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FINAL ENVIRONMENTAL IMPACT STATEMENT. REGULATIONS FOR U.S. TANK--ETC(U)
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DEPARTMENT OF TRANSPORTATION

COAST GUARD

(2)

FINAL

ENVIRONMENTAL IMPACT STATEMENT

REGULATIONS FOR U.S. TANK VESSELS CARRYING OIL IN FOREIGN TRADE AND FOREIGN TANK VESSELS THAT ENTER THE NAVIGABLE WATERS OF THE UNITED STATES

PROTECTION OF THE MARINE ENVIRONMENT

OCTOBER 1976

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16. Abstract

This statement assesses the environmental impact of changing the pollution prevention regulations in Title 33, Part 157, Code of Federal Regulations to extend requirements for segregated ballast on new tank vessels over 70,000 deadweight tons and other vessel design, equipment, and operating requirements to two new groups of vessels: U.S. tank vessels carrying oil in foreign trade, and foreign tank vessels carrying oil to or from U.S. ports. These regulations, their environmental effects, and the alternatives considered by the Coast Guard are discussed in an earlier statement, Final Environmental Impact Statement; Regulations for Tank Vessels Engaged in the Carriage of Oil in Domestic Trade, completed 15 August 1975. This statement expands on and should be read in conjunction with the earlier statement.

The purpose of these regulations is to control the discharge of oily mixtures from tank cleaning and deballasting operations and to incorporate construction requirements for new vessels which will reduce size and occurrence of oil spills from future vessel accidents and improve the survivability of tankers after damage. These regulations are based on requirements of the International Convention for the Prevention of Pollution from Ships, 1973, but also include constraints on the location of required segregated ballast spaces to provide protective spaces against collision or grounding damage.

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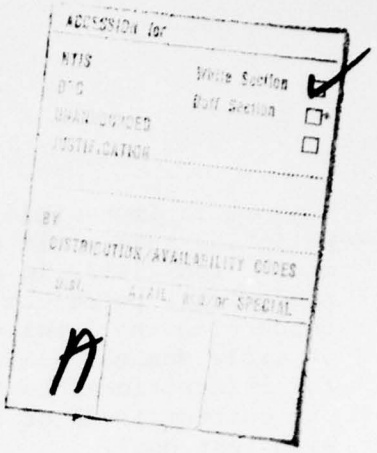

SUMMARY

( ) Draft (X) Final

Department of Transportation
U. S. Coast Guard

Contact Individual:

Executive Secretary
Marine Safety Council
U. S. Coast Guard (G-CMC/81)
Washington, D. C. 20590
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1. Name of Action.

(X) Administrative Action ( ) Legislative Action

2. Description of Action.

The pollution prevention regulations in Title 33, Part 157, Code of Federal Regulations, are to be amended by extending the present requirements to cover two additional groups of vessels: U. S. tank vessels carrying oil in foreign trade and foreign tank vessels carrying oil to or from U. S. ports. The purpose of these regulations is to control the discharge of oily mixtures from tank cleaning and deballasting operations and to incorporate construction requirements for new vessels which will reduce spill size in future casualties and improve the survivability of tankers after damage. These regulations are based on requirements contained in the International Convention for the Prevention of Pollution from Ships, 1973, but also include constraints not included in the Convention on the location of segregated ballast spaces required on new tank vessels over 70,000 deadweight tons.

3. Environmental Impact and Adverse Environment Effects

Application of the discharge criteria to these two additional groups of vessels will reduce operational outflows by approximately 5,760 metric tons per year. Additional reductions will be achieved in future years as new vessels built with improved damage resistance and defensive space arrangement enter service. Additional reductions will also result from adoption of similar control measures by other countries with the adoption and entry into force of the International Convention for the Prevention of Pollution from Ships, 1973. The Coast Guard believes the extension of U. S. regulations to foreign vessels carrying oil to or from U. S. ports will contribute toward adoption of the Convention by other countries.

It is impossible to say what impact the elimination of the oil pollution that would otherwise occur will have on the marine environment. Too little is known about the ocean system and its ability to accommodate petroleum hydrocarbon inputs. Until basic questions concerning the level of petroleum hydrocarbon input at which irreversible damage will occur can be answered it seems wisest to work for international control of inputs and push forward research to reduce our current level of uncertainty. These regulations are consistent with that goal.

These regulations should have no adverse environmental effects.

4. Economic Impact

These regulations require a number of actions to be taken by shipowners in an effort to reduce oil inputs to the oceans. These actions will require additional capital investment in vessels and equipment and will also increase operating costs. It is likely that these additional costs of doing business will be passed on to the consumer as increased transportation costs added onto the price of petroleum products. Under the most pessimistic set of assumptions, these increased transportation costs are estimated to be less than 0.2 cents per gallon. The Coast Guard has considered these costs, along with the need for regulations and the extent to which the rules being considered will contribute to safety and protection of the marine environment, and has concluded that the expenditures involved are warranted by the results expected.

5. Alternatives Considered

In preparing these rules and the earlier rules for U. S. tankers in domestic trade of which these are an extension, the following alternatives were considered:

a. Publish no additional regulations. (No Action)

b. Publish regulations less stringent than those proposed.

c. Publish regulations more stringent than those proposed, including regulations requiring double bottoms, additional segregated ballast and equipment or design features intended to improve maneuvering and stopping ability.

d. Reduction of oil consumption or reduction of oil imports.

e. Use of different mode of transportation for oil.

6. Comments on the draft statement were requested from the agencies and groups listed below. An asterisk (*) indicates comments were received and are attached:

*Department of the Interior
*Environmental Protection Agency
*Department of Defense
*Department of Commerce
*Department of Transportation
*Department of State
Sierra Club
Connecticut Citizens Action Group
*Center for Law and Social Policy (representing a number of environmental groups)
American Petroleum Institute
American Institute of Merchant Shipping
American Association of Port Authorities
American Maritime Association
American Waterways Operators, Inc.
Shipbuilders Council of America
Environmental Policy Center
Coalition Against Oil Pollution
National Audubon Society

7. Dates statements were made available to the Council on Environmental Quality and the public:

Draft statement	16 April 1976
Final statement	12 NOV 1976

C O N T E N T S

TABLES

1. INTRODUCTION

Public Law 92-340, the Ports and Waterways Safety Act of 1972, authorized and charged the Coast Guard with setting up vessel traffic systems and improving standards for design, construction, alteration, repair, maintenance, and operation of oil tank vessels to control hazards to life, property, and the marine environment incident to marine commerce. As one step in the implementation of Title II of this Act, the Coast Guard issued regulations on 14 October 1975 applicable to U. S. seagoing tank vessels carrying oil in domestic trade. The purpose of those regulations is to control the discharge of oily mixtures from tank cleaning and deballasting operations, and to incorporate construction requirements for new vessels aimed at reducing spill size in future casualties and improving the survivability of tankers after damage. Segregated ballast is required on new tank vessels of 70,000 DWT and larger. The regulations are based on requirements contained in the International Convention for the Prevention of Pollution from Ships, 1973, commonly referred to as "the 1973 Marine Pollution Convention." The regulations, their environmental effects, and the alternatives considered by the Coast Guard are discussed in the final environmental impact statement filed with the President's Council on Environmental Quality and made available to the public on 15 August 1975.[1]

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[1] U. S. Coast Guard, Final Environmental Impact Statement, Regulations for Tank Vessels Engaged in the Carriage of Oil in Domestic Trade, Protection of the Marine Environment, Washington, D. C., 1975

The Coast Guard now proposes to make these earlier rules, which were applicable only to U. S. vessels in domestic trade, applicable to two additional groups of vessels:

- U. S. tank vessels carrying oil in foreign trade, and
- Foreign tank vessels carrying oil and entering the navigable waters of the United States.[2]

Just as the regulations now proposed are an extension of the earlier regulations, this environmental impact statement extends or supplements information contained in the earlier impact statement. The proposed regulatory action is based on information assembled and decisions made in the course of developing the rules for tankers in domestic trade. The reader should have available the earlier statement and consider information referred to in it in conjunction with this statement.

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[2] Where the phrases "navigable waters of the United States" and "navigable waters" appear in this statement, their meanings are as given in 33 CFR 2.05-25(a) as amended by 40 Federal Register 49327, 22 October 1975. They include territorial seas (a belt three miles wide adjacent to the U. S. coast), internal waters, and inland waters.

2. DESCRIPTION AND PURPOSE OF THE ACTION

2.1 Purpose

The purpose of this action is to reduce operational pollution from seagoing U. S. tank vessels engaged in foreign trade and tank vessels of foreign registry carrying oil and entering the navigable waters of the United States. These regulations also require certain design and construction features on new vessels which are intended to reduce oil outflows resulting from vessel accidents.

2.2 Description of the Regulations

2.2.1 General Approach

As outlined in the Introduction, these rules are basically an extension of pollution prevention regulations now in effect for U. S. tank vessels in domestic trade to two new groups of vessels - - U. S. tank vessels in foreign trade and foreign tank vessels carrying oil that enter U. S. navigable waters. These rules are similar to requirements of the 1973 Marine Pollution Convention, with some additional constraints on the location of segregated ballast spaces added. The rulemaking modifies 33 CFR 157 to extend its applicability to these two new groups of vessels by revising certain sections and adding where necessary notes on the applicability of rules to various categories of vessels. (See Appendix B for 33 CFR 157 as it will appear except for editorial changes and small changes to be made in response to comments received.)

2.2.2 Summary of Requirements

The applicability of individual regulations in Title 33, Part 157, of the Code of Federal Regulations to U. S. and foreign tank vessels is shown in Table 1. These requirements are the same as those applied to U. S. tank vessels in domestic trade earlier which were fully described in Section 2.3 of reference 1. Discharge requirements applicable to tank vessels are summarized in Table 2.

The proposed regulations would require new and existing foreign vessels to meet the same design and equipment requirements as new and existing U. S. vessels. The proposed operating requirements for foreign vessels and U. S. vessels are, however, different. The regulations governing discharges of oily mixtures from U. S. vessels on the high seas have not been made applicable to foreign vessels because of limits on U. S. jurisdiction over foreign vessels on the high seas. However, international law (present and proposed) establishes limits on discharges by all vessels in areas beyond the contiguous zone, which ends 12 miles from shore, (refer to Table 2 for limits).

Table 1

Pollution prevention requirements for tank vessels, Title 33, Part 157, Code of Federal Regulations

Requirements	Reference	U. S. Tankers--Domestic Trade[1,2]		U. S. Tankers--Foreign Trade[1,3]		Foreign Tankers[1,4]	
		new[5]	existing[6]	new[7]	existing[6]	new[7]	existing[6]
Oil record book	151.35	X	X	X	X	(8)	(8)
Design and equipment requirements							
Segregated ballast	157.09	X		X		X	
Segregated ballast space distribution	157.09(d)	(9)		(10)		(11)	
Pumping, piping and discharge arrangements	157.11	X	(12)	X	(13)	X	(13)
Designated observation area	157.13	X		X		X	
Cargo slop tanks	157.15	X	X	X	X	X	X
Oily residue tank	157.17	X	X	X	X	X	X
Cargo tank arrangement and size	157.19	X	(14 15)	X	(16 15)	X	(16 15)
Subdivision and stability	157.21	X		X		(17)	
Cargo and ballast system information	157.23	X	X	X	X	X	X
Submission of calculations, plans, and specifications	157.24	X		X		X	

Table 1 (continued)

Pollution prevention requirements for tank vessels, Title 33, Part 157, Code of Federal Regulations

Requirements	Reference	U. S. Tankers--Domestic Trade[1,2]		U. S. Tankers--Foreign Trade[1,3]		Foreign Tankers[1,4]	
		new[5]	existing[6]	new[7]	existing[6]	new[7]	existing[6]
Vessel operating requirements							
Discharge requirements							
Discharges: tank vessels carrying oil exclusively in rivers, lakes, bays, sounds, and the Great Lakes, and seagoing tank vessels of less than 150 gross tons	157.27	(15)	(15)	(15)	(15)		
Discharges from tank barges exempted for certain design requirements	157.28	(15)	(15)	(15)	(15)		
Discharges: seagoing tank vessels of 150 gross tons or more	157.29	(15)	(15)	X	X	(18)	(18)
Discharges; chemical additives	157.31	X	X	X	X	(18)	(18)
Discharge of cargo residue	157.37	X	X	X	X		
Machinery space bilges	157.39	X	X	X	X		
Emergencies	157.41	X	X	X	X		
Discharges: Clean and segregated ballast	157.43	X	X	X	X	(18)	(18)
Water ballast in oil fuel tanks	157.33	X		X		X	
Ballast added to cargo tanks	157.35	X		X			
Valves in cargo or ballast piping systems required to be closed at sea	157.45	X	X	X	X		
Information for master	157.47	X		X			
Instruction manual	157.49	X	X	X	X	X	X

Table 1 (continued)
Pollution prevention requirements for tank vessels
Title 33, Part 157, Code of Federal Regulations

Notes

1. This table covers two groups of regulations: (a) Those in effect as of January 8, 1976, applicable to U. S. tank vessels in domestic trade (shown in column headed "U. S. Tankers--Domestic Trade," published in 40 Federal Register 48280, October 15, 1975, and 41 Federal Register 1479, January 8, 1976, and referred to in this statement as "present regulations"), and (b) proposed changes to the regulations in 33 CFR Part 157 extending rules for tank vessels in domestic trade to cover U. S. tank vessels in foreign trade and foreign tank vessels entering U. S. waters (shown in columns headed "U. S. Tankers--Foreign Trade" and "Foreign Tankers" and referred to as "proposed regulations").

2. Domestic trade is defined in present regulation 157.03(s) as "trade between ports or places within the United States, its territories and possessions, either directly or via a foreign port including trade on the navigable rivers, lakes, and inland waters."

3. Foreign trade is defined by proposed regulation 157.03(cc) as "a trade that is not domestic trade." See note 2 for definition of domestic trade.

4. Foreign vessel is defined in proposed 157.03(bb) as a vessel that is not documented under the laws of the United States except a public vessel other than those engaged in commercial service.

See 157.01(a)(2)

5. New vessel is defined in present regulation 157.01(i) in terms of contract, keel-laying, and delivery dates. See Table 1a for specific dates.

6. Existing vessel is defined in present regulation 157.01(j) as "any vessel that is not a new vessel" and this definition is not changed by the proposed regulations.

7. The definition of new vessel in proposed regulation 157.03(i) has been expanded to cover U. S. tank vessels in foreign trade and foreign tank vessels entering U. S. waters. Refer to Table 1a for dates used in definitions.

8. Oil record book requirements in present 33 CFR 151.35 are not applicable to foreign vessels. The requirements now in 33 CFR 151.05(c) regarding inspection and maintenance of oil record books on foreign vessels do apply.

9. Segregated ballast space distribution requirements are applicable to new tank vessels contracted for after January 8, 1976.

10. Segregated ballast space distribution requirements would not be applicable to vessels built before the effective date of final regulations. (See proposed regulation 157.08(a)(4)(ii).)

Table 1 (continued)
Pollution prevention requirements for
tank vessels
Title 33, Part 157

Notes

11. Segregated ballast space distribution requirements would not be applicable to new vessels built before the effective date of final regulations. (See proposed regulation 157.08(a)(4)(iii).)

12. Existing vessels must comply with present regulation 157.11 before December 31, 1977. (See note following 157.11.)

13. An existing vessel that is a foreign vessel or a U. S. vessel that carries oil in foreign trade must comply with the requirements in 157.11 before December 31, 1979. (See proposed revision to note following 157.11.)

14. See note following present 157.19 for applicability of cargo tank arrangement and size requirements to existing vessels.

15. Applicable to some vessels within this category. Refer to regulation for specific applicability.

16. See proposed 157.19 and note following for applicability to existing vessels.

17. The requirements of present regulation 157.21 concerning subdivision and stability and of present regulation 157.47 regarding stability and loading information are not going to be extended to cover foreign vessels. Foreign vessels must comply with presently recognized international law in this area, the International Convention on Load Lines, 1966 (18 UST 1857, TIAS 6331, 640 UNTS 133).

18. Clean ballast may be discharged into U. S. navigable waters as long as the vessel has in operation an automatic oil discharge monitoring and control system in accordance with 157.37(a)(6) and the discharge does not leave a sheen. Segregated ballast may be discharged into U. S. navigable waters so long as a check has been made for oil contamination by visual examination of the top surface of liquid in the tank or testing with an oil/water interface detector in the case of double bottom ballast tanks.

Table 1a

Definition of "New Vessel"

	1973 Marine Pollution Convention	Note 3 U. S. Tankers Domestic Trade	Note 8 U. S. Tankers Foreign Trade	Note 8 Foreign Tankers
"New vessel" means a vessel that--				
is constructed under a contract awarded after _____;	December 31, 1975	December 31, 1974	December 31, 1975	December 31, 1975
in the absence of a building contract, has the keel laid or is at a similar stage of construction after _____;	June 30, 1976	June 30, 1975	June 30, 1976	June 30, 1976
is delivered after _____; or	December 31, 1979	December 31, 1977	December 31, 1979	December 31, 1979
has undergone a major conversion for which--				
the contract is awarded after _____;	December 31, 1975	December 31, 1974	December 31, 1975	December 31, 1975
in the absence of a contract, conversion is begun after _____; or	June 30, 1976	June 30, 1975	June 30, 1976	June 30, 1976
conversion is completed after _____.	December 31, 1979	December 31, 1977	December 31, 1979	December 31, 1979

Table 2
Discharge standards applicable to tank vessels
Limitations on oil content of mixtures discharged to the sea

Vessel	Space where oily mixture originates	Waters (distance from the nearest land)[1]		
		less than 12 miles	12 to 50 miles	over 50 miles
U. S. Tank Vessel	Machinery Space Bilge	no discharge of oily mixtures permitted[2,3]	.as permitted by 1954 Convention[4] .as permitted by 1973 rev to 33 USC 1002[5] .as permitted by 33 CFR 157.39[6]	.no limit, or .as permitted by 33CFR 157.39[6]
	Cargo tank or cargo pumproom bilge	no discharge of oily mixtures permitted[2,7,8,9]	now, no discharge permitted (1954 Conv, as amended.) no discharge permitted 33 CFR 157.37(a)	.no limit (since U. S. has not adopted 1969 Amendments, or .as permitted by 33 CFR 157.37(a)
Foreign Tank Vessel	Machinery space bilge	no discharge of oily mixture permitted[2,3]	.as permitted by 1954 Convention[4] .as permitted by 1973 rev to 33 USC 1002[5]	.not limited at present (except for nations enforcing 1969 Amendments) .as permitted by 73 MP Conv, Annex I, Reg 9 (when it comes into force)
	Cargo tank or cargo pumproom bilge	no discharge of oily mixture permitted[2,9]	no discharge of oily mixture permitted (1954 Conv, as amended)	.as limited by 1954 Conv (really no limit) .as limited by 1969,1971 Amendments (effective for some) .as limited by 1973 Conv (when Convention comes into force)

Note: Items in ( ) are those affected by this proposed rulemaking.

Table 2 (continued)
Discharge standards applicable to tank vessels
Limitations on oil content of mixtures discharged to the sea

Notes

1. "From the nearest land" means from the baseline from which the territorial sea of the U. S. is established in accordance with international law. The term "territorial seas" means waters within a belt three miles wide adjacent to the U. S. coast and seaward of the territorial baseline. "Contiguous zone" means the belt of high seas, nine nautical miles wide, adjacent to and seaward of the territorial seas. The term "navigable waters" includes the territorial sea as well as internal waters and inland waters. (See 33 CFR 2.05-25(a) for complete definition of navigable waters.) Refer to 33 CFR 2.05 and 33 CFR 157.03(l).

   There is a problem with mixing terminology and concepts from the 1954 Convention and the 1973 Convention. The 1954 Convention and subsequent amendments use the concept of "prohibited zones" (generally 50 miles from land, except 100 for Canada, the Med., Baltic, etc, plus the Great Barrier Reef.). The 1973 Convention provides for "special areas" (the Med., Baltic, etc) and "no discharge within 50 miles of nearest land" in the discharge criteria. So this table does not precisely reflect standards now in effect with regard to prohibited zones other than 50 miles from shore.

2. Discharge of a "harmful quantity" of oil into U. S. navigable waters and the contiguous zone is prohibited, except for discharges into the contiguous zone permitted under Article IV of the International Convention for the Prevention of Pollution of the Sea by Oil, 1954, as amended. (See 40 CFR 110.) The exceptions allowed by Article IV of the 1954 Convention are (a) discharges for securing safety of a ship, preventing damage to a ship or cargo, or saving life at sea, (b) escape of oil due to damage to a ship, and (c) discharge of residue from lube oil or fuel oil purifiers.

3. Present regulations, 33 CFR 157.39, prohibit the discharge of oily mixtures from machinery space bilges within 12 nautical miles of land , except for the purpose of securing the safety of the vessel, saving life at sea, or as a result of damage to the vessel. (See 157.41.)

4. A vessel may discharge oily mixtures containing no oil other than lubricating oil which has drained or leaked from machinery spaces. (33 USCA 1004, Oil Pollution Act, 1961, and Article V of the International Convention for the Prevention of Pollution of the Sea by Oil, 1954.)

5. There are provisions in 33 USCA 1002 and 1016 as amended by PL 93-119 in 1973 which indicate a tanker may discharge an oily mixture from machinery space bilges if (a) the ship is proceeding enroute, and (b) the instantaneous rate of discharge of oil does not exceed 60 liters per mile, and (c) the oil content of the discharge is less than 100 parts per million of the mixture, and (d) the discharge is made as far as practicable from the nearest land. These 1973 amendments to U. S. law do not become effective until the 1969 and 1971 Amendments to the 1954 Marine Pollution Convention are ratified or accepted with the advice and consent of the U. S. Senate. This has not yet taken place and these provisions are therefore not yet in effect.

6. A tank vessel may discharge oily mixtures from machinery space bilges if the vessel is more than 12 miles from the nearest land, proceeding enroute, has in operation an oil discharge monitoring and control system, and is discharging an effluent with an oil content of less than 100 parts per million. (33 CFR 157.39--Now applicable to U. S. tankers in domestic trade, to be extended to U. S. tankers in foreign trade.)

7. Tank vessels operating on inland waters and seagoing tank vessels under 150 gross tons must either retain on board oily mixtures or transfer them to a reception facility. (33 CFR 157.27--Now required by present regulations for U. S. tank vessels in domestic trade, to be extended to U. S. tankers in foreign trade by proposed regulations.)

8. Seagoing tank vessels of 150 gross tons or more may discharge oily mixtures from cargo tanks and cargo pumproom bilges into the sea if the vessel is more than 50 nautical miles from the nearest land and proceeding enroute, the instantaneous rate of discharge of oil does not exceed 60 liters per mile, and the total quantity of oil discharged does not exceed, for an existing vessel, 1/15,000 of the cargo carried, and for a new vessel, 1/30,000 of the total quantity of the cargo from which the discharge came. The vessel must have in operation an oil discharge monitoring and control system. (33 CFR 157.37--Now applicable to U. S. tank vessels in domestic trade, to be extended to U. S. tank vessels in foreign trade.)

Table 2 (continued)
Discharge standards applicable to tank vessels
Limitations on oil content of mixtures discharged to the sea

Notes

9. Segregated ballast and clean ballast may be discharged in port or at an offshore terminal if certain conditions are met. "Segregated ballast" means the ballast water introduced into a tank which is completely separated from the cargo oil and oil fuel system and which is permanently allocated to carriage of ballast. (33 CFR 157.03(r). Note that this definition differs slightly from the definition in Regulation 1 of the 1973 Marine Pollution Annex I, Convention.) "Clean ballast" means the ballast in a cargo tank which, if discharged from a vessel that is stationary into clean, calm water on a clear day, would not leave a sheen or cause a sludge or emulsion to be deposited. (33 CFR 157.03(e). Note that the definition in the 1973 Marine Pollution Convention, Annex I, Regulation 2, goes on to stipulate that ballast with less than 15 ppm of oil discharged through an oil content monitor is considered clean ballast, even if it leaves some visible trace. U. S. regulations do not include this provision since it would conflict with the definition of "harmful quantity" of oil in 40 CFR 110.) Conditions under which segregated ballast and clean ballast can be discharged in port or at an offshore terminal are specified in 33 CFR 157.43 (adapted from Regulation 18(4) of Annex I, 1973 Marine Pollution Convention). Before segregated ballast is discharged, the vessel's master must ensure that the segregated ballast has not become contaminated by oil by seeing that a visual examination of the top of the contents of each segregated ballast tank is made or that the contents of each segregated ballast tank to be discharged is tested with an oil/water interface detector. Clean ballast can only be discharged through the oil discharge monitoring and control system as described in 157.37(a)(6).

2.3 Compliance Assurance Procedures

Design and equipment requirements

Compliance by U. S. tank vessels with design and equipment requirements in these regulations will be verified before the Coast Guard issues or renews Certificates of Inspection.

Compliance by foreign tankers entering U. S. navigable waters will be verified in one of two ways:

1. The Coast Guard will accept certification by a flag state that a particular vessel registered with that state complies with the design and equipment requirements. (See proposed regulation 157.24.)

2. The Coast Guard will certify that a particular vessel complies with the design and equipment requirements on the basis of its own review of vessel plans and inspection of the vessel. The Coast Guard will issue the vessel a letter indicating the relevant requirements have been complied with. (See proposed regulation 157.24.)

Vessel operating requirements

Compliance of both U. S. and foreign tank vessels with vessel operating requirements will be verified as part of the Coast Guard's Marine Environmental Protection Program. This program includes:

. Monitoring of oil transfer operations to ensure operating procedures and equipment are in accordance with regulations.

. Boarding of tank vessels to ensure operations are conducted in compliance with regulations, review oil record books, inspect records to ensure compliance with the Oil Pollution Act of 1961, and to deny entry to any port or detain vessels found without proof of financial responsibility.

. Aerial and surface surveillance to detect polluting discharges, to ensure compliance with discharge reporting requirements, and to detect violations of load line, anchorage, and other requirements.

. Facility inspections to ensure compliance with regulations.

. Investigation of discharges to determine volume, source, and cause of the discharge and to support later enforcement actions.

3. PROBABLE IMPACT OF THE PROPOSED ACTION ON THE MARINE ENVIRONMENT

3.1 Introduction

Information on the need for regulations aimed at reducing oil pollution from tank vessels and information on oil inputs to the marine environment from tankers is presented on pages 23 - 41 of reference (1).

3.2 Effect of the Regulations on Tanker Oil Pollution

The process of assessing the effects of these regulations on tanker oil pollution is the same as that outlined in reference (1), page 41-52. As noted there, it is impossible with current knowledge and methods to directly assess the impact of varying amounts and distributions of oil inputs on the marine environment. The Coast Guard has, therefore, estimated the effect of these new regulations on oil inputs to the oceans from the vessels they are applicable to. Implicit in this procedure is the assumption that environmental damage is proportional to the amount of annual oil input and independent of space and time distributions.

Estimated effects

The design and construction requirements of these proposed rules apply to two groups of vessels: (1) U. S. tank vessels in foreign trade, both new and existing, and (2) foreign tank vessels that enter the navigable waters of the United States. The operating requirements will apply to foreign tank vessels only while they are in U. S. navigable waters.

As a result of these proposed regulations the Coast Guard expects:

1. U. S. tankers in foreign trade will use load-on-top (LOT) or retention-on-board (ROB) techniques and will comply with the discharge restrictions contained in regulations.

2. New U. S. tankers will be built with provisions for segregated ballast.

3. New foreign tankers intended for service carrying oil to or from U. S. ports will be built with provisions for segregated ballast.

It is assumed that foreign tankers will continue to observe restrictions on discharge of oily mixtures contained in present U. S. and international law and U. S. regulations. (These discharge limitations are summarized in Table 2.) In addition, the Coast Guard believes many foreign tank vessels will comply with the more stringent discharge criteria contained in the 1973 Marine Pollution Convention (which are the same as requirements applicable to U. S. ships). The 1969 Amendments to the 1954 Marine Pollution Convention contain discharge criteria very similar to criteria of the 1973 Marine Pollution Convention. Although the 1969 Amendments have not yet received the required number of ratifications to enter into force, many major shipping nations in whose vessels oil is imported into the United States have ratified the 1969 Amendments and placed them into effect for their vessels. These vessels are, in effect, required by their governments to comply with the discharge criteria in the 1973 Marine Pollution Convention.

The Coast Guard believes there are actually at least three factors working to encourage foreign vessels to comply with the discharge criteria applied to U. S. vessels, even while those foreign vessels are outside U. S. waters:

(1) This proposal will require necessary equipment, piping, and vessel arrangements be provided on such foreign vessels entering U. S. waters. Given the presence of the equipment, vessel personnel will have no reasonable excuse not to minimize intentional discharge into international waters.

(2) As discussed above, many flag states now require their vessels to comply with the 1969 Amendments.

(3) The value of oil has increased to the point where indiscriminate dumping to the sea is no longer the most economic method of disposal of oily residue.

In addition to the three primary expected results of these regulations already cited (U. S. tankers in foreign trade use LOT, new U. S. tankers in foreign trade incorporate segregated ballast spaces, and new foreign tankers in service to U. S. incorporate segregated ballast) which have the largest impact on oil outflows, bilge discharge standards, requirements for cargo tank arrangement and size, and subdivision and stability standards will also reduce outflows.

The greatest immediate reduction in oil inputs to the oceans will result from use of LOT techniques. (Oil inputs from tank cleaning and ballasting operations account for an estimated 80% of the oil entering the oceans from tankers.)

Table 3 compares oil inputs from the vessels to which these rules will apply before and after the rules take effect. As Table 3 indicates, application of the discharge standards reduce operational outflows from tank cleaning and ballasting by nearly 90%.

The effects of the introduction of new segregated ballast tankers into service and the other measures included in the regulations will be smaller than the effect of discharge requirements. Qualitative effects of these other requirements are discussed on pages 42-52 of reference (1).

3.3 Other Impacts of the Regulations

The economic impact, technical feasibility, and safety impact of the regulations are discussed in this section.

Economic Impact

The regulations require a number of actions be taken by shipowners and operators in an effort to reduce oil inputs to the oceans. These actions will require additional capital investment in vessels and equipment and increase operating costs. These increased costs will ultimately be passed on to the consumer as increased transportation costs and higher prices for petroleum products. The actions required by the regulations are shown in Table 4.

TABLE 3 Comparison of oil inputs from tank cleaning and ballasting for U. S. tankships if foreign trade and foreign tankships carrying oil to or from U. S. ports

SOURCE	Estimated Oil Inputs (thousands of metric tons per year)			
	Present		Permitted by Discharge Standards	
	U. S. tankships in foreign trade	Foreign tankships trading to U. S.	U. S. tankships in foreign trade	Foreign tankships trading to U. S.
Ballasting & tank washing for clean ballast, crude & residual carriers	3	76.0	0.07	12.4
Tank cleaning for sediment control, crude & residual	1.8	34.4		
Tank cleaning, refined product carriers for clean ballast and cargo purity	0.5	12.4	0.07	1.53
Tank cleaning prior to shipyard repairs	1.8	25.7	1.2	0.09
TOTALS	7.1	148.5	1.34	14.02

Outflow reduction (U. S. vessels) = 7.1 - 1.34 = 5,760 metric tons/year

Outflow reduction (both U. S. and foreign vessels) = (7.1 + 148.5) - (1.34 + 14.02) = 140,200 metric tons/year

The largest cost associated with these regulations is the increase in construction cost to provide segregated ballast space on new tankers over 70,000 DWT. Various estimates of cost increases to provide segregated ballast have been made. A study submitted by the United States to IMCO prior to the 1973 Pollution Conference estimated the increase in required freight rate to range from about 4% to as much as 10%, depending on ship size, voyage length, how the ballast was distributed (staggered wing, double bottom, double skin, etc.), and a host of other variables.[3] It should be noted that these costs are representative, but not necessarily optimum (no effort was made to optimize individual designs since the study was done to compare various segregated ballast designs) and depend on a great many assumptions involving some uncertainty.

Required freight rate depends on vessel size and length of voyage. Some typical rates, their contribution to oil prices and the effect of a 10% increase in required freight rate are shown in Table 5.

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[3]Required freight rate (RFR) is commonly used as a measure of vessel profitability. It is defined as the income, per unit of cargo, that a shipowner must collect in order to earn returns equivalent to the repayment of his investment plus some arbitrary (but reasonable) rate of interest. RFR takes into account amortization of capital costs as well as operating costs.

TABLE 4

Action Required by Regulations

Requirement	Existing Vessels	New Vessels
Segregated ballast tanks	Not required	For vessels over 70,000 DWT, increasing size of ship by approximately 20% for same payload results in construction and operating cost increases. Additional pump and piping for segregated ballast system Additional design cost to locate segregated ballast
Cargo residue discharge standards		
Pumping, piping and discharge arrangements	Install new discharge line	Install new discharge line
Designated area	Not required	Locate area so overboard discharge can be observed Install pump shutoff control
Slop tanks	Designate slop tank, modify piping by December 31, 1977	Design and install slop tank system

TABLE 4 (Continued)

Action Required by Regulations

Requirement	Existing Vessels	New Vessels
Cargo and ballast system information	Prepare information	Prepare information
Discharge of cargo residue	Install oil discharge Monitoring and control system. Use LOT procedures. Dispose of slops ashore Cost of reception facilities. Delay in port to discharge slops Additional time at Sea for LOT	Install oil discharge Monitoring and control system. Use LOT procedures Dispose of slops ashore Cost of reception facilities Delay in port to discharge slops Additional time at sea for LOT
Bilge discharge standards		
Oily residue tank	Install tank Alter piping	Install tank and piping
Machinery space bilges	Oil discharge monitoring and control system or oily water separating equipment	Oil discharge monitoring and control system or oily water separating equipment
Cargo tank arrangement and size	Not required	Additional design calculations Restrict tank size
Subdivision and stability	Not required	Additional design calculations

TABLE 5

TYPICAL TRANSPORTATION COSTS
for
TANKER OIL SHIPMENTS

Voyage	Venezuela - U.S. East Coast	Persian Gulf - U.S. East Coast
Ship	20,000 DWT	150,000 DWT
Approximate Required Freight Rate (RFR)	$0.32/bbl	$0.70/bbl
Assumed Cost of Crude Oil	$ 12/bbl	$ 12/bbl
% of Cost represented by Ocean Transportation	2.7%	5.8%
Maximum Estimated % Increase in RFR[4]	10%	10%
$ Increase in RFR	$0.03/bbl	$ 0.07/bbl
(Price Increase required to cover increased transportation cost)	(0.07 cents/gal)	(0.17 cents/gal)

[4] See page 22 for discussion of range of estimates for increased RFR and factors influencing RFR.

In addition to increasing the cost of new tanker construction, the regulations will require installation of monitoring and control equipment and piping changes to both new and existing vessels at an estimated cost of $200,000 per vessel. This is, of course, small compared to the increased construction costs discussed above (say 5% increase on a $30 million ship, or $1.5 million) so its effect on costs will also be small.

Another requirement that will raise transportation costs which is not included in Table 5 is shore reception facilities.

In addition, there will likely be some additional costs for enforcement of the new standards by the Coast Guard. Some additional plan review and inspection will be required. Vessel boarding and aerial surveillance may be required to provide effective enforcement of the discharge standards.

Technical Feasibility

The achievement of the discharge standards in the regulations, the same standards as those in the 1973 Marine Pollution Convention, is considered technically feasible. Improvements in the performance of oil content monitors now available are needed to improve separation of oil from water on board ships to optimum levels, particularly for refined products, but these improvements are not necessary to achieve the bulk of the possible improvement.

Safety Impact

The regulations, directed at pollution control, will also have safety benefits. Segregated ballast on ships over 70,000 DWT will give additional protection from damage from collisions and groundings (and fires which sometimes occur as a result). Subdivision and stability requirements will contribute to survivability of new tankers after damage also.

The piping system requirements and segregated ballast distribution requirements will increase complexity of tankers and may make proper inspection and repair of tank interiors more difficult. The Coast Guard does not feel these potential problems are serious enough to warrant rejecting these requirements.

4. ALTERNATIVES TO THE PROPOSED ACTION

These proposed rules are an extension of earlier rules published for U. S. tank vessels in domestic trade. The alternatives to the course of action adopted by the Coast Guard and future actions planned by the Coast Guard (including the publication of rules for U. S. tankers in foreign trade and foreign tankers) are discussed on pages 58-82 of reference (1).

There are two other questions to be resolved:

(1) What discharge criteria should the regulations make applicable to foreign vessels while on the high seas and trading with the United States?

(2) What stability criteria should be applied to foreign tankers?

Discharge criteria alternatives

A decision must be made on what discharge criteria the regulations should set for foreign tank vessels. The available alternatives are:

1. Retain discharge criteria presently applicable to foreign tankers in U. S. waters, i.e., no "harmful discharge" within 12 miles of the shore. Continual recognition of the 1954 Convention, as amended, for foreign vessels operating on the high seas.

2. Same as alternative I, except recognize that some countries have adopted and are enforcing the 1969 Amendments and enforce these same standards for vessels of these nations in U. S. waters.[5] Under this alternative, the Coast Guard could board these vessels while in our ports to verify compliance by checking records and reporting violations found to the flag state and to IMCO. The U. S. could also encourage other countries to implement the discharge standards, checking the vessels flying other flags and reporting to the flag state and to IMCO the results of such check.

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[5] To date, six countries operating about half of the world's fleet of approximately 5000 tank ships over 2000 gross tons have implemented the 1969 Amendments to the 1954 Convention. These countries and the portion of the world's fleet they have under registry are: Canada (0.5), Japan (7.9), Sweden (1.7), USSR (8.0), United Kingdom (9.6), and Liberia (21.8).

3. Establish discharge criteria for foreign vessels which are the same as those for U. S. vessels (i.e., the same ones that will be effective when the 1973 Marine Pollution Convention comes into force.) Make adherence to these discharge criteria a condition of entry for vessels transporting oil to or from U. S. ports.

Discussion of alternatives

Alternative 1 would do nothing to reduce present oil inputs or to encourage adoption of the 1973 Marine Pollution Convention by other countries. It involves no new enforcement nor legal problems with regard to foreign ships. It does not treat U. S. ships in foreign trade the same as foreign vessels with respect to performance standards even though these two classes of ships would be treated the same with respect to construction and equipment standards.

Alternative 2 might encourage some vessels trading with the U. S. which would not otherwise do so to use LOT/ROB techniques and thus reduce oil inputs. Its effect would depend on the vigor with which its enforcement was pursued. It would involve extra boardings to check records.

Alternative 3 would offer the greatest potential for oil outflow reduction but is not feasible from a legal standpoint. Present jurisdiction is inadequate to set and enforce discharge criteria for foreign ships beyond the contiguous zone, 12 miles from the nearest U. S. land. Alternative 3 must, therefore, be rejected.

The Coast Guard believes a combination of alternatives 1 and 2 is the best available alternative for establishing discharge criteria for foreign vessels, and that is the alternative chosen. The proposed regulations do not change the discharge criteria currently applicable to foreign tankers.

Subdivision and stability criteria for foreign tank vessels

A decision on what subdivision and stability criteria should be made applicable to foreign tank vessels entering U. S. navigable waters is also required. The international standards for tank vessel subdivision and stability currently in effect are those contained in the International Convention on Load Lines, 1966. Ambiguity in that agreement has resulted in some difference in interpretation among nations as to the subdivision and stability requirements for vessels while in a partially loaded condition. The United States construes the 1966 Load Line Convention to require two-compartment subdivision on tankers in partially-loaded as well as fully-loaded conditions, while some other parties to the Convention felt one-compartment subdivision was adequate to meet the requirements

for partially-loaded conditions. This difference in interpretation was resolved and language clearly requiring two compartment subdivision in all loading conditions was incorporated into the 1973 Marine Pollution Convention, (which has not come into force). A decision must be made whether U. S. regulations for foreign tankers should retain provisions contained in present international law (the 1966 Load Line Convention) or impose requirements of 1973 Marine Pollution Convention before that agreement comes into effect.

The Coast Guard believes that where international requirements resulting from an international agreement to which the U. S. is a party cover a particular problem area, the U. S. should not issue different regulations applicable to foreign ships unless the international standards do not provide an adequate level of safety. In the case of subdivision and stability requirements for tank vessels, the current international standards do provide an adequate level of safety, the Coast Guard has decided that foreign vessels will not be required to comply with the requirements of regulation 157.21 concerning subdivision and stability. Instead, these vessels must comply with recognized international law in this area, the International Convention on Load Lines, 1966.[6]

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[6] Further discussion of subdivision and stability requirements may be found in responses to comments on page

5. PROBABLE ADVERSE ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED

The overall effect of these regulations will be to reduce the amount of oil entering the oceans as indicated in Section 3. No adverse environmental effects are anticipated as a result of this action.

6. RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF MAN'S ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

Both short-term and long-term fates and effects of petroleum hydrocarbons in the marine environment are analyzed in the NAS Report, Petroleum in the Marine Environment (reference 2). So far as the Coast Guard can determine, these regulations do not involve any tradeoffs between short-term environmental gains at the expense of long-term losses or vice versa. Nor are any future options foreclosed.

7. IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

No significant irreversible and irretrievable commitments of resources are involved in this proposed action.

8. COMMENTS ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT AND COAST GUARD RESPONSES

Comments on the draft statement were requested from the agencies and groups listed below. An asterisk (*) indicates comments were received and are included in this section.

* Department of the Interior
* Environmental Protection Agency
* Department of Defense
* Department of Commerce
* Department of Transportation
* Department of State
Sierra Club
Connecticut Citizens Action Group
* Center for Law and Social Policy
American Petroleum Institute
American Institute of Merchant Shipping
American Association of Port Authorities
American Maritime Association
American Waterways Operators, Inc.
Shipbuilders Council of America
Environmental Policy Center
Coalition Against Oil Pollution
National Audubon Society

In addition, comments were received from the following groups:

State of New Jersey
Shell International Marine Ltd.
Imperial Oil Limited
Oil Companies International Marine Forum
International Chamber of Shipping

In preparing the final EIS, the Coast Guard has included comments which fall into the following categories:

1. Comments from people who <u>say</u> their comments are applicable to the EIS.

2. Comments from the regulatory docket file (75-240) which also mention the draft EIS.

3. Significant comments from the regulatory docket file which cover important issues addressed in EIS.

United States Department of the Interior

OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20240

MARINE SAFETY COUNCIL
STAFF
RECEIVED
JUN 22 1976

PEP ER-76/462

JUN 18 1976

Dear Sir:

The Department has completed its review of the draft environmental statement for Regulations for U.S. Tank Vessels Carrying Oil in Foreign Trade and Foreign Tank Vessels that Enter the Navigable Waters of the United States. We have no specific comments to offer regarding this statement.

Many of the environmental implications of the new 33 CFR 157 regulations were discussed previously in the Coast Guard's final environmental statement released in August 1975 which addressed domestic tanker operations in U.S. waters.

We feel the extension of these criteria to U.S. tankers carrying oil in foreign trade and foreign vessels carrying oil in U.S. waters represents a significant step towards reducing a major source of marine pollution.

Sincerely yours,

Stanley R. Jeremus

Deputy Assistant Secretary of the Interior

Executive Secretary
Marine Safety Council
U.S. Coast Guard (G-CMC/81)
Washington, D.C. 20590

RESPONSE

Comment acknowledged. No response necessary.

AMERICAN REVOLUTION BICENTENNIAL 1776-1976

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

30 JUN 1976

MARINE SAFETY COUNCIL
STAFF
RECEIVED
JUL 02 1976

OFFICE OF THE
ADMINISTRATOR

Executive Secretary
Marine Safety Council
U.S. Coast Guard (G-CMC/81)
Washington, DC 20590

Dear Sir:

The Environmental Protection Agency, pursuant to its responsibilities under the National Environmental Policy Act and Section 309 of the Clean Air Act, has reviewed the Coast Guard's Draft Environmental Impact Statement (DEIS) entitled "Regulations for US Tank Vessels Carrying Oil in Foreign Trade and Foreign Tank Vessels that Enter the Navigable Waters of the United States." The DEIS appears to have adequately analyzed the expected environmental impacts associated with the proposed action.

We suggest that the final EIS include a clearer account of which sections of the prior regulations would apply to foreign vessels, and which would not. Also, a copy of the existing regulations and the proposed revisions should be included in the final version. We also suggest that the final EIS include a more complete summary of the environmental effects of the proposed action. Especially helpful would be the addition of tables, similar to Table 3, showing estimated oil inputs to the oceans from foreign vessels trading in US navigable waters and from US vessels in domestic trade, and the effect of these regulations in reducing them. We are assigning a rating of LO-1 (lack of objections--adequate) to the EIS. An explanation of our rating system is enclosed.

Thank you for the opportunity to provide these comments.

Sincerely yours,

Rebecca W. Hanmer

Rebecca W. Hanmer
Director
Office of Federal Activities

Enclosure

DEFINITIONS OF CODES FOR THE GENERAL NATURE
OF EPA COMMENTS

ENVIRONMENTAL IMPACT OF THE ACTION

LO--Lack of Objection

EPA has no objections to the proposed action as described in the draft impact statement; or suggests only minor changes in the proposed action.

ER--Environmental Reservations

EPA has reservations concerning the environmental effects of certain aspects of the proposed action. EPA believes that further study of suggested alternatives or modifications is required and has asked the originating Federal agency to reassess these impacts.

EU-Environmentally Unsatisfactory

EPA believes that the proposed action is unsatisfactory because of its potentially harmful effect on the environment. Furthermore, the Agency believes that the potential safeguards which might be utilized may not adequately protect the environment from hazards arising from this action. The Agency recommends that alternatives to the action be analyzed further (including the possibility of no action at all).

ADEQUACY OF THE IMPACT STATEMENT

Category 1--Adequate

The draft impact statement adequately sets forth the environmental impact of the proposed project or action as well as alternatives reasonably available to the project or action.

Category 2--Insufficient Information

EPA believes that the draft impact statement does not contain sufficient information to assess fully the environmental impact of the proposed project or

Response to comments by the

Environmental Protection Agency

contained in a letter dated 30 June 1976

COMMENT

The final EIS should include a clearer account of which sections of the prior regulations would apply to foreign vessels, and which would not.

RESPONSE

Applicability of regulations to foreign vessels is indicated in Table 1, page 5.

COMMENT

A copy of the existing regulations and the proposed revisions should be included in the final EIS.

RESPONSE

Appendix B incorporates proposed changes to 33 CFR 157 appearing in the April 15, 1976, Notice of Proposed Rule Making.

COMMENT

The final EIS should include a more complete summary of the environmental effects of the proposed action. Especially helpful would be the addition of tables, similar to Table 3, showing estimated oil inputs to the oceans from foreign vessels trading in U. S. navigable waters and from U. S. vessels in domestic trade, and the effect of these regulations in reducing them.

RESPONSE

Table 3 has been expanded to include information on foreign vessels trading into U. S. waters. Information on oil inputs from U. S. tankers in domestic trade and estimated effects of carrier regulations on those inputs are described on pages 41 through 52 of reference 1.

DEPARTMENT OF THE ARMY
OFFICE OF THE CHIEF OF ENGINEERS
WASHINGTON, D.C. 20314

REPLY TO
ATTENTION OF:

DAEN-CWR-P

14 JUN 1976

MARINE SAFETY COUNCIL
STAFF
RECEIVED
JUN 18 1976

Executive Secretary
Marine Safety Council
U.S. Coast Guard (G-CMC/81)
Washington, D.C. 20590

Dear Sir:

I have reviewed the Department of Transportation's Draft EIS on regulations for U.S. tank vessels which carry oil in foreign trade and foreign tank vessels that enter the navigable waters of the United States. I do not find any impacts with respect to the Corps of Engineers' Civil Works areas of responsibility.

I would appreciate receiving a copy of the Final EIS when it becomes available.

Sincerely yours,

JOHN R. HILL, JR.
LTC, Corps of Engineers
Assistant Director of Civil Works,
Environmental Programs

RESPONSE

Comment acknowledged. No response necessary.

UNITED STATES DEPARTMENT OF COMMERCE
The Assistant Secretary for Science and Technology
Washington, D.C. 20230

MARINE SAFETY COUNCIL
STAFF
RECEIVED
JUN 3 1976 EO

June 1, 1976

Executive Secretary
Marine Safety Council
U. S. Coast Guard (G-CMC/81)
Washington, D. C. 20590

Dear Sir:

The draft environmental impact statement entitled "Regulations for U.S. Tank Vessels Carrying Oil in Foreign Trade and Foreign Tank Vessels that Enter the Navigable Waters of the United States," has been received by the Department of Commerce for review and comment. The statement has been reviewed and the following comments are offered for your consideration.

Page 19 refers the reader to reference (a) for a discussion of the economic impacts of the proposed action. Since reference (a) addresses U.S. flag tank vessels in the domestic trade, it is suggested that additional discussion of the economic impacts be made. Possible problem areas are outlined below.

a. The economic impact of imposing the subject regulations upon U.S. flag tankers operating strictly in the foreign trade has not been considered. Since tank vessels operating from foreign port to foreign port do not enter U.S. navigable waters, U.S. tankers in this trade could be at a competitive disadvantage with respect to their foreign counterparts.

b. The proposed subdivision and stability requirements of 157.21 apply to U.S. flag tank vessels but not to foreign flag tankers. Instead, foreign flag vessels must comply with the recognized international law of this area, the 1966 International Convention on Load Lines. Since the proposed requirements of 157.21 are significantly more stringent than the 1966 Load Line Convention as interpreted by many countries, a competitive disadvantage could be incurred by U.S. flag tankers.

c. Concerning the increase in costs to the consumer of petroleum products, it is stated on page ii that "increased transportation costs are estimated to be less than 0.2 cents per gallon." This information is extracted from Table 9 of reference (a) and implies that the increased cost to the consumer will be less than 0.2 cents per gallon for specific petroleum products such as automotive gasoline and residual fuel oil. The draft environmental impact statement contains no discussion of the relationship between required freight rate and consumer costs.

The data presented in Table 3, page 20, do not completely reflect those presented in Appendix A. It is suggested that Table 3 include estimated oil discharge data for foreign tank ships that enter U.S. navigable waters based on the assumption that these foreign tankers will comply with the discharge criteria applied to U.S. vessels.

In order to further amplify Item 2 on page 22, it would be well to include what percentage of tankers now in use on a world-wide basis comply with the 1969 Amendments to the 1954 Marine Pollution Convention (which contains discharge criteria similar to those proposed by the 1973 Marine Pollution Convention).

Thank you for giving us an opportunity to provide these comments, which we hope will be of assistance to you. We would appreciate receiving thirteen (13) copies of the final statement.

Sincerely,

Sidney R. Galler
Deputy Assistant Secretary
for Environmental Affairs

UNITED STATES DEPARTMENT OF COMMERCE
Maritime Administration
Washington, D.C. 20230

June 4, 1976

Rear Admiral William M. Benkert
Chief, Office of Merchant Marine Safety
U.S. Coast Guard
400 Seventh Street, S.W.
Washington, D.C. 20590

Subject: U.S. Coast Guard Tanker Pollution Prevention Regulations in 33 CFR 157 - Proposed Amendments Addressing U.S. Tank Vessels Carrying Oil in Foreign Trade and Foreign Tank Vessels Carrying Oil in U.S. Navigable Waters

Dear Admiral Benkert:

The subject proposed rule making, as published in the Federal Register of April 15, 1976, has been reviewed by the Maritime Administration and comments are hereby forwarded. The following comments address two areas of possible adverse economic impact on U.S. flag vessels imposed by the subject proposed rules.

1. Section 157.01

The economic impact of the proposed regulations upon U.S. flag tankers operating strictly in foreign to foreign trade should be considered before promulgating final rule making. Since tank vessels operating from foreign port to foreign port do not enter U.S. navigable waters, U.S. tankers in this trade could be at a competitive disadvantage with respect to their foreign counterparts. It is suggested, therefore, that consideration be given to the alternative of modifying the application of these regulations to U.S. flag tank vessels operating strictly in such foreign trade. Those owners anticipating possible operation in U.S. waters would certainly have the incentive to build in compliance with the proposed rules considering the cost of retrofit.

2. Section 157.21

It is noted that the proposed subdivision and stability requirements of Regulation 157.21 apply to U.S. flag tank vessels but not to foreign flag tankers. Instead, foreign flag tankers are required to comply with the recognized international regulations in this area, the 1966 International Convention on Load Lines.

Since the proposed requirements of Section 157.21 are significantly more stringent than the 1966 Convention standards as interpreted by many countries, there is some question concerning the adequacy of the 1966 Convention as compared to the subdivision and stability requirements being proposed for U.S. flag tankers. It would be prudent to apply the proposed requirements of Section 157.21 to both U.S. and foreign flag tank vessels for the following reasons:

- These requirements are intended to prevent the total loss of a vessel from a casualty and a subsequent massive oil spill. If the 1966 Load Line Convention requirements were considered to be adequate in this regard, there would have been no need to propose Regulation 157.21 nor to incorporate the two-compartment standard of subdivision into the 1973 Marine Pollution Convention.

- Since Regulation 157.21 is significantly more stringent than the 1966 Load Line Convention as interpreted by many countries, the unilateral application of these requirements to U.S. flag tankers will place such vessels at a competitive disadvantage relative to their foreign counterparts.

I hope that these comments are of assistance in preparing effective amendments to the tanker pollution prevention regulations.

Sincerely,

JOHN J. NACHTSHEIM
Assistant Administrator for Operations

Response to comments by the

Department of Commerce

contained in letters dated June 1, 1976, and June 4, 1976

COMMENT

It is suggested that additional discussion of the economic impacts be made. Possible problem areas are:

a. The economic impact of the regulations on U. S. flag tankers operating strictly in trade between foreign ports has not been considered. U. S. tankers in such trade could be at a competitive disadvantage with respect to their foreign counterparts. The Coast Guard should consider excluding U. S. tanker vessels operating exclusively in trade between foreign ports from these proposed regulations.

RESPONSE

It appears that the proposed regulations will increase the competitive disadvantage U. S. flag tankers operating strictly in trade between foreign ports face with respect to vessels of other nations operating in the same trade. The Coast Guard believes this increase in competitive disadvantage will be slight and of a relatively short-term nature.

The following factors will contribute to differences in cost of transportation on U. S. tankers and foreign tankers trading exclusively between foreign ports:

- New U. S. tankers must be constructed to meet segregated ballast distribution requirements in 157.09(d) and foreign tankers do not. (It is assumed that all new tankers, both U. S. and foreign, will be built with segregated ballast. It appears unlikely that an owner would risk building a new tanker without segregated ballast which would become obsolete and have to be removed from service or extensively modified when the 1973 Marine Pollution Convention comes into force.) There will be some small increase in both capital cost and operating cost to provide segregated ballast distribution on new U. S. tankers.

COMMENT

b. The subdivision and stability requirements in proposed Section 157.21 should be applied to foreign flag tank vessels entering U. S. waters as well as to U. S. flag tank vessels because

(1) the subdivision and stability requirements contained in the 1966 Loadline Convention are inadequate, and

(2) failure to do so will place U. S. flag tankers engaged in foreign trade at a competitive disadvantage relative to foreign tankers.

RESPONSE

The Coast Guard has considered and rejected the action recommended for the following reasons:

(1) The Coast Guard does not consider the 1966 Loadline Convention subdivision and stability requirements inadequate compared to the 1973 Convention requirements. Both are adequate and, in fact, the only differences in interpretation involve requirements for the partially-loaded condition. Requirements for fully-loaded tankers, such as would be coming to the U. S., are the same, and both sets of requirements provide equivalent safety as far as waters around the U. S. are concerned.

(2) Even given the possible differences in interpretation of requirements in the 1966 and 1973 Conventions for partially-loaded conditions, the presence or absence of competitive disadvantage is largely a function of how the designer chooses to meet the requirements. The Coast Guard believes no serious competitive disadvantage will result from these small differences in stability requirements.

COMMENT

c. The draft environmental impact statement contains no discussion of the relationship between required freight rate and consumer costs.

RESPONSE

A discussion of the relationship between required freight rate and consumer costs has been added as part of the expanded analysis of economic impacts on pages 20-27.

• Both new and existing U. S. vessels must have slop tanks, oil discharge monitoring and control systems and other design and equipment features and comply with vessel operating requirements indicated in Table 1, pages 5 and 6, while their foreign counterparts may not have to until the 1973 Marine Pollution Convention comes into force. (Note, though, that approximately half of the world's tankship fleet is required to observe the discharge requirements in the 1969 Amendments, since their flag states have implemented those requirements.) This will result in expenditure of a one-time modification cost and some small difference in operating cost--at least until the 1973 Marine Pollution Convention requirements become applicable to all foreign ships.

There are only a few U. S. tankers operating strictly in foreign-to-foreign trade (approximately six vessels), and the Coast Guard expects these vessels will shift to foreign-to-U. S. trade as soon as U. S. deepwater ports are completed. The Coast Guard believes the economic impact on these vessels will be small and of a temporary nature (until the 1973 Marine Pollution Convention comes into force).

Since the law does not allow a distinction to be drawn between pollution prevention requirements for U. S. ships in foreign-to-U. S. trade and U. S. ships in foreign-to-foreign trade, the suggested exclusion of foreign-to-foreign vessels is not considered feasible.

COMMENT

The data presented in Table 3, page 20, do not completely reflect those presented in Appendix A. It is suggested that Table 3 include estimated oil discharge data for foreign ships that enter U. S. navigable waters based on the assumption that these foreign tankers will comply with the discharge criteria applied to U. S. vessels.

RESPONSE

Table 3 has been expanded to include estimates of oil inputs from foreign tankships and reductions resulting from new discharge standards.

COMMENT

In order to further amplify Item 2 on page 22 (recognition of implementation of 1969 Amendments by six countries) it would be well to include what percentage of tankers now in use on a world-wide basis comply with the 1969 Amendments to the 1954 Marine Pollution Convention (which contains discharge criteria similar to those proposed by the 1973 Marine Pollution Convention).

RESPONSE

The Coast Guard knows of no authoratative estimates of what portion of the world's tankship fleet is currently complying with the discharge criteria of the 1969 Amendments. The section of the EIS on discharge criteria alternatives has been revised to include information on percentages of the world's tankship fleet registered with the countries which have adopted and implemented the 1969 Amendments--see page 29.

Form DOT F 1320.1 (1-67)

UNITED STATES GOVERNMENT

DEPARTMENT OF TRANSPORTATION
OFFICE OF THE SECRETARY

Memorandum

SUBJECT: Draft Environmental Impact Statement "Regulations for U.S. Tank Vessels Carrying Oil in Foreign Trade and Foreign Tank Vessels that Enter the Navigable Waters of the United States"

DATE: 4 MAY 1976

In reply refer to:

FROM: Assistant Secretary for Environment, Safety, and Consumer Affairs

TO: Chief Environmental Impact Branch G-WEP-7/73

We have completed review of the above draft environmental impact statement (EIS), and have the following comments:

1. The referencing of an earlier EIS pertaining to U.S. tankers in domestic trade has aided the development of a concise EIS. However, a careful review of the topics referenced should be made in order to assure that the earlier EIS contained adequate analysis for the current case. Particular attention should be given to economic analyses in this regard.

2. It is suggested that the applicability of the proposed regulations to tankers calling at U.S. deepwater ports be discussed in the final EIS, inasmuch as the deepwater ports may be located beyond the 12-mile contiguous zone.

3. While compliance assurance for foreign tankers is discussed briefly on page 22, the final EIS should contain a more complete description of current and proposed Coast Guard measures to assure that both U.S. and foreign vessels comply with discharge standards.

4. Considering the complex nature of the intertwined U.S. and international rules, the use of comparison tables is a helpful, clarifying device for the layman. We suggest, however, that the explanations given in the text be sufficiently complete to avoid confusion that may result for persons unfamiliar with these standards. For example, different uses of the term "navigable waters" should be clearly defined.

5. The final EIS should include a copy of the final version of the rules being promulgated.

Certain other detailed comments have been provided by the Office of Environmental Affairs to LCdr. Warren Snider, Office of Merchant Marine Safety.

We appreciate the opportunity to review the draft EIS, and we look forward to receiving the final statement including comments received on the draft.

Judith T. Connor

Response to comments by the

Department of Transportation

contained in DOT memorandum dated May 4, 1976

COMMENT

A careful review of the topics referenced in the earlier EIS should be made to ensure that the earlier EIS contained adequate analysis for the current case. In this regard, particular attention should be given to economic analysis.

RESPONSE

References to the earlier EIS were reviewed as suggested by the commenter with results shown in the table on the next page.

As a result of this review and comments on the draft statement, expanded discussion of economic impacts of the proposed action appears on pages 20-27 of the final statement.

RESULTS OF REVIEW OF DRAFT EIS REFERENCES TO
EARLIER FINAL EIS ON TANKERS IN DOMESTIC TRADE

Topic	Page reference in draft EIS	Reference in previous final EIS	Remarks
Detailed description of requirements of proposed regulations	4	Section 2.3	Note 1
Info on need for regs & oil inputs from tankers	15	Pages 23-41	Note 1
Description of process used to assess effects of regulations	15	Pages 41-52	Note 1
Effect of measures other than LOT on oil inputs	19	Pages 42-52	Note 1
Economic impact, technical feasibility, and safety impact	19	Pages 53-57	Note 2
Alternatives to proposed action	21	Pages 58-82	Note 1

Note 1. The info presented in the previous EIS (ref 1) adequately covers the current proposed action.
Note 2, Discussion of economic impact needs revision.

COMMENT

Applicability of the proposed regulations to tankers calling at U. S. deepwater ports should be discussed in the final EIS.

RESPONSE

Although deepwater ports would not be considered "navigable waters of the U. S.", the possibility exists that vessels that call at these ports may become subject to these and other regulations by virtue of a broad interpretation of section 19 of the Deepwater Ports Act of 1974 (Pub. Law 93-627, 88 Stat. 2126, 33 U.S.C. 1501) or by the action of the licensee of the port as a condition of operation.

COMMENT

The final EIS should contain a more complete description of current and proposed Coast Guard measures to assure both U. S. and foreign vessels comply with discharge standards.

RESPONSE

A discussion of Coast Guard marine environmental protection enforcement and surveillance activities has been added on pages 14-15.

COMMENT

We suggest that the explanations given in the text (as opposed to the tables) of the EIS be sufficiently complete to avoid confusion that may result for persons unfamiliar with these standards. For example, different uses of the term "navigable waters" should be clearly defined.

RESPONSE

A definition of "navigable waters" has been added in a footnote on page 2 This same meaning applies wherever the term is used in the statement.

COMMENT

The final EIS should include a copy of the final version of the rules being promulgated.

RESPONSE

Appendix B contains the rules in 33 CFR Part 157 as they will appear after incorporating changes to be published by the Coast Guard as a final rulemaking.

DEPARTMENT OF STATE

Washington, D.C. 20520

BUREAU OF OCEANS AND INTERNATIONAL
ENVIRONMENTAL AND SCIENTIFIC AFFAIRS

May 26, 1976

Executive Secretary
Marine Safety Council
U.S. Coast Guard (G-CMC/81)
Washington, D.C. 20590

Dear Sir:

The Department of State has no objection to, and no comments on, the draft Environmental Impact Statement on Regulations for U.S. Tank Vessels Carrying Oil in Foreign Trade and Foreign Tank Vessels that Enter the Navigable Waters of the United States.

We appreciate the opportunity to review the draft.

Sincerely,

Donald R. King

Donald R. King
Acting Director
Office of Environmental Affairs

cc: CEQ (5 copies)

RESPONSE

Comment acknowledged. No response necessary.

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CENTER FOR LAW AND SOCIAL POLICY

1751 N STREET N W WASHINGTON D C 20036 202 872 0670

June 9, 1976

Executive Secretary
Marine Safety Council
(G-CMC/81)
Room 8117
United States Coast Guard
Washington, D.C. 20590

CGD 75-240

Dear Sir:

In accordance with the Notice of Proposed Rulemaking Regarding the Construction and Equipment of Certain Tank Vessels Carrying Oil (CGD 75-240), published in the Federal Register on April 15, 1976 (41 Fed. Reg. 15859), I request that my statement at the hearing held on May 20, 1976, be treated as the written submission of my clients in the rule-making proceeding. If you need further copies of such statement, please advise me, and I will be happy to supply them for the record.

One additional point might be made with respect to enforcement of international discharge standards against foreign flag vessels. A review of the proceedings at the 1973 International Conference on Marine Pollution reveals that there was a general recognition that port state enforcement might be appropriate in order to ensure compliance with the international standards negotiated at such Conference. Thus, it is likely that United States action under the Ports and Waterways Safety Act would not be viewed by the international community as an unwarranted and unexpected assertion of unilateral jurisdiction.

Thank you for consideration of our views in this rulemaking.

Sincerely,

Eldon V.C. Greenberg

Counsel to Natural Resources Defense Council, Inc., the Sierra Club, The Wilderness Society, The National Wildlife Federation, The National Audubon Society, The Environmental Defense Fund, Friends of the Earth, and The National Parks and Conservation Association

CMC/51 DP

TESTIMONY OF ELDON V.C. GREENBERG ON BEHALF OF THE NATURAL RESOURCES DEFENSE COUNCIL, THE SIERRA CLUB, THE WILDERNESS SOCIETY, THE NATIONAL WILDLIFE FEDERATION, THE NATIONAL AUDUBON SOCIETY, THE ENVIRONMENTAL DEFENSE FUND, FRIENDS OF THE EARTH, AND THE NATIONAL PARKS AND CONSERVATION ASSOCIATION ON PROPOSED RULES FOR THE CONSTRUCTION AND EQUIPMENT OF TANK VESSELS IN FOREIGN TRADE (CGD75-240) PRESENTED ON MAY 20, 1976, TO THE UNITED STATES COAST GUARD

I am Eldon Greenberg of the Center for Law and Social Policy, a public interest law firm.[1/] I am pleased to appear today to provide the views of the Natural Resources Defense Council, the Sierra Club, the Wilderness Society, the National Wildlife Federation, the National Audubon Society, the Environmental Defense Fund, Friends of the Earth, and the National Parks and Conservation Association (the "environmental groups")[2/] with respect to the Coast Guard's proposed amendments to its tank vessel regulations, 33 C.F.R. Part 157, to extend their

1/ The Center's address and telephone number are: 1751 N Street, N.W., Washington, D.C. 20036; (202) 872-0670.

2/ NRDC, whose principal office is at 15 West 44th Street, New York, N.Y. 10036, and has additional offices in Washington, D.C. and Palo Alto, Calif., has a membership of approximately 18,000 persons. The Sierra Club, whose principal place of business is at 530 Bush Street, San Francisco, Calif. 94104, has a membership of approximately 160,000 persons. The Wilderness Society, which has its principal office at 1901 Pennsylvania Avenue, N.W., Washington, D.C. 20006, and a field office in Denver, Colorado, has a membership of about 90,000 persons. NWF, whose principal place of business is 1412 16th Street, N.W., Washington, D.C. 20036, is composed of associate members and members of state affiliate member organizations, comprising over 2,000,000 persons. The National Audubon Society, which has its principal office at 950 Third Avenue, New York, N.Y. 10022, has a membership of more than 340,000 persons. EDF, whose principal place of business is 162 Old Town Road, East Setauket, N.Y. 11733, has a membership of approximately 55,000 persons and a 700 member Scientists' Advisory Committee. FOE, whose principal place of business if 529 Commercial Street, San Francisco, Calif. 94111, has a membership of 20,000 persons. NPCA, whose principal office is 1701 18th Street, N.W., Washington, D.C. 20009, has a membership of approximately 45,000 persons.

coverage to U.S. flag tankers engaged in foreign trade, and foreign flag tankers entering U.S. navigable waters (CGD 75-240), as set forth in the Federal Register notice of April 15, 1976 (41 Fed. Reg. 15859) (the "proposed rules"). All the environmental groups are national, non-profit membership organizations deeply concerned and knowledgeable about the preservation and protection of the marine environment. They have each taken an active interest in the development of standards for the design and operation of oil carrying vessels, and I have been asked by them to coordinate the presentation of their views on the proposed rules.

Because the proposed rules are, except in one or two respects, essentially the same as the regulations adopted by the Coast Guard in October, 1975 (40 Fed. Reg. 48279) and January, 1976 (41 Fed. Reg. 1479) for oil tankers in domestic trade, I do not intend this morning to focus upon the details of the regulatory requirements themselves. The environmental groups' criticisms of the adequacy of such requirements have been expressed on many previous occasions,[3/] and are well-known. Rather, I would like to discuss two basic policy questions raised by the proposed rules: (1) whether the Coast Guard should be confined to the requirements of the International Convention for the Prevention of Pollution from Ships, 1973 (the "1973 Convention") in establishing design and equipment standards for oil tankers in internationa

3/ Seven of the groups in fact currently contesting the adequacy of such regulations in a lawsuit pending in the United States District Court for the District of Columbia (Natural Resources Defense Council, Inc., et al. v. William T. Coleman, Jr., et al., Civ. Action No. 76-0131).

trade; and (2) whether the Coast Guard should limit its enforcement of generally accepted international discharge standards against foreign flag tankers, to situations when the violations occur in U.S. territorial waters or whether it should enforce such standards also when a violation of such standards occurs outside U.S. territorial jurisdiction.

(1) Application of Standards Additional to Those of the 1973 Convention -- It has been, and continues to be, an article of faith at the Coast Guard that the United States should only adopt regulations for U.S. flag tankers in foreign trade and foreign flag tankers entering our ports which are "consistent with" the 1973 Convention. The Coast Guard's position, as set forth in its Final Environmental Impact Statement on Regulations for Tank Vessels Engaged in the Carriage of Oil in Domestic Trade, issued in August, 1975 (hereafter cited as "CGEIS"), is that pollution is an international problem and, if the United States should move to impose standards additional to those embodied in the 1973 Convention, not only could the future of that Convention be cast in doubt, but so, too, would be most hopes for international solutions in the area of marine pollution. Indeed, the Coast Guard has gone so far as to state that because ship source pollution is "best attacked in an international context," unilateral action should only be taken "when international solutions are impossible or inappropriate" (40 Fed. Reg. 48280).

While the environmental groups agree with the Coast Guard that international agreements are desirable, we believe that it would be counter-productive to limit U.S. standards to those embodied in the 1973 Convention. Such a policy may in the end result in the sacrifice of our own environment and perhaps the world environment for the sake of an international agreement which may never be generally adopted. We reach this conclusion for two basic reasons:

First, whatever action the United States takes, the 1973 Convention does not appear likely to enter into force in the near future. Today, two and one-half years after it was opened for signature, only two countries -- Jordan and Kenya, neither of which is a significant maritime power -- have ratified the 1973 Convention. Before it could actually enter into force, no less than 15 states, the combined merchant fleets of which constitute not less than 50% of the gross tonnage of the world's merchant shipping, must become parties (1973 Convention, Article 15, paragraph 1). When, if ever, this will occur is uncertain. Indeed, because of the costly requirements of the 1973 Convention with respect to the provision of reception facilities for oily residues and oily mixtures, the future of the Convention is particularly clouded.

Second, there are a number of areas in which there has been neither international discussion nor international agreement. It is difficult to understand how progressive United States action in such areas would undermine the chances of the 1973 Convention being adopted, or, for that matter, the chances of new agreements being reached. For example, if, as contemplated by the Ports and Waterways Safety Act, the United States were to establish standards for maneuverability or stopping ability -- subjects not addressed in the 1973 Convention or any other existing agreements -- U.S. regulatory initiatives would not, in our view, be taken by the international community as a "signal' that the United States intended to impose additional requirements in those areas in which international agreements have been or could be reached. In point of fact, taking the initiative in this way, perhaps in order to galvanize the international community to take similar

Sea Conference. See Revised Single Negotiating Text, Part III, Article 28, A/Conf. 62/WP.8/.1/Part III (May 6, 1976). For the United States to step out in front by actually putting such a port state scheme into effect would not only have a beneficial effect in terms of pollution control but would perhaps hasten the general acceptance of port state enforcement.[8/]

Finally, the three reasons advanced by the Coast Guard in its draft environmental impact statement on the proposed rules as mitigating the absence of operational standards for foreign flag vessels are unpersuasive. First, the mere fact that a vessel must have necessary pumping, piping and discharge arrangements, and even a discharge monitoring and control system, so as to engage in load-on-top operations, does not ensure that discharges will be within applicable limits. Load-on-top operations are only partly effective, and there are numerous situations, e.g., short ballast voyages, rough sea conditioning, see CGEIS at 40, in which such operations cannot be carried on with any degree of success. In these situations, the temptation may well be to discharge in violation of international standards, regardless of any equipment, piping, and discharge arrangements on board. Second, th "many flag states are in fact requiring that their vessels comply with the 1969 Amendments" scarcely begins to solve the problem of operational

8/ To the extent that port state enforcement poses the risk of conflict with flag states, appropriate safeguards for flag state interests might also be devised, along the lines of those being considered at the Law of the Sea negotiations, such as suspension of port state proceedings in the event that the flag states initiate proceedings for the same violation. See Revised Single Negotiating Text, Part III, Articles 33-42, A/Conf. 62/WP.8/Rev. 1/Part III (May 6, 1976). Any specific U.S. safeguards established in the interim period before entry into force of the Law of the Sea Treaty could, of course, be replaced by the international safeguards, if different, once the Treaty goes into effect.

be made, however, is that this proposal reflects an understanding of our need and ability not to be bound by the four corners of the 1973 Convention, but, to establish where appropriate, additional standards to deal with the whole range of risks associated with the marine transport of oil. We would suggest that, in areas such as tanker maneuverability and stopping ability, similar, forward thinking action can and should be taken.

(2) Enforcement of Generally Accepted International Discharge Standards -- Operational pollution is the basic focus of the proposed rules. Nevertheless, such rules fall short of what might be achieved, even if the Coast Guard feels constrained by the standards of the 1973 Convention, because they contain no provision for enforcing violations of discharge standards outside U.S. territorial waters against foreign flag vessels. Because of the well-known and likely long-term glut in the tanker market, see generally Mueller, The Worldwide Need for Tankers (Paper Presented at the Seatrade Conference on Money and Ships, London, March 18, 1975), the Coast Guard's regulations providing for incorporation of segregated ballast capacity (33 C.F.R. §157) are likely to have little impact on operational pollution because a retrofit requirement is not included.[4/] Consequently, there is a pressing need to take as effective action as possible with respect to operational pollution from existing tankers.

4/ As far as retrofit of segregated ballest is concerned, the environmental groups note that the Coast Guard's Advance Notice of Proposed Rulemaking of May 13, 1976 (41 Fed. Reg. 19672) indicates that such a possibility is under active consideration, and we urge that every effort be made to act on this matter on a priority basis.

In 1974, world trade in petroleum shipped by tanker averaged to 35 million barrels per day; of this amount, some 5.4 million barrels per day were carried to the United States, almost exclusively (94%) by foreign flag tankers. See generally Office of Technology Assessment, Oil Transportation by Tankers: An Analysis of Marine Pollution and Safety Measures, 8-14 (July, 1975). In other words, one-sixth to one-seventh of the total oceanborne transport of petroleum was destined for the United States. U.S. enforcement of operational requirements on foreign flag tankers, would, therefore, be highly significant, even in a global pollution context.

Although the Coast Guard, in its draft environmental impact statement on the proposed rules indicates (at pages 23 and 24) that making adherence to discharge criteria a condition of entry to U.S. ports "would offer the greatest potential for oil outflow reduction," it nevertheless rejects this alternative as "not feasible from a legal standpoint," indicating in the notice of proposed rulemaking that such action would involve "a disputable extension of United States legal authority and jurisdiction" (41 Fed. Reg. 15860).[5/] The environmental groups believe that the Coast Guard has not only framed the issue in an unfortunate way, but that discharge standards may be enforced against foreign flag vessels consistent with domestic and existing international law, as well as emerging international law.

To frame the issue in terms of application of U.S. standards is misleading. The standards in the proposed rules have not

5/ Given the desirability of this alternative, it plainly deserves more that the summary one page treatment given it in the draft impact statement. All its ramifications should be fully explored before any final action is taken.

been unilaterally developed by the United States. They are international standards derived from the 1969 Amendments to the International Convention for the Prevention of Pollution of the Sea by Oil, 1954, 12 U.S.T. 2989, T.I.A.S. 4900, 327 U.N.T.S. 3, as amended, 17 U.S.T. 1523, T.I.A.S. 6109, 600 U.N.T.S. 332, and the 1973 IMCO Convention. The issue, in other words, is more properly framed in terms of U.S. enforcement of generally accepted international standards, rather than U.S. standard setting as such. If the proposed action is limited to enforcement only of international standards, any contention that such action represents a unilateral extension of standard setting jurisdiction is unfounded.

In any event, it seems clear that the United States does have the power under existing domestic and international law to enforce discharge criteria against foreign flag vessels when violations of such criteria occur outside the territorial jurisdiction of the United States. The Ports and Waterways Safety Act authorizes such exercise of jurisdiction. The Act gives the Coast Guard authority to establish rules and regulations for the operation of all vessels which enter U.S. navigable waters.[6/] Such authority does not depend upon where the violation occurs. Jurisdiction attaches when the vessel enters U.S. navigable waters. Moreover, Section 201 (13) of the Ports and Waterways Safety Act gives the Coast Guard authority to exclude "non-complying" vessels from U.S. navigable waters. Exercise

6/ Section 201(1) provides, "That it is necessary that there be established for all such vessels documented under the laws of the United States or entering the navigable waters of the United States comprehensive minimum standards of design, construction, alteration, repair, maintenance, and operation to prevent or mitigate the hazards to life, property, and the marine environment.

of this authority is fully consistent with the United States' absolute right under international law to exclude vessels of foreign registry from its internal waters. See generally Burke, Contemporary Law of the Sea: Transportation, Communication and Flight 1 (Occasional Paper Series, Law of the Sea Institute, University of Rhode Island, November 1975)

> ("States claim complete authority to control access of vessels, both private and governmental, to internal waters, whether such waters are ports, bays, or areas beyond bays that may be useful as a route for international transport. In recent times some states wholly composed of islands make the claim that waters between the islands are internal. With respect to all waters claimed to be internal, the basic claim by coastal officials is to a discretionary authority to permit or to deny access as they may unilaterally decide.")

See also Whiteman, Digest of International Law, 186-188, 216-217, 250-251 (1965). If the United States can exclude foreign vessels from its ports for any reason whatsoever, a fortiori it can exclude them for discharges which occur outside of the territorial jurisdiction of the United States.[7/]

The concept of port state enforcement of international discharge standards, if not already part of international law, certainly represents the emerging consensus. The United States has been one of its leading supporters internationally, and it is now specifically reflected in the revised Single Negotiating Text at the Law of the

7/ The remedy of exclusion should be distinguished, of course, from the imposition of monetary penalties and other remedies, where the legal basis for action under existing international law may be less well established. Denial of entry, however, may be a fairly effective remedy. Whereas monetary fines measured even in thousands of dollars might not deter polluters, denial of entry, when a cargo worth millions of dollars is involved, almost surely would.

Sea Conference. See Revised Single Negotiating Text, Part III, Article 28, A/Conf. 62/WP.8/.1/Part III (May 6, 1976). For the United States to step out in front by actually putting such a port state scheme into effect would not only have a beneficial effect in terms of pollution control but would perhaps hasten the general acceptance of port state enforcement.[8/]

Finally, the three reasons advanced by the Coast Guard in its draft environmental impact statement on the proposed rules as mitigating the absence of operational standards for foreign flag vessels are unpersuasive. First, the mere fact that a vessel must have necessary pumping, piping and discharge arrangements, and even a discharge monitoring and control system, so as to engage in load-on-top operations, does not ensure that discharges will be within applicable limits. Load-on-top operations are only partly effective, and there are numerous situations, e.g., short ballast voyages, rough sea conditioning, see CGEIS at 40, in which such operations cannot be carried on with any degree of success. In these situations, the temptation may well be to discharge in violation of international standards, regardless of any equipment, piping, and discharge arrangements on board. Second, th "many flag states are in fact requiring that their vessels comply with the 1969 Amendments" scarcely begins to solve the problem of operational

8/ To the extent that port state enforcement poses the risk of conflict with flag states, appropriate safeguards for flag state interests might also be devised, along the lines of those being considered at the Law of the Sea negotiations, such as suspension of port state proceedings in the event that the flag states initiate proceedings for the same violation. See Revised Single Negotiating Text, Part III, Articles 33-42, A/Conf. 62/WP.8/Rev. 1/Part III (May 6, 1976). Any specific U.S. safeguards established in the interim period before entry into force of the Law of the Sea Treaty could, of course, be replaced by the international safeguards, if different, once the Treaty goes into effect.

pollution. One of the major difficulties in the past with the international system of regulation of oil pollution has been that flag states have had exclusive enforcement jurisdiction. There is general recognition that flag state enforcement must be supplemented by other enforcement mechanisms if there is going to be any assurance that discharge criteria will not be violated with impunity. Third, the mere escalation in the value of oil is far from sufficient to deter willful violations of international standards. Although the cost of oil has escalated dramatically in the past two years, nonetheless, there is no proof that operational discharges have been reduced. Indeed, there is even a substantial percentage of the world fleet which still does not follow load-to-top procedures. Ultimately, the United States cannot rely on external forces to influence others to reduce their operational discharges; it must take action itself if it wishes to assure adequate protection of the marine environment.

Conclusion

In sum, the environmental groups believe that, with respect to the two basic policy questions raised in this rulemaking proceeding, the time has come to establish additional standards where needed and not addressed internationally and to enforce generally accepted international discharge standards against all vessels entering its navigable waters. Such vigorous action will help ensure that the mandate of the Ports and Waterways Safety Act will begin to be fulfilled.

Thank you.

* * *

Response to comments by the Center for Law and Social Policy contained in a statement presented by Mr. Eldon V. C. Greenburg at the public hearing on the proposed regulations held in Washington, D. C., on May 20, 1976, and supplemented by letter dated June 9, 1976

COMMENT

We believe that it would be counter-productive to limit U. S. standards to those embodied in the 1973 Convention. Such a policy may result in the sacrifice of our own environment and perhaps the world environment for the sake of an international agreement which may never be generally adopted. We reach this conclusion for two reasons:

(1) It does not appear likely that the 1973 Convention will enter into force in the near future. Because of the costly requirements for reception facilities for oily residues and oily mixtures it may never come into force.

(2) There are a number of areas in which there has been neither international discussion or international agreement. Progressive action by the United States in such areas would not undermine the chances of the 1973 Convention being adopted or new agreements being reached. One area where such action could be taken is to establish standards for maneuverability or stopping ability. The Coast Guard need not be bound by the four corners of the 1973 Convention, but should establish where appropriate additional standards to deal with the whole range of risks associated with the marine transportation of oil. Such action can and should be taken in areas such as tanker maneuvering and stopping ability.

RESPONSE

The Coast Guard agrees that legally the measures taken by the U. S. toward reduction of marine pollution from vessels need not be limited to provisions of the 1973 Marine Pollution Convention. However, the Coast Guard is convinced that the Convention represents the best opportunity of achieving the objectives of reducing operational and accidental vessel pollution in the foreseeable future and is, therefore, deserving of strongest U. S. support. Any U. S. actions contemplated must be consistent with these goals.

The 1973 Convention represents a major commitment on the part of the world's nations, and it should be no surprise that so broad and complex a document requires considerable time for nations to implement. Also, delay can be attributed to the ongoing law of the sea negotiations. There are no insurmountable technical problems with implementing the required annexes. As the commenter points out, requirements for reception facilities are costly. For this reason, the Coast Guard is drafting proposed regulations to require that vessels have the necessary equipment to consolidate waste oils, since this will ease the reception facility burden.

The commenter also suggests that issues such as maneuvering and stopping ability of vessels where no international agreement or even extensive discussions have occurred are areas where the U. S. can take action to establish standards without undermining the chances of adoption of the 1973 Convention. The problems associated with establishing these types of performance standards are fully discussed on pages 64-69 and 179-181 of reference (1).

COMMENT

The rules fall short of what might be achieved because they contain no provision for enforcing violations of discharge standards outside U. S. territorial waters against foreign flag vessels.

(CLSP, page 6)

The environmental groups believe that discharge standards may be enforced against foreign flag vessels consistent with domestic and existing international law, as well as emerging international law.

The discharge standards in the proposed rules are international standards, derived from the 1969 Amendments to the International Convention for the Prevention of Pollution of the Sea by Oil, 1954, and the 1973 IMCO Convention.

The issue, then, is U. S. enforcement of generally accepted international standards, rather than the application of U. S. standards to foreign vessels. If the proposed action is limited to enforcement of international standards, any contention that such action represents a unilateral extension of standard setting jurisdiction is unfounded.

(CLSP, Pages 7-8)

RESPONSE

The Coast Guard cannot agree that the operational discharge standards in the proposed rules are international standards. Rather these standards are proposed international standards not yet in force which will supersede certain provisions of the present international law to which the U. S. is a party, the International Convention for the Prevention of Pollution of the Sea by Oil, 1954, as amended in 1962. The proposed standards as embodied in the 1969 amendments to the 1954 Convention are fairly close to having received sufficient ratifications for entry in force. Many nations have already implemented the standards for

their own vessels as has the United States. Thus, the 1969 amendments have received a measure of acceptance, but they are not yet international law, nor can they be until they enter into force and succeed provisions of the 1954 Convention.

COMMENT

It is clear that the United States does have the power under existing domestic and international law to enforce discharge criteria against foreign flag vessels when violations of such criteria occur outside the territorial jurisdiction of the United States.

The Ports and Waterways Safety Act authorized such exercise of jurisdiction. The Act gives the Coast Guard authority to establish rules and regulations for the operation of all vessels which enter U. S. navigable waters (Section 201(1)). Such jurisdiction does not depend on where the violation occurs. Jurisdiction attaches when the vessel enters U. S. navigable waters. Section 201 (13) of the Act gives the Coast Guard authority to exclude "non-complying" vessels from U. S. navigable waters. Exercise of this authority is fully consistent with the United States' absolute right under international law to exclude vessels of foreign registry from its internal waters. Thus, the United States can exclude foreign vessels from its ports for discharges which occur outside of the territorial jurisdiction of the United States.

The concept of port state enforcement of international discharge standards, if not already part of the international law, certainly represents the emerging consensus. This principle, supported by the U. S., is specifically reflected in the revised Single Negotiating Text at the Law of the Sea Conference (Revised Single Negotiating Text, Part III, Article 28, A/Conf. 62/WP.8/.1/Part III, May 6, 1976). For the United States to step out in front by actually putting such a port state scheme into effect would not only have a beneficial effect in terms of pollution control but would perhaps hasten the general acceptance of port state enforcement.

RESPONSE

This comment recommends that the proposed discharge standards be enforced against foreign flag vessels on international waters and that violators of these standards be denied entry to U. S. ports. A distinction is drawn between the U. S. unilaterally enforcing U. S. standards in international waters and enforcing "generally accepted international standards" on international waters. The contention is that the latter, if not part of international law, represents the emerging consensus, citing Part III, Article 28 of the Revised Single Negotiating Text (Third Conference of Law of the S a, A/Conf.62/WP.8/.1/Part III (May 6, 1976)).

Article 28 can have very little impact on the Coast Guard's resolution of the issues raised by the commenter. As the President of the Conference states in his Note, the Revised Single Negotiating Text "represent(s) a further stage in the work of the Conference." The texts "have no other status than that of serving as a basis for continued negotiation without prejudice to the right of any delegation to move any amendment or to introduce any new proposals. The texts must not be regarded as committing any delegation or delegations to any of their provisions." Article 28, therefore, at this stage of the negotiations of the Convention, binds no one and does not represent a consensus.

More pertinent to the Coast Guard's resolution of this issue is the method employed in Article 4 of the International Conference on Marine Pollution 1973. It reads as follows:

ARTICLE 4

Violation

(1) Any violation of the requirements of the present Convention shall be prohibited and sanctions shall be established therefor under the law of the Administration of the ship concerned wherever the violation occurs. If the Administration is informed of such a violation and is satisfied that sufficient evidence is available to enable proceedings to be brought in respect of the alleged violation, it shall cause such proceedings to be taken as soon as possible, in accordance with its law.

(2) Any violation of the requirements of the present Convention within the jurisdiction of any Party to the Convention shall be prohibited and sanctions shall be established therefor under the law of that Party. Whenever such a violation occurs, that Party shall either:

(a) cause proceedings to be taken in accordance with its law; or

(b) furnish to the Administration of the ship such information and evidence as may be in its possession that a violation has occurred.

(3) When information or evidence with respect to any violation of the present Convention by a ship is furnished to the Administration of that ship, the Administration shall promptly inform the Party which has furnished the information or evidence, and the Organization, of the action taken.

(4) The penalties specified under the law of a Party pursuant to the present Article shall be adequate in severity to discourage violations of the present Convention and shall be equally severe irrespective of where the violations occur.

Article 4 conforms to established international law. It is a principle that can be read in other recent international conventions, such as Article 2 of the United Nations "Convention of The High Seas," 13 UST 2312, TIAS 5200, 450 UNTS 82. Article 2 states that:

"The high seas being open to all nations, no State may validly purport to subject any part of them to its sovereignty. Freedom of the high seas is exercised under the conditions laid down by these articles and by the other rules of international law. It comprises, inter alia, both for coastal and noncoastal states:

(1) Freedom of navigation;

(2) Freedom of fishing;

(3) Freedom to lay submarine cables and pipelines;

(4) Freedom to fly over the high seas.

These freedoms, and others which are recognized by the general principles of international law, shall be exercised by all States with reasonable regard to the interests of other States in their exercise of the freedom of the high seas."

It is a principle recognized by the Supreme Court in United States v. Louisiana, et al (363 US 1, 33) "the high seas, as distinguished from inland waters, are generally conceded by modern nations to be subject to the exclusive sovereignty of no single nation."

This concept is expressed as follows in "The International Law of the Sea" by C. John Colombia (6th edition):

"§80. Right of regulation by the community of nations.

"It results from the above considerations that the high sea cannot be under the sovereignty of any State and that no State has a right to exercise jurisdiction over it. The sea must remain common to all nations in order to fulfill its main mission of an international highway. It does not follow, however, that because no jurisdiction is enjoyed by any State on the high seas, that the community of nations is not entitled to provide, by international agreement, binding rules on the proper use of the sea to the greatest possible advantage of all States and also for the purpose of establishing a legal order in and over it. If this were not so, a state of anarchy and lawlessness would prevail on the open seas, not only rendering its use incapable of proper exploitation, but endangering the lives and property of persons sailing in it.

A right to regulate the open seas must therefore be recognized to the international community of nations . . . ."

It is the Coast Guard's opinion that this is a well established principle of international law, and the commenter's recommendation, since it ignores this principle, cannot be accepted.

COMMENT

There was a general recognition at the 1973 International Conference on Marine Pollution that port state enforcement might be appropriate to ensure compliance with standards negotiated at that Conference. Thus, it is likely United States action under the Ports and Waterways Safety Act would not be viewed by the international community as an unwarranted and unexpected assertion of unilateral jurisdiction.

RESPONSE

It is not clear at all that "there was a general recognition at the 1973 International Conference on Marine Pollution that port state enforcement might be appropriate to ensure compliance with standards negotiated at that Conference," and even if there was, might be is considerably short of is. This impression of the consensus of the Conference is at variance with that reported by Pearson[1]:

"The 1973 London Conference on the Prevention of Pollution by Ships presents a vivid illustration of the intrusion of other ocean issues in forming marine environment policy. Two

[1]Pearson, Charles S., International Marine Environment Policy: the economic dimension, Baltimore, Maryland, 1975.

questions that lie at the core of most ocean issues were raised and nearly succeeded in sinking the conference. Both concerned jurisdiction -- the areal extent of national jurisdiction over ocean space, and the rights of coastal states to establish more stringent environmental measures for the protection of their environment within areas under their jurisdiction.

"With regard to the areal extent of jurisdiction, which directly involves most important law-of-the-sea issues, the question at London was the extent to which a country could extend its environmental jurisdictional zone. Ultimately, the question was side-stepped. The convention obliges a country to prohibit and punish violations 'within its jurisdiction, or to refer them to the flag state for prosecution.' It intentionally avoided any resolution of the areal jurisdictional question and, in line with the U. S. position, deferred the matter to the forthcoming Law of the Sea Conference. Thus there was no endorsement or condemnation of the asymmetrical situation in which Canada claims a 100 mile environmental zone and the United States 12 miles.

"The conference also avoided a resolution of the rights of coastal states to establish more stringent measures within their ocean jurisdiction. Presumably, these measures would include rigorous ship discharge standards and specifications regarding ship design and pollution control equipment. The United States, as a major maritime power with a strong interest in unimpeded commercial navigation, wishes to see internationally uniform environmental controls over marine transit, rather than a patchwork of differing coastal state standards. Article 8 of the draft convention, prepared prior to the conference, explicitly permitted states to establish more stringent standards under certain conditions. This article became the most controversial element at the conference and, following considerable pressure by the United States, was omitted from the final document, the question being deferred to the Law of the Sea Conference. (As described by Russell Train, Chairman of the U. S. Delegation, 'This really was the most difficult element in the Conference because it involved such divergent points of view not really of an environmental nature, or even a maritime nature, but of national interest generally.'" Hearings on the 1973 IMCO Conference, p. 9 (emphasis added by Pearson).

The issue of coastal or port state enforcement thus was not resolved at the Conference, and as indicated in the response to an earlier comment, has not yet been resolved at the Law of the Sea Conference. Likewise, other comments received on the draft statement demonstrate that the statement, "it is likely that United States action under the Ports and Waterways Safety Act would not be viewed by the international community as an unwarranted and unexpected assertion of unilateral jurisdiction" is in error. (See pages 93, 97, 103 and 112).

COMMENT

The three reasons given by the Coast Guard in the draft EIS as mitigating failure to impose discharge standards on foreign vessels are unpersuasive.

The mere fact that a vessel must be equipped to practice LOT does not ensure that discharges will be within acceptable limits. In many situations there will be a temptation to discharge in violation of international standards, regardless of the equipment required to be installed.

The fact that many flag states are requiring their vessels to comply with the 1969 Amendments scarcely begins to solve the problem of operational pollution. Flag state enforcement must be supplemented by other enforcement mechanisms if there is going to be any assurance that discharge criteria are not going to be violated with impunity.

The mere escalation in the value of oil is far from sufficient to deter willful violations of international standards. Although the cost of oil has escalated dramatically in the past two years, there is no proof that operational discharges have been reduced. The United States cannot rely on external forces to influence others to reduce their operational discharges; it must take action itself if it wishes to assure adequate protection for the marine environment.

RESPONSE

The Coast Guard agrees that "the mere fact that a vessel must be equipped to practice LOT does not ensure that discharges will be within acceptable limits." Making the discharge standards applicable to foreign vessels outside U. S. waters or any other action within the practical limits of the Coast Guard's power would not ensure that either. The question is, rather, what can the Coast Guard do, within the practical limits of its authority and the resources available to it, to encourage the greatest reduction in operational discharges by the most dischargers. In this regard, the Coast Guard believes the principle applies which states, "If it is as easy to do the right thing as it is to do the wrong thing, then most people will do the right thing."

The Coast Guard believes the requirement by many nations that their vessels comply with the discharge criteria in the 1969 Amendments will be of benefit in reducing operational pollution. International mechanisms already exist for referral of violations to flag state for prosecution.

The Coast Guard also believes the increasing value of oil does provide strong incentive for operational discharge reduction, and that there is considerable potential for increasing such incentives through already beginning to be included clauses in charter party agreements and the like.

It is true, of course, that no proof of reduced operational pollution resulting from higher oil prices can be demonstrated, but such lack of proof does not refute the basic economic principle that

when the value of a pollutant exceeds the cost of its recovery, it is no longer regarded as a pollutant but as an asset.

State of New Jersey
DEPARTMENT OF COMMUNITY AFFAIRS

PATRICIA Q. SHEEHAN
COMMISSIONER

363 WEST STATE STREET
POST OFFICE BOX 2768
TRENTON, N.J. 08625

May 20, 1976

MARINE SAFETY COUNCIL
STAFF
RECEIVED
MAY 26 1976

Executive Secretary
Marine Safety Council
U. S. Coast Guard (G-CMC/81)
Washington, D.C. 20590

RE: OSRC-FY-76-875

Dear Mr. Secretary:

This will acknowledge receipt of your recent Project Notification for the Draft Environmental Impact Statement - *Regulations for U.S. Tank Vessels Carrying Oil in Foreign Trade and Foreign Tank Vessels that Enter the Navigable Waters of the United States.* The project has been designated application OSRC-FY-76-875 for all future references.

We have circulated this Project Notification to the appropriate State agencies for review and comment. We anticipate no problems during the review phase, but should any conflicts or issues arise, it will be necessary to schedule a conference in order to resolve the issues prior to the issuance of a Letter of Certification.

Very truly yours,

Jerry Eure
Supervising Planner
Project Review Section
Division of State and
Regional Planning

JE:br

State of New Jersey
DEPARTMENT OF COMMUNITY AFFAIRS

PATRICIA Q. SHEEHAN
COMMISSIONER

363 WEST STATE STREET
POST OFFICE BOX 2768
TRENTON, N.J. 08625

June 15, 1976

MARINE SAFETY COUNCIL
STAFF
RECEIVED
JUN 22 1976

Executive Secretary
Marine Safety Council
U.S. Coast Guard (G-CMC/81)
Washington, D.C. 20590

RE: OSRC-FY-76-875

Dear Mr. Secretary:

In accordance with the U.S. Office of Management and Budget Circular A-95 Revised, your Environmental Impact Statement for the Draft E.I.S. - Regulations for U.S. Tank Vessels Carrying Oil in Foreign Trade and Foreign Tank Vessels that Enter the Navigable Waters of the United States designated application OSRC-FY-76-875 has met the State of New Jersey's Clearinghouse regulations.

We have circulated this Project Notification to the appropriate State agencies, none of which have voiced any objections.

Very truly yours,

Sidney L. Willis
State Review Coordinator

SLW:br

State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION

TRENTON 08625

OFFICE OF THE COMMISSIONER

MARINE SAFETY COUNCIL
STAFF
RECEIVED
JUL 07 1976

30 June 1976

Executive Secretary
Marine Safety Council
U. S. Coast Guard (G-CMC/81)
Washington, DC 20590

Dear Sir:

This is in response to the Draft Environmental Impact Statement for Regulations for U. S. Tank Vessels Carrying Oil in Foreign Trade and Foreign Tank Vessels that enter the Navigable Waters off the United States. This office has reviewed the aforementioned document and has no substantive comments to make at this time. However, we are submitting a copy of the EIS to our Department's Division of Water Resources, Office of Special Services for their review. If applicable, they may comment on the Draft EIS within the near future.

Thank you for the opportunity to review the Draft EIS.

Sincerely yours,

Lawrence Schmidt, Chief
Office of Environmental Review

LS:mm

Response to comments by New Jersey contained in
letters dated 20 May, 15 June and 30 June 1976

RESPONSE

The three letters from New Jersey state officials demonstrate wide circulation of the DEIS within the state. The letters contain no substantive objection or comment to the proposed action. No response necessary.

FROM SHELL INTERNATIONAL MARINE LTD LONDON MRS (MRA MRP MRT MR) ""
TX 919651
URGENT TO ADMIRAL O.W. SILER, U.S. COAST GUARD, WASHINGTON

CORRECTED ROUTING
DESTROY PREVIOUS CO

REF LON196435 11/JUNE/76

PROPOSED RULE MAKING REF. 33 CFR PART 157

SHELL GROUPS OF COMPANIES TOGETHER OWN/OPERATE OVER 130 OIL TANKERS TOTALLING OVER 14 MILLION TONS DEADWEIGHT AND SHELL INTERNATIONAL MARINE LIMITED ADDITIONALLY HAS ON CHARTER AT ANY ONE TIME TYPICALLY A SIMILAR NUMBER OF INDEPENDENTLY OWNED TANKSHIPS TOTALLING OVER 15 MILLION TONS DEADWEIGHT. THESE SHIPS OF MANY FLAGS TRADE WORLDWIDE AND TO THE UNITED STATES. SHELL INTERNATIONAL THEREFORE ARE LIKELY TO BE OPERATIONALLY AFFECTED
(CONTINUED)

AD-A036 769 COAST GUARD WASHINGTON D C OFFICE OF MERCHANT MARINE--ETC F/G 5/4
FINAL ENVIRONMENTAL IMPACT STATEMENT. REGULATIONS FOR U.S. TANK--ETC(U)
NOV 76

UNCLASSIFIED USCG-M-08-77 NL

2 OF 2
ADA036769

END

DATE
FILMED
4-77

19643S/2
BY ANY U.S. LEGISLATIVE REQUIREMENTS RELATING TO NON-U.S. FLAG TANKERS WHEN IN U.S. WATERS OR PORTS.
DESPITE THIS LONG TIME INVOLVEMENT IN TRADING TO THE UNITED STATES WE HAVE NOT TAKEN OPPORTUNITY OF DIRECT COMMENT ON PAST PROPOSED RULEMAKING BUT WOULD NOW WISH TO DO SO IN RESPECT OF 33 CFR PART 157 AS NOTIFIED IN SPECIFIC DETAIL IN THE FEDERAL REGISTER OF 15 APRIL 76 FOR NEW SHIPS AND AS GIVEN AS ADVANCE NOTICE IN FEDERAL REGISTER OF 13 MAY 76 IN RESPECT OF EXISTING TANKSHIPS.
WE FEEL CONSTRAINED TO MAKE THESE COMMENTS BECAUSE CERTAIN ASPECTS OF THIS PROPOSED RULE MAKING ARE QUITE UNPRECEDENTED IN THE EXTENT OF THEIR UNILATERAL CONSTRUCTIONAL REQUIREMENTS AND WOULD, WE BELIEVE, BE FAR REACHING IN THEIR EFFECT ON PRESENT INTER-GOVERNMENTAL ARRANGEMENTS FOR THE CONTROL OF SHIPPING IF THEY WERE TO BE BROUGHT INTO EFFECT. WE BELIEVE ALSO THAT THESE PARTICULAR REQUIREMENTS WOULD REPRESENT A MOST COSTLY BUT COMPARATIVELY INEFFECTIVE CONTRIBUTION BY THE U.S. TO THE MINIMISATION OF TANKER SOURCE POLLUTION.
(CONTINUED)

196435/3
SHELL, THROUGH ITS CONNECTIONS WITH THE INTERNATIONAL CHAMBER OF SHIPPING AND ITS MEMBERSHIP OF THE OIL COMPANIES INTERNATIONAL MARINE FORUM HAS ALWAYS SUPPORTED THE TIMELY FORMULATION OF AGREED INTERNATIONAL REGULATIONS FOLLOWED BY THEIR SPEEDIEST AND MOST WIDESPREAD IMPLEMENTATION AND ENFORCEMENT.
WHILST MULTILATERAL IMPLEMENTATION RELATED TO INTERNATIONAL RATIFICATION IS THE IDEAL, WE WELL APPRECIATE THE FRUSTRATION ENGENDERED BY THE OFTEN TARDINESS OF INTERNATIONAL CONVENTION RATIFICATION PROCEDURE. FOR THESE REASONS WE DO NOT DEPRECATE THOSE ITEMS IN THE PROPOSED RULEMAKING WHICH WOULD IMPLEMENT VARIOUS REQUIREMENTS OF THE 1973 CONVENTION.
NEVERTHELESS WE SHOULD POINT OUT THAT THE APPLICATION OF CLAUSE 157.11(A)(2) IN RESPECT OF ABOVE WATER DISCHARGING AND OF 157.37(A)(6) TO EXISTING SHIPS MAY, BECAUSE OF THE HIGH COST OF MODIFICATION, ELIMINATE MANY OLDER THOUGH EFFICIENT SHIPS FROM ELIGIBILITY FOR U.S. TRADE AND, BY REDUCING THE TONNAGE AVAILABILITY, THEREBY ADD TO THE MARKET PRESSURES OUTLINED IN CCC) BELOW.
(CONTINUED)

196435/4
WE DO, HOWEVER, STRONGLY DEPRECATE THE ARBITRARY AND UNILATERAL PROPOSALS OF CLAUSE 157.09 WHICH FOR LARGE NEW SHIPS OF ANY FLAG IN U.S. WATERS WOULD IMPOSE LOWER MAXIMUM HYPOTHETICAL ACCIDENTAL OIL OUTFLOW THAN DO IMCO REQUIREMENTS AND WOULD REQUIRE A FORM OF DISTRIBUTION OF SEGREGATED BALLAST WHICH HAS NOT BEEN SUBJECT TO ANY INTERNATIONAL INVESTIGATION OR DEVELOPMENT.
WE ALSO MUST STRONGLY DEPRECATE THE MORE RECENT PROPOSAL TO REQUIRE SOME FORM OF SEGREGATED BALLAST OPERATION ON EXISTING LARGE TANKERS OF NON-U.S. FLAG VISITING U.S. WATERS.
BEFORE YOU PROCEED WITH THESE PROPOSALS WE THINK YOU SHOULD CONSIDER THE FOLLOWING:
AAA) THE REDUCTION TO 80 PERCENT OF CONVENTION OUTFLOW QUANTITIES AND THE RULES FOR DISPOSITION OF SEGREGATED BALLAST BEAR VERY DIRECTLY ON SHIP STRUCTURAL DESIGN. THE PRESENT ECONOMY AND CONTINGENCY CAPABILITY OF OIL TRANSPORTATION IS BUILT UPON WORLDWIDE FLEXIBILITY OF ROUTING AND USAGE OF TANKERS. IF OTHER COUNTRIES SHOULD FOLLOW THE
(CONTINUED)

U.S. PRECEDENT AND FORMULATE THEIP OWN ARBITRARY CONSTRUCTION RULES THEN THE WHOLE PRESENT FRAMEWORK OF OCEAN OIL TRANSPORTATION COULD BE DISRUPTED AND COULD DESCEND TO VERY COSTLY CHAOS INDEED.

BBB) THE SITUATION DESCRIBED UNDER AAA) IS THE ABNEGATION OF ALL THAT IS SENSIBLE AND PURPOSEFUL IN THE IMCO MECHANISM OF INTERNATIONALLY AGREED AND MULTILATERALLY IMPLEMENTED REQUIREMENTS AND IT SEEMS TO US THAT IF SUCH A POWERFUL LEADING NATION AS THE UNITED STATES DOES ENACT AND ENFORCE UNILATERAL LEGISLATION OF THIS ARBITRARY AND ONEROUS CONSTRUCTIONAL NATURE THEN THE CREDIBILITY AND CONTINUED VIABILITY OF IMCO COULD VANISH OVERNIGHT.

CCC) LOOKING MORE SPECIFICALLY AT THE EFFECT OF REQUIRING SEGREGATED BALLAST (SBT) IN EXISTING TANKERS OF OVER 70,000 DWT ESTIMATES SUGGEST THAT BY THE MID-EIGHTIES SOME HALF OF CRUDE OIL IMPORTS MAY BE CARRIED INTO U.S. TERRITORIAL WATERS BY SHIPS IN EXCESS OF 70,000 DWT INVOLVING THE USE OF BETWEEN 100 AND 150 SUCH

(CONTINUED)

SHIPS AT ANY ONE TIME. IF THESE SHIPS WERE REQUIRED TO BE SBT THEN THEIR BASIC FREIGHT RATE MUST INCREASE BY SOME 20 PERCENT ABOVE THEIR NON-SBT EQUIVALENT. HOWEVER, IT IS UNLIKELY THAT A GREAT EXCESS OF SHIPS WOULD BE CONVERTED TO SBT FOR THE U.S. TRADE AND THE NORMAL VERY WIDE AVAILABILITY AND FLEXIBILITY IN PROGRAMMING SHIPS FOR THIS TRADE WOULD BE GREATLY REDUCED. EXPERIENCE SHOWS THAT IN SUCH CONDITIONS MARKET FORCES WOULD NORMALLY GENERATE A PREMIUM WHICH WOULD BE IN EXCESS OF THE BASIC FREIGHT COST INCREASE.

ALTERNATIVELY IT MAY BE THAT IN ORDER TO LIMIT CONVERSION TO SBT THE TRADE WOULD MOVE TOWARDS INCREASED TRANSHIPMENT AND FINAL DELIVERY THROUGH U.S. WATERS IN SHIPS OF LESS THAN 70,000 DWT. AGAIN SUBSTANTIALLY HIGHER COSTS THAN DIRECT NON-SBT DELIVERY WOULD BE INVOLVED AS WOULD BE AN INCREASE IN TRAFFIC DENSITY AT RECEIVING PORTS AND AN INCREASE IN TOTAL NUMBER OF OIL TRANSFERS.

DDD) IT IS OFTEN SAID THAT RETROFITTED SBT IS NO MORE THAN AN ACCELERATION OF PROGRESS TO AN ERA WHICH HAS ALREADY BEEN

(CONTINUED)

196435/7

AGREED FOR THE FUTURE VIA NEWBUILDINGS. SUCH A STATEMENT NEEDS SOME RESERVATION SINCE THE COSTS AND USE OF RESOURCES IN RETROFITTED SBT ARE OF A WHOLLY DIFFERENT NATURE FROM THOSE ATTACHING TO NEWBUILDING SBT. FOR THE LATTER THE ONLY COST AND RESOURCE USAGE IS THE EXTRA CONSTRUCTIONAL STEEL TO PROVIDE FOR THE EXTRA CUBIC CAPACITY FOR BALLAST. IN THE CASE OF RETROFITTED SBT, CONVERSION COSTS ARE HIGH AND VARIABLE, MORE SHIPS MUST BE USED TO TRANSPORT THE SAME AMOUNT OF OIL AND AS A CONSEQUENCE OVERALL FREIGHT COSTS ARE ESCALATED MUCH MORE THAN FOR NEWBUILDING SBT, CONSIDERABLY MORE STEEL IS USED IN PROVIDING EXTRA SHIPS AND PROPORTIONATELY MORE BUNKERS USED IN PROPELLING THESE EXTRA SHIPS.

EEE) THE VIRTUES OF SBT ARE INDEED REAL IN THAT IT REDUCES THE REQUIREMENT FOR TANK CLEANING ON THE BALLAST VOYAGE AND ELIMINATES THE WORRY IN THE DISCHARGE OF CLEAN BALLAST FROM CARGO TANKS AT THE LOADING PORT. FOR THESE REASONS SBT AS ACHIEVED ON NEWBUILDINGS AT REASONABLE AND WORLDWIDE SHARED

(CONTINUED)

196435/8

COSTS AND WITHOUT TRADE DISRUPTION IS SENSIBLE. SBT APPLIED TO EXISTING FOREIGN FLAG SHIPS VISITING U.S. WATERS DOES, HOWEVER, INVOLVE GREAT ALTRUISM IN THAT WHILST THE COSTS MUST INEVITABLY FALL UPON THE U.S. AS THE CALLER OF THE TUNE, THE MARGINAL REDUCTION IN POLLUTION WILL NOT AFFECT U.S. WATERS BUT ONLY FAR AWAY LOADING PORTS AND THE HIGH SEAS WELL AWAY FROM U.S. SHORES. INDEED IF THESE REGULATIONS WERE TO INCREASE THE AMOUNT OF TRANSHIPMENT INTO SMALLER SHIPS FOR FINAL DELIVERY, THIS COULD BE COUNTER-PRODUCTIVE BECAUSE OF THE INCREASE IN TANK WASHING ON COMPARATIVELY SHORT BALLAST VOYAGES CLOSE TO U.S. SHORES.

WHILST THE ABOVE COMMENTARY ON THESE PARTICULAR ASPECTS IS WHOLLY OF A NEGATIVE NATURE, WE IN SHELL INTERNATIONAL MARINE HAVE, AS YOU DO, AN ABHORRENCE OF THE PRESENT LEVEL OF POLLUTION FROM TANKERS. WE DO BELIEVE, HOWEVER, THAT MUCH MORE CAN BE DONE TOWARDS ELIMINATION OF THIS POLLUTION BY MUCH SIMPLER, LESS DRASTIC ENDEAVOUR THAN THAT WHICH YOU ARE PROPOSING.

(CONTINUED)

19643579
WE HAVE PARTICULARLY IN MIND FIRSTLY THE WIDE IMPLEMENTATION OF
THE 1969 AMENDMENTS AND THEIR DETERMINED ENFORCEMENT.
IN THIS LATTER RESPECT, CO-OPERATION FROM OIL PRODUCING
STATES AND FROM FLAG STATES IN THE WIDESPREAD USE OF LOADING PORT
INSPECTIONS WOULD BE OF ENORMOUS VALUE. SECONDLY THE
RECENTLY LAUNCHED ICS POLLUTION PREVENTION CODE (OIL TANKERS),
TO WHICH WITH OTHERS WER ARE SIGNATORIES, HAS,
WE BELIEVE, VERY SUBSTANTIAL POTENTIAL AND A FEW DAYS AGO WAS
APPROVED BY IMCOS MEPC. SUPPORT AND ENCOURAGEMENT OF THE CODE
BY GOVERNMENTS WOULD HELP IT MORE SPEEDILY ACHIEVE
ITS OBJECTIVES.
FINALLY WE NEED HARDLY STRESS THAT WE DO REGA
25#3 .-5534 91
THIS TELEX TO BE OF VITAL IMPORTANCE BOTH TO THE TANKER INDUSTRY
AND TO THE OIL CONSUMER. SHOULD THERE BE ANY AREA OF
UNCERTAINTY IN WHAT IS HERE SAID OR OTHERWISE AND ON WHICH
WE COULD BE OF FURTHER HELP WE WOULD BE PLEASED, SHOULD YOU WISH
IT, TO VISIT YOU AND DISCUSS IT.

NNNN

Response to comments submitted by
Shell International Marine Ltd. in
11 June 1976 telex

COMMENT

We should point out that the application of clause 157.11(a)(2) requiring above-water discharging and 157.37(a)(6) to existing ships may, because of the high cost of modification, eliminate many older though efficient ships from eligibility for U. S. trade and, by reducing the tonnage availability, thereby add to the market pressures outlined in (C) below.

RESPONSE

Several commenters suggested that the requirements for rerouting piping systems be eliminated in proposed 157.11 because the rearrangements will not in themselves effect a significant reduction in oil discharge during normal tanker operations and is unjustified on grounds of cost-effectiveness, especially in older vessels. Before making the proposal, the Coast Guard studied this issue and determined that the proposed resolution is technically and economically feasible. Section 157.11 requires the fixed piping system to discharge to the sea from above the weather deck or the side above the waterline of the deepest ballast condition. Pumps capable of pumping cargo to deck level and then ashore are capable of pumping oily mixtures over the side as required without rearrangement. Accordingly, the Coast Guard did not accept this suggestion.

COMMENT

We strongly deprecate the arbitrary and unilateral proposals of clause 157.09 which for large new ships of any flag in U. S. waters would impose lower maximum hypothetical accidental oil outflow than do IMCO requirements and would require a form of distribution of segregated ballast which has not been subject to any international investigation or development. Before you proceed with these proposals we think you should consider the following:

A. The reduction to 80% of Convention outflow quantities and the rules for disposition of segregated ballast bear very directly on ship structural design. The present economy and contingency capability of oil transportation is built upon worldwide flexibility of routing and usage of tankers. If other countries should follow the U. S. precedent and formulate their own arbitrary construction rules then the whole present framework of ocean oil transportation could be disrupted and could descend to very costly chaos indeed.

B. The situation described under A. is the abnegation of all that is sensible and purposeful in the IMCO mechanism of internationally agreed and multilaterally implemented requirements and it seems to us that if such a powerful leading nation as the United States does enact and enforce unilateral legislation of this arbitrary and onerous constructional nature then the credibility and continued via viability of IMCO could vanish overnight.

RESPONSE

This is but one of several comments criticizing the proposed requirements as attempting to introduce unilaterally, for foreign-flag vessels, detailed requirements that exceed internationally-agreed standards. A commenter suggested that it could be counter productive to the objective of pollution avoidance to specify, at this stage, the distribution of the segregated ballast. He also suggested that it is unreasonable to specify a 20% reduction in the maximum hypothetical outflow specified in the 1973 Convention.

The 1973 Convention only requires meeting its standards. It does not prohibit more stringent standards, especially on issues for which no specifications are supplied. The distribution of segregated ballast spaces is considered by the Coast Guard as a logical and beneficial corollary to a segregated ballast capacity on new vessels. Since the issue in the comment was centered in the Coast Guard's co-called "unilateral actions" and not on the technical merits of the distribution of segregated ballast, it is considered an issue that is dealt with by the preamble in the April 15, 1976 notice of proposed rule making, and is not accepted by the Coast Guard.

One of those commenters also criticized the ballast location proposal because "it appears to be of secondary value and to have been considered in relation to only a limited number of possible tanker designs or alternative measures." This commenter appears to have misunderstood the objective of the regulations, as stated in the preamble in the October 14, 1975 issue of the Federal Register. The primary purpose (or value) of these regulations is to protect the marine environment by reducing operational pollution. A secondary purpose (or value) of these regulations is, with the proper positioning of segregated ballast, to achieve a significant measure of additional protection, as a result of the extra cubic capacity that such ballast provides, over a range of accident circumstances. The study Group Report, of April 28, 1975, has been included in the Final Environmental Impact Statement on Regulations for Tank Vessels

Engaged in the Carriage of Oil in Domestic Trade. The study states the following:

> "This study was necessarily carried out within a limited time frame. Every effort was made to include all of the creative thinking and analysis work that various industry and government groups had already developed on this subject. The study group expressed a good deal of its own creative ability but the possibility remains that there are other design concepts which might exist and be found advantageous. The time limitations also forced the study group to do most of its evaluation on designs in the 120-250,000 DWT size range with lesser attention to ships up to 500,000 DWT. Different design alternatives might be more or less advantageous on ships which fall outside the 120-250,000 DWT size range. The study group also necessarily focused its attention on designs with conventional ratios of length to beam to depth. The same problems may apply with designs which are not conventional in this regard. The study group also recognizes that a correction factor to the formula may be necessary for ship sizes larger than those primarily studied. Time limitations again precluded particular consideration of this item. There is almost no quantitative data available which relates resulting internal structural integrity to the depth of accidental penetration. The study group used the same approach as in the IMCO hypothetical outflow regulation in regard to the point of penetration. <u>While this is a simplified assumption, it should provide a relative measure of effectiveness for differing designs in accident circumstances</u>." (Underscoring supplied).

Since the purpose of the study was to provide the measure, the Coast Guard considers that the study was worthwhile and has met its objectives. If new vessels are not built in the near future, no vessels will be affected by the requirements while IMCO is considering the issue. The rules could, of course, be changed in the future depending upon positive IMCO action.

M P E R I A L O I L L I M I T E D

111 ST. CLAIR AVENUE WEST TORONTO CANADA M5W 1K3

TRANSPORTATION DEPARTMENT
MARINE DIVISION

W. H. ABEL, MANAGER

June 9, 1976

File: 0810

Notice CGD 75-240
Fed. Reg. Issue
15 April 1976

Executive Secretary,
Marine Safety Council,
U.S. Coast Guard H.Q.,
Washington, D. C. 20590

Dear Sir:

We take note of proposed amendments to Part 157 of Coast Guard Rules detailed in the above notice.

These proposals deal with questions which are within the competence of the Marine Environment Protection Committee of IMCO. It is, therefore, inappropriate for the U.S. to issue such a regulation affecting foreign ships until it has been discussed and endorsed by that body. Article 16 of IMCO 73 provides the machinery for doing this. To attempt to circumvent this procedure by so large and influential a party as the U.S. A. can only bring the whole question of international law related to shipping into jeopardy.

CGD 75-240 in its present form should be withdrawn. If U.S.C.G. believes strongly in it, it should be submitted for consideration by the Marine Environment Protection Committee of IMCO through the designated channels. The course proposed is a discourtesy to IMCO.

We also endorse the opinion of the French delegation to the recent IMCO meeting that the result would be in conflict with international law when the 1973 Convention enters into force. The U.S. reply failed to take note of the fact that they signed IMCO 73 and, therefore, solemnly accept its provisions. Articles 5,7,15 and 16 of IMCO 73 are pertinent to the above issue.

Yours very truly,

E. E. Bustard

cc. Mr. W. O. Gray, Exxon Corporation

Response to Comments submitted by
Imperial Oil Limited in a letter
dated June 9, 1976

COMMENT

These proposals deal with questions which are within the competence of the Marine Environment Protection Committee of IMCO. It is, therefore, inappropriate for the U. S. to issue such a regulation affecting foreign ships until it has been discussed and endorsed by that body. Article 16 of IMCO 73 provides the machinery for doing this. To attempt to circumvent this procedure by so large and influential a party as the U.S.A. can only bring the whole question of international law related to shipping into jeopardy. The proposed rules should be withdrawn and submitted for consideration by the Marine Environment Protection Committee of IMCO through the designated channels. The course proposed is a discourtesy to IMCO.

RESPONSE

The International Conference on Marine Pollution 1973 already has dealt with all the provisions of the proposed rules excepting that portion concerning distribution of required segregated ballast capacity. The amendment procedures of Article 16 of the 1973 Convention cannot be used until that Convention enters into force.

The portion of the rules concerning segregated ballast distribution has been discussed in a prior response on pages 93-95.

Oil Companies I rnatio: Marine Forum

6th Floor
Portland House
Stag Place
London SW1E 5BH
England
Telephone: 01-828 7696
Cables: Ocimfor London SW1
Telex: 24942

June 9, 1976

Re: Notice (CGD-75-240) "Certain Tank Vessels, Proposed Rules for Carrying Oil" from Federal Register, Vol. 41, No. 74 of April 15, 1976

Executive Secretary
Marine Safety Council
U. S. Coast Guard (G-CMC/81)
Washington, D. C. 20590

Dear Sir:

I am writing on behalf of the Oil Companies International Marine Forum (OCIMF) to acquaint you with its views on the proposed rules published in the April 15, 1976 Federal Register. OCIMF was created six years ago and now has 43 member oil companies from all areas of the Free World. Through its member companies it is believed to represent upwards of 80% of the Free World's oil tanker movements. Perhaps the principal role of OCIMF is to express technical viewpoints on international regulatory matters through our consultative status at IMCO.

Consistent with this role, we would not normally expect to comment on proposed U.S. rule-making. Because of the broad international nature of the April 15 proposals, however, we feel it is essential in this case to acquaint you with the viewpoint of our member companies on these proposals. Rather than make detailed comments on each of the various specific regulatory proposals, we would like to restrict our comments to what we consider the most significant elements. In this regard, we are, of course, aware that the International Chamber of Shipping (ICS) is also providing you with comments reflecting the viewpoints of the international shipping community on a point-by-point basis.

Our analysis of the April 15 notice indicates that the main thrust of the proposed regulations would be unilateral application in the near future of the major provisions of Annex I of the International Convention for the Prevention of Pollution from Ships, 1973, insofar as they apply to tankers. It is noted further that the intent of such unilateral action would be to extend these provisions to foreign vessels entering U.S. waters as well as to U.S. Flag tankers. Having participated in all preliminary meetings and at the 1973 IMCO Conference, OCIMF is a strong supporter of the 1973 Convention, and to the extent your present proposals may help to bring this act into force, they have our wholehearted support.

Despite this very positive objective, there is one portion of the regulations with which we strenuously disagree. The proposed Section 157.03, which would be revised to require new foreign tankships over 70,000 DWT entering the navigable waters of

the U.S. to comply with Section 157.09 (d) concerning distribution of segregated ballast spaces clearly exceeds the requirements of the 1973 IMCO Convention and in our view should be withdrawn. We have two reasons for believing this is a very unfortunate proposal. First, as your notice clearly states, it would represent a major unilateral requirement in excess of the provisions adopted through IMCO and, accordingly, it will serve to hamper and frustrate the effectiveness of the international regulations. Second, the ballast location proposal has not been studied internationally. Furthermore, on the basis of the restricted study conducted on this concept in the U.S., it appears to be of secondary value and to have been considered in relation to only a limited number of possible tanker designs or alternative measures. We would like to comment further on each of these two aspects.

The concept of unilateral adoption of design and construction standards for foreign vessels entering any nation's waters was discussed at length at the 1973 IMCO Conference and continues to be discussed at the Law of the Sea Conference. While OCIMF has no particular expertise in the legal aspects of these matters, we would like to refer you back to various statements by U.S. representatives on this very fundamental issue. Two weeks after the 1973 Conference, on November 14, 1973, the leaders of the U.S. delegation testified before the Senate Committee on Commerce to report on the 1973 Conference. Mr. Russell E. Train, leader of the U.S. delegation, made a very positive statement on the 1973 Convention as a whole. A number of his remarks are worth reviewing now.

> "The United States worked throughout that period with the other 78 countries represented in order to achieve a Convention which could be the basis of drastic reduction of the current pollution of the sea both by oil and other noxious substances.
>
> "It is my belief that we have, to a large extent, achieved that goal. I think we can be proud of the fact that the two years of international activity culminating in this Convention followed a U.S. initiative, made in 1970, calling on the nations of the world to take action to end ship-generated marine pollution in this decade."

We believe this statement typifies Mr. Train's testimony and indicates that he sincerely believed the 1973 IMCO Convention achieved the goals set by the U.S. We recognize that elsewhere in his testimony he indicated that the U.S. had supported a position leaving some freedom of unilateral action to individual nations but addressing this subject as really being a matter for determination by international law. In this regard, he evidently believed that some limitations on unilateral acts did or would exist:

> "As I indicated, this was left by the convention (1973 IMCO) to international law. The question is not what this convention, or how this convention affects that right, rather the question is what right exists insofar as international law is concerned.
>
> "Again I do not consider myself really very expert in this area, but I can conceive that certain kinds of restrictions would be so burdensome as to constitute

> an unreasonable interference with the freedom of navigation on the high seas. It seems to me, at least arguably, that there may well be some kinds of standards, which if unilaterally applied by the coastal state to the vessels of another nation's flag vessel entering the coast state's waters, could be considered in contravention of international law."

Later in these proceedings, Admiral Chester Bender, then Commandant of Coast Guard who was Vice Chairman of the U.S. delegation in 1973, made the following statement in regard to discussion of a "Draft Article 8"which would have limited the rights of nations to adopt unilateral design and construction standards.

> "It was a central article of faith at the Conference--that which you referred to earlier as Article 8, sir,--in abandoning inclusion of an article formally limiting unilateral action, that all nations would act responsibly in substantial conformance with the Convention provisions. Because of the recognition by other nations of the operative thrust of the Ports and Waterways Safety Act, any actions by the United States will be followed with great interest by other governments in formulating their policies with respect to ratification of the Convention and possible measures in response to U.S. unilateral action. If standards are imposed on only U.S. Flag vessels stricter than those standards aopted internationally, serious inequities could arise when U.S. vessels call in U.S. ports alongside foreign vessels engaged in the same trade but not subject to the same regulatory constraints. Furthermore, such an approach would not enhance the protection of the marine environment in any effective way, since the majority of seagoing vessels entering U.S. ports are under foreign flag.
>
> "At this time, it is our hope that we can accept the Convention as being consistent with the interests of the United States, with the implementation of additional vessel operational controls, where necessary, to meet unique environmental demands. Examples of such operational controls are improved traffic management, mandatory use of sufficient tugs, and improved navigation systems."

OCIMF believes that the views expressed by these two gentlemen two and a half years ago sum up very succinctly the hopes of responsible persons in the international marine community for effective and enforceable measures developed through IMCO. We cannot understand why these basic beliefs, agreed at the conclusion of the 1973 Conference, are now about to be abandoned in favor of unilateral action.

Another proposal having similarly profound implications is that appearing in the May 13, 1976 Federal Register concerning the possibility of the U.S. Government requiring retrofitting of segregated ballast to existing foreign tankers over 70,000 DWT entering U.S. waters. This subject was discussed at length at MEPC on May 25 from which we would like to quote paragraph 24 of the draft report.

> "Several delegations expressed grave concern over the measures contemplated by the United States insofar as they affect foreign ships. In response, the United States delegation explained to the Committee about the issuance of

an advance notice of proposed rule-making (circulated informally) stating that regulations are under consideration which would require segregated ballast tanks in existing tankers of 70,000 DWT and over. The subject notice is now open for comments by interested parties. The United States delegation promised to keep the Committee informed of any further developments in the matter. The French delegation pointed out that the result might be in conflict with the international law when the 1973 Convention enters into force. The United States delegation emphasized that the Committee is not an appropriate forum to discuss international law nor is it within the competence of the Committee to judge critically the action of a Member State exercising its prerogative under national law."

At one point during discussion of this matter at MEPC, it was stated that unilateral action of the type contemplated in the U.S. by any important nation is clearly contrary to the spirit and objectives of IMCO and could in the final analysis serve only to do away with any hope for effective international maritime regulations.

Finally on this point, we believe that there is a very clear parallel in the contemplated action to that which we understand is now taking place in the U.S. between federal regulations and state regulations. We believe that the case for uniform federal measures as endorsed by the Coast Guard has been strenuously and correctly made, and that the Coast Guard clearly understands that unilateral and conflicting proposals in the states of Washington and Alaska are frustrating possible trading to these states. The situation contemplated by both the April 15 and May 13 proposals for unilateral U.S. action in conflict with IMCO adopted provisions is the same type of action exactly, except that with the more tenuous nature of international agreements such action by an important nation such as the U.S. could have a profound effect on the international scene.

As to the substance of ballast location proposal, the report of the study group, which appeared in the Coast Guard Final Environmental Impact Statement of August 1975, clearly indicates:

1. However capable the study participants, they were limited in number and had a very short time in which to consider an extremely complex subject.

2. The study participants themselves recognized this, as is clearly evident in the description of "limitation of the study" in their report.

3. The study participants closed the abstract of their report with a statement to the effect that measures other than further design provisions would most likely be most effective in preventing accidental pollution.

These points were reemphasized at the IMCO Symposium in Acapulco in March of this year, and a senior U.S. representative also made the very constructive suggestion that this entire concept should be brought to IMCO attention for a more thorough study and review before broader adoption. He noted that with present surplus market conditions for tankers, there will be a considerable amount of time for definitive study to take place before substantial numbers of new large tankers will be constructed. We share these views completely.

In conclusion, OCIMF urges you to reconsider the advisability of proceeding with the ballast location proposals for foreign tankers. It is the unanimous conviction of our member companies that very little is likely to be gained through this requirement, but that the entire future of the international regulation-making process is being put in jeopardy if such unilateral action is taken by the United States.

Very truly yours,

C. A. Walder, Executive Secretary
Oil Companies International Marine Forum

Response to Comments submitted by
Oil Companies International Marine
Forum in a letter dated June 9, 1976

COMMENT

There is one portion of the regulations with which we strenuously disagree. The proposed Section 157.08, which would be revised to require new foreign tankships over 70,000 DWT entering the navigable waters of the U. S. to comply with Section 157.09(d) concerning distribution of segregated ballast spaces clearly exceeds the requirements of the 1973 IMCO Convention and in our view should be withdrawn. We have two reasons for believing this is a very unfortunate proposal:

First, as your notice clearly states, it would represent a major unilateral requirement in excess of the provisions adopted through IMCO and, accordingly, it will serve to hamper and frustrate the effectiveness of the international regulations. It also represents an abandonment of the hopes of responsible persons in the international marine community for effective and enforceable measures developed through IMCO (typified by the remarks of Mr. Russel E. Train and Admiral Chester Bender quoted in the OCIMF letter) in favor of unilateral action.

Second, the ballast location proposal has not been studied internationally. Furthermore, on the basis of the restricted study conducted on this concept in the U. S., it appears to be of secondary value and to have been considered in relation to only a limited number of possible tanker designs or alternative measures. The entire concept should be brought to IMCO attention for a more thorough study and review before broader adoption. With present surplus market conditions for tankers, there will be a considerable amount of time for definitive study before substantial numbers of new large tankers will be built.

OCIMF urges you to reconsider the ballast location proposals for foreign tankers. Very little is likely to be gained through this requirement, but the entire future of the international regulation-making process is placed in jeopardy by such unilateral action by the United States.

RESPONSE

This comment is discussed in the response to a prior comment beginning on page 93.

INTERNATIONAL CHAMBER OF SHIPPING

TELEGRAMS : LOGBOARD, LONDON E.C 3
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OUR REFERENCE ICS/60/1 YOUR REFERENCE

7th June, 1976.

The Executive Secretary,
Marine Safety Council (G-CMC/81)
Room 8117,
U.S. Coast Guard Headquarters,
Washington D.C. 20590,
U.S.A.

Dear Sir,

Proposed Rules for Carrying Oil on Certain Tank Vessels
(Federal Register Vol.41, No. 74, Thursday 15 April 1976)

The International Chamber of Shipping has the honour to submit the attached comments on the US Coast Guard's Proposed Rules for Carrying Oil on Certain Tank Vessels.

Yours faithfully,

P.W.W. GRAHAM
Secretary General

INTERNATIONAL CHAMBER OF SHIPPING

Comments on Proposed Rules for Carrying Oil on Certain Tank Vessels (Federal Register Vol. 41 No. 74 - Thursday, April 15th, 1976)

INTRODUCTION

1. The International Chamber of Shipping (ICS) is an organisation representing national shipowners' associations in 28 countries, together covering almost two-thirds of world merchant tonnage. The American Institute of Merchant Shipping (AIMS) is a prominent member of ICS.

2. ICS has noted with concern the proposals in the Federal Register for 15th April 1976 relating to the design and equipment of tankers, and offers the following comments for consideration by the Coast Guard. The remarks relate solely to those features of the proposals which are directed at foreign-flag vessels entering the navigable waters of the United States: ICS does not wish to offer comment on the requirements for United States vessels.

GENERAL

3. The broad aim of the proposals is evidently to accelerate the date on which, insofar as tankers in US navigable waters are concerned, certain provisions of Annex I of the 1973 Marine Pollution Convention take effect. Regulations covering the application of these proposals for US tankers in domestic trades have already been issued. ICS sympathises with the principle of examining methods of accelerating the entry into force of the 1973 Convention, and has itself recently taken steps in this direction by introducing the Pollution Prevention Code (Oil Tankers), the aim of which is to encourage compliance with the operable oil tanker provisions of that Convention.

4. The US proposals, however, aim to do more than accelerate the entry into force of the Convention: they seek to anticipate it, and in some cases expand upon it. Furthermore, they are directed primarily at those aspects of Annex I dealing with ship

design and equipment, matters on which maritime nations and the shipping and oil industries have consistently upheld the principle of full international agreement. ICS believes that introduction of certain of the US proposals for foreign-flag tankers would be contrary to the interests of international efforts to improve the state of the marine environment.

THE PROPOSALS

5. The proposed regulations can conveniently be divided into four sections. They are:-

(i) The requirement for segregated ballast on new tankers;
(ii) The application of cargo tank size arrangements for new tankers;
(iii) The requirement for certain design features for existing tankers;
(iv) Other requirements.

SEGREGATED BALLAST

6. The proposals are intended to introduce the Convention requirement for segregated ballast on "new" tankers of 70,000 tons dwt or above. The dates in the definition of "new vessel" in the proposals are the same as those in the Convention, and it is the intention that this requirement would take effect for foreign vessels in US navigable waters from the appropriate dates whether or not the Convention had come into force. The regulation itself (157.09) is a reflection of Regulation 13 of Annex I of the Convention.

7. This part of the proposal is, therefore, a straightforward anticipation of an internationally-agreed proposal. ICS would not wish to offer any opposition to such a proposal: it is most improbable that an owner would build a new tanker of 70,000 tons dwt or above without taking account of the segregated ballast requirements.

8. The proposals also seek, however, to regulate the distribution of the segregated ballast within the tanker, in order to optimise its contribution towards minimising outflow in the event of a casualty. ICS recognises that segregated ballast spaces may be of some value as a means of reducing spillage after an accident, but is strongly opposed to any attempt to introduce unilaterally to foreign-flag vessels detailed requirements which exceed internationally-agreed standards. Although considerable data on casualties have now been collected, segregated ballast design is only in its infancy. In the opinion of ICS, it could be counter-productive to the objective of pollution avoidance to specify at this stage the distribution of the segregated ballast spaces; and ICS believes strongly that it is unreasonable to specify a 20% reduction in the maximum hypothetical oil outflow agreed in the 1973 Convention, at least until IMCO has had an opportunity to appraise the arguments.

9. Furthermore, there is ample opportunity for IMCO to consider this question. As was recognised at the recent Symposium on Marine Pollution from Ships, held in Acapulco, there is at present little or no ordering of new tankers of 70,000 dwt and above. It was recommended at Acapulco that IMCO should take advantage of this situation, and study the distribution of segregated ballast spaces for outflow prevention purposes. ICS would welcome such study. It is essential that the critical percentages specified in section 157.09(d) (1) and (2) can be shown to produce positive effects before regulations of this nature are adopted, and there would thus be every advantage in initiating full international discussion on the subject in IMCO.

10. ICS therefore submits that there is no reason to extend the requirements of the 1973 Convention in this way insofar as foreign-flag tankers are concerned.

CARGO TANK SIZE ARRANGEMENTS

11. ICS has no practical objection to introduction of the tank size requirements: as with segregated ballast on new

tankers, we believe that no owner would build a new tanker other than in compliance with the tank size limitations. It will be appreciated, however, that there is an inconsistency between the dates from which the requirements will be applied under the 1971 amendments to the 1954 Oil Pollution Convention, and those in the 1973 Marine Pollution Convention. It seems probable that most countries will abide by the 1971 decision and adopt the requirements according to the dates in the 1971 amendments but ICS believes that the US authorities should deal sympathetically with any problems which might arise over the differences in the dates.

DESIGN FEATURES FOR EXISTING TANKERS

12. Regulations 15-17 of Annex I of the 1973 Convention introduce certain rules relating to the equipment on existing vessels. The requirements would generally take effect when the Convention enters into force, but in the case of oil discharge monitoring and control systems and slop tank arrangements, three further years are granted for existing tankers to comply.

13. The United States, on the other hand, is proposing to apply some of these rules to existing foreign tankers in US navigable waters from 31st December 1979, even though the Convention may not be in force. The acceptability of anticipating these aspects of the Convention will depend upon the extent to which existing tankers are readily capable of complying with the requirements.

14. The slop tank requirements (section 157.15) are in line with the requirements in the Convention. Almost all existing vessels have a slop tank of the required capacity, and any which do not should be able to designate a cargo tank as a slop tank without undue difficulty. ICS would therefore not wish to oppose anticipation of this requirement, though would recommend that discretion be given to accept existing vessels with purpose-built slop tanks of a volume slightly lower than the stipulated three per cent of oil carrying capacity. It was in recognition

of the problems facing ships which did not already comply with the slop tank arrangements that the Conference granted three years grace for compliance.

15. Oily residue tank (section 157.17). This section is also consistent with Regulation 17 of Annex I of the 1973 Convention. ICS thinks the provision of tank capacity to accept residues for the purification of fuel oil is a reasonable requirement, and has in fact made it a condition of acceptance of the Pollution Prevention Code (Oil Tankers). ICS therefore has no comment to offer on this section.

16. The requirements for Pumping, Piping and Discharge Arrangements (Section 157.11), however, pose problems of a different magnitude. Most existing tankers have piping so arranged that discharge to the sea is made beneath the water-line. Adaptation of pumping and piping systems to ensure discharges above the waterline is a fairly costly and complex procedure. It is impossible to predict the extent of the tanker surplus by the end of 1979, when the US proposals would take effect for foreign-flag tankers; but under normal circumstances re-arranging the piping system could be sufficiently expensive to encourage scrapping of an older tanker rather than conversion. ICS submits that the new piping arrangements will not in themselves effect a significant reduction in oil discharge during normal tanker operations, and that anticipation of this requirement would be unjustified on grounds of cost-effectiveness, especially in older vessels. For this reason ICS recommends that it be removed from the proposals for existing foreign-flag tankers.

OTHER REQUIREMENTS

17. Submission of Calculations, Plans and Specifications (section 157.24).

ICS has no comment on the objective behind this requirement, and will encourage the issue of certificates of compliance with Regulation 24 of Annex I of the 1973 Convention. It is,

however, quite unrealistic and unreasonable to expect the owner, builder or designer of a foreign vessel to submit calculations and other material to the Coast Guard before construction of the vessel, as a preamble to section 157.24 requires. The Coast Guard has a legitimate interest in the state of a foreign vessel trading to the United States, but can have no direct interest in the plans for a foreign vessel, as yet unbuilt, which may never approach the United States.

18. Vessel Operating Requirements. ICS has no comment on those sections of the operating requirements which apply to foreign vessels in US waters (157.29, 157.31 and 157.43) except in relation to section 157.43(a). This paragraph refers to section 157.37(a)(c), but section 157.37 does not apply to foreign vessels. ICS believes that there is some inconsistency in this cross-reference, and would in any event submit that the requirement for an automatic oil discharge monitoring and control system as a condition of discharge of clean ballast is unrealistic at this stage. Equipment capable of the degree of accuracy needed is not yet available, and ICS would welcome clarification of the Coast Guard's proposals in this respect for foreign vessels.

JURISDICTIONAL ISSUES

19. This paper has concentrated on the practical effects of the US proposals. There are, however, some extremely important jurisdictional issues which must be considered.

20. The application of the proposals to foreign vessels is to "foreign tank vessels in U.S. waters". Elsewhere the proposals talk about extending existing regulations in order to cover "foreign flag tankers of 150 gross tons or more that enter the navigable waters of the United States".

21. It is unclear from this wording whether the United States is seeking to apply the rules solely to foreign vessels trading to or from U.S. ports or entering internal waters, or also to foreign vessels exercising the right of innocent passage through the territorial waters of the United States. If the latter, ICS would submit that the proposals are directly contrary not only

to the approach currently adopted by the U.N. Conference on the Law of the Sea, but also to international law as it stands today. The latest Single Negotiating Text for Committee II, produced on conclusion of the recent New York session, maintains the specific exclusion from the powers of the coastal state of the right to impose regulations relating to the design, construction, equipment or manning of a foreign vessel in the territorial sea.

22. In some respects the U.S. proposals are in line with the provisions of the 1973 Convention; but there has been no international debate on the distribution of segregated ballast, and in this respect the proposals clearly exceed the coastal state powers which seem likely to be agreed in the Law of the Sea Conference.

23. It is arguable, furthermore, that anticipation of the Convention dates in respect of certain provisions for new vessels, as provided for in the US proposals, would also be outside the interpretation of international agreement as conceived in the Law of the Sea discussions.

24. Any unilateral action which runs counter to international law as accepted by states is always to be deplored; it would be particularly unfortunate and counter-productive when the next session of the Law of the Sea Conference is shortly to commence, and might lead to similar unilateral action by other states. ICS strongly recommends that the Coast Guard consider these issues carefully.

CONCLUSION

25. ICS hopes these remarks will be of help to the Coast Guard, and that they will be taken into full account. ICS will readily provide further information on any points if so requested.

Response to Comments submitted by the
International Chamber of Shipping in
a letter dated June 7, 1976

COMMENT

ICS recognizes that segregated ballast spaces may be of some value as a means of reducing spillage after an accident, but is strongly opposed to any attempt to introduce unilaterally to foreign-flag vessels detailed requirements which exceed internationally-agreed standards. It could be counter-productive to the objective of pollution avoidance to specify at this stage the distribution of the segregated ballast spaces; and ICS believes strongly that it is unreasonable to specify a 20% reduction in the maximum hypothetical oil outflow agreed in the 1973 Convention, at least until IMCO has had an opportunity to appraise the arguments. It is essential that the critical percentages specified in section 157.09(d)(1) and (2) can be shown to produce positive effects before regulations of this nature are adopted. There is ample time for IMCO to consider these questions, since there is at present little or no ordering of new tankers over 70,000 DWT. There is therefore no reason to extend the requirements of the 1973 Convention in this way insofar as foreign-flag tankers are concerned.

RESPONSE

The response to this comment is discussed in the response to a prior comment beginning on page 93.

COMMENT

The requirements for pumping, piping and discharge arrangements in section 157.11 pose problems for existing tankers. Most existing tankers have piping arranged so that discharges to the sea is made beneath the waterline. Adaptation of pumping and piping systems to ensure discharges above the waterline is a fairly costly and complex procedure. Re-arranging the piping system could be sufficiently expensive to encourage scrapping of an older tanker rather than conversion (depending on market conditions at the time). ICS submits that the new piping arrangements will not in themselves effect a significant reduction in oil discharge during normal tanker operations, and that anticipation of this requirement would be unjustified on older vessels. For this reason ICS recommends that it be removed from the proposals for existing foreign-flag tankers.

RESPONSE

The response to this comment is discussed in the response to a prior comment (page 92).

COMMENT

It is unclear whether the United States is seeking to apply the rules solely to foreign vessels trading to or from U. S. ports or entering internal waters, or also to foreign vessels exercising the right of innocent passage through the territorial waters of the United States. If the latter, ICS would submit that the proposals are directly contrary not only to the approach currently adopted by the U. N. Conference on the Law of the Sea, but also to international law as it stands today. The latest Single Negotiating Text for Committee II, produced on conclusion of the recent New York session, maintains the specific exclusion from the powers of the coastal state of the right to impose regulations relating to the design, construction, equipment or manning of a foreign vessel in the territorial sea.

There has been no international debate on the distribution of segregated ballast, and in this respect the proposals clearly exceed the coastal state powers which seem likely to be agreed in the Law of the Sea Conference.

It is arguable that anticipation of the Convention dates in respect of certain provisions for new vessels, as provided for in the U. S. proposals, would also be outside the interpretation of international agreement as conceived in the Law of the Sea discussions.

Any unilateral action which runs counter to international law as accepted by states is always to be deplored; it would be particularly unfortunate and counter-productive when the next session of the Law of the Sea Conference is shortly to commence, and might lead to similar unilateral action by other states. ICS strongly recommends that the Coast Guard consider these issues carefully.

RESPONSE

This commenter stated that it is unclear whether or not the proposed requirements apply to foreign vessels trading to or from U. S. ports, entering internal waters, or exercising the right of innocent passage through the territorial waters of the United States.

The language with which the commenter has difficulty is taken from the law under which the regulations are proposed, Title II of the Ports and Waterways Safety Act of 1972, as amended, 46 U.S.C. 391a. That language is as follows:

> "All vessels, regardless of tonnage, size, or manner of propulsion, and whether self-propelled or not, and whether carrying freight or passengers for hire or not, which are documented under the laws of the United States or enter the navigable waters of the United States (underscoring supplied), except public vessels other than those engaged in commercial service, that shall have on board liquid cargo in bulk . . ."

There was nothing in the regulations, nor in the Coast Guard's intent in proposing the regulations, to challenge the international law concept of innocent passage. However, since the regulations appear not to be clear in this respect, 157.01(a)(2) will be changed by adding the words "to engage in commercial service" after the words "United States."

A commenter suggested that the proposed distribution of ballast exceeds the coastal state powers to be agreed upon by the Law of the Sea Conference. Also, this commenter states that the proposed dates used for new vessels that anticipate the 1973 Convention is outside the interpretation of international agreement as conceived in the Law of the Sea discussion. Since the Law of the Sea is only in the drafting stage, it can have no impact, at this time, in the proposed regulations. Nevertheless, it should be pointed out to the commenter that the powers exercised under these regulations are those of a port state and not coastal state.

COMMENT

ICS has no comment on those sections of the operating requirements which apply to foreign vessels in US waters, except in relation to section 157.43(a). This paragraph refers to section 157.37(a)(6), but section 157.37 does not apply to foreign vessels. ICS believes that there is some inconsistency in this cross-reference, and would in any event submit that the requirement for an automatic oil discharge monitoring and control system as a condition of discharge of clean ballast is unrealistic at this stage. Equipment capable of the degree of accuracy needed is not yet available, and ICS would welcome clarification of the Coast Guard's proposals in this respect for foreign vessels.

RESPONSE

The Coast Guard agrees there is an inconsistency here. For clarification, section 157.25(a) has been changed by adding a section 157.37(a)(6) to the list of requirements that apply to foreign vessels when they discharge into the navigable waters of the United States. In addition, section 157.25(b) has been changed to exclude 157.37(a)(6) from the list of requirements that do not apply to foreign vessels.

The Coast Guard is aware of equipment limitations of oil discharge monitoring and control systems and will not enforce the requirement for such systems until a specification regulation for this equipment is published in the FEDERAL REGISTER, after the public participates in the rule making procedure. The Coast Guard anticipates publishing a proposed specification within the next six months.

REFERENCES

1. U. S. Coast Guard, Final Environmental Impact Statement, Regulations for Tank Vessels Engaged in the Carriage of Oil in Domestic Trade, Protection of the Marine Environment, Washington, D. C., 1975.

2. National Academy of Sciences, Petroleum in the Marine Environment, Washington, D. C., 1975.

3. British Petroleum Company, Limited, BP Statistical Review of the World Oil Industry - 1973, London, 1974.

4. J. E. Shewmaker, R. R. Goodrich, Jr., and R. J. Skocypec, "Characterization of Ballast Water," Report EE.3MTR.74, prepared by Esso Research and Engineering Company for the Maritime Administration (Contract C-1-35049), April 1974.

5. H. Santiago and C. Chappell, "Final Report on Oil Discharge Characteristics of Product Oil Tankers," Office of Water Programs Operations, Division of Oil and Hazardous Materials, Environmental Protection Agency, September 1973.

6. U. S. Department of Commerce, Maritime Administration, Final Environmental Impact Statement: Maritime Administration Tanker Construction Program, NTIS Report No. EIS 730725-F, Washington, D. C., 1973.

7. M. P. Holdsworth, "Ballast and Wash Waters from Tankers," in Water Pollution by Oil, London, 1971.

8. J. D. Porricelli, V. F. Keith, and R. L. Storch, 1971, "Tankers and the Ecology," Transactions SNAME, 1971.

9. G. Victory, 1973, "The Load on Top System, Present and Future," pp. 10-20, Symposium on Marine Pollution, Royal Institute of Naval Architects, London.

APPENDIX A

Assumptions and Calculations used to develop Table 3, Comparison of oil inputs from tank cleaning and ballasting for U. S. tankships in foreign trade and foreign tankships carrying oil and entering the navigable waters of the United States.

Appendix A to Draft EIS

Assumptions and calculations used to develop Table 3. Comparison of oil inputs from tank cleaning and ballasting for U. S. tankships in foreign trade and foreign tankships carrying oil which enter the navigable waters of the U. S.

A. Present oil inputs

1. U. S. tankships in foreign trade - taken from Table 4, page 36 of reference (1)

2. Foreign tankships trading to U. S.

a. Crude and residual oil tankers not using LOT/ROB techniques

Assume (1) 186×10^6 metric tons of crude and residual oil are carried into or out of U. S. ports by foreign tankships each year (from line 1, Table 3, p. 32 of reference (1), neglecting any oil exports from U. S. ports).

(2) 80% of such tankers use LOT/ROB (20% do not).

(3) LOT is 90% effective in avoiding oil discharge (10% ineffective).

(4) 0.4% of the cargo remains in the vessel following discharge, i.e., clingage factor of 0.004.

(5) 1/3 of tanks are cleaned and/or ballasted each voyage, 1/5 of the tanks are ballasted prior to departure from the discharge port (i.e., dirty ballast equals 1/5 of DWT).

(6) On LOT tankers 15% of the clingage remaining in a tank is discharged to the sea when dirty ballast is decanted to the sea.

(7) On non-LOT tankers, 80% of the clingage remaining in a tank is discharged to the sea when dirty ballast is pumped overboard.

(Note: These assumptions are based on information in the references listed at the end of this appendix. They are similar to the assumptions used in previous similar calculations in the Maritime Administration Tanker Construction Program EIS (page IV-2) and the final EIS on regulations for tank vessels in domestic trade (page 308.)

Using these assumptions, the oil discharged to the sea by foreign LOT tankers is:

Amount from tank washing + amount from dirty ballast

$(186 \times 10^6)(.8)(.1)(.004)(.33) + (186 \times 10^6)(.8)(.004)(.2)(.15)$

19,641 + 17,856

A portion of the tank washing is done for clean ballast and a portion for sediment control and routine maintenance. Assume that half of the tank cleaning is for ballast and half for sediment control. (This is the same as saying that if there was no need to clean tanks for clean ballast, 1/6 of the tanks would still be cleaned each voyage for sediment control.) Then the amounts discharged are:

19,641 (.5) + 17,856 = 27,676 for clean ballast

and 19,641 (.5) = 9,820 for clean sediment control.

b. Crude and residual oil tankers not using LOT/ROB

Using the same assumptions as above, oil released to the sea equals

$(186 \times 10^6)(.2)(.004)(.33) + (186 \times 10^6)(.2)(.004)(.2)(.8)$

49,104 + 23,808

Again, assume that half the tank cleaning is for clean ballast and half for sediment control. Then, the amounts discharged are:

49,104 (.5) + 23,808 = 48,360 tons for clean ballast

and 49,104 (.5) = 24,552 tons for sediment control

In summary,

for clean ballast	LOT	27,676
	non-LOT +	48,360
	Total	76,036
and for sediment control	LOT	9,820
	non-LOT +	24,552
	Total	34,372

These values appear in Column 2 of Table 3.

c. Product carriers, foreign tankships trading into U. S.

Assume: (1) 23×10^6 metric tons of product are carried into or out of U. S. ports by foreign tankships each year. (from line 5 , Table 3, p. 32 of reference (1), neglecting any oil exports from U. S. ports).

(2) 0.075% of the cargo remains in the vessel following discharge, i.e., clingage factor of 0.00075

(3) 80% of tankers are cleaned each trip

(4) 90% of tank washings are discharged to the sea and 10% are discharged to shore reception facilities

Using these assumptions, oil released to the sea is:

$(23 \times 10^6)(0.00075)(.8)(.9) = 12{,}420$ tons

d. Tank cleaning prior to entering shipyard

Assume: (1) One complete cleaning every 1.5 years

(2) Clingage of 0.004

(3) 50% of washings discharged to the sea, 50% to shore reception facility

(4) 10.5% of world's tanker fleet of 257 million deadweight tons will be subject to these regulations. (10.5% from page 14 of B. P. Statistical Review of the World Oil Industry - 1973, British Petroleum Corporation,

Then, the amount of oil input $= \frac{1}{1.5} (.004)(.5)(.105)(257 \times 10^6) = 27{,}700$ tons

B. Oil inputs if maximum of 1/15,000 of cargo is discharged to the oceans from U. S. tank vessels in foreign trade and foreign tankers carrying oil into or out of U. S. ports.

1. U. S. tankships in foreign trade, crude and residual oil

Assume (1) 10 million tons of crude oil and residual oil is carried annually by U. S. tankships in foreign trade (B.1.a, p 310 of reference (1), Line 2, Table 3, p. 32 of reference (1)

(2) All of these vessels will use improved LOT/ROB techniques, discharging no more than 1/15,000 of the cargo transported.

Then the amount entering the oceans is
10^6 (1/15,000) = 66.7 tons

2. Foreign tankships carrying crude and residual oil into or out of U. S. ports

Assume: (1) 186×10^6 tons of crude oil and residual oil is carried annually by foreign tankships to and from U. S. ports (from line 1, Table 3, p. 32 of reference (1), neglecting any oil exports from U. S. ports)

(2) All these vessels will use improved LOT/ROB techniques, discharging no more than 1/15,000 of the cargo transported.

Then, the amount discharged is
186×10^6 (1/15,000) = 12,400 tons

3. U. S. tankships in foreign trade, refined products

Assume (1) 10^6 tons transported (line 6, Table 3, page 32, reference (1)

(2) Use of improved LOT/ROB limits discharge to 1/15,000 DWT

Then, amount discharged = 10^6(1/15,000) = 66.6 tons

4. Foreign tankships carrying refined products into or out of U. S. ports

Assume: (1) 23×10^6 tons transported (line 5, Table 3, p.32, reference (1)

(2) Use of improved LOT/ROB limits discharge to 1/15,000 DWT

Then, amount discharged = (23×10^6) (1/15,000) = 1,533 tons

5. Tank cleaning prior to entering shipyard

Assume: (1) Complete cleaning every 1.6 years

(2) U. S. fleet in foreign trade = 2×10^6 DWT of shipping

(from "Tank Vessels, Employment of U. S. Flag oceangoing Tank Vessels as of December 31, 1974," Department of Commerce, Maritime Administration, Office of Subsidy Administration, Division of Trade Studies and Statistics)

(3) 10.5% of world's tanker fleet of 257 million deadweight tons serves U. S. ports (27×10^6 DWT)

(4) Equivalent of 1/15,000 of DWT discharged to the sea

Then, amount from U. S. vessels in foreign trade =

$$\frac{1}{1.5}(2 \times 10^6)\ (1/15{,}000) \approx 89$$

and from foreign vessels =

$$\frac{1}{1.5}(27 \times 10^6)\ (1/15{,}000) = 1200$$

APPENDIX B

CODE OF FEDERAL REGULATIONS, TITLE 33, PART 157
RULES FOR THE PROTECTION OF THE MARINE ENVIRONMENT
RELATING TO TANK VESSELS CARRYING OIL IN BULK

This Appendix contains the rules in 33 CFR Part 157 as they will appear after incorporating changes to be published by the Coast Guard as a final rulemaking at approximately the same time the final environmental impact statement is made available to the President's Council on Environmental Quality and to the public. This appendix incorporates rules originally published in Federal Register editions:

40 FR 48280	October 14, 1975
41 FR 1479	January 8, 1976
41 FR 15859	April 15, 1976

PART 157—RULES FOR THE PROTECTION OF THE MARINE ENVIRONMENT RELATING TO TANK VESSELS CARRYING OIL IN BULK

Subpart A—General

Sec.

Subpart B—Design and Equipment

Subpart C—Vessel Operation

AUTHORITY: R.S. 4417a(3) and (7), as amended (46 U.S.C. 391a(3) and (7)); 49 CFR 1.46(n)(4).

Subpart A—General

§ 157.01 Applicability.

(a) This part prescribes design, equipment, and operation requirements for tank vessels of 150 gross tons or more carrying oil in bulk that—

(1) are documented under the laws of the United States (U.S. vessels); or

(2) are not U.S. vessels and enter the navigable waters of the United States (foreign vessels).

(b) This part does not apply to public vessels not engaged in commercial service.

NOTE: Additional requirements for U.S. vessels are found in 46 CFR Subchapters O and D.

§ 157.03 *Definitions.*

As used in this part:

(a) "Length" or "L" means the distance in meters from the fore side of the stem to the axis of the rudder stock on a waterline at 85 percent of the least molded depth measured from the molded baseline, or 96 percent of the total length on that waterline, whichever is greater. In vessels designed with drag, the water line is measured parallel to the designed waterline.

(b) "Amidships" means the middle of the length.

(c) "Breadth" or "B" means the maximum molded breadth of a vessel in meters.

(d) "Center tank" means any tank inboard of a longitudinal bulkhead.

(e) "Clean ballast" means the ballast in a cargo tank which, if discharged from a vessel that is stationary into clean, calm water on a clear day, would not—

(1) produce visible traces of oil on the surface of the water or on adjoining shore lines; or

(2) cause a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shore lines.

(f) "Combination carrier" means a vessel designed to carry oil or solid cargoes in bulk.

(g) "Deadweight" or "DWT" means the difference in metric tons between the lightweight displacement and the total displacement of a vessel measured in water of specific gravity 1.025 at the load waterline corresponding to the assigned summer freeboard.

(h) "Lightweight" means the displacement of a vessel in metric tons without cargo, oil fuel, lubricating oil, ballast water, fresh water, and feedwater in tanks, consumable stores, and any persons and their effects.

(i) "New vessel" means—

(1) a U.S. vessel in domestic trade that—(i) is constructed under a contract awarded after December 31, 1974;

(ii) in the absence of a building contract, has the keel laid or is at a similar stage of construction after June 30, 1975;

(iii) is delivered after December 31, 1977; or

(iv) has undergone a major conversion for which—(A) the contract is awarded after December 31, 1974;

(B) in the absence of a contract, conversion is begun after June 30, 1975; or

(C) conversion is completed after December 31, 1977; and

(2) a foreign vessel or a U.S. vessel in foreign trade that—(i) is constructed under a contract awarded after December 31, 1975;

(ii) in the absence of a building contract, has the keel laid or is at a similar stage of construction after June 30, 1976;

(iii) is delivered after December 31, 1979; or

(iv) has undergone a major conversion for which—(A) the contract is awarded after December 31, 1975;

(B) in the absence of a contract, conversion is begun after June 30, 1976; or

(C) conversion is completed after December 31, 1979.

(j) "Existing vessel" means any vessel that is not a new vessel.

(k) "Major conversion" means a conversion of an existing vessel that—

(1) substantially alters the dimensions or carrying capacity of the vessel;

(2) changes the type of the vessel; or

(3) substantially prolongs the vessel's service life.

(l) "From the nearest land" means from the baseline from which the territorial sea of the United States is established in accordance with international law.

(m) "Instantaneous rate of discharge of oil content" means the rate of discharge of oil in liters per hour at any instant, divided by the speed of the vessel in knots at the same instant.

(n) "Oil" means oil of any kind or in any form, except petrochemicals, and includes but is not limited to petroleum, fuel oil, sludge, oil refuse, and oil mixed with wastes other than dredged spoil.

(o) "Oil fuel" means any oil used as fuel for machinery in the vessel in which it is carried.

(p) "Oily mixture" means a mixture with any oil content.

(q) "Permeability of a space" means the ratio of the volume within a space that is assumed to be occupied by water to the total volume of that space.

(r) "Segregated ballast" means the ballast water introduced into a tank that is completely separated from the cargo oil and oil fuel system and that is permanently allocated to the carriage of ballast.

(s) "Slop tank" means a tank specifically designated for the collection of cargo drainings, washings, and other oil mixtures.

(t) "Tank" means an enclosed space that is formed by the permanent structure of a vessel, and designed for the carriage of liquid in bulk.

(u) "Tank barge" means a tank vessel not equipped with a means of self-propulsion.

(v) "Tank vessel" means a vessel that is specially constructed or converted to carry liquid bulk cargo in tanks and includes tankers, tankships, tank barges, and combination carriers when carrying oil cargoes in bulk.

(w) "Foreign trade" means any trade that is not domestic trade.

(x) "Wing tank" means a tank that is located adjacent to the side shell plating.

(y) "Tankship" means a tank vessel propelled by mechanical power or sail.

(z) "Domestic trade" means trade between ports or places within the United States, its territories and possessions, either directly or via a foreign port including trade on the navigable rivers, lakes, and inland waters.

(aa) "Cargo tank length" means the length from the collision bulkhead to the forward bulkhead of the machinery spaces.

§ 157.05 Performing calculations for this part.

In this part, unless the context requires otherwise—

(a) formulas are in the International System of Units (SI);

(b) values used in those formulas must be in the International System of Units; and

(c) forward and after perpendiculars are located at the forward end and at the after end of the length. The forward perpendicular coincides with the foreside of the stem on the waterline on which the length of the vessel is measured.

§ 157.07 Equivalents.

The Coast Guard may accept an equivalent, in accordance with the procedure in 46 CFR 30.15–1, of a design or an equipment to fulfill a requirement in this part except an operational method may not be substituted for a design or equipment requirement.

Subpart B—Design and Equipment

§ 157.08 Applicability of subpart B.

This subpart applies to vessels under this part that are seagoing except as follows:

(a) Section 157.21 also applies to vessels under this part on voyages on the Great Lakes.

(b) Sections 157.11, 157.13, and 157.15 do not apply to a tank vessel that carries only asphalt.

(c) Sections 157.11, 157.13, 157.15, and 157.23 do not apply to a tank barge that can not ballast cargo tanks or wash cargo tanks while proceeding en route.

(d) Sections 157.19 and 157.21 do not apply to a tank barge whose certificate is endorsed by the Coast Guard for a limited short protected coastwise route if the barge is constructed and certificated primarily for service on an inland route.

(e) Section 157.09(d) does not apply to any—

(1) U.S. vessel in domestic trade that is constructed under a contract awarded before January 8, 1976;

(2) U.S. vessel in foreign trade that is constructed under a contract awarded before (effective date of regulations to be inserted); or

(3) foreign vessel that is constructed under a contract awarded before (effective date of regulations to be inserted).

§ 157.09 Segregated ballast.

(a) A new vessel of 70,000 tons DWT or more must have segregated ballast tanks that have a total capacity to allow the vessel to meet the draft and trim requirements in paragraph (b) of this section without recourse to the use of oil tanks for water ballast.

(b) In any ballast condition during any part of a voltage, including that of lightweight with only segregated ballast, the vessel's drafts and trim must have the capability of meeting each of the following requirements:

(1) The molded draft amidship (dm) in meters without taking into account vessel deformation must not be less than dm in the following mathematical relationship:

$$dm = 2.0 + 0.02L$$

(2) The drafts at the forward and after perpendiculars must correspond to those determined by the draft amidship as specified in paragraph (b)(1) of this section, in association with the trim by the stern of no more than 0.015L.

(3) The minimum allowable draft at the after perpendicular is that which is necessary to obtain full immersion of the propeller.

(c) The vessel may be designed to carry ballast water in cargo tanks during the condition described in § 157.35.

(d) Segregated ballast spaces, voids, and other noncargo-carrying spaces for a vessel of conventional form must be distributed—

(1) So that the mathematical average of the hypothetical collision (O_c) and the hypothetical stranding (O_s) outflows as determined by the application of the procedures in § 157.19 and Appendix B is 80 percent or less of the maximum allowable outflow (O_A) as determined by paragraph 157.19(b)(1); and

(2) To protect at least 45 percent of the sum of the side and bottom shell areas, based upon projected molded dimensions, within the cargo tank length.

When the vessel design configuration does not provide for the spaces to be distributed to protect at least 45 percent of the side and bottom shell areas, the spaces must be distributed so that the mathematical average of the hypothetical collision (O_c) and the hypothetical stranding (O_s) outflows, determined by application of the procedures in § 157.19 and Appendix B, is a further 2 percent less than the maximum allowable outflow (O_A) for each 1 percent by which the shell area protection coverage required is not achieved.

(e) A ballast space, void or other noncargo-carrying space used to meet requirements in paragraph (d) of this section must separate the cargo tank boundaries from the shell plating of the vessel by at least 2 meters.

(f) A vessel of conventional form for application of this section has—

(1) A block coefficient of .80 or greater,

(2) A length to depth ratio between 12 and 16, and

(3) A breadth to depth ratio between 1.5 and 3.5.

(g) Segregated ballast spaces, voids, and other noncargo-carrying spaces for a vessel not of conventional form must be distributed in a configuration acceptable to the Coast Guard.

§ 157.11 Pumping, piping, and discharge arrangements.

(a) Each tank vessel must have a fixed piping system arranged for the—

(1) transfer of dirty ballast residue and tank washings from each cargo tank to a slop tank;

(2) discharge to the sea under § 157.37; and

(3) discharge in a port or at an offshore terminal under § 157.43.

(b) Each tank vessel must have the fixed piping system arranged to, for discharges under paragraph (a)(2) of this section, terminate above the weather deck or on the vessel's side above the waterline of the deepest ballast condition.

(c) Each tank vessel must have a cargo or ballast discharge manifold that—

(1) is located on the weather deck;

(2) terminates on each side of the vessel; and

(3) is connected to the piping system required in paragraph (a)(1) of this section for the transfer to a reception facility of oily mixtures that cannot be discharged under §§ 157.37 or 157.43.

Effective date of § 157.11. An existing vessel that is a U.S. vessel in domestic trade must comply with § 157.11 before December 31, 1977. An existing vessel that is a foreign vessel or a U.S. vessel in foreign trade must comply with § 157.11 before December 31, 1979.

§ 157.13 Designated observation area.

A new vessel must have a designated observation area on the weather deck or above that is—

(a) located so that the effluent from the pipeline terminations required in § 157.11(a) and the manifold required in § 157.11(c) may be visually observed; and

(b) equipped with—

(1) a means to directly stop the discharge of effluent into the sea; or

(2) a positive communication system, such as a telephone or a radio, between the observation area and the discharge control position.

§ 157.15 Slop tanks in tank vessels.

(a) *Number.* A tank vessel must have the following number of slop tanks that comply with the requirements of this section:

(1) A new vessel of less than 70,000 tons DWT and an existing vessel must have at least one slop tank.

(2) A new vessel of 70,000 tons DWT or more must have at least two slop tanks.

(b) *Capacity.* Slop tanks required in this section must have a capacity to retain two percent or more of the oil carrying capacity of the vessel except nonsegregated ballast tank vessels that have tank eductors installed must have a slop tank capacity of three percent or more of the oil carrying capacity of the vessel.

(c) *Design.* A slop tank required in this section—

(1) must minimize turbulence, entrainment of oil, and the creation of an emulsion by the use of separate inlet and outlet connections; and

(2) may carry bulk oil when not being used as a slop tank.

Effective date of § 157.15. An existing vessel that is a U.S. vessel in domestic trade must comply with § 157.15 before December 31, 1977. An existing vessel that is a foreign vessel of a U.S. vessel in foreign trade must comply with § 157.15 before December 31, 1979.

§ 157.17 Oily residue tank.

(a) A tank vessel of 400 gross tons or more must have a tank that receives and holds oily residue resulting from purification of fuel and lubricating oil and from oil leakages in machinery spaces.

(b) Each oily residue tank required in paragraph (a) of this section must have an adequate capacity that is determined by the—

(1) type of machinery installed on the vessel; and

(2) maximum fuel oil capacity.

(c) Each oily residue tank on a new vessel must be designed to facilitate—

(1) cleaning; and

(2) discharging to a reception facility.

Effective date of § 157.17. An existing vessel that is a U.S. vessel in domestic trade must comply with § 157.17 (a) and (b) before December 31, 1977. An existing vessel that is a foreign vessel or a U.S. vessel in foreign trade must comply with § 157.17 (a) and (b) after December 31, 1979.

§ 157.19 Cargo tank arrangement and size.

(a) This section applies to—(1) A U.S. or foreign vessel that is delivered after January 1, 1977;

(2) A U.S. vessel that is delivered before January 1, 1977, for which the building contract is awarded after January 1, 1972, or, if there is no building contract, the keel is laid or the vessel is at a similar stage of construction after June 30, 1972; and

(3) A foreign vessel that is delivered before January 1, 1977, for which the building contract is awarded after January 1, 1974, or if there is no building contract, the keel is laid or the vessel is at a similar stage of construction after June 30, 1974.

(b) As determined in accordance with the procedures contained in Appendix A of this part, each cargo tank must be of such size and arrangement that—

(1) the hypothetical outflow for side damage (O_c) or for bottom damage (O_s) anywhere within the length of the vessel must not exceed O_A (30,000 cubic meters or 400 $\sqrt[3]{\text{DWT}}$, whichever is greater, limited to a maximum of 40,000 cubic meters);

(2) the volume of each wing tank and center tank is less than the allowable volume of a wing tank (VOL_w) and the allowable volume of a center tank (VOL_c) respectively; and

(3) the length of a tank is less than the allowable length of a tank (l_a).

(c) If a cargo transfer system interconnects two or more cargo tanks, the system must have valves to segregate the tanks from each other.

(d) If a line of piping that runs through a cargo tank in a position less than t_c from the vessel's side or less than v_s from the vessel's bottom, as defined in Appendix A of this part, has a branch, that branch must have a valve within each cargo tank into which the branch opens.

(e) If piping that serves suction wells is installed within a double bottom, that piping must be—

(1) fitted with valves located at the point of connection to the tank served to prevent oil outflow in the event of damage to the piping; and

(2) designed to be installed as high from the bottom shell as possible.

Effective date of § 157.19. Vessels to which § 157.19(a)(2) applies must meet § 157.19 before December 31, 1976; however, if a vessel is constructed under a contract awarded before January 1, 1974 and does not carry crude oil, fuel oil, heavy diesel oil, or lubricating oil, the requirements in § 157.19 do not apply. Vessels to which § 157.19(a)(3) apply must meet § 157.19 before June 30, 1978.

CROSS REFERENCE: See 33 CFR 151.50 (39 FR 30125) for an interpretative rule concerning tank arrangement and size limitations applicable to seagoing tank barges.

§ 157.21 Subdivision and stability.

A new vessel that is a U.S. vessel must meet the following subdivision and damage stability criteria after assuming side and bottom damages as defined in Appendix B of this Part. A U.S. vessel that meets the requirements in this section is considered by the Coast Guard as meeting 46 CFR 42.20–5.

(a) The final waterline, taking into account sinkage, heel, and trim, must be below the lower edge of an opening through which progressive flooding may take place, such as an air pipe, or any opening that is closed by means of a weathertight door or hatch cover. This opening does not include an opening closed by a—

(1) watertight manhole cover;

(2) flush scuttle;

(3) small watertight cargo tank hatch cover that maintains the high integrity of the deck;

(4) remotely operated watertight sliding door; or

(5) side scuttle of the non-opening type.

(b) In the final stage of flooding, the angle of heel due to unsymmetrical flooding must not exceed 25 degrees, except that this angle may be increased to 30 degrees if no deck edge immersion occurs.

(c) For acceptable stability in the final stage of flooding, the righting lever curve must have a range of at least 20 degrees beyond the position of equilibrium in association with a maximum residual righting lever of at least 0.1 meter. For the calculations required in this section, weathertight openings or openings fitted with automatic closures, (*e.g.* a vent fitted with a ball check valve), need not be considered as points of downflooding within the range of residual stability, but other openings must be accounted for in the calculation.

§ 157.22 [Reserved]

§ 157.23 Cargo and ballast system information.

(a) Each tank vessel to which this part applies must have an instruction manual that describes the automatic and manual operation of the cargo and ballast system in the vessel.

(b) The format and information contained in the instruction manual required in paragraph (a) of this section must be similar to the manual entitled "Clean Seas Guide for Oil Tankers" which can be obtained from the International Chamber of Shipping, 30–32 St. Mary Axe, London, England, EC3A 8ET.

§ 157.24 Submission of calculations, plans, and specifications.

The owner, builder, or designer of a new vessel shall submit the following to the Coast Guard before construction of the vessel:

(a) Calculations to substantiate compliance with the tank arrangement and size requirements under § 157.19, or a letter from the government of the vessel's flag state that certifies compliance with—(1) Section 157.19; or

(2) Regulations 24 of Annex I of the International Convention for the Prevention of Pollution from Ships, 1973.

(b) Except for a new vessel that is a foreign vessel, calculations to substantiate compliance with subdivisions and damage stability requirements under § 157.21.

(c) Calculations to substantiate compliance with the segregated ballast distribution requirements in § 157.09(d).

(d) Plans and specifications for the vessel that include—

(1) design characteristics;

(2) a lines plan;

(3) curves of form (hydrostatic curves);

(4) a general arrangement plan of each deck and level;

(5) inboard and outboard profile plans showing oiltight and watertight bulkheads;

(6) a midship section plan;

(7) a capacity plan showing the capacity and the vertical and longitudinal centers of gravity of each cargo space, tank, and similar space;

(8) tank sounding tables;

(9) draft mark locations;

(10) detailed plans of watertight doors; and

(11) detailed plans of vents.

Subpart C—Vessel Operation

§ 157.25 Exceptions to applicability.

(a) Sections 157.29, 157.31, and 157.43 apply to foreign vessels when they discharge into the navigable waters of the United States.

(b) Sections 157.35, 157.37, 157.39, 157.45, and 157.47 do not apply to foreign vessels.

§ 157.27 Discharges: Tank vessels carrying oil exclusively on rivers, lakes, bays, sounds, and the Great Lakes, and seagoing tank vessels of less than 150 gross tons.

Unless a tank vessel carrying oil exclusively on rivers, lakes, bays, sounds, and the Great Lakes, or a seagoing tank vessel of less than 150 gross tons discharges clean ballast or segregated ballast, the vessel must—

(a) retain on board any oily mixture; or

(b) transfer an oily mixture to a reception facility.

§ 157.28 Discharges from tank barges exempted from certain design requirements.

The person in charge of a tank barge exempted under § 157.08(a)(2) from the requirements in §§ 157.11, 157.13, 157.15, and 157.23 shall ensure that while the barge is proceeding en route—

(a) cargo tanks are not ballasted or washed; and

(b) oil or oily mixtures are not discharged.

§ 157.29 Discharges: Seagoing tank vessels of 150 gross tons or more.

Unless a seagoing tank vessel of 150 gross tons or more discharges an oily mixture in compliance with the requirements in §§ 157.37, 157.39, or 157.43, the vessel must—

(a) retain the mixture; or

(b) transfer the mixture to a reception facility.

§ 157.31 Discharges: Chemical additives.

No person may use a chemical additive to circumvent the discharge requirements in §§ 157.27, 157.29, 157.37, 157.39, and 157.43.

§ 157.33 Water ballast in oil fuel tanks.

A new vessel may not carry ballast water in an oil fuel tank.

§ 157.35 Ballast added to cargo tanks.

A tank vessel that meets the design requirement in § 157.09 may carry water ballast in cargo tanks during abnormally severe weather conditions if more ballast water than can be carried in segregated ballast tanks is required for the safety of the vessel. This ballast water must be—

(a) processed and discharged in compliance with the requirements in § 157.37; and

(b) recorded in the Oil Record Book under § 151.35(c)(1)(vii) of this chapter.

§ 157.37 Discharge of cargo residue.

(a) Except as required in paragraph (b) of this section, a tank vessel may discharge into the sea an oily mixture from a cargo tank and cargo pump room bilge if the vessel—

(1) is more than 50 nautical miles from the nearest land;

(2) is proceeding en route;

(3) is discharging at an instantaneous rate of oil content not exceeding 60 liters per nautical mile;

(4) is an existing vessel and the total quantity of oil discharged into the sea does not exceed 1/15,000 of the total quantity of the cargo that the discharge formed a part, or is a new vessel and the total quantity of oil discharged into the sea does not exceed 1/30,000 of the total quantity of the cargo that the discharge formed a part;

(5) discharges above the waterline through the piping required in §157.11(a); and

(6) has in operation an automatic oil discharge monitoring and control system approved by the Coast Guard (specification regulation to be proposed), except that system may be operated manually if—

(i) the automatic system fails during a ballast voyage;

(ii) the failure is recorded in the Oil Record Book;

(iii) the master ensures that the discharge is constantly monitored visually and promptly terminated when oil is detected in the discharge; and

(iv) the system is operated manually only until the ballast voyage is completed.

(b) A tank vessel that carries asphalt exclusively must transfer cargo residues and tank washings to a reception facility.

§ 157.39 Machinery space bilges.

(a) A tank vessel may discharge an oily mixture from a machinery space bilge that is combined with an oil cargo mixture if the vessel discharges in compliance with § 157.37.

(b) A tank vessel may discharge an oily mixture from a machinery space bilge that is not combined with an oil cargo mixture if the vessel—

(1) is more than 12 nautical miles from the nearest land;

(2) is proceeding en route;

(3) is discharging an effluent with an oil content of less than 100 parts per million; and

(4) has in operation an oil discharge monitoring and control system approved by the Coast Guard (specification regulation to be proposed) and oil water separating equipment approved by the Coast Guard (specification regulation to be proposed).

§ 157.41 Emergencies.

Sections 157.27, 157.29, 157.37, and 157.39 do not apply to a tank vessel that discharges into the sea oil or oily mixtures—

(a) for the purpose of securing the safety of the vessel or for saving life at sea; or

(b) as a result of damage to the vessel or its equipment if—

(1) reasonable precautions are taken after the occurrence of the damage or discovery of the discharge for the purpose of preventing or minimizing the discharge; and

(2) the owner, master or person in charge did not intend to cause damage, or did not act recklessly and with knowledge that damage of the environment would probably result.

§ 157.43 Discharges: clean and segregated ballast.

(a) Clean ballast may be discharged in accordance with § 157.37(a)(6).

(b) The master of a vessel under this part shall ensure that segregated ballast is not discharged unless he finds no oily mixture in the ballast after—(1) visually examining the top of the ballast contents of each tank; or

(2) testing the ballast contents of each tank with an oil/water interface detector.

§ 157.45 Valves in cargo or ballast piping system.

When a tank vessel is at sea and the tanks contain oil, valves and closing devices in the cargo or ballast piping system or in the transfer system must be kept closed except they may be opened for cargo or ballast transfer to trim the vessel.

§ 157.47 Information for master.

A master or person in charge of a new vessel shall operate the vessel in accordance with the information required in 46 CFR 31.10-30(d) that includes the following:

(a) Stability information.

(b) Damage stability information determined in acordance with the criteria contained in Appendix B of this part.

(c) Loading and distribution of cargo information determined in compliance with the damage stability criteria required in Appendix B of this part.

§ 157.49 Instruction manual.

The master of a tank vessel shall ensure that the instruction manual under § 157.23 is available and used when the cargo or ballast systems are operated.

APPENDIX A—DAMAGE ASSUMPTIONS, HYPOTHETICAL OUTFLOWS, AND CARGO TANK SIZE AND ARRANGEMENTS

1. *Source.* The procedures for the damage assumption calculations contained in this Appendix conform to Regulations 22, 23, and 24 of Annex I of the International Convention for the Prevention of the Pollution from Ships, 1973, done at London, November 2, 1973.

2. *Assumptions.* For the purpose of calculating hypothetical outflow from tank vessels, three dimensions of the extent of damage of a parallelepiped on the side and bottom of the vessel are assumed.

(a) For side damage, the conditions are as follows:

Damage	*Conditions*
(1) Longitudinal extent l_c	$\frac{1}{3} L^{\frac{2}{3}}$ or 14.5 m, whichever is less.
(2) Transverse extent (t_c) (inboard from the vessel's side at right angles to the centerline at the level corresponding to the assigned summer freeboard).	$\frac{B}{5}$ or 11.5 m, whichever is less.
(3) Vertical extent (v_c)	From the base line upwards without limit.

(b) For bottom damage, two conditions to be applied individually to the stated portions of the vessel, as follows:

Damage	Conditions	
	For 0.3L from the forward perpendicular of ship	Any other part of ship
(1) Longitudinal extent (l_s)	$\frac{L}{10}$	$\frac{L}{10}$ or 5 meters, whichever is less.
(2) Transverse extent (t_s)	$\frac{B}{6}$ or 10 meters, whichever is less but not less than 5 meters.	5 meters.
(3) Vertical extent from the base line (v_s).	$\frac{B}{15}$ or 6 meters, whichever is less	$\frac{B}{15}$ or 6 meters, whichever is less.

3. *Hypothetical Outflow of Oil.* (a) The hypothetical outflow of oil in the case of side damage (O_c) and bottom damage (O_s) is calculated by the following formula with respect to compartments breached by damage to all conceivable locations along the length of the vessel to the extent as defined in section 2 of this Appendix.

(1) *For side damages:* Formula I

$$O_c = \Sigma W_i + \Sigma K_i C_i$$

(2) *For bottom damage:* Formula II

$$O_s = \frac{1}{3}(\Sigma Z_i W_i + \Sigma Z_i C_i)$$

Where:

W_i = Volume of a wing tank assumed to be breached by the damage as specified in section 2 of this Appendix; W_i for a segregated ballast tank may be taken equal to zero;

C_i = Volume of a center tank assumed to be breached by the damage as specified in section 2 of this Appendix; C_i for a segregated ballast tank may be taken equal to zero;

$$K_i = l - \frac{b_i}{t_c}$$

when b_i is equal to or greater than t_c, K_i is equal to zero;

$$Z_i = l - \frac{h_i}{v_s}$$

when h_i is equal to or greater than v_s, Z_i is equal to zero;

b_i = Minimum width of wing tank under consideration measured inboard from the vessel's side at right angles to the centerline at the level corresponding to the assigned summer freeboard; and

h_i = Minimum depth of the double bottom under consideration; where no double bottom is fitted, h_i is equal to zero.

(b) If a void space or segregated ballast tank of a length less than l_c is located between wing oil tanks, O_c in formula I of this section may be calculated on the basis of volume W_i being the actual volume of one such tank (where they are of equal capacity) or the smaller of the two tanks (if they differ in capacity), adjacent to such space, multiplied by S_i as defined below and taking for all other wing tanks involved in such a collision the value of the actual full volume.

$$S_i = l - \frac{l_i}{l_c}$$

Where l_i = length of void space or segregated ballast tank under consideration.

(c) Credit is only given in respect to double bottom tanks which are either empty or carrying clean water when cargo is carried in the tanks above.

(1) If the double bottom does not extend for the full length and width of the tank involved, the double bottom is considered *nonexistent* and the volume of the tanks above the area of the bottom damage must be included in formula II of this section even if the tank is not considered breached because of the installation of such a partial double bottom.

(2) Suction wells may be neglected in the determination of the value h_i if such wells are not excessive in area and extend below the tank for a minimum distance and in no case more than half the height of the double bottom. If the depth of such a well exceeds half the height of the double bottom, h_i is taken equal to the double bottom height minus the well height.

(d) In the case where bottom damage simultaneously involves four center tanks, the value of O_s may be calculated according to formula III as follows:

$$O_s = \frac{1}{4}(\Sigma Z_i W_i + \Sigma Z_i C_i)$$

(e) Credit for reduced oil outflow from bottom damage may be applied to formula III for an installed emergency high suction cargo transfer system that—

(1) transfers within two hours oil equal to one half of the volume of the largest tank involved;

(2) has sufficient ballast or cargo tankage available to receive the transferred oil; and

(3) has the high suction piping installed at a height not less than the vertical extent of bottom damage (v_s).

4. *Allowable volumes of cargo tanks.*

(a) The allowable volume of a wing cargo tank (VOL_w) is equal to seventy-five percent of O_A. In a segregated ballast tank vessel VOL_w may equal O_A for a wing cargo oil tank located between two segregated ballast tanks each of length greater than l_c and width greater than t_c.

(b) The allowable volume of a center cargo tank (VOL_c) is 50,000 cubic meters.

5. *Allowable length of cargo tanks.* The allowable length of a cargo tank (l_a) is equal to the greater of 10 meters or more of the following values:

(a) If no longitudinal bulkhead is provided, 0.1L.

(b) If a longitudinal bulkhead is provided at the centerline only, 0.15L.

(c) If two or more longitudinal bulkheads are provided:

(1) For wing tanks, 0.2L; and

(2) For center tanks—

If

(i) $\frac{b_i}{B}$

is equal to or greater than $\frac{1}{5}$, 0.2L; or

If

(ii) $\frac{b_i}{B}$

is less than $\frac{1}{5}$; and—

(A) no centerline longitudinal bulkhead is provided,

$$\left(0.5\frac{b_i}{B} + 0.1\right)L;$$

or

(B) a centerline longitudinal bulkhead is provided,

$$\left(0.25\,\frac{b_i}{B}+0.15\right)L.$$

APPENDIX B—SUBDIVISION AND STABILITY ASSUMPTIONS

1. *Source.* The procedures for the loading assumption calculations contained in this Appendix conform to Regulation 25 of Annex I of the International Convention for the Prevention of the Pollution from Ships, 1973, done at London, November 2, 1973.

2. *Loading Assumptions.* For the purpose of calculating subdivision and damage stability for a tank vessel, the operating drafts must reflect actual partial or full load conditions consistent with trim and strength of the vessel. Ballast conditions need not be considered if the tank vessel is not carrying oil in cargo tanks excluding oily residues. Loading condition must reflect the specific gravities of the cargo.

3. *Damage Assumptions.*

(a) Damage is applied to all conceivable locations along the length of the vessel as follows:

(1) For a vessel of more than 225 meters in length, anywhere in the vessel's length.

(2) For a vessel of more than 150 meters, but not exceeding 225 meters in length, anywhere in the vessel's length except where the after or forward bulkhead bounding a machinery space located aft is involved in the damage assumption. The machinery space is calculated as a single floodable compartment.

(3) For a vessel 150 meters or less in length, anywhere in the vessel's length between adjacent transverse bulkheads except the machinery space.

(b) The extent and the character of the assumed side or bottom damage, as defined in section 2 of Appendix A of this part, must be applied except longitudinal bottom damage within 0.3L from the forward perpendicular must be assumed to be the same as that for side damage. If any damage of lesser extent results in a more severe condition, such damage must be assumed.

(c) If damage involves transverse bulkheads as specified in paragraphs (a)(1) and (2) of this section, transverse watertight bulkheads must be spaced at least at a distance equal to the longitudinal extent of the assumed damage specified in paragraph (b) of this section in order to be considered effective. Where transverse bulkheads are spaced at a lesser distance, one or more of these bulkheads within such extent of damage must be assumed as nonexistent for the purpose of determining flooded compartments.

(d) If the damages between adjacent transverse watertight bulkheads is within the definition contained in paragraph (a)(3) of this section, no main transverse bulkhead or a transverse bulkhead bounding side tanks or double bottom tanks is to be assumed damaged, unless—

(1) the spacing of the adjacent bulkheads is less than the longitudinal extent of assumed damage defined in paragraph (b) of this section; or

(2) there is a step or a recess in a transverse bulkhead of more than 3.05 meters in length, located within the extent of penetrations of assumed damage. The step formed by the after peak bulkhead and after peak tank top is not regarded as a step for these calculations.

(e) If pipes, ducts, or tunnels are situated within the assumed extent of damage, there must be arrangements so that progressive flooding may not thereby extend to compartments other than those assumed to be floodable for each case of damage.

4. *Characteristic and Condition Assumption for Calculations.*

(a) Account must be taken of any empty or partially filled tanks, the specific gravity of cargoes carried, and any outflow of liquids from damaged compartments.

(b) The permeabilities are assumed as follows:

Intended space use:	*Permeability*
Stores	0.60
Accommodation	0.95
Machinery	0.85
Voids	0.95
Consumable liquids	[1] 0 or 0.95
Other liquids	[2] 0 or 0.95

[1] Whichever results in the more severe requirements.

[2] The permeability of partially filled compartments must be consistent with actual density and the amount of liquid carried.

(c) The buoyancy of any superstructure directly above the side damage is to be disregarded. The unflooded parts of superstructures beyond the extent of damage may be taken into consideration if they are separated from the damaged space by watertight bulkheads and no progressive flooding of these intact spaces takes place. Class I doors are allowed in watertight bulkheads in the superstructure.

(d) The free surface effect is to be calculated—

(1) at an angle of heel of 5 degrees for each individual compartment; or

(2) by assessing the shift of liquids by moment of transference calculations.

(e) In calculating the effect of free surfaces of consumable liquids, it is to be assumed that, for each type of liquid, at least one transverse pair or a single centerline tank has a free surface and the tank or combination of tanks to be taken into account is to be those where the effect of free surface is the greatest.

(R.S. 4417a(3) and (7), as amended (46 U.S.C. 391a(3) and (7); 49 CFR 1.46(n)(4) (40 CFR 3906).

Effective date. These regulations shall become effective on October 14, 1975.