

**VIDA Initial Review, Summary and Comments**

7 October 2020

Regulated Discharge	Observations on the Standard	Reference	Comments	Concerns and Queries
Scope	<i>Vessel discharges.</i> Any discharge incidental to the normal operation of a vessel. <i>Area of coverage.</i> ...waters of the United States or the waters of the contiguous zone.	Page 255, §139.1(a)(1) Page 256, §139.1(c)	<ul style="list-style-type: none">Does not prevent any State from regulating sewage discharges.Waters of the United States would be 'territorial waters', i.e. 12nm from shore (nearest land).	
General Operation and Maintenance	Vessels must implement best management practices aimed at reducing pollutants being introduced into the discharge at source and then limiting the volume of the discharge.	Page 270, §139.4.	<ul style="list-style-type: none">Standard best management practice consistent with VGP requirements.Minimizing denotes that the vessel must demonstrate 'control' over the discharges that are covered in the rule.	As per VGP, is it of value to request a list of relevant substances that are acceptable or not-acceptable as per the reference to disinfectants, cleaners, biocides, coatings, sacrificial anodes and FIFRA registration?
Biofouling Management	A vessel-specific biofouling management plan must be developed and followed with a goal to prevent macrofouling,	Page 272, §139.5	<ul style="list-style-type: none">Discharges of biofouling organisms during normal operation of the vessel include, but are not limited to, those from maintenance and cleaning activities of hulls, niche areas, and associated coatings. Page 51.The plan can be based on the IMO's Guidelines, MEPC.207(62) and should include elements that prioritize procedures and strategies to prevent macrofouling. Page 53.The plan must also include those elements listed in the VGP: consideration of vessel class, operations, and biocide release rates and components in the selection of antifouling systems, an annual inspection of the vessel hull	Cross reference also to section §139.22 on Hulls and associated niche areas as well as §139.28 Seawater piping.



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			and niche areas for assessment of biofouling organisms and condition of anti-fouling paint, a drydock inspection report noting that the vessel hull and niche areas have been inspected for biofouling organisms and those organisms have been removed or neutralized, reporting of cleaning schedules and methods, and appropriate disposal of wastes generated during cleaning operations. Page 53.	
Oil Management	An environmentally acceptable lubricant (EAL) must be used in any oil-to-sea interface unless such use is technically infeasible.	Page 273. § 139.6 (d).	<ul style="list-style-type: none"> EPA notes that certain types of seals used on below-deck equipment such as air seals are based on designs that use an air gap or other mechanical features to prevent oils from reaching waters at the exterior of the vessel's hull. To the extent that these seals do not allow the lubricant to be released under normal circumstances, they are not considered to be oil-to-sea interfaces¹. Page 59. 'Technically infeasible' as defined in the VGP will be retained but that the USCG will develop implementing regulations to assist in determining when the use of an EAL is 'technically infeasible'. Page 59. VGP EAL labelling issues are dealt with and are expanded to include the European Ecolabel definition of biodegrade. Pages 59-62 	This should be welcomed by the industry as an improvement on the VGP. But needs input from EnvComm.
1. Ballast tanks	Excludes vessels implementing the continuous flow-through method .	Page 273. § 139.10(b)(1)	<ul style="list-style-type: none"> Page 273. Ref. Saudi Arabia, Saudi Aramco FastBallast, first presented to IMO MEPC as a design for tankers. Great Lakes carriers also researched this alternative to BWMS. 	

¹ An important development evolving from INTERTANKO's Guidance for Implementing the EPA 2013 Vessel General Permit (2013 VGP), pages 10-11.



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	Ballast tanks must be periodically flushed and cleaned to remove sediment and biofouling organisms .	Page 274. § 139.10(c)(1)(i)	<ul style="list-style-type: none"> 	The explanation suggests this is consistent with the VGP and USCG requirements and that the flushing/cleaning can be undertaken at dry-dock. However, the VGP and USCG requirements DO NOT cover cleaning of ballast tanks for the purpose of removing biofouling. How do you remove and then confirm removal of biofouling in tanks? This is over and above a discharge standard. Page 70.
	Biological discharge standard set as per VGP and USCG standards.	Pages 75 and 275. § 139.10(d)	<ul style="list-style-type: none"> Living continues to be used as opposed to the IMO D-2 term, viable. Justification for the continued use of this discharge standard is offered and arguments for the continued use of BAT and the USCG established BWMS type-approval process. Pages 79-90. Alignment and not exceedance of the IMO D-2 standard. Pages 83-106. 	
	Exemption if the vessel takes on and discharges ballast water exclusively in the contiguous portions of a single COTP Zone.	Pages 146 and 276. § 139.10(d)(3)(iii)	<ul style="list-style-type: none"> Consistent with VGP and USCG rules. 	
	Compliance dates for using a BWMS and BWE will be issued by the USCG in line with the USCG ballast regulations.	Pages 76, 150, 151 and 276. § 139.10(d)(3)(vii)	<ul style="list-style-type: none"> USCG extension program will remain in place and administered by the USCG. Pages 150 and 151. 	



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	Saltwater flushing of empty ballast tanks introduced for vessels using BWE as its treatment option.	Pages 276-277. § 139.10(e)(3)(i)	<ul style="list-style-type: none"> Exemption for vessels with USCG TA BWMS that have used the BWMS to treat the residual waters and sediments, 'residual waters and sediments of an empty ballast tank <i>were</i> subject to treatment...through a BWMS. This needs clarification. Pages 153-155 and 277. 	Further consideration needed in respect of the implications of this requirement. If the BWMS treats on discharge then the residual water and sediments in the ballast tank would NOT be treated – but the text suggests that so long as the residual water and sediments are treated using the BWMS it is not important when the treatment occurs, only that it is treated before discharge.
	Exchange and treat for Great Lakes , includes saltwater flushing for empty tanks even with BWMS installed.	Pages 278-279. § 139.10(f)	<ul style="list-style-type: none"> Goes beyond the VGP requirements. Page 156. 	
	Pacific region and ballast water exchanges exemptions.	Pages 279-281. § 139.10(g)(1)	<ul style="list-style-type: none"> USCG BWMS vessels would be exempt from the BWE requirements. Page 158 and § 139.10(g)(1)(ii)(A) 	Member input required to review the exemptions and their impact on tankers.
	Pacific region and low-salinity waters .	Pages 161, 280-281. § 139.10(g)(2)	<ul style="list-style-type: none"> Exchange and treat required for vessels coming from low-salinity regions and discharging ballast in the Pacific region. Page 280. §139.10(g)(2)(i). If exchange is to be excluded the BWMS must be approved to treat 100 x the biological discharge standard. Page 281. §139.10(g)(2)(ii) 	Member input required to review the exemptions and their impact on tankers.
2. Bilges	Discharge treated bilge only when en route .	Pages 162-166 and 282. § 139.11(c)	<ul style="list-style-type: none"> This requirement is introduced for all vessels over 400gt without the previous VGP limitation of being further than 1nm from shore. 	EPA specifically invites comments on reducing the 15ppm limit to 5ppm , , '...EPA invites comments on...(1) type-approved systems capable of meeting a 5 ppm numeric discharge standard, and (2) OCMs that can consistently and accurately determine oil content at these low detection levels when considering margin for error. The research performed by EPA suggests that OCMs relying on alternative



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				<i>mechanisms other than turbidity/light scattering, such as UV fluorescence, may be more accurate since the monitor can differentiate between oil and other contaminants.’ Page167.</i>
3. Boilers	Boiler blowdown.		<ul style="list-style-type: none"> No change from VGP for vessels above 400gt, best practice to be used to minimize discharges of blowdown. 	
4. Cathodic protection	Anode metal selection criteria removed.	Page 171.	<ul style="list-style-type: none"> Small change, ‘EPA is not carrying forward the requirement from the VGP regarding the selection of sacrificial anode systems based on toxicity of the anode’ as it deemed that this selection criteria for anode metal selection may not be technically feasible nor economically practicable. Although EPA support toxicity used as part of the anode selection consideration. 	Question over the recommendation to use ICCP.
5. Chain lockers			<ul style="list-style-type: none"> EPA establishes a set of recommendations off the back of the VGP, extending management practices to 12nm / waters of the US. Page 173 and § 139.14(b), (c) and (d). 	Does this necessitate the development of a stand-alone chain locker management plan? Is this to welcomed?
6. Decks			<ul style="list-style-type: none"> Additional requirements for tankers as per VGP Section 5.5.2 do not seem to have been included: <i>5.5.2 Additional Effluent Limits</i> <i>Owners/operators of oil tankers must plug scuppers during cargo loading and unloading operations to prevent the discharge of oil into waters subject to this permit. Any oil spilled must be cleaned with oil absorbent cloths or another appropriate approach.</i> 	Check if § 139.15(b) would cover the plugging of scuppers during cargo operations.
7. Desalination and Purification	Introduces prohibition on discharges from cleaning of	Page 285. § 139.16(b)		



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	desalination and purification systems.			
8. Elevator pits	None.			
9. Exhaust gas emission control systems	EPA is proposing to incorporate the discharge requirements of the IMO 2015 EGCS Guidelines as well as the IMO 2018 EGR Guidelines as EPA standards.	<p>Pages 181 and 285. § 139.18(a)</p> <p>Pages 181 and 285. § 139.18(b)(1)</p> <p>Pages 184-185 and 285-287. § 139.18(a), (c) and (d)</p>	<ul style="list-style-type: none"> • Applicability to both exhaust gas cleaning system (EGCS) and exhaust gas recirculation (EGR) system. • EPA proposes to amend the pH limit for discharges of EGCS washwater to 6.5 and is adding the additional IMO option for determining the limit based on either in-water measurement or a calculation-based methodology. • Inclusion of EGR bleed-off water into the standards is a change from the VGP which was limited to EGCS discharges. • Two differences between IMO 2018 EGR standards and VIDA: <ol style="list-style-type: none"> 1. Distinction of whether the vessel is in port, underway outside of US waters. (IMO distinguishes between harbours, estuaries, Polar waters and whether underway or not). 2. No exception given oil content in EGR bleed-off. 	<p>Note the EPAs consideration of the total ban on the use of scrubbers, as an ongoing item to monitor for the agency. The intent is to follow IMO's work and amend the national standards in line with any changes at the International / IMO level. Page 184.</p> <p>Some further understanding of the applicability of the EGR requirements versus the IMO 2018 EGR Guidelines would be beneficial.</p>
10. Fire protection equipment	Prohibition of discharges from fire protection equipment in port and must not contain fluorinated firefighting foam.	Page 185-190 and 286-287. § 139.19	<ul style="list-style-type: none"> • The discharge requirement is in line with the VGP as is the AFFF and fluorinated AFFF prohibition (VGP 2.2.5). 	It is not clear how the use of 'in port' and the prohibition of fluorinated FFF will deviate from standard practice and implementation of the previous AFFF requirements of the VGP. Further consideration of this will be necessary. Possible further guidance needed on this and alignment with INTERTANKO's Guidance on Waste Management for Tankers 2020.



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11. Gas turbines	The discharge of untreated gas turbine washwater is prohibited unless infeasible .	Pages 190-191 and 288. § 139.20	<ul style="list-style-type: none"> The prohibition applies to 'untreated' washwater discharges. Does this imply that there is an exception for 'treated' gas turbine discharges? 	This exception is not in the VGP but the question is whether treating gas turbine cleaning washwaters is common? VGP prohibits the 'direct' discharge of gas turbine washwater. What is the 'indirect' discharge? It cannot be commingled with another treatment system onboard if VIDA is to remain consistent with the VGP (2.2.14).
12. Graywater	Graywater discharge prohibited within 3NM of shore . Minimization of greywater production and discharge.	Page 191-196 and 288-290. § 139.21 Page 191.	<ul style="list-style-type: none"> Significant departure from the VGP 2.2.15 with a discharge prohibition for greywater within 3nm of shore. Exception provided for exceeding the greywater storage capacity or discharge of treated greywater – see standard in § 139.21 (f) BMPs, e.g. kitchen oils, phosphate-free soaps etc, are consistent with the VGP 2.2.15. Combined or advanced treatment systems that mix or commingle greywater with other residues for treatment are acceptable (e.g. combined greywater and sewage treatment systems, AWTS). 	Applicability of the standard in § 139.21 (f) to new vessels only, see § 139.21 (e)(1) – so existing vessels may discharge greywater within regulated waters if the storage capacity is exceeded while new vessels would need to either retain the greywater if the capacity was exceeded or discharge using a treatment system to meet the discharge standards.
13. Hulls and associated niche areas	Anti-fouling system (coating) must be specific to the vessel's operational profile.	Pages § 139.22(b)	<ul style="list-style-type: none"> Selection of the AFS would be included in the Biofouling Management Plan – see also INTERTANKO's Guide to Modern antifouling Systems and Biofouling Management 2020. Consistency with the AFS Convention, cybutrene is being included as a prohibited substance together with organotin. 	As this is consistent with the IMO Guidelines and with the majority of INTERTANKO members now using stand-alone Biofouling Management Plans, then this 'should' not present a challenge or concern for INTERTANKO members. Standard hull management practices in terms of periodicity of cleaning will be included in members' biofouling management plans. Copper-based AFS remain under scrutiny, as per VGP 2.2.23, with EPA calling on



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				information related to limitations of leach rates for copper-based AFS used on commercial vessels – could be relevant but would need further consideration with coatings experts in EnvComm/ISTEC.
	<p>In-water cleaning permissible for soft fouling but capture required for hard fouling above FR20.</p> <p>In-water cleaning and capture (IWCC) permitted under certain conditions.</p>	Pages 202-209 and 291-292. § 139.22(c)	<ul style="list-style-type: none"> • In-water cleaning may occur but only for ‘grooming/preventative cleaning’, i.e. maintenance of soft-fouling and slime – reference to FR-20 – see additional notes and reference table below. • For hard fouling/scrubbing of hull, in-water cleaning may also occur but it must involve capture of biofouling and antifouling residues. IWCC. • Exemptions exist if the biofouling was accumulated in the local waters (a single port / ‘clean-before-you-go’). So a vessel idle in US waters may be able to clean hardfouling § 139.22(c)(4)(i) • Limitations are introduced for copper-based systems in federally-protected waters. • Additional limitations; do not undertake cleaning ‘...on any section of a biocidal antifouling coating that shows excessive cleaning actions (e.g., brush marks) or blistering due to the internal failure of the paint system’. 	Copper-impaired waters listed on EPA website – mostly freshwater and not relevant to trading patterns of members’ tankers.
14. Inert gas systems		Pages 46, 209 and 292. § 139.23	<ul style="list-style-type: none"> • Important to note that there is no change from VGP. 	



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15. Motor gasoline and compensating systems			<ul style="list-style-type: none"> No change from VGP. 	
16. Non-oily machinery			<ul style="list-style-type: none"> No change from VGP. 	
17. Pools and spas			<ul style="list-style-type: none"> No change from VGP. 	
18. Refrigeration and air conditioning			<ul style="list-style-type: none"> No change from VGP. 	
19. Seawater piping	Niche areas to be fitted with MGPS.	Pages 214,	<ul style="list-style-type: none"> Definition of MGPS has been expanded to go beyond just sacrificial anodes (copper) and chlorine-based systems to include, <i>'chemical injection; electrolysis, ultrasound, ultraviolet radiation, or electrochlorination; application of an antifouling coating; or use of cupro-nickel piping'</i>. 	Consider whether this would simply be incorporated into the Biofouling Management Plan or whether this necessitates the installation of new or additional MGPS. Consideration of the threshold standard FR-20. Is this practical and relevant? Uncertain why EPA felt it necessary to exclude 'Seawater piping' from the requirements under Biofouling (§139.5) and /or Hull and associated niche areas (§ 139.22).
20. Sonar domes			<ul style="list-style-type: none"> No change from VGP. 	

Largely consistent* with VGP

Slightly modified* from VGP

Significant modifications* from VGP

*** Comment: The distinction by the EPA of sections that differ slightly, significantly or not at all from the VGP is misleading and it is up to the regulated entity (INTERTANKO members) to determine if the modifications have a significant or slight impact on their vessel operations.**



Notes

General comments

Evaluating the use of BPT/BCT/BAT when defining the discharge standards. Pages 41-42.

EPA were not given sufficient time by Congress to re-evaluate all 30 discharge standards established in the VGP using BPT/BCT/BAT but did so where there were meaningful changes in technology or practices. Page 42.

Added that because the standards do not materially differ from VGP then the BPT/BCT/BAT analysis used for the VGP was relied upon/used. Page 43.

Five year period of review and revision of the standards. Page 43.

...with limited exceptions the VIDA is to be at least as stringent as the VGP. Page 9

...the standards are required to be technology-based. Page 10

Special requirements for oil and chemical tankers

VGP Section 5.5 included special requirements for tankers, much of which seems not to have been carried over into VIDA.

General Discharge Standards (GDS)

Best Management Practices (BMP) will be required to be implemented. Aim to reduce the pollutants being introduced into the discharge at source and then limiting the volume of the discharge. Page 11.

Specific Discharge Standards (SDS)

Discharges from pieces of equipment and systems. 20 in total. Page 11.

...based on best available technology economically achievable, best conventional pollutant control technology, and best practicable technology currently available, including the use of BMPs. Page 11.

EPA is proposing changes to the VGP requirements to...improve clarity, enhance enforceability and implementation, or incorporate new information and technology. Page 12. *Useful to reference in the comment submission letter/paper.*

Procedure for States to establish no-discharge zones, different discharge standards or emergency orders. Page 13.



Scope Pages 29-30

Waters: Contiguous zone, Navigable waters and Territorial seas.

Vessels: All INTERTANKO member vessels fall within the scope of this rule; new and existing (contingent on the discharge).

Definitions

Several key definitions remain similar or the same as VGP or USCG legislation, importantly, these include:

Ballast water exchange...means the replacement of ballast water in a ballast tank using one of the following methods:

(1) Flow-through exchange, in which ballast water is flushed out by pumping in mid-ocean water at the bottom of the tank if practicable, and continuously overflowing the tank from the top, until three full volumes of tank water have been changed. (2) Empty and refill exchange, in which ballast water is pumped out until the pump loses suction, after which the ballast tank is refilled with water from the mid-ocean.

Ballast water management system, means any marine pollution control device (including all ballast water treatment equipment, ballast tanks, pipes, pumps, and all associated control and monitoring equipment) that processes ballast water to kill, render nonviable, or remove organisms; or to avoid the uptake or discharge of organisms. Page 258.

Constructed in respect of a vessel means a stage of construction when: (1) The keel of a vessel is laid; (2) Construction identifiable with the specific vessel begins; (3) Assembly of the vessel has commenced and comprises at least 50 tons or 1% of the estimated mass of all structural material of the vessel, whichever is less; or (4) The vessel undergoes a major conversion. Page 260

Empty ballast tank, means a tank that has previously held ballast water that has been drained to the limit of the functional or operational capabilities of the tank (such as loss of pump suction); is recorded as empty on a vessel log; and may contain unpumpable residual ballast water and sediment. Page 261.

Live or living, notwithstanding any other provision of law (including regulations), does not:

(1) Include an organism that has been rendered nonviable; or

(2) Preclude the consideration of any method of measuring the concentration of organisms in ballast water that are capable of reproduction. Page 264.

New definitions for:



Fouling rating means the scale developed by the U.S. Navy (Naval Ships' Technical Manual, Chapter 81, Waterborne Underwater Hull Cleaning of Navy Ships, Revision 5, S9086-CQ-STM-010, 2006²) that assigns a fouling rating (FR) number to the 10 most frequently encountered biofouling patterns. Numbers

² Naval Ships' Technical Manual, Chapter 81:

Table 081-1-1 FOULING RATINGS (FR) IN ORDER OF INCREASING SEVERITY

Type	Fouling Rating (FR)	Description
Soft	0	A clean, foul-free surface; red and/or black AF paint or a bare metal surface.
Soft	10	Light shades of red and green (incipient slime). Bare metal and painted surfaces are visible beneath the fouling.
Soft	20	Slime as dark green patches with yellow or brown colored areas (advanced slime). Bare metal and painted surfaces may be obscured by the fouling.
Soft	30	Grass as filaments up to 3 inches (76 mm) in length, projections up to 1/4 inch (6.4 mm) in height; or a flat network of filaments, green, yellow, or brown in color; or soft non calcareous fouling such as sea cucumbers, sea grapes, or sea squirts projecting up to 1/4 inch (6.4 mm) in height. The fouling can not be easily wiped off by hand.
Hard	40	Calcareous fouling in the form of tubeworms less than 1/4 inch in diameter or height.
Hard	50	Calcareous fouling in the form of barnacles less than 1/4 inch in diameter or height.
Hard	60	Combination of tubeworms and barnacles, less than 1/4 inch (6.4 mm) in diameter or height.
Hard	70	Combination of tubeworms and barnacles, greater than 1/4 inch in diameter or height.
Hard	80	Tubeworms closely packed together and growing upright away from surface. Barnacles growing one on top of another, 1/4 inch or less in height. Calcareous shells appear clean or white in color.
Hard	90	Dense growth of tubeworms with barnacles, 1/4 inch or greater in height; Calcareous shells brown in color (oysters and mussels); or with slime or grass overlay.
Composite	100	All forms of fouling present, Soft and Hard, particularly soft sedentary animals without calcareous covering (tunicates) growing over various forms of hard growth.



are assigned on a scale from 0 to 100, in 10-point increments, with the lowest number representing a clean hull and the higher numbers representing biofouling organism populations of increasing variety and severity. Page 262.

Marine growth prevention system (MGPS), means an anti-fouling system used for the prevention of biofouling accumulation in seawater piping systems and sea chests. (source: modified from IMO MEPC.207(62)). Page 264.

Mid-ocean, means greater than 200 nautical miles (NM) from any shore, except when a ballast water exchange or saltwater flush outside of 50 NM is authorized in this part, then it means greater than 50 NM from any shore. For regular maintenance of ballast tanks to remove sediments, it means outside the waters of the United States or the waters of the contiguous zone. Page 265.

Oil-to-Sea interface, means any seal or surface on ship-board equipment where the design is such that oil or oily mixtures can escape directly into surrounding waters. Oil-to-sea interfaces are found on equipment that is subject to submersion as well as equipment that can extend overboard. Page 267.

Ballast Water

Removal of a list of outdated BMPs for ballast water management which are standard in many industry BWMPs – since ICS/INTERTANKO Model BWMP 1997. Page 74.

Discharge standard as per the VGP and USCG biological standard but with the clarification that a living organism does not include an organism that is rendered non-viable. A caveat is also offered in regards to the lack of an agreed testing method for quantifying non-viable organisms in ballast water. Pages 75 and 275.

Subpart D – Special Area requirements

Additional discharge requirements for vessels trading in the Great Lakes, Pacific region and waters subject to Federal protection. Page 295-296, § 139.40.

Development of a chart for INTERTANKO members to delineate federally-protected waters and Pacific region discharge requirements may be beneficial. See in particular Appendix A to Part 139—Federally-Protected Waters, pages 304-328. Perhaps the EPA already map these regions and if not, they should be requested to do as part of the implementation of VIDA. Having separate maps and charts offered by the various parks and conservation entities in the US is not hugely helpful.

Subpart E - Procedures for States to Request Changes to Standards, Regulations, or Policy Promulgated by the Administrator



The process for a **State requesting to change the discharge standards** established by VIDA allows for a **public comment period** and therefore intervention or comments to be made by INTERTANKO. Pages 297-298, § 139.50(d)(2).

The process for a **State requesting the establishment of a no-discharge zone (NDZ)** allows for a **public comment period**. Further, States wishing to establish NDZs should also demonstrate they have **adequate reception facilities** for any discharges being prohibited, § 139.52(d)(2) and (g).
