limits is consistent with the State Implementation Plan which suggests the use of acute toxicity testing (not LC50) in lieu of chronic toxicity testing under certain circumstances. The plan states " A ratio of 10:1 may be used in absence of site specific data". In the absence of site specific data for treated seawater and freshwater discharges, the 10:1 ratio and the limits were not changed in the final permit. That ratio is also commonly used in permits in cases where the critical dilution is less than five percent.

EPA agrees that, based on OOC's data, the ratio for the 48-hour NOEC to the 7-day NOEC for produced water may often be something besides ten to one, but OOC's produced water data are not relevant to treated seawater and freshwater discharges. In addition, the acute to chronic ratio was not used to develop produced water toxicity limits.

(18) COMMENT: The OOC commented that the permit's part II provisions requiring notification of discharges of toxic substances should be modified to clarify that the requirements do not apply to produced water. EPA has reviewed the available produced water data and is aware of the toxic substances present in produced water; therefore, no useful purpose would be served by requiring permittees to notify the agency of the substances.

RESPONSE: The language does not apply and has been removed from the permit as requested.

(19) COMMENT: The OOC stated that the definitions of domestic waste and gray water should be combined and listed as domestic waste. They explained that the way in which the definitions are presently listed makes it difficult to ensure a comprehensive list of discharges.

RESPONSE: The definitions were combined as requested.

(20) COMMENT: The OOC requested the addition of hydrostatic test water from previously used piping to the definition of uncontaminated freshwater. They stated that piping is cleaned of any oil or pollutants prior to being filled with hydrostatic test water intended for discharge.

RESPONSE: The change has not been made in the final permit. The definition of uncontaminated fresh water is identical to the definition contained in the Western Gulf of Mexico Outer Continental Shelf general permit. It is unlikely that water used to pressure test used piping could be discharged without any added pollutants, especially if the water was used in an existing

crude oil pipeline. Unless the previously used piping is properly cleaned, the hydrostatic test water discharge from such piping could contain pollutants in levels of concern. The hydrostatic test water discharge may therefore not meet the definition of uncontaminated freshwater. Technologies used to treat waste water from hydrostatic testing of existing pipelines have not been examined; therefore, the permit does not contain limits based on best available technology, for that type of discharge. The technology was also not addressed by the Effluent Limitations Guidelines for the Offshore Subcategory of the Oil and Gas Extraction Point Source Category. Methods needed to ensure representative sampling of such discharges also have not been addressed in the permit. Accordingly, in order to provide clarity and consistency between the permit's authorizations to discharge uncontaminated seawater and freshwater and chemically treated seawater and freshwater used for pressure treating of piping, the permit has been changed to show that all of those discharges are to be from new piping. Discharges from existing piping will need to be addressed by a permit modification or under a separate hydrostatic test water general permit.

(21) COMMENT: The OOC commented that arsenic concentration limits listed in the tables that are below 3.0 ug/l should be set equal to 3 ug/l. Some of the proposed permit limits, corresponding to high discharge rates in shallow waters, are lower than ambient concentrations of arsenic, which range from 1 ug/l to 3 ug/l.

RESPONSE: This comment is no longer relevant because the arsenic limit has been replaced with a limit for thallium.

(22) COMMENT: The OOC and the Department of Energy commented that the mixing zone radius should be adjusted to be 400 feet instead of 100 meters. Louisiana has defined the mixing zone for state waters in the Gulf of Mexico to be 400 feet; therefore, the Agency should recognize this definition and use it in permit calculations. They added that the larger mixing zone will allow greater effluent dilution and give operators more flexibility in their water treatment programs, without sacrificing environmental concerns.

RESPONSE: The request is denied. In order to determine that there will be no unreasonable degradation of the marine environment in the territorial seas, as required by 40 CFR 125.122, factors including potential impacts on human health and marine water quality criteria, which include human health protection criteria must be considered. The Louisiana Water Quality Standards do not define a mixing zone size in the territorial seas for human health protection. The mixing zone size of 100 meters, as defined in 40 CFR 125.121 must, therefore, be used to assure compliance with the human health aspects of 125.122 in the territorial seas of Louisiana. The 100 meter mixing zone is required to be used for both the aquatic life protection and human health protection considerations of 125.122 for discharges into the Outer Continental Shelf waters of the Gulf of Mexico. Use of a larger mixing zone for aquatic life protection in the relatively shallow Louisiana Territorial Seas than in the deeper OCS waters which will have more dilution would not assure that the 125.122 requirements will be met.

(23) COMMENT: The OOC commented that they were unable to reproduce the critical dilutions listed in the proposed permit with the information available in the Fact Sheet. They also

stated that the modeling input parameters shown in the Fact Sheet were not consistent with those used in dilution modeling conducted for the Outer Continental Shelf general permit.

RESPONSE: The produced water dilution modeling was rerun to ensure that the results are reproducible, and the critical dilution tables were corrected accordingly. Input parameters used in the new model runs were identical to those used for the Outer Continental Shelf general permit with the exception of the density gradient of 0.182 sigma-t/meter which is the average obtained from data for the Louisiana Territorial Seas.

(24) COMMENT: The OOC stated that the interpolation procedure used to derive the final produced water critical dilution tables is inappropriate. The recursive nature of the interpolation will lead to an exaggeration of any errors or inaccuracies in the original model results. It would be more appropriate to use the actual CORMIX predictions rather than the interpolations because their field observations indicate that high volume discharges in shallow water dilute more rapidly than indicated by the interpolated critical dilution table.

RESPONSE: The field observations presented by OOC concerned produced water which is discharged through two outfalls located 19 meters apart. EPA disagrees that the field observations are representative of a single high volume discharge. A discharge separated by two ports is going to receive much more dilution than the same discharge through a single port. Additionally, the method used for field observations is highly suspect. Since the receiving water will have natural variations in salinity, measurement of salinity is a problematic method for

determining plume boundaries. Dye studies are considered a more reliable method.

Most of the inconsistencies noted in the model results have been eliminated in the new modeling. The few discharge scenarios which still appear to be inconsistent are highly turbulent. The high turbulence may account for the differences between those scenarios and the lower volume discharges where the inconsistencies do not appear. Therefore, the newly modeled produced water critical dilution tables were not corrected by interpolation in the final permit.

(25) COMMENT: The OOC requested additional dilution values in the critical dilution tables to account for discharges between 10,000 barrels per day and 20,000 barrels per day. A large number of discharges are believed to fall in this range.

RESPONSE: The change was made as requested.

(26) COMMENT: The OOC requested additional produced water critical dilution tables in the permit to better account for different pipe diameters. They stated that the most cost effective way to increase dilution is to modify the discharge pipe diameter.

RESPONSE: Additional produced water critical dilution tables were included in the final permit to account for different discharge pipe diameters. As a result of this change, four additional critical dilution tables were added to the permit. In order to allow the same flexibility for the water quality based limitations for benzene, lead, phenol, and thallium and keep the number of

tables in the permit to a manageable number, equations have been included in the permit by which permittees will calculate those limitations from the critical dilution.

(27) COMMENT: The OOC commented that the table which specifies the minimum separation between vertically separated ports should be expanded to allow greater discharge rates.

RESPONSE: The table was expanded as requested.

(28) COMMENT: The OOC commented that the critical dilution tables for treated seawater and freshwater should be revised to eliminate inconsistencies. They added that CORMIX may not be able to calculate some of the dilutions listed in the table. EPA should reexamine the critical dilutions, as was shown in the Fact Sheet for the produced water critical dilutions, and further develop the table to ensure that the model predictions are reasonable.

RESPONSE: The effluent dilutions were recalculated with CORMIX1 and the table was revised. The new table does not contain the inconsistencies noted in the old table; therefore, the interpolation method shown in the fact sheet was not used to adjust results as requested. There are no data which show an interpolation of the model results to be more accurate than the actual CORMIX results.

(29) COMMENT: Flores & Rucks, Inc. commented that the drilling fluids and drill cuttings discharge prohibition raises serious safety concerns resulting from hauling drilling fluids and

cuttings in shallow water, high energy areas of the Gulf. They stated that, although EPA considered safety as a non-water quality factor during development of effluent limitations guidelines, the Agency determined that it was not possible to predict the effect of transportation of drilling waste to shore on the number of personnel casualties. They urged EPA to reconsider this discharge prohibition and suggested that this may be a variance under the Clean Water Act.

RESPONSE: The prohibition against the discharge of drilling fluids and drill cuttings is based on National Effluent Limitations Guidelines. The general permit issuance process is not the correct forum to raise issues concerning the appropriateness of factors considered in issuing those guidelines.

(30) COMMENT: The United States Department of Interior (DOI) commented that EPA's analysis did not adequately consider implications to facilities located in the Outer Continental Shelf (OCS). EPA's economic analysis did not account for large volume central processing facilities which receive produced water from OCS platforms and presently discharge into coastal waters. When coastal discharges are required to cease, this permit will severely limit operators' discharge options. If those discharges cannot comply with the proposed permit, the added costs of building treatment units or new structures in OCS waters to handle this produced water may force premature abandonment of older or marginal fields. They further stated that EPA's technology based limitations do not adequately address the technology of the large central processing units.

RESPONSE: This permit allows the discharge of produced water from wells located in the outer continental shelf to the territorial seas of Louisiana if the discharge is compliant with Ocean Discharge Criteria and State water quality standards. It also allows several simple and fairly inexpensive methods to achieve compliance with the water quality based limits so that a discharge will not be prohibited. Therefore the toxicity limits and numeric water quality criteria based limits do not appear to preclude any produced water discharges from facilities located in the Outer Continental Shelf.

This is , however, not the correct forum under which to address the technology basis for the produced water effluent limitations. The technology based produced water limitations are in accordance with national effluent limitations guidelines at 40 CFR Part 435 Subpart A.

(31) COMMENT: The DOI commented that EPA should explain why the facilities located in the territorial seas offshore of Texas are exempt from this permit.

RESPONSE: Facilities located in the Texas territorial seas are not "exempt" from this permit; rather, they are not covered by this permit. EPA Region 6 plans at a later date to proposed a general permit covering discharges from oil and gas operations in the Texas territorial seas.

(32) COMMENT: The DOI commented that the proliferation of EPA general permits covering oil and gas operations in the Gulf of Mexico is cumbersome. They suggested consolidating the various permits.

RESPONSE: EPA disagrees that there is a "proliferation" of general permits covering oil and gas operations in the Gulf of Mexico. The Louisiana territorial seas general permit replaces the expired permit for the territorial seas of Louisiana (LA0060224) which expired on June 30, 1984. It is not a new permit. Also, it would be impractical and confusing to combine permits which have extremely different requirements.

EPA Region 6 has attempted to limit the number of new general permits where feasible. The most recent example is the issuance of the New Source General Permit for the Western Portion of the Outer Continental Shelf of the Gulf of Mexico, which was combined with the existing Outer Continental Shelf general permit at the time it was issued. In that case both permits were nearly identical, included the same area of coverage, and will by administered by the same agency.

(33) COMMENT: The Department of Energy (DOE) stated that produced water toxicity limits are not appropriate because produced water has a higher salinity than the receiving waters and can cause toxic effects due to salinity or ionic balances. They commented that, due to the effects of salinity differences, the toxicity tests may indicate toxicity unrelated to the effects of toxic chemicals.

RESPONSE: Produced water discharges are known to have the potential to cause toxic effects due to ionic imbalances, organics, and metals. EPA's Technical Support Document for Water Quality Based Toxics Control clearly states that dissolved salts which cause ionic imbalances in ambient waters, marine or freshwater, are pollutants (See Saline Effluent Discharges to Saltwater,

page 61). The produced water toxicity limitations were included in the permit to ensure that authorized discharges will not violate the narrative water quality standard (LAC 33.IX.113.B.5) which states: "No substances shall be present in the waters of the state or the sediments underlying said waters in quantities that alone or in combination will be toxic to human, plant, or animal life or significantly increase health risks due to exposure to the substances or consumption of contaminated fish or other aquatic life". There is not an exemption in those water quality standards or the implementation plan for those standards which states that toxicity caused by ionic imbalances or salts is not toxicity; therefore, the toxicity limits were not removed from the final permit.

(34) COMMENT: DOE commented that the term "whole effluent lethality" is not commonly used in short term chronic toxicity tests and is not defined in the general permit. They suggested modifying the term.

RESPONSE: EPA disagrees. The term "whole effluent lethality" is used in the standard language for toxicity testing included in NPDES permits issued by EPA Region 6. In a short term chronic test two NOECs are generated, one for the lethality component (survival) and one for the sublethal component (growth or reproduction). EPA has stipulated that the limit imposed is for the lethality component and the sub-lethal component of the test has not been incorporated as a limit in this permit. To identify the limit as applying only to the survival portion of the test, EPA has identified the reporting element as a Whole Effluent Lethality value.

(35) COMMENT: DOE commented that the 30-day average and 7-day minimum parameters in the toxicity testing requirements are inappropriate since the most frequent toxicity testing interval is once per month. They stated that calculation of an average implies several data points are being averaged together and that a 7-day average value is typically the average of daily measurements over a 7-day period.

RESPONSE: 40 CFR 122.45(d)(1) requires permits to contain both daily maximum and monthly average limitations for continuous discharges wherever practicable. Since the toxicity test takes seven days to complete and measures a minimum instead of a maximum, the results are better described as a 7-day average minimum, not a daily maximum. Although the most frequent monitoring interval required by the permit is once per month, the toxicity test is deemed to be representative of the effluent during that entire month and is therefore called a monthly average. If a permittee violates the 7-day average limitation this permit language gives them the option of conducting additional testing and averaging the results to come into compliance with the monthly average limit.

(36) COMMENT: DOE commented that in the water quality criteria analysis presented in the Fact Sheet EPA should have used a geometric mean instead of an arithmetic mean as a measure of the average of the produced water data. In doing the analysis, EPA also failed to properly handle outliers in the data set and to properly account for data values reported as non-detectable or below the detection limit.

RESPONSE: EPA agrees that the method for comparison of State water quality criteria with the calculated ninety-fifth percentile of a discharger's effluent data shown in Louisiana's implementation plan uses the geometric mean of those data. However, the implementation plan's method is intended to determine the reasonable potential of an individual discharge to violate water quality standards. In order to apply that method to the many discharges proposed to be covered under the general permit, reasonable worst case effluent pollutant concentrations had to be calculated from the available data. If the geometric mean of the data, calculated as the commentor suggested, were used in the analysis, the scenario would be an average case scenario instead of a reasonable worst case scenario. If the average case scenario were used for the water quality analysis, it is highly likely that some discharges (described as outliers by the commentor) would violate water quality standards and Ocean Discharge Criteria, and the permit would not contain limitations to prevent those violations. The permit, as proposed, will ensure discharges do not cause violations of those standards and criteria.

(37) COMMENT: The Louisiana Department of Environmental Quality (LDEQ), as conditions of certification, required the permit to prohibit produced water discharges in the following scenarios: onto any intermittently exposed sediment surfaces, within the boundaries of any state or Federal wildlife management area, refuge, or park or into any water body determined to be of special ecological significance, within 1,300 of an active oyster lease, live natural oyster or other molluscan reef, designated oyster seed bed, or sea grass bed, or which facilitates the incorporation of significant quantities of hydrocarbons or radionuclides into sediment or biota. They also required inclusion of biochemical oxygen demand and total suspended solids limits on sanitary and

domestic discharges with an average daily flow of less than 2,500 gallons per day.

RESPONSE: The changes were made as requested.

(38) COMMENT: LDEQ commented that the permit should require monitoring of biochemical oxygen demand (BOD) and total suspended solids (TSS) on a frequency of once per six months on all sanitary wastewater discharges.

RESPONSE: The monitoring requirements have been added to the permit as requested.

(39) COMMENT: LDEQ requested a change in the permit to require operators to include the field designation assigned by the State in the permit's notification requirements.

RESPONSE: The change was made as requested.

(40) COMMENT: LDEQ commented that the permit should require all marine sanitation devices to meet a minimum total residual chlorine concentration of 1 mg/l and be maintained as closely as possible to that concentration. This limit will help ensure compliance with the water quality standard for fecal coliform. They recommended a monitoring frequency of once per six months.

RESPONSE: The limit was added as requested.

(41) COMMENT: LDEQ commented that EPA should delete the allowance to discharge uncontaminated seawater and freshwater without monitoring for free oil at unmanned platforms with automatic purge systems.

RESPONSE: The request has been denied. Waste streams such as ballast water and deck drainage are discharged at unmanned platforms. They are not expected to be contaminated and there is no way to hold the discharges until the platform is manned.

(42) COMMENT: LDEQ requested that EPA delete the permit requirement for operators to submit notification of intent to be covered by a subsequent permit, six months prior to the expiration of the permit.

RESPONSE: The request has been granted.

(43) COMMENT: LDEQ requested a change in the notification requirements to require operators to send the notification to it instead of EPA.

RESPONSE: The change has been made as requested.

(44) COMMENT: LDEQ requested a change in the permit language requiring 24-hour reporting, in Part II.D.a of the permit, to make it a one hour reporting requirement.

RESPONSE: The change has been made as requested.

(45) COMMENT: LDEQ requested a change in the 24-hour and 5-day reporting requirements for unauthorized discharges in section D.7.b., to require reporting of any pollutant which exceeds the reportable quantity specified in State regulations at LAC 33:I Subchapter E, unless specifically authorized in the permit.

RESPONSE: The language has been added to the permit as requested.

(46) COMMENT: LDEQ requested inclusion of the definition “weekly average” in the permit.

RESPONSE: The definition has been included as requested.