SECTION 2
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Regulatory Scheme

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Introduction

The purpose of these notes is to describe the regulatory scheme administered by the Coast Guard that applies to small Oceanographic Research Vessels (ORVs). In general, these regulatory standards address safety, pollution prevention and pollution response. The safety blanket covers safety of persons as well as seaworthiness of vessels.

Background

Regulatory standards are contained in U.S. law (US Code) and regulation (Code of Federal Regulations) and are found in Titles 33 (Navigation) and 46 (Shipping). In general, congress provides enabling legislation for executive branch agencies to implement specific regulations. Therefore, nearly all regulatory standards of concern to a marine manager can be found in the Code of Federal Regulations. While the Coast Guard is the primary agency that deals with Navigation and Shipping, there are about 15 other agencies that enter this arena from time to time. Examples are FCC for communications, HHS for drug testing, EPA for spill response, and NOAA for marine sanctuaries.

The Safety System

Safety standards apply to vessels, crew and marine environment and in this regard can be viewed as a system. Each element is important; failure of any one element can result in failure of the system. For this reason the regulatory scheme addresses each of these three elements. Historically, the Coast Guard has concentrated on design and equipment of vessels and paid less attention to crews. More recently however that emphasis has changed course and competency of crews is receiving much more regulatory attention than before.

Where Do Standards Come From ?

Regulatory standards of concern to marine managers (other than standards for recreational vessels) flow from three sources; international conventions (treaties), lessons learned from casualties, and advances in technology. In every case the regulatory agency must have authority to implement new regulations.

International agreements

There are several international agreements that impact U.S. regulation. A short list (names are abbreviated) of relevant international agreements includes the following:

SOLAS 74 (includes the ISM Code)
MARPOL 73/78
LOAD LINE, 1966
STCW 95
TONNAGE MEASUREMENT OF SHIPS, 1969

The International Maritime Organization, a specialized agency of the United Nations, is the international agency that deals with marine matters. The international agreements listed above were brought about by diplomatic conventions that were ratified by a sufficient number of countries representing enough of the world's tonnage to bring those standards into force. Technical work is constantly done under the auspices of IMO to enhance implementation and upgrade conventions. The Coast Guard, together with representatives from industry and other government agencies, provides technical representation for the US on several delegations to IMO committee meetings.

Lessons learned from casualties

There is always an urge to react and prevent reoccurrence of a serious marine casualty. That is why investigations are conducted. Perhaps the best example of reaction to a marine casualty is the regulatory impact resulting from the oil spill from EXXON VALDEZ. That casualty resulted in over 40 regulatory projects initiated by the Coast Guard. Other agencies had their fair share. Loss of several commercial fishing vessels in the 80's, and a number of more recent casualties involving the towing industry have caused the Coast Guard to address those sectors of our industry through the regulatory process.

Advances in technology

Perhaps the greatest change due to technological advances is in the area of satellite communications. The Global Maritime Distress and Safety System (GMDSS), agreed upon internationally, is structured around world-wide satellite communications, has replaced use of Morse code on 500 KC and is nearing full implementation. Immersion suits, inflatable life rafts, fire detection devices, and non-combustible materials are other examples of technology that have enhanced regulatory standards.

How are standards administered?

Implementation of new federal regulations must follow procedures set forth in the Administrative Procedures Act. Elements of these procedures include:

- Publishing Proposed Regulations in the Federal Register along with appropriate economic and environmental impact statements.
- Solicitation of comments from the public as well as impacted industry.
- Consideration of comments by the agency.
- Publishing Final Rules in the Federal Register along with agency response to comments and rationale for decision-making.

The Federal Register is published daily by the National Archives and Records Administration. Final rules published in the Federal Register are incorporated into the texts of the Code of Federal Regulations when those volumes are reprinted each year. For that reason, it is important to keep the most recent issue on hand. Of historical note, agency explanations that accompany printing of proposed and final rules in the Federal Register get left behind - only the regulatory text is printed in the CFRs. The Federal Register can be accessed on line via http://www.access.gpo.gov/nara.

Who is responsible for Enforcement?

Ship owners, operators, Masters and others are ultimately responsible for compliance with regulatory standards. The Coast Guard is the primary agency in the United States charged with regulatory enforcement of navigation and shipping regulations. Some states have recently extended their marine law enforcement jurisdiction from recreational boating to commercial vessels - these efforts are generally related to the transportation of oil.

The Coast Guard will routinely board 'inspected' vessels during drydockings and when a Certificate of Inspection is due for renewal. Coast Guard personnel will also board commercial vessels to examine compliance with oil transfer regulations, various pollution standards, and navigation safety regulations. Because the regulatory scheme applies to inspected and uninspected vessels, the Coast Guard boards vessels from all sectors of the industry, including foreign flag vessels where there is jurisdiction.

Non-compliance is addressed by the Coast Guard in at least three ways: action against the license or Merchant Mariner's Document (MMD) held by a person alleged to be at fault, a civil penalty against the company/operator of the vessel, or criminal charges. When action against a person's license of MMD is deemed appropriate, the Coast Guard presents the case before an Administrative Law Judge who hears evidence, the mariner's response, and then renders a decision and order.

Traditionally, non-compliance involving safety equipment aboard an inspected vessel results in issuance of a Coast Guard form CG-835 that sets forth the deficiency and provides a date when compliance must be achieved.

Much of the Coast Guard's inspection efforts for inspected vessels, particularly in technical areas, is now done by the American Bureau of Shipping per a Memorandum of Understanding between the two entities.

What is an inspected vessel?

Certain vessels are required by law and regulation to be 'inspected' and thus must conform to exact standards regarding vessel construction, stability, safety equipment, manning, and operation. Such vessels are issued a Certificate of Inspection that is usually valid for two years. Factors that determine whether a vessel is subject to inspection are size (measured in gross tons), route (inland or oceans for example), cargo (all oil tankers are inspected), and risk to personnel (vessels that carry more than 6 passengers are inspected).

There is now less distinction between inspected and uninspected vessels than just 10 years ago. Some vessel types have sections of the CFR dedicated to them yet they remain 'uninspected'. Commercial fishing vessels and towing vessels are in this category. Subchapter C of the CFR which addressees uninspected vessels, has 46 pages dedicated to commercial fishing vessels. Uninspected towing vessels are in the process of receiving similar attention.

Where do *SMALL* Oceanographic Research Vessels (ORVs) fit in this regulatory scheme?

An ORV, unlike any other vessel, must be designated as an ORV by the Coast Guard. Criteria and procedures are set forth in 46 CFR 3.05-3 and 3.10-1 which state among other things that the vessel must be employed 'exclusively in oceanographic instruction, limnologic instruction, oceanographic research, or limnologic research. Once satisfied the vessel is used for that purpose, the Coast Guard (Marine Safety Office) issues a *Letter of Designation* to an uninspected ORV that is valid for 2 years.

Seagoing Oceanographic Research Vessels over 300 gross tons are subject to inspection by the Coast Guard in accordance with Subchapter U (46 CFR 188-196). This assumes the vessel is propelled by motor (not steam). Seagoing means the vessel would navigate on the high seas i.e. beyond the Boundary Line.

ORVs of less than 300 gross tons are not subject to inspection but like other uninspected vessels must conform to several other regulatory standards such as load lines, admeasurement, and qualifications for certain members of the crew.

ORVs are unique in that they take *scientists* to sea. Scientists are neither crew nor passengers and therefore ORVs are treated separately by the regulatory scheme. Where this treatment is most apparent is with regard to fire protection. The fire protection standards for ORVs is a blend of technical standards for passenger vessels and cargo vessels. Obviously, those who constructed

these standards took account that scientists are active persons with some knowledge and experience regarding ships, more than passengers, and perhaps less than some professional merchant mariners. The Letter of Designation is evidence the Coast Guard acknowledges the vessel carries scientists and not passengers.

Some significant 'breakpoints' for application of regulatory standards include:

- SOLAS 74 applies to vessels of 500 gross tons and more.

- MARPOL 73/78 has several tonnage threshold values, the lowest being 400 gross tons.

- Breakpoints, or thresholds, occur at 100, 200, 300, 400, 500 and 1600 gross tons., Conformance is required with whatever standard is required for vessels of that greater size. Tonnage values for ships are often 99, 198, etc for this reason.

- Load Line regulations are applicable to vessels over 79' in length. This is one of the few standards where length of a vessel is an important determinant.

- Manning. The subject of manning is complicated and application of manning statutes are difficult to interpret. A decision by the US Court of Appeals, 9th Circuit in 1981 decided that "..for purposes of manning statutes, definition of merchant vessels encompasses oceanographic research vessels. The court took account of the fact that the vessels involved were not carrying freight or passengers for hire (my words). Decided were that 65% of the deck crew must be qualified as AB, a 3 watch system was required, and persons were subject to certain qualification standards. Simply put, this court in 1981 decided that manning standards for merchant vessels apply to oceanographic research vessels. The question that I believe remains today is whether that decision should be interpreted broadly or narrowly.

- Documentation. 46 CFR 188.05-10 contains a provision stating that in effect says regulations within Subchapter U that apply to vessels on an international voyage do not apply to a vessel that is numbered in accordance with the Federal Boat Safety Act.. As a consequence many oceanographic research vessels are numbered by states rather than being documented under the federal system. I'm uncertain what benefits accrue from this exemption today.

- In my opinion, the greatest challenge facing operators of smaller oceanographic vessels today is compliance with STCW. STCW applies to any seagoing vessel (that goes seaward of the Boundary Line) regardless of size. The Coast Guard has administratively exempted certain US vessels of less than 200 gross tons from STCW because of their domestic routes and participation in equivalent programs such as AWO's Responsible Carrier Program. I don't know any reason why an ORV of

less than 200 gross tons that makes an international voyage would be exempt from the provisions of STCW.

Summary

Oceanographic research vessels are unique vessels in many ways, including their fit in the regulatory scheme. The role of scientists is particularly unique in this industry.

Manning standards are complicated. Perhaps they shouldn't be, but they are. If you are uncertain about compliance, take time to insure your vessel is properly manned. Routes, gross tonnage, and length of voyage can influence manning requirements. .

Finally, implementation of STCW applies to many oceanographic research vessels. While implying more work, improving the qualifications of seafarers usually makes sense.