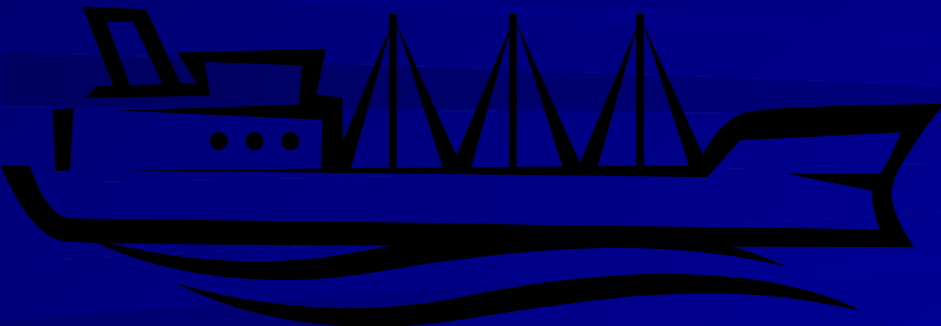




Large Merchant Vessel Obligations under EPA's Vessel General Permit (VGP)

A presentation for the Nautical Institute
Houston, Texas
3/11/09

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US Environmental Protection Agency





Outline

- Why did EPA issue this permit?
- The VGP, emphasizing key effluent limits
- Resources for additional information





Clean Water Act Authority

- 35 year regulatory exemption from NPDES permitting of “discharges incidental to the normal operation of a vessel.”
- Due to court decision, this exemption was vacated as of February 6, 2009 for most large non-recreational vessels.
- As a result, most vessels must have a 402 Clean Water Act NPDES permit to discharge legally after that date.



What if I don't want coverage under the VGP?

- The Vessel General Permit will be the most efficient approach to obtaining permit coverage for most vessel owners and operators.
- You may also apply to EPA for an individual permit consistent with the regulations found at 40 CFR §§ 122.21 and 122.28



Vessel General Permit (VGP) Issuance

- Final VGP issued December 18, 2008
 - Final VGP covers:
 - All discharges incidental to normal operation of non-recreational vessels 79 feet or longer, except commercial fishing vessels.
 - For ballast water discharges, permit covers all non-recreational vessels (including commercial fishing vessels and vessels less than 79 feet).



Permit Overview

- Initial Issuance of Vessel General Permit (VGP) is national in scope
 - There are additional state-specific requirements issued via the 401 certification process
 - Additional requirements submitted by 28 states and tribes
- No EPA fees for the VGP
- Jurisdiction of the permit covers inland waters and 3 nautical mile (nm) Territorial Sea



VGP Structure

- Part 1 – Coverage under the Permit
 - (General Information and Standard Requirements)
- Part 2 – Effluent Limits and Related Requirements
- Part 3 – Corrective Actions
- Part 4 – Inspections, Monitoring, Reporting, and Recordkeeping
- Part 5 – Vessel Class-Specific Requirements
- Part 6 – State 401 certification conditions
- Appendices





Part 1 – Coverage under the Permit

- Vessel Discharges Eligible for Coverage
 - List of Incidental Vessel Discharges
- Vessel Discharges Not Eligible for Coverage include, but are not limited to:
 - Discharges previously permitted by NPDES
 - Sewage
 - Used or Spent Oil
 - Garbage or Trash
 - Medical Waste
 - Tetrachloroethylene degreasers



Part 1 – Coverage under the Permit

- NOI required by September 19, 2009 for certain vessels:
 - Greater than or equal to 300 gross tons; or
 - Have a ballast water capacity of at least 8 cubic meters
- These vessels can begin submitting NOIs on June 19, 2009
- All other vessels are granted coverage without submitting an NOI



Part 2 - VGP Effluent Limits and Related Requirements

- Technology-Based Effluent Limits applicable to all vessels
- Technology-Based Effluent Limits for specific discharge types
 - 26 discharge types listed
- Water Quality-based Effluent Limits (WQBELs)



VGP: Effluent Limits

Applicable to all vessels

- Five effluent limits apply to all vessels:
 - Material Storage
 - Toxic and Hazardous Materials
 - Fuel Spills and Overflow
 - Discharges of Oil and Oily Mixtures
 - Compliance with other Regulations and Statutes Applicable to Incidental Discharges



Discharge-Specific Effluent Limits

2.2

- 26 discharges identified, each with at least one BMP associated with the discharge.
- Captain Chopra submitted a list of several discharges to discuss including:
 - Deck Washdown and Runoff and Above Water Line Hull Cleaning
 - Bilgewater
 - Ballast Water
 - Anti-foulant Hull Coatings
 - Oil to Sea Interfaces
 - Graywater



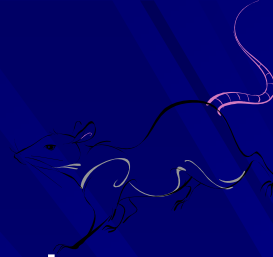
Deck Washdown and Runoff

(selected highlights)

- Permittees must use cleaners and detergents that are
 - phosphate-free
 - non-toxic
- Recommend that permittees use cleaners and detergents that are biodegradable and minimally caustic
- Permittees must maintain tidy decks and minimize garbage and other debris from entering waters subject to this permit
- Minimize deck washdowns while in port (anchored, secured, or otherwise moored)



Bilgewater



- Unless technologically infeasible to do so or required for safety and stability, vessels greater than 400 gross tons which leave waters subject to this permit shall not discharge bilgewater into waters
 - within 1 nm of shore unless technologically infeasible
 - Between 1 and 3 nm unless sailing at least 6 knots.
 - And into “Part 12 waters”
- Discharges must not cause a visible sheen or otherwise be in a quantity that may be “harmful.”
 - Oil in discharges that may be harmful is a defined term in Clean Water Act regulations and this permit
- Must not add dispersants, detergents or other substances to remove the presence of a visible sheen in discharges



Discharge Specific Limits: 2.2.3

Ballast Water

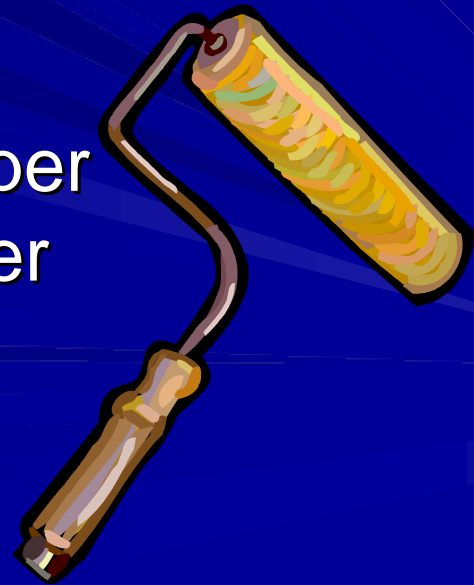
- Incorporates Coast Guard mandatory management and exchange requirements
- Pacific Nearshore Voyages
- Mandatory Saltwater Flushing
- Must conduct exchange as early as practicable
- If you are in STEP, or use approved Coast Guard treatment device, need not flush/exchange





Anti-foulant Hull Coatings

- FIFRA
- No banned materials
- Prohibits organotin discharge (e.g., TBT)
 - If currently coated in TBT, must remove or overcoat
- At time of reapplication, must give consideration for biocide with lowest release rate, as appropriate
- If you spend more than 30 days in a copper impaired water, must consider non-copper based alternatives
 - If you still use copper-based biocide, must document why decision was reached





Boiler Economizer Blowdown

- Minimize discharge
- Certain vessels greater than 400 tons may not discharge within 1 nm unless needed for:
 - Safety
 - Before Entering Drydock
 - Vessel remains in waters for a longer period than the necessary duration between blowdown cycles.



Cathodic Protection

- Must maintain to minimize large flaking.
- Proper maintenance/replacement in drydock.
- Use ICCP when feasible, particularly for new vessels.
- When using sacrificial anodes, pick least toxic options when feasible
 - Magnesium is less toxic than Aluminum, which is less toxic than Zinc



Chain Locker Effluent

- Thoroughly wash down anchor chain while pulling in anchor.
- Thoroughly clean chain locker during drydocking (remove sediment, accumulated debris).
- If feasible, periodically clean, rinse, and/or pump out chain locker in mid-ocean.
- Must not rinse/clean chain lockers into waters subject to this permit unless needed for safety.



Oil-to-Sea Interfaces

- Subject to limitations for discharges of oil, including oily mixtures (Part 2.1.4) (e.g., no visible sheen)
- Must maintain all seals to minimize discharge
- Perform maintenance out of waters when feasible.
- If performing maintenance on stern tubes in water, must have ready access to appropriate spill response resources.
- Use environmentally preferable lubricants when feasible



Reverse Osmosis/ Distillation Brine

2.2.10

- Shall not contain or come into contact with other machinery or industrial equipment, toxic or hazardous materials, or other wastes.

Firemain Systems

2.2.12

- Authorized without restriction for emergency or safety purposes.
- Authorized for certification, maintenance, and training if it comes from potable water or waters immediately surrounding the vessel
- Do not discharge in "Part 12" waters except for emergencies or for anchor chain washdowns.



Gas Turbine Washwater

- Must not discharge directly (untreated).
- Discharge onshore when feasible, when not feasible, must prevent discharges in quantities that may be harmful.





Graywater

- Must use phosphate free and non toxic soaps and detergents
- All vessels must minimize discharge 'in port'
- May not discharge untreated graywater within 1 nm for certain vessels over 400 GT.
- Certain vessels must treat or dispose of onshore if facilities are available and disposal is economically practicable and achievable.





Non-oily machinery wastewater

- If discharged directly, keep from coming in contact with any toxic materials or oils.
- May be drained to the bilge if appropriate (but must then meet bilgewater requirements).



Seawater Cooling Overboard Discharge

- If possible, discharge while underway
- To minimize discharge in Port, EPA recommends shore-based power when:
 - Available
 - Power systems are capable of supplying power, and
 - Vessel is properly equipped





Seawater Piping Biofouling Prevention

- Minimize disinfection agent to only amount necessary to prevent growth
- If subject to FIFRA, must be registered
- No banned materials authorized.
- Periodically clean piping of any growth.
- Removed organisms may not be discharged (added) into any waters subject to this permit.
 - Must dispose of onshore or at sea (mid-ocean preferably).



Graywater mixed with Sewage

- Regulated by both this permit (CWA 402) and CWA 312.
 - Must meet Marine Sanitation Device, no discharge zones, and other applicable requirements as required by Section 312 of the CWA
 - Must meet all graywater requirements of the permit.
- In cases where there are two limits, must meet more stringent of the two.

WQBELS

- Each permittee must control its discharge as necessary to meet applicable water quality standards
- Additional conditions given via the State 401 certification process (Part 6 of the Permit)





Part 3 - VGP Corrective Actions

- The permit requires the permittee to take corrective action when they become aware of a violation
- Original exceedance of an effluent limit is a permit violation
- Furthermore, failure to take corrective action within specified time period is another permit violation





Part 3 - VGP Corrective Actions

3

- Corrective actions must be taken:
 - Minor changes: within two weeks
 - Major changes (requiring new parts): within three months
 - Major renovations: before relaunching from the next drydocking (typically a 5 year cycle)





Part 4

Inspections and Monitoring

■ Self inspections

– Routine visual inspections

- To be conducted the greater of once per voyage (maximum of once per day) or once per week.

– Annual vessel inspections are more comprehensive and must focus on areas likely to generate harmful pollution or violate effluent limits.

- Annual inspections do not require drydocking.

– Dry dock Inspection: More comprehensive than annual inspection and only required in coordination with dry docking (does not mandate additional dry docking).

■ Analytical monitoring for select cruise ships and vessels with experimental ballast water treatment systems



Part 4

Recordkeeping and Reporting

- Recordkeeping
 - Records must include owner and voyage information, additional maintenance & discharge information, certification, safety exemptions claimed, and any monitoring or inspection results
- Reporting required for ballast water release (to Coast Guard), spills that endanger health or welfare, spills of oily materials, and annual noncompliance
- One-time report for all vessels (30-36 months after obtaining permit coverage)
- Discharge monitoring reports for select cruise ships and vessels with experimental ballast treatment systems



One Time Report Discharge Monitoring Report

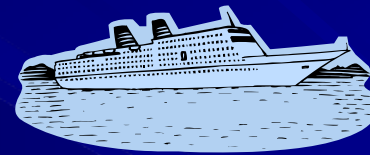
- Simple report (6 questions)
 - Assures permittees are in basic compliance with the permit and to
 - Gives EPA information about the impact of the first permit iteration.
- Discharge Monitoring Report
 - Required for analytical monitoring reporting for Cruise Ships and some experimental ballast water treatment systems
 - Available as a fillable PDF on the VGP website.



Vessel Class-Specific Requirements

Eight classes or types:

- Medium Cruise Ships
- Large Cruise Ships
- Large Ferries
- Oil or Petroleum Tankers
- Barges
- Research Vessels
- Emergency Vessels
- Vessels with Experimental Ballast Water Treatment Systems





Vessel Specific Sections

- Contain additional authorized discharges or effluent limits as appropriate.
 - e.g., additional limits for most “cruise ships”
- Education requirements (Large Ferries, Tankers)
- Supplemental Inspection Requirements (Barges, Tankers)



Experimental Ballast Water Treatment Systems

5.8

- Permittees are authorized to discharge residual biocides from ballast water treatment systems: must meet appropriate limits.
- If biocide and expected residual have water quality criteria, discharge must be:
 - Lower than acute water quality criteria
 - Lower than 100 ug/L of residual chlorine
- If biocides or expected residuals do not have water quality criteria
 - Conduct Whole Effluent Toxicity Testing
(Procedure outlined in Appendix J (15))
- Permittees may seek individual permit coverage if they do not meet these terms



401 Certification Requirements

- Vary from State to State – 28 States, Tribes, and Territories added additional conditions
 - Some are being challenged in state courts or administrative proceedings
- EPA strongly recommends that permittees read the conditions for each States' or Tribes' waters in which they will be operating
- If permittees have questions regarding conditions in a given States' waters, EPA advises the permittees to contact the State Agency directly.



401 Certification Requirements

- State 401 certification conditions include additional provisions for (varying by State):
 - Ballast Water
 - Several States include various treatment standards for living organisms or treatment procedures with schedules for implementation
 - Bilgewater
 - Graywater
 - Several states prohibit graywater discharges for certain vessels, in certain waters, or in future years.
 - Underwater Ship Husbandry
 - Discharge Location Limitations
 - Additional Monitoring and/or Reporting



Appendices

- Definitions
- EPA Regional Contacts
- Areas Covered
- Notice of Intent
- Notice of Termination
- List of all resource areas containing 'waters federally protected for conservation purposes.
- One Time Report
- Discharge Monitoring Report
- Procedure for Whole Effluent Toxicity Testing for select Ballast Water Treatment Systems



Waters Federally Protected for¹² Conservation Purposes

- Contains a complete list of several resource protection areas, including:
 - Marine Sanctuaries
 - A unit of the National Park System
 - A unit of the National Wildlife Refuge System
 - National Wilderness Areas
 - Incorporates (though does not list) Outstanding National Resource Waters (ONRWs), listed by State or Tribe.



Other resources

■ VGP fact sheet

- Similar to a rule preamble, this document explains EPA's logic behind many decisions

■ Docket

- Has numerous background papers, also includes Response to Comment Document and other supporting information.
- Available at www.regulations.gov, Docket # OW-2008-0055.



Questions



For More Information:

■ Visit www.epa.gov/npdes/vessels

Or email:

■ commercialvesselpermit@epa.gov