

GMS

Gallagher Marine Systems, LLC.

17 May 2013
Client Advisory – #10-13
The 2013 Vessel General Permit – Gap Analysis

Overview:

This Client Advisory provides information gathered by Gallagher Marine Systems (GMS) regarding the differences between the existing, 2008 Vessel General Permit (VGP) which is currently in force and the final version of the 2013 VGP, which was released by the US Environmental Protection Agency (EPA) on 28 March 2013. The 2013 version is scheduled to enter into force on 19 December 2013.

This Advisory does not discuss the entire 2013 VGP. Rather, it emphasizes the changes and updated requirements included in the 2013 VGP. It also assumes that the reader has an understanding of the requirements contained in the 2008 VGP. If the content and protocols of the VGP are new to you, please contact us via our general email address info@chgms.com with a request for background information on this subject.

Additionally, we briefly discuss the additional requirements added to the VGP by means of the “401 Certification” process, which allows individual US States to review and certify the VGP. It is through this process that US States can possibly add their own requirements that are applicable only within that particular state.

This Advisory will cover the 2013 VGP in the following order:

1. General Requirements
 - a. Permit Applicability
 - b. *Notice of Intent* and *Notice of Termination* filings
 - c. Electronic filing requirement
2. Effluents and Discharges
 - a. General effluent categories
 - b. Specific effluent categories
3. Compliance Activities and Administration
 - a. Corrective Actions
 - b. Inspections
 - c. Recordkeeping
 - d. Reports
 - e. Violations
4. Special Requirements for Certain Vessel Types
 - a. Large Passenger Vessels
 - b. Tankers
5. “401 Certifications” by US States and their effect on VGP compliance

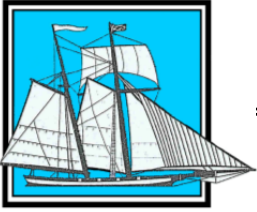
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The appropriate paragraph number of the VGP pertaining to the subject is included in the title line of each section. GMS comments, either as notes or comments, that are embedded in the VGP text are made *[in bold italicized square brackets]*.

Background & Review:

The Vessel General Permit is the result of a finding made by a US Court that the EPA had improperly excluded vessel discharges incidental to normal operation from provisions of the Clean Water Act. To remedy this and comply with the Court's order, the Vessel General Permit was created as part of the National Pollution Discharge Elimination System (NPDES) which is a program, created and administered by the EPA, under the authority of the Clean Water Act of 1972.

The VGP both authorizes and regulates discharges that are “incidental to the normal operation of a vessel”; i.e., waste streams that by their nature cannot be fully prevented or stopped if the ship is to continue to operate. Generally, the VGP itself does not authorize, or regulate, discharges covered under regulations administered by the US Coast Guard (USCG). These include such discharges as sewage, NLS and tank washings, etc. Notable exceptions, however, are the Biofouling and the Ballast Water effluent categories, which are regulated by both the VGP under the authority of the Clean Water Act, and by the USCG at 33 CFR Part 151 (operations) and 46 CFR Part 162 (equipment) under the authority of the *National Invasive Species Act*.

The authority of the VGP extends out to the “Waters of the United States” as defined in 40 CFR 122.2, including inland waters, and that part of the Great Lakes that are under the jurisdiction of the US. The definition of “US Waters” differs in various sections of US law, however, for the purposes of the VGP; the jurisdiction extends out to 3 Nautical Miles from the baseline. Outside of 3 NM from the baseline the VGP is not effective.

The Vessel General Permit is planned to have a 5-year life cycle, beginning on the 19th of December each 5th year. The 2013 VGP is the second VGP to become enacted; the third, yet to be developed iteration, is expected to become effective in December 2018.

The USCG verifies VGP compliance during Port State Control (PSC) boardings, which is expected to continue for the 2013 VGP. VGP compliance deficiencies are entered into the USCG's PSC database for later review and possible adjudication by the EPA. To date the vast majority of VGP deficiencies issued to vessels are relate to a failure to file a “Notice of Intent” with the EPA.

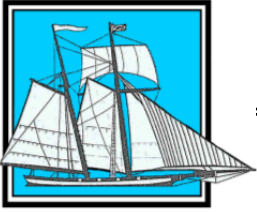
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The 2013 VGP Fact Sheet, downloadable from the EPA's website at http://cfpub.epa.gov/npdes/home.cfm?program_id=350, provides information and discussion on the VGP and documents some of the reasoning and decision making involved in drafting the VGP. It is good reference material for any company official overseeing VGP implementation aboard their vessels and for those seeking a better understanding of the VGP and what it is intended to accomplish.

GMS Compliance Assistance:

As with the 2008 VGP, GMS will offer VGP Compliance services to you, our compliance partners, including:

- assistance with the electronic filing of vessel Notice of Intent (NOI), Notice of Termination (NOT), annual reports;
- Development of a compliance system (manual) which will provide you valuable guidance in ensuring proper implementation of required VGP protocols for shipboard and shoreside compliance in the form of best management practices, inspections, recordkeeping and more.
- Onboard training for crewmembers in complying with the VGP
- Shoreside training for staff in the form of a "Train the Trainer" course.

Details on these services will be announced in future Client Advisories and/or upon request from you. As always, if you have specific questions on VGP compliance, please forward those to our general email address info@chgms.com and we will be happy to provide assistance.

The following page commences our review and GAP analysis of the 2013 VGP

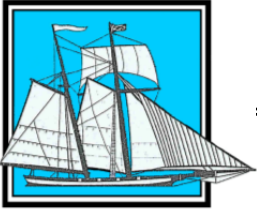
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REVIEW OF THE 2013 VGP - GENERAL REQUIREMENTS

Permit Applicability (¶ 1.2):

There are two versions of the VGP for 2013. The “standard” VGP is for vessels 79 feet (24 Meters) and larger, and the sVGP (for small vessel VGP) which may be used for non-pleasure vessels less than 79 feet that are otherwise subject to VGP requirements. Fishing vessels and other non-recreational vessels less than 79 feet may seek coverage under the standard VGP. It is assumed that nearly all of our client’s vessels will be covered under the standard VGP.

Vessels with auxiliary craft, which of themselves are large enough to require coverage under the VGP, are covered by the submission of the NOI on the parent vessel.

Pleasure vessels are not presently required to obtain coverage under a VGP; however there has been discussion to create a version of the VGP for these vessels in the future.

Notice of Intent (NOI) Filing (¶ 1.5):

To obtain “Coverage” (and be allowed to discharge) under the VGP, a “Notice of Intent” must be filed for each vessel. The 2013 VGP requires that a new NOI be filed for vessels that will seek coverage, even if a NOI was filed and remains active for the 2008 VGP.

- Note that the 2008 VGP NOI filings do not carry over to the 2013 VGP.

The 2013 NOI has approximately 30% more questions/data fields than the 2008 NOI, including additional details on all pollution prevention equipment installed aboard, hull cleaning dates and methods, and other information.

The NOI for the 2013 VGP must be submitted no later than 7 days before effective date of the 2013 VGP (12 December 2013) to be eligible for coverage. As with the 2008 VGP, it must be certified by an individual recognized as the owner/operator of the vessel. In most cases this has been the DPA or other person at a similar level in the organization.

As stated before, GMS will support you in filing eNOIs. However, you are reminded that once, we file the eNOI, you will be required to certify it.

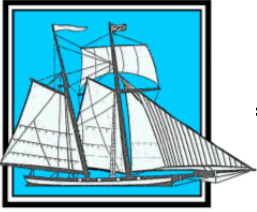
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Notice of Intent (NOI) Filing (§ 1.5): (CONTINUED):

The timeline for processing electronic NOIs (eNOI) has improved from the 2008 VGP.

- For the 2013 VGP, discharge is authorized (vessel has coverage) under the VGP 7 days after processing by the EPA.
- The 2008 VGP stated discharge would be authorized 30 days after processing by the EPA.

If a paper version of the 2013 NOI is filed, discharge is authorized 30 days after processing by the EPA. GMS expects that the EPA's Central Data Exchange system will be available to receive eNOIs sometime in late October.

Notice of Termination (NOT) Filing (§ 1.6):

If you wish to terminate coverage under the permit, a *Notice of Termination* (NOT) must be filed. Reasons for filing a NOT include:

- A new owner or operator taking over responsibility for the vessel;
- You permanently ceased operating the vessel in waters subject to the VGP [*are no longer calling United States ports*]; or
- You have obtained NPDES coverage under an individual or alternative general permit for discharges.

Electronic Filing Requirement (§ 1.14):

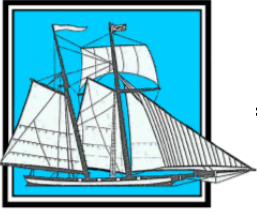
All filings and reports related to the VGP are required to be filed electronically, unless one or more of the following conditions exist:

- a. EPA has not yet implemented such electronic reporting;
- b. The owner/operator's headquarters is physically located in an area that is underserved by broadband communications;
- c. The vessel owner/operator has issues regarding computer access or capability.

NOTE: If you wish to obtain a waiver for submitting your reports electronically, you must submit a request to EPA headquarters for consideration.

Certification Requirement (§ 1.7):

As with the 2008 VGP, the 2013 VGP requires that filings and reports include a certification clause where the signer agrees to the certification's conditions and verifies the information to be correct under penalty of law.



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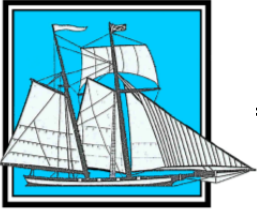
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REVIEW OF THE 2013 VGP - EFFLUENTS AND DISCHARGES

Discharges not subject to former NPDES Permit exclusion and vessel discharges generated from vessels that are operated in a capacity other than as a means of transportation (§ 1.2.3.1):

[Note: These discharges, as listed, serve to establish that they are ineligible for discharge coverage under the VGP. Most are regulated in other areas of US Regulations, as noted. This list differs in some areas from the 2008 VGP, and for vessels sailing the Great Lakes contains a new requirement for Gray Water discharges. Changes from the 2008 VGP are highlighted in bold type].

Paragraph No.	Effluent	Description
1.2.3.2	Sewage	<p>Discharges of sewage from vessels are regulated under Section 312 of the CWA and 40 CFR Part 140 and 33 CFR Part 159.</p> <p>Under CWA section 312(a)(6), the definition of sewage includes graywater discharges from “commercial vessels” (as defined in CWA section 312(a)(10)), operating on the Great Lakes.</p> <p>If a vessel operating on the Great Lakes is not a commercial vessel the graywater discharges are eligible for coverage under the VGP and are subject to additional permit requirements.</p> <p><i>[Note: The above seems to indicate that for vessels in the Great Lakes, graywater can no longer be discharged overboard without being stored for later discharge at sea, or, at a minimum, being treated in an approved sewage treatment plant first. This was not a part of the 2008 VGP.]</i></p>
1.2.3.3	Used or Spent Oil	<p>Used or spent oil no longer being used for their intended purposes are not eligible for coverage under the VGP.</p> <p><i>[Note: no change from the 2008 VGP].</i></p>

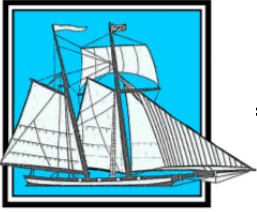


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Paragraph No.	Effluent	Description
1.2.3.4	Garbage or Trash	Discharges of rubbish, trash, garbage, or other such materials discharged overboard are not eligible for coverage under the VGP. Garbage includes discharge of bulk dry cargo residues as defined at 33 CFR 151.66(b) and agricultural cargo residues. Discharges of garbage are subject to regulation under 33 CFR Part 151, Subpart A [APPS]. [Note: no change from the 2008 VGP].
1.2.3.5	Photo-Processing Effluent	Discharges from photo-processing operations are not eligible for coverage under the VGP. [Note: no change from the 2008 VGP].
1.2.3.6	Effluent from Dry Cleaning Operations	Discharges of spent or unused effluent from dry cleaning operations are not eligible for coverage under the VGP. [Note: no change from the 2008 VGP].
1.2.3.7	Discharges of Medical Waste and Related Materials	Discharges of medical waste as defined in 33 USC 1362(20) are not eligible for coverage under the VGP. Discharges of spent or unused pharmaceuticals, formaldehyde, or other biohazards are not eligible for coverage under the VGP. Wastes produced by dialysis treatment may be discharged after being treated by marine sanitation devices. [Note: no change from the 2008 VGP].
1.2.3.8	Discharge of NLS residues	Discharges of NLS residues subject to 33 CFR Part 151, Subpart A or 46 CFR 153.1102 are not eligible for coverage under the VGP. [Note: The 2013 VGP is changed to include the 46 CFR 153.1102 reference].
1.2.3.9	Tetrachloroethylene and Trichloroethylene degreasers	Discharges of Tetrachloroethylene (“Perk”) and Trichloroethylene (TCE or “Trike”) are not eligible for coverage under the VGP. [Note: The 2013 VGP is changed to include Trichloroethylene].
1.2.3.10	Discharges currently or previously covered by another NPDES permit	[This paragraph states that if the vessel has a discharge covered by another NPDES permit, that discharge is not eligible for coverage under the VGP. There is no change from the 2008 VGP.]



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Effluent Limits and Related Requirements (Chapter 2):

Discharge limitations used in this advisory and throughout the VGP use the term “minimize” frequently. The EPA defines minimize as: “...Reduce and/or eliminate to the extent achievable using control measures (including best management practices) that are technologically achievable and economically practicable and achievable in light of best marine practice”.

This limitation method (called “technology based control” by the EPA) does not require numeric limitations on effluents or its constituents. This method applied to nearly all of the effluents in the 2008 VGP and applies to most of the effluent category discharge limitations in the 2013 VGP. However, numeric limitations are applied to some effluents in the 2013 VGP, most notably the Ballast Water effluent category.

A full discussion on the types of methods to control effluents is in the 2013 VGP Fact Sheet mentioned earlier.

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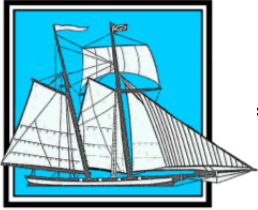
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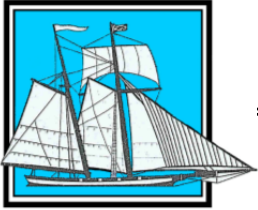
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Technology-Based Effluent Limits and Related Requirements Applicable to All Vessels (§ 2.1):

The following table outlines the requirements of the “General Effluent” categories listed in the VGP. Many of these types of discharges are already regulated under different sections of US Regulations, and by different Agencies, primarily the US Coast Guard. Overall these are similar to the 2008 VGP, however a new “Related Requirement” was added which is called “General Training”.

As before, changes (additions) made to the 2013 VGP from the 2008 VGP are highlighted in **bold type** and GMS Comments and Notes are in **[Bold Italicized text in brackets]**.

Para Number	Effluent Category	Description of Requirement
2.1.1	Material Storage	<p>Minimize time cargoes or onboard materials which might wash overboard or dissolve from contact with water, or be blown overboard by winds, you must minimize the amount of time these items are exposed to such conditions;</p> <p>Locate storage areas on vessel for such items in covered areas; where feasible and consistent with Coast Guard regulations.</p> <p>If water draining from storage areas contains oils, you must:</p> <ul style="list-style-type: none"> a) Use dry cleanup methods; b) Store the water for onshore disposal; c) Run the oily water through an Oily Water Separator.

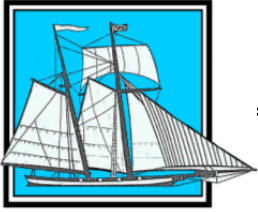


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Para Number	Effluent Category	Description of Requirement
2.1.2	Toxic and Hazardous Materials	<p>Where consistent with vessel design and construction, you must locate toxic and hazardous materials in protected areas of the vessel to minimize exposure to ocean spray and precipitation, unless:</p> <ul style="list-style-type: none"> a) The Master determines this would interfere with essential vessel operations or safety of the vessel, or; b) Doing so would violate Coast Guard regulations for material storage that establish safe transportation, handling, carriage and storage of pollutants. c) Any discharge made for the above reasons must be documented as described in Part 4.2 [of the VGP].
2.1.3	Fuel Spills/Overflows	<p>Fuel spills or overflows must not result in a discharge in harmful quantities pursuant to 40 CFR Part 110 [the Clean Water Act].</p> <p>[Note: Discharge of fuels and oils is also regulated by the Oil Pollution Act of 1990, which amends the Clean Water Act].</p> <p>Air vents for fuel tanks must use spill containment or other methods to prevent or contain any fuel or oil spills. Large-scale fuel spills are not incidental to the normal operation of a vessel and are not authorized by the VGP.</p> <p>When fueling auxiliary vessels [including lifeboats, rescue boats, boats with outboard motors, etc.], the following requirements apply:</p> <ul style="list-style-type: none"> a) When fueling, examine surrounding water for a visible sheen; if one exists as a result of your fueling it must be cleaned up immediately; b) Know the capacity of the fuel tanks before fueling in order to prevent overflowing;

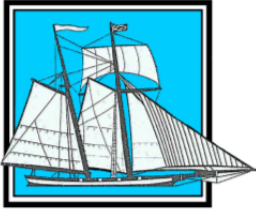


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Para Number	Effluent Category	Description of Requirement
2.1.3	Fuel Spills/Overflows (Continued)	<ul style="list-style-type: none"> c) Prevent overfilling and do not “top off” tanks; d) When possible, fill portable tanks on shore or on the host vessel, not the auxiliary vessel; e) Use sorbents while fueling to catch drips from overflows and fuel intake; f) Regularly inspect the fuel and hydraulic systems for any damage or leaks. <p>Owners/Operators shall ensure that all crew responsible for conducting fueling operations are trained in methods to minimize spills caused by human error and/or improper use of equipment.</p>
2.1.4	Discharges of Oil Including Oily Mixtures	<p>All discharges of oil, including oily mixtures, from ships subject to MARPOL Annex I as implemented by the Act to Prevent Pollution from Ships (i.e., MARPOL vessels), must have concentrations of oil less than 15 PPM before discharge. All MARPOL vessels must have an International Oil Pollution Prevention Certificate (IOPP).</p> <p>All other discharges of oil including oily mixtures must not contain oil in quantities that may be harmful pursuant to 40 CFR Part 110.</p>
2.1.5	Compliance with Other Statutes and Regulations	<p>As required by 40 CFR 122.44, you must comply with any applicable regulations promulgated by the Coast Guard that establish specifications for safe transportation, handling, carriage, and storage of pollutants. Any discharge from your vessel must comply with sections 311 (33 USC 1321) of the CWA, the Act to Prevent Pollution from Ships (APPS 33 USC 1905 – 2720), the National Marine Sanctuaries Act (16 USC 1431 et seq.) and implementing regulations found at 15 CFR Part 922 and 50 CFR Part 404, the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA, 7 USC 136 et seq.), and the Oil Pollution Control Act (OPA-90, 33 USC 2701 – 2720).</p>

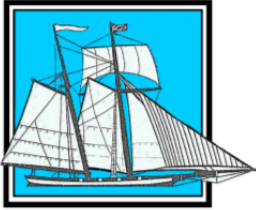


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Para Number	Effluent Category	Description of Requirement
2.1.6	General Training	<p>All owner/operators of vessels must ensure that the Master, operator, person-in-charge, and crew members who actively take part in the management of incidental discharges [VGP discharges] or who may affect those discharges are adequately trained in implementing the VGP.</p> <p>All owner/operators of vessels must ensure appropriate vessel personnel are trained in the procedures for responding to fuel spills and overflows, including notification of vessel personnel, emergency response agencies, and regulatory agencies.</p> <p>This training need not be formal or accredited courses; however it is the vessel owner/operator’s responsibility to ensure these personnel are given the necessary information to conduct shipboard activities in accordance with the terms of this permit.</p> <p>Vessel owner/operators must meet training-related recordkeeping requirements of Part 4.2 of the VGP. <i>[Part 4.2 states that training records kept in compliance with ISM may be considered as meeting the training recordkeeping requirement].</i></p> <p>Please recall that GMS has an active VGP training program that can be administered onboard your vessels. Please contact us via email (info@chgms.com) if you are interested in scheduling onboard or in-office training for your personnel.</p>



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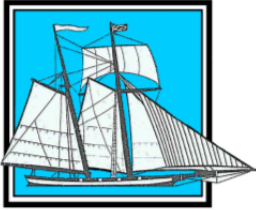
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Effluent Limits and Related Requirements for Specific Discharge Categories (¶ 2.2):

The following table outlines the requirements of the “Specific Effluent” categories listed in the VGP. The effluent categories are essentially the same as the 2008 VGP, and some do not apply to most commercial vessels, as noted herein. Note that the effluent categories consist of technology-based effluent limitations and related requirements (as previously discussed), except where specifically noted that the requirements contain numeric, or water quality-based limits.

As the descriptions of the requirements are lengthy in some cases, the requirements may be numbered or bulleted and paraphrased in the interest of brevity. As before, changes from the 2008 VGP are highlighted in **bold type** and GMS explanatory text or comments are **[*Bold Italicized text in brackets*]**.

Para Number	Effluent Category	Description of Requirement
2.2.1	Material Storage	a) Minimize the introduction of on-deck debris, garbage, residue, and spill into deck wash-down and runoff discharges. b) Before deck wash downs occur, you must broom clean (or equivalent) exposed decks or use comparable measures and remove all existing debris. c) When required by Class or the CG, vessels must be fitted with and use perimeter spill rails and scuppers to collect the runoff for treatment. d) Where feasible, machinery on deck must have coamings or drip pans to collect any oily discharge or leaks. The drip pans must be drained to a waste container for proper disposal and/or periodically wiped and cleaned. e) Additionally, to reduce the risk of any leakage or spills or harmful oils into the aquatic environment, EPA strongly encourages the use of environmentally acceptable lubricants in all above deck equipment.

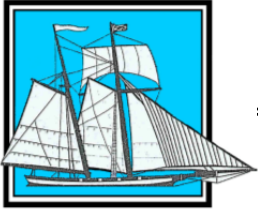


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Para Number	Effluent Category	Description of Requirement
2.2.1	Material Storage (Continued)	<ul style="list-style-type: none"> f) The presence of floating solids, visible foam, halogenated phenol compounds, and dispersants, or surfactants in deck wash-downs must be minimized. g) Must minimize deck wash-downs while in port. h) Maintain topside surface and other above-water-line portions of the vessel to minimize the discharge of rust, cleaning compounds, paint chips, non-skid material fragments, and other materials associated with topside preservation. i) Minimize residual paint droplets from entering waters subject to the VGP when conducting maintenance painting. j) The VGP does not authorize the disposal of unused paint into waters subject to the VGP. k) If deck wash-downs or above-waterline hull cleaning will result in a discharge, they must be conducted with “minimally toxic” and “phosphate free” cleaners and detergents as defined in Appendix A of this permit. l) Furthermore, cleaners and detergents should not be caustic and must be biodegradable.
2.2.2	Bilgewater/Oily Water Separator Effluent	<p>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).</p> <ul style="list-style-type: none"> a) Vessel operators may not use [chemicals and detergents] that remove the appearance of a visible sheen in their bilgewater discharges. This does not prohibit the use of these materials in machinery spaces for the purposes of maintaining or cleaning equipment.

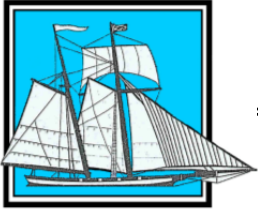


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2.2.2	Bilgewater/Oily Water Separator Effluent (Continued)	<ul style="list-style-type: none"> b) Except in the case of flocculants or other required additives (excluding any dispersants or surfactants) used to enhance oil/water separation during processing (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. c) 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 any discharge of such materials into waters subject to this permit must be minimized. d) 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. e) All vessels must minimize the discharge of bilgewater into waters subject to this permit... f) Vessels greater than 400 Gross tons shall not discharge untreated oily bilgewater (i.e., bilgewater not treated with an onboard separator or bilgewater with a concentration of oil greater than 15 PPM) into waters subject to the VGP. g) 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, or 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 and reported to EPA as part of the vessel's annual report.

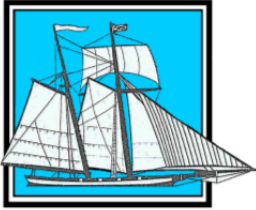


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Para Number	Effluent Category	Description of Requirement
2.2.2	Bilgewater/Oily Water Separator Effluent (Continued)	<p>h) Vessels greater than 400 gross tons shall not discharge treated bilgewater into waters referenced in Appendix G of the VGP [<i>Marine Sanctuaries, etc.</i>] 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 reported to EPA as part of the vessel’s annual report.</p> <p>i) 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 the vessel is 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 and reported to EPA as part of the vessel’s annual report.</p>
2.2.2.1	Bilgewater/Oily Water Separator Effluent - Monitoring Reporting	<p>Bilgewater Monitoring:</p> <p>a) “New Build” vessels built after December 19, 2013 greater than 400 gross tons that may discharge bilgewater into waters subject to this permit must monitor (i.e., sample and analyze) their bilgewater effluent at least once a year for oil and grease content. That monitoring can be conducted as part of the vessel’s annual survey.</p> <p>b) To demonstrate treatment equipment maintenance and compliance with this permit, the bilgewater sample must be analyzed for oil. At the time of sample collection, the reading on the oil content meter (OCM) must be recorded such that</p>

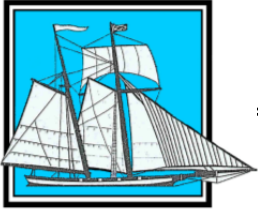


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2.2.2.1	Bilgewater/Oily Water Separator Effluent - Monitoring Reporting (Continued)	<p>the oil and grease concentration measured by the laboratory can be compared to the OCM.</p> <p>c) If your analytical results show oil and grease concentrations of less than 5 ppm for two consecutive years, you need not sample and analyze subsequent years of permit coverage if:</p> <ul style="list-style-type: none"> a. Your vessel uses an oily water separator capable of meeting a 5 ppm oil and grease limit, or you use an alarm which prevents the discharge of oil and grease above 5 ppm whenever you discharge in waters subject to this permit, b. You calibrate your OCM at least annually (calibrations during a vessel survey meet this requirement), and c. Your OCM never reads above 5 ppm during discharges into waters subject to this permit. If this information is recorded in the oil record book, you need not record these data in other recordkeeping documentation. <p>d) Records of monitoring must be retained onboard for at least 3 years in the vessel's recordkeeping documentation and must include:</p> <ul style="list-style-type: none"> a. The date, exact place, and time of sampling or measurements; b. The individual(s) who performed the sampling or measurements; c. The individual(s) who performed the analyses and any meter recalibration; d. The techniques or methods used for sample analyses; e. The results of such analyses and OCM readings.

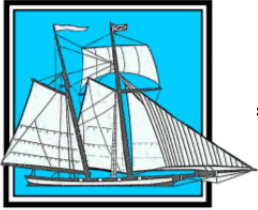


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2.2.2.1	Bilgewater/Oily Water Separator Effluent - Monitoring Reporting (Continued)	<p>Monitoring Reporting:</p> <p>For those vessels for which monitoring must be conducted, analytical and corresponding OCM monitoring data must be submitted at least once per calendar year no later than February 28 of the year after the data are collected. Additionally, if you have met the requirements in part 2.2.2.1 to waive analytical monitoring after two years, you must note your waiver qualifications on your report. Data may be submitted as part of the vessel’s annual report (Appendix H) on the VGP bilgewater Discharge Monitoring Report (DMR).</p>
2.2.3	Ballast Water	<p>All discharges of ballast water must comply with the requirements in this permit as described below. 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.</p> <p>In addition, as a condition of this permit, all discharges of ballast water must also comply with applicable US Coast Guard regulations found in 33 CFR Part 151.</p> <p>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.</p>

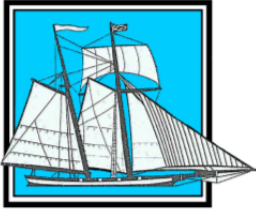


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Para Number	Effluent Category	Description of Requirement
2.2.3.1	Ballast Water - Training	<p>All owner/operators of vessels equipped with ballast water tanks must train the master, operator, person-in-charge, and crew members who actively take part in the management of the discharge or who may affect the discharge, on the application of ballast water and sediment management and treatment procedures.</p> <p>As part of Ballast Water Management Plans under ¶2.2.3.2, a stand-alone training plan, or other recordkeeping documentation, owner/operators must maintain a written training plan describing the training to be provided and a record of the date of training provided to each person trained.</p> <p>Persons required to be trained must be trained promptly upon installation of treatment technology and in the event of a significant change in ballast water treatment practices or technology.</p>
2.2.3.2	Ballast Water - Ballast Water Management Plans	<p>All owner/operators of vessels equipped with ballast water tanks must maintain a ballast water management plan developed specifically for the vessel that will ensure that those responsible for the plan understand and follow the ballast water management strategy. That plan must be made available upon request to EPA or its authorized representative. The master and crew members who actively take part in the management of the discharge or who may affect the discharge must understand and follow the management strategy laid out in the plan.</p> <p>At a minimum, all vessels must have a plan which outlines how they will meet the requirements of Part ¶2.2.3.3 of this permit. The plan must also include how vessels will comply with training requirements of 2.2.3.1 and meet all requirements in Parts</p>

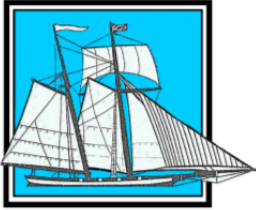


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2.2.3.2	Ballast Water - Ballast Water Management Plans (Continued)	¶2.2.3.3 through ¶2.2.3.8, as applicable. EPA notes that a Ballast Water Management Plan is also required by the US Coast Guard by 33 CFR Part 151. Provided owner/operators meet the requirements discussed above, EPA expects that vessels will need one ballast water management plan to meet both EPA and US Coast Guard requirements.
2.2.3.3	Ballast Water - Mandatory Ballast Water Management Practices)	<p>Avoid the discharge or uptake of ballast water in areas/into waters subject to this permit within, or that may directly affect, marine sanctuaries, marine preserves, marine parks, or coral reefs or other waters listed in Appendix G waters.</p> <p>Minimize or avoid uptake of ballast water in the following areas and situations:</p> <ul style="list-style-type: none"> • Areas known to have infestations or populations of harmful organisms and pathogens (e.g., toxic algal blooms); • Areas near sewage outfalls; • Areas near dredging operations; • Areas where tidal flushing is known to be poor or times when a tidal stream is known to be turbid; • In darkness, when bottom-dwelling organisms may raise up in the water column; • Where propellers may stir up the sediment; • Areas with pods of whales, convergence zones, and boundaries of major currents. <p>Clean ballast tanks regularly to remove sediments in mid-ocean (when not otherwise prohibited by applicable law) or under controlled arrangements in port, or in drydock;</p>

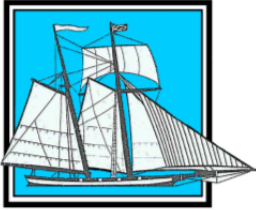


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2.2.3.3	Ballast Water - Mandatory Ballast Water Management Practices) (Continued)	<p>No discharge of sediments from cleaning of ballast tanks is authorized in waters subject to this permit;</p> <p>Where feasible, utilize the high sea suction when the clearance is less than 5 meters to the lower edge of the sea chest or the vessel is dockside to reduce sediment intake;</p> <p>When feasible and safe, you must use your ballast water pumps instead of gravity draining to empty your ballast water tanks, unless you meet the treatment limits found in Part ¶2.2.3.5 of this permit [the ballast water discharge standard].</p> <p>Minimize the discharge of ballast water essential for vessel operations while in the waters subject to this permit.</p>
2.2.3.4	Ballast Water - Mandatory Ballast Water Management Practices for “Lakers”	<ol style="list-style-type: none"> 1. Each owner/operator must perform annual inspections on their vessels to assess sediment accumulations. <ol style="list-style-type: none"> a. Removal of sediment, if necessary, must be carried out; b. Vessel owner/operators must develop sediment removal policies as part of the Ballast Water Management Plan; c. Records of sediment removal and disposal (including facility name and location and all invoices) shall be kept onboard the vessel; d. Discharge of sediments from cleaning of ballast tanks is not authorized in waters subject to this permit. 2. When practical and safe, vessels must minimize ballast water taken up at dockside. This will typically mean limiting uptake to the amount of ballast water required to safely depart the dock and then complete ballasting in deeper water.

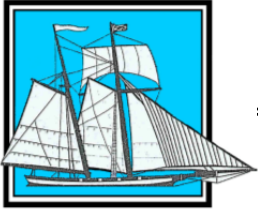


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2.2.3.4	Ballast Water - Mandatory Ballast Water Management Practices for “Lakers” (Continued)	<p>3. Owners/Operators of Laker vessels must perform annual inspections of their sea chest screens to assure that they are fully intact;</p> <ul style="list-style-type: none"> a. Inspection must assure that there is no deterioration which has resulted in wider openings or holes in the screen. b. If the screen has deteriorated such that there are wider openings than the screen design, the vessel owner/operator must repair or replace the screen. c. Any repairs must be of such quality that they are expected to last at least one year. <p>If a Laker meets the permit limits found in Part 2.2.3.5 of this permit [discharge standards, described below] then the vessel owner/operator is not required to conduct the additional management measures found in Part 2.2.3.4 [this part], but must still comply with Part 2.2.3.3 [mandatory ballast water management practices for all vessels, described above].</p>
2.2.3.5	Ballast Water - Ballast Water Numeric Discharge Limits [Discharge Standards]	<p>[Note: Portions of this Part of the VGP are complex as they deal with the upcoming technology of ballast water treatment systems and the requisite testing. For details refer to the VGP document itself. The outline below is paraphrased and intended to provide an overview of the requirements without re-stating complex rules and tables, testing standards for ballast water, etc. In places where text or tabular data is excluded it will be indicated by an ellipsis (...) at the exclusion.]</p> <p>Owner/Operators must meet the following ballast water discharge limits (described as instantaneous maximum) consistent with the schedule found in Part 2.2.3.5.2 [BWMS Installation Schedule] unless you are excluded from these requirements by Part</p>

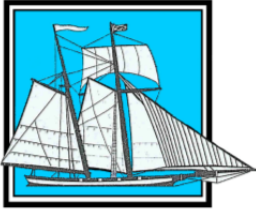


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2.2.3.5	Ballast Water - Ballast Water Numeric Discharge Limits [Discharge Standards] (Continued)	<p>2.2.3.5.3 [certain vessels, see description further down in table] or Part 2.2.3.8 [vessels enrolled in the USCG STEP program].</p> <p>[Discharge standards are those contained in IMO Regulation D-2 and in the new US Coast Guard Ballast Water Regulation and repeated below]:</p> <ul style="list-style-type: none"> • Fewer than 10 living organisms \geq 50 micrometers per cubic foot of ballast water; • Fewer than 10 living organisms $<$ 50 micrometers and \geq 10 micrometers per milliliter of ballast water; • [Indicator organisms must not exceed published limits]. <p>These limits may be met by using one of the ballast water management measures described in Part 2.2.3.5.2 of this permit [and are listed below].</p> <p>2.2.3.5.1.1: Ballast Water Management using a Ballast Water Management System;</p> <p>2.2.3.5.1.2: Onshore Treatment of Ballast Water;</p> <p>2.2.3.5.1.3: Use of Public Water Supply</p> <p>2.2.3.5.1.4: No Discharge of Ballast Water</p> <p>2.2.3.5.2: Table 6: Ballast Water Treatment to Best Available Technology Schedule [implementation schedule]:</p> <ol style="list-style-type: none"> 1. New Vessels constructed after 01 December 2013: At delivery. 2. Existing vessels with ballast capacity less than 1500 Cbm: First scheduled drydocking after 01 January 2016;

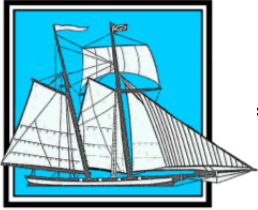


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2.2.3.5	Ballast Water - Ballast Water Numeric Discharge Limits [Discharge Standards] (Continued)	3. Existing vessels with ballast capacity between 1,500 and 5,000 CbM: First scheduled drydocking after 01 January 2014; 4. Existing vessels with ballast water capacity greater than 5,000 CbM: First scheduled drydocking after 01 January 2014.
2.2.3.5.1.1	Ballast Water - Management using a Ballast Water Treatment System [BWTS]	<p><i>[Note: this Section of the Client Advisory paraphrases some of the requirements required for vessels which use treatment systems to meet the ballast water discharge standards of Part 2.2.3.5].</i></p> <ul style="list-style-type: none"> • <u>Owner/Operators utilizing a ballast treatment system must be shown to be effective by testing conducted by an independent third party laboratory, test facility or test organization.</u> • A BWTS that has been type approved by the US Coast Guard, or approved as an “Alternate Management System” [An AMS is a BWTS that is type approved by a foreign flag state/class society and accepted by the Coast Guard, but has not yet received USCG type approval] will be deemed to meet this “shown to be effective” provision. • Once the effluent limits become applicable to a vessel, if a ballast water treatment system is used, the effluent limits are an instantaneous maximum. <p><i>[Note: The underlined text above is one area where the US Coast Guard and the VGP requirements differ as related to BWTS. The US Coast Guard regulation requires BWTS either to be US Coast Guard approved or to have been granted “AMS” approval. <u>The VGP only requires they be approved/proven by a third party.</u></i></p>

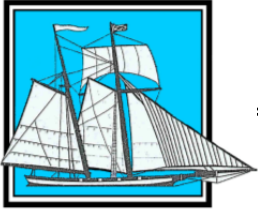


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2.2.3.5.1.1	Ballast Water - Management using a Ballast Water Treatment System [BWTS] (Continued)	<i>This opens the way for the VGP to require a BWTS per the implementation schedule, even if neither US Coast Guard approved or an AMS designated system are available for installation as required by the implementation schedule. This effectively negates the Extension of Compliance Date clause contained in the US Coast Guard Ballast Water regulation at 33 CFR § 151.2036.]</i>
	Ballast Water - Monitoring from vessels using BWTS	<p><i>[The following is a very brief outline/summary of the monitoring requirements contained in this paragraph and its subparagraphs. The requirements for monitoring and testing are complex and detailed and too lengthy list in their entirety.]</i></p> <p>2.2.3.5.1.1.2 - Ballast Water System Functionality Monitoring:</p> <ul style="list-style-type: none"> • To assess the BTWS functionality, monitoring indicators for the BWTS functionality are required at least once per month for specific parameters that are applicable to your system. <p>2.2.3.5.1.1.3 – Ballast Water monitoring equipment calibration:</p> <ul style="list-style-type: none"> • At a minimum, all applicable sensors and other control equipment must be calibrated annually; additionally, calibration must be no less frequently than recommended by the sensor or other equipment manufacturer, or by the BWTS manufacturer or when warranted based on device drift. • During the period when sensors are not installed [for calibration], or inoperable, the vessel must not discharge ballast water.

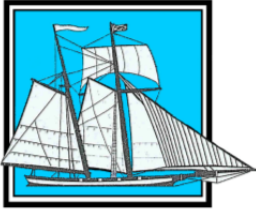


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2.2.3.5.1.1.1	Ballast Water - Monitoring from vessels using BWTS (Continued)	<p>2.2.3.5.1.1.4 – Effluent Biological Organism Monitoring:</p> <ul style="list-style-type: none"> • Once a BWTS is required to be installed, any ballast water discharges from the vessel will be subject to the effluent limitations. • To ascertain compliance, EPA is establishing biological indicator compliance monitoring. <ul style="list-style-type: none"> ○ 2 samples during the first year for systems which have “high quality” data available <ul style="list-style-type: none"> ▪ Shortened to one time per year for satisfactory results on two subsequent events – if not, then 2 samples per year ○ 4 samples per year for systems for which “high quality” data is not available. <p>2.2.3.5.1.1.6 – BWTS Recordkeeping and Reporting:</p> <ul style="list-style-type: none"> • Records of sampling and testing results must be retained onboard for 3 years. • Vessels must also submit the testing results to EPA as part of the vessel’s annual report, on the Ballast Water Discharge Monitoring Report form. <p><i>[Significant additional data and details are required to be retained aboard and also to be submitted to EPA on the Ballast Water Discharge Monitoring Report (DMR)].</i></p>

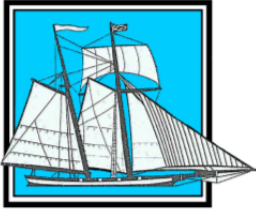


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2.2.3.5.2	Ballast Water – Alternate Methods of meeting Discharge Standard	<p><i>[Note: The Ballast Water Discharge Standard limits may be met by using one of the alternate ballast water management measures described in Part 2.2.3.5.2 of this permit, listed below, as an alternative to installing a BWTS]:</i></p> <p>2.2.3.5.1.2: Onshore Treatment of Ballast Water [Discharge ashore to a treatment facility];</p> <p>2.2.3.5.1.3: Use of Public Water Supply [Taking on potable water ballast from shore-side into tanks that have been cleaned of all sediment and ambient water (sea water) prevented from being subsequently introduced. These requirements are comparable to the new CG BW regulation at 33 CFR 151.2025 – see VGP for additional details];</p> <p>2.2.3.5.1.4: No Discharge of Ballast Water [Discharge of ballast for reasons of unscheduled voyages, unexpected or quickly arranged cargo, etc., would constitute a permit violation; however, a safety exemption per 40 CFR 122.41 may apply].</p>
2.2.3.6	Ballast Water – Interim requirements for meeting ballast water management measures in 2.2.3.5 [vessels without a BWTS]	<p><i>[Note: The requirements contained within Paragraph 2.2.3.6 correspond with previous requirements of the 2008 VGP concerning ballast water management (exchanges) and also 33 CFR 151.2025(a)(3) of the new CG Ballast Water Regulation. These requirements are a continuance of previous ballast water management methods and procedures (i.e., ballast water exchange) for vessels until they are required to comply with the Ballast Water Discharge Standards. These requirements are paraphrased here as a reminder].</i></p> <p>2.2.3.6: Interim Requirements for vessels not meeting the ballast water management measures of 2.2.3.5 [BW discharge standards using a BWTS]:</p>

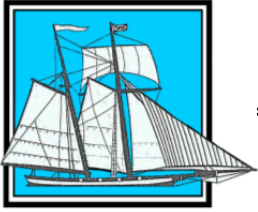


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2.2.3.6		<p>Vessels not subject to the ballast discharge standard requirements [<i>i.e., not yet applicable per implementation timeline</i>] must meet the exchange and flushing requirements as applicable...Once a vessel is required to meet the discharge standard, ballast exchange may not be used in lieu of meeting the numeric effluent limits.</p> <p>2.2.3.6.1: Requirements for Oceangoing Voyages While Carrying Ballast Water Exchange ballast water 200 NM from any shore, in waters beyond the US EEZ, and as early in the vessel voyage as possible.</p> <p>2.2.3.6.2: Vessels Carrying Ballast Water Engaged in Pacific Nearshore Voyages Any vessel engaged in Pacific Nearshore Voyages that carries ballast water taken on in areas less than 50 NM from any shore must carry out an exchange of ballast water before discharge if the vessel travels through more than one COTP zone or the vessel crosses international boundaries. Such exchange must occur in waters more than 50 NM from any shore and waters of 200 Meters in depth. [Other details apply, refer to VGP text].</p> <p>2.2.3.6.2: Vessels with any Ballast Water Tanks that are Empty or have Un-pumpable Residual Water (NOBOB): For ballast water tanks that are empty or contain un-pumpable residuals, you must either seal the tank [the valves or controls] so no discharge or uptake and subsequent discharge occurs in VGP waters, unless the tank has been flushed in waters 200 NM from any shore. If some tanks are full, waters between full and empty tanks must not be allowed to comingle. [Other details and conditions apply, refer to VGP text].</p>

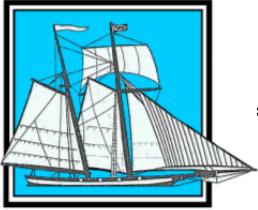


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Para Number	Effluent Category	Description of Requirement
2.2.3.7	Ballast Water - Vessels Entering the Great Lakes	<p>In addition to complying with the requirements of this permit, all vessels equipped to carry ballast water and enter the Great Lakes must comply with 33 CFR 151 PART C, and those that operate outside the EEZ and more than 200 NM from any shore and then enter the Great Lakes must also comply with 33 CFR 401.30 <i>[Regulations on ballast and trim required to enter the Waterway]</i>.</p> <p>Vessels that are unable, due to weather, equipment failure, or other extraordinary condition, to effect a BWE must employ another method of ballast water management listed in 33 CFR 151.1510 <i>[Either use a BWTS or have previously ballasted with potable water]</i> or otherwise comply with the provisions of 33 CFR 1515 <i>[exchange ballast water in an area designated by the COTP]</i>.</p> <p><u>Additionally, vessels with a BWTS must also conduct a ballast water exchange or saltwater flushing (as applicable) in addition to treating ballast water discharges if they meet the following requirements:</u></p> <ul style="list-style-type: none"> • The vessel operates outside the EEZ and more than 200 NM from any shore and then enters the Great Lakes via the Saint Lawrence Seaway System, and; • The vessel has taken on ballast water that has a salinity of less than 18 parts per thousand (PPT) from a coastal, estuarine, or freshwater ecosystem within the previous month (30 days). <p>If a vessel affected by these requirements has not taken on ballast water with a salinity of less than 18 PPT in the previous month, the master of the vessel must certify to this effect in their ballast water recordkeeping requirements before entering the Great Lakes.</p>

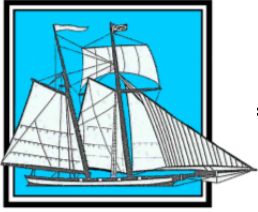


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Para Number	Effluent Category	Description of Requirement
2.2.3.7		<i>[Note: The underlined text above highlights another difference in the Ballast Water rules between the 2013 VGP and the Coast Guard regulation. There is no requirement within the CG BW Regulation for a vessel with a BWTS to conduct an exchange prior to entering the Great Lakes via the Seaway system].</i>
2.2.3.8	Ballast Water – Vessels enrolled in the Shipboard Technology Evaluation Program (STEP)	Vessels that are enrolled in the US Coast Guard Shipboard Technology Evaluation Program (STEP) are not required to meet the ballast water discharge standards of 2.2.3.5, except for paragraphs 2.2.3.5.1.1.5 <i>[testing requirements for systems that use Active Substances]</i> , and 2.2.3.5.1.1.6 <i>[ballast water treatment system recordkeeping and reporting]</i> .
2.2.4	Anti-Fouling Hull Coatings/ Hull Coating Leachate	<i>[Note: The title of this particular effluent category has been updated, however the requirements have not been changed substantially from the 2008 VGP].</i>
2.2.5	Aqueous Film Forming Foam (AFFF)	<p><i>[Note: The requirements of this particular effluent category were reworded slightly but not significantly changed from the 2008 VGP]:</i></p> <p>Discharges of AFFF are authorized for emergency purposes when needed to ensure the safety and security of the vessel and her crew.</p> <p>For vessels that sail outside of the territorial sea more than once per month, maintenance and training discharges of fluorinated AFFF are not authorized in VGP waters.</p> <p>If emergency discharges are made into Appendix G waters <i>[Marine sanctuaries, etc]</i>, then a written explanation must be kept in the ship’s log or other vessel recordkeeping documentation.</p>

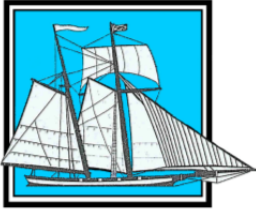


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Para Number	Effluent Category	Description of Requirement
2.2.6	Boiler/Economizer Blow Down	[Note: The requirements for this effluent category have not changed from the 2008 VGP].
2.2.7	Cathodic Protection	<p>Cathodic protection must be maintained to prevent the corrosion of the ship's hull...Vessel operators must appropriately clean and/or replace these anodes during periods of maintenance (dry docking) so that release of these metals to waters is minimized. Furthermore, when feasible, sacrificial anodes should be flush-fitted to the hull, or vessel must fill the space between the anode and hull backing to remove the potential for hotspots for fouling organisms.</p> <p>Vessel operators should note that magnesium is less toxic than aluminum and aluminum is less toxic than zinc. If vessel operators use sacrificial electrodes, they must select electrode devices with metals that are less toxic to the extent technologically feasible and economically practicable and achievable...For vessels that spend the majority of their time in saltwater, if zinc is selected, the vessel owner/operator must document why aluminum is not selected The documentation requirement is applicable after the vessel's first dry docking after 19 December 2013 (e.g., if the vessel dry-docks in 2015, the requirement is applicable for that vessel starting in 2015).</p> <p>EPA recommends, particularly for new vessels, the use of Impressed Current Cathodic Protection (ICCP) in place of or to reduce the use of sacrificial electrodes...</p>
2.2.8	Chain Locker Effluent	[Note: The requirements for this effluent category have not changed from the 2008 VGP].

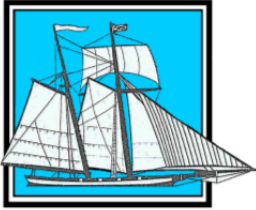


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Para Number	Effluent Category	Description of Requirement
2.2.9	Controllable Pitch Propeller and Thruster Hydraulic Fluid and other Oil-to-Sea Interfaces	<p>[Note: Changes to this Effluent Category adds the requirement to use “Environmentally Accepted Lubricants” (EAL) to extent possible, and recordkeeping documenting and annual reporting on the reason why you cannot use EALs].</p> <p>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 ot minimize the leaking of hydraulic oil or other oils. The vessel must not discharge oil in quantities that may be harmful as defined in 40 CFR Part 110 [which is any oil that leaves sheen on the surface or emulsion under the surface of the water]...</p> <p>Minimize maintenance activities on stern tube seals when a vessel is outside of drydock. If emergency repairs must be done, arrange for appropriate spill response equipment to contain any oil leakage.</p> <p>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 unless doing so is deemed unsafe by the Master of the vessel.</p> <p>All vessels must use an Environmentally Accepted Lubricant (EAL) in all oil-to-sea interfaces, unless technically infeasible. EALs are lubricants that are “biodegradable” and “minimally toxic” and are not “bio accumulative” as defined in Appendix A of the 2013 VGP. For purposes of the requirements related to EALs, technically infeasible means that no EAL products are approved for use in a given application that meet manufacturer specifications for that equipment, products which come pre-lubricated (such as wire ropes) have no available alternatives manufactured with EALs, products meeting a manufacturers specifications are not available within any port in which the</p>

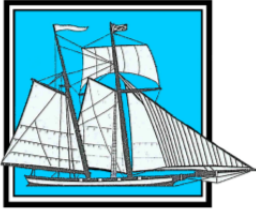


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Para Number	Effluent Category	Description of Requirement
2.2.9		vessel calls, or change over and use of an EAL must wait until the vessel's next dry-docking. If a vessel is unable to use an EAL, you must document it in your recordkeeping documentation why you are unable to do so, and you must report the use of a non-environmentally acceptable lubricant to EPA in your Annual Report. <u>Use of an environmentally acceptable lubricant does not authorize the discharge of any lubricant in a quantity that may be harmful as defined in 40 CFR Part 110.</u>
2.2.10	Distillation and Reverse Osmosis Brine	<i>[Note: The requirements for this effluent category have not changed from the 2008 VGP].</i>
2.2.11	Elevator Pit Effluent	<i>[Note: The requirements for this effluent category have not changed from the 2008 VGP].</i>
2.2.12	Firemain Systems	<i>[Note: The requirements for this effluent category have not substantially changed from the 2008 VGP].</i>
2.2.13	Freshwater Layup	<i>[Note: The requirements for this effluent category have not changed from the 2008 VGP].</i>
2.2.14	Gas Turbine Washwater	<i>[Note: The requirements for this effluent category have not changed from the 2008 VGP].</i>

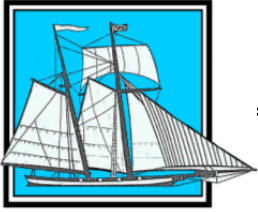


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Para Number	Effluent Category	Description of Requirement
2.2.15	Graywater	<p><i>[Note: The core requirements for this effluent category have not substantially changed from the 2008 VGP. However, the definition of phosphate-free and minimally-toxic soaps has been further refined and additional requirements added for vessels operating in the Great Lakes, and for Graywater Monitoring and Reporting]:</i></p> <p>Vessel owners/operators must use phosphate-free and minimally-toxic soaps and detergents, as identified in Appendix A of the 2013 VGP, for any purpose if graywater will be discharged into VGP waters. Soaps and detergents must be free from toxic or bio accumulative compounds and not lead to extreme shifts in receiving water pH. For purposes of this part, extreme shifts means causing pH to fall below 6.0 or rise above 9.0 as a direct result of discharge.</p>
2.2.15.2	Graywater – Additional Graywater Requirements for Certain VGP Vessels Operating in the Great Lakes	<p><i>[Note: This requirement is targeted to non-commercial vessels. For this reason its specifics are not included in this Summary. However it is important to note, as described on paragraph 1.2.3.2 that graywater discharge from commercial vessels in the Great Lakes is “Sewage” and must be treated as such. In other words, discharge of gray water into the Great Lakes from commercial vessels is not permitted under the VGP].</i></p>

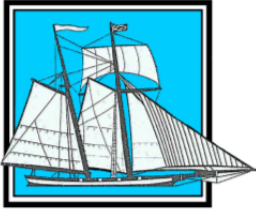


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Para Number	Effluent Category	Description of Requirement
2.2.15.2	Graywater - Monitoring	<p><i>[Note: The Monitoring requirement for graywater is also detailed. However, since it applies to new buildings of 19 December 2013 onwards, it is not discussed in detail here. Refer to the VGP for the full text of the requirement].</i></p> <p>The following monitoring requirements apply to vessels which discharge graywater in VGP Waters and meet one of these conditions:</p> <ul style="list-style-type: none"> • The vessel is a new build constructed on or after December 19, 2013, has maximum crew capacity greater or equal to 15, and provides overnight accommodations to those crew; or, • Vessel is subject to 2.2.15.2, above <i>[certain non-commercial vessels]</i>. <p>Vessels must collect and analyze two samples per year, collected at least 14 days apart, and report the results of those samples as part of their Annual Report...</p> <p>Vessels which do not enter VGP waters for the calendar year need not conduct monitoring for that year, but must clearly indicate on their Annual Report that they did not enter waters subject to this permit during that year.</p>
2.2.16	Motor Gasoline and Compensating Discharge	<i>[Note: The requirements for this effluent category have not changed from the 2008 VGP].</i>
2.2.17	Non-Oily Machinery Wastewater	<i>[Note: The requirements for this effluent category have not substantially changed from the 2008 VGP].</i>

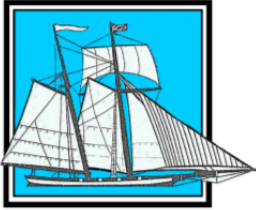


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Para Number	Effluent Category	Description of Requirement
2.2.18	Refrigeration and Air Condensate Discharge	<i>[Note: The requirements for this effluent category have not substantially changed from the 2008 VGP].</i>
2.2.19	Seawater Cooling Overboard Discharge (including non-contact Engine Cooling Water; Hydraulic System Cooling Water, Refrigeration Cooling Water)	<i>[Note: The requirements for this effluent category have not changed from the 2008 VGP].</i>
2.2.20	Seawater Piping Biofouling Prevention	<i>[Note: The requirements for this effluent category have not changed from the 2008 VGP].</i>
2.2.21	Boat Engine Wet Exhaust	<p><i>[Note: The requirements for this effluent category have not changed from the 2008 VGP with the exception of requiring Environmentally Accepted Lubricants for 2-stroke engines]:</i></p> <p>EPA encourages vessel operators to consider four stroke engines instead of two stroke engines for vessels generating wet exhaust that are covered under this permit [which includes embarked small craft]. Use of a four stroke engine may minimize the discharge of pollutants to VGP waters. Where vessels utilize two stroke engines, environmentally acceptable lubricants (as defined in Appendix A of the 2013 VGP) must be used unless technologically infeasible. If technologically infeasible, the vessel owner/operator must document in their recordkeeping why they are not using environmentally acceptable lubricants.</p>
2.2.22	Sonar Dome discharge	<i>[Note: The requirements for this effluent category have not changed from the 2008 VGP].</i>

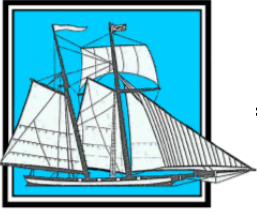


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Para Number	Effluent Category	Description of Requirement
2.2.23	Underwater Ship Husbandary and Hull Fouling Discharges	<i>[Note: Except for the addition of “Hull Fouling Discharges” to the title of the effluent category, the requirements have not significantly changed from the 2008 VGP].</i>
2.2.24	Welldeck Discharges	<i>[Note: The requirements for this effluent category have not changed from the 2008 VGP].</i>
2.2.25	Graywater mixed with Sewage from Vessels	<i>[Note: The requirements for this effluent category have not changed from the 2008 VGP].</i>
2.2.26	Exhaust Gas Scrubber Washwater Discharge	<i>[Note: The 2013 VGP added significant additional requirements for the discharge and monitoring of wash water used in Exhaust Gas Scrubbers. The VGP text states these requirements generally follow those contained in MEPC.184(59). Since scrubber installations are not statistically high, the VGP requirements for scrubber wash water are not discussed here. For owner/operators of vessels that have exhaust system scrubbers, please refer to the text of the 2013 VGP for further information].</i>
2.2.27	Fish Hold Effluent	<i>[Note: This is a new effluent category for the 2013 VGP. However it has limited applicability to client vessels so it is not discussed here].</i>



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THE 2013 VGP - COMPLIANCE ACTIVITIES AND ADMINISTRATION

Corrective Actions (Part 3 of the VGP):

The text describing process, timeline, and conditions for discovery, documenting and closing out Corrective Actions for the 2013 VGP are identical to the 2008 VGP.

What has been seen as common practice, and allowed for by the VGP, is for vessels to follow their Company's SMS procedures in raising, analyzing, and closing out non-conformities, except that these non-conformities would require identification as VGP-related deficiencies.

As with other VGP records, they must be produced on demand and retained aboard the vessel for 3 years.

Self-Inspections and Monitoring (Part 4 of the VGP):

¶4.1.1: Routine Visual Inspections:

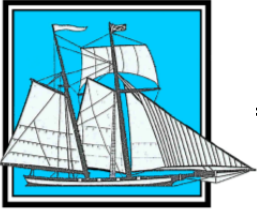
For the 2013 VGP, the Quarterly Inspection of effluent streams has been eliminated. The paragraphs describing the "routine visual inspection conducted at least once per week or per voyage" [*while in VGP waters*] are nearly identical to the paragraphs contained in the 2008 VGP.

¶4.1.1.1: Documentation of the Routine Visual Inspections:

The requirements contained in the 2013 VGP have been reworded slightly but the requirements have not changed.

¶4.1.1.2: Extended Unmanned Period (EUP) Inspections:

For vessels in an extended unmanned period (unmanned, fleeted, jacked-up, or otherwise has its navigations systems and main propulsion shut down for 13 days or greater), an alternate EUP inspection may be made in lieu of the routine inspections (weeklies) described earlier.



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The EUP may be elected if the owner/operator is up to date on all other inspection and reporting requirements of the VGP, and the owner/operator has not received any VGP-related notices of violation.

For those with vessels entering an Extended Unmanned Period, a review of the related Section of the 2013 VGP should be made to determine its specific requirements.

¶4.1.3: Comprehensive Annual Vessel Inspections:

The requirements for the Comprehensive Annual Inspection remain almost unchanged from the 2008 VGP. The only addition is to require inspection of vessel niche areas for fouling organisms. However, the inspection is limited to those things that can be performed without forcing the vessel into drydock, and there is no requirement within the VGP for a dive inspection, so it is expected this will only apply at drydock or if the ship is examined by a diver for this or other reasons.

¶4.1.4: Drydock Inspection Reports:

The requirements for the Drydock Inspection Reports have not substantially changed from the 2008 VGP; the exception being a slightly different description of cleaning the chain locker(s) which refers to the ¶2.2.8 Chain Locker Effluent discharge category of the 2013 VGP.

¶4.2: Recordkeeping:

The recordkeeping requirements are similar to those of the 2008 VGP. Added is the requirement to maintain records of BWTS operations and maintenance and any other analytical monitoring required to be completed and reported on Discharge Monitoring Reports.

The 2013 VGP now allows electronic VGP records, however the records must be:

- In a format that can be read in a similar manner as a paper record;
- Legally dependable with no less evidentiary value than their paper equivalent, and;
- Accessible to the inspector during an inspection to the same extent as a paper copy stored on the vessel would be, if the records were stored in paper form.

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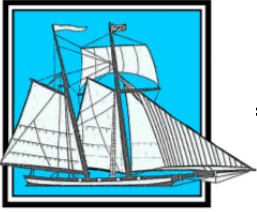
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The requirement for legally dependable documents likely prevents simply storing VGP record documents in MS Word/Excel or similar flat-file format, as the recording of metadata information is not continuous. Without 3rd-party stamping of digital signatures or other type controls it is doubtful these records could be legally defensible. A Class-approved maintenance system that has a document management/control feature may, however, provide the needed level of data logging to make electronic records legally dependable.

¶4.3: Additional Recordkeeping for Vessels Equipped with Ballast Tanks:

The 2013 VGP requirements for ballast water recordkeeping contain no significant changes from the 2008 VGP and correspond with the data gathering and reporting requirements for National Ballastwater Information Clearinghouse (NBIC) reporting.

¶4.4: Annual Report:

For the 2013 VGP, for all vessels that have a *Notice of Intent* on file with the EPA, an Annual Report must be filed for each year they have active VGP coverage **[regardless if they called US ports or not]**. Annual reports must be completed for each calendar year and submitted by 28 February of the following year. For the 2013 VGP, the first Annual Report will encompass calendar year 2014 and will be due to EPA on 28 February 2015.

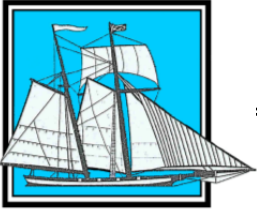
Any analytical monitoring results required for specific VGP Effluent Categories (Ballast Water, Grey Water, Oily Water Separator, as required depending on each ship) must also be submitted and their appropriate Discharge Monitoring Reports (DMRs) attached. Reports must be submitted electronically, with limited exceptions.

The Annual Report replaces the *annual non-compliance report* and *one-time permit report* requirements found in the 2008 VGP.

All instances of VGP non-compliance must be submitted as part of the Annual Report.

Vessel-Class Specific Requirements (Part 5 of the VGP):

As with the 2008 VGP, the 2013 VGP contains additional requirements for certain types of ships. These types of ships are generally categorized as Cruise Ships (both large and medium-sized), Large Ferries, Barges, Oil/Petroleum Tankers and Bulk Chemical Carriers, Research Vessels, and Emergency and Rescue Vessels.



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The Vessel-Class Specific Requirements for all vessels are similar to those contained in the 2008 VGP.

- **For Cruise Ships and Large Ferries** the focus is on the maintenance, treatment, and discharge of graywater; treatment and discharges of pool and spa water, and the education of crew and passengers.
- **Tank vessels** have an additional authorized effluent: Washwater from inert gas generators and deck seals. However this discharge must be minimized if feasible for their design. Additionally, scuppers must remain plugged during cargo operations, visual inspections of the water surrounding the vessel, and additional training requirements for crewmembers.

THE 2013 VGP - US STATE “401 CERTIFICATIONS”

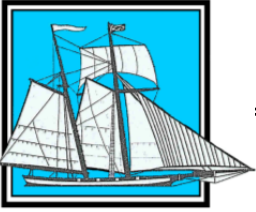
Under the *Clean Water Act*, US States are provided the opportunity to review and certify permits issued under the *National Pollution Discharge Elimination System*. During this Certification process, the States may either certify the VGP “as-is”, they may decline or waive their right to certify, or they may certify “with Conditions”. These “Conditions” often result in additional requirements being added to the VGP which are only applicable in that particular State’s waters.

For the 2008 VGP, 26 US States added Conditions to their Certification to the VGP. For the 2013 VGP, 25 US States added conditions. These States are as follows:

Alaska*	Indiana*	New York*
Arizona	Iowa*	North Carolina*
Arkansas	Kansas	Ohio*
California*	Maine*	Rhode Island*
Connecticut*	Michigan*	Vermont*
Georgia*	Minnesota*	Washington*
Hawaii*	Missouri	Wisconsin*
Idaho	Nebraska	
Illinois*	New Hampshire*	

* State Conditions discussed in this document.

Of the States listed above, the States identified with an asterisk are considered to have ports where Client vessels are likely to call and will be discussed in this Advisory. The remaining States listed do not have saltwater ports, but may have inter-state lakes or rivers with barge or other vessel traffic where the VGP is applicable, thus their interest in stating Conditions to their certification.



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Many of the States' Certifications are lengthy and make references to their own State laws and regulations. Primarily the focus of these States is in the areas of Ballast Water, Graywater, Hull Husbandary (biofouling and cleaning) and copies of VGP Annual and Discharge Monitoring Reports sent to the EPA also provided to the State agencies.

These requirements are summarized within the table on the following pages.

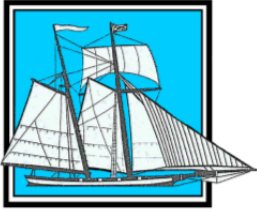
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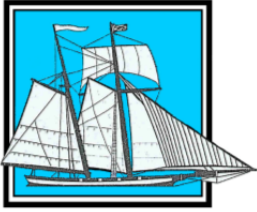


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State	Graywater (and sewage)		Ballast Water	Hull Husbandry/Biofouling	Required Reports to State?	Other
	Treated	Untreated				
Alaska	Per VGP	Per VGP	Per VGP and 33 CFR 151	Per VGP	Copies of non-compliance reports required under 40 CFR 122.44(i)(5) to be submitted to the State.	Vessels responsible for knowing status of waters they are travelling through [with regards to impaired waters and discharge activity].
California	<ul style="list-style-type: none"> Large passenger/cruise ships prohibited from discharging in State Waters. Ships >300 GRT may not discharge if adequate tankage is available. Owner/operator of a large passenger vessel shall notify the California Emergency Management Agency (Cal-EMA) immediately, but no longer than 30 minutes, after the discovery of a release of graywater or sewage to Marine Waters of the State or a Marine Sanctuary. The owner/operator of a large passenger vessel or oceangoing ship shall notify Cal –EMA immediately, but no longer than 30 minutes, after discovery of a release of hazardous waste, other waste, sewage sludge, or oily bilgewater into the marine waters of the state or a marine sanctuary. 		<ul style="list-style-type: none"> Comply with California State Lands Commission (SLC) requirements at Public Resources Code § 71200 et seq. Report to SLC after each port visit If ballast discharge to ocean [within State Waters] contains Chlorine, it cannot exceed a maximum level of 60 µg/L total residual chlorine <p>Although not listed in the Certification, the following are known to apply:</p> <ul style="list-style-type: none"> Pacific Nearshore exchange requirements; 	<ul style="list-style-type: none"> Comply with California State Lands Commission (SLC) requirements at Public Resources Code § 71200 et seq. Hull cleaning allowed only using Best Available Technologies 	<ul style="list-style-type: none"> Complete SLC forms for the Marine Invasive Species Program found at: http://www.slc.ca.gov/spec_pub/mf/d/ballast_water/C/ompliance_Rptng_Docs.html <p>Although not listed in the Certification, the following are known to apply:</p> <ul style="list-style-type: none"> Hull Husbandry report annually after notification BW report to SLC within 24 hours after each port visit. 	<ul style="list-style-type: none"> Discharges shall comply with the California Clean Coast Act of 2005 A monitoring study will be conducted – vessels that do not discharge in California for 2013 VG cycle are not subject to data submissions. A fee will be charged to all NOI filers to pay for above study. On receipt of NOI form from EPA, must submit copy along with fee [which is not yet specified] to State of California. None of the vessel VGP discharges may contain hazardous substances listed in Attachment 2 [to the Certification Letter].

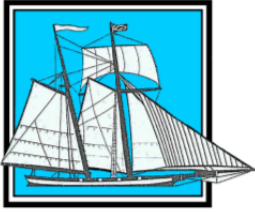


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State	Graywater (and sewage)		Ballast Water	Hull Husbandry/Biofouling	Required Reports to State?	Other
	Treated	Untreated				
Connecticut	No discharge permitted.		Per VGP and 33 CFR 151. All vessels entering Connecticut must maintain ability to measure salinity levels in each ballast tank so that salinities between 20 and 25 PPT can be ensured for ballast exchange in marine waters.	Per VGP	Must submit copy of NOI and all reports required in Appendix A to J of the VGP to State Department of Energy and Environmental Protection.	Discharge of Exhaust Scrubber Wash water is prohibited.
Georgia	Vessels < 20 GRT must process through MSD, otherwise VGP applies.		Per VGP and 33 CFR 151	Per VGP	None	Georgia DNR or EPD personnel, or other duly authorized agents, shall have access to any vessel at reasonable times for the purpose of determining compliance with these rules.
Hawaii	Sewage, whether comingled with graywater or not, shall be disposed at pier side collection or treatment system or outside of estuaries or embayments.		Per VGP and 33 CFR 151	Per VGP	Report all non-compliance to basic water quality criteria applicable to all state waters, and all analytical monitoring data that exceeds the numerical criteria of the State WQS to the State as soon as the vessel becomes aware. Reporting will be on a form provided by the Director.	Information similar to (but not exactly matching) the NOI must be submitted to the State at a state-run website before coverage of effluent discharges become covered [<i>i.e., before discharges under the VGP will be allowed</i>].

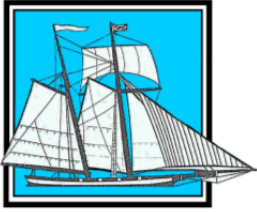


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	Treated	Untreated				
Illinois	Per VGP	Per VGP	Per VGP and 33 CFR 151 (for vessels entering the Great Lakes) Discharges of Total Residual Chlorine [from BWTS using Active Substances or those that generate Chlorine] shall not exceed 0.019 mg/L	Per VGP	None	No discharge from any vessel shall contain settle able solids, floating debris, visible oil, grease, scum or sludge solids.
Indiana	Per VGP	Per VGP	Per VGP and 33 CFR 151 (for vessels entering the Great Lakes) Oceangoing vessels eligible for coverage by the VGP that enter the Great Lakes – St Lawrence and are transiting from beyond the 200 NM EEZ shall perform open ocean ballast water exchange/saltwater flushing before entering the Seaway System in order to ensure water quality standards are met. [This requirement appears to remain even after a BWTS is installed] Discharges of Total	Per VGP	None	Permittee shall allow the Commissioner or authorized representative to enter and inspect vessels, examine records, inspect monitoring or operational equipment, etc., and to sample or monitor any discharge of pollutants from covered vessels.

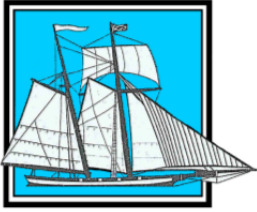


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Indiana (Continued)			Residual Chlorine [from BWTS using Active Substances or those that generate Chlorine] shall not exceed 0.02 mg/L			
Iowa	Per VGP	Per VGP	Per VGP and 33 CFR 151 (for vessels entering the Great Lakes)	Per VGP	None	All discharges to the waters of the State of Iowa from vessels covered by the VGP shall not cause a violation of Iowa Water Quality Standards.
Maine	<p>Large vessels >250 passengers prohibited from discharging graywater into No Discharge Areas.</p> <p>Large commercial passenger vessels (>250 passengers) must report discharges of all blackwater, a mixture of blackwater and graywater, or graywater into No Discharge Areas to the Department.</p>		Operator of any vessel covered by VGP whose voyage originates from outside of EEZ shall conduct ballast water exchange or flushing in waters of 200NM from any shore at least 2,000 Meters deep, resulting in salinity levels of at least 30 PPT. This shall be done regardless if the vessel has a BWTS installed	Hull cleaning prohibited except as required for emergency hull repairs.	None	None
Michigan	Discharges of Blackwater and Graywater are prohibited in Michigan waters.		<ul style="list-style-type: none"> Must obtain Michigan discharge permit MIG140000 prior to discharge. Vessels entering Michigan waters from outside the EEZ must conduct ballast water exchange (or salt water 	Per VGP	None listed in Certification, but reports required as part of Michigan Discharge Permit.	<p>All vessels using BWTS will allow MDEQ reasonable entry to the vessel for inspection, access to records, and collection of ballast water discharge sample.</p> <p>All discharges to Michigan waters are prohibited from causing or contributing to exceedances of the Michigan Water</p>



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	Treated	Untreated				
Michigan (Continued)			flushing) 200 NM from any shore and in waters beyond the EEZ. <ul style="list-style-type: none"> • A salinity of 30 PPT must be maintained. • This requirement remains in effect even if a BWTS is installed unless it is demonstrated to the State that discharge standards adopted after the date of this Certification for living organisms are met. • Operator of a vessel whose voyages originate from outside the EEZ will monitor ballast water discharged from their vessel at least once per year, and submit a report summarizing the results to MDEQ no later than 31 December each year. 			Quality Standards.
Minnesota	Per VGP	Per VGP	<ul style="list-style-type: none"> • Must obtain permit from State for Ballast Water discharges. • Vessels entering Minnesota waters shall not discharge ballast 	Per VGP	Annual BWTS test and monitoring reports on BWTS to both EPA and the State	None

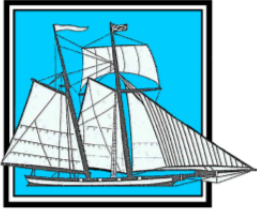
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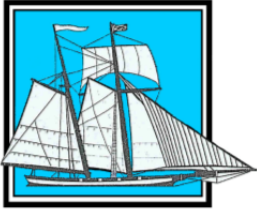


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	Treated	Untreated				
Minnesota (Continued)			unless it has been exchanged at least 200 NM from any shore in waters at least 2,000 Meters in depth, resulting in a salinity of at least 30 PPT. <ul style="list-style-type: none"> • This requirement remains in place regardless if the vessel is equipped with a BWTS. • Sample and test BWTS discharge ate last once year. 			
New Hampshire	All Sewage discharge prohibited within 3 NM of shore whether treated or untreated (including graywater containing sewage). [The shoreline of New Hampshire has been designated a No-Discharge Zone by the EPA]. Graywater without sewage should be discharged at pumpout stations or outside of 3 NM from shore.		Per VGP and 33 CFR 151	Per VGP	None	None
New York	Per VGP.		<ul style="list-style-type: none"> • Vessels entering New York waters shall not discharge ballast unless it has been exchanged at least 200 NM from any shore in waters at least 2,000 Meters in depth, 	Per VGP	Annual BWTS test and monitoring reports on BWTS to both EPA and the State.	Discharge of bilge water is prohibited in New York waters.



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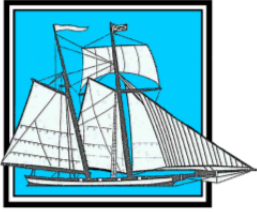
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New York (Continued)			resulting in a salinity of at least 30 PPT. <ul style="list-style-type: none"> This requirement remains in place regardless if the vessel is equipped with a BWTS. 			
North Carolina	Per VGP	Per VGP	Per VGP and 33 CFR 151	Per VGP	None	None
Ohio	Per VGP	Per VGP	<ul style="list-style-type: none"> Per VGP and 33 CFR 151, except prohibited from discharging ballasted sea water within breakwaters of Lake Erie Ports. For BWTS using or producing Chlorine, discharge is limited, see text. 	Per VGP	None	None
Rhode Island	Per VGP	Per VGP	<ul style="list-style-type: none"> Bilge Water discharges must be made outside of Rhode Island waters. Vessels shall not bring ballast water into Rhode Island waters unless it has been exchanged/tanks flushed at least 200 NM from any shore in waters at least 2,000 Meters in depth.. 	Per VGP	Annual BWTS test and monitoring reports on BWTS to both EPA and the State.	None

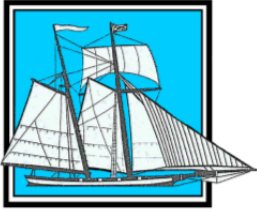


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Rhode Island (Continued)			<ul style="list-style-type: none"> This requirement remains in place regardless if the vessel is equipped with a BWTS. 			
Vermont	Per VGP	Per VGP	Per VGP & 33 CFR 151	No discharge of hull wash waters to Vermont State waters.	Immediate report required in case of release of oil.	None
Washington	No large or medium Cruise Ship shall discharge graywater within 0.5 miles of a shellfish bed that is recreationally harvested or approved for commercial harvest.		Per VGP & 33 CFR 151	<ul style="list-style-type: none"> Regular cleaning of hulls and niche areas is only routinely available nontoxic method for minimizing transport of attached living organisms. The release of nonnative aquatic species from in-water cleaning of hulls, niche areas and running gear is prohibited 	<p>Any discharge of graywater in violation of the VGP</p> <p>Any discharge of sewage if it exceeds the bacterial or suspended solids standards in 40 CFR 140.3(d).</p>	Discharges to State waters causing a sheen, film, sludge, foam, turbidity, color or odor are prohibited.



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Washington (Continued)				without approval from Washington Dept of Fish and Game. <ul style="list-style-type: none"> Severely accumulated biofouling may also be considered as an illegal release 		
Wisconsin	Per VGP	Per VGP	<ul style="list-style-type: none"> State discharge permit required. Install BWTS per schedule in VGP. Discharges of ballast water from vessels containing seawater in other than insignificant amounts that remain in tanks is prohibited unless it can be demonstrated that the discharge will comply with Wisconsin chloride limits. BWTS must be specifically tested for use in freshwater. 	Per VGP	All instances of non-compliance must be reported to WDNR immediately.	Permittee shall allow access onto the vessel for inspection, access to records, and to collect ballast water samples.

END OF ADVISORY

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