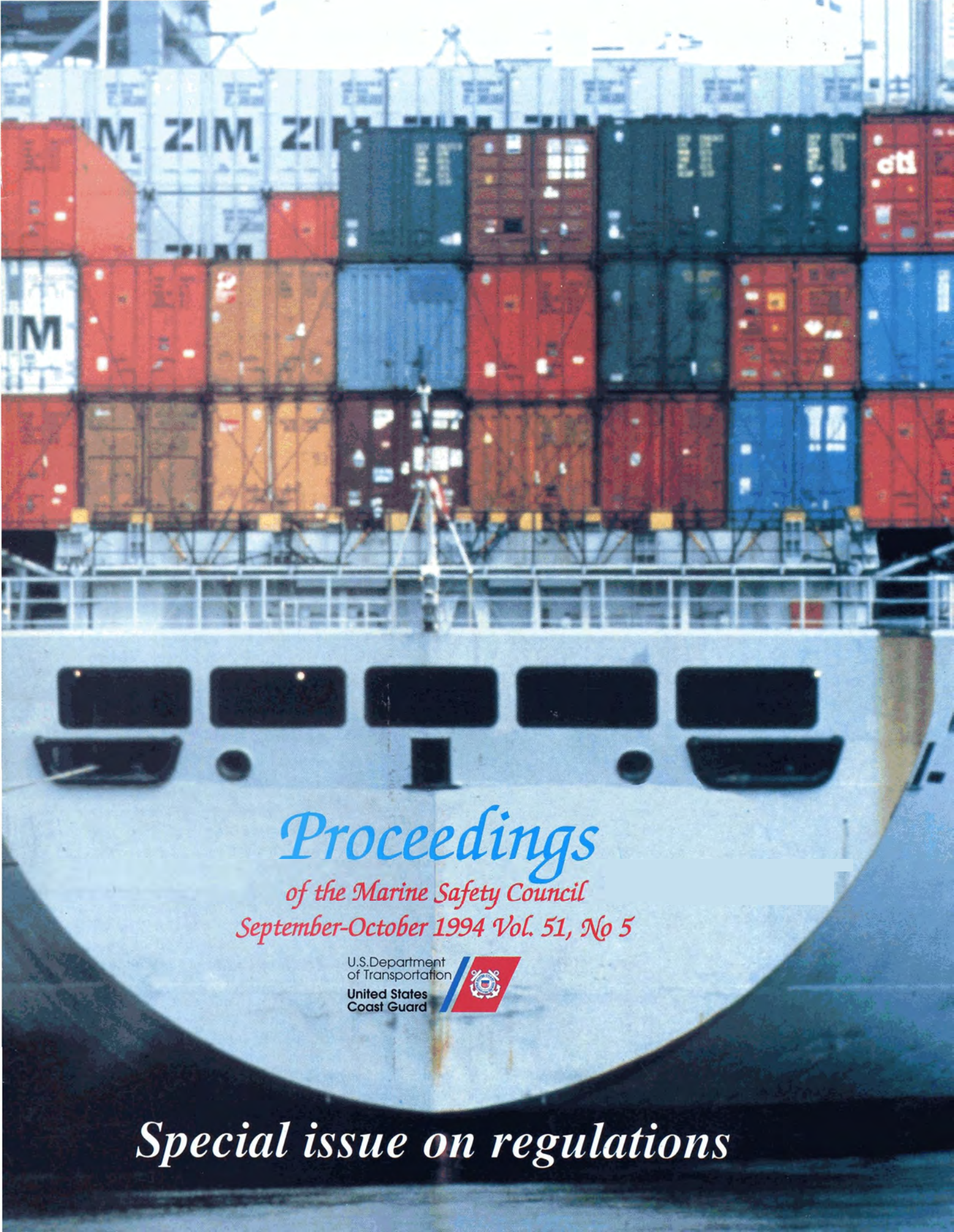


Proceedings

of the Marine Safety Council

September-October 1994 Vol. 51, No 5

U.S.Department of Transportation

United States Coast Guard

Special issue on regulations

Proceedings is published bimonthly by the Coast Guard's Office of Marine Safety, Security and Environmental Protection, in the interest of safety at sea under the auspices of the Marine Safety Council. The Secretary of the Office of Transportation has determined that the publication of this periodical is necessary in the transaction of the public business required by law of this agency. Special permission for republication, either in whole or in part, except for copyrighted material, is not required, provided credit is given to Proceedings. The views expressed are those of the authors and do not represent official Coast Guard policy. All requests for subscriptions and changes of address must be in writing, addressed to: Editor, Proceedings Magazine, U.S. Coast Guard (G-MP-4), 2100 Second Street, S.W., Washington, D.C. 20593-0001; (202) 267-1408. Please include mailing label when changing an address

DIST (SDL No. 132)
A: ac(2); ebfghijklmnopqrsuv(1).
B: nr(50); cefginw(10); hklnshi(5); xdmou(2); vyz(1).
C: n(4); adek(3); blo(2); cfeiimpqrtuvwxvz(1).
D: ds(5); abcefghijklmnopqrtuvwyz(1).
E: kn(2). F: abcdehjkloqst(1).
List TCG-06.

Proceedings

of the Marine Safety Council

September- October 1994 *Vol. 51, No 5*

Special issue on regulations

Regular features

Premier Cruise Lines ~~Star/Ship Oceanic~~ sails under the Bahamas flag.

Coast Guard promotes international safety

By Mr. Jack Booth

"Internationalism" is fast becoming the watchword for business, and is most likely the future for regulatory development as well. However, "internationalism" is nothing new to the maritime regulatory community. It has been the major focus of the shipping industry for the past century. Since the sinking of the *Titanic* on April 14, 1912, the United States has been a leader in the development of international maritime standards for the Safety of Life at Sea (SOLAS) Convention. From the first SOLAS Convention in 1914, through two world wars up to the present, the United States has been a major promoter of international maritime safety.

While the first convention dealt primarily with issues related to the *Titanic*, each subsequent conference has broadened its focus based on advances in marine technology and lessons learned from recent casualties. Each SOLAS Convention has increased maritime safety for the general public, and further leveled the playing field for shipbuilders, owners and equipment manufacturers both here and abroad.

IMO

The International Maritime Organization (IMO), a specialized United Nations agency, is charged with administering and promoting the SOLAS Convention. IMO currently has 132 member states from all over the world, more than ten times the number that attended the first SOLAS conference in 1914.

Representing the United States, the Coast Guard has worked closely with other IMO members in developing regulations to increase maritime safety and prevent marine pollution.

Domestic influences

Today, many United States regulations are reflected in SOLAS and other IMO conventions as a result of our active participation.

One example which stands out is the requirement for non-combustible construction of passenger vessels on international voyages.

Continued on page 2

These ongoing initiatives and their underlying philosophies will firmly establish a fair business environment without any reduction in safety.

Continued from page 1

Originally developed in 1936 in the United States for the domestic fleet, these requirements were used as the basis for the construction requirements for all passenger vessels in the SOLAS 74 Convention. Enforced in 1994, they were retroactively applied to all existing passenger vessels, to be phased in over a 16-year period, ending in 2010.

At the same time, our domestic regulations have been changed to reflect SOLAS Conventions as well. During the cruise ship building boom in the early 1980s, passenger vessel damage stability criteria came to the forefront. Earlier, the Coast Guard had recognized that United States domestic regulations and their equivalents in the international conventions had become inadequate to deal with improvements in vessel hull design. The Coast Guard worked with IMO members to revise the damage stability criteria for passenger vessels, resulting in amendments to SOLAS 74. The requirements in these amendments are now part of our public rulemaking to ensure that domestically-operated vessels have at least an equivalent level of safety with United States vessels in international trade.

Both examples clearly demonstrate our goals to harmonize domestic regulations with international conventions, and to level the playing field internationally for United States maritime industries. However, more work remains to be done to fully accieve these goals.

Safety concerns

Since international conventions often have vaguely worded requirements, more work is needed to ensure consistency through uniform applications of the requirements. An IMO initiative originally proposed by the United States is to identify loosely worded or vague phrases in the SOLAS Convention, and develop unified interpretations and amendments to resolve issues surrounding such phrasing. The task is a top priority with the IMO Maritime Safety Committee.

The importance of resolving issues caused by vaguely worded phrases in a convention cannot be overstated. Such interpretations can have a major impact on whether intended levels of safety and fair business environments for manufacturers competing for international maritime trade are maintained.

The IMO Subcommittee on Fire Protection, which is responsible for chapter II-2 of the convention, is leading this effort. Thus far, the subcommittee has identified more than 200 vague phrases, such as, "to the satisfaction of the administration" or "a means shall be provided." A working document compiled by the subcommittee has more than 300 pages of interpretations submitted by IMO members. This document will first be used to develop unified interpretations, and will eventually amend the SOLAS Convention.

This long-term project will be closely watched by many member countries to gage its effect both on safety and economic interests.

Initiatives

In the summer of 1992, the Coast Guard conducted a limited comparison of ship design and construction standards between the Code of Federal Regulations (CFR), and a combination of SOLAS and American Bureau of Shipping (ABS) rules. The results demonstrated that a combination of SOLAS and ABS rules would provide a safety level equivalent to many CFR requirements.

Upon subsequent review, this limited study helped bring about a major maritime regulatory reform initiative, involving vessels built to meet SOLAS and ABS class requirements. A primary objective of this initiative is to harmonize domestic regulations and standards with international convention requirements. This provides useful alternative ways for United States flag vessels to comply with applicable international requirements. Other initiatives will examine CFR requirements with a view toward eliminating, updating or replacing regulations. One example is sprinkler requirements.

In the past several years, vessels have become increasingly dependent on the installation of automatic sprinkler systems to ensure the safety of passengers and cargo. Older Coast Guard regulations are very specific and do not permit designers to take advantage of recent technological advancements in automatic sprinkler system design. Consequently, the Coast Guard is modifying and adopting newly-established industry standards developed by the National Fire Protection Association. The guidance for this modification was published in Navigation and Vessel Inspection Circular (NVIC) 10-93. The Coast Guard intends to pursue this guidance as a frame work from which a standard-making organization, such as the National Fire Protection Association, can develop a marine automatic sprinkler standard. Once developed, it will replace the current CFR sprinkler regulations.

Mr. Jack Booth is on the staff of the Ship Design Branch of the Marine Technical and Hazardous Materials Division.

Telephone: (202) 267-2997.

The Viking Princess of Palm Beach Cruise Lines is registered in Panama.

Gas carriers steer steady course to safety

for new technology in any industrial field.

By Mr. Thomas J. Felleisen

Gas carriers are specialized ships that carry cargoes that are gases at room temperature and pressure. By lowering this temperature or by increasing the pressure, the cargoes condense into a liquid. Much denser than the gaseous form, the liquid form is the only economical way to transport the cargoes. However, the liquid form has its own hazards because of its high pressure or low temperature.

The regulations in 46 CFR part 154 protect against these hazards.

Plan review

In the 1960s, the Coast Guard conducted a plan review of all gas carriers entering United States waters. This review consisted of thorough examinations of the special cargo containment, hull structure, firefighting capabilities, machinery and operations that are critical for the safe carriage of liquefied gases. As the trade grew in such cargoes, the Coast Guard's work load increased as well.

The United States, in the meantime, was not the only nation to conduct plan reviews. For shipbuilders, owners and operators, these duplicate efforts produced time-consuming burdens.

To alleviate this burden and to control its own increasing work load, the Coast Guard promoted an international standard for gas carriers through the IMO. These standards would represent a consensus among nations and would be uniformly enforced.

IMO standard

Since the middle 1970s, gas carriers have been regulated by the IMO. A rulemaking, "Safety Standards for Self-propelled Vessels Carrying Bulk Liquefied Gases," will help conform United States rules in 46 CFR part 154 with the IMO standards. (See page 18 in *Keynotes* for the June 6, 1994 notice of proposed rulemaking in the *Federal Register*.) This rulemaking will continue a long-standing association of the Coast Guard with IMO on safety measures for gas carriers.

The IMO standard, called, "Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk," known familiarly as "the gas carrier code," was introduced in 1976. This code was the foundation of the regulations in 46 CFR part 154, with four significant differences. These are the only instances where Coast Guard rules are intended to exceed those of IMO, and will remain in the rule after the modifications are completed.

Differences

Unlike the IMO gas carrier code, 46 CFR part 154 requires:

- special steels that resist cracking when exposed to the very cold liquefied gases in certain areas of the hull,
- tanks where high pressure is used to liquefy gas meet construction standards that are enforced by states and municipalities throughout the United States,
- hulls designed for lower sea and air temperatures, especially for ships going to Alaska, and
- cargo temperature or pressure controls that eliminate air pollution from venting of cargo tank vapors during a voyage.

Minor changes

Since 46 CFR part 154 was first published, there have been minor changes in the gas carrier code. The Coast Guard hasn't yet succeeded in keeping up with these changes, but should catch up with proposed revisions to 46 CFR part 154.

Other than miscellaneous clarifications, the changes are in three main areas. The first is the number of cargoes covered by 46 CFR part 154. The additional cargoes in the gas carrier code are not truly gases. They are liquids which boil slightly above room temperature. The low boiling point necessitates refrigeration or pressurization of the cargoes for safe carriage. Consequently, these cargoes are often transported by gas carriers.

The second area concerns the specifications for emergency equipment on gas carriers. The amount of equipment needed to respond to an injury or fire would conform with the IMO requirements. For United States merchant mariners, the rulemaking would also reflect standards already in place for shore-based workers. These standards were developed by the Occupational Safety and Health Administration.

Regulations for a special type of cargo tank are the third major area. Known as internal insulation tanks, they are constructed by fastening an impermeable insulation to the inner hull of a gas carrier. (Gas carriers must have double hulls.) The proposed new regulations under 46 CFR part 154 incorporate the IMO standards for this type of tank design.

This rulemaking strives to conform the Coast Guard regulations to IMO standards when possible, and also to reaffirm long-standing Coast Guard requirements which are distinct from those of IMO. It is hoped that this dual goal will improve safety of gas carriers in United States waters.

Mr. Thomas J. Felleisen is a chemical engineer with the Bulk Cargo Section of the Hazardous Materials Branch of the Marine Technical and Hazardous Materials Division.

Telephone: (202) 267-1577.

The liquefied natural gas carrier, Bekulan, unloads cargo in Tokyo Bay, Japan.

What are continuing dockets?

By Mr. Stephen Irvin
and Mr. Curtis Payne

By their nature, regulatory projects are normally opened to address a specific issue and, consequently, additions, deletions and/or changes are made to the regulations. Due to this singular purpose, most regulatory projects end with a final rule.

Regulatory changes under continuing dockets benefit the transportation of hazardous materials as well as general shipping.

Exceptions

There are a few instances, however, where this is NOT the case. Two are found in the Marine Technical and Hazardous Materials Division under Coast Guard dockets CGD 88-032 and CGD 94-900. These dockets support regulatory projects which have periodic, non-controversial changes or updates to requirements within titles 33 and 46 of the Code of Federal Regulations (CFR).

The two projects differ considerably in their areas of concern and types of changes. However, the rationale behind their designation as "continuing dockets" is the same.

The principal difference between the continuing docket and the usual regulatory project is that the former can have numerous regulatory changes occur under the same docket and work plan, essentially never closing. As long as the nature of the changes to the federal regulations are approved within the work plan, they are merely phase four, six or 19 of the docket.

Docket CGD 88-032

The Engineering Branch of the division uses CGD 88-032 to accomplish two goals. The first is to incorporate into 33 CFR and 46 CFR by reference those standards developed to supplement the various subchapters of both titles or to replace detailed requirements in subchapter Q of 46 CFR. The second goal is to update effective edition dates of various standards previously incorporated into the CFR.

The normal regulatory process of a notice of proposed rulemaking is followed to achieve the first goal. Then, after a comment period, a final rule is published which addresses the comments and may or may not modify the proposed rule. Although the Coast Guard strives to address anticipated effects on the industry, an opportunity to comment must be provided to allow industry representatives to present their views and to avoid unnecessary confusion. Typically, the incorporation of standards is uncontested, so the usual process can be expedited.

If a regulatory effort is initiated simply to update the editions of incorporated standards as in the second goal, an interim final rule can be used instead of the longer process described above. The only delay in this procedure is compiling the updated standards, which must be submitted to the *Federal Register* for complete review. This step takes nearly as long as the whole interim final rule process.

Docket CGD 94-900

The Hazards Evaluation Section of the Hazardous Materials Branch of the division uses the continuing docket CGD CY(calendar year)-900 to update the chemical tables in 46 CFR parts 30-40, 150, 151, 153 and 154, as well as those in 33 CFR part 151. Amendments to these parts are issued as necessary to incorporate changes, additions to and modifications of tables and charts.

These actions arose due to the Coast Guard's evaluation and classification of new commodities proposed for transportation in bulk by water. In addition, similar proposals by the United States and other nations to the IMO for international transportation are incorporated into Coast Guard regulations.

(In the past, the Coast Guard used docket series CY-100. Recently this was changed to the docket series CY-900.)

Conclusion

Continuing docket regulatory projects have a definite role in the regulatory process. They can update federal regulations more often and more efficiently to reflect the "state of the art," whether new materials are being considered for construction, industry standards for machinery components, new chemicals and other cargoes, or recent IMO guidance and requirements.

Mr. Stephen Irvin is a mechanical engineer with the Engineering Branch and Mr. Curtis Payne is a chemical engineer with the Hazardous Materials Branch of the Marine Technical and Hazardous Materials Division.

Telephone: (202) 267-2206 and 267-1577.

How regulations come to be

By Mr. Bruce Novak

Congress passes laws to accomplish goals of society. Because of the incredible complexity of the technical issues involved, the laws are usually refined further and implemented through regulations issued by executive federal agencies.

This process is called rulemaking.

The way it was

At one time, each federal agency issued its own regulations and notified the public in whatever way seemed appropriate. There were as many different rulemaking strategies as there were agencies. As could be imagined, the results were chaotic. It was virtually impossible for the federal agencies or the public to tell what rules had been issued.

To remedy this problem, soon after World War II, Congress passed the Administrative Procedure Act and the Federal Register Act. The former established a procedure for involving the public in the rulemaking process and the latter created a mechanism whereby all Americans would be notified of rulemaking actions.

The Administrative Procedure Act established both formal and informal rulemaking processes. The formal process is seldom used. The Coast Guard and most other agencies use the informal process.

Rulemaking today

The heart of the rulemaking process established by the Administrative Procedure Act is the notice and comment procedure. This simply requires a federal agency to inform the public of proposed rules through notices in the *Federal Register* and receive public comments on them. The ultimate agency action, such as a final rule, must be published in the *Federal Register.*

Various presidential executive orders have improved on this basic process by requiring agencies to consider the costs of a rule, its benefits, recordkeeping and reporting burdens, and expected impact on the environment, small entities and historical landmarks.

The resulting rulemaking process has been frequently criticized for being too long, too difficult and too complex. Over the years, there have been repeated attempts to "streamline" the regulatory process. In spite of good intentions, these efforts generally are unsuccessful in either reducing the number of steps a rule must go through or in decreasing development time. There are good reasons for this.

"The search for quicker and better ways of regulating goes on."

Protections

Rules issued by federal agencies such as the Coast Guard can carry civil and criminal penalties. As far as the public perception is concerned, the rules are the same as laws passed by Congress.

There is a critical difference, however. Laws passed by Congress are voted on by elected representatives who have the interests of their constituents in mind and who are accountable to those constituents. Federal agency personnel, on the other hand, are not accountable to the electorate.

Some of the steps that make the rulemaking process so complex and lengthy are designed to protect the public against rules that are poorly thought out by assuring the regulated and interested public a meaningful opportunity to be heard before a rule is finalized.

Other protections are designed to assure that the agency has carefully thought out implications of the proposed rule. This is more difficult than it sounds. Agencies regulate in highly sophisticated areas. It is not difficult to write a rule that will not actually achieve the desired result, or a rule that, by solving one problem, inadvertently creates others.

The Coast Guard tries to avoid these unintended consequences by requiring all rules to be reviewed by senior officials, who assess technical feasibility, costs, benefits and environmental impacts.

This review process helps protect the public against slipshod regulations. However, the cost of these protections has been long development and processing times. While there is a general desire to quicken the rulemaking process, no one is willing to trade the protections for faster processing. The search for quicker and better ways of regulating goes on.

"To craft the best rules possible, it is necessary for the public and the government to work in partnership."

Improvements

In the spirit of the administration's initiative to "reinvent government," the Coast Guard thoroughly reviewed its rulemaking process and came up with several recommendations for improvements. On January 14, 1994, the commandant approved revisions to the agency's internal rulemaking development procedures. The purpose was to minimize delays and improve the quality of the final document.

The new procedures increase the accountability of project managers for meeting critical deadlines in a project's development. At the very beginning of a project, dates are projected for key developmental events. By comparing these milestone dates against actual project development, managers quickly realize when their projects are falling behind schedule. The manager can then take prompt action to get the project back on track.

The dates are also tracked by the Marine Safety Council, a board of senior Coast Guard officers who oversee the rulemaking process. If a project falls more than two months behind schedule, the council may reassign resources, adjust completion dates or cancel it.

Accessibility

In an effort to assure effectiveness of the rules, the Coast Guard is opening up the rulemaking process to as many individuals as possible. The quality of the rules is dependent on the amount and quality of information received from those who are regulated and other interested parties.

Executive Order 12866 encourages agencies to involve interested individuals in rulemaking, even before a notice of proposed rulemaking has been published. This technique helps the Coast Guard to identify problem areas, and estimate economic and environmental effects early in the process. It also helps the Coast Guard to identify potential problems before drafting a notice of proposed rulemaking.

The resulting notice of proposed rulemaking is generally less contentious, and requires fewer and less extensive revisions before going final.

Advisory committees

In addition to public input, the Coast Guard relies heavily on the expertise of its advisory committees. Whether mandated by law or created by the Coast Guard, these committees provide access to a depth of expertise on a variety of topics that might not otherwise be available. Composed of technical experts and members of the general public, the advisory committees are valuable "reality checks" for the Coast Guard. Their membership is balanced to assure that opinions and advice are not dominated by one interest group.

Conclusion

The rulemaking process is unavoidably complex and lengthy. The result, though, is better, less expensive and more effective regulations.

The key to success for the Coast Guard's outreach program is public involvement. It is unfortunate that too many people believe that one voice cannot change the outcome of an agency decision. This is not true. A single comment, if convincing, can change the whole direction of a project. For this to happen, the comment must be powerful and well documented — but most importantly, it must be made.

The Coast Guard can only respond to comments it receives. To craft the best rules possible, it is necessary for the public and the government to work in partnership.

Mr. Bruce Novak is the manager of the Coordination and Clearance Branch of the Oil Pollution Act (OPA 90) staff.

Telephone: (202) 267-6819.

Cleaner seas and safer ships . . .

through maritime regulatory reform

By Mr. Bruce Novak

Public awareness of environmental and safety issues is increasing throughout the world. On the other hand, compliance with the expanding number of stringent safety standards has been slow, particularly by foreign-flag vessels.

Currently, most of the vessels calling at United States ports are registered under foreign flags. Consequently, it is critical that the United States place greater emphasis on port-state control activities to reduce risks posed to American waterways.

A plan

The Coast Guard is developing a plan for regulatory compliance options in order to adapt to changes in the commercial maritime environment. The agency will also improve the effectiveness of its operating programs, while maintaining its credibility and reputation as a leading maritime safety organization.

The plan builds upon the success of ongoing efforts to relieve regulatory burdens upon industry and to improve international maritime safety. The Coast Guard is also examining various compliance options.

The options include:
permitting United States-flag vessel operators to use the American Bureau of Shipping (ABS) to perform design review and survey functions currently specified in titles 33 and 46 CFR, while the Coast Guard issues the certificate of inspection;

implementing a "model" company and "model" designer concept;

using a combination of these approaches to develop compliance options;

implementing the IMO International Safety Management Code used by vessel operators and member governments as the basis for vessel safety and environmental protection management programs;

providing effective "targeted" Coast Guard design and inspection oversight of ABS reviews and surveys via appropriate inspections during the term of a vessel's certificate of inspection;

providing Coast Guard audits of ABS quality systems, including participation on ABS design and vessel survey teams; and

fostering other techniques that let the Coast Guard focus on critical problems and recognize quality company management.

Regardless of the options chosen, it is imperative that the Coast Guard maintain program control and staff expertise. This will be accomplished by training and comprehensive oversight. Equally important is that the regulatory compliance options permit balancing of flag state and port state enforcement without reducing the safety level of United States vessels.

Implementation

To successfully carry out this plan, the Office of Marine Safety, Security and Environmental Protection will have to rapidly accept a wider range of performance-based and industry consensus standards, harmonize international standards, and achieve a better balance of resources to shoulder domestic and international responsibilities for safety and pollution prevention.

Along with other port states victimized by lax flag state enforcement of standards, the United States intends to work through IMO to identify countries and organizations not meeting their international responsibilities.

For one thing, the United States will step up enforcement of international standards on visiting foreign-flag vessels. The number and thoroughness of port state control inspections and supporting resources will also be increased.

The public can expect stricter enforcement standards along with increased penalties. The United States also intends to use all other available sanctions, such as vessel detention, to induce owners and operators to run responsible operations.

Resources

Currently, a disproportionate amount of Coast Guard time is spent on the United States fleet instead of foreign vessels. By shifting resources to where they are needed most, the Coast Guard will apply pressure on substandard vessel owners and operators, classification societies and flag states to improve their performances or withdraw from the United States market.

When flag states conscientiously adhere to safety standards, enforcement efforts of flag and port states can be more evenly balanced.

Exposure

One way to encourage compliance with international standards is to expose substandard performers to worldwide attention. The United States is making selected vessel inspection and boarding files universally available to ship owners and charterers, classification societies and flag states, allowing them to examine the enforcement history on any vessel.

The United States has proposed the creation of a similar international data base to be administered by IMO. Data from port and flag state inspections worldwide would be fed into it, resulting in an even greater availability of information.

Such a data base would be of value to many users. For example, it could be used by insurance companies in establishing premiums and deciding who to insure, to charterers to select vessels to lease, and to port states to determine appropriate inspections.

Human error

It is time to deal with the fact that human error is a major factor in 80 to 85 percent of all vessel casualties.

In the past, we dealt with human error by making technical and design changes to ships. If a tanker ran aground due to a personnel error, we would install a double hull. If personnel error should cause the tanker to run aground and spill oil again, we would propose other modifications, such as redundant propulsion and steering systems.

Incompetence or human error, however, can foul up any engineered-in solution. In the long run, it is more economical to face the need for proper training, manning and work hours than to rebuild ships. Working with the international community, the United States is reexamining provisions of the Convention on Standards and Training Certification and Watchkeeping.

Continued on page 12

Continued from page 11

It is imperative for vessel safety to have credible standards for work hours, manning and total crew size. Automated vessels have advantages in that they are less expensive to operate and use smaller crews. However, these advantages can be offset by using inadequate crews or by requiring excessive work hours.

The future

The future of shipping is changing radically, but the direction of change is already set. The pressure on the marine industry to meet strict new requirements for safety and pollution prevention, such as the safe ship management code, will continue.

The United States and other port nations will pursue a policy of strict uniform enforcement to force out substandard operators who are driving the freight rates down to such a level that reputable owners cannot compete.

In the not too distant future, marginal operators of substandard vessels will not be able to find markets willing to risk doing business with them. Owners and operators, classification societies and flag states willing to let others worry about safety, will either realize that safe operation of vessels is in everyone's best interest and act accordingly, or leave the business.

While competitive pricing will always be important, it will no longer be the primary concern when shipping contracts are being let. *We can look forward to cleaner seas and safer ships in the very near future.*

The United States is working with the international community to bring this about rapidly with a minimum of disruption to the industry.

We have to do a better job. The public expects it, administrations expect it and it will happen. The world community will meet the challenges ahead.

As a port state, the United States will help mend the fabric of the safety nets protecting maritime safety by identifying vessels, companies and classification societies that fail to meet their obligations. We are ready to act as the flag states' conscience by identifying failures and encouraging all involved to adopt a safety culture attitude.

Together we can go beyond the letter of the law and implement its spirit.

Mr. Bruce Novak is the manager of the Coordination and Clearance Branch of the Oil Pollution Act (OPA 90) staff.

Telephone: (202) 267-6819.

"We can look forward to cleaner seas and safer ships in the very near future."

There is a worldwide recognition that business as usual in developing and enforcing standards just can't go on.

Mariner's Seabag

New and revised deck questions

"The merchant marine deck examination new and revised questions" (publication # COMDTPUB P16721.40) has been released to the public for review and comment on the questions' clarity and accuracy. The publication should be used in conjunction with others in the series.

The questions in this publication reflect additions and changes to those in the data bank as of March 1, 1994. The Coast Guard will continue to develop new questions, using them first in examinations before public release. The published questions serve as a guide to the types of questions that may be used in the exams. Questions requiring charts to determine answers are based on the following:

CHART 12221TR - CHESAPEAKE BAY
CHART 12354TR - LONG ISLAND SOUND
CHART 13205TR - BLOCK ISLAND SOUND

These charts are available at the Defense Mapping Agency and authorized book stores.

Some questions require the use of illustrations or diagrams. *"Merchant marine deck examination illustration book"* (publication #COMDTPUB P16721.6A), dated January 1992, contains all the illustrations referred to by deck questions. Copies are available from the following:

Superintendent of Documents
U.S. Government Printing Office
Washington, D.C. 20402

Navigation problems module

These navigation problems are for licenses of 100 GT or less on ocean, near coastal and inland routes.

This module has 10 questions with a passing score of 70 percent. The test begins with data about the vessel, weather or voyage. It includes a deviation table and the variation for the area. The questions are based upon the use of the magnetic compass and deviation table, a chart and the standard navigation publications. Each module is based on one of these three charts:

Module 0772X Chesapeake Bay	Chart 12221TR
Module 0773X Long Island Sound	Chart 12354TR
Module 0774X Block Island Sound	Chart 13205TR

The examination requires determination of position based on terrestrial and electronic observations. Other navigational skills examined by this test may include calculation of set and drift and course or speed made good; determination of leeway, compass error and estimated time of arrival.

Protest of examination questions

In November 1993, the Coast Guard expanded its policy for protesting license and document examination questions. There are two methods by which to submit a protest. The first is executed by completing "comment sheets" during the exam. If your answer is wrong and you fail the exam because of it, your comment sheet will be reviewed at Coast Guard headquarters to determine the cause of the different answer. If you can substantiate your answer, you will be given credit and will pass this portion of the exam.

In addition, anyone who is unsuccessful in passing an exam module by no more than two questions will be given the opportunity to protest answers marked as incorrect. Regardless of the method used, the comments or protests should be complete and factual, with all work shown for math-related questions.

Each protest should factually demonstrate that the Coast Guard's answer is incorrect. This process should include submitting all work sheets and scrap paper. The candidate may use any reference material normally used in the exam room during testing to support his or her answer.

The following question appeared in the 1988 edition of the *"Merchant marine examination questions - electricity,"* book 12 and has been used on licensed engineer's examinations:

When two AC generators are being paralleled, the breaker should be closed with the synchroscope pointer rotating in the _____.

A. "slow" direction, just before the 12 o'clock position
B. "fast" direction, just after the 12 o'clock position
C. "slow" direction, just after the 12 o'clock position
D. "fast" direction, just before the 12 o'clock position

The correct answer is *"D,"* but the answer given in book 12 was mistakenly printed as *"A."* One candidate failed the exam and filed a protest on this question, stating, *"I marked off the answer given in the question and answer book."*

The candidate would have been more correct had he or she marked off *"D"* on the answer sheet and filed the comment, *"The only correct method for closing the breaker is that stated in answer 'D.' If answer 'A' were followed, as answered in the question book, it could lead to blacking out the plant."*

Exam questions are published to give the public a chance to review and comment on their clarity and accuracy. If errors are found, please inform the Merchant Marine Examination Branch (G-MVP-5).

Nautical Queries *September-October 1994*

The following deck questions should be answered using chart number 12221TR, Chesapeake Bay entrance and the supporting publications.

Deck

Your draft is 4.2 meters (14 feet). Use 10° W for variation where required. The gyro error is 3° E. The deviation table is:

HDG. MAG	DEV.	HDG. MAG	DEV.
000°	2.0°E	180°	2.0° W
030°	1.0° E	210°	1.0° W
060°	0°	240°	0.5° W
090°	0.5° W	270°	0.5° E
120°	1.0° W	300°	1.5° E
150°	2.0° W	330°	2.5°E

1. Your 1600 position is LAT 37°22.5' N, LONG 75°32.3' W. The depth of water under the keel is about_____

A. 38 feet (11.5 meters)
B. 45 feet (13.6 meters)
C. 52 feet (15.8 meters)
D. 59 feet (17.3 meters)

2. If there is no current, what is the course per gyro compass from your 1600 position to point A, 0.5 mile due east of Hog Island Lighted Bell Buoy "12?"

A. 190° pgc.
B. 193° pgc.
C. 196° pgc.
D. 199° pgc.

3. At 1630, you reach point A and come right to 204° T. Your engine speed is 12 knots. Your 1715 position is LAT 37°09.8' N, LONG 75°37.4' W. The current was _____

A. 058° T at 1.1 knots
B. 238° T at 1.1 knots
C. 067° T at 1.5 knots
D. 246° T at 1.6 knots

4. From your 1715 fix, you steer 214° T at 12 knots. At 1800, you take a fix using Loran-C readings:

9960 -- X -- 27116.8

9960 -- Y -- 41386.0

9960 -- Z -- 58620.6

Your 1800 position is _____

A. LAT 37°02.9' N, LONG 75°43.1' W
B. LAT 37°02.9' N, LONG 75°43.9' W
C. LAT 37°03.0' N, LONG 75°43.3' W
D. LAT 37°03.1' N, LONG 75°42.8' W

5. At 1815, your position is LAT 37°01.0' N, LONG 75°42.7' W. If there is no current, what is the course per standard magnetic compass to arrive at a point 0.3 mile due north of North Chesapeake Entrance Lighted Whistle Buoy "NCA?"

A. 249.0°.
B. 251.5°.
C. 255.0°.
D. 257.0°.

6. From your 1815 position, you want to make good course 263° T. Your engines are turning RPMs for 12 knots. The current is 050° T at 1.9 knots. Adjusting your course for set and drift, when should you expect to enter the red sector of Cape Henry Light?

A. 1849.
B. 1854.
C. 1859.
D. 1904.

7. At 1920, Cape Henry Light bears 225° pgc, and Chesapeake Channel Tunnel North Light bears 288° pgc. If your heading is 268° T, what is the relative bearing of Chesapeake Light?

A. 194°.
B. 205°.
C. 213°.
D. 220°.

8. Concerning your 1920 position, which is true?

A. You are entering a restricted area.
B. You are under the inland rules of the road.
C. You are within the Chesapeake Bay Entrance traffic separation scheme.
D. You can expect differences of up to 6° from the normal magnetic variation of the area.

9. From your 1920 position, you change course to enter Chesapeake Channel between buoys 9 and 10. What is the course per standard magnetic compass?

A. 286° psc.
B. 283° psc.
C. 280° psc.
D. 274° psc.

10. At 2000, your position is LAT 37° 04.1'N, LONG 76° 05.6'W. You change course for the Eastern Shore. At 2037, Old Plantation Flats Light bears 033° pgc, and York Spit Light bears 282° pgc. Your course made good from your 2000 position is _____.

A. 359° T
B. 006° T
C. 014° T
D. 020° T

11. At 2037, what course per standard magnetic compass should you steer to make good a course of 016° T? There is no current, but a westerly wind is causing 3° leeway.

A. 031° psc. B. 028° psc.
C. 025° psc. D. 022° psc.

12. Your height of eye is 7.6 meters (25 feet). If the visibility is 5.5 nautical miles, what is the luminous range of Wolf Trap Light?

A. 7.5 miles.
B. 12.0 miles.
C. 16.0 miles.
D. 17.0 miles.

13. If you want a more detailed chart of the area at your 2115 DR position, which chart should you use?

A. 12222.
B. 12224.
C. 12225.
D. 12238.

14. At 2123, your position is LAT 37° 20.0' N, LONG 76° 03.0' W. What is your distance offshore at Savage Neck?

A. 4.3 miles.
B. 3.4 miles.
C. 2.6 miles.
D. 1.7 miles.

15. From your 2123 position, you are approximately 42 miles from Crisfield, Maryland. If you are making good a speed of 13 knots, at what time should you arrive at Crisfield?

A. 2359.
B. 0037.
C. 0112.
D. 0148.

ANSWERS

1-A, 2-B, 3-C, 4-A, 5-D, 6-D, 7-C, 8-A,
9-B, 10-A, 11-D, 12-A, 13-B, 14-D, 15-B.

If you have any questions concerning Nautical Queries, please contact G-MVP-5. Telephone: (202) 267-2705.

Chemical of the month *1/C Brian K. Koshulsky*

Carbofuran

Carbofuran is a common pesticide used as a systemic insecticide and nematocide. It is also known commercially as Curaterr (a product of Bayer) or Furadan (a product of FMC Corporation). It is identified chemically as 2,3-dihydro-2,2-dimethyl-7-benzofuranyl methylcarbamate.

Carbofuran exists in its basic state as an odorless, colorless to white, solid crystalline powder. It is slightly soluble in water (700lbs/100lbs water at 77°F), but it will sink. A ratio of four pounds of carbofuran to one gallon of water forms a flowable paste.

Health hazards

Carbofuran is highly toxic through inhalation or ingestion of solid or dust. However, it has low toxicity by skin exposure. It is listed in the Code of Federal Regulations as a 6.1 poison.

Effects from overexposure result from either swallowing, breathing or coming into contact with the eyes or skin. Increased temperature and humidity may aid skin absorption, and, therefore, increase toxicity.

Symptoms of overexposure include headache, light-headedness, weakness, abdominal cramps, nausea, excessive salivation, perspiration, blurred vision, tearing, pin-point pupils, blue skin color, convulsions, tremor and coma.

If the eyes are exposed to carbofuran, a burning sensation and dimming of vision, miosis or pupil contraction may result.

Recommended personal protection equipment when working with exposed substance is goggles, mask or respirator, nonpermeable protective clothing and rubber gloves.

Treatment

If carbofuran is ingested, induce vomiting by giving a tablespoon of salt in a glass of warm water. Repeat as necessary until the vomiting is over. Gastric lavage or syrup of ipecac may be used if the salt water does not produce prompt or profuse vomiting.

If the substance is inhaled, remove the victim from the area of exposure. Administer atropine sulfate. Give artificial respiration or oxygen as necessary.

If the eyes are exposed, irrigate with water or saline solution for at least 15 minutes. Exposed areas of skin should be washed with soap and water, followed by alcohol, and a final wash with soap and water.

In all cases of exposure, medical attention should be obtained as quickly as possible.

Fire hazards

The chemical is slightly combustible and may support a fire at elevated temperatures. It will sustain burning if ignited. When burning, it produces toxic dust and vapors of nitrogen oxides. It will decompose at temperatures above 130°C (266°F).

Environmental hazards

Carbofuran is highly toxic to the environment, especially waterways where it may cause fouling to the shoreline and death to aquatic life.

In the event of a spill, a water contamination warning should be issued. Operators of local water intakes should be notified, as well as the local health and wildlife officials.

Carbofuran

Chemical name:	2,3-dihydro-2,2-dimethyl-7-benzofuranyl methylcarbamate
Formula:	$C_{12}H_{15}NO_3$
Synonyms:	Carbofuran, Furadan, Curaterr and methylcarbamate
Description:	Odorless, colorless to white, solid crystalline powder
Physical properties:	
Boiling point:	N/A
Freezing point:	302-307°F (150-153°C)
Vapor pressure:	2×10^{-5} mm at 33°C
Threshold limit values:	
Time-weighted average:	0.1 mg/m^3
Short-term exposure limit:	None
Combustion properties:	Slightly combustible; may support combustion at elevated temperatures
Densities:	
Specific gravity at 20°C:	1.180
Identifiers:	
CHRIS code:	CBF
CAS registry number:	1563-66-2
IMDG Code:	Carbamate pesticides, solid, toxic, n.o.s.
UN:	2757

Brian K. Koshulsky was a first class cadet at the Coast Guard Academy when this article was written under the direction of LCDR Richard B. Gaines for a class on hazardous materials.

This article was reviewed by the Hazardous Materials Branch, Marine Technical and Hazardous Materials Division, Office of Safety, Security and Environmental Protection. Telephone: (202) 267-1577.

Final rule

CGD 93-051, Proof of commitment to employ aboard United States merchant vessels (46 CFR parts 12 and 16) RIN 2115-AE54 (June 3).

The Coast Guard amends its regulations covering applicants for merchant mariner's documents to eliminate the requirement that the applicant provide proof of a commitment of employment as a member of the crew of a United States merchant vessel. Because of new requirements pertaining to applicants of merchant mariner's documents, this requirement is no longer necessary. The action will relieve applicants and employers of an unnecessary regulatory burden.

DATES: The rule was effective on July 5, 1994.

Addresses: Unless otherwise indicated, documents referenced in this preamble are available for inspection or copying at the office of the executive secretary, Marine Safety Council (G-LRA/3406) (CGD 93-051), Coast Guard headquarters, 2100 Second Street, S.W., Washington, D.C. 20593-0001, or may be delivered to room 3406 between 8 a.m. and 3 p.m., Monday through Friday, except holidays. Telephone: (202) 267-1477.

For further information, contact: Mrs. Justine Bunnell, Merchant Vessel Personnel Division. Telephone: (202) 267-0238.

Notice of proposed rulemaking

CGD 82-058, Safety standards for self-propelled vessels carrying bulk liquefied gases (46 CFR parts 40 and 154) (June 6).

The Coast Guard proposes to amend its regulations concerning safety standards for self-propelled vessels carrying bulk liquefied gases. These amendments are necessary because the International Maritime Organization (IMO) Code on which many of these regulations are based has been amended. This proposal would make the changes necessary to align these regulations with the IMO Code and to clarify certain provisions in the existing regulations.

DATE: Comments must have been received by August 5, 1994.

Addresses: The executive secretary maintains the public docket for this rulemaking. Comments are part of this docket and may be inspected or copied at room 3406, Coast Guard headquarters. A copy of the material listed in "Incorporation by Reference" of this preamble is available for inspection at room 1218.

For further information, contact: Mr. Thomas J. Felleisen, Marine Technical and Hazardous Materials Division. Telephone: (202) 267-0238.

Notice of temporary rules issued

CGD 94-007, Safety zones, security zones and special local regulations (33 CFR parts 100 and 165) (June 14).

This document provides required notice of substantive rules adopted by the Coast Guard and temporarily effective between January 1, 1994, and March 31, 1994, which were not published in the *Federal Register*. This quarterly notice lists temporary local regulations, security zones and safety zones which were for limited duration and for which timely publication in the *Federal Register* was not possible. It also lists some regulations not in the previous quarterly list.

Addresses: The complete list of these temporary regulations may be examined at the executive secretary, Marine Safety Council (G-LRA), Room 3406, Coast Guard headquarters.

For further information, contact: LCDR Thomas R. Cahill, executive secretary, Marine Safety Council. Telephone: (202) 267-1477.

Notice of proposed rulemaking

CGD 94-008, Documentation of vessels (46 CFR part 67) RIN 2115-AE83 (June 20).

The Coast Guard proposes to amend its vessel documentation regulations. The proposed amendments would clarify these regulations by restating the citizenship requirements for trusts to reflect the Coast Guard's policy; by correcting an existing cross-reference error regarding mortgagee consent for exchange of Certificates of Documentation; by implementing statutory requirements concerning endorsements on Certificates of Documentation for dredges and towing vessels; and by making other minor technical amendments.

DATE: Comments must have been received by August 19, 1994.

Addresses: The executive secretary maintains the public docket for this rulemaking. Comments are part of this docket and may be inspected or copied at room 3406, Coast Guard headquarters.

For further information, contact: LCDR Don M. Wrye, Vessel Documentation and Tonnage Survey Branch, Merchant Vessel Inspection and Documentation Division. Telephone: (202) 267-1492.

Notice of proposed rulemaking

CGD 94-003, Ballast water management for vessels entering the Hudson River (33 CFR part 151) RIN 2115-AE76 (June 21).

The Coast Guard proposes regulations to implement an amendment to the Nonindigenous Aquatic Nuisance Prevention and Control Act of 1990. The proposed regulations, if adopted, would require ballast water management practices for each vessel entering the Hudson River north of the George Washington Bridge after operating on waters beyond the Exclusive Economic Zone. These rules would help prevent additional introduction of nonindigenous aquatic nuisance species into the Great Lakes through the ballast water of vessels operating on the Hudson River.

DATE: Comments must have been received by August 22, 1994.

Addresses: The executive secretary maintains the public docket for this rulemaking. Comments are part of this docket and may be inspected or copied at room 3406, Coast Guard headquarters.

For further information, contact: LT Jonathan C. Burton, project manager, Marine Environmental Protection Division (G-MEP-1). Telephone: (202) 267-6714.

Notice

CGD 94-049, Annual certification of Cook Inlet Regional Citizens' Advisory Council (June 24).

Under the Oil Terminal and Oil Tanker Environmental Oversight and Monitoring Act of 1990, the Coast Guard may certify annually a voluntary advisory group in lieu of a regional citizens' advisory council for Cook Inlet, Alaska. This certification allows the advisory group to monitor the activities of oil tankers and facilities under the Cook Inlet Program established by the act. The purpose of this notice is to inform the public that the Coast Guard has recertified the alternative voluntary advisory group for Cook Inlet, Alaska.

EFFECTIVE DATES: June 1, 1994, through May 3, 1995.

For further information, contact: Mrs. Janice Jackson, project manager, Marine Environmental Protection Division (G-MEP-3). Telephone: (202) 267-0500.

Notice of availability

CGD 94-051, Differential Global Positioning System, Northwest Region; Environmental Assessment (June 24).

The Coast Guard has prepared a programmatic environmental assessment and findings of no significant impact for implementing a differential global positioning system service in the Northwest Region of the United States. The assessment concluded that there will be no significant impact on the environment and that preparation of an environmental impact statement will not be necessary. This notice announces the availability of the assessment and the findings.

DATE: Comments must have been received by July 25.

Addresses: Copies of these documents may be obtained by contacting LTJG Randy Navarro at (202) 267-1058 or faxing a request at (202) 267-4427. A copy of the assessment (less enclosures) is also available on the Electronic Bulletin Board System at the GPS Information Center in Alexandria, VA (703) 313-5910. For information on the system, call the watchstander at (703) 313-5900.

For further information, contact: LTJG Randy Navarro, Radionavigation Division at (202) 267-1058.

Continued on page 20

Continued from page 19

Interim rule with request for comments

CGD 91-005, Financial responsibility for water pollution (vessels) (33 CFR parts 4, 130, 131, 132, 137 and 138) RIN 2115-AD76 (July 1).

The Coast Guard is issuing interim regulations to implement the provisions concerning financial responsibility for vessels under the Oil Pollution Act of 1990 and the Comprehensive Environmental Response, Compensation and Liability Act as amended. These provisions require owners and operators of vessels, with certain exceptions, to establish and maintain evidence of insurance or other evidence of financial responsibility sufficient to meet their potential liability under the acts for discharges or oil or hazardous substances. The regulations are administrative in nature and concern procedures for evidencing financial responsibility.

DATES: This rule was effective on July 1, 1994. Comments must be received by September 29, 1994. The Coast Guard will issue new certificates of financial responsibility under this rule beginning December 28, 1994.

Addresses: Comments may be mailed to the executive secretary, Marine Safety Council (G-LRA/3406) (CGD 91-005), Coast Guard headquarters or may be delivered to room 3406 between 8 a.m. and 3 p.m., workdays. Telephone: (202) 267-1477.

The executive secretary maintains the public docket for this rulemaking. Comments will be part of this docket and will be available for inspection or copying at room 3406 between 8 a.m. and 3 p.m., workdays. Unless otherwise indicated, documents referenced in this preamble also are available in this docket.

For further information, contact: Mr. Robert M. Skall at (703) 235-4704 or Mr. Robert S. Horowitz at (703) 235-4792, National Pollution Funds Center. Procedural questions may be directed to Mr. Richard Castellano at (703) 235-4810.

Correction

CGD 94-049, Annual certification of Cook Inlet Regional Citizens' Advisory Council (July 14).

This document corrects the notice (CGD 94-049) published on June 24, 1994, (59 FR 32745) concerning the annual certification of Cook Inlet Regional Citizens' Advisory Council.

EFFECTIVE DATES: June 1, 1994, through May 31, 1995.

For further information, contact: Mrs. Janice Jackson, project manager, Marine Environmental Protection Division (G-MEP-3). Telephone: (202) 267-0500.

Supplementary information: In the June 24 edition of the *Federal Register*, the notice certifying the Cook Inlet Regional Citizens' Advisory Council inadvertently referred to the Prince William Sound Regional Citizens' Advisory Council in the last paragraph of the notice. The notice is corrected to read as follows.

Recertification By letter dated June 1, 1994, the chief, Office of Marine Safety, Security and Environmental Protection certified that the Cook Inlet Regional Citizens' Advisory Council qualifies as an alternative voluntary advisory group under the provisions of 33 U.S.C. 2732(o). This recertification terminates on May 31, 1995.

Policy Statement

CGD 94-050, Deep frames in vessel admeasurement (36 CFR part 68) (July 15).

The Coast Guard is issuing this policy statement to address the variances in its practices related to the use of deep frames in vessel admeasurement. Recent decisions applying the rules of practice regarding deep frames to existing vessels during remeasurement have raised questions of fairness in application of the practices. This policy addresses the acceptance of deep frames used in the construction of vessels under previously accepted practices.

EFFECTIVE DATE: July 15, 1994.

For further information, contact: Mr. Kenneth C. Hixson, Vessel Documentation and Tonnage Survey Branch. Telephone: (202) 267-1492.

Final rule

CGD 90-020, National vessel traffic services regulations (33 CFR parts 1, 26, 160, 161, 162, 164 and 165) RIN 2115-AD56 (July 15).

The Coast Guard is amending its vessel traffic services (VTS) regulations to make participation in all VTS mandatory. This rule also simplifies existing VTS regulations by amending part 161 to incorporate standard national vessel traffic management rules applicable to all VTS, vessel movement reporting requirements for certain vessels operating in the VTS areas and geographic descriptions and local regulations pertaining to specific VTS areas. Additionally, the rule redesignates other regulations, not unique to VTS operations, into more appropriate parts within title 33. This rulemaking does not significantly change Coast Guard VTS procedures or requirements. This final rule is intended to promote safe vessel movement by reducing the potential for collisions, rammings and groundings, and their attendant loss of lives, property and environmental harm.

EFFECTIVE DATE: October 13, 1994.

Addresses: Unless otherwise indicated, documents referenced in this preamble are available for inspection or copying at the office of the executive secretary, Marine Safety Council (G-LRA/3406), Coast Guard headquarters, room 3406 between 8 a.m. and 3 p.m., workdays. Telephone: (202) 267-1477.

For further information, contact: Ms. Irene Hoffman, project manager, Vessel Traffic Services Division (G-NVT). Telephone: (202) 267-6277.

Notice

CGD 94-047, Implementation of the port-state control initiative (July 19).

The Coast Guard has implemented a port-state control initiative to identify and eliminate the operation of substandard ships in United States waters. The Coast Guard is increasing its enforcement efforts against these vessels. This notice is published to ensure wide dissemination of this information to those who may be affected by it.

EFFECTIVE DATE: May 1, 1994.

For further information, contact: CDR Joseph J. Saboe, project manager, Merchant Vessel Inspection and Documentation Division (G-MVI-1). Telephone: (202) 267-1464.

Notice of proposed rulemaking

CGD 94-011, Inland navigation rules; lighting provisions (33 CFR parts 80, 82, 84, 87, 88 and 90) RIN 2115-AE72 (July 20).

The Coast Guard proposes to amend certain technical lighting provisions and interpretive regulations supplementing the Inland Navigation Rules. The proposed changes will bring certain United States technical rules into conformity with amendments to the International Regulations for Preventing Collisions at Sea (72 COLREGS) scheduled to become effective in November 1995. In addition, at the request of the Navigation Safety Advisory Council, the Coast Guard is proposing several interpretive regulations to clarify ambiguities in the rules.

DATE: Comments must be in by September 19, 1994.

Addresses: Comments may be mailed to the executive secretary, Marine Safety Council (G-LRA/3406) (CGD 94-011), Coast Guard headquarters or may be delivered to room 3406 between 8 a.m. and 3 p.m., Monday through Friday, except federal holidays. Telephone: (202) 267-1477.

The executive secretary maintains the public docket for this rulemaking. Comments will be part of this docket and will be available for inspection or copying at room 3406, Coast Guard headquarters.

For further information, contact: Mr. Jonathan Epstein, Navigation Rules and Information Branch, Office of Navigation Safety and Waterway Services. Telephone: (202) 267-0352 or (202) 267-0357.

Introducing . . . the Marine Safety Council

By LT Anita Abbott

Over the years, the Coast Guard has assumed numerous regulatory responsibilities in areas which strongly affect the activities of the maritime community at home and abroad. The focal point of the regulatory process is the Marine Safety Council.

This council oversees the development and implementation of all Coast Guard regulations which affect the public. It establishes internal policies and procedures for preparing and clearing rulemaking projects. It advises the commandant on all regulatory issues. News of the council's activities is reported in the *Proceedings of the Marine Safety Council.*

The chief counsel is a member and the permanent chairperson of the Marine Safety Council, which also includes the chiefs of the Office of Marine Safety, Security and Environmental Protection, the Office of Engineering and Development, and the Office of Navigation Safety and Waterway Services. The council meets at least quarterly to oversee the development of rulemaking projects.

To facilitate the review process, the council requires a work plan for each project having policy implications. This plan outlines the conceptual basis for the proposed rule, and highlights potential problem areas and alternatives.

All significant rulemaking projects are discussed at council meetings, and work plans for minor projects are usually circulated for review. This process provides council members with the opportunity to evaluate proposed policy decisions before extensive resources have been expended to develop detailed regulations.

The council also reviews the public participation plan to ensure that there are adequate opportunities to collect opinions and views from affected parties and the public.

History

The predecessor of the Marine Safety Council was the Merchant Marine Council. This was established in 1942 when the Bureau of Marine Inspection and Navigation transferred to the Coast Guard from the Department of Commerce.

Serving as a deliberative body, the Merchant Marine Council considered proposed regulations and type approvals of equipment, conducted public hearings and provided a forum for the public and industry to resolve problems. The council also served as a fact-finding body and an advisor to the commandant.

The council's work was facilitated by panels of industry representatives which held forums throughout the country. Included were the Western Rivers Panel, the Panel on Motorboats and Yachts, and the Panel of Consultants.

In January 1944, the first issue of *Proceedings of the Merchant Marine Council* was published. It has been issued monthly or bi-monthly ever since, keeping the lines of communication open to maritime industries and individuals affected by the activities of the Coast Guard. The goal of *Proceedings* is to keep the maritime community informed of pertinent safety, security and environmental protection issues.

The Coast Guard's engineer-in-chief was the original council chairman until 1946, when the chief of the Office of Merchant Marine Safety took over. In 1971, the membership of the council was broadened to include all offices with regulatory responsibilities. At that time, the council's name was changed to the Marine Safety Council, and the chief counsel became the permanent chairperson. At the same time, the council moved to the Office of the Commandant. In 1987, the council's functions were transferred to the Office of Chief Counsel, where they are today.

RADM John E. Shkor is chief counsel for the Coast Guard and chairperson of the Marine Safety Council.

Goals

The Marine Safety Council, working with Coast Guard program offices, has helped to develop numerous regulations. To improve the timeliness and quality of future rulemaking, the council set up a quality action team to review the regulatory process in depth. Several areas were pinpointed for improvement.

Statutorily-mandated projects

Statutorily-mandated rulemaking projects, or those of special interest to the commandant now require council oversight early in the process, from the time a requirement is imposed.

As soon as program directors learn of a statutory requirement for regulations to be issued, they must notify the council by memo of the requirements imposed and the process to be used to develop the regulations. This memo identifies the division(s) responsible for drafting the regulations and the project team members. It also provides tentative deadlines for work plan submission and preparation of necessary documents.

Public participation

In accordance with a recommendation in Executive Order 12866, efforts will be made to solicit public participation earlier in the regulatory process. To the extent possible, program managers will publish public notices, and conduct public meetings and workshops to solicit early public comment on potential regulatory projects, even before a regulatory project is officially initiated. When appropriate, these projects shall be coordinated with Coast Guard advisory committees.

Oversight

The council intends to provide closer oversight of the rulemaking schedule established for each regulatory project. A tracking system is being set up by the Regulations and Administrative Law Division. Excessive delays in meeting rulemaking deadlines must be accounted for.

Training

A formal training program will be established for personnel involved in rulemaking to improve efficiency and expedite the whole process.

In addition, the council's guide to procedures will be revised and expanded to reflect its goals more explicitly, and provide meaningful guidance on the many aspects of regulatory development.

It is hoped that these and other changes will improve the accountability, responsiveness, quality and timeliness of the whole Coast Guard rulemaking process.

LT Anita Abbott is a member of the staff of the Regulations and Administrative Law Division of the Office of Chief Counsel. Telephone: (202) 267-6234.

The Marine Safety Center flexes new regulatory muscle

By CDR Kevin Eldridge
and CDR Jeffrey G. Lantz

Historically, the Marine Safety Center in Washington, D.C. has concentrated its resources on detailed reviews of vessel drawings and calculations submitted to demonstrate compliance with the Code of Federal Regulations (CFR). The Office of Marine Safety, Security and Environmental Protection at Coast Guard headquarters interpreted the regulations.

In recent years, however, requests for interpretations of regulatory requirements have multiplied, due in large measure to innovative markets which forced vessel designers to push the design envelope, working "between the lines" of the regulations. In addition, because of decreasing time periods between design to construction, the requests have very tight deadlines.

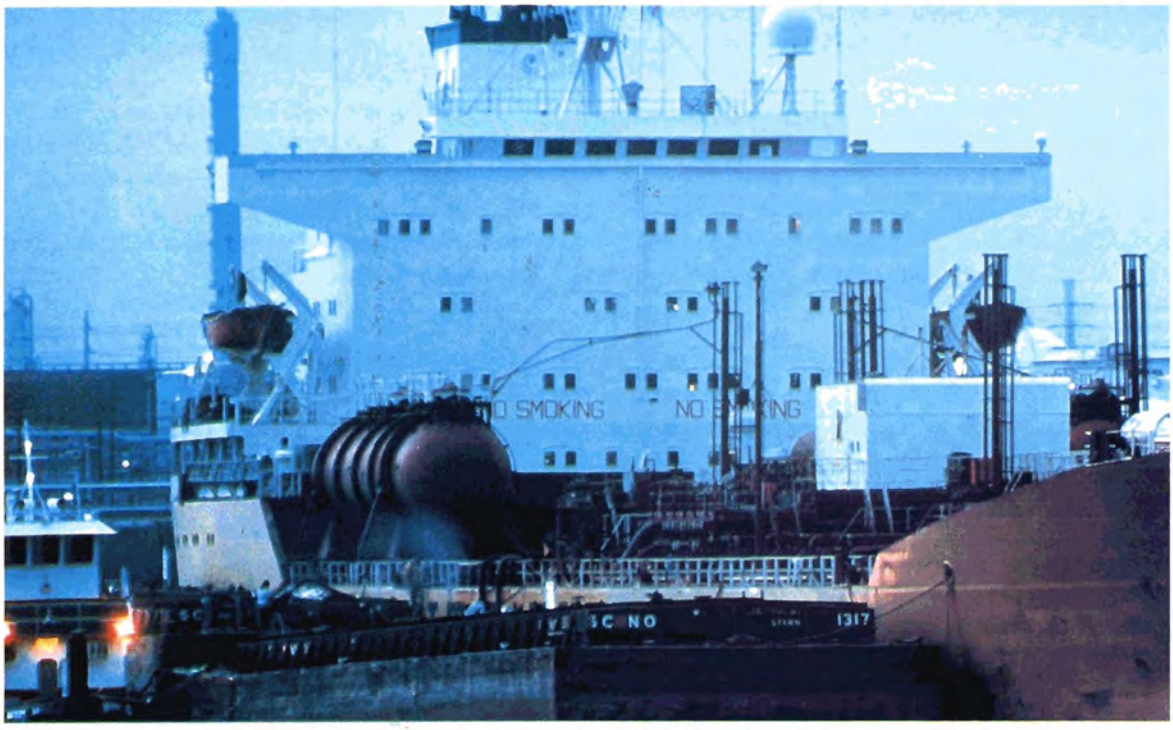
The division of decision-making between the Marine Safety Center and the Office of Marine Safety, Security and Environmental Protection was not responsive enough to meet industry's needs promptly.

"Window"

In an effort to serve the maritime industry better, the commandant of the Coast Guard designated the Marine Safety Center as the Maritime community's "window" to technical issues within the commercial vessel safety program. The authority of the center has been expanded to include regulatory interpretations concerning plan review.

The Marine Safety Center is actually in an ideal position to make technical interpretations of regulations. Day-to-day review activities requiring consistent application of regulations give center personnel an excellent working knowledge of the meaning and intent of the regulations.

No longer will such issues have to be forwarded to the Office of Marine Safety, Security and Environmental Protection for interpretations. An added benefit of this change is "one-stop shopping" for the industry. (The commandant formalized this action in COMDTINST 16715.5 dated May 20, 1994.)



EFFECTIVE IMMEDIATELY

All commercial vessel design issues shall be directed to the Marine Safety Center for appropriate action including technical and regulatory interpretations.

All requests outside the scope of technical regulatory implementation will be forwarded to the appropriate division of the Office of Marine Safety, Security and Environmental Protection.

Policy

With its added responsibility, the Marine Safety Center will establish policy through regulation interpretations. However, this is restricted to plan review issues. Decisions concerning waivers or exemptions from regulations will remain the responsibility of the Office of Marine Safety, Security and Environmental Protection.

The boundary between these two policy categories is difficult to clearly define for the maritime community and Coast Guard field units. Thus, to facilitate exercising of its new authority, the Marine Safety Center will be the first point of contact for all technical issues, regardless of who is responsible for the final actions. The center will determine the responsible party.

If a determination involves commercial vessel safety program policy, the request will be forwarded to the Office of Marine Safety, Security and Environmental Protection. Both parties will endeavor to maintain effective communications to ensure that all interpretations and decisions made by the Marine Safety Center are fed back to headquarters for continued improvement and updating.

CDR Kevin Eldridge is the chief of the Hazardous Materials Branch of the Marine Technical and Hazardous Materials Division.

Telephone: (202) 267-1217.

CDR Jeffrey G. Lantz is the executive officer of the Marine Safety Center, 400 7th Street, S.W., Washington, D.C. 20590-0001.

Telephone: (202) 366-6483.

Additional bulk materials to be regulated

By Mr. Frank K. Thompson

On [redacted] Guard issued a notice of proposed rulemaking in the Federal Register proposing to amend its regulations for the carriage of certain bulk solid materials. The object of the proposed rule is to add materials carried under Coast Guard special permits, as well as materials contained in the IMO Code of Safe Practice for Solid Bulk Cargoes, including coal. Special handling procedures for these materials would also be included in the regulations.

The proposed revisions would harmonize United States regulations with recommended international practices. They would also eliminate the need to apply for special permits, except for newly classified solid hazardous materials proposed for bulk carriage.

Solid hazardous materials

Bulk solid hazardous materials are grouped into nine specific classes, which are defined in the Hazardous Materials Regulations of the Research and Special Programs Administration, Department of Transportation (DOT) (49 CFR chapter I, subchapter C).

There are also some solid materials that are not properly described by any of the hazard classes defined in the Hazardous Materials Regulations. However, when carried in bulk, they may pose a threat to the vessel or crew. This is due to their tendency to spontaneously generate heat or to deplete the oxygen in cargo spaces. These materials include coal, ferrosilicon, direct reduced iron and metal sulfide concentrates.

Standards

The international standard for the marine transport of solid materials in bulk is the IMO *Code of Safe Practice for Solid Bulk Cargoes*. This code is only a recommended standard, although several countries, including Australia, Canada, Italy, South Korea and Poland have adopted it in their national regulations, or require compliance when bulk solid cargoes are handled in their ports.

In the code, certain materials which do not fit into standard United Nations hazard classes are placed in a special class, "Materials hazardous only in bulk." These bulk materials present sufficient hazards to require specific precautions.

They include materials which are likely to reduce the oxygen content of cargo spaces, such as metal sulfide concentrate, self-heating materials, including coal, and those which become hazardous when wet, such as direct reduced iron. Monitoring of cargo spaces for toxic or flammable gases and oxygen is now required for many of these materials under chapter VI of SOLAS 74/78 as amended.

Special permits

Under current United States regulations governing the carriage of solid hazardous materials in bulk (46 CFR part 148), the Coast Guard issues special permits for shipments of bulk solids not listed in these regulations.

These permits prescribe safety requirements for these materials. They also allow the Coast Guard to monitor the shipment of bulk solid hazardous materials to determine if these requirements adequately ensure safe carriage. The Coast Guard also uses special permits to allow the shipment of materials not listed in 46 CFR part 148, but for which international guidelines have been established.

20 materials

Twenty materials proposed for inclusion in 46 CFR part 148 are classified as materials hazardous only in bulk in the IMO *Code of Safe Practice for Solid Bulk Cargoes*. Of these, eight are now regulated in 46 CFR part 148 under the now obsolete DOT classification "ORM-A," "ORM-B" or "ORM-C." These eight materials are aluminum dross, charcoal, ferrophosphorus, ferrosilicon, unslaked lime, petroleum coke, sawdust and tankage.

Three others [metal sulfide concentrates, direct reduced iron (hot-molded briquettes) and direct reduced iron (cold-molded briquettes)] are subject to Coast Guard special permits. If handled improperly when loaded as bulk cargoes, these materials pose an unacceptable risk to the vessel and its crew.

Industry concern

Through responses from the public following an advance notice of proposed rulemaking published in the *Federal Register* on April 28, 1989, the Coast Guard learned that classifying previously unregulated materials as hazardous would impose unnecessary burdens on shippers.

The transportation industry expressed concern that the materials would subsequently be subject to regulations covering all modes of transportation, including truck and rail. There was also concern that the Occupational Safety and Health Administration requirements for material safety data sheets and hazard communication programs would be applied to shipments of the materials.

Concern response

In recognition of the industry concern that the IMO classification "material hazardous only in bulk" could be misinterpreted, the Coast Guard revised 46 CFR part 148 to refer to the new classification as "potentially dangerous materials." This would include materials that may be transported in bulk without posing undue risk if precautions stipulated in part 148 are followed. (Conversely, if these precautions are not observed, these materials could be harmful.)

In most cases, the safety precautions proposed are simply good operating procedures that any prudent mariner would follow to ensure the safety and integrity of the vessel. These include loading cargo in clean dry holds, not loading cargoes that may become dangerous when wet during rainy weather, and not permitting crew members to enter unventilated cargo spaces without breathing apparatus.

Also, the proposed rules clearly state that the regulations would apply only to bulk shipments of the materials by water, and that the materials defined as potentially dangerous would be regulated only when being carried as bulk cargo on a vessel.

Continued on page 28

Continued from page 27

To further eliminate the implication that these materials are being classified as hazardous, the heading of part 148 would be changed from "Carriage of Solid Hazardous Materials in Bulk" to "Carriage of Bulk Solid Materials Requiring Special Handling."

Application

The intent of this proposed rulemaking is to include the 20 materials classified as potentially dangerous in 46 CFR part 148, as well as any special handling procedures for these materials, including requirements imposed by chapter VI of SOLAS 74/78 as amended.

As proposed, the regulations would apply to all United States-flag vessels transporting potentially dangerous materials and to foreign-flag vessels transporting such materials in United States waters. The regulations would apply to all classes of vessels that transport solid bulk cargoes which require special handling, including unmanned barges.

Responsibility

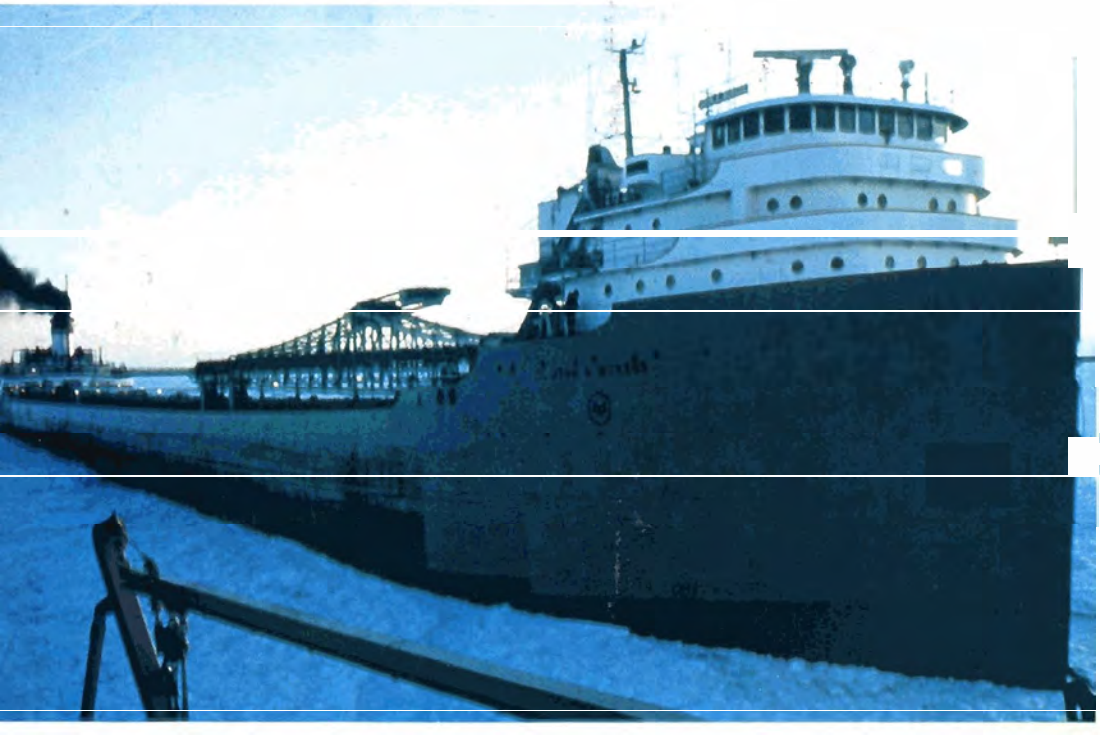
The proposed rules place the responsibility on the shipper to determine if material meets the definition of potentially dangerous. The properties of such materials differ greatly. In the proposed regulations, special stowage and segregation requirements for these materials are presented in tabular form for clarity.

New category

As proposed, the regulations would also establish an additional category of materials in 46 CFR part 148. Hazardous substances classified by the Environmental Protection Agency (EPA) based on the potential of an accidental release of the material to endanger public health, welfare or the environment have previously been carried only under special Coast Guard permits issued on a case-by-case basis.

The regulations in 49 CFR chapter I define hazardous materials as including substances present in a quantity in one package that exceeds the reportable quantity of that substance as determined by EPA. The entire shipment must be taken into consideration for bulk cargoes because there is no package. Because reportable quantities assigned by EPA do not exceed 5,000 pounds, any bulk shipment of an environmentally hazardous substance would be a shipment of a hazardous material.

The proposed rules would not relieve shippers or masters from any reporting requirements of EPA, but would set out minimum requirements for the safe carriage of solid environmentally hazardous substances in bulk by vessel.



Twenty potentially dangerous materials

- Aluminum dross, residues and skimmings
- Calcined pyrites (pyritic ash or "fly ash")
- Charcoal (screenings and briquettes)
- Coal
- Direct reduced iron, lumps, pellets and cold-molded briquettes
- Direct reduced iron and hot-molded briquettes
- Ferrophosphorus (including briquettes)
- Ferrosilicon containing 25 to 30% silicon or 90% or more silicon (including briquettes)
- Fluorspar (calcium fluoride)
- Lime, unslaked (calcium oxide or quicklime)
- Magnesia, unslaked (light-burned magnesia or calcined magnesite)
- Metal sulfide concentrates (solid finely divided sulfide concentrates of copper, iron, lead, nickel, zinc or other metalliferous ores)
- Petroleum coke (calcined or uncalcined, having a temperature of 55°C or higher when loaded)
- Pitch prill, prilled coal tar and pencil pitch
- Sawdust
- Silicomanganese
- Tankage, garbage tankage, rough ammonia tankage and tankage fertilizer
- Vanakium ore
- Wood chips
- Wood pulp pellets

Mr. Frank K. Thompson is a chemical engineer with the Hazardous Materials branch of the Marine Technical and Hazardous Materials Division. Telephone: (202) 267-1217.

U.S. Department
of Transportation

**United States
Coast Guard**

2100 Second St., S.W.
Washington, D.C. 20593