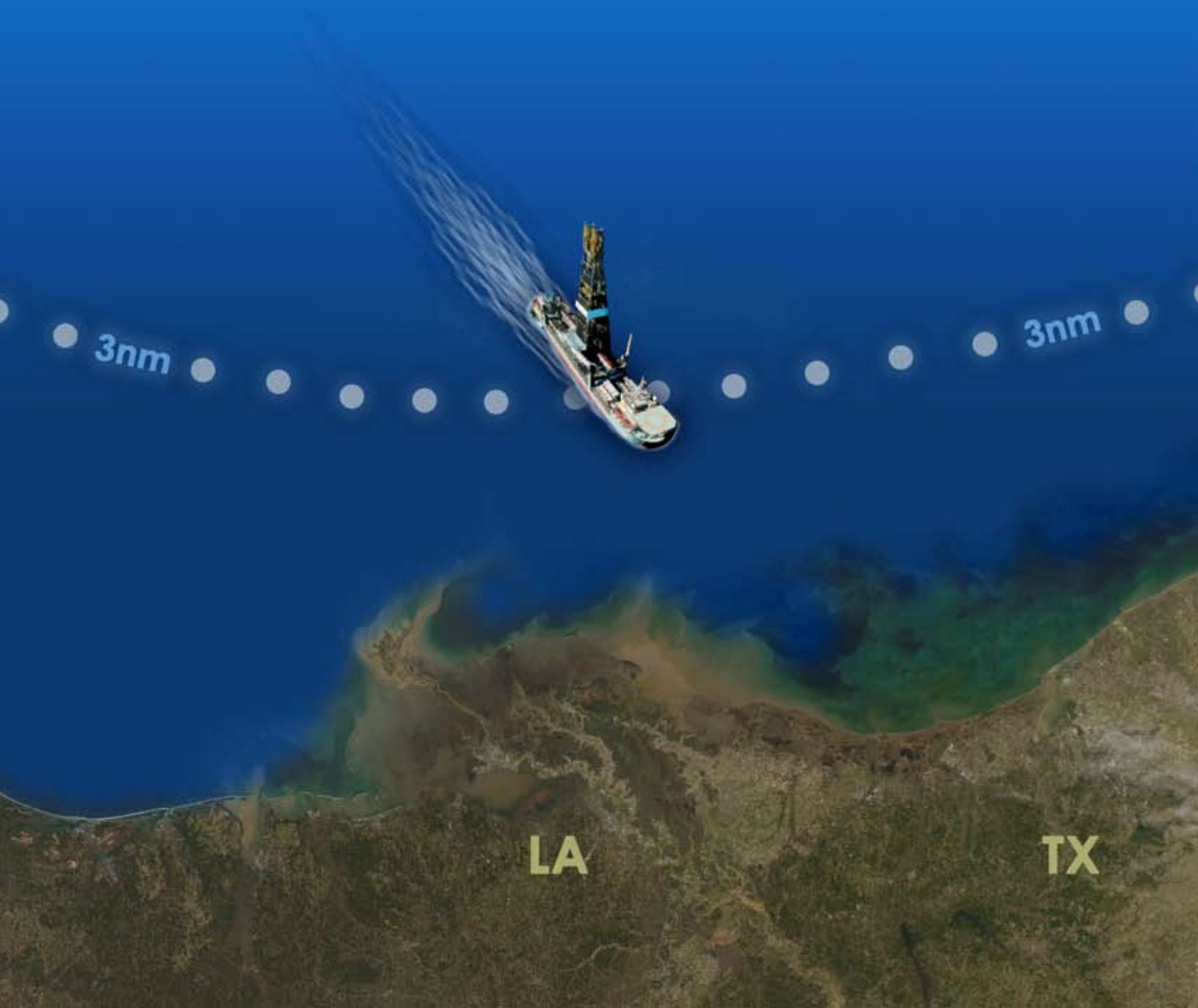


INTERNATIONAL ASSOCIATION OF DRILLING CONTRACTORS

IADC GUIDELINE FOR MODUs

***Subject to the U.S. EPA NPDES Permit Requirements
for Discharges Incidental to Normal Vessel Operations***



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This document contains recommendations from an IADC Work Group established to develop a guideline for owners and operators of Mobile Offshore Drilling Units (MODUs), including inland barge units, regarding the implementation of, and compliance with, the provisions of the Environmental Protection Agency National Pollutant Discharge Elimination System (NPDES) General Permit for Discharges Incidental to the Normal Operation of a Vessel. The commentaries and recommendations made by this Work Group have neither been reviewed nor endorsed by the IADC Board of Directors.

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Suggested revisions to the guidelines are invited and will be considered along with future changes to its content. Suggestions should be submitted to the Assistant Director-Offshore Technical and Regulatory Affairs, International Association of Drilling Contractors, 10370 Richmond Avenue, Suite 760, Houston, TX 77042. (713-292-1945)

Controlled Material

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Guideline for Mobile Offshore Drilling Units
Subject to the U.S. EPA NPDES Permit Requirements
For
Discharges Incidental to Normal Vessel Operations

PURPOSE

The purpose of this document is to provide guidance to the owners and operators of Mobile Offshore Drilling Units (MODUs), including inland barge units, regarding implementation of, and compliance with, the provisions of the recently-issued U.S. Environmental Protection Agency (EPA) National Pollutant Discharge Elimination System (NPDES) General Permit for Discharges Incidental to the Normal Operation of a Vessel (the VGP).

EPA's issuance of the VGP responds to a District Court ruling that vacated a longstanding EPA regulation that had excluded discharges incidental to the normal operation of a vessel from the need to obtain an NPDES permit. This regulation provided an exemption to the prohibition against discharge-without-a-permit under section 301 of the Clean Water Act (CWA).

The VGP and its requirements apply to 26 different discharges incidental to the normal operation of all commercial vessels 79 feet or greater in length when operating as a means of transportation within the 3 mile territorial sea of the United States (Permit Waters) commencing on 6 February 2009. The VGP would typically be applicable to a MODU that:

- Is moving between drilling locations within Permit Waters;
- At dockside, laid-up or stacked¹ within Permit Waters; or
- Enters Permit Waters from overseas or from a location on the OCS.

Because the drilling industry routinely experiences large swings in business activity, it is normal industry practice for MODUs to be laid-up (*i.e.*, warm stacked or cold stacked) for prolonged periods when business activity is low. Thus, it is IADC's view that stacked units remain both eligible for, and subject to, the provisions of the VGP. Nonetheless, MODU owners with large numbers of stacked units within Permit Waters may find it advantageous to explore obtaining coverage under an alternative permit where inspections, etc. could be better tailored to the conditions on board stacked units.

¹ EPA has indicated that the issue of precisely when vessels that are laid-up or stacked cease operating in a capacity as a means of transportation will necessarily depend upon the specific facts presented. This would include factors such as the duration the vessel is out of service, normal industry practices with respect to vessel lay-up, and the ability of the vessel to return to transportation service without major renovations.

COMPLIANCE APPROACHES

MODUs that routinely operate in Permit Waters should establish an internal program to address compliance with the permit requirements on an ongoing basis.

MODUs that do not routinely, but may or only occasionally, enter Permit Waters (e.g., deepwater units that would typically only enter Permit Waters to transit to a shipyard) need not establish a continuous program for compliance, but should establish a program to assure that appropriate inspections have been completed and documented so as to assure compliance with all NPDES Permit requirements prior to entry into Permit Waters.

Because of the possible need to enter Permit Waters for repairs, it is recommended that all MODUs operating on the U.S. Outer Continental Shelf establish programs to assure compliance with the VGP and that a Notice of Intent (NOI) be submitted for such vessels once enrollment is available.

EPA Region 6 has confirmed that it is not necessary for MODUs to repeatedly apply for and terminate coverage under the VGP as these vessels move in and out of Permit Waters or when they become subject to an O&G Permit.² IADC has not sought similar confirmation from other EPA Regions.

EPA has stated that vessels when in drydock do not operate “in a capacity as a means of transportation” and thus are not subject to (or eligible for coverage under) the VGP. With respect to vessels under construction, EPA has stated that when the vessel is engaged in sea trials which result in operational discharges, because testing is a critical part of vessel operation, such discharges would be incidental to the normal operation of a vessel, and thus eligible for coverage under the VGP. However, any discharges resulting from construction activities are not covered by the VGP as they are incidental to vessel construction, not vessel operation. Accordingly, MODU owner/operators should take steps to assure that any discharges not covered by the VGP are covered by the shipyard’s NPDES permit or are otherwise disposed of in accordance with applicable regulatory requirements.

Considering their unit’s exposure to operations in Permit Waters, MODU owner/operators should give consideration to developing a unit-specific VGP Compliance Plan that takes into account the MODU’s anticipated operations within Permit Waters, the specific equipment installed on the unit, and the EPA-required Best Management Practices (BMPs) applicable to the unit.

² MODU owners/operators should document when a MODU enters into or exits from Permit Waters and when coverage under an O&P Permit commences or terminates.

IMPORTANT DATES

- 19 December 2008: Effective date of the VGP. Provisions of the VGP that require compliance in an explicit amount of time are based on this date.
- 6 February 2009: As of this date, discharges of certain effluents incidental to normal vessel operations in Permit Waters were required to be in conformance with the VGP. Noncompliance with the permit terms became subject to civil and criminal enforcement actions under the CWA.
- 19 February 2009: MODUs to which the VGP applied were required to meet the VGP's inspection, training, recordkeeping and reporting requirements.
- 19 June 2009: Electronic submissions of a NOI for a VGP will be available and required on, but not later than 90 days, after this date.³ (19 September 2009)
- 19 December 2009: MODUs must comply with the VGP's requirements to take corrective actions requiring major renovations in drydock. The first annual report of non-compliances should be submitted to EPA no later than this date.

VGP REQUIREMENTS

An NPDES Permit authorizes the discharge of a specified amount of a pollutant(s) into U.S waters under certain specified conditions.

The VGP addresses potential vessel discharges by establishing numerical effluent limits for some discharge streams and imposing required Best Management Practices (BMPs) for others where numerical limits are not practicable. Although all discharges covered by the VGP will be covered for the MODU, a MODU owner/operator is required to comply with only those requirements for the effluents that the vessel actually produces, not the entire list of potential discharges.

The VGP has been modified since it was first issued in December 2008, and can be expected to be further modified during its term. It is recommended that MODU

3 MODUs operating in Permit Waters or which may operate in Permit Waters should file an NOI on or after 19 June 2009 by using EPA's e-NOI system at: www.epa.gov/npdes/eNOI; or sending the completed form to:
EPA Vessel Notice Processing Center Mail Code 4203M
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460

Questions regarding the form may be directed to the NOI Center after 19 June 2009 at: +1 866 352-7755.

Based on an NOI review, EPA may delay the discharge authorization date for further review, or may deny coverage under the permit and require submission of an application for an individual NPDES permit. EPA will provide a written determination if VGP coverage is denied and indicates it will allow reasonable time to obtain individual permit coverage before general permit coverage terminates.

All NOIs received will be posted at www.epa.gov/npdes/noisearch. Late NOIs will be accepted, but authorization to discharge is not retroactive.

owners/operators periodically check to ensure that they are using the most recent VGP. The VGP can be found on EPA website at: http://cfpub.epa.gov/npdes/home.cfm?program_id=350.

The VGP contains specific requirements that are applicable to specific vessel types. Barges are one vessel type for which such requirements are provided. While the EPA does not define “barge” for purposes of the permit, IADC recommends that MODU owner/operators treat any non-propelled MODU as a “barge” for purposes of the permit.

In addition to the requirements for specific vessel types, the permit imposes requirements for individual States or Indian Country Lands. As of the date of issue of this Guideline the States and Indian Country Lands which have imposed additional requirements are not areas where MODUs normally operate.

RELATIONSHIP TO OIL AND GAS PERMITS

MODUs not only operate as vessels subject to the VGP, but also conduct operations in a non-transportation capacity (*i.e.*, oil and gas drilling). As a result, MODUs are expected to transition between coverage under the VGP and coverage under a permit for oil and gas operations (O&G Permit). The exact timing of the transition between permits will depend upon the specific circumstances. This is a potential source of confusion and adds to the complexity of assuring compliance with the VGP, particularly for MODUs conducting drilling operations within Permit Waters.

The oil company operator will seek O&G Permit coverage under an Oil and Gas General Permit⁴ or may obtain coverage under an individual permit, depending upon the location and the oil company’s business decisions.

At no time are the VGP and an O&G Permit simultaneously in effect for a MODU. Nonetheless, in order to assure compliance with the VGP, certain inspections and tests under the VGP must be completed while under the coverage of the O&G Permit. There can be significant differences between discharges authorized by (and discharge limitations under) an O&P Permit and those authorized by the VGP. An individual

-
- 4 O&G General Permits applicable to drilling operations in the territorial sea or internal waters include:
- LAG29000 – NPDES General Permit for the Territorial Seas of Louisiana.
 - CWOGF-G – Water Discharge Permit: Oil & Gas Exploration, Development, and Production Facilities in Coastal Waters.
 - TXG260000 – NPDES General Permit for Discharges from the Offshore Subcategory of the Oil and Gas Extraction Point Source Category to the Territorial Seas off Texas.
 - TXG330000 – NPDES General Permit for Discharges from the Oil and Gas Extraction Point Source Category to Coastal Waters in Texas.
 - AKG280000 – Authorization to Discharge under the National Pollutant Discharge Elimination System (NPDES) for Oil and Gas Extraction Facilities on the Outer Continental Shelf and Contiguous State Waters.
 - AKG-31-5000 – Authorization to Discharge under the National Pollutant Discharge Elimination System (NPDES) for Oil and Gas Extraction Facilities in Federal and State Waters in Cook Inlet.

MODU's operations should be controlled to comply with (and where appropriate, take advantage of) the permit in effect at the time.

While this guideline makes recommendations with respect to activities that should be undertaken while a MODU may be subject to an O&G Permit, these recommendations relate to the VGP. This guideline is not intended to provide any recommendations regarding implementation of, or compliance with, any O&G Permit.

BEST MANAGEMENT PRACTICES (BMPs)

The VGP addresses 26 different effluent streams (not all of which are relevant to MODUs). Because of the nature of vessel discharges, the EPA has determined that it is not practicable to rely on numeric effluent limits for the large majority discharge types until greater information is available. In the VGP, the EPA has included many non-numeric effluent limits and requires permittees to engage in specific behaviors or BMPs.

Annex 1 summarizes the EPA required BMPs and provides additional IADC recommended practices and commentary.

VOYAGE PLANNING

Certain provisions of the VGP limit permissible discharges depending on the location of the vessel, e.g., nutrient impaired waters, hypoxic waters, or within waters that are federally protected wholly or in part for conservation purposes. In planning for relocation of a unit, consideration should be given to:

- The list of Federally Protected Waters found in Part 12 of the VGP:
http://www.epa.gov/npdes/pubs/vessel_vgp_permit.pdf.
- Also each operator should review the list of nutrient-impaired waters found at:
http://www.epa.gov/npdes/pubs/vessel_impair_nutrient.pdf; and
http://www.epa.gov/npdes/pubs/vessel_impair_copper.pdf.; and
- The information provided regarding hypoxic waters found at:
<http://www.ncddc.noaa.gov/interactivemaps/hypoxia-watch>.

TRAINING

For MODUs that routinely operate in Permit Waters basic VGP and BMP training should be provided to all personnel, including contractors and visitors. Such basic training should include an introduction to the Vessel General Permit and the MODU BMPs, as well as company/unit specific policies and best management practices. This training may be incorporated into the new employee orientation or on board induction.

For MODUs that do not routinely, but may or only occasionally, enter Permit Waters, basic VGP and BMP training should be provided to all personnel on board, including contractors and visitors prior to entry into Permit Waters through employee orientation or on board induction. When possible, it is recommended that such training be provided one week prior to entry into permit waters.

BMP training should be given to appropriate facility supervisors and contractor supervisors for the purpose of informing these personnel of the components and objectives of the VGP. The training should address the requirements of each BMP for the MODU, goals for continuous improvement, reporting and recordkeeping requirements, and potential penalties for non-compliance. Training is done on an as needed basis in the event that there is a change in facility or contractor personnel, or a significant BMP Plan modification. Records of training should be maintained for three years.

EVALUATION AND RE-EVALUATION

The operational guidance and instructions should be re-evaluated and appropriately revised when the VGP is amended or re-issued. Other circumstances that will trigger modification of the operational guidance and instructions include, but are not limited to, the following:

- In response to identified shortcomings in the operational guidance and instructions (e.g., following a near-miss, when new equipment is installed, or operating procedures are changed).
- Whenever inspections or incidents reveal a need to modify procedures or equipment to further reduce the potential to release contaminants to the receiving water.

RECORDKEEPING

For recordkeeping purposes each MODU must keep written records on the unit. A summary of the required records is contained in Appendix 1 of this guideline. (A more detailed description is available in section 4.2 of the VGP.) Owners and operators may choose how these records will be maintained, but must retain them on the unit for a period of three years.

SIGNATORIES

EPA regulations and the VGP require that certain records be signed by a person that is a 'signatory' in accordance with 40 CFR 122.22. The VGP, specifically recognizes that a signatory includes the person in charge (e.g. the Master), or their duly authorized representative. Accordingly, no designation letter is required for the person in charge (Offshore Installation Manager or Master) for most MODUs, but a designation letter would be required to assign or delegate signatory authority to others on the unit or to shore based personnel, who are not a 'responsible corporate officer' under 40 CFR 122.22, in order to serve as a duly authorized representative. Generic examples are provided in Appendix 7. Any duly authorized representative must be designated in writing with notification provided to the EPA Regional office. Rather than naming an individual, it is recommended that any designations refer to an assigned job position.

INSPECTIONS

Routine

Visual inspections (walk-throughs) should be performed daily and any potential non-conformity, non-compliance, or violation of the VGP should be documented and corrected as necessary. The visual inspection should include:

- Checking for leaks and spills.
- Examination of areas which have been identified of special concern (.e.g., recently-repaired equipment).
- Identify equipment and materials that are not properly stored or positioned.
- Initiating corrective actions as necessary.

The person conducting the routine weekly inspection must be a signatory per 40 CFR Part 122.22.

The records of routine weekly inspections must be made available to the EPA or their authorized representative upon request. Unit operators must initiate corrective actions for problems noted in their inspections in the time allotted period. (The next section describes corrective actions.)

The routine weekly inspection should follow a checklist, developed for the individual unit on the basis of a review of its equipment and operations and should focus on stored materials (new and spent), equipment, and work areas with the potential to pollute. You must document the date and time of this inspection, locations on board the unit inspected, personnel conducting the inspection, location of any visual sampling and observations, note any potential problems and sources of contamination found, and it must be signed by the person conducting the inspection, if not the person in charge. While the weekly checklist must reflect the individual unit, a generic example report is provided in Appendix 2.

The person conducting the inspection is required to sign the weekly inspection form and completed inspection forms are to be maintained on board the unit for a period of three years.

Quarterly

At least once per quarter samples must be taken of any discharge stream that is not readily able to be visually inspected, such as those discharged below the waterline (e.g., bilgewater or graywater). The sample should be inspected for any signs of visible pollutants or constituents of concern, such as: discoloration, visible sheen, suspended solids, floating solids, foam, or changes in clarity. You must document the date and time of this inspection, ship locations inspected, personnel conducting the inspection, location of any visual sampling and observations, note any potential problems and

sources of contamination found, and it must be signed by the person conducting the inspection, if not the person in charge. While the form used for this quarterly inspection must reflect the individual unit, a generic example report for this inspection is provided in Appendix 3.

Annual

A comprehensive annual vessel inspection must be conducted by qualified personnel at least once every twelve (12) months. Qualified personnel include the person in charge or the owner/operator of the vessel, if appropriately trained, or appropriately trained marine or environmental engineers or technicians, or an appropriately trained class society representative acting on behalf of the owner/operator. While the annual checklist must reflect the individual unit, a generic example report for this inspection is provided in Appendix 4.

Drydock

A drydock report, prepared by the classification society or their flag administrations must be made available to the EPA or an authorized representative of the EPA upon request. In lieu of, or in addition to the classification society or flag report, the owner/operator must prepare their own report and make it available for the EPA. The VGP requirements for the drydock report are specific and may not be addressed in the routine drydock reports provided by classification societies or flag administrations. While the drydock checklist must reflect the individual unit, a generic example report is provided in Appendix 5.

CORRECTIVE ACTIONS

Deadlines for eliminating a problem(s) or violation(s) are determined by the complexity of the corrective action and/or the impact of the problem(s) / violation(s). Compliance with many permit or VGP requirements can be accomplished immediately.

Corrective Action types:	Must be completed by:
Housekeeping or operational and maintenance requirements	Immediate Compliance
Corrective actions that can be accomplished with relatively simple adjustments to your control measures, using existing personnel and resources, and not requiring the MODU to be in drydock.	As soon as possible but no later than 2 weeks after the discovery of the problem/violation, or if leaving waters subject to this permit, before expiration of the 2 week period or before re-entering the waters subject to the VGP, whichever is later.

Corrective Action types:	Must be completed by:
Corrective actions that require new parts or the installation of new equipment, not requiring the MODU to be in drydock: MODU must address the underlying cause of the noncompliance and return to compliance and/or complete necessary repairs.	No later than 3 months after the discovery of the problem , or, if leaving waters subject to the VGP, before expiration of the 3 month period or before re-entering waters subject to the VGP, whichever is later. However, if completing repairs within 3 months is impracticable, you must complete the repairs as soon as possible after 3 months and document the reason why more time is needed as part of your corrective action assessment.
For corrective actions that require large or comprehensive renovations, alterations or repairs to the MODU that can only be achieved while the vessel is in drydock: MODU must address the underlying cause of the noncompliance and return to compliance and/or complete necessary renovations or repairs prior to re-launching the MODU from drydock.	Complete necessary renovations or repairs prior to re-launching the MODU from drydock.

Any inspection or observation that results in a problem, non-conformance, noncompliance, or violation will require a corrective action assessment within the above time frames listed.

Corrective Action Assessment Record- A generic example of the information required by this type of record can be found in Appendix 6 and is further explained in section 3.2 of the VGP.

PERMIT COMPLIANCE RECORDS ⁵

The VGP contains no specific requirements with respect to the form of documentation required to or for demonstration of permit compliance. To assist MODU owners/operators in meeting these requirements, some of the below listed records have generic examples provided in an appendix to this guideline. Those without an example provided in the appendix should already be available within one of the company's current policies or procedures manual(s).

- MODU Relocation / Voyage Record (Company policy),
- Effluent Limit Violations Record (Company policy),
- Routine Weekly Inspection Record (See Appendix 2),

5 A Record developed to achieve and/or demonstrate compliance with the VGP is subject to inspection by the EPA and, once provided to the agency may be subject to public view. If the records maintained for VGP compliance are intertwined (and not extractable) with other records, it may be difficult to produce the required records without disclosing non-required ones. You should be aware of this as you consider the systems (*e.g.*, records) that you will use to comply with the recordkeeping requirements of the VGP.

- Cargo Operations Record (Company policy, if required),
- Quarterly Sampling Record (See Appendix 3),
- Annual Inspection Record (See Appendix 4),
- Additional Maintenance and Discharge Information Record (Company policy),
- Drydock Inspection Record (See Appendix 5),
- Corrective Action Assessment Record (See Appendix 6), and
- Training Record (Company policy)

Alternative forms of recordkeeping, so long as the permit requirements are met, are perfectly acceptable.

The VGP requires that all documentation (except the Notice of Intent, Notice of Termination, and reports submitted to EPA) required under the permit is signed and dated by the person preparing the documentation. The Notice of Intent, Notice of Termination, and reports (including monitoring data) submitted to EPA must include a signed certification in a form specified in the permit. (See example in Appendix 7).

REPORTING

Annual

A report must be submitted to the EPA Regional office that documents all instances of non compliance at least once per year. This report should be submitted to the Regional office responsible for the waters in which the non compliance occurred (VGP section 8). For multiple occurrences in various locations, the report should go to the regional office with the most number of occurrences or, if an even number, then to the regional office where the unit spent the most time. Since no specific format is specified, you may use company letterhead and include the information contained in your inspection and/or assessment reports (*i.e.*, date, time, location, requirement, cause, corrective action, etc) for each of the non compliances.

24-hour + 5-day Additional Reporting

Owners/operators must report any non compliance which may endanger health or the environment to the EPA regional office. The information must be provided orally within 24 hours from the time you become aware of the circumstances. Additionally, a 5-day written follow up report must also be provided within five days of your awareness.

Reportable Quantities of Hazardous Substances or Oil

Owners/operators should, in addition to the above 24-hour/5-day reporting, follow their standard procedures for this type of discharge, which should require them to report it to the National Response Center (1-800-424-8802 or 202-267-2675). Additionally, the VGP recordkeeping requirement (VGP section 4.4.2) indicates that within 14 calendar days of knowledge of the release that the on board records should indicate:

- a) The discovery date and description of the discharge or release;
- b) The circumstances leading up to it;
- c) The responses employed to handle it; and
- d) The measures taken to prevent re-occurrence of it.

One Time Permit Report

The vessel owner/operator is required to submit a one time report between 30 to 36 months after obtaining permit coverage. The report form, which is available in section 13 of the VGP, is needed to assist the EPA in development of the next version of the VGP.

Recordkeeping - Appendix 1

Written records must be kept on the MODU that include the following information:

- Vessel information: Vessel Name, International Maritime Organization (IMO) number and/or Official number and vessel type.
- Voyage Log: Date and port of arrival, last port of call, next port of call.
- Violation of effluent limits: Description of violation, date, name of person identifying the violation, and name of person recording violation, and location where corrective action assessment is stored.
- Log of deficiencies or problems: Routine inspection non-compliance issues, corrective actions planned or taken, and the inspector's name.
- Results of all monitoring conducted: Analytical results, which include sample documentation, results, and laboratory documentation.
- Annual inspection report: Findings from annual inspection, corrective actions taken or planned, and the inspector's name.
- Imposed requirements and actions taken: Written requirements given to the vessel by the EPA or an authorized state agency and how these requirements were met.
- Maintenance and discharge information for the following:
 - Deck maintenance;
 - Bilgewater disposal;
 - Paint application;
 - AFFF discharges;
 - Chain locker inspection;
 - Controllable pitch propellers, stern tube and other oil-to-sea interfaces;
 - Emergencies requiring discharges into prohibited waters;
 - Gas turbine water wash; and
 - Graywater discharges

Routine Weekly Inspection Report- Appendix 2

To be completed at least once weekly or whenever a problem, non-conformance, noncompliance or violation is observed.

Person in charge or duly authorized
representative's printed name

MODU / Vessel Name

Signature _____

Date & Time _____

Latitude _____

Longitude _____

Note any problem, non-conformance, noncompliance or violation that was observed while performing the visual inspection. Note any areas which not able to be inspected and reason why.

Area	Observed problem, non-conformance, noncompliance or violation

Quarterly Inspection Report- Appendix 3

To be completed at least once per quarter and taken from any discharge stream that is not readily able to be visually inspected, such as those discharged below the waterline (e.g., bilgewater or graywater).

Person in charge or duly authorized representative's printed name	MODU / Vessel Name
Signature _____	Date & Time _____
Latitude _____	Longitude _____
Year _____	Quarter _____

Type of Sample & Location:
Results:
Type of Sample & Location
Results:
Type of Sample & Location
Results:
Type of Sample & Location
Results:

Annual Inspection Report- Appendix 4

To be completed at least once every 12 month period and conducted by a qualified personnel.

NOTE: A classification society or flag State report may be used if it contains all the required information and is completed by an appropriately trained surveyor. Full explanations are required any time a section of the inspection cannot be performed.

AREAS THAT MUST BE EXAMINED	RESULTS
Vessel hull for attached living organisms, flaking anti-fouling paint, exposed TBT or other organotin surfaces	SAT / UNSAT
Ballast water tanks, as applicable	SAT / UNSAT
Bilges, pumps and oily water separator (OWS) sensors, as applicable.	SAT / UNSAT
Protective seals for lubrication and hydraulic leaks	SAT / UNSAT
Oil and chemical storage areas, cargo areas, and waste storage areas	SAT / UNSAT
All visible pollution control measures to ensure that they are functioning properly	SAT / UNSAT

 Person in charge or duly authorized
 representative's printed name

 MODU / Vessel Name

Signature _____

Date & Time _____

Call Sign _____

Official Number _____

Gross Tonnage _____

Port of Registry _____

Remarks:

Drydock Inspection Report- Appendix 5

To be completed after final completion of a DRYDOCK period.

NOTE: Not all items will be applicable to every MODU. Full explanations are required any time a section of the inspection cannot be performed

Inspection criteria	Performed
The chain locker has been cleaned for both sediment and living organisms	Yes N/A
The MODU hull, thrusters, gratings, sea chest, and other surface areas of the MODU have been inspected for attached living organism and those organisms have been removed OR neutralized.	Yes No
Any antifouling hull coatings have been applied, maintained and removed consistent with the FIFRA label if applicable: any exposed existing or new coating does not contain biocides or toxics that are banned for use in the United States.	Yes No
All cathodic protection, anodes or dielectric coatings have been inspected, cleaned and/or replaced to reduce flaking	Yes No
All pollution control equipment is properly functioning.	Yes No

 Person in charge or duly authorized
 representative's printed name

 MODU / Vessel Name

Signature _____

Date & Time _____

Call Sign _____

Official Number _____

Gross Tonnage _____

Port of Registry _____

Remarks:

Corrective Action Assessment - Appendix 6

Vessel Name- _____

Date: _____

Description of the problem:

Explanation of the cause:

Description of Corrective actions planned:

Drydock required: Yes__ No__

Date and time corrective action implemented:

Summary of Corrected Actions taken:

Recorder name and title

Signature

Designation Letter - Appendix 7.1

ADHOC Drilling Company, Inc.

Director, Water Division
EPA Region

Date: _____

Subj: NPDES Vessel General Permit – Corporate Designation of Duly Authorized Representatives

In accordance with 40 CFR 122.22 and Section 4.2 of the NPDES Vessel General Permit, ADHOC Drilling Company, Inc. delegates the authority to sign documents associated with the Vessel General Permit within its corporate structure as follows:

- Vice President of Regional Operations (responsible corporate officer) designates General Manager(s)
- General Manager(s) designates Operations Manager(s)
- Operations Manager(s) designates Rig Manager(s)
- Rig Manager(s) designates vessel Person(s) in Charge / Offshore Installation Manager(s)
- Person(s) in Charge / Offshore Installation Manager(s) may delegate to senior crewmembers via a duly authorized representative designation letter [Note: Use position titles appropriate to the company.]

Name _____

Signature _____

Title _____

(Must be a responsible corporate officer identified in 40 CFR122.22 (a)(1)(i))

“I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information contained therein. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information contained is, to the best of my knowledge and belief, true, accurate, and complete. I have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.”

Designation Letter - Appendix 7.2

ADHOC Drilling Company, Inc.

Director, Water Division
EPA Region

Date: _____

Subj: DRILLUNIT XX (Identifying number)
NPDES Vessel General Permit – Designation of Duly Authorized
Representatives

In accordance with 40 CFR 122.22 and Section 4.2 of the NPDES Vessel General Permit, authority to sign documents associated with the Vessel General Permit related to the DILLUNIT XX is delegated to the following corporate positions:

- Maintenance Supervisor
- Barge Engineer

[Note: Use position titles appropriate to the company and unit.]

Name _____

Signature _____

Title _____

(Must be a responsible corporate officer identified in 40 CFR122.22(a)(1)(i) or identified corporate delegate.)

“I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information contained therein. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information contained is, to the best of my knowledge and belief, true, accurate, and complete. I have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.”

ANNEX 1 to IADC Guideline for MODUs

1. Deck Washdown and Runoff and Above Water line Hull Cleaning

EPA required BMPs

Vessel owner/operators must minimize the introduction of on-deck debris, garbage, residue and spill into deck washdown and runoff discharges. When required by their class societies (e.g., oil tankers), their flag Administrations, or the U.S. Coast Guard, vessels must be fitted with and use perimeter spill rails and scuppers to collect the runoff for treatment. Where feasible, machinery on deck must have coamings or drip pans to collect any oily water from machinery and prevent spills. The drip pans must be drained to a waste container for proper disposal and/or periodically wiped and cleaned. The presence of floating solids, visible foam, halogenated phenol compounds, and dispersants, or surfactants in deck washdowns must be minimized. Vessel operators must minimize deck washdowns while in port.

Vessel operators must maintain their topside surface and other above water line portions of the vessel to minimize the discharge of rust (and other corrosion by-products), cleaning compounds, paint chips, non-skid material fragments, and other materials associated with exterior topside surface preservation. Furthermore, vessel owner/operators must minimize residual paint droplets from entering waters subject to this permit whenever they are conducting maintenance painting. Possible minimization techniques include, but are not limited to, avoiding paint spraying in windy conditions or avoiding over-application of paint. This permit does not authorize the disposal of unused paint into waters subject to this permit.

If deck washdowns or above water line hull cleaning will result in a discharge, they must be conducted with non-toxic and phosphate free cleaners and detergents. Furthermore, cleaners and detergents should not be caustic or only minimally caustic and should be biodegradable.

Note: EPA provides the following definitions:

“Non-toxic” soaps, cleaners, and detergents means these materials which do not exhibit potentially harmful characteristics as defined by the Consumer Product Safety Commission regulations found at 16 CFR Chapter II, Subchapter C, Part 1500.

“Phosphate Free” soaps, cleaners, and detergents means these materials which contain, by weight, 0.5% or less of phosphates or derivatives of phosphates.

Commentary: None

Additional recommended practices:

- If possible, deck washdowns should be postponed until the unit is outside Permit Waters.
- When washdowns are necessary within Permit Waters, collect all debris, garbage and residues for disposal prior to conducting washdowns.
- A procurement process should be established which reviews soaps, cleaners and detergents that are intended for use for deck washdowns or above the water line hull cleaning will meet the VGP requirements.
- Machinery containment/drip pans and containment wells around fuel oil and bulk lubricating oil tank vents, overflows and fill pipes should be routinely maintained and any oily waste disposed of properly or retained on board for discharge in accordance with applicable regulations.

- For MODUs completing drilling operations, consideration should be given to conducting washdowns of the drill floor and drilling fluid processing areas while the O&G Permit remains in effect.

ANNEX 1 to IADC Guideline for MODUs

2. Bilgewater

EPA required BMPs

All bilgewater discharges must be in compliance with the regulations in 40 CFR Parts 110 (Discharge of Oil), 116 (Designation of Hazardous Substances), and 117 (Determination of Reportable Quantities for Hazardous Substances) and 33 CFR §151.10 (Control of Oil Discharges).

In addition:

- Vessel operators may not use dispersants, detergents, emulsifiers, chemicals or other substances to remove the appearance of a visible sheen in their bilgewater discharges.
- Except in the case of flocculants or other required additives (excluding any dispersants or surfactants) used to enhance oil/water separation during processing (after bilgewater has been removed from the bilge), vessel operators may not add substances that drain to the bilgewater that are not produced in the normal operation of a vessel. The use of oil solidifiers, flocculants, or other required additives are allowed only as part of an oil water separation system provided they do not alter the chemical make-up of the oils being discharged and they are not discharged into waters subject to this permit. Routine cleaning and maintenance activities associated with vessel equipment and structures are considered to be normal operation of a vessel if those practices fall within normal marine practice.
- All vessels must minimize the discharge of bilgewater into waters subject to this permit. This can be done by minimizing the production of bilgewater, disposing of bilgewater on shore where adequate facilities exist, or discharging into waters not subject to this permit (i.e., more than 3 nautical miles (nm) from shore) for vessels that regularly travel into such waters. Though not regulated under this permit, EPA notes that discharges of bilgewater outside waters subject to this permit (i.e. more than 3 nm from shore) are regulated under Annex I of the International Convention for the Prevention of Pollution from Ships as implemented by the Act to Prevent Pollution from Ships and U.S. Coast Guard regulations found in 33 CFR 151.09.
- Vessels greater than 400 gross tons shall not discharge untreated oily bilgewater into waters subject to this permit.
- Vessels greater than 400 gross tons that regularly sail outside the territorial sea (at least once per month) shall not discharge treated bilgewater within 1 nm of shore if technologically feasible (e.g. holding would not impact safety and stability, would not contaminate other holds or cargo, would not interfere with essential operations of the vessel). Any discharge which is not technologically feasible to avoid must be documented as part of the requirements in Part 4.2.
- Vessels greater than 400 gross tons shall not discharge treated bilgewater into waters referenced in Part 12.1 unless the discharge is necessary to maintain the safety and stability of the ship. Any discharge of bilgewater into these waters must be documented as part of the recordkeeping requirements in Part 4.2 and vessel operators must document whether this bilgewater discharge was made for safety reasons.
- For vessels greater than 400 gross tons that regularly sail outside the territorial sea (at least once per month), if treated bilgewater is discharged into waters subject to this permit, it must be discharged when vessels are underway (sailing at speeds greater than 6 knots), unless doing so would threaten the safety and stability of the ship. EPA notes that vessel operators may also choose to dispose of bilgewater on shore where adequate facilities exist. Any discharge which is made for safety reasons must be documented as part of the requirements in Part 4.2.

Commentary:

- (1) All MODUs presently in service are greater than 400 gross tons.
- (2) The provisions of 33 CFR 151.10 applicable to a MODU within Permit Waters are as follows:

§ 151.10 Control of oil discharges.

- (b) When within 12 nautical miles of the nearest land, any discharge of oil or oily mixtures into the sea from a ship other than an oil tanker or from machinery space bilges of an oil tanker is prohibited except when all of the following conditions are satisfied—
- (1) The oil or oily mixture does not originate from cargo pump room bilges;
 - (2) The oil or oily mixture is not mixed with oil cargo residues;
 - (3) The oil content of the effluent without dilution does not exceed 15 ppm;
 - (4) The ship has in operation oily-water separating equipment, a bilge monitor, bilge alarm, or combination thereof as required by Part 155 Subpart B of this chapter; and
 - (5) The oily-water separating equipment is equipped with a 15 ppm bilge alarm; for U.S. inspected ships, approved under 46 CFR 162.050 and for U.S. uninspected ships and foreign ships, either approved under 46 CFR 162.050 or listed in the current International Maritime Organization (IMO) Marine Environment Protection Committee (MEPC) Circular summary of MARPOL 73/78 approved equipment.

Note: In the navigable waters of the United States, the Federal Water Pollution Control Act (FWPCA), section 311(b)(3) and 40 CFR Part 110 govern all discharges of oil or oily mixtures.

- (e) The provisions of paragraphs (a), (b), (c) and (d) of this section do not apply to the discharge of clean or segregated ballast.
- (f) The person in charge of an oceangoing ship that cannot discharge oily mixtures into the sea in compliance with paragraphs (a), (b), (c), or (d) of this section must ensure that those oily mixtures are—
- (1) Retained on board; or
 - (2) Discharged to a reception facility. If the reception facility is in a port or terminal in the United States, each person who is in charge of each oceangoing tanker or any other oceangoing ship of 400 gross tons or more shall notify the port or terminal, at least 24 hours before entering the port or terminal, of—
 - (i) The estimated time of day the ship will discharge oily mixtures;
 - (ii) The type of oily mixtures to be discharged; and
 - (iii) The volume of oily mixtures to be discharged.

Note: There are Federal, state, or local laws or regulations that could require a written description of the oil residues and oily mixtures to be discharged. For example, a residue or mixture containing oil might have a flashpoint less than 60 °C (140 °F) and thus have the characteristic of ignitability under 40 CFR 261.21, which might require a description of the waste for a manifest under 40 CFR Part 262, Subpart B. Occupational safety and health concerns may be covered, as well as environmental ones.

The notice required in this section is in addition to those required by other Federal, state, and local laws and regulations. Affected persons should contact the appropriate Federal, state, or local agency to determine whether other notice and information requirements, including 40 CFR Parts 262 and 263, apply to them.

- (g) No discharge into the sea shall contain chemicals or other substances introduced for the purpose of circumventing the conditions of discharge specified in this regulation.
- (h) This section does not apply to a fixed or floating drilling rig or other platform that is operating under a National Pollutant Discharge Elimination System (NPDES) permit.⁶

The provisions of 33 CFR 155 applicable to MODUs⁷ within Permit Waters are as follows:

⁶ Note: 33 CFR 151 and 155 pre-date the issuance of the VGP. The NPDES permit referred to in these regulations is the O&G Permit.

§ 155.400 Platform machinery space drainage on oceangoing fixed and floating drilling rigs and other platforms.

- (a) No person may operate an oceangoing fixed or floating drilling rig or other platform unless it either—
- (1) Complies with the oily-water separating equipment requirements of a valid National Pollutant Discharge Elimination System (NPDES) permit issued in accordance with section 402 of the Clean Water Act and 40 CFR Chapter I;
 - (2) Complies with the oily-water separating equipment requirements for oceangoing ships of 400 gross tons and above as set forth in either §155.360 or §155.370; or
 - (3) Is not equipped with an installed bilge pumping system for discharge of oily mixtures from platform machinery spaces into the sea and has the capacity to retain on board all of these oily mixtures and is equipped to discharge these mixtures for transport to a reception facility.
- (b) When an oceangoing fixed or floating drilling rig or other platform is in a special area, is not proceeding en route, or is within 12 nautical miles of the nearest land; it must either—
- (1) Have the capacity to retain on board all machinery space oily mixtures from platform machinery space drainage and be equipped to discharge these mixtures for transport to a reception facility; or
 - (2) Discharge in accordance with §151.10 (b)(3), (b)(4), and (b)(5) of this chapter, provided the drilling rig or platform is not within a special area.
- (c) Paragraph (b) of this section does not apply to a fixed or floating drilling rig or other platform that is operating under an NPDES permit.
- (4) Prior to the effective date of the VGP, the net effect of these regulations is that MODU had the following options for handling machinery spaced drainage when within what are now Permit Waters:
- They could retain on board all machinery space oily mixtures from machinery space drainage and be equipped to discharge these mixtures for transport to a reception facility.
 - They could handle them in accordance with an O&G Permit when such a permit was in force; or
 - They could be discharged when all of the following conditions were satisfied—
 - (3) The oil content of the effluent without dilution does not exceed 15 ppm;
 - (4) The ship has in operation oily-water separating equipment, a bilge monitor, bilge alarm, or combination thereof as required by Part 155 Subpart B of this chapter; and
 - (5) The oily-water separating equipment is equipped with a 15 ppm bilge alarm; for U.S. inspected ships, approved under 46 CFR 162.050 and for U.S. uninspected ships and foreign ships, either approved under 46 CFR 162.050 or listed in the current International Maritime Organization (IMO) Marine Environment Protection Committee (MEPC) Circular summary of MARPOL 73/78 approved equipment.
- (5) Amendments to MARPOL Annex I entered into force on 1 January 2007 imposed further restrictions on the discharge into the sea of oil or oily mixtures. Regulation 15/2 of the amended regulations reads:

-
- 7 33 CFR 151 contains no provisions that are directly applicable to fixed and floating drilling rigs that are not "oceangoing". 33 CFR 151.05 provides the following definition:
Oceangoing ship means a ship that--
- (1) Is operated under the authority of the United States and engages in international voyages;
 - (2) Is operated under the authority of the United States and is certificated for ocean service;
 - (3) Is operated under the authority of the United States and is certificated for coastwise service beyond three miles from land;
 - (4) Is operated under the authority of the United States and operates at any time seaward of the outermost boundary of the territorial sea of the United States as defined in Sec. 2.22 of this chapter; or
 - (5) Is operated under the authority of a country other than the United States.

2 Any discharge into the sea of oil or oily mixtures from ships of 400 gross tonnage and above shall be prohibited except when all the following conditions are satisfied:

- .1 the ship is proceeding en route;
- .2 the oily mixture is processed through an oil filtering equipment meeting the requirements of regulation 14 of this Annex;
- .3 the oil content of the effluent without dilution does not exceed 15 parts per million;
- .4 the oily mixture does not originate from cargo pump-room bilges on oil tankers; and
- .5 the oily mixture, in case of oil tankers, is not mixed with oil cargo residues.

Additional guidance regarding handling of oily wastes in machinery spaces was provided in November 2008.⁸

These amendments have yet been reflected in 33 CFR 151, which makes their enforceability with respect to ships operated under the authority of the United States; however, they should generally be considered applicable to any State party to MARPOL Annex I.

(6) The following BMPs of the VGP place new restrictions on permitted discharges:

- Vessels greater than 400 gross tons that regularly sail outside the territorial sea (at least once per month) shall not discharge treated bilgewater within 1 nm of shore if technologically feasible (e.g. holding would not impact safety and stability, would not contaminate other holds or cargo, would not interfere with essential operations of the vessel). Any discharge which is not technologically feasible to avoid must be documented as part of the requirements in Part 4.2.
- Vessels greater than 400 gross tons shall not discharge treated bilgewater into waters referenced in Part 12.1 unless the discharge is necessary to maintain the safety and stability of the ship. Any discharge of bilgewater into these waters must be documented as part of the recordkeeping requirements in Part 4.2 and vessel operators must document whether this bilgewater discharge was made for safety reasons.
- For vessels greater than 400 gross tons that regularly sail outside the territorial sea (at least once per month), if treated bilgewater is discharged into waters subject to this permit, it must be discharged when vessels are underway (sailing at speeds greater than 6 knots), unless doing so would threaten the safety and stability of the ship. EPA notes that vessel operators may also choose to dispose of bilgewater on shore where adequate facilities exist. Any discharge which is made for safety reasons must be documented as part of the requirements in Part 4.2.

Additional recommended practices:

- Where fitted, oily-water separators (OWS) should be included in the unit's planned maintenance program.
- There have been significant amendments to the IMO standards for oily-water separating equipment [^{3,9}]. Owners of units where oily-water separating equipment is routinely used may wish to consider replacement of existing oily-water separators, particularly if costly repairs to existing systems are needed.

8 IMO Circular MEPC.1/Circ.641, Supplementary Guidelines for approval of bilge and sludge handling systems, and IMO Circular MEPC.1/Circ. 642, 2008 Revised Guidelines for systems for handling oily wastes in machinery spaces of ships incorporating guidance notes from an integrated bilge water treatment system (IBTS).

9 IMO Resolution MEPC.107(49), Revised Guidelines on specification for pollution prevention equipment for machinery space bilges of ships.

ANNEX 1 to IADC Guideline for MODUs

3. Ballast Water

EPA required BMPs

All discharges of ballast water must comply with the Coast Guard regulations found in 33 CFR Part 151. Vessels that operate solely within one Captain of the Port (COTP) zone are exempt from certain requirements, as described in 33 CFR 151.2010(b). Additionally, owner/operators of all vessels subject to coverage under this permit which are equipped with Ballast Tanks must comply with any additional BMPs in this section.

All discharges of ballast water may not contain oil, noxious liquid substances (NLSs), or hazardous substances in a manner prohibited by U.S. laws, including section 311 of the Clean Water Act.

All owner/operators of vessels equipped with ballast water tanks must maintain a ballast water management plan that has been developed specifically for the vessel that will allow those responsible for the plan's implementation to understand and follow the vessel's ballast water management strategy. Owner/operators must make that plan available upon request to any EPA representative. Vessel owner/operators must assure that the master and crew members who actively take part in the management of the discharge or who may affect the discharge understand and follow the management strategy laid out in the plan.

EPA notes that these plans are being imposed as "conditions to assure compliance" with effluent limitations under CWA 402(a)(2) and 40 CFR 122.43(a).

Masters, owners, operators, or persons-in-charge of all vessels equipped with ballast water tanks that operate in waters of the U.S. must:

- Avoid the discharge of ballast water into waters subject to this permit that are within or that may directly affect marine sanctuaries, marine preserves, marine parks, shellfish beds, or coral reefs or other waters listed in Part 12.1.
- Minimize or avoid uptake of ballast water in the following areas and situations:
 - Areas known to have infestations or populations of harmful organisms and pathogens (e.g., algal blooms).
 - Areas near sewage outfalls.
 - Areas near dredging operations.
 - Areas where tidal flushing is poor or when a tidal stream is known to be more turbid.
 - In darkness when bottom dwelling organisms may rise up in the water column.
 - In shallow water or where propellers may stir up the sediment.
 - Areas with pods of whales, convergence zones and boundaries of major currents
- Clean ballast tanks regularly to remove sediments in mid-ocean or under controlled arrangements in port, or at dry dock.
- No sediment discharge from cleaning of ballast tanks is authorized in waters subject to this permit. Discharge only the minimal amount of ballast water essential for vessel operations while in the waters subject to this permit.

2.2.3.4 On-shore Treatment of Ballast Water

For those vessels whose design and construction safely allows for the transfer of ballast water to shore, if compatible onshore treatment for ballast water is available and economically practicable and achievable, the vessel owner/operator must use this treatment for any ballast water discharges, unless they use an onboard ballast water treatment system approved by the Commandant of the Coast Guard. If vessels use on-shore treatment at one port, and they will not discharge ballast water into any other waters subject to this permit for their entire duration in waters subject to this permit, then it is not necessary to meet the requirements of 2.2.3.5, 2.2.3.6, 2.2.3.7, and 2.2.3.8.

2.2.3.5 Requirements for Ocean Going Voyages While Carrying Ballast Water

Any vessels that carry ballast water that was taken on in areas less than 200 nautical miles from any shore that will subsequently operate beyond the Exclusive Economic Zone (EEZ) and more than 200 nm from any shore must carry out an exchange of ballast water for any tanks that will discharge ballast water into waters subject to this permit unless the vessel meets one of the exemptions in Part 2.2.3.11.

This exchange must be conducted in compliance with the following standards prior to discharging ballast water into waters subject to this permit:

- The exchange must occur in waters beyond the U.S. EEZ;
- The exchange must occur in an area more than 200 nautical miles from any shore;
The exchange must be commenced as early in the vessel voyage as possible, as long as the vessel is more than 200 nm from any shore.

EPA suggested BMPs

Suggested control measures to minimize the discharge of ballast water include, but are not limited to, transferring ballast water between tanks within the vessel in lieu of ballast water discharge. Another option for minimizing the potential for spread of aquatic nuisance species (ANS) via ballast water discharges might be using treated graywater (only in areas where treated graywater may be discharged) for those vessels that generate substantial quantities of graywater (e.g. cruise ships). Yet another option is to use potable water for ballast.

Commentary:

(1) The International Convention for the Control and Management of Ships' Ballast Water.

The International Convention for the Control and Management of Ships' Ballast Water and Sediments will enter into force 12 months after ratification by 30 States, representing 35 % of world merchant shipping tonnage. As of 31 March 2009, the Convention had been ratified by 18 States representing approximately 15% of the world merchant shipping tonnage. Countries party to the Convention are: Albania, Antigua & Barbuda, Barbados, Egypt, France, Kenya, Liberia, Maldives, Mexico, Nigeria, Norway, Saint Kitts and Nevis, Sierra Leone, South Africa, Spain, Syrian Arab Republic, and Tuvalu.

MODUs are treated as 'ships' for the purposes of the Convention, and only the provisions regarding surveys contain any exemptions. Under the Convention, ships are required to have on board and implement a Ballast Water Management Plan approved by the Administration (Regulation B-1). The Ballast Water Management Plan is specific to each ship and includes a detailed description of the actions to be taken to implement the Ballast Water Management requirements and supplemental Ballast Water Management practices.

Ships must have a Ballast Water Record Book to record when ballast water is taken on board; circulated or treated for ballast water management purposes; and discharged into the sea. It should also record when ballast water is discharged to a reception facility and accidental or other exceptional discharges of ballast water.

The Convention contains specific requirements for ballast water management.

- Ships constructed before 2009 with a ballast water capacity of between 1500 and 5000 cubic metres must conduct ballast water management that at least meets the ballast water exchange standards or the ballast water performance standards (which requires the installation and use of an approved Ballast Water Management System (BWMS)) until 2014, after which time it shall at least meet the ballast water performance standard.
- Ships constructed before 2009 with a ballast water capacity of less than 1500 or greater than 5000 cubic metres must conduct ballast water management that at least meets the ballast water exchange standards or the ballast water performance standards until 2016, after which time it shall at least meet the ballast water performance standard.

- Ships constructed in or after 2009 with ballast water capacity of less than 5000 cubic metres must conduct ballast water management that at least meets the ballast water performance standard.
- Ships constructed in or after 2009 but before 2012, with a ballast water capacity of 5000 cubic metres or more shall conduct ballast water management that at least meets the ballast water exchange standard until 2016 and at least the ballast water performance standard after 2016.
- Ships constructed in or after 2012, with a ballast water capacity of 5000 cubic metres or more shall conduct ballast water management that at least meets the ballast water performance standard.

BWMS must be approved by the Administration in accordance with IMO Guidelines. As of 31 March 2009, there are a limited number of BWMS which have obtained final approval.

All ships using ballast water exchange should:

- whenever possible, conduct ballast water exchange at least 200 nautical miles from the nearest land and in water at least 200 m in depth, taking into account Guidelines developed by IMO;
- be as far from the nearest land as possible, and in all cases at least 50 nautical miles from the nearest land and in water at least 200 m in depth, in cases where the ship is unable to conduct ballast water exchange listed as above.

The ballast water exchange standard requires that ships performing ballast water exchange do so with an efficiency of 95 % volumetric exchange of ballast water. For ships exchanging ballast water by the pumping-through method, pumping through three times the volume of each ballast water tank shall be considered to meet the standard described. Pumping through less than three times the volume may be accepted provided the ship can demonstrate that at least 95 percent volumetric exchange is met.

The ballast water performance standards requires that ships conducting ballast water management discharge less than 10 viable organisms per cubic meter greater than or equal to 50 µm in minimum dimension and less than 10 viable organisms per ml less than 50 µm in minimum dimension and greater than or equal to 10 µm in minimum dimension; and discharge of the indicator microbes shall not exceed the specified concentrations.

The indicator microbes, as a human health standard, include, but are not be limited to:

- a. Toxicogenic *Vibrio cholerae* with less than 1 colony forming unit (cfu) per 100 ml or less than 1 cfu per 1 gram (wet weight) zooplankton samples ;
- b. *Escherichia coli* less than 250 cfu per 100 milliliters;
- c. Intestinal Enterococci less than 100 cfu per 100 milliliters.

It is not clear at this time if either EPA or the U.S. Coast Guard will accept flag-State approval of BWMS or operation of such systems as meeting the requirements of the VGP or Coast Guard regulations.

(2) It is perceived that MODUs, which meet all of the IMO and USCG requirements with regards to ballast water management, would also meet all of the VGP requirements too.

Additional recommended practices:

None

4. Anti-Fouling Hull Coatings

EPA required BMPs

- All anti-fouling hull coatings subject to registration under FIFRA* (see 40 CFR 152.15) must be registered, sold or distributed, applied, maintained, and removed in a manner consistent with applicable requirements on the coatings' FIFRA label.
- For anti-fouling hull coatings not subject to FIFRA registration (i.e. not produced for sale and distribution in the United States), hull coatings must not contain any biocides or toxic materials banned for use in the United States (including those on EPA's List of Banned or Severely Restricted Pesticides). This requirement applies to all vessels, including those registered and painted outside the United States.

At the time of initial application or scheduled reapplication of anti-fouling coatings, you must give consideration, as appropriate for vessel class and vessel operations, to the use of hull coatings with the lowest effective biocide release rates, rapidly biodegradable components (once separated from the hull surface), or non-biocidal alternatives, such as silicone coatings.

Some ports and harbors are impaired by copper. These waters include Shelter Island Yacht Basin in San Diego, California and waters in and around the ports of Los Angeles/Long Beach. A complete list of such waters may be found at www.epa.gov/npdes/vessels. When vessels spend considerable time in these waters (defined as spending more than 30 days per year), or use these waters as their home port (i.e. house boats, ferries or rescue vessels), vessel owner/operators shall consider using antifouling coatings that rely on a rapidly biodegradable biocide or another alternative rather than copper based coatings. If after consideration of alternative biocides, vessel operators continue to use copper based antifoulant paints, they must document in their recordkeeping documentation how this decision was reached.

The discharge of Tributyltin (TBT) or any other organotin compound is prohibited by this permit. Therefore, vessel operators covered by this permit have a zero discharge standard for TBT or any other organotin compound. You may not use an antifoulant coating containing TBT or any other organotin compound. If the vessel has previously been covered with a hull coating containing TBT or any other organotin compound, vessels must be effectively over-coated so that no TBT or other organotin leaches from the vessel hull or the TBT or other organotin coating must have been removed from the vessel's hull.

* Federal Insecticide, Fungicide, and Rodenticide Act

Commentary:

(1) An International Anti-fouling System Certificate pursuant to the Convention on the Control of Harmful Anti-fouling Systems on Ships, 2001, may be useful in demonstrating compliance with the VGP with regard to the presence of TBT coatings. The Convention entered into force on 17 September 2008. As of 31 March 2009, States party to the Convention are: Antigua & Barbuda, Australia, Bahamas, Bulgaria, Cook Islands, Croatia, Cyprus, Denmark, Estonia, France, Greece, Hungary, Japan, Kiribati, Latvia, Liberia, Lithuania, Malta, Marshall Islands, Mexico, Netherlands, Nigeria, Norway, Panama, Poland, Republic of Korea, Romania, Saint Kitts and Nevis, Sierra Leone, Slovenia, Spain, Sweden, Tuvalu and Vanuatu.

(2) The following table provides a list of copper-impaired waters in areas where MODUs currently operate. The list may change, so reference should be made to the EPA website at www.epa.gov/npdes/vessels.

Name/Location	Waterbody Type
Bayou Barataria/Barataria Waterway, LA	Stream/creek/river
Bayou Cane, LA	Wetland
Bayou Trepagnier – NORCO to Bayou Labranche, LA	Stream/creek/river
Cross Lake, LA	Lake/reservoir/pond
Duncan Canal (Parish Line Canal), LA	Stream/creek/river
Lake Pontchartrain, LA	Lake/reservoir/pond
James' Bayou, TX	Lake/reservoir/pond

Additional recommended practices:

- If not already completed, a survey should be undertaken to determine the characteristics of any existing hull coatings. IMO Resolutions [MEPC.102\(48\)](#) and [MEPC.104\(49\)](#) the Organization has developed “Guidelines for Survey and Certification of Anti-fouling Systems on Ships” and “Guidelines for Brief Sampling of Anti-Fouling Systems on Ships”, respectively.

5. Aqueous Film Forming Foam (AFFF)

EPA required BMPs

Discharges of AFFF are authorized for emergency purposes when needed to ensure the safety and security of the vessel and her crew.

For all vessels that sail outside of the territorial sea more than once per month, maintenance and training discharges of fluorinated AFFF are not authorized within waters subject to this permit (Any such discharges should be collected and stored for onshore disposal or scheduled when the vessel is outside such waters). Discharge volumes associated with regulatory certification and inspection must be minimized and a substitute foaming agent (i.e. non-fluorinated) must be used if possible within waters subject to this permit.

For vessels that do not leave the territorial sea more than once per month, if maintenance and training discharges are required, AFFF must be collected and stored for onshore disposal if technologically feasible unless the vessel uses non-fluorinated or alternative foaming agent. For those vessels for which it is not technologically feasible to collect and store the fluorinated AFFF foam, vessel owner/operators must limit the discharge to that amount necessary to conduct legally required tests. Training should be conducted as far from shore as is practicable. Maintenance and training discharges are not allowed in port.

For all vessels, AFFF discharges may not occur in or within 1 nm of a water referenced in Part 12.1 unless they are discharged:

- For emergency purposes,
- By rescue vessels such as fireboats for firefighting purposes,
- By vessels owned or under contract to do business exclusively in or within 1 nm of those protected areas by the United States government or state or local governments.

If AFFF discharge occurs in waters in Part 12.1 for emergency purposes, a written explanation must be kept in the ship's log or other vessel recordkeeping documentation consistent with Part 4.2 of this permit.

Commentary:

This BMP is not intended to interfere in any way with any essential emergency management operations. If an emergency occurs while in Permit Waters that results in an AFFF discharge an explanation of the emergency and the need to discharge AFFF needs to be documented and reported to the appropriate EPA office.

EPA's BMP states "if maintenance and training discharges are required, AFFF must be collected and stored for onshore disposal if technologically feasible unless the vessel uses non-fluorinated or alternative foaming agent." Published reports are available¹⁰ comparing the acute aquatic toxicity (LC 50) of various AFFF formulations to those of 'fluorine-free' formulations, which show substantially lower LC 50 values for the 'fluorine-free' formulations. It should be permissible to discharge these 'fluorine-free' formulations as 'non-fluorinated' foaming agents in accordance with the BMP. EPA provides no guidance on which to base the selection of any other 'alternative' foaming agent.

Additional Recommended Practices:

- AFFF fire extinguishing systems, if installed, should be included in the unit's planned maintenance system.

¹⁰ E.g., reports by the Fire Fighting Foam Coalition and the U.K. Fire Industry Association.

- When possible, units that are equipped with AFFF should conduct any inspection, maintenance or training that may result in the discharge of AFFF while outside Permit Waters.
- Where testing of existing AFFF systems must be undertaken within Permit Waters, the possibility of conducting the tests with a non-fluorinated agent, while maintaining the existing inventory of AFFF, should be investigated with the system manufacturer and regulatory authorities.
- When installing a new fire extinguishing system, or it becomes necessary to replace an existing AFFF fire extinguishing system, consideration should be given to procuring a system using a non-fluorinated agent.
- Should it be necessary to replace an existing AFFF inventory, consideration should be given to procuring a non-fluorinated agent compatible with the existing system, or modifying the system as may be necessary in order to use a non-fluorinated agent.

6. Boiler / Economizer Blowdown

EPA required BMPs

Minimize the discharge of boiler/economizer blowdown in port if chemicals or other additives are used to reduce impurities or prevent scale formation. For vessels greater than 400 gross tons which leave the territorial sea at least once per week, boiler/economizer blowdown may not be discharged in waters subject to this permit, unless:

- The vessel remains within waters subject to this permit for a longer period than the necessary duration between blowdown cycles,
- The vessel needs to conduct blowdown immediately before entering drydock, or
- For safety purposes.

For all vessels, boiler/economizer blowdown may not be discharged in waters referenced in Part 12.1 except for safety purposes. Furthermore, boiler/economizer blowdown should be discharged as far from shore as practical.

Commentary:

MODUs operating in Permit Waters are rarely equipped with boilers or boilers with economizers.

Additional recommended practices:

None

7. Cathodic Protection

EPA required BMPs

Cathodic protection must be maintained to prevent the corrosion of the ship's hull. The discharge of zinc, magnesium, and aluminum are expected from properly functioning cathodic protection sacrificial electrodes. However, vessel operators must minimize the flaking of large, corroded portions of these anodes. Sacrificial anodes must not be used more than necessary to adequately prevent corrosion of the vessel's hull, sea chest, rudder, and other exposed areas of the vessel. Vessel operators must appropriately clean and/or replace these anodes in periods of maintenance (such as drydocking), so that release of these metals to waters is minimized.

Vessel operators should be cognizant that magnesium is less toxic than aluminum, which is less toxic than zinc. If vessel operators use sacrificial electrodes, they must use the metals that are less toxic to the extent technologically feasible and economically practicable and achievable.

If vessel operators use ICCP, they must maintain dielectric shields to prevent flaking.

EPA suggested BMPs

EPA recommends the use of Impressed Current Cathodic Protection (ICCP) in place of or to reduce the use of sacrificial electrodes when technologically feasible (e.g. adequate power sources, appropriate for vessel hull size and design), safe, and adequate to protect against corrosion, particularly for new vessels.

Commentary:

Cathodic protection systems typically employ sacrificial electrodes or a combination of sacrificial anodes and ICCP. Consideration should be given to the installation of ICCP where such systems may be feasibly installed.

Additional recommended practices:

- An ICCP, if installed, should be included in the unit's planned maintenance program.

8. Chain Locker Effluent

EPA required BMPs

The anchor chain must be carefully and thoroughly washed down (*i.e.*, more than a cursory rinse) as it is being hauled out of the water to remove sediment and marine organisms. In addition, chain lockers must be cleaned thoroughly during dry docking to eliminate accumulated sediments and any potential accompanying pollutants. For vessels that regularly sail outside waters subject to this permit, if technically feasible, periodically clean, rinse, and/or pump out the space beneath the chain locker prior to entering waters subject to this permit (preferably mid ocean) if the anchor has been lowered into any near-shore waters. Furthermore, for vessels that leave waters subject to this permit at least once per month, chain lockers may not be rinsed or pumped out in waters subject to this permit, unless not emptying them would compromise safety. Such a safety claim must be documented in the vessel's recordkeeping documentation consistent with Part 4.2.

Commentary:

None

Additional recommended practices:

None

9. Controllable Pitch Propeller and Thruster Hydraulic Fluid and other Oil to Sea Interfaces, including Lubrication Discharges from Paddle Wheel Propulsion, Stern Tubes, Thruster Bearings, Stabilizers, Rudder Bearings, Azimuth Thrusters, Propulsion Pod Lubrication, and Wire Rope and Mechanical Equipment Subject to Immersion

EPA required BMPs

The protective seals on controllable pitch propellers, azimuth thrusters, propulsion pods, rudder bearings, or any other oil to sea interfaces must be maintained in good operating order to minimize the leaking of hydraulic oil or other oils. The vessel owner/operator must not discharge oil in quantities that may be harmful as defined in 40 CFR Part 110 from any oil to sea interface. If possible, maintenance activities on controllable pitch propellers, thrusters and other oil-to-sea interfaces should be conducted when a vessel is in drydock.

Minimize maintenance activities on stern tube seals when a vessel is outside of drydock. If maintenance or emergency repair must occur on stern tubes or other oil-to sea interfaces which have a potential to release oil in quantities that may be harmful as defined in 40 CFR Part 110, appropriate spill response resources (e.g. oil booms) must be used to contain any oil leakage. Operators of the vessel must have ready access to any spill response resources to clean any potential oil spills.

After applying lubrication to wire rope and mechanical equipment subject to immersion, wire ropes and other equipment must be thoroughly wiped-down to remove excess lubricant.

Owner/operators should use an environmentally preferable lubricant, including vegetable oil, synthetic ester, or polyalkylene glycol as a base for these applications when feasible. Use of an environmentally preferable lubricant does not authorize the discharge of any lubricant in a quantity that may be harmful as defined in 40 CFR Part 110.

Commentary:

None

Additional recommended practices:

- Prepare a unit-specific list of oil-water interfaces subject to the VGP.
- Promptly repair any lubricant seal leaks on equipment subject to immersion.
- Apply only the amount of lubrication necessary for proper maintenance of tow wire, mooring line, or mechanical coupling devices.
- Apply lubrication in a manner that minimizes drips and spills and promptly clean up any drips or spills that occur.
- Establish procurement procedures that give consideration to:
 - The type(s) of lubricants used in new equipment subject to the VGP to assure environmentally preferable lubricants are used, when feasible; and
 - The feasibility of using environmentally preferable lubricants on existing equipment.
- If maintenance or emergency repair of thrusters must be undertaken while afloat in Permit Waters, use an oil boom to contain possible hydraulic oil leakage and have cleanup/response equipment, such as oil absorbent pads, on hand to clean up any spillage/discharge.

10. Distillation and Reverse Osmosis Brine

EPA required BMPs

Brine from the distillation system and reverse osmosis reject water shall not contain or come in contact with machinery or industrial equipment (other than that necessary for the production of potable water), toxic or hazardous materials, or wastes.

Commentary:

None

Additional recommended practices:

- Minimize the production and associated discharges of distillation and reverse osmosis brine while in Permit Waters.
- On units which will operate a distillation or reverse osmosis unit in Permit Waters, consideration should be given to installing a dedicated line to discharge reject water. In order to eliminate the need for quarterly sampling, the discharge should be located above the waterline in a readily visible location.

11. Elevator Pit Effluent

EPA required BMPs

Discharges of untreated elevator pit effluent are not authorized within waters subject to this permit except in cases of emergency. Elevator pit effluent may be discharged into waters subject to this permit if it is managed with the vessel's bilgewater and meets all the requirements of Part 2.2.2 of this permit or it must otherwise be treated with an oily-water separator and discharged with an oil content below 15 ppm as measured by EPA Method 1664 or other appropriate method for determination of oil content as accepted by the International Maritime Organization (IMO) (e.g. ISO Method 9377) or U.S. Coast Guard. Emergency discharges must be documented in the ship's log or other vessel recordkeeping documentation consistent with Part 4.2.

Commentary:

MODUs operating in Permit Waters are rarely equipped with elevator pits that can be discharged to the sea.

Additional recommended practices:

None

12. Firemain Systems

EPA required BMPs

Discharges from firemain systems are authorized for emergency purposes when needed to ensure the safety and security of the vessel and her crew, other emergency situations, and for testing and inspection purposes as may be required to assure its operability in an emergency. Firemain systems may be discharged in port for certification, maintenance, and training requirements if the intake comes directly from the surrounding waters or potable water supplies and there are no additions to the discharge. Furthermore, firemain discharges may be discharged for deck washdown or other secondary uses if the intake comes directly from the surrounding waters or potable water supplies and the discharge meets all relevant effluent limitation associated with that activity. When feasible, maintenance and training should be conducted outside port and/or outside waters subject to this permit.

Do not discharge firemain systems in waters listed in Part 12.1 except in emergency situations or when washing down the anchor chain to comply with anchor wash down requirements in Part 2.2.8.

Commentary:

This BMP is not intended to interfere in any way with any essential emergency management operations. If an emergency occurs while in Permit Waters that requires use of the firemain system, an explanation of the emergency and the need to use the firemain system will need to be documented and reported to the appropriate EPA office.

Additional Recommended Practices:

None

13. Freshwater Layup

EPA required BMPs

Minimize the amount of disinfection agents used in freshwater layup to the minimum required to prevent aquatic growth.

Commentary:

When certain ships are out of service for an extended period and the seawater cooling systems are not circulated, the main condensers are placed in a freshwater layup to prevent the accumulation of biological growth and the resultant loss of condenser efficiency while the seawater cooling system is not in use. The layup is accomplished by blowing the seawater from the main condensers with air and isolating the condensers. The condensers are then filled with potable water to which biocides may be added. Freshwater layup is not generally associated with MODU operations.

Additional Recommended Practices:

None

14 Gas Turbine Wash Water

EPA required BMPs

Gas turbine wash water must not be directly discharged within waters subject to this permit. Where feasible, such wash water must be prevented from commingling with bilge water that will be discharged in waters subject to this permit, for example by collecting it separately and properly disposing of it on-shore. Under no circumstances may oils, including oily mixtures, from gas turbine wash water be discharged in waters subject to this permit in quantities that may be harmful as determined in accordance with 40 CFR Part 110.

Commentary:

There are no known MODUs operating in Permit Waters equipped with gas turbines.

Additional recommended practices:

None

15. Graywater

EPA required BMPs

All vessels must minimize the discharge of graywater while in port. For those vessels that cannot store graywater, the owner or operator and their crews should minimize the production of graywater in port. All vessels that have the capacity to store graywater shall not discharge that graywater in waters listed in Part 12.1. For vessels that cannot store graywater, vessel operators must minimize the production of graywater while in waters listed in Part 12.1.

For vessels greater than 400 gross tons that regularly travel more than 1 nm from shore that have the capacity to store graywater for a sufficient period, graywater must be discharged greater than 1 nm from shore while the vessel is underway, unless the vessel meets the treatment standards and other requirements contained under Parts 5.1.1 and 5.1.2 or 5.2.1 and 5.2.2 of this permit. Additional specific requirements for Graywater apply to Cruise Vessels (Parts 5.1 and 5.2) and Large Ferries (Part 5.3).

Vessels that do not travel more than 1 nm from shore shall minimize the discharge of graywater and, provided the vessel has available graywater storage capacity, must dispose of graywater on shore if appropriate facilities are available and such disposal is economically practicable and achievable unless the vessel meets the treatment standards and other requirements contained under Parts 5.1.1 and 5.1.2 or 5.2.1 and 5.2.2 of this permit. Minimize the discharge of graywater when the vessel is not underway.

If graywater will be discharged in waters subject to this permit, the introduction of kitchen oils must be minimized to the graywater system. When cleaning dishes, you must remove as much food and oil residue as practicable before rinsing dishes. Oils used in cooking shall not be added to the graywater system. Oil from the galley and scullery shall not be discharged in quantities that may be harmful as defined in 40 CFR Part 110.

Vessel owner/operators must use phosphate free and non-toxic soaps and detergents for any purpose if they will be discharged into waters subject to this permit. These detergents must be free from toxic or bio-accumulative compounds and not lead to extreme shifts in receiving water pH.

If you are underway in a nutrient impaired water, or a water that is impaired as a result of nutrient enrichment (such as waters listed as impaired for phosphorus, nitrogen, or for hypoxia or anoxia (low dissolved oxygen concentrations)) you must follow these additional steps:

When the vessel has adequate graywater storage capacity, the vessel owner/operator shall not discharge graywater into nutrient impaired waters subject to this permit (e.g., the Chesapeake Bay). A complete list of such waters can be found at www.epa.gov/npdes/vessels. Where the vessel does not have adequate storage capacity to eliminate such discharges, graywater production and discharge must be minimized in such waters. Any such discharge must be conducted while the vessel is underway in areas with significant circulation and depth to the extent feasible. Graywater stored while in such waters can later be disposed of on shore or discharged in accordance with the other requirements of this permit.

Commentary:

The provisions of parts 5.1 and 5.2 referred to in the EPA required BMPs do not apply to MODU operations.

Additional recommended practices:

- Unit managers should ascertain whether unit graywater systems are arranged to discharge through the sewage treatment system and document their findings.
- Procurement procedures should be established to assure that soaps and detergents that could be discharged as graywater (e.g., for galley, laundry, or personal use) will meet the VGP requirements.

- Where graywater is discharged:
 - Minimize the introduction of kitchen oils to the graywater system.
 - When cleaning dishes, remove as much food and oil residue as practicable before rinsing dishes.
- Consider providing shore-side washrooms, kitchen and laundry facilities when practicable when a MODU is at the dock or in dry-dock.
- Use tie-ins to shore-side treatment facilities when feasible.
- Minimize the production of graywater through:
 - Promptly repairing leaky fixtures.
 - Using sinks, showers, washing machines, etc. in most economic operating condition.
 - Educating crew members on steps to be taken to reduce the production and contamination of graywater; and
 - Posting signs on the MODU to remind crew of the need to minimize production of graywater.

16. Motor Gasoline and Compensating Discharge

EPA required BMPs

The discharge of motor gasoline and compensating effluent must not have oil in quantities that may be harmful as defined in 40 CFR 110.3, which includes discharges resulting in a visible sheen, or an oil concentration that exceeds 15 ppm. Determination of oil concentration may be measured by EPA Method 1664 or other appropriate method for determination of oil content as accepted by the International Maritime Organization (IMO) (e.g. ISO Method 9377) or U.S. Coast Guard. Compliance with the 15 ppm oil concentration limitation may be established with visual monitoring for an oily sheen. Minimize discharge of motor gasoline and compensating discharge in port. If an oily sheen is observed, the vessel operator must deploy appropriate oil containment practices. Vessels shall not discharge motor gasoline and compensating discharge in waters subject to this permit listed in Part 12.1.

Commentary:

There is no known use of Motor Gasoline and Compensating Discharge by MODUs.

Additional Recommended Practices:

None

17. Non-Oily Machinery Wastewater

EPA required BMPs

If discharged directly overboard, non-oily machinery wastewater must be free from oils (in quantities that may be harmful pursuant to 40 CFR Part 110) and any additives that are toxic or bio-accumulative in nature. Non-oily machinery wastewater may also be drained to the bilge.

Commentary:

As this discharge stream can be discharged without treatment, it is necessary to review the drainage arrangements to assure that the possibility of contamination with oil or oily mixtures is minimized. Separation of non-oily and oily discharge streams minimizes the need for treatment of discharges.

Alternatively, the drainage may be directed to the discharge stream for discharges of oil, including oily mixtures, or the discharge stream for bilgewater.

Additional recommended practices:

None

18. Refrigeration and Air Condensate Discharge

EPA required BMPs

You must not allow refrigeration and air condensate discharge to come into contact with oily or toxic materials if it is discharged directly overboard. Refrigeration and air conditioning condensate that is collected and plumbed for internal recycling (e.g. recycled as "technical water") is allowed to commingle with oily water; however, the commingled discharge must meet all requirements of Part 2.1.4 of this permit and Part 2.2.2 of this permit if applicable.

Commentary:

As this discharge stream can be discharged without treatment, it is necessary to review the drainage arrangements to assure that the possibility of contamination with oil or oily mixtures or toxic materials is minimized. Separation from the oily discharge streams minimizes the need for treatment of discharges.

Alternatively, the drainage may be directed to the discharge stream for discharges of oil, including oily mixtures, or the discharge stream for bilgewater.

Additional recommended practices:

None

19. Seawater Cooling Overboard Discharge

EPA required BMP

When possible, seawater cooling overboard should be discharged when the vessel is underway so that any thermal impacts are dispersed.

Maintenance of all piping and seawater cooling systems must meet the requirements of Part 2.2.20 (Seawater-Piping Biofouling Prevention).

EPA suggested BMP

To reduce the production and discharge of seawater cooling overboard discharge, EPA recommends that vessel owner/operators use shore based power when the vessel is in port if:

- Shore power is readily available for vessel owner/operators from utilities or port authorities,
- Shore based power supply systems are capable of providing all needed electricity required for vessel operations; and
- The vessel is equipped to connect to shore-based power and such systems are compatible with the available shore power.

Commentary:

None

Additional recommended practices:

None

20. Seawater Piping Biofouling Prevention

EPA required BMPs

Seawater piping biofouling chemicals subject to FIFRA* registration (see 40 CFR 152.15) must be used in accordance with their FIFRA label. No pesticides or chemicals banned for use in the United States may be discharged into waters subject to this permit.

Vessel owner/operators must use the minimum amount of biofouling chemicals needed to keep fouling under control. Discharges containing active agents must contain as little chlorine as possible.

Vessel owner/operators must remove fouling organisms from seawater piping on a regular basis and dispose of removed substances in accordance with local, State, and federal regulations. Removed fouling organisms shall not be discharged into waters subject to this permit.

* Federal Insecticide, Fungicide, and Rodenticide Act

EPA suggested BMPs

EPA recommends that if removed fouling organisms are discharged into waters, they should be discharged more than 50 nm from shore. Vessel owner/operators should remove any organisms while at sea to reduce the risk of invasive species introduction in ports.

Commentary:

While the suggestion regarding removal and discharge of fouling organism in waters more than 50 nm from shore is noted, it may not be practicable in the case of units that are outside Permit Waters and are undergoing required inspections that necessitate cleaning of sea valves and seachests and strainers.

It should also be noted that many units are not moved between areas having differing ecosystems, so the risk of introduction of an invasive species posed by removal of fouling organisms outside Permit Waters is minimal.

Additional recommended practices:

None

21. Boat Engine Wet Exhaust

EPA required BMPs

Vessels generating wet exhaust must be maintained in good operating order, well tuned, and functioning according to manufacturer specifications if available to decrease pollutant contributions to wet exhaust.

EPA suggested BMPs

EPA encourages vessel operators to consider four-stroke versus two-stroke engines for vessels generating wet exhaust that are covered under this permit. Use of a four-stroke engine may minimize the discharge of pollutants to US waters. Vessel owner/operators should use low sulfur or alternative fuels for their vessels to reduce the concentration of pollutants in their discharge.

Commentary:

None

Additional recommended practices:

None

22. Sonar Dome Discharge

EPA required BMP

The water inside the sonar dome shall not be discharged within waters subject to this permit for maintenance purposes. Vessel operators should not use biofouling chemicals that are bio-accumulative for the exterior of sonar domes when other viable alternatives are available.

Commentary:

MODUs are rarely, if ever, equipped with sonar domes.

Additional recommended practices:

None

23. Underwater Ship Husbandry

EPA required BMPs

Vessel owner/operators must minimize the transport of attached living organisms when they travel into U.S. waters from outside the U.S. economic zone or when traveling between COTP zones.

Whenever possible, rigorous hull-cleaning activities should take place in drydock, or another land-based facility where the removal of fouling organisms or spent antifouling coatings paint can be contained. If water-pressure based systems are used to clean the hull and remove old paint, use facilities which treat the washwater prior to discharge to remove the antifouling compound(s) and fouling growth from the washwater.

Vessel owner/operators who remove fouling organisms from hulls while the vessel is waterborne must employ methods that minimize the discharge of fouling organisms and antifouling hull coatings. These shall include:

- Selection of appropriate cleaning brush or sponge rigidity to minimize removal of antifouling coatings and biocide releases into the water column.
- Limiting use of hard brushes and surfaces to the removal of hard growth.
- When available and feasible, use of vacuum control technologies to minimize the release or dispersion of antifouling hull coatings and fouling organisms into the water column.

Vessel owner/operators must minimize the release of copper based antifoulant paint into the water column when they clean their vessel. Cleaning of copper based antifoulant paints must not result in any visible cloud or plume of paint in the water: if a visible cloud or plume of paint develops, shift to a softer brush or less abrasive cleaning technique. A plume or cloud of paint can be noted by the presence of discoloration or other visible indication that is distinguishable from hull growth or sediment removal. Production of a plume or cloud of sediment or hull growth is normal in some cases during vessel hull cleaning, but this plume or cloud should be substantially paint free (e.g. paint should not be clearly identifiable in the plume or cloud).

Vessels that use copper based anti-fouling paint must not clean the hull in copper impaired waters within the first 365 days after paint application unless there is a significant visible indication of hull fouling.

Commentary:

None

Additional recommended practices:

- If not already completed, a survey should be undertaken to determine the characteristics of any existing hull coatings. IMO Resolutions [MEPC.102\(48\)](#) and [MEPC.104\(49\)](#) the Organization has developed “Guidelines for Survey and Certification of Anti-fouling Systems on Ships” and “Guidelines for Brief Sampling of Anti-Fouling Systems on Ships”, respectively.

When feasible, extensive hull cleaning shall be conducted when the rig is in drydock or when the byproducts of the cleaning can be contained and disposed of properly, especially when cleaning hulls using water pressure based systems. This BMP encourages all waste to be collected and disposed of properly to ensure that they are not washed into waters subject to the Vessel General Permit (VGP). While these practices do not specifically address the release of antifouling materials from hulls during vessel operations (i.e., hull coating leachate), they are critical to controlling levels of contaminants that result in the same type of environmental degradation. In addition, these same practices will reduce the potential for release of introduced species during hull cleaning and paint preparation activities.

Vessel owner/operators who remove fouling organisms from hulls while the vessel is waterborne must employ methods that minimize the discharge of fouling organisms and antifouling hull coatings. These shall include:

- Selection of appropriate cleaning brush or sponge rigidity to minimize removal of antifouling coatings and biocide releases into the water column.
- Limiting use of hard brushes and surfaces to the removal of hard growth.
- When available and feasible, use of vacuum control technologies to minimize the release or dispersion of antifouling hull coatings and fouling organisms into the water column.

24. Welldeck Discharge

EPA required BMPs

Welldeck discharges that contain graywater from smaller vessels should not be discharged within waters subject to this permit except in cases of emergency. Welldeck discharges from washdown of gas turbine engines may not be discharged within waters subject to this permit. Welldeck discharges from equipment and vehicle washdowns must be free from garbage and must not contain oil in quantities that may be harmful as defined in 40 CFR Part 110.

Commentary:

MODUs operating in Permit Waters are rarely, if ever, configured with welldecks.

Additional recommended practices:

None

25. Graywater Mixed with Sewage from Vessels

EPA required BMPs

The commingled discharge of graywater mixed with sewage from vessels must comply with the effluent limits for graywater discharge in Part 2 or Part 5 of this permit if applicable. Though not a requirement of this permit, vessel owner/operators are advised that all discharges commingled with sewage must meet the requirements set forth in section 312 of the Clean Water Act and its implementing regulations found at 40 CFR Part 140 and 33 CFR Part 159. Hence, discharges of graywater mixed with sewage must meet both standards to be in compliance with the Clean Water Act.

Commentary

None

Additional recommended practices

Unit managers should ascertain whether their unit graywater systems are arranged to discharge through the sewage treatment system.

Where existing systems on units are combined, consideration should be given to making each system independent in order to avoid commingling sewage with graywater.

26. Exhaust Gas Scrubber Washwater

EPA required BMPs

Exhaust gas scrubber washwater discharge must not contain oil, including oily mixtures, in quantities that may be harmful as determined in accordance with 40 CFR Part 110. Sludge generated from exhaust gas scrubber washwater discharge must not be discharged in waters subject to this permit.

EPA suggested BMPs

EPA recommends that owner/operators of vessels with exhaust gas cleaning systems that result in washwater discharges follow the guidelines set out in section 10 for Exhaust Gas Cleaning Systems (resolution [MEPC.170\(57\)](#)).

Commentary:

Exhaust gas scrubbers are rarely, if ever, installed on MODUs.

Additional recommended practices:

None