

**Final NPDES General Permit for Discharges from New and Existing Sources in the Offshore Subcategory of the Oil and Gas Extraction Point Source Category for the Western Portion of the Outer Continental Shelf of the Gulf of Mexico (GMG290000)**

**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 final National Pollutant Discharge Elimination System (NPDES) general permit for discharges by Oil and Gas Extraction facilities located in the Western Gulf of Mexico (GMG290000). The permit authorizes discharges from new and existing sources and new discharges from Offshore Subcategory of the Oil and Gas Extraction Point Source Category (40 CFR Part 435, Subpart A) facilities located in and discharging pollutants to Federal waters seaward of the outer boundary of the territorial seas offshore of Louisiana and Texas. This final permit replaces the expired general permit issued on October 7, 2004 (69 FR 60150).

**Dates:** All limits, prohibitions, and monitoring requirements shall become effective sixty 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 GMG290000 at 71 FR 76667 (December 21, 2006). The comment period closed on February 20, 2007.

EPA received comments from the Offshore Operators Committee (OOC), Gulf Restoration Network, MacDermid Offshore Solutions, the Department of Energy (DOE), Christy Mile, and Gilbert Cheramie.

Based on information provided in those comments the following changes have been made to the permit. Requirements to comply with new cooling water intake structure regulations were changed to allow expansion of the industry-wide study to include entrainment monitoring. Operators are only required to submit cooling water intake structure design information once per facility. Notification requirements have been added for operators of mobile offshore drilling units required to comply with cooling water intake structure conditions. An end-of-well sample is no longer required for sediment toxicity testing when using non-aqueous based drilling fluids. The toxicity testing frequency for sub-sea fluids has been decreased from once per batch to once per year. Toxicity testing is no longer required for miscellaneous discharges treated using hypochlorite. Minor corrections were made in the produced water whole effluent toxicity testing requirements. Other minor changes in wording were made to clarify EPA's intent regarding the permit's requirements.

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) requested clarification of the permit's oil spill requirements to state that sheens resulting from permitted discharges are not defined as spills.

#### **Response:**

EPA has previously worked with the U.S. Coast Guard to determine when a sheen would be considered a spill. Sheens from non-permitted discharges were determined to be spills which are under the jurisdiction of the U.S. Coast Guard. Sheens which result from permitted discharges were determined to be under EPA jurisdiction and are not considered to be spills. The requested clarification is consistent with that determination and has been made in the final permit.

### **Comment Number 2:**

OOC requested a change in the permit to clarify that the postmark date on notices of intent, transfer, and termination is the date at which they apply.

#### **Response:**

The change has been made as requested.

### **Comment Number 3:**

OOC requested a change in the permit's notice of termination requirements to show that they are applicable to termination of permit coverage and not to termination of operations. The change would be consistent with lease block assignment by the Department of Interior.

#### **Response:**

The change has been made as requested.

### **Comment Number 4:**

OOC requested that the end of well sediment toxicity monitoring requirement be removed from the permit. Unlike water based drilling fluids, synthetic based fluids are reused at

other wells and there is no bulk discharge. Sediment toxicity testing is performed when the fluid is reused in subsequent wells.

**Response:**

EPA agrees that since there is no bulk discharge and the fluid is tested for sediment toxicity when it is reused, the end of well sampling requirement is unnecessary. The requirement has been removed from the permit.

**Comment Number 5:**

The OOC requested that the oil and grease sampling language for well treatment completion and workover fluids be changed to make it consistent with the produced water requirements.

**Response:**

The change will increase the consistency of the permit requirements and has been made as requested.

**Comment Number 6:**

The OOC and MacDermid Offshore Solutions provided information suggesting that the proposed requirement to conduct whole effluent toxicity testing on each batch of subsea fluid is unnecessary and will not afford additional environmental protection. The commentors provided product, quality control, and cost information to support the request and requested that the testing frequency be reduced to once per year in the final permit.

**Response:**

EPA agrees that the testing frequency could be reduced to once per year while affording an appropriate level of environmental protection. Information provided by the commentors demonstrates that there is little variability in the toxicity of subsea fluids and supports the requested change. The change has been made as requested.

**Comment Number 7:**

The OOC stated that multiple tests have shown that miscellaneous discharges treated with chlorine or hypochlorite do not have a reasonable potential to exceed the whole effluent toxicity limits. OOC requested that the toxicity testing requirements be removed for the discharges. Alternatively, OOC requested chemical specific limits replace the toxicity testing requirements.

**Response:**

EPA has found that toxicity testing is not a good measure of the effects of chlorine because it dissipates from the test chamber. Available information on the chemically treated discharges shows that chlorine has been present at low concentrations which would not be expected to exhibit toxic effects at the edge of the mixing zone. Therefore, the requested change appears appropriate and has been made in the permit.

**Comment Number 8:**

The OOC requested that the CWA 316(b) Phase III requirements for cooling water intake structures be removed from the permit as they generally apply to third party contractors rather than lease operators and there are some technical requirements that are infeasible. OOC suggested that the requirements would best be addressed under a separate general permit.

**Response:**

The 316(b) Phase III rule applies to all facilities constructed after July 17, 2006. Like other phases of the 316(b) rule EPA does not have the flexibility to selectively apply it in NPDES permits. Any NPDES permit which authorizes discharges from facilities subject to the rule must include its requirements. See 71 FR 35008 (June 16, 2006) for more detail.

**Comment Number 9:**

The OOC stated that oil and gas operators should not be held accountable for the design or operation of drilling rig cooling water intake structures that they do not design, construct, own, or operate.

**Response:**

EPA understands that operators who have general permit coverage will not always have control over aspects such as design and construction of drilling rigs owned by third parties. To address that issue, new notification requirements have been added to the permit. Operators of mobile offshore drilling units (MODUs) that have control of the facility but are not lease holders will be required to submit a notice of intent to be covered by the permit.

**Comment Number 10:**

The OOC commented that the supplemental notice of intent framework proposed for 316(b) is inconsistent with the permit's current framework. Operators currently submit a notice of intent for permit coverage when they obtain a lease. They are not required to notify EPA when platforms are installed on the lease or when drilling rigs are moved onto lease blocks. Since the 316(b) notification requirements are tied to specific intake structures and not to permit coverage of a lease, the proposed notification requirements are inconsistent.

**Response:**

As described above in the response to comment number 9, the notification requirements have been changed to address the issue of third party operators.

**Comment Number 11:**

The OOC stated that MODUs can operate at numerous leases during the life of the permit. The organization suggested that certification of compliance with the proposed 316(b) notice of intent requirements be provided by the owner/operator of the MODU rather than the lease operator.

**Response:**

EPA agrees that several of the 316(b) notification requirements can best be addressed through a notice of intent submitted by the owner/operator of the facility. As noted above in the response to comment number 9, requirements have been included in the permit to address this issue. Operators of MODUs are required to submit design information only once for a facility but will need to submit a separate notice for each lease on which they will operate.

**Comment Number 12:**

The OOC requested a change in the 316(b) requirements so that drilling rigs would not need to reapply for a subsequent permit when the general permit is reissued. The change would make the requirements more consistent with the current permit requirements. In addition, OOC stated that the requirement to supply maps of future locations where the facility will operate will be difficult for drilling rigs as the owners are not able to predict future locations.

**Response:**

EPA finds no reason to require drilling rigs to resubmit notices on intent. Therefore, the change has been made as requested. Additionally, since rigs will generally operate throughout the area of permit coverage and owners will not have information on all future locations, EPA agrees that the requirement to provide maps is not practicable. The requirement has been removed from the permit as requested.

**Comment Number 13:**

The OOC stated that addressing the 316(b) requirements under a separate permit would allow EPA time to develop an administrative process and workable compliance and monitoring requirements for the new regulation.

**Response:**

While a separate permitting system for facilities required to comply with the 316(b) requirements would be an option, EPA has not chosen to pursue that course at this time. Facilities would not be able to obtain permit coverage during the time it would take to develop and issue a separate permit. EPA believes that addressing 316(b) requirements under the reissued permit is the best mechanism to ensure both timely coverage of new facilities and implementation of protection afforded by the regulation. The change has not been made in the final permit.

**Comment Number 14:**

The OOC requested a change in the permit to clarify that the 316(b) requirements do not apply to total water intake at a facility but only apply to the cooling water intake structure.

**Response:**

EPA agrees that this request is consistent with the 316(b) regulations. The requirements do not apply to intake structures which do not intake cooling water. The clarification has been made as requested.

**Comment Number 15:**

The OOC requested the addition of a compliance schedule in the permit to address changes which may need to be made to facilities based on the results of the required baseline biological study. The organization suggested that the baseline study commence one year after the effective date of the permit and the other intake structure requirements be effective two years later.

**Response:**

EPA agrees that time is needed to plan and conduct the baseline biological study and to make changes to facilities. As requested, a compliance schedule has been included in the final permit to address the time needed for the studies. The design and construction requirements of the regulation are effective for all facilities constructed after July 17, 2007. Since facilities must be constructed to be compliant with the 316(b) regulation and it would be more costly to retrofit a facility after it is in use than when it is built, there is no need for a compliance schedule.

**Comment Number 16:**

The OOC requested that the permit include a mechanism so that future operators will have an opportunity to participate in its biological studies.

**Response:**

The allowance has been included in the permit as requested.

**Comment Number 17:**

The OOC requested that the permit include clarification on the portion of the biological community which should be the focus of the study.

**Response:**

Clarification has been included in the permit as requested.

**Comment Number 18:**

The OOC requested a change in the permit language to show that backup data are only required to be obtained for field studies conducted as part of the 316(b) baseline biological study. Backup data are not required for the information obtained from literature.

**Response:**

The request is consistent with the regulation and the change has been made in the final permit.

**Comment Number 19:**

The OOC requested that EPA Region 6 only require submittal of cooling water intake structure design information once for each facility operating under the general permit.

**Response:**

EPA agrees that there is no reason for operators to submit the information more than once. The change has been made in the final permit as requested.

**Comment Number 20:**

The OOC requested that the requirement to include physical studies to determine the area of influence of cooling water intake structure be removed from the permit since it would not be possible to conduct such studies prior to installation of a facility.

**Response:**

The change has been made as requested.

**Comment Number 21:**

The OOC requested clarification of which permit requirements only apply to surface intake structures.

**Response:**

Clarification has been made as requested. The requirement to determine velocity based on measurement of head loss across the intake screen applies to intake structures located at the surface. Operators may measure velocity using other means such as pump curves for intake structures located lower in the water column.

**Comment Number 22:**

The OOC requested that the permit requirement to submit species specific information in the 316(b) notice of intent should be removed from the permit because the information will not be available until the baseline study has been completed.

**Response:**

The permit language has been changed to show that the information is not required to be submitted until the baseline study has been completed.

**Comment Number 23:**

The OOC requested a change in the cooling water intake structure velocity calculation for new fixed facilities to show that it only applies to surface water intake structures.

**Response:**

The final permit language has been revised to clarify the requirements of 40 CFR 125.137(b). See also the response to comment number 21.

**Comment Number 24:**

The OOC requested a revision in the 316(b) permit language to show that some of the requirements are only applicable if the Director determines that there are protected species, critical habitat, or other species of concern present in the hydraulic zone of influence of the cooling water intake structure.

**Response:**

Endangered species are present in the area of coverage for the permit. Additionally, the Gulf of Mexico has been designated essential fish habitat under the Magnusson-Stevens



Fisheries Management and Conservation Act. Therefore, the requirements apply to facilities covered under the general permit and no changes to the requirement have been made in the final permit.

**Comment Number 25:**

The OOC requested that the 316(b) requirement for weekly visual monitoring of intake screens be modified to allow less frequent monitoring if the baseline biological study showed it to be appropriate. OOC also requested that the permit include an exemption from monitoring during times when conditions such as rough seas make monitoring unsafe or impossible.

**Response:**

The requested changes are reasonable given the adverse conditions which occur offshore and the difficulties in conducting visual monitoring. The changes have been included in the final permit as requested.

**Comment Number 26:**

The OOC requested that the 316(b) entrainment monitoring study be based on representative species. The results of the baselines biological study should yield information on which species would be most effective to monitor. The group suggested that this method would reduce the time and expense of the monitoring while producing needed information.

**Response:**

EPA agrees. The change has been made in the final permit as requested.

**Comment Number 27:**

The OOC stated that monitoring for entrainment is a reasonable requirement; however, the duration should be limited since there is no permit limit. A 24-month monitoring study was suggested as being optimal for providing adequate data for future permitting decisions while reducing the burden on operators. OOC also suggested that an industry-wide study would be an effective mechanism for providing the information without burdening each new facility. The industry-wide study would also be consistent with the regulations at 40 CFR 125.137(a)(3).

**Response:**

Although the regulations at 40 CFR 125.137(a) require entrainment monitoring at each fixed platform not using a sea chest as an intake structure, EPA is allowed to approve alternate requirements in some cases (see 40 CFR 125.135). If the compliance costs are out of proportion with those considered by EPA in developing the regulation, alternate requirements can be approved. In this case, EPA stated that the expected cost for compliance with the entrainment

monitoring requirement would be approximately \$80,000. Based on information provided by OOC, it appears that the actual cost of monitoring at a platform would be in excess of \$2,000,000. Therefore, EPA agrees that an alternate requirement is appropriate. A 24-month study would produce sufficient information to determine whether additional controls are needed in the general permit. In addition, industry has conducted several industry-wide studies under the permit in the past. That method of studying potential environmental impacts has proven highly effective because issues can be studied in greater detail than if monitoring is conducted at every platform. In addition, EPA will have a high level of input and oversight in the studies. Therefore, EPA agrees that an industry-wide study is an appropriate mechanism for conducting the biological studies required by the 316(b) regulations. The requested change has been made in the final permit.

**Comment Number 28:**

The OOC requested clarification of the 316(b) biological monitoring requirements for fixed facilities that employ sea chests as intake structures. The organization stated that biological monitoring is not required at the facilities.

**Response:**

EPA agrees. The proposed permit's monitoring requirement was intended to only apply to fixed facilities that do not employ sea chests. The permit's language has been clarified.

**Comment Number 29:**

The OOC requested clarification on whether sampling is required for waste water associated with tank and pit cleaning.

**Response:**

The clarification has been included in the permit as requested. Since the waste in tanks and pits has previously been sampled for permit compliance, it is not necessary to resample it prior to discharge.

**Comment Number 30:**

The OOC requested that the permit's language regarding surface preparation and coating discharges reflect the American Petroleum Industry Recommended Practice 91 (RP91). RP91 was developed with the goal of standardizing management practices employed by industry to contain maintenance waste in compliance with U.S. Coast Guard (USCG) regulations implementing MARPOL Annex 5.

**Response:**

EPA, USCG, and the Minerals Management Service worked with industry to ensure that RP91 is consistent with the MARPOL Annex 5 implementing regulations. Based on available information, EPA believes that RP91 will meet the intent of the regulations, provided specific examples of practices for waste containment are included in either that document or in a lease operator's specific Best Management Practices Plan. The change has been made to the permit as requested.

**Comment Number 31:**

The OOC requested several changes in the whole effluent toxicity testing language to update the protocol. The changes include: allowing use of arc-sine-square root transformed data for calculating the survival coefficient of variation; inclusion of a reference to the percent minimum significant difference range in the current testing manual; and an updated reference for the manual.

**Response:**

The requested changes are consistent with current whole effluent toxicity testing requirements in EPA Region 6 and have been made in the final permit.

**Comment Number 32:**

The OOC requested that EPA update the reference to the Enforcement Division website shown in the permit. In addition, OOC requested that the information, such as the DMR guidance document shown on the website be updated.

**Response:**

The change has been made as requested.

**Comment Number 33:**

The OOC requested that EPA clarify the no discharge certification and summary requirements that must be provided in lieu of the DMR.

**Response:**

Clarification has been added to the permit as requested.

**Comment Number 34:**

The Gulf Restoration Network commented that it supported the addition of requirements to monitor sub lethal effects for whole effluent toxicity testing; however, the organization questioned the need for a two-year compliance schedule.

**Response:**

EPA Region 6 typically grants a three year compliance schedule for new, more stringent, water quality based limits. That length of time is usually needed by permittees to complete all the measures needed to ensure compliance with new limits. That process does not simply consist of installing new equipment purchased off the shelf. Permittees may need to conduct effluent and plant process monitoring to determine the best means to comply with the limits. In addition, permittees must design and fund new equipment, construct it, pilot test the equipment, and ensure it operates correctly. EPA does not believe that a three year compliance schedule is warranted in this case because operators will not typically need to design complex treatment systems. In many cases, operators will add diffusers to the discharge ports to obtain additional dilution and ensure compliance with the permit limits. The installation of a diffuser is not a lengthy process by itself; however, operators will need to first conduct monitoring to determine the level of action needed to comply with the new limits. After monitoring is completed, operators will need time to design diffusers and obtain funding before installation can be done. While in most cases this can be accomplished in well under two year's time, EPA must account for other factors over which operators have no control, such as weather. Because adverse conditions can often delay activities in an offshore environment, EPA has determined that a two year compliance schedule is reasonable in this case.

**Comment Number 35:**

Gulf Restoration Network commented that the permit is not clear in its allowance for two samples to be collected and split for sediment toxicity and biodegradation testing. The organization stated that operators could split the least toxic sample and average the results, thereby increasing the likelihood of compliance with the limits. The Gulf restoration network requested that the permit include a safeguard to ensure that averaging is not used to systematically reduce the level of toxicity measured by the test.

**Response:**

EPA's intent in developing the permit requirement was to allow sample averaging where needed to resolve issues with test variability. Although the sediment toxicity and biodegradation tests are not considered to be more variable than other test methods, variability is an issue in determining compliance with the sediment toxicity and biodegradation limits. Both the test for samples being monitored for compliance and the test for the standard used as the compliance benchmark can exhibit some degree of variability. This is not an issue with other permit limits because they are based on a discrete numeric value; thus, the limits are not variable.

The permit requires that both of the samples be collected within a fifteen minute period. A drilling fluid system is not expected to vary significantly in nature in a fifteen minute timeframe, so the two samples should not exhibit highly different results. The permit specifically requires that the first sample collected is split and half of that sample tested for compliance. If operators wish to average samples, the permit requires that both parts of the split sample are tested, and if necessary, the second sample is also tested and its results averaged. EPA believes that the test protocol includes sufficient safeguards to prevent averaging being used in a manner which would mask a non-compliant fluid.

**Comment Number 36:**

Mr. Gilbert Cheramie and Ms. Christy Mickie commented that the general permit unfairly requires a much lower frequency of toxicity testing than is required for facilities located onshore. The commentors added that the decreased testing frequency and associated reduced cost of testing required under the general permit is not justified given the much higher level of treatment effluent receives at facilities located onshore.

**Response:**

Like all other NPDES permits, the general permit requires monitoring based on the reasonable potential of the discharge to exhibit toxic effects at the edge of the mixing zone. Dischargers with produced water discharges with a rate greater than 193,200 gallons per day are required to conduct whole effluent toxicity (WET) testing once per quarter for the first year they are authorized by the permit. This requirement is consistent with WET testing requirements for facilities located onshore. Since discharges made at a lower rate are not as likely to exhibit toxic effects, a lower monitoring frequency is justified. It should also be noted that produced water is not the only discharge where WET testing is required. The permit contains WET testing requirements for drilling fluid discharges and miscellaneous discharges such as cooling water. Drilling fluid discharges are required to be tested monthly and water based fluids are also required to be tested at the end of drilling. That frequency is higher than required for most discharges from facilities located onshore. In addition, this is the only industry currently subject to sediment toxicity testing. While small volume produced water discharges and those that have demonstrated no toxic effects are allowed to be tested at a frequency of once per year, EPA finds that the overall toxicity testing required on discharges authorized by the general permit is at least as protective as testing required for other discharges from onshore facilities.

**Comment Number 37:**

MacDermid Offshore Solutions commented that the annual toxicity testing required for chemically treated miscellaneous discharges is more onerous than the requirements of other countries. The commentor stated that monitoring is required once per three years in the United Kingdom.

**Response:**

Although discharge in other countries must comply with different monitoring requirements than those authorized in the United States, they are regulated under different laws and regulations. Federal regulations, which apply to discharges authorized in the United States, require that parameters with limits be monitored at a minimum frequency of once per year (see 40 CFR 122.44.i.2).

**Comment Number 38:**

MacDermid Offshore Solutions commented that chemical testing of the miscellaneous discharges would be preferable to and would be a better measure of product quality than toxicity testing because biological testing is inherently variable.

**Response:**

EPA disagrees. Biological testing, when properly conducted, is no more variable than any other type of test. Unlike the analytical testing which the commentor conducts for quality control, biological testing is required in the permit as a means to protect aquatic life and ensure compliance with Ocean Discharge Criteria. Chemical specific analytical testing is not appropriate for that purpose because it does not adequately measure the synergistic effects of all the components in a discharge.

**Comment Number 39:**

DOE commented supporting the permit's allowance of an industry-wide study for the baseline biological monitoring requirements for cooling water intakes. DOE further suggested that the requirement be expanded to include the following:

Descriptions of design and operational technologies utilized to minimize entrainment;

Design calculations, drawings, and estimates to support design technologies;

Descriptions of the design, structure, equipment, and operation used to meet the through-screen velocity requirement;

Weekly visual inspections of intake structures to ensure that the utilized technologies continue to function as designed;

Entrainment monitoring; and

Quarterly velocity monitoring at the point of entry through the intake device.

**Response:**

EPA agrees that it is appropriate that monitoring requirements be conducted under an industry-wide study when they are intended to gather information rather than determine compliance with permit conditions at specific facilities. Previous industry wide studies have proven valuable at providing quality information in a controlled environment with a high degree of EPA oversight. Therefore, the allowance to conduct an industry-wide study for the baseline biological monitoring requirements has been expanded to include monitoring for entrainment.

Other permit conditions, such as the design specifications are facility specific and needed to determine compliance. Reporting and monitoring requirements which are facility specific and intended to demonstrate compliance with the permit's limits must be done at each facility and cannot be accomplished under an industry-wide study. The requested change has not been made for those conditions which are measures of compliance with limitations.

**Comment Number 40:**

DOE noted that some of the 316(b) regulations are contingent on the Director determining that endangered species are present or that commercial or sport species of impingement concern pass through the hydraulic zone of influence of the facility. DOE requested that the associated requirements be removed from the permit or be made contingent on the Director's determination.

**Response:**

Listed endangered species can be present throughout the permit's area of coverage and the entire Gulf of Mexico has been designated as essential fish habitat under the Magnuson-Stevens Fisheries Conservation and Management Act. Therefore, the Director has determined that both endangered species and sport and commercial species of concern are likely to be present in the hydraulic zone of influence of facilities covered under the permit.

**Comment Number 41:**

DOE commented that the permit does not include an alternative for facilities to use the 316(b) Track II alternatives and recommended that the final permit include those options.

**Response:**

The Track II alternative requires that operators demonstrate that the chosen technology reduces the level of environmental impact to a comparable level as would be achieved under Track I. Intake structures which comply with the Track I requirements for intake velocity and minimization of entrainment of aquatic life can most easily be built when the facility is constructed. Since it is much more complicated and expensive to retrofit facilities at a later time when they are in the field, it is EPA's understanding that the Track II requirements are not

practical for offshore oil and gas facilities. In addition, the Track II alternative would require the Director to make a case-by case determination that the technology employed provides a level of protection consistent with Track I. While such a determination would be practical for an individual permit where the design of a facility can be explored in depth in the permit issuance process, it is not appropriate for a general permit covering a large number of facilities.