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Our 55th Year

Proceedings

of the Marine Safety Council

July - September, 1998 Vol. 55, No. 3

Office of Standards Evaluation and Development

Features

Departments

(Cover photo by Christiaan Werk)

Assistant Commandant's Perspective

By RADM Robert C. North
Assistant Commandant For Marine Safety & Environmental Protection

This issue of Proceedings is designed to inform you about Regulatory Reinvention in marine safety and environmental protection—both what we are doing currently and what the future holds. Starting in 1992, as part of the National Performance Review, the Coast Guard began a regulatory reform initiative designed to eliminate outdated, inefficient, or overlapping regulations. While the Coast Guard remains focused on marine safety and environmental protection, we are exploring new options to reduce regulatory burdens that hinder competitiveness. All of these issues interrelate through a very important theme: people and partnerships.

The key to long-term progress in regulatory reform is developing strong partnerships between the regulator and the regulated. In maritime affairs, this allows the Coast Guard to work in concert with industry for mutual benefit. Establishing partnerships with industry is integral to the Coast Guard's accident prevention efforts. In this issue you will read how these partnerships in regulatory reinvention allow the Coast Guard and industry to play a complimentary role in our efforts to ensure the highest possible standards of marine safety and environmental protection.

You will also read how the Coast Guard is working with all areas of the maritime community to develop a National Marine Safety Incident Reporting System. This is part of a long-term strategic plan known as Prevention Through People (PTP) which strives to significantly expand our knowledge and understanding of the human element and its role in maritime operations and accidents.

Cooperation between government and industry is also the foundation of the Coast Guard's Alternate Compliance Program (ACP). ACP is a program developed as an alternative method for owners of U.S. flag vessels to fulfill our regulatory requirements. It is an important component of the new regulatory regime and is explained in more detail within this issue.

In addition to PTP and ACP, the Coast Guard is making a concerted effort to harmonize many regulations with both industry standards and the international community. These efforts represent just a few of the opportunities for government and industry to develop a stronger, healthier, and safer maritime community.

The future of maritime safety and environmental protection is in our hands, and we will continue to make progress by working together. Remember, the key to all of this is simple… people and partnerships.

BY THE WAY

EDITOR'S POINT OF VIEW

Proceedings magazine, as always, strives to keep you informed about all aspects of the maritime industry.

Dear Reader:

As the newly appointed editor of the *Proceedings of the Marine Safety Council*, I would like to take this opportunity to introduce myself. My name is Edward Hardin, and I bring to *Proceedings* talents that have been developed during eighteen years of experience in the graphic arts and publications fields. For the past four years I have been a technical editor with the National Maritime Center. In addition, I have a Master of Science degree in business administration. I hope to combine my educational and professional skills to create a work environment that allows growth and rewards excellence. I am happily married and have three fantastic teenage children.

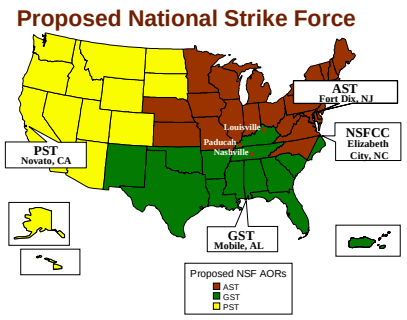
I am a possibility thinker, and my mother always says that I accomplish more when I have more to do. As I reflect on that statement, I realize that my plate overflows. Becoming the editor of *Proceedings* is a responsibility I do not take lightly. I ask that each and every reader hold me accountable for making *Proceedings* the best publication it can be.

I look forward to working with the publications staff. It is clear to me that they are an enthusiastic, talented group of people. Based on our own strengths, we will be able to build a team that can meet the challenges and goals required to accomplish the mission of the National Maritime Center Publications Division for 1998/99 and beyond. Your comments and suggestions are always welcome.

Corrections to April - June Issue:

The following are corrections to the National Strike Force information published on the inside back cover:

- Gulf Strike Team phone number should be (334) 441-6001.
- National Strike Force Coordination Center phone number should be (252) 331-6000.
- NSFCC mailing address should be:
  1461 N. Road St.
  Elizabeth City, NC 27909-3241
- Corrected Area of Responsibility map is on the right



NEXT ISSUE:

Hazardous Materials

UPCOMING ISSUES:

Annual Index, Advances in Pollution Response

Office of Standards Evaluation and Development (G-MSR)

The Office of Standards Evaluation and Development (G-MSR) is the lead office that supports the Coast Guard's role in creating maritime safety and environmental regulations. Whether it's laws, such as the Oil Pollution Act of 1990, or international treaties like the International Convention of Safety of Life at Sea, G-MSR facilitates the development of regulations, studies, and reports implementing these objectives. Currently we have over 60 active regulatory projects. During the last 18 months, we have published 30 final rules, 12 proposed rules, 3 interim rules and over 20 requests for comments.

Tracing our origin back to the Oil Pollution Act of 1990, this office serves as a center of excellence for regulatory project development. Composed of project managers, economic and environmental impact analysts, and technical editors, the office provides a specialized staff to oversee the development of maritime safety and environmental regulations. In this issue of *Proceedings* you'll see how our office carries out Regulatory Reinvention initiatives while protecting the environment and promoting marine safety.

The article, "Why the Coast Guard is Reinventing Its Regulatory System" describes the National Performance Review (NPR) and its effect on the regulatory process. It's critically important for agencies such as the Coast Guard to have streamlined, efficient regulatory development processes. In today's environment, regulations must:

1. Regulate only when necessary and link to agency Business Plan goals. The article "Recipe For a Business Plan" tells how MSO Detroit strategically aligned their business plan resulting in reduced oil spill incidents in their area of responsibility.
2. Regulate cost effectively, openly, and fairly. The Alternate Compliance Program (ACP) is the Coast Guard's partnership effort with industry and U.S. flag vessel owners to provide an alternative method of fulfilling certain regulatory requirements.
3. Provide increased flexibility, particularly for small business. The article "The Coast Guard's Outreach to Small Business" tells of our concerted efforts to ensure that small businesses have an opportunity to voice their concerns and participate in the rule-making process.
4. Maximize benefits to society while minimizing burdens. The Prevention Through People (PTP) program strives to reduce the number of accidents by creating a safety mind set with management and the workforce.

We also ensure that the Coast Guard is adhering to the standards outlined in the NPR. We have:

- Reduced regulatory development cycle time.
- Focused limited resources on high priority projects.
- Eliminated obsolete regulations and harmonized regulations with international standards.
- Ensured compliance with the Administrative Procedure Act, the Regulatory Flexibility Act, and other directives.

We believe public involvement in the regulatory process is the key to success. As a regulatory agency, the Administrative Procedures Act (APA) requires the Coast Guard to give public notice of our rule-making intentions and an opportunity for the public to comment. There are new initiatives in place to make it even easier to get involved.

Since February 1998, all public dockets can be accessed electronically through the DOT's Docket Management System (DMS) at http://dms.dot.gov. Earlier this year, we began a trial program to accept email comments to the docket, making it easier for the public to submit comments. Starting this fall, DMS will begin accepting email comments.

Our web site at http://www.uscg.mil/hq/g-m/regs/reghome.htm provides the latest information on proposed and final rules and provides instructions for submitting comments to the public docket. In June, the President issued a Memorandum instructing Federal Agencies to use plain language when drafting regulations and other publications. We are writing regulations in plain everyday language so that everyone will be able to understand. The article, "Plain Language has No Place in Government Regulations?" by Stephen Barber describes this new initiative.

The Office of Standards Evaluation and Development plays an important role in regulatory development. G-MSR has incorporated the regulatory reform initiatives to develop only necessary and efficient regulations to support the Coast Guard's maritime safety and environmental protection missions.

For more information, please contact us at:

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The Coast Guard's Alternate Compliance Program (ACP): Yesterday, Today, and Tomorrow

By Mr. Jaideep Sirkar, Naval Architecture Division, Office of Design and Engineering Standards

What is the Alternate Compliance Program (ACP)?

ACP is a three-year-young program developed as an alternative method for owners of U.S. flag vessels to fulfill the regulatory requirements for vessel design, inspection and certification. Under this program, the Coast Guard can issue a certificate of inspection based upon reports by a recognized, authorized classification society that the vessel complies with applicable international conventions, classification society rules, and other specified requirements. ACP is an option available to owners of tank vessels, passenger vessels, cargo vessels, miscellaneous vessels, and mobile offshore drilling units that engage in international voyages.

ACP is best defined as:

CFRs (Code of Federal Regulations) = Class Rules + International Requirements + Supplement

What does this definition mean? In the "traditional" process of regulatory compliance, the ship owner complied with the CFRs to obtain a certificate of inspection from the Coast Guard. Under the ACP, the ship owner does not comply directly with the CFRs. Rather, an equal level of safety is met by relying on the rules of the classification society, applicable international conventions (appropriate for the type and service of the vessel), and a "supplement."

What is a "supplement?" A supplement is a document that contains (a) various interpretations made by the Coast Guard of international conventions, (b) navigation safety and pollution prevention standards required by statute of all vessels in U.S. waters, and (c) Coast Guard requirements that are not included in class rules or international conventions.

Where is ACP today?

In February 1995, ACP was initiated as a pilot program with the American Bureau of Shipping (ABS), the U.S. based classification society. This pilot program, referred to as the Coast Guard's ABS based ACP, was the result of a regulatory reform initiative begun in 1992. The initiative was to enhance the competitive position of the U.S. maritime industry through reform of the regulations while maintaining a level of vessel safety and environmental protection equivalent to Coast Guard regulations.

Based on the success of the pilot program, the Coast Guard published an interim rule in December 1996 that formalized ACP and expanded the program

to include other recognized and authorized classification societies. In December 1997, a final rule was published that the Coast Guard expects will reduce vessel down time, provide greater flexibility in scheduling inspections, and meet required standards.

ACP allows both the ship owner and the Coast Guard to concentrate on a systems approach versus an over-burdensome regulatory approach. Simultaneously, ACP eliminates duplicative inspection tasks performed by the Coast Guard and the classification society. This elimination of duplication results in savings for the ship owner and allows the Coast Guard, through its port state control program, to redirect its resources to those vessels that pose the highest safety and environmental risks.

The Coast Guard Authorization Act of 1996 (Public Law 104-324) allowed the Coast Guard to delegate certain functions to foreign-based classification societies. Today, ACP is available to other recognized and authorized classification societies.

How does a classification society participate in the ACP?

Participation is a three-step process: recognition, authorization to issue international certificates, and authorization to participate in ACP.

1. Recognition—This is achieved upon satisfying a set of performance criteria based on standards developed by the International Maritime Organization (IMO), as well as a satisfactory port-state control performance (based on a rolling, three-year average of detentions of distinct arrivals in U.S. waters), and reciprocity for ABS to perform similar functions in the country where the classification society is based.

2. Authorization to Issue International Certificates—Upon recognition, the classification society may apply to the Coast Guard to issue certain international certificates on behalf of Coast Guard. Based on a review of the class rules and procedures, the Coast Guard may enter into an agreement with the society to issue international certificates.

3. Authorization to Participate in ACP—In the third and final step in this process, the Coast Guard may authorize a classification society to participate in ACP, two years after the society has issued its first safety related international certificate under Step 2 above.

To date, recognized classification societies are ABS, Lloyd's Register (LR), and Det Norske Veritas (DNV). The table below shows the various international certificates that these societies have been authorized to issue on

	ABS	LR	DNV
International Load Line Certificate	✓	✓	✓
International Tonnage Certificate	✓	✓	✓
SOLAS Cargo Ship Safety Construction Certificate	✓	✓*	
SOLAS Cargo Ship Safety Equipment Certificate	✓		
MARPOL 73/78 International Oil Pollution Prevention Certificate	✓		✓
MARPOL 73/78 International Oil Pollution Prevention Certificate for the Carriage of Noxious Liquid Substances in Bulk	✓		
Verification of Compliance with MARPOL 73/78 Annex III (Packaged Harmful Substance)	✓+		
Verification of Compliance with MARPOL 73/78 Annex V (Garbage)	✓+		
ISM Code (Safety Management Certificate and Document of Compliance)	✓		

* pending completion of certificate supplement
\+ ACP vessels only

behalf of the Coast Guard. Currently, only ABS is authorized to participate in ACP.

The number of vessels enrolled under ACP is growing and currently stands at 90, including vessels currently under construction. Clearly, ACP is proving a successful and popular program.

What is the future of ACP?

As a major Coast Guard program, ACP is in its relative infancy. However, all early indicators point towards continued success as the program matures. The Coast Guard fully expects that in time more classification societies will be eligible to participate in the ACP. Consequently, in addition to the benefits of ACP, a choice of classification society may also be available to the ship owners in the not-too-distant future.

Furthermore, the Coast Guard has completely revised its policy on development of the "supplement". Instead of the approach that used the line-by-line comparison of class rules and CFRs, a "critical ship safety systems" approach has been developed that will provide the ship owner even further flexibility in regulatory compliance within ACP.

For more details, the reader is referred to the following:

1. On the Internet: http://www.uscg.mil/hq/g-m/nmc/temp.htm

2. *Alternate Compliance via Recognized Classification Society and U.S. Supplement to Rules*, Federal Register Notice, Final Rule, December 24, 1997.

3. *U.S. Coast Guard's Alternate Compliance Program*, U.S. Coast Guard Navigation and Vessel Inspection Circular Number 2-95, Change 1, August 1, 1997.

4. *USCG/American Bureau of Shipping Based Alternate Compliance Program - The History of the US Supplement to the ABS Rules for Steel Vessels on International Voyages,* by Robert Vienneau, ABS, Proceedings of the Marine Safety Council, July-September, 1997

Mr. Jaideep Sirkar is a naval architect in the Office of Design and Engineering Standards, and is the ACP/Classification Society Coordinator.

Programmatic Regulatory Assessment of the Oil Pollution Act

New Technology to Address Families of Federal Requirements

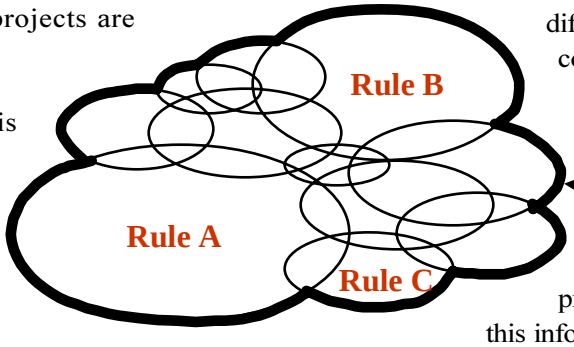
by Fredrick C.G. Scheer and David L. Houser

In response to broad mandates contained in the Oil Pollution Act of 1990 (OPA 90), the Coast Guard developed a wide range of new regulations that are individually and collectively directed at oil spill prevention, mitigation, cleanup, and liability. To facilitate the rule-making process, the Coast Guard divided the OPA 90 regulatory requirements into relatively small component rule-makings which were treated as stand-alone projects. The Coast Guard analyzed economic, environmental, small entity, and information collection impacts for each project. This core group is listed in Table One.

Now that the OPA 90 rule-making projects are substantially complete, the Coast Guard is preparing a Comprehensive Programmatic Regulatory Assessment (PRA). The purpose of the ongoing PRA is to evaluate the combined and interactive cost-effectiveness of the OPA 90 regulations, using a core group of eleven key OPA 90 rule-makings as proxy for the body of regulations.

The benefits of the selected core group of rules are measured in terms of avoided barrels of oil spilled and barrels of spilled oil that are removed from the water before damage to the environment occurs. The benefits of the individual rules are calculated as the product of (1) baseline oil spillage, that is, future spillage in the absence of OPA 90 requirements; and, (2) the effectiveness of the rules in reducing oil spillage.

Figure 1
Overlapping Effects of OPA 90 Rules: The total effectiveness is less than the sum of the individual parts.



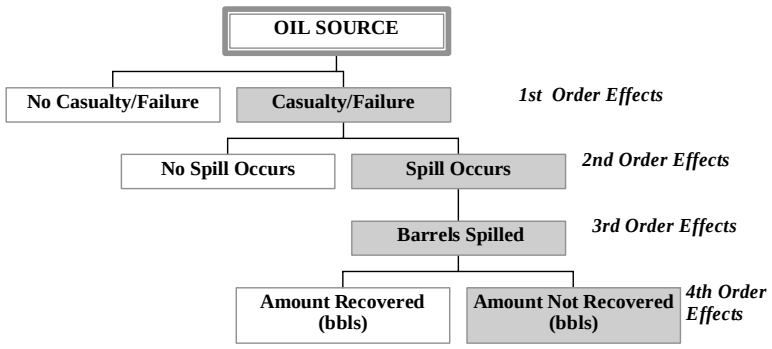
The Coast Guard assembled a PRA Project Team (Team) in conjunction with the Volpe National Transportation Systems Center (Table Two). One of the Team's first and principal challenges was to develop reliable data algorithms to address baseline oil spillage and the effectiveness of the rules. To assist in developing these estimates, the Team assembled specialized private sector and federal agency expertise into two panels, which were queried through a series of three highly structured and controlled workshops. The first panel addressed future oil spill baselines and the second panel estimated the effectiveness of individual regulations in the core group on the baselines. The potential effectiveness of individual rules in the core group was especially difficult to estimate. The Coast Guard was concerned about building the most reliable estimates possible under the circumstances. The controlled public-private partnership used in developing this information provided the best available technical guidance from which to develop data estimates.

After the Team established the oil spill baseline and the effectiveness of individual OPA 90 rule-making projects, they proceeded to analyze the combined and interactive effects of the core group. The respective OPA 90 rules are not all mutually exclusive and they are not necessarily independent of each other. Consequently, the aggregate beneficial effectiveness of all of the rules joined together as one distinct entity will not equal the sum of the effectiveness of each individual rule considered in isolation from all other rules. Simple summation of the individually estimated benefits, or effects, of each rule would

result in multiple counting and over estimation of benefits from the complete suite of OPA 90 rules as represented by the core group. In Figure One, individual ovals represent the individual effectiveness of each rule when considered in complete isolation from all other rules. In reality, however, the individual effectiveness of the several rule-makings overlap, and the area outlined in bold represents the total effectiveness of all the rules when operating together.

The team created a logical chain of causal events that lead to spills and classified rule-makings in the core group to develop beneficial impact estimates by order of effects. First order effects are achieved by rule-makings that lower the likelihood of an accident or failure. Second order effects are achieved by rule-makings that lower the probability of a spill if an accident or failure occurs. Third order effects are achieved by rule-makings that lower the expected quantity of oil spilled if a spill occurs. Fourth order effects are achieved by rule-makings that lower the expected quantity of spilled oil that would otherwise remain in the environment. The Team established a matrix that consisted of the eleven core group rule-makings, their principal provisions, and their respective order effects. The matrix reveals which rule-makings impact the environment with first order, second order, third order, and fourth order effects, and also, those that impact with multiple effects. The core group of rule-makings and their respective order effects are shown in Table One (p. 11). Figure Two illustrates the typical spill event tree and the order effects of OPA 90 regulations.

Figure 2
Typical Spill Event Tree:
The four orders of effects addressed by OPA 90 rules



The Team:

- Built the oil spill baseline mentioned earlier to account for the theoretical future, absent OPA 90. Inputs included forecasts of future oil transportation trends, historical records of previous spills, and the advice of paneled experts, which were brought together to project future annual spill quantities;

- Employed projected spill quantities and the information generated by the second panel to determine effectiveness factors attributable to each rule-making in the core group; and

- Compared the effectiveness factors with the baseline case to estimate potential reductions in future spills attributable to OPA 90.

The team also addressed another form of benefits, which are avoided costs. These are cost savings that would occur due to OPA 90 rule-makings, other than the principal benefits of oil spills avoided or cleaned up. Avoided costs are realized by preventing accidents that presumably would have occurred in the absence of rules. Examples of avoided costs include the monetary value of vessel damage repairs, time lost, and human injuries and deaths. To account for avoided costs, adjustments in the form of offsets were applied to certain compliance and enforcement costs associated with the core group rule-makings.

There was no overlap in the costs calculated by the Coast Guard during development of the respective rule-makings. Accordingly, reevaluation of costs is not a principal focus of the PRA. However, the Team reviewed estimates of industry compliance costs and government enforcement and in some cases, such as for double hull requirements, cost estimates were adjusted in the PRA to reflect refinements and experience since publication of the rule-makings.

The PRA project required special computer software to manage many data elements and to accurately perform the wide range of computations that comprise the combined and interactive technology. Accordingly, the Team developed an OPA 90 Accounting Model to support the effort. The OPA 90 Accounting Model will accept alternative data inputs for the core group of rule-makings for sensitivity analysis and is also flexible enough to accept data to represent additional rules. It may be run once with the entire core group or may be run several times while omitting individual rules to calculate the marginal cost effectiveness of individual rule-makings. Perhaps as its most important feature, the OPA 90 Accounting Model can be easily adapted to fit new scenarios that may come under study in the future.

The PRA addresses the aggregate cost-effectiveness of the core group of rule-makings and identifies the relative contribution of each rule-making to these aggregate values. Both the aggregate and incremental cost-effectiveness are addressed with a reasonable degree of certainty.

In contrast, the nature of the rule-makings' overlapping effects makes isolation of the net contribution of each rule-making to the aggregate cost-effectiveness mathematically impossible. However, the OPA 90 Accounting Model approximates the relative contributions and presents them as marginal benefits. The marginal benefit of a rule-making is the incremental amount of the aggregate benefit that is contributed by that rule-making. By approximating the marginal benefits, the process provides insight into the relative value of individual regulations within the core group.

The PRA is a significant component of the Coast Guard's regulatory reform initiatives:

- It gives the Coast Guard a needed tool with which to evaluate prospective changes to OPA 90 rule-makings, which may be proposed from time to time; and,

- It introduces to federal rule-making a new applications technology with which the Coast Guard and other agencies may evaluate the combined and interactive effectiveness or benefits of rule-making families that address a single benefit or similar intended benefits.

The Office of Management and Budget (OMB) is a principal customer for the PRA. From the beginning of the PRA project, OMB contributed advice and counsel, and has assisted the Coast Guard with constructive comments on key deliverables. The science and application of panels comprised of public and private subject matter experts provided the best available technical guidance for critical underlying assumptions. An innovative and versatile computer model was designed to facilitate the computations, and it can be used for future studies. The PRA itself will allow federal decision-makers to see the cost per barrel of oil spills prevented due to the core group of eleven key OPA 90 rule-makings and to view each rule-making's individual contribution to the intended effects of the law.

When it is completed and released this year, the PRA is expected to set a high standard for quantitative evaluation of complex families of associated rule-makings.

Mr. Scheer is Chief of the Standards Evaluation and Analysis Division in the Marine Safety and Environmental Protection Directorate. The Division is responsible for the range of economic and environmental analyses required by law, executive order, and policy for all marine safety regulatory proposals, and is also called upon to assist other Coast Guard and Department of Transportation Offices with the assessment of regulations. Mr. Houser is an economist with the Standards Evaluation and Analysis Division and a recent arrival to the Coast Guard from the U.S. Army Corps of Engineers.

Table 1: Oil Pollution Act of 1990: Core Group rule-makings and spill order events targeted.

PRA Rule No.	RULE SHORT TITLE	SPILL EVENT TARGETED
I	Double Hulls	(2) Reduced Number of Spills (3) Reduced Quantity of Spilled Oil
II	Deck Spill Control	(3) Reduced Quantity of Spilled Oil
III	Spill Source Control & Containment	(1) Reduced Number of Vessel Casualties (2) Reduced Number of Spills (3) Reduced Quantity of Spilled Oil (4) Increased Quantity of Spill Oil Removed
IV	Emergency Lightering, Equip. & Advance Notice of Arrival (Non-Double Hulls)	(2) Reduced Number of Spills (3) Reduced Quantity of Spilled Oil
V	Overfill Devices	(2) Reduced Number of Spills
VI	Operational Measures for Non-Double Hulled Vessels	(1) Reduced Number of Vessel Casualties (2) Reduced Number of Spills (3) Reduced Quantity of Spilled Oil
VII	License, Certifications of Registration & Merchant Mariners' Documents	(1) Reduced Number of Vessel Casualties (2) Reduced Number of Spills (3) Reduced Quantity of Spilled Oil
VIII	Financial Responsibility/Liability	(1) Reduced Number of Vessel Casualties (2) Reduced Number of Spills (3) Reduced Quantity of Spilled Oil
IX	Vessel Response Plans	(2) Reduced Number of Spills (3) Reduced Quantity of Spilled Oil (4) Increased Quantity of Spill Oil Removed
X	Facilities Response Plan	(2) Reduced Number of Spills (3) Reduced Quantity of Spilled Oil (4) Increased Quantity of Spill Oil Removed
XI	Equipment and Personnel Requirements	(4) Increased Quantity of Spill Oil Removed

Table 2: Programmatic Regulatory Assessment (PRA) Project Team Members.

Name	Organization
Fredrick C.G. Scheer	Coast Guard: Chief, G-MSR-1 1/
John P. O'Donnell	Volpe Center: Chief, DTS-42 2/
David A. Du Pont	Coast Guard: G-MSR-1 1/
David L. Houser	Coast Guard: G-MSR-1 1/
Dominic J. Maio	Volpe Center: DTS-42 2/
Leo J. Casey	Volpe Center: DTS-42 2/
Robert J. Armstrong	Volpe Center: DTS-42 2/
Douglas Rickenback	Volpe Center: DTS-42 2/
Jeffrey R. Bryan	Volpe Center: DTS-42 3/
Patrick McHallam	Volpe Center: DTS-42 4/
Rick Russel	Volpe Center: DTS-42 4/
Cassandra Oxley	Volpe Center: DTS-42 5/

1/ U.S. Coast Guard Headquarters' Standards Evaluation and Analysis Division, Washington, D.C.
2/ Volpe National Transportation Systems Center's (VNTSC) Economic Analysis Division, Cambridge, Massachusetts
3/ VNTSC's Change Management Division, Cambridge, Massachusetts
4/ Computer Sciences Corporation/Battelle at VNTSC: Software development contract
5/ Camber/EG&G at VNTSC: Documentation contract

An Alternative to the Civil Penalty Process: Safety Action Plans

by LT Burt A. Lahn, MSO Savannah, Georgia

Introduction:

The Coast Guard Marine Safety Office in Savannah, Georgia recently formed a partnership with several other Federal regulatory agencies to assist a shipping company with development and implementation of improvements to company procedures for shipping hazardous materials. This partnership was formed to address the shipping company's extensive history of noncompliance with the hazardous materials regulations contained in title 49, Code of Federal Regulations, and the International Maritime Dangerous Goods Code (IMDG).

Traditionally, when potential minor, first-time hazardous materials violations are noted, the shipper is issued a letter of warning. The letter of warning serves several purposes. First, it informs the shipper of its responsibilities for a violation of Federal law. Secondly, it states the total possible civil penalty that could be assessed for the violation. And lastly, it informs the shipper that, although a civil penalty would not be processed or recommended, the violation would be considered during any subsequent civil penalty proceedings.

For more serious first-time violations and any subsequent violations, the normal procedure is to process a violation and recommend a civil penalty based on the circumstances of the case. During this process, a Letter of Violation is issued to the responsible party and a case file is prepared and forwarded to a Coast Guard Hearing Officer with a recommended penalty amount.

At this point, the Hearing Officer reviews the case file, and based on the circumstances of the case and in accordance with the applicable statutory standards, may either dismiss the case, reduce the penalty to a Letter of Warning, or assess a civil penalty. Factors considered in the decision making process include the seriousness of the violations, previous violations of the same nature, and action taken by the responsible party to mitigate or correct the violations.

This article outlines an alternative approach to the civil penalty process, one that affords a company responsible for potential violations the opportunity to pursue internal quality control improvements, to identify and correct weaknesses and shortfalls in company training programs, and the opportunity to take a close look at the internal company processes, procedures, and actions that resulted in the violations. More importantly, it provides the avenue for a partnership to be formed between the shipping company and the regulatory agency, with the collective goals of identifying the root of the potential violations, developing strategic plans to address their sources, and, most importantly, providing a financial incentive to implement the strategic plan.

How it all started:

From 31 March 1997 to 1 April 1997, the USCG Marine Safety Office Savannah, Federal Railroad Administration (FRA) and Federal Highway Administration (FHA) hazardous materials inspectors conducted a joint intermodal inspection on an import shipment from Brazil of a "dangerous when wet" hazardous material (Class 4.3, UN 2813). The shipment consisted of 256 drums packed into four 20-foot intermodal containers. During the inspection several violations were noted, including overloading the drums by 50 kg each.

The shipping company immediately filed for an emergency exemption from the Research and Special Programs Administration (RSPA) to allow the overloaded shipments to proceed, via rail and highway, to the final stateside destination.

A review of the Marine Safety Information System (MSIS) database revealed that the shipping company had an extensive history of noncompliance with hazardous materials regulations. Violations identified during inspections of previous shipments included marking, packaging, labeling, blocking and bracing, and shipping paper. In almost every case, a Coast Guard Hearing Officer assessed a civil penalty and the shipping company submitted a payment.

Based on scope and frequency of the violations, it was evident that the shipping company had serious problems with its procedures relating to the proper handling, packaging, and shipping of hazardous materials. Consensus among the three Federal agencies was that it was only a matter of time before a hazardous materials incident would occur or someone would get injured. The time for intervention had arrived.

An alternative to the civil penalty process:

A review of the shipping company's violation history revealed inadequate consideration of a possible major hazardous materials release or spill incident as a result of noncompliances with the hazardous materials regulations. The Federal hazardous materials inspectors believed that some type of enforcement action was warranted.

MSO Savannah, FRA, and FHA consulted with RSPA and requested that if an emergency exemption was granted, it contain a stipulation requiring the shipping company to submit a Safety Action Plan (SAP) outlining the steps it would take to ensure that future hazardous materials were properly marked, labeled, packaged, and otherwise transported in accordance with the hazardous materials regulations. The SAP would be subject to review by MSO Savannah, FRA and FHA, with all three agencies agreeing to assist the shipping company in developing the specific details of the plan. Realizing the potential positive impacts of this initiative, RSPA granted the emergency exemption with the SAP stipulation. When presented with this alternative, the shipping company agreed to begin development on the SAP and avoid substantial costs associated with repacking the 256 overloaded drums.

A partnership is formed:

During a subsequent meeting with representatives from MSO Savannah, FRA, and FHA, the required provisions for the SAP were outlined to the shipping company. The SAP included numerous intervention actions the shipping company should take to ensure all future shipments were in compliance with the hazardous materials regulations.

At this meeting, MSO Savannah, FRA, and FHA agreed that to evaluate the effectiveness of the SAP, inspections would be conducted for a minimum time period of 6 months, and would include a minimum of 12 separate shipments. The level of compliance demonstrated during the inspections

would be considered in processing any civil penalties from the 31 March 1997 and 1 April 1997 inspections. The shipper was also informed that any and all future violations, including those resulting from future SAP compliance inspections, would be subject to separate civil penalty proceedings.

Substantive provisions of the SAP included worker training, identification of the steps involved with the entire shipment/packing process, development of internal quality assurance oversight procedures, and procedures to set up future compliance inspections by Federal hazardous materials inspectors to determine the effectiveness of the SAP. The ground work for the SAP was based on the extensive guidance and recommendations provided to the shipping company regarding both public and private training program resources, commodity specific shipping requirements, and required worker-training provisions outlined in title 49, Code of Federal Regulations, and the IMDG.

The Safety Action Plan:

The shipping company submitted an SAP that was detailed, comprehensive (31 pages), and included procedures, checklists, and flowcharts ensuring the hazardous materials were properly packaged, documented, and prepared for transportation. The methods for conducting initial and refresher employee training were well-structured, and included quality control oversight at the senior level that ensures the SAP initiatives are followed. The SAP identified each step in the hazardous materials preparation and shipment process, supervisory personnel by name and job title, and job responsibilities for each specific shipment function. The SAP also included information describing internal training programs in which supervisory personnel would conduct training with other company employees.

The results:

Over a six-month period, SAP compliance inspections were conducted at several U.S. entry ports on 12 shipments involving 25 containers. The inspections were conducted as required by the SAP provisions, and included checking shipping papers, rail and highway bills of lading, and conducting internal inspections to determine marking, labeling, packaging, and blocking and bracing requirements.

The inspections revealed a total of three violations, all involving the actual structure of the container. Contact with the shipping company revealed that the company did not have the ability to control this part of the process because the Port Authority performed selection of the containers itself.

Realizing that they were still responsible as the shipper to ensure the use of structurally sound containers, the shipping company immediately initiated a modification to their shipping process that included oversight inspections on the Port Authority selected containers to ensure they were structurally sound. These inspections were conducted prior to the cargo being loaded into the actual containers.

The provisions of the shipping company's SAP concept were thoroughly evaluated and the effectiveness established and validated. Realizing the financial incentive to properly prepare hazardous materials shipments and avoid costly, repeat civil penalty violations, the shipping company continues to make quality improvements to shipping processes and to consult with the Federal agencies on shipping operations.

Editors note: Based on the good faith efforts of the shipping company, and more importantly, the demonstrated compliance with the hazardous materials regulations, no civil penalties were assessed for the 31 March 1997 and 1 April 1997 violations. To date the shipping company has not incurred any further violations of the hazardous materials regulations.

LT Burt A. Lahn is currently stationed at MSO Savannah, Georgia. During this inspection initiative he was serving as the Chief, Facility Safety Department.

Developing Consensus Standards

by Laura Hamman
Office of Engineering and Design Standards

Industry Involvement

Down-sizing, reinventing, streamlining, right-sizing, reorganizing; no matter what you call it, the U.S. Coast Guard is trying to do more with less people, resources, and dollars. How can this be achieved? This is achieved by including industry in the process of regulating and promoting safety. Instead of dictating to industry through the use of the Code of Federal Regulations (CFR), the U.S. Coast Guard can use voluntary consensus standards to help promote safety.

The CFR is a codification of the general and permanent rules published in the Federal Register by the Executive departments and agencies of the Federal Government. These regulations have the force of law. Thus, it is into this arena that we bring voluntary consensus standards.

Voluntary Consensus Standards

Voluntary consensus standards are developed by a substantial group of individuals within a given industry, composed of manufacturers, suppliers, oversight agencies, users and other interested parties. Consequently, the standard for a particular process or component is developed by a much larger group of "experts" than the government could ever hope to assemble or finance. This is especially true of specialized areas, such as the maritime industry. Thus, the government's workforce is increased at basically no additional cost to the taxpayers. These standards are considered voluntary consensus standards, as they are voluntarily accepted and adopted by industry, using a consensus approach.

Created to address the specific needs of an industry, standards making organizations consider not only the technical aspects of the various issues, but also the broader social, economic, environmental preservation, safety, quality aspects, as well as consumer needs and desires. Thus, broad spectrums of concepts are considered during the development of these standards.

Voluntary consensus standards can be incorporated by reference in the CFR. "Incorporation by reference" was established by statute and allows federal agencies to meet the requirement to publish regulations in the Federal Register by referring to materials already published elsewhere.

The legal effect of "incorporation by reference" is that the material is treated as if it were published in full in the Federal Register. This material, like any other properly issued regulation, has the force of law. Acceptance of voluntary consensus standards with, or in place of, the CFR, reduces the government's regulatory role and the cost of compliance with the regulations.

Since 1968, the Coast Guard has adopted over 250 industry consensus standards into regulations in an effort to do this. Currently, the Coast Guard participates actively in more than sixty standards-making committees of at least twelve different nongovernment organizations and technical and professional societies.

Adopting standards by reference in the CFR keeps the regulations on the leading edge of technological advancement and incorporates flexibility into the CFR, which facilitates both compliance and maintenance. Voluntary consensus standards are dynamic documents that are changed to meet the needs of the industry. With the advancements being made in the maritime industry, the ability to respond rapidly to technology changes is paramount. One common complaint lodged against federal regulations is that they are stagnant documents and frequently lag behind accepted industry practices. To write and publish an extensive technical regulation in the CFR can take years. However, once a voluntary consensus standard is incorporated by reference, it is a fairly simple matter to update the edition date of a standard within the regulations.

Incorporated voluntary consensus standards also help promote competitiveness by ensuring that products are produced to a certain minimum quality and will perform to expectations. Additionally, having been developed by a consensus of the industry, the standard is more likely to be accepted by the members of the industry, and there is considerably less feeling that the government is imposing "another" burden upon the industry and the general public.

Mandated Involvement

The adoption of voluntary consensus standards does not just apply to the U.S. Coast Guard. All of the federal government was affected when the Office of Management and Budget published Circular number A-119, which was originally issued in October 1982, updated in March 1992, and revised in October 1993. This document states:

"Government functions often involve products or services that must meet reliable standards. Many such standards, appropriate or adaptable for the Government's purposes, are available from private voluntary bodies. Government participation in the standards-related activities of these voluntary bodies provides incentives and opportunities to establish standards that serve national needs, and the adoption of voluntary standards, whenever practicable and appropriate, eliminates the cost to the Government of developing its own standards."

This led the Commandant (G-M) to issue Instruction 5420.32 "Standards Program for Marine Safety, Security and Environmental Protection Programs" which stated that the Office of Marine Safety, Security, and Environmental Protection (G-M) is committed to developing nationally and internationally recognized standards as a means to improve

maritime safety and marine environmental protection, and to promote an internationally competitive U.S. Maritime industry. The goals and objectives of this instruction are:

- Develop a comprehensive set of internationally recognized standards through active participation in International Maritime Organization (IMO) and other international standards making organizations such as International Standards Organization (ISO) and International Electrotechnical Organization (IEC);

- Develop a comprehensive set of nationally recognized, internationally compatible standards through active participation in national standards organizations such as American Society of Mechanical Engineers (ASME), American Society for Testing and Materials (ASTM) and National Fire Protection Association (NFPA);

- Improve competitiveness of the U.S. maritime industry by removing regulatory and other barriers that impede productivity and a free flow of commerce;

- Maximize effective use of Coast Guard resources by creating a force multiplier; and increase our knowledge base through cooperative endeavors and exchanges of information with industry leaders.

Prior to either of these documents, Executive Order (EO) 12866 of September 30, 1993, "Regulatory Planning and Review", initiated a new program to reform and make the regulatory process more efficient. It reconfirmed the need for, and validity of, the innovative regulatory techniques. In particular, EO 12866 states:

1) "Each agency shall identify and assess available alternatives to direct regulation, including providing economic incentives to encourage the desired behavior...."

2) "Each agency shall identify and assess alternative forms of regulation and shall, to the extent feasible, specify performance objectives, rather than specifying the behavior or manner of compliance that regulated entities must adopt."

3) "Each agency shall tailor its regulations to impose the least burden on society ...consistent with obtaining the regulatory objectives..."

For example, the Department of Defense realized that it was time to make changes in the method of specifying equipment. On June 29, 1994, Secretary of Defense William Perry issued a memo stating that to meet future needs, DOD must increase access to commercial state-of-the-art technology and update its business processes. Instead of writing its own specifications for everything, the DOD is now required to work with industry to produce integrated, consensus, dual use commercial and military development and manufacturing standards.

According to the memo, to reach these goals, the DOD is to use performance and commercial specifications and standards in lieu of military specifications and standards unless no practical alternative exists.

CULMINATION

To the maximum extent practicable, the government needs to incorporate industry consensus standards, recognize advances in technology development, and minimize cost while maintaining an acceptable level of safety and reducing the regulatory burden.

In all situations, whether writing standards, specifying equipment, or searching for alternatives to current methods of development and manufacturing, early public participation is the key. Getting members of industry involved in the setting of standards is extremely important. This is especially true for areas that do not currently have a long history of government regulation. It is also true for any industry area that plans to remain "state-of-the-art" or "state-of-the-practice". Establishing the Government and Industry partnership up front in the regulation process initially requires more time and effort, but definitely pays off in the long term, especially when looking to reduce the regulatory burden and the associated cost to the Maritime industry. Voluntary Consensus Standards present the best opportunity for both industry and Government to reap the benefits of active, joint standards development participation while tackling the most challenging technological issues.

Environmental Protection Systems in Transition Toward a More Desirable Future

An Overview of the Final Report of the Enterprise for the Environment

by LCDR Peter A. Jensen

Introduction

In 1996, the Enterprise for the Environment (E4E) was convened under the auspices of the Center for Strategic and International Studies (CSIS). The CSIS is a private, tax exempt institution focused on international public policy issues and based in Washington, DC. William D. Ruckelshaus, former Environmental Protection Agency (EPA) Administrator, was selected as the Chairman of E4E. Over 80 other experts representing nearly every sector of society, including the Administration and Congress, agreed to participate in a bipartisan dialogue whose focus was to "identify steps that will improve the efficiency and effectiveness of our system of environmental protection." In the development of their report, the E4E evaluated only the national environmental programs administered by the EPA and the States; however, the principles are applicable to marine environmental protection, as well.

Overview of the Report

The E4E report concluded that while many environmental achievements have occurred over the past 20 years, further progress is necessary to not only sustain what has been achieved, but to ensure continued advances. The E4E agreed to the following vision for improving the current environmental system: An improved system that fosters the creation of environmental goals and milestones, uses performance-based requirements where appropriate to achieve them, tolerates no rollback in protecting the environment and human health (but allows more flexible and innovative tools to achieve further protection), ensures strict accountability, and includes clear incentives for companies, governments, and individuals to act in ways that continually improve the environment.

This vision requires a collaborative approach expanded into the following 12 elements:

1. Maintain basic standards of environmental protection, and effectively and efficiently prevent and control threats to human health and the environment;

2. Ensure that all environmental laws and regulations are fairly and consistently enforced;

3. Distribute costs and benefits fairly, accounting for impacts on both present and future generations, and address disproportionate impacts on any group in society, especially low-income individuals, people of color, or other disadvantaged groups;

4. Set and pursue clear environmental goals and milestones for the nation, states, localities, and tribes, and use understandable indicators to measure progress;

5. Adapt and adjust policies, strategies, and systems based on experience and new information;

6. Generate, disseminate, and rely on the best-available scientific and economic information;

7. Offer flexibility of means coupled with clarity of responsibility, accountability for performance, and transparency of results;

8. Rely on a broad set of policy tools, including:

    - economic incentives that align with environmental goals, reward superior environmental performance, and stimulate technological innovation,

    - incentives for changes in individual behavior, and

- disclosure of consistent and accurate source-level performance information;

9. Place authority, responsibility, and accountability at the appropriate level of government;

10. Promote collaborative problem solving and integrated policy-making by all branches and levels of government;

11. Promote high levels of environmental stewardship and continuous improvement in environmental performance; and

12. Create decision processes that meaningfully involve affected stakeholders and engage all citizens in protecting the environment.

Even though these elements focus primarily on EPA and State-administered national programs, they still require a step-by-step process of implementation, including cooperation and coordination among the stakeholders. Developing a new environmental protection system will be a learning process that involves trial and error, risk taking, and earning the trust of all of the stakeholders. The E4E's premise is that the environmental protection system in the United States and the quality of this nation's environment will improve through the implementation of a series of recommendations addressing the twelve elements. The E4E report contains 30-plus comprehensive recommendations, many of which are discussed in the next section.

Goals, Milestones, and Reassessment

The group recognized that successful business plans require establishing goals, milestones, and a method to reassess progress. E4E defines "goals" as the qualitative and quantitative environmental outcome that society seeks. The "milestones" represent the path and pace toward those goals. They should take cost, fairness, and a risk/benefit analysis into consideration. Then, the "reassessment" allows for feedback to modify the milestones used to achieve the goals. These three requirements work together to allow for an adaptable, timely, and organized approach that is consistent with the Government Performance and Results Act (GPRA) enacted by Congress in 1993. All bodies involved in the legislative process use this approach.

Information: Improving the Collection, Management, Accessibility, Quality and Use as a Policy Tool

To achieve goals and milestones, as well as have the ability to reassess, a wealth of information is necessary. Although many databases exist, they are not always compatible and may not contain the data to ensure the success of a new environmental protection system.

E4E categorized the types of information that would support a new system as follows:

1. Indicators that measure ambient environmental conditions and trends;

2. Information on waste, emissions, and other alterations of the environment by point and non-point sources;

3. Information on the nature and extent of human exposure to pollutants and related indicators of human health status and trends;

4. Information about how human and financial resources are deployed in protecting the environment, and the interaction between environmental programs and the economy;

5. Knowledge from scientific research, economics, and social sciences on the nature and causes of environmental problems, their effects on human and ecosystem health, and the steps required to mitigate and prevent them; and

6. Metrics designed to support corporate stewardship efforts, including the productivity of resource use, source reduction, product responsibility, and the full range of environmental impacts along a company's supply, production, and customer chain.

The federal government, with input from all stakeholders, should undertake a well-funded approach to improving the collection, management, accessibility, and quality of information. As a policy tool, disclosure and accountability of information will ultimately influence a company's approach to improving their environmental performance, as has been the situation with the Toxic Release Inventory, according to many executives.

Our Evolving Regulatory System

Laws and regulations will always be a significant part of our system of governing, but other policy tools can be implemented that will still ensure that the vision is satisfied. E4E focused on the following five alternative methods:

1. Where feasible, increase the use of performance-based regulatory mechanisms. This will increase technology development and allow companies to have the option to select technology, provided it conforms to the required performance levels; however, cost-effective monitoring and verification must be overcome by government and industry.

2. Improve and make better use of the permitting process, such as stakeholder participation in the decision process, alignment of permit schedules, simplified renewal procedures, and developing procedures for consistent reporting of release data.

3. Encourage the adoption of expanded environmental management systems (EMSs). EMSs not only ensure full compliance with environmental laws and regulations, they assist in exhibiting environmental leadership, provide a method of keeping management and government well-informed, and improve business performance and government incentive programs (such as reduced inspections, penalty mitigation);

4. Where appropriate, implement pilot projects. These projects provide risk-taking opportunities by regulators and those regulated, followed by lessons learned that resulted in new discoveries.

5. Better address the needs of the nation's small businesses. Because they already feel overburdened, emphasize the use of the Regulatory Flexibility Act and the Small Business Regulatory Efficiency and Fairness Act. These acts require review of regulations from federal agencies that significantly impact small businesses, improve compliance-assistance program coordination among government agencies, and increase assistance for multimedia compliance and pollution prevention.

Economic Incentives

In addition to laws and regulations, the use of some form of economic or fiscal policy tool can be beneficial for improving the current environmental protection system. The intent is to influence in a flexible, cost-effective, and positive way the behavior of those being regulated. This can include changes in the tax code to reward superior environmental performance, while penalizing poor performance. The intent should not be revenue raising, but behavior alteration.

Government and Public Involvement

E4E's vision states "that an improved environmental protection system should 'place authority', responsibility, and accountability at the appropriate level of government, and promote collaborative problem solving and integrated policy-making by government agencies." One way to achieve this is through the involvement of stakeholders. This is absolutely essential throughout the process, especially between the EPA and individual states. The EPA should increase technical assistance to states, provide direct staff support when implementing jointly agreed-upon priorities, and increase attention to interstate issues. In addition, the EPA and the States should agree upon and implement performance measures to ensure progress is made.

The concept of "place-based" environmental protection is a recent development. This concept or approach views all resources (air, water, land, and living resources) as an interconnected system. Because of that, it encourages all levels of government to bring their specific talents to bear on the issues at hand. All agencies need to include environmental protection into their missions (especially the Departments of Defense, Energy, Transportation, and Agriculture) and must improve their coordination.

Furthermore, we cannot forget Congress, which needs to continue improving its approaches to guidance and oversight of Federal agencies, and needs to develop environmental protection systems.

Corporate Environmental Stewardship

E4E's vision has been clearly stated. Corporate environmental stewardship can be considered the vision of a corporation with respect to values and

priorities towards the environment. E4E believes that through this corporate approach, the nation will achieve better environmental quality. To capitalize on this concept, E4E sees the need for government, business, and environmental leaders to work closely in establishing measures and indicators for stewardship; clearly define the benefits of stewardship practices and improved environmental performance; and encourage wider use among businesses. In addition, E4E recommends that business implement "best practices" to capitalize on the rewarding attributes of corporate stewardship.

None of this requires regulatory measures. It begins with committed corporate leaders. For acceptance and effectiveness, they must champion the program and show their employees the financial and environmental benefits. They should also collaborate with other businesses, government, and environmental leaders. Sharing of nonproprietary information and success stories within similar business sectors can encourage the acceptance of this concept. It is equally important to spread the word to small businesses, regardless of the business sector. They are generally the forgotten ones.

The focus should be to increase business value through environmental performance rather than on the costs of environmental compliance. The "best practice" concept will improve business and environmental performance, if managed well. These approaches for improving environmental protection systems are value-driven versus rules-driven. E4E recommends that corporations collaborate with the Federal government, the States, and stakeholders to further develop the framework for a viable corporate stewardship program with a goal of demonstrating the feasibility of a "values-driven" approach to environmental protection.

Applying the Improved System: Reducing Non-point Source Pollution

This happens to be one of the nation's most significant environmental problems and not easily manageable. Unfortunately, stakeholders—such as developers, ranchers, farmers, and municipalities—were not represented in the group. Therefore, a specific program was not recommended. E4E recognized that management of this resides at the state-level, however, the federal government should guide and approve the state-developed programs. Point and non-point sources need to reduce pollution

loading, and the states and stakeholders need to work closely on watershed management activities to ensure the reductions occur. Applying what has been covered in the E4E report to the non-point runoff problem is the best solution. This includes—goals, milestones, and reassessment; best management practices; innovative incentives and drivers; inclusion of stakeholders; place-based environmental management; and focusing agency missions on the issue.

Conclusions

The intent of E4E was not to criticize the existing system of Federal environmental protection, but to collectively agree on what an improved system would look like and how it would be achieved. Collectively is a key word. As Ruckelshaus stated in the preface of the E4E report, "Consensus on any issue concerning the environment in this country is rare...by demonstrating our willingness to reform our environmental protection system, we will invigorate it and show by example that we are capable of constructive change in a time of deep partisan divisions."

This report is only the beginning. Continuous efforts, cooperation, and funding are necessary by all concerned for the vision to be successfully implemented. This is an opportunity for change, and the time is right.

A copy of the full report can be found at http://www.csis.org/pubs/pubse&e.html.

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FORECASTING STANDARD VIEW:

A Maritime Industry Risk Analysis Tool; and the National Maritime Safety Incident Reporting System: A Maritime Industry Risk Reduction Tool

by LCDR Scott J. Ferguson

Introduction

A management goal of the U.S. Coast Guard and many members of industry is to develop risk management tools to help allocate scarce resources and reduce risk exposure within the maritime community. Another goal is to capture information on unsafe occurrences, hazardous situations, and nonconformities regarding safety incidents and the corrective actions that were taken to avert marine casualties. This article will explore two risk management initiatives, and how they may be used individually and in harmony to help measure the effectiveness of the U.S. Coast Guard's and industry's safety/prevention programs and foster a safer, more efficient maritime community.

The ultimate goal of these initiatives is to provide an interactive instrument to prevent a catastrophic event with a large discharge of oil or major loss of life. If these tools prevent one catastrophic event, it is my belief that the benefits in lives and property saved, reduction in damage to the marine environment, and the reduction in operation and response costs, public and private, will far exceed the fiscal expense of these tools.

Initiative #1: Forecasting Standard View

The concept of forecasting standard view involves the building and use of multivariate regression models and the use of hypothesis testing and probabilistic statistical tools to forecast risk within industry and measure the effectiveness of the U.S. Coast Guard's and industry's resources in executing their safety/prevention programs. These risk-based tools would be used to focus Coast Guard and industry resources on high-risk areas within the maritime community.

The idea is to use these methods to truly identify the maritime community's safety vulnerabilities and weaknesses, and to measure the effectiveness of its safety/prevention programs by using a combination of mission or operation specific multivariate regression models, hypothesis testing, and actual incident data collected through the national maritime safety incident reporting system (subject of Initiative #2). Through these methods proactive steps can be taken to mitigate causal events before they become major problems. The forecasting standard view project is the next-generation form of what the Coast Guard calls the standard view.

Today, the U.S. Coast Guard uses the standard view (which contains quantitative annualized marine safety activity data) as one of its tools to assess performance of mandated missions and to do risk identification with other tools such as the Spill Planning, Exercise and Response System (SPEARS). The SPEARS system is used for oil spill and chemical release risk identification.

The forecasting standard view is envisioned to be an automated tool/system that all levels of U.S. Coast Guard management and industry can use in conjunction with information collected by the national maritime safety incident reporting system to assess not only qualitatively identified risks, but to quantitatively assess mission/operational effectiveness and risk trends. It should enable the maritime community to identify budding safety vulnerabilities before they lead to marine casualties and its subsequent negative impact on fiscal and physical aspects of the industry and the marine environment.

The following steps will turn the forecasting standard view concept into a user friendly product:

Step 1: Work directly with the Coast Guard's marine safety and operational programs, and industry's program managers to identify key prevention and safety measures. Use these measures, the

strategic goals of the FY1999 U.S. Coast Guard Performance Plan, and the goals of 1998 Performance Plan for Marine Safety and Environmental Protection to start the process.

Step 2: Use the measurement areas discovered in "Step 1" to gather source population information to be used as the basis for denominator data. Denominator data in this sense means the capture of exposure population information that can be used to form the baselines and sample population pools needed to enable random sampling and the employment of statistical tools/models designed specifically for risk assessment.

The Coast Guard's current database(s) (e.g., Marine Safety Management System (MSMS), Marine Safety Information System (MSIS), and Spill Planning, Exercise and Response System (SPEARS)), for the most part, provide good numerator data for risk identification purposes (e.g., casualty and pollution incident data) that describes what went wrong in an event.

What the U.S. Coast Guard and industry do not have, and what is needed to truly measure/improve our safety effectiveness is denominator data based on the identified measurements described in "Step 1." Some possible sources of denominator data may include databases maintained by the U.S. Army Corps of Engineers, Bureau of Labor Statistics, American Bureau of Shipping, Lloyd's of London, Det Norske Veritas, and aspects of the Coast Guard's own MSMS relational database system.

Step 3: Based on the guiding input in "Step 1" and the baselines developed in "Step 2", generate multivariate regression models focused on the variables in the following function equation for each goal described below: S = f(Oi, Ri, Wi, Qi, Fi, Vi, Ei)[1] (see endnotes and references for an explanation of the function equation variables and their relationship). Using this expanding function equation, the corresponding regression models must take into account the mix of industry's operational and prevention activities and the Coast Guard's operational and prevention activities that may contribute to the accomplishment or non-accomplishment of the identified measurement areas and/or the U.S. Coast Guard's performance plans goals. The models should also include environmental factors such as the economy and its

impact on maritime related traffic, the impact of intermodalism, port activities (pricing, depth of water, dock space, traffic and cargo throughput, labor characteristics, etc.) etc. The goals and measurements that the expanding function equation and the related regression models should at a minimum address the identified measures and the U.S. Coast Guard performance goals derived in "Step 1".

Steps 4 and 5: Use the population data described in "Step 2" to do random sampling and statistical inferences through hypothesis testing. The focus of this testing should be based on the measures and the U.S. Coast Guard performance goals identified in "Step 1." Then use the national maritime safety incident reporting system (would include a trifold database system, i.e., marine casualty data reported per 46 CFR 4.05-10, hazardous conditions reported per 33 CFR 160.203 and 160.215, and near-casualty/hazardous situation data) to help validate the results of the hypothesis testing with known or real-time maritime community safety vulnerabilities and weaknesses. The statistical tool(s), i.e., regression models and hypothesis testing, coupled with the actual occurrence data, i.e., national maritime safety incident reporting system, will identify industry danger trends and provide a system to help validate the observations. Plugging actual data and statistically valid (high confidence level) inferences into the multivariate regression models will allow us to see how these trends impact the events the U.S Coast Guard and industry are trying to prevent and how well the said goals are being met. The power of this program is that the maritime community may use it to make educated mid-course corrections to resources, operations, and safety programs fostering attainment of strategic safety goals.

Step 6: Automate the process focusing on the end-user. These tools and their interface must be end-user friendly. They must be easy to use and understand. If they are not, they will not be used and a great safety, cost savings, and risk management opportunity will be lost. This is a very important step in the process. Without end-user buy-in all is lost.

Step 7: Another essential aspect of the process is having a strong communications network or distribution system that gets the word out to the U.S. Coast Guard field units and the particular segment of the industry that is impacted by the trends identified by the regression models, hypothesis tests, and the national maritime safety incident reporting system risk management triad.

The development of these tools and their use in unison should revolutionize the way the U.S. Coast Guard and the commercial maritime community do business. It would allow us, for the first time, to truly measure the effects of the Coast Guard's safety/prevention programs and industry's operational and safety policies. By providing the maritime community with the real time capability to identify negative safety trends, we will have an unprecedented opportunity to use information systems to read "danger ahead" signals and proactively intervene to mitigate events that could threaten lives, property, and the environment. This "nip the problem in the bud" approach, keyed to preventing hazards to public and private safety and the environment, fully supports most, if not all, of the U.S. Coast Guard's strategic goals and industry's efforts to meet the International Safety Management Code (ISM) for the Safe Operation of Ships and for Pollution Prevention. Since deployed resources will be more focused on high risk areas in marine safety and environmental protection, it promotes cost effective industry and Coast Guard operations. The maritime community will have a better understanding where their resources, safety, and training dollars should go. Efforts expended in these "ounce of prevention" measures are much less resource intensive and costly than those employed in "pound of cure" responses to combat major marine safety contingencies and pollution events for both the private and public sectors of the maritime community.

Initiative #2: National Maritime Safety Incident Reporting System

From the inception of the marine safety program, the U.S. Coast Guard has investigated casualty events that resulted in the loss of life, property, and/or damage to the environment. The results of these investigations have been used to improve design, construction, and operations of merchant vessels. While this information has been very useful, there are many more unsafe occurrences that involve near-casualties (near-misses), e.g., near

collision situations, near pollution events, etc., and related precursor events (hazardous situations), e.g., equipment maintenance/failures, communication problems, crew fatigue, poor procedures, human factors problems, etc., that, but for some corrective action in the chain of events, did not result in the occurrence of an accident or casualty. These non-accidents and/or unsafe occurrences are an untapped source of data that serve as leading indicators on the level of safety within the maritime community. Such data can provide the real-time information needed to prevent accidents before they happen.

The Maritime Administration and the U.S. Coast Guard have signed a Memorandum of Agreement to work together with industry to develop and implement an industry led safety incident reporting system. This system would receive, analyze, and disseminate information about unsafe occurrences. Participation would be voluntary and reports generated for distribution would be non-attribution based. The intent of this system is to capture, analyze, and distribute causal information and lessons-learned on unsafe occurrences and corrective actions taken at various points in the chain of events that prevented an accident by highlighting lessons-learned rather than culpability.

The concept is to collaborate with industry to design, development, and implement a national/international system that can gather, maintain, analyze and edit, de-identify, and distribute information on safety problems or situations. The gathering and distribution of information will permit the maritime community to take action on potential system vulnerabilities and weaknesses before a system failure and/or marine casualty occurs. This industry-based initiative would help the maritime community prevent marine casualties, e.g., EXXON VALDEZ, TORREY CANYON, etc. If this system can prevent one major incident, e.g., EXXON VALDEZ at an estimated cleanup cost of $3.2 billion, the savings could be astronomical. To demonstrate this savings, funding requirements for the national maritime safety incident reporting system range between $321,000 and $1.2 million in recurring funds until the system can be self-sustaining through member, subscription and research fees. Funding for the forecasting standard view initiative depends on the level of energy the maritime community wishes to expend on the idea. I would estimate that $1 million would go a long way towards moving this idea through the life cycle process from research and development to implementation. Also the knowledge gained from a systematic analysis of near-miss and/or related precursor events promises to point the way to those key interventions that should prevent casualties and thus save more lives and property, reduce the number of injuries, mitigate damage to the environment, and reduce operational and response costs for both the private and public segments of the maritime community. A successful system could serve as a source of tax relief for the general public, e.g., reduced pollution fund needs and carrier operational subsidies. Industry must resolve whether this ounce of prevention is worth the cure? I believe the answer is obvious, in the affirmative.

The development and use of risk management methodologies within the maritime community (public and private) are essential in today's operating environment where full advantage of operating efficiencies and safety programs play key roles. This three part system using regression models, statistical hypothesis testing, and the results from an industry based national maritime safety incident reporting system can forever change the way Government and industry do business within the maritime community. The real winners here are the general public who will reap the safety benefits, and the cost-benefits in reduced prices and taxes resulting from gains in efficiency within the international transportation/trade community and Government. These initiatives represent a bold strike for marine safety. The time has come for the maritime community to transition their safety efforts from a defensive posture to the offensive!

Endnotes and References:

1. S = f(Oi, Ri, Wi, Qi, Fi, Vi, Ei): These relational functional variables have the following meaning:

   S = Performance plans and maritime community safety measures mission and/or goal attainment.

   Oi = Operating options based on mission program guidance, e.g., port safety and security program, vessel inspection program,

marine environmental protection program, law enforcement, waterways management, industry safety programs, etc. Operating options can be further categorized in each mission area to include variables such as speed of movement, frequency of service, reliability of service, susceptibility to loss and damage, accessibility of service. A further explanation can be found in Talley, W.K., Transport Carrier Cost, New York, Gordon and Breach Science Publishers, 1988, pp. 44-46.

Ri = Resources, labor (people), energy or fuel, way (path over which the operate moves; natural path + aids like aids to navigation and roads), facilities or terminals, vehicles (cutters, boats, cars, trucks, etc.). Ibid, pp. 41-43.

Wi = Cost of resources used in function by individual resource.

Qi = Number of mission or activity opportunities.

Fi = Program or goal funding level.

Vi = In a marine transportation setting this refers to the number of transportation miles expended. In the Coast Guard setting it refers to the operating, response or travel miles/time expended.

Ei = Environmental or external to the organization factors.

Function Expanded (read down):

$Fi = Fi(W_1, W_2, \ldots Wi; E_1, E_2, \ldots Ei)$

$Ri = Ri(O_1, O_2, \ldots Oi; Q_1, Q_2, \ldots Qi$; constrained by Fi)

$Vi = Vi(R_1, R_2, \ldots Ri)$

S = S(Vi constrained by Ri)

Microeconomics regression modeling provides the best examples of the kind of approach I am envisioning for this process. Good maritime references include a number of articles written by Dr. Wayne K. Talley, Old Dominion University, Norfolk, VA. Specific articles include:

- Talley, W.K., Transport Carrier Costing. New York: Gordon and Breach Science Publishers, 1988, pp. 39-49, 57-76.

- Talley, W.K. and Frederick W. Beazley, "Performance Evaluation of Mixed-Cargo Ports", Old Dominion University, Norfolk, VA 23529, a paper prepared for the U.S. Army Corps of Engineers (USACOE).

- Talley, W. K., "Performance Indicators and Port Performance Evaluation," Logistics and Transportation Review, Volume 30 (1994), pp. 339-352.

- Talley, W.K., "Port Pricing: A Cost Axiomatic Approach," Maritime Policy and Management, (1994), Vol. 21, No. 1, 61-76.

There is also a port productivity/efficiency model published in an article by Dr. Jose L. Tongzon entitled "The Port of Melbourne Authority's Pricing Policy": Its Efficiency and Distribution Implications," Maritime Policy Management, (1993) Vol. 20, No. 3, 197-205.

A related system that could serve as a potential blueprint for a national maritime safety incident reporting system is the FAA/NASA's Aviation Safety Reporting System (ASRS) http://olias.arc.nasa.gov/asrs.

2. Point of Contact: If you would like to comment on these projects, please forward your ideas, comments, insights, and questions to me as follows: LCDR Scott J. Ferguson, U.S. Coast Guard, Office of Investigations and Analysis, (202) 267-0715/ 1430, fax: (202) 267-1416, email: sferguson@comdt.uscg.mil, mailing address: Commandant (G-MOA), U.S. Coast Guard Headquarters, 2100 Second Street, SW, Washington, DC 20593-0001.

The views expressed herein are those of the author and are not to be construed as official or reflecting the views of the Commandant or of the U.S. Coast Guard.

Taking Government to the People

by Patricia Prosperi, TASC

In January 1995, the Department of Transportation (DOT) began the process to consolidate nine separate docket offices in each operating administration into a centralized, fully automated dockets facility which is now operated by the Transportation Administrative Services Center (TASC). The facility is located at 400 7th Street, SW, Washington, DC 20590 in room PL-401 and operates Monday through Friday from 9:00 am to 5:00 pm except on federal holidays. Since 1996, TASC has provided centralized dockets services to the Department's internal and external customers.

DOT's regulation of the Nation's transportation systems touches the lives of American citizens every day and has important consequences for their safety and well being. For example, DOT issues regulations on seat belts and airbags, transportation of hazardous materials, alcohol and drug testing, and transportation of the disabled. In addition, it makes adjudicatory decisions about which airlines fly to and from the U.S., and decides enforcement cases about violation of consumer and safety rules. To carry out these responsibilities, DOT publishes and stores, among other matters: information about proposed and final regulations, public comments on proposed rules, petitions and exemptions, applications for new airline services, and enforcement and adjudicatory actions. The dockets containing these comments and pleadings are the official record on which DOT makes its decisions. Docketed material is also used by DOT and other government to respond to Freedom of Information Act requests and Congressional inquiries.

DOT took a giant step forward late last year when DOT Secretary Rodney Slater announced that DOT customers could now access regulatory and adjudicatory docketed material at their desktops via the Internet. This feature can be accessed at http://dms.dot.gov on the Internet or by following the DOT Dockets link from the http://www.dot.gov DOT home page.

What is a Docket?

A docket is the official public record of DOT's rule-making and adjudicatory cases. Specific documents covering the same topics are stored together in a docket. Therefore, a docket will contain many documents that are related to the same subject matter. A docket is a folder containing individual document data records and image copies of the original document. These images are in read-only format, and are not changeable.

Each docket contains a specific rule-making or adjudicatory action in a sequentially numbered folder categorized by Operating Administration. A docket contains individually numbered documents described by searchable indexing data to allow display of the desired document image. The Dockets Management System (DMS) stores on-line information about each proposed and final rule and each case or proceeding on file. The DMS is used by the DOT staff, public and transportation industry and foreign governments to participate in the regulation of the transportation system. Access to DMS is available on the Internet and public workstations in the Central Docket Facility. DOT uses the docketed material to make regulatory and adjudicatory decisions, and allow review of the materials by interested parties. Docketed material reflects the basis for regulatory and adjudicatory decisions.

Evolution of an Information Management System

At any given time, DOT has as many as eight million pages of active docketed material in use. This enormous amount of information was once stored on paper, in nine separate DOT docket offices located all over Washington, DC. This huge volume of paper was processed, tracked, researched, and retrieved manually. The process was ripe for reinvention. Why? It was very difficult for the public and the transportation industry to easily participate in the regulatory process and required DOT's customers to bear the expense of journeying to nine separate

offices in Washington to access these public dockets. Voluminous dockets made it difficult for users to search for and organize needed information. Often multiple copies of docketed material had to be produced and circulated by hand delivery to the nine docket offices and to legal and program offices throughout DOT, consuming substantial time and resources. Even when needed material was found, only one person could view a docket at a time and documents and/or pages within a docket could easily be misplaced or lost. Also, storing paper files in nine separate DOT offices made it very difficult for DOT offices to share or even locate information across organizational lines. In fact, one DOT organization found it necessary to fly a staff member from Boston to Washington, D.C. several days each week just to locate and review docketed material housed throughout the nine separate docket offices. Members of the public, too, experienced similar inconveniences and inefficiencies. Clearly, this limited many Americans' full participation in the regulatory process, and was not an efficient or cost-effective system.

In 1993, DOT Secretary Federico Peña recognized that there could be considerable savings of space, personnel, paper, and equipment, as well as an increase in efficiency, by centralizing the rule-making and adjudicatory dockets of DOT. Benefits envisioned included improved docket access through minimized search and retrieval times, enhanced customer service, and decreased numbers of lost or misfiled dockets. Showing top level support, Secretary Peña directed that DOT dockets be centralized and automated.

Starting in 1993, DOT began to develop image-based technology to use in the management of its rule-making and adjudicatory dockets. Through a partnership between DOT's General Counsel's office, TASC (DOT's fee-for-service organization), DOT operating administrations, and private sector technical support companies, the agency developed an electronic, image-based dockets management system (DMS). This process consolidated DOT's nine separate docket offices into one centralized, fully-automated facility where DOT customers can now interact with "One DOT"—an important departmental strategic goal. The centralized dockets facility can now answer the public's questions about any DOT docket and provide service to any customer seeking help on any departmental filing procedure, status of order, proceeding, rule-making action, and Federal Register publication submission. The facility also provides a full-service reference room with state-of-the-art computer workstations that permit fast, easy retrieval of information and enhanced search capabilities.

What is the Dockets Management System (DMS)?

DMS is an electronic, image-based database in which all DOT docketed information is stored for easy research, and retrieval. DOT used off-the-shelf imaging technology to meet the legal requirements of maintaining a record of docketed material and producing certified true copies of the docket for adjudicatory and court proceedings. This system transfers docketed materials into an unchangeable electronic format for easier storage, access, research, and retrieval.

Sophisticated indexing enables easy retrieval and analysis of docketed materials. DMS features an open architecture that uses the latest technology designed to be flexible enough to incorporate new advancements. DMS is based on high performance Sun Solaris platforms running Oracle 8. Detailed DMS system architecture is shown in Figure 1 (facing).

A key component of the DOT network is the Sun firewall to protect the system from intrusion.

The DMS Oracle server provides support Docket processing Internet access. The Ultra 3000 manages three storage areas: The 60GB RAID 5 for images, the 30GB RDBMS for production and incoming records, and the QA area for temporary storage. The SUN 1000, which is the backup system for the Ultra 3000, manages two distinct storage areas: a disk array for a backup copy of the database, and the write-once read many Jukebox for permanent storage of the original documents. Outside the firewall the DMS-WEB manages a 30GB RAID disk array and serves as a front-end processor for all web-based traffic.

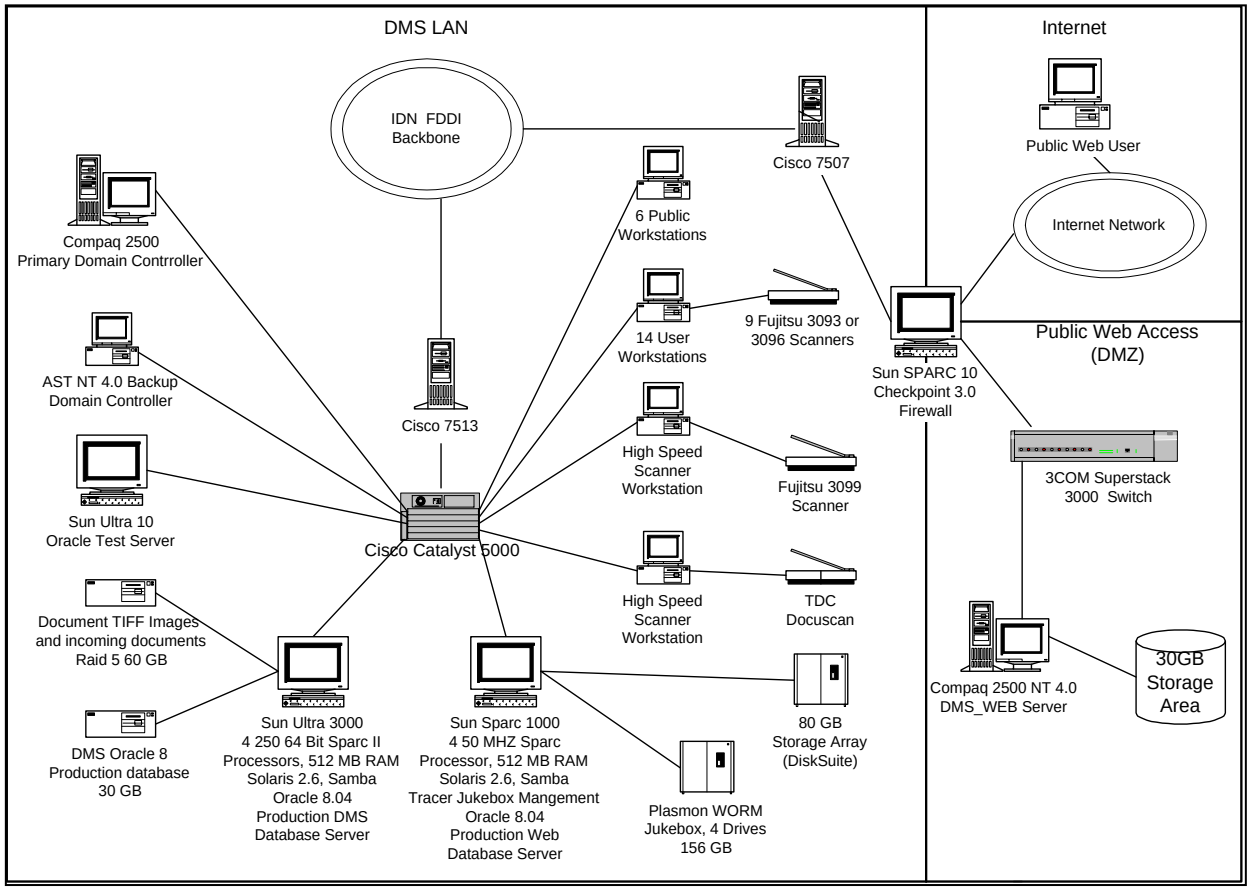


Figure 1: DOT's DMS Hardware Architecture

To ensure accessibility to the DMS data in the event of a hardware failure, the system includes some redundant components for fault tolerant operation. Database information from the Ultra 3000 is exported to the SUN 1000 on a nightly basis, while the jukebox images (SUN 1000) are duplicated on the DMS 3000's RAID 5 array for improved performance. In the event of a system failure on the Ultra 3000, the DMS can be supported by the Sun 1000 while off line repairs are completed.

To access DMS from the Internet, the following minimum computer hardware is recommended:

- 486 or 040 processor.
- Windows 3.x or Mac OS 7.0 or higher.
- Netscape 3 or Microsoft Internet Explorer 3 Internet browser.
- TIFF image viewers like Win 95 Imaging, TMS Doc View, CPC View that can be downloaded from the web site.

The latest feature to be added to DMS is Electronic Submission capability: the ability to file comments, petitions, and requests electronically. This feature provides an electronic Internet-based "front-end" alternative to the paper-based submissions to DMS; streamlines the workload associated with processing documents; and fulfills Vice President Gore's National Partnership for Reinventing Government initiative to measurably improve the efficiencies and working environments of all Federal Departments. Figure 2 (p. 30) depicts the DMS User Interface Screen.

As shown in Figure 2, DMS also provides users with an on-line tutorial and help capabilities, customer feedback features and Frequently Asked Questions page to assist users in using the system and locating needed information easily.

TASC operates DOT's consolidated dockets facility and can provide dockets or information management services to other Federal, state and local governments as well as to nonprofit organizations on a fee basis, saving these agencies significant systems developmental investments in electronic information systems.

What are the Benefits of DMS?

The President has emphasized the need to reengineer the federal government's processes through the use of information technology, stressing that this reengineering will make government services more accessible, more efficient, and easier to use. In his Executive Order 13011, President Clinton states:

"A Government that works better and costs less requires efficient and effective information systems. The Paperwork Reduction Act of 1995 and the Information Technology Management Reform Act of 1996 provide the opportunity to improve significantly the way the Federal Government acquires and manages information technology. Agencies now have the clear authority and responsibility to make measurable improvements in mission performance and service delivery to the public through the strategic application of information technology. A coordinated approach that builds on existing structures and successful practices is needed to provide maximum benefit across the Federal Government from this technology."

DMS makes the President's vision a reality today.

In late 1997, DMS provided docketed material to industry partners and the general public at their homes and businesses via the Internet. Secretary Slater stated that the electronic docket "gives people the opportunity to learn about the issues which matter to them and their families, and helps them make their voices be heard."

Figure 2: DMS Main Menu

For example, when an American citizen wants to know about a regulation being proposed on shipboard lifesaving equipment, he or she can access that information 24 hours a day, 7 days a week, worldwide, from the convenience of their home and business. Customers can read supporting analyses and see comments that other interested parties have made about the proposed regulation. Not only does DMS bring government directly to the people, it also adds a previously unheard of richness to the dialogue that helps government frame its public policies, simultaneously saving customers time and money.

Other benefits of DMS include the following.

- Saves DOT over $900,000 annually in administrative overhead costs.
- Reduces the number of staff needed for dockets operation.
- Reduces the amount of paper that must be stored.
- Improves security for docketed materials.
- Complete off-site electronic back up system for disaster recovery.
- Reduces public travel and administrative costs.
- Streamlines processing of document and cross-training of staff.
- Provides more seamless federal government-wide customer service through links.

DOT customers recognize DMS's benefits. Since DMS has been available via the Internet, 1.4 million users have visited the website. Those who watch the Department's activities have reported the following benefits.

- "The new system has made the documents staff more productive…the agency also has improved its public service by posting documents on the World Wide Web." (Government Executive, December 1997).
- "Slogging through the docket of proposed Department of Transportation rules has become a bit easier with the unveiling of an on-line docket management system…(which) allows rapid retrieval, cross-referencing and searching for specific subjects from a single source any time of day or night." (Washington Report, December 1, 1997).
- "After all the breathless predictions, the era of electronic federal agency has begun." (Legal Times, December 1, 1997).

What does the future hold?

TASC plans to use the DMS infrastructure to develop new services to customers. Features currently under development are listed below.

- In fiscal year 1999: DMS plans to have additional security enhancements added; develop an electronic freedom of information act (EFOIA) response capability; and add an automated coordination feature.
- In fiscal year 2000: DMS plans to make EFOIA operational; and develop an automated rule-making process.

If you are a Federal, state, local, or nonprofit agency that is interested in exploring how you can use the DMS system to benefit your organization, please contact the Dockets Development staff at (202) 366-4399 for a free consultation. The DMS operations and development staff welcomes your feedback on how the system may better serve your needs. Please contact us with your suggestions and help us bring government to you even better!

Patricia Prosperi is the Principal, Information Services at the Department of Transportation's Transportation Administrative Service Center (TASC).

Plain Language Has No Place in Government Regulations?

By Stephen H. Barber

There is talk in the halls of Government about encouraging agencies to communicate with the public in a clearer, more easily understood way. For written documents, such as regulations, the method is called "plain English" or "plain language." Not every agency is leaping to adopt these new techniques. This article explains what is old, what is new, and what you can do to help.

"PLAIN LANGUAGE HAS NO PLACE IN GOVERNMENT REGULATIONS!" If you are in Government, you hear this all the time and, to many of us, it makes sense. Think about it. Plain language, or plain English as most of us call it, is too informal for official documents. It talks down to our readers. It is a passing fad that just happens to be favored by the present Administration. It forces us to waste time trying to understand what it is we are writing. Our bosses do not use it, and they'll think we are simple if we do. It is a bunch of gimmicks that might be useful for agencies talking to the guy on the street, like IRS, but not for the Coast Guard with its audience of techno-professional types. And, on top of this, everything we write is, of course, already crystal clear anyway. Am I right? Well, let's see.

What is this plain language? For one thing, it is not new. Thomas Jefferson complained about the "saids" and "afforesaids" that perplexed the common readers, as well as the writers themselves. But, it wasn't until the 1970's that a serious effort to improve the way we write began.

It may come as a surprise, but the earliest attempts to use plain language came from private industry. Insurance companies found that plain language in their policies was a big success with their policyholders. Mortgage lenders started taking the fine print out of their contracts. Banks rethought their promissory notes. Soon, governments, both State and Federal, began to see the light and stressed improved writing.

In 1978, President Carter called for Federal regulations to be "as simple and clear as possible." About that time, the Office of the Federal Register issued its Legal Drafting Style Manual, which stressed clarity and accuracy as the most important goals of the drafter. Following quickly on the heels of the Carter initiative, the Department of Transportation directed its agencies to issue regulations that were "clear, precise, uncomplicated, and understandable to all affected by them."

Under the current Executive Order on regulatory planning and review, we are told that regulations must be "simple and easy to understand." By the time you read this article, the President may have issued an Executive Order or Memorandum strongly recommending the use of plain language in all communications with the public. If this is the case, what is all the current fuss about the need to convert to plain lan-

guage? Is that not what we were told to do 20 years ago? If not, what is the difference between what we were told to do then and what we are being asked to do now?

What is the old rule for writing? Write clearly.

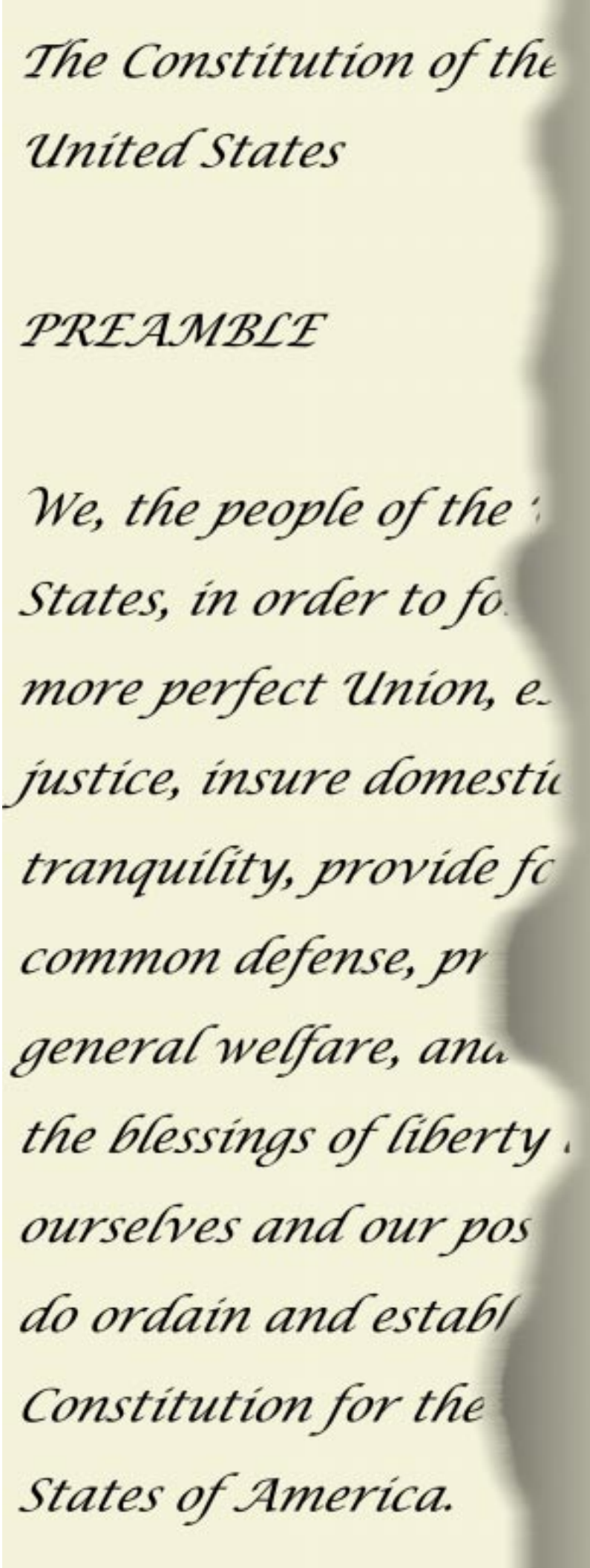
Here are a few rules from the Legal Drafting Style Manual prepared by the Office of the Federal Register way back in 1978.

- Put things in a logical order. Arrange the items within a topic in a logical sequence helpful to the audience being addressed. Put more important provisions before lesser ones, more frequently used before less used, and administrative and penalty provisions last. Put the rule first, then the exceptions (unless they're only one or two).

- Write short paragraphs and sentences and use short words. Keep sentences down to 25 words or less and paragraphs to 75 words or less. Avoid words with a lot of syllables.

- Use present tense. Say "the fine is $10," not "the fine shall be $10." A regulation speaks as of the time you apply it not as of the time it became effective. Other tenses make it questionable as to when the thing required must be done.

- Use active voice. Say, "the master must submit the form" ("must submit" is in the active voice), not "the form must be submitted" ("must be submitted" is in the passive voice). Using the active voice makes it clear who is supposed to do the thing required or who has the power to do it.



Number of Rescue Boats

If you are…	With 8 persons or less, you must have…	With 9 or more persons, you must have
Operating North of 25 degrees north latitude	Two.	One boat for each eight people onboard.

- Use action verbs. "Consider" instead of "give consideration to." They're shorter and more direct.

- Consistency in choice of words. Don't use different words that mean the same thing just for variety (despite what your English teacher told you). Don't use "vessel" and "boat" if one or the other is adequate. Also, don't use one word to mean two things (e.g., "vessel" to mean the Titanic and "vessel" to mean a container).

- Don't arrange a sentence so that it could be interpreted in two ways. Don't say "the master must train each member of the crew who operates a crane and a fork lift." It's not clear whether the person must operate both a crane and a lift or either a crane or a lift. Likewise, does a vessel of "more than 60 feet" mean a vessel that is "60 feet or more" or a vessel that is "61 feet or more." This kind of error is quite common and forever plagues the reader.

- Don't use old-fashioned, legal-sounding words. Words like "above-mentioned," "herein," and "pursuant to" were as old fashioned to Thomas Jefferson as they are today.

- Don't use fancy words when more common or shorter ones get the message across. Replace "in lieu of" with "instead of," "prior to" with "before," "expedite" with " "speed up," "commence" with "begin," and "under the provisions of" or "pursuant to" with "under." The drafting guides are filled with scores of these preferred, simpler expressions.

What is the new rule for writing? Engage the reader.

First of all, all the old rules still apply to Federal regulations. They tell us how to write clearly and sensibly. The new rules include all of the old rules, plus add the following techniques to engage the reader. It is not enough to write clearly and unambiguously if you do not address the needs of the reader and present the material in a way that maximizes the reader's ability to absorb it.

- Focus on the needs of the intended reader. This is absolutely the most important part of the modern plain language movement. If you forget the

rest, remember this. Under plain language, every technique used is intended to make it easier for our customers (i.e., those affected by the regulation) to quickly understand what is being required of them. All of the following techniques are designed to benefit the reader.

- Use pronouns to talk directly to the reader. Pretend you are in a room with one of the people you are addressing. Write as you would if you were talking to that person. For example, you would call that person "you." In your regulation, not only is it OK to use "you" and other pronouns ("I," "we," etc.), but using them is found to better engage the reader. It helps you identify the readers and lets them know that you've made an effort to identify them.

- Use a question-and answer format. The reader comes to the regulation for answers to their questions. Do the regulations affect them? If so, how are they affected? What must they do? Try putting each section heading in the form of a question and the text of the section in the form of an answer to that question. "When must I pay the fee?" "You must pay the fee on October 1, 1998."

- Use lists, tables, and if-then statements. The if-then statement is a particularly good example of how material can be made to look visually appealing. It is presented in a way that allows the reader to see relationships that the standard text hides.

- Guide the reader to the material needed. Organize the material in the way most useful to the reader. Use lots of informative headings to help them find their way to the material they need.

Try your own good ideas. The techniques of plain language are in their infancy. They are constantly evolving. Be a part of that evolution.

So what is the conclusion?

If people understand better what is expected of them, they tend to do what is right the first time and they need less help from us. If we help them use our regulations, they'll helps us by better compliance and fewer lawsuits and penalties. So, is it worth the effort to adopt this new plain language? The Coast Guard knows it is.

Where can I find more information?

The group leading the Government-wide effort to convert to plain language is the Plain English Network, a team spearheaded by the National Partnership for Reinventing Government. Their internet site has a great deal of useful, up-to-date information. You can find it at http://www.plainlanguage.gov.

How can you help us help you?

To let us know how we are doing on our regulations write to:

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Mr. Stephen H. Barber is a staff attorney specializing in regulations and is a member of the Plain English Network.

Licensing Reengineering: Leading the Mariner Licensing and Documentation Program into the Next Century

by LT Lionel Mew
Office of Environmental Standards

For years, the Coast Guard's Mariner Licensing and Documentation (MLD) Program has received its share of criticism. Mariners, as well as Coast Guard employees, frequently expressed frustration with the MLD process. Mariners were dissatisfied with the level of difficulty involved with obtaining or renewing a license or document, and Coast Guard employees were frustrated with an inability to provide the level of service they felt mariners deserved. Additionally, a report of the Department of Transportation Inspector General (DOTIG) characterized the program as "ineffective" and "inefficient." It became increasingly obvious to all involved that fixing the system would require dramatic changes.

A series of events conspired to cause the Coast Guard to completely reengineer the MLD process. A 1993 focus group report entitled *Licensing 2000 and Beyond* provided a vision to take the MLD process into the next century. Then provisions of the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, 1978 (STCW) included changes to competency and other requirements for issuance of licenses and documents. In 1996, the Chief of Staff of the Coast Guard decided to streamline the MLD process. A MLD Quality Action Team provided recommendations on streamlining the MLD process in July 1997. Finally, the previously mentioned DOTIG report was published in September 1997.

In response to these activities, Rear Admiral Robert C. North, Assistant Commandant for Marine Safety and Environmental Protection, chartered a group known as the Licensing Reengineering Team (LRT) to implement the recommendations of the MLD Quality Action Team. The LRT would also consider the other recommendations from various sources. The goals of the LRT were to ensure that mariner qualifications meet U.S. and international professional standards, improve customer service to the maritime community, and streamline the existing process where possible. The LRT directed development of a detailed plan to reengineer the MLD system.

The LRT held a series of meetings between September 1997, and January 1998, usually gathering for half a day once a week and for two full days once a month. A contractor was brought in to provide facilitation and administrative support. Over the course of these meetings, a consensus emerged regarding implementation of the forty-five recommendations from previous studies. The LRT adopted the fundamental principles contained in *Licensing 2000 and Beyond*, modified slightly to incorporate concepts contained in STCW. Key success factors were developed so there would be clear indicators that the goals are being achieved as the program is reengineered. A draft plan developed by the LRT was first introduced to the maritime community at the March, 1998, meeting of the Merchant Marine Personnel Advisory Committee in Washington, DC.

The draft plan calls for MLD program reengineering to be accomplished systematically over a period of six years. This reengineering incorporates the forty-five objectives that include recommendations from the MLD Quality Action Team, *Licensing 2000 and Beyond*, and the DOTIG Audit Reports.

The envisioned state of the MLD program is significantly different from the program today. The required Quality Standards System oversight program

mandated by STCW will be implemented. The administrative functions of the 17 Regional Examination Centers will be centralized. Functions, such as credential issuance, course approvals, evaluations, and applicant-data entry, will be completed at one central location. Some administrative functions will be privatized. These include preparation of application packages, initial evaluation of mariner qualifications, and administration of examinations. New Maritime Personnel Specialist positions will be added at 28 major ports, providing enforcement of STCW on foreign and domestic vessels and executing oversight programs for testing, training courses, and so forth. Additionally, the Coast Guard will issue new regulations to harmonize U.S. and international regulations, and to eliminate or amend outdated and counterproductive licensing and manning statutes.

By addressing the recommendations in *Licensing 2000 and Beyond*, the MLD Quality Action Team Report, and the DOTIG Audit Report, the reengineering initiative is expected to yield many benefits. For example, reengineering will enable the U.S. to meet international obligations under STCW, while increasing the competency of U.S. merchant mariners. Additionally, customer service and cost effectiveness will be greatly improved. Additional benefits include centralization or privatization of most functions, streamlining, and instilling quality within the MLD organization. Finally, Port State Control boarding team expertise will be improved.

Reengineering of the MLD program is truly a case of reinventing government. Through this initiative, the MLD process will yield more qualified mariners and provide superior customer service, all at less cost. The program will enter the twenty-first century meeting the LRT vision:

We will promote the safety of life at sea and protect the economic and natural environment by providing efficient and professional service to ensure that merchant mariners meet appropriate international and domestic standards for competency.

Additional information on licensing reengineering may be obtained by calling the National Maritime Center, (703) 235-0002.

REGULATORY REINVENTION:

Coast Guard, Industry Play Complementary Roles

by Jennifer A. Kelly
Vice President, Government Affairs
The American Waterways Operators

Nearly five years ago, Vice President Al Gore unveiled the National Performance Review, the administration's "reinventing government" initiative that encourages Federal agencies to change the way they do business and create a government that "works better and costs less." A key element of that initiative is regulatory reinvention—changing the way an agency like the Coast Guard, charged with ensuring the safety, security, and environmental integrity of our nation's ports and waterways, develops the regulatory standards to carry out its marine safety and environmental protection mission.

While it is common to think of regulatory reinvention as primarily a governmental responsibility—after all, it is the inherently governmental function of regulation that is being reinvented—that is only half the story. The fact is, regulatory reinvention involves more than the efforts of a federal agency to streamline processes or deliver more cost-effective service to customers. At its essence, regulatory reinvention is a challenge and an opportunity in which both government and industry have complementary roles to play.

Regulatory reinvention begins with the premise that both government and industry share an interest in doing things right—that is, with a high standard of safety and environmental care. In the case of the Coast Guard and the maritime industry, that interest is ensuring the highest possible standards of marine safety and environmental protection. This is the Coast Guard's charge as a regulatory agency, and the marine industry's responsibility to its employees, its customers, and the American people.

Government and industry have other complementary interests, too. In an era of scarce governmental resources, an agency like the Coast Guard cannot expect significantly larger budgets or significantly more human resources to carry out its multifaceted mission. Given that, it must find ways to do its work as efficiently as possible and to draw on the resources of other qualified parties—industry, classification societies, educational institutions—to help it accomplish its goals. This is particularly important as the performance of government agencies is increasingly measured by the results they achieve, not by the dollars they spend or the personnel they employ. For its part, the maritime industry has a strong interest in retaining the ability to operate in the most cost-effective, operationally efficient manner possible. Safety and efficiency can and do coexist; the best way to ensure that they continue to do so, and that ever higher standards of safety are achieved, is to bring government and industry together as partners in the regulatory reinvention process.

The goal of this process is twofold. First, where regulations are needed, regulatory reinvention means crafting those standards in a way that maximizes the likelihood that they will be successful in achieving their intended results: for example, more competent, better trained personnel, or less oil spilled in the marine environment. Second, regulatory reinvention means encouraging responsible industries and companies to do more than the regulations require, and creating a climate in which companies that abide by higher standards are encouraged in and rewarded for their efforts. Ultimately, this combination of a sound, well-crafted regulatory floor, complemented by rigorous industry-developed standards that exceed that floor, is the best way to achieve the shared Coast Guard-industry goal of a safer, cleaner marine environment.

Several examples from the recent experience of the Coast Guard and the tugboat, towboat, and barge industry illustrate the complementary roles of government and industry in the regulatory reinvention process.

The Licensing Rule-making: A Case Study in Regulatory Reinvention

The Coast Guard's ongoing Rule-making to overhaul the licensing requirements for towing vessel operators demonstrates how a more open, consultative regulatory process can benefit the Coast Guard, the industry, and, not least, the cause of marine safety and environmental protection.

Nearly four years ago, the Coast Guard, the Secretary of Transportation, and the barge and towing industry agreed that a more rigorous licensing system for towing vessel operators was necessary to ensure the highest standards of competence in the wheelhouses of tugboats and towboats. All parties agreed that a key element of this new system should be a practical demonstration of navigational proficiency as a prerequisite for obtaining an original license. This concept was consistent with changes then under development to the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW), which governs personnel qualifications for mariners on oceangoing vessels, and with practices long in place within the towing industry itself to ensure the competence of the vessel operators. Nonetheless, both the Coast Guard and the towing industry recognized that translating this concept into federal regulation would bring new challenges and require close consultation between the Coast Guard and the barge and towing industry.

To meet that challenge, the Coast Guard and the industry established, under the auspices of the congressionally authorized Towing Safety Advisory Committee (TSAC), a working group comprising company executives, working mariners, labor representatives, and maritime educators to make recommendations on the outlines of a new licensing system. Using federal advisory committees to provide feedback on emerging federal regulations has long been a component of the Coast Guard's regulatory development process, but in this case, the agency pursued a more extensive process of consultation rooted in the principles of regulatory reinvention. TSAC was asked for input early in the regulatory development process—even before a notice of proposed rule-making (NPRM) was developed. The Coast Guard thus had the benefit of the committee's perspective from the outset, and could factor the advice of TSAC into the development of a regulatory work plan.

In another improvement over the traditional regulatory development process, the Coast Guard continued to use TSAC as a resource as new or difficult issues arose in the rule-making process. In the summer of 1995, two smaller TSAC working groups were convened to help the Coast Guard develop an approach to two issues that had not been addressed in the committee's original recommendations to the agency, but had proven challenging in the process of drafting the then-unpublished NPRM. These working groups helped the Coast Guard to anticipate and address industry concerns that would otherwise have surfaced in public comments on the NPRM: the terminology applied to licenses for inland towing vessel operators and the special operational circumstances of operators in the harbor services sector.

When a NPRM was eventually published in July 1996, the Coast Guard again turned to TSAC to provide additional perspective on a series of issues that had generated significant concern from industry commenters, most notably the proposed inclusion of a horsepower breakpoint as a line of demarcation in the new licensing structure. Reviewing its initial recommendations and the input of commenters to the docket, TSAC recommended that the horsepower breakpoint be eliminated and suggested other ways to ensure the competence of towing vessel operators to safely operate the vessels on which they serve. A subsequent round of TSAC working group feedback, coupled with input from a series of public meetings, led to the October 1997 publication of a supplemental notice of proposed rule-making (SNPRM) that addresses the most serious concerns raised by operators while providing a more rigorous system to ensure and maintain high standards of personnel competence.

The Coast Guard's willingness to view the regulatory development process as a dialogue with industry and to make use of all the tools available to pursue that dialogue—such as public meetings and frequent consultation with advisory committees—has already borne fruit in a more candid agency-industry relationship and a better understanding by the Coast Guard of the distinct characteristics of towing vessel operations. Moreover, this open, consultative process is certain to produce a final rule far more practical, effective, and operationally workable than the agency could have produced without the help of regulatory reinvention tools.

Beyond Regulation: Leveraging Industry Resources to Improve Marine Safety and Environmental Protection

As encouraging as this case study is, producing more practical regulations through a more open regulatory process is only half of the regulatory reinvention story. The other half involves going beyond regulation by encouraging industry itself to take the lead in developing higher standards of safe and environmentally responsible operations. The experience of the American Waterways Operators (AWO), the national trade association for the inland and coastal tugboat, towboat, and barge industry, in recent years demonstrates the value of industry-led initiatives as a complement to governmental efforts to raise the standard of safety on U.S. waterways.

In April 1994, AWO's Board of Directors approved a strategic plan for the association called *AWO 2000.* A key objective of that plan was to make AWO "the leader in marine safety and environmental protection," working in partnership with its members to promote sound operating principles and practices and working in partnership with government to implement safety improvements. Internally, the manifestation of that objective is the AWO Responsible Carrier Program, a safety program for barge and towing companies approved by AWO's Board of Directors in December 1994. The Responsible Carrier Program is based on the philosophy that while government clearly has a vital role to play in ensuring the safety of marine transportation—namely, to establish and to enforce the regulatory floor below which no company or vessel should be operating—safety is not primarily the Coast Guard's job, it is industry's job. As individuals and companies who make their living in the towing industry, it is the members of AWO who best know their business, and it is companies themselves who have the most ability and the greatest responsibility to operate their vessels in a safe and environmentally sound manner.

The Responsible Carrier Program is a mix of procedural guidelines and specific equipment and personnel requirements designed to provide a template that barge and towing companies can use to implement a comprehensive company safety program tailored to the specifics of their trade, area of operation, size, and corporate culture. No matter where a company is on the continuum of safety and quality—the program takes as a starting point compliance with all applicable laws and regulations—the Responsible Carrier Program is designed to make it better. The program itself is organized in three parts—management and administration, equipment and inspection, and human factors—reflecting the role of each of these components in ensuring safety and efficient towing vessel operations.

For the past three and a half years, AWO has pursued an intensive implementation effort aimed at ensuring that all AWO members have the tools they need to adopt the Responsible Carrier Program. That process led to the hiring of a full-time AWO staff expert as Director-Safety Responsible Carrier Program Implementation, charged with providing hands-on assistance to AWO members in upgrading the safety of their operations. Developing and implementing industry standards is an evolutionary process: in

October 1997, AWO's Board of Directors voted to establish a third-party audit for the Responsible Carrier Program, a step which will provide companies with independent feedback on their safety program and provide external verification to industry customers, insurers, regulators, and the public that high standards of safety and environmental protection are in place. On April 3, AWO's membership took its most significant step yet and approved an amendment to AWO's *Constitution and Bylaws* making a commitment to compliance with the Responsible Carrier Program a condition of membership in the association.

Complementing the Responsible Carrier Program is the Coast Guard-AWO Safety Partnership, established in September 1995 to provide a mechanism for Coast Guard-AWO cooperation on safety and environmental issues outside the regulatory process. If the Responsible Carrier Program is about industry taking the initiative to put its own house in order, the Safety Partnership provides a mechanism for working cooperatively with the Coast Guard outside the regulatory process to address safety and environmental protection challenges that warrant collective agency-industry attention, without waiting for Congress or the public to demand it.

The partnership, the first of its kind between the Coast Guard and any segment of the U.S. maritime industry, centers around a National Quality Steering Committee composed of senior Coast Guard and industry leaders. The principal role of this high-level committee is to identify safety or environmental concerns to which subject-specific Coast Guard-AWO Quality Action Teams (QATs) can develop solutions. It's a serious, working partnership designed to produce real results. For example, the first Coast Guard-AWO QAT was formed in late 1995 to analyze the causes of crew fatalities in the towing industry and develop a program to reduce the incidence of on-the-job fatalities, a key objective of the Coast Guard's marine safety (G-M) business plan. The QAT's work spurred the development of the Stay Alert for the Edge (S.A.F.E.) decks campaign, a joint Coast Guard-industry initiative to educate crewmembers on safe working practices and fall overboard prevention.

A second QAT recently completed an analysis of oil and hazardous substance transfer spills between tank barges and marine terminals, and is now moving forward with a communication and implementation campaign to disseminate the QAT's recommendations to prevent tank barge transfer spills. As a follow-on effort, a new Quality Action Team is now working to investigate the larger, navigation-related spills that account for the majority of tank barge-related pollution by volume. Similar Coast Guard-industry teams are also at work on the regional level, with Regional Quality Steering Committees in place in AWO's Mid-continent, Southern, Atlantic, and Pacific regions. This focus on real work and results has garnered some high-level recognition: in April 1997, the partnership was awarded Vice President Gore's Hammer Award for its efforts to bring government and industry together to solve problems through a cooperative, non-regulatory approach, consistent with the objectives of the administration's National Performance Review.

Just as the marine industry can support the Coast Guard's regulatory role by playing an active and constructive role in the regulatory development process, so the Coast Guard can encourage the development of industry standards by recognizing the steps industry is taking to improve its own safety and environmental performance. Programs that target Coast Guard enforcement activity on substandard operators or allow responsible operators to take over such functions as vessel inspection, with appropriate oversight, are an important means of encouraging industry to go beyond regulatory compliance and strive for higher standards of marine safety and protection of our nation's waterways. Such initiatives are a key component of a holistic regulatory reinvention program.

True regulatory reinvention requires a commitment by both government and industry to make the contribution each is best suited to make to the achievement of shared agency-industry objectives. That process begins with the recognition that both the Coast Guard and the maritime industry have important and necessary roles to play in developing and implementing high standards of safety and environmental protection. It cannot end there, however. Ultimately, the success of regulatory reinvention will be judged by the results it achieves: by injuries avoided, by accidents averted, by oil and hazardous substance spills prevented. Achieving those results will require a concerted and continuing Coast Guard-industry effort to refine and reinvent old ways of doing business and continually strive for higher standards of safety and environmental protection.

Why the Coast Guard Is Reinventing Its Regulatory System

by Christine Meers and Sarah Osmer

Introduction

On March 13, 1993, the National Performance Review, now the National Partnership for Reinventing Government (NPR) was set into action under the direction of Vice-President Al Gore. In his letter to President Clinton, Vice-President Gore identifies NPR's goals as "moving from red tape to results to create a government that works better and costs less." Six months later, NPR announced over 800 suggested reforms. One of these suggestions, the need for reinvention of the regulatory system, has received significant executive attention. As a regulatory producing agency, the Coast Guard is complying with the president's new policies, and reinventing their own regulatory process. This issue of *Proceedings* explains many areas in which the Coast Guard has been an active participant in making the vision of NPR a reality.

"Reinventing the Regulatory System" In Even Plainer Language

In his 1993 book *Creating A Government That Works Better and Costs Less: The Report of the National Performance Review*, Vice-President Al Gore wrote, "Thousands upon thousands of outdated, overlapping regulations remain in place." As part of the administration's Reinventing Government Program, the need for regulatory reform was studied. The issue of modern regulatory reform was first addressed by President Reagan in 1981, when he required the Office of Management and Budget's (OMB) Office of Information and Regulatory Affairs (OIRA) to review all regulations proposed by executive agencies. However, Vice-President Gore cites a 1993 study concluding, "the cost to the private sector of complying with regulations is at least $30 billion annually."

So, in 1993, the Vice-President convened an informal working group to recommend changes to the existing regulatory review process. One of those recommendations resulted in Executive Order #12866-Regulatory Planning and Review. Executive Order #12866 calls for more than a review of reforms; a reinvention of the federal government's system of producing and administrating regulations is necessary. In the spirit of NPR, it's objectives are to:

- enhance planning and coordination of new and existing regulations;
- reaffirm the role of Federal agencies in the regulatory decision-making process;
- restore the integrity and legitimacy of regulatory review and oversight; and
- make the process more accessible and open to the public.

The reinvention of the regulatory system is not only meant to improve the new regulations, but also to revise existing regulations through review, and change the regulatory process as a whole.

The President instructs agencies on how they should implement reinvention in what he calls his Regulatory Philosophy and Regulation Principles. The Regulatory Philosophy communicates the goals each agency should strive for. In general, agencies should propose only such regulations that are required by law, are necessary to interpret the law, or are made necessary by compelling public need. Regulations should be based on full assessment of costs and benefits (both quantitative and qualitative) of all alternatives. Regulations should reflect the best possible alternative, including the alternative of not regulating. The President's Regulation Principles are the step-by-step methodology agencies should follow to accomplish the goals set by the Regulatory Philosophy.

To aid agencies in reinventing their regulatory systems, E.O.#12866 calls for the creation of a collaborative regulatory planning and review process consisting of Federal agencies, the Office of Management and Budget (OMB) and the Vice-President. The organization works cooperatively to make sure important regulations are in compliance with applicable law, the President's priorities, and the Execu-

tive Order. In the organizational effort, agencies are responsible for conducting reviews of their existing regulations, and for developing new regulations consistent with the reinvention program.

The Office of Management and Budget (OMB) is responsible for reviewing agency proposals and final rules for compliance. The OMB review process focuses on reviewing and revising the most important rules (i.e. rules that have the greatest economic, social and legal impact on the public). This selectivity allows for greater attention to detail and more time to review each rule, resulting in more improvements in regulations. The Vice President is responsible for coordinating the development and presentation of recommendations concerning regulatory policy, planning and review.

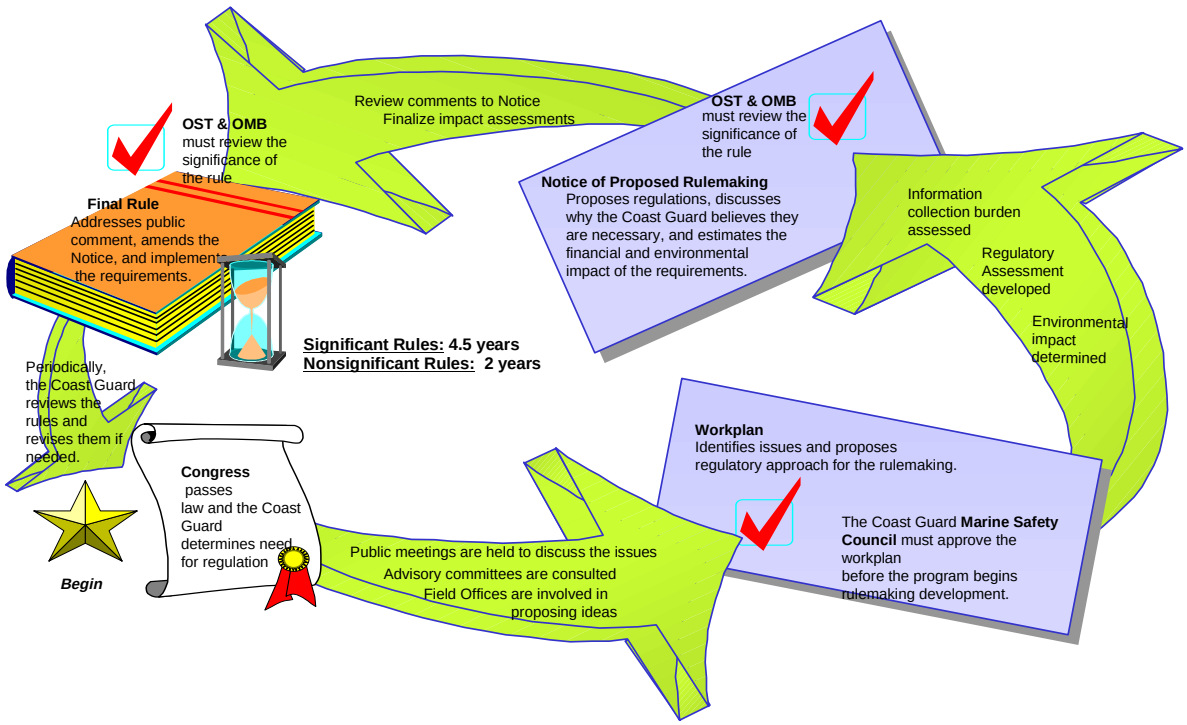
Where Do Regulations Come From?

To understand changes to the regulatory process, you need to understand the existing process and the challenges to improve it. Regulations are directives, standards, or procedures, supported by penalties or other sanctions that are designed to shape the behavior of individuals, businesses, and state, local and tribal governments. Four key agents are involved in the development and enforcement of regulations: Congress, the executive branch, and the public and federal courts.

Congress passes legislation that authorizes or requires an agency to issue regulations. The executive branch, including independent regulatory agencies, decides the form and actual substance of regulation and issues individual rules through a rule-making process. The Administrative Procedure Act (APA) is the basic legal structure governing this rule-making process. APA requires agencies to publish a notice of proposed rule-making in the Federal Register (FR) that either sets forth the proposed rule or describes what the agency intends to do. The agency must allow the public time to comment, and then is required to review the public comments, modify the rule as appropriate and publish the final rules and a "statement of basis and purpose in the FR." The public may challenge these final rules in court. The courts can order agencies to revise rules. The entire process usually takes about 24 to 36 months. This is a high-level explanation of the process. Figure 1 provides a general schematic of the regulatory process of the Coast Guard.

Domestic marine safety regulations historically have been developed in response to disasters or significant incidents. In such cases, Congress has

Figure 1
The Regulatory Process

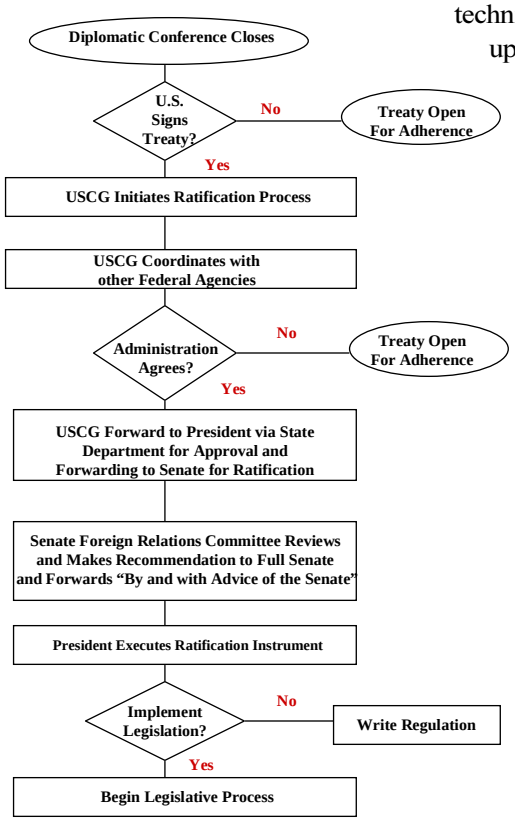


taken swift and decisive action to answer public outrage and the Coast Guard has published comprehensive regulations to improve safety.

Trade expansion and differences in worldwide regulatory application have also led to voluntary consensus standards by such societies as ASME, ANSI, IEEE, and others. By 1968, these standards were suitable to replace the requirements of federal regulations. By 1982, our relationship with the maritime industry and the American Bureau of Shipping had grown to let us take advantage third party certification. Certifying others to act on our behalf gave business the freedom to choose the Coast Guard's level of involvement they wanted and us the ability to multiply our workforce.

Another way in which the Coast Guard writes regulations is through the international treaty process. In line with a long-standing strategic commitment, the Coast Guard has worked to establish standards through the International Maritime Organization (IMO) for 40 years. The IMO is under the auspices of the United Nations. The IMO amends and modernizes important international conventions. The Coast Guard views the consensus that the IMO can generate as a means of furthering maritime safety and environmental protection on a global scale. The treaty ratification or the tacit amendment processes are used to implement global safety changes.

Figure 2
International Treaty Process



The International Treaty Ratification Process Explained

The Coast Guard initiates the international treaty ratification process and coordinates with other involved federal agencies to ensure concurrence. If the Administration supports ratification of the treaty, the appropriate paperwork will be completed and the document forwarded, via the Secretary of State, to the White House. The President forwards the treaty to the Senate for ratification. The Senate Committee on Foreign Relations makes recommendations to the full Senate regarding ratification of a treaty. If the Committee should approve a treaty as submitted by the President, it will "report the same favorably to the Senate without amendment with the recommendation that it advise and consent to its ratification." The President executes an instrument of ratification, then for such an instrument to be deposited in accordance with the relevant terms of the treaty as constituting an instrument of ratification, adherence, acceptance, accession, or approval. The instrument of ratification is returned to the Department of State for further action. Depending on the treaty, it may be necessary for implementing legislation to be developed. Neither Senate advice nor consent is always necessary. For treaties that include a lot of technical information that is updated periodically (many IMO treaties, for example), the tacit amendment process is used. Such treaties give party states a designated amount of time to implement the technical amendments. The tacit amendment process is used for technical issues only, nothing substantive. Treaty ratification can take a long time. For example, the President, based on a Coast Guard recommendation, has requested accession to the Law of the Sea Convention. The Senate Foreign Relations Committee has contemplated this action for over 3 years. Figure 2 depicts the process to ratify an international treaty. This activity precedes regulatory development activity.

The rather simple regulatory development process can be made increasingly more complicated at each step of the process. Congress traditionally authorizes or requires command-and-control regulations rather than more innovative, market-oriented mechanisms that allow regulated entities greater flexibility because they often lack knowledge about innovative regulatory designs. The executive branch

has layered on a number of requirements in addition to those imposed by APA. They include statutes, executive orders, and internal agency policies and requirements. Although many of these extra requirements are beneficial, they contribute to slowing down the regulatory process. The long time it takes agencies to issue rules is a major problem because it delays resolution of the problem that the rule is supposed to address and creates uncertainty and fear within the regulated public. Another factor that delays the publication is the review process. The review process often contributes to publication delays. Some view this as a clogged process in which the public rarely gets the maximum benefits from the amount it spends on regulation. However, regulatory review is necessary by multiple entities to make sure that all interests are served and to prevent agencies from overstepping their boundaries.

The goal of the Reinvention Program is to create a regulatory process that will respond in a timely manner, be efficient, and be both fair and perceived as fair. The process should produce rules that:

- address an identifiable problem,
- implement the law and the President's policies faithfully,
- are in the public interest,
- are consistent with other rules and policies at all levels of government,
- are based on adequate information,
- are adequately and rationally justified,
- accomplish goals in a cost-effective manner,
- can actually be implemented,
- are acceptable and enforceable,
- are easily understood, and
- stay in effect only as long as is necessary.

E.O.#12866 identifies how best to recreate the regulatory process to accomplish these goals.

"How To" Guide for Reinventing the Regulatory System

The President's Principles of Regulation provide broad guidelines for agencies to follow in reinventing their regulatory system. First, agencies should identify and analyze a problem in order to tailor the regulatory approach appropriately. Since agencies have to cope with a heavy load, they should prioritize the problem and its causes. Once the problem is identified, they can begin to develop alternative approaches to solving the problem. They should try to design approaches that go beyond the traditional command and control regulation, such as performance standards, market incentives, and information strategies.

- Performance standards are a non-regulatory approach in which federal agencies set goals and allow the private sector to determine the best means to achieve them.
- Market incentives are rights to a good or service issued in set quantities and allocated appropriately. Entities can trade, buy and sell these rights among themselves without agency interference, but the total quantity will always be regulated.
- Information sharing is a non-regulatory approach in which agencies share key information with the private sector and allow it to take action instead of making regulations.

After agencies develop alternative approaches to the problem, they should assess the costs and benefits of all the alternatives, using the best available scientific, technical and economic data available. Costs and benefits include both quantitative and qualitative factors. Agencies should then consult intergovernmental partners (e.g., state, local and tribal governments) and the public for their input. Consideration for the prospective regulated entities' availability of resources to carry out the regulation is recommended. If the best solution is a regulation, regulations that are inconsistent, incompatible, or duplicative with agency regulations or with those of other Federal agencies should be avoided. Agencies should design the regulation for maximum benefit of the public. Also, the regulatory language and organization should be simple and easy to understand.

How Has the Coast Guard Caught the Regulatory Reinvention Wave?

As a Federal agency, the Coast Guard has worked diligently to reinvent their regulatory system, and its efforts have not gone unnoticed. In its December 1996 "Regulatory Report to the President", OMB commends USCG several times as an agency that has successfully begun to incorporate the President's regulatory philosophy into its regulatory system. The following commendation praises Coast Guard's ability to assess all the factors of a problem and tailor the solution accordingly, but the example also illustrates how Coast Guard considers small business concerns:

"DOT's Coast Guard has also been adept at tailoring its rules to address the problem at hand. In January 1996, the Coast Guard issued a final rule revising inspection and safety requirements for more than 5,000 small passenger vessels. Extensive risk analysis and public comment received on the proposed rule, combined with a focus on high-risk vessel operations, enabled the Coast Guard to substantially reduce its original proposed requirements. This approach helped the Coast Guard to continue to ensure safety and reduce red tape by retaining strict requirements on riskier boat travel while substantially reducing the number of vessels required to carry additional life rafts and inflatable buoyant apparatus and to maintain crew and passenger lists. These changes significantly decreased information collection and paperwork burdens and reduced annual costs, from an estimated $10 million for the proposal, to about $3 million for the final regulation."

Coast Guard has improved its regulatory process not only by implementing the President's regulatory principles, but also by realizing the initiatives of Vice-President Gore's National Partnership for Reinventing Government (NPR), which are

- Putting customers first,
- Cutting red tape,
- Empowering employees to get results, and
- Cutting back to basics.

When the NPR came along, the American people and executive leaders wanted benefits for tax dollars spent on services. The Coast Guard consulted with shipping companies and the public, to use strategic planning, and to measure performance. These data made our mandate clear: remove the regulatory differential between U.S. and foreign vessels engaged in international trade. If we did this, U.S. shipping interests would become more globally competitive. The result was regulatory reform around 1992. The goal is to harmonize our regulations with international standards, increase adoption of industry standards, remove unnecessary regulations, and provide multiple compliance options. The Coast Guard was well positioned to contribute to the President's Regulatory Reinvention Initiative (PRRI) to jump start achievement of the attributes listed above. In PRRI, the President mandated:

- That agencies eliminate or reinvent 16,000 pages from the Code of Federal Regulations by June 1, 1996,
- Cut obsolete regulations and reform remaining regulations, and
- Change how agencies measure performance so that the focus is on results rather than process and punishment.

In the environment created by the PRRI, the Coast Guard was able to expedite regulatory projects in line with its strategic commitment to enforce stricter international safety and environmental standards on the international maritime community; and level the playing field between the U.S. maritime industry and the international maritime community by removing the disparity in safety and environmental standards. The Coast Guard began its regulatory reinvention in 1993. With PRRI, the Coast Guard readjusted priorities and concentrated on completed strategic reforms. The Coast Guard met the PRRI targets while also advancing its long-term strategic commitment. By June 1996, the Coast Guard published many rules to meet these goals. Some examples follow.

- Lifesaving Equipment Revision: revised lifesaving equipment regulations to conform with Chapter III of SOLAS 74 and replaced prescriptive regulations with performance-based regulations;
- Electrical Engineering Revision: amended rules for electrical engineering, assimilating them to the conventions of SOLAS 74, deleting obsolete and prescriptive design,

specification, and approval standards, replacing them with performance-based requirements;

- Safety of Life at Sea ("SOLAS 74") Revision: adjusted rules for construction and performance of vessels to bring them into accordance with the newer SOLAS 74 standards which take advantage of advances in technology and lessons learned sine the last amendment of these regulations;

- Tankerman Qualifications: created qualifications for tankermen in accordance with the Standards of Training, Certification, and Watchkeeping for Seafarers international convention;

- Small Passenger Vessels: modified the regulations for small passenger vessels to meet technological advances, industry trends, and international standards;

- Bulk Hazardous Material: altered carriage requirements for bulk hazardous materials to align with the minimum requirements with those approved by the IMO;

- Offshore Supply Vessels: consolidated the regulations covering this unique class of vessels in its own subchapter in order to provide more efficient and customer focused regulation of the nation's fastest growing fleet of offshore supply vessels;

- Vessel Traffic Services (VTS) Revisions: standardized VTS reporting requirements nationwide and reorganized them so that 33 CFR is now easier to use; and

- Industry Standards: eliminated regulations that could be replaced by industry standards.

Throughout the process, the Coast Guard exceeded its goals for both pages eliminated and reinvented in the Code of Federal Regulations by 2 and 58 percent, respectively. Vice President Gore recognized this work with a Hammer Award.

Other legislation to advance NPR objectives include:

- *Unfunded Mandates Reform Act*: Signed into law by the President in March 1995, this Act sets forth the responsibilities of Federal agencies when writing regulations that meet the Act's threshold of $100 million in expenditures in any year as a result of unfunded mandates on State, local, or tribal governments, or on the private sector. The objectives of this Act are for agencies to have a renewed focus on ensuring that rules of all kinds contain a minimum of unfunded mandates, establish consultative processes with affected State, local, or tribal governments, and are responsive to legitimate concerns raised by other levels of government.

- *Paperwork Reduction Act (PRA):* The PRA of 1995 set standards of minimal burden and maximum usefulness for agency collections of information that are contained in regulations. This new PRA covers all reporting and record keeping for the Federal Government, and includes as well those agency actions that authorize or require disclosure of information from one private party to another.

- *Small Business Regulatory Enforcement Fairness Act (SBREFA):* This bill, signed in March 1996, codifies and reinforces many of the President's own initiatives aimed at cutting regulatory burden on small businesses. The bill provides for Congressional review of agency regulations.

- *The Regulatory Flexibility Act:* This act requires agencies to consider the special needs and concerns of small entities, particularly small businesses, and to prepare a "regulatory flexibility analysis" describing the rule's effect on these entities.

- *The National Environmental Policy Act:* This bill requires agencies to analyze the effect of the regulation on the environment and, in certain circumstances, to prepare an environmental impact statement.

You will read about many other innovations in this issue that the Coast Guard has initiated to fulfill the reinvented regulatory system vision.

Summary

Our journey in regulatory reinvention continues because it is an iterative process.

The Coast Guard will continue to listen to and act on our customers' feedback. We will get feedback through both informal and formal partnerships. Our feedback has been both positive and formative. Recently, the U.S. Chamber of Shipping praised our work, but at the same time told us that we can do even more to reduce the regulatory burden on U.S.-flag carriers. We are working with the U.S. Chamber of Shipping to further improve shipping's competitiveness. In the future, we will explore ways in which to make regulatory improvements for the domestic fleet. We are still learning how to better apply standards to many domestic vessel segments and to establish a cost-effective safety and environmental protection foundation. We're optimistic that our formal partnership with industry associations will provide us with appropriate insight and direction. Other short-term improvements include the following:

- Revise 33 and 46 CFR to slim and trim regulations and standards, and make them easy-to-understand.
- Adopt "best practices" and voluntary compliance programs to achieve our goals.
- Compare and rank the relative risks posed by problems regulated, to target environmental protection efforts on the basis of opportunities for the greatest risk reduction. This will help us distinguish between regulatory targets that demand immediate attention and those that allow for mid- or long-range corrections.
- Frame regulations on market incentives instead of command and control.
- Regulate only when necessary and focus on marine safety and environmental protection goals identified in our business plan.
- Harmonize domestic standards with international standards wherever practical. Level the playing field.
- Regulate cost-effectively, openly, and fairly.
- Provide increased flexibility in compliance options, particularly to small businesses.
- Increase early public participation in the regulatory process.
- Create easier ways for the public to participate in the regulatory process, particularly leveraging the efficiencies and convenience of information technology.
- Maximize benefits to society and place the smallest possible burden on those being regulated.
- Coordinate more with other Federal agencies, state, and local governments to minimize burdens. Where possible, develop federal-state-local partnerships to develop goals and objectives for major programmatic areas.
- Create more grassroots partnerships with those regulated to improve the regulatory process.
- Proactively work with Senate and House liaisons and subcommittees to refine pending legislation so it reflects appropriate timelines and realistic, cost-effective solutions.

Regulatory reinvention offers many benefits. Costs to the maritime industry are reduced and compliance flexibility is increased. Both remove trade barriers and enhance global competitiveness. Regulatory reinvention helps the maritime industry to keep pace with technological advancements. The Coast Guard plans for the future include a keen focus on prevention. Programs will encourage operators to rise to a new level of excellence, ultimately leading to better marine safety and environmental outcomes.

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Sarah Osmer was an intern with the Coast Guard's Office of Standards Evaluation and Development. She is a student at Mary Baldwin College.

A Developing Respect

The Ohio Valley Marine Community: An idea has sprouted into an effective partnership

by Captain David Reed, Port Captain, Crounse Corporation

SILENT MAJORITY AND THE NEED FOR COOPERATION

An Overview:

The Huntington Port, for its size, is one of the busiest areas on the inland waterways. It consists of 18 miles of the Ohio River and includes 8 miles of the Big Sandy River. The port generates over 28 million tons of commerce a year. The Kanawha River, which is just 30 miles north of the Huntington Port, extending into the heart of West Virginia's coal and chemical regions, and still in the jurisdiction of the Huntington District Coast Guard and Army Corps of Engineers (ACOE), generates over 25 million tons of commerce a year. With the region's tonnage approaching 60 million tons of commerce moving through the area, something was needed. And that something was cooperation—cooperation between industry and government. To that end, the Waterways Advisory Committee of the Huntington District was formed 19 years ago to deal with a major bottleneck to commerce at the time. The Galloplis Lock and Dam project was just getting off the ground, and the ACOE asked industry for input into the design. From those humble beginnings, the group had advised the district on countless projects.

Breaking Down Barriers

River pilots in the MSO Huntington zone of the Central Ohio River Valley now have a dynamic and influential forum to discuss regulatory and navigational issues that directly affect them. This group is the Navigational Subcommittee to the larger organization—the Waterways Advisory Committee of the Huntington District. The Coast Guard formed this so-called Navigation Work Group (NWG) in 1996. It came into being as a rather narrowly focused NWG designed to document the many lessons learned during major flooding of the region earlier that year.

The NWG membership (led by the MSO Huntington executive officer, a licensed officer himself) was purposely limited to experienced industry captains and pilots. The reason for this was simple: It only made sense to have those who were actually on the river during the flood—those who could recount their success firsthand. In addition, the Coast Guard felt the NWG could set a standard of care for high-water navigation using those most qualified and capable of helping to form the same standards.

By the time the group had met a second time, it was apparent to everyone there was a tremendous untapped opportunity to improve communication and safety within the towing group. That was due in large measure to the collective experience of members, as well as the propensity of the pilots to sincerely speak their minds. Soon, many navigational-related issues were put on the agenda and the group was placed under the industry's larger Waterways Advisory Committee. The popularity of this forum has spread throughout other zones in the Ohio River system, and new groups are in the formative stages.

In the end, what started as a rather limited idea has grown to a highly effective Ohio River Valley partnership, one incorporating the marine community from Pittsburgh to Paducah.

(R to L): Bobby Taylor (AEP), David Clayton (ACOE) and Commander Sahoe (USCG)

Success through Cooperation

During the major flood of the Ohio River System in January of 1996, the Huntington Zone was fortunate to avoid any significant vessel casualties (barge break away, sinking, or allisions with bridges or locks and dams). This was directly attributable to two things: (1) The vigilance and skill of industry personnel, and (2) Coast Guard's ability to open and maintain regular lines of communication for information and problem resolution.

What have we learned? A great deal. For example, the NWG original objective to validate lessons learned has been realized with the completion of the Ohio River Crisis Action Plan (CAP). The CAP, not unlike a similar plan for federal authorities and the towing industry used on the Mississippi corridor, is tailored to the geography and unique characteristics of the Ohio River basin. The CAP now incorporates the response activities of industry, Coast Guard, and ACOE actions during flood events and low water conditions. In addition, the CAP, originally intended to cover just the Huntington zone, now represents not only Huntington, but the Pittsburgh, Louisville, and Paducah zones as well.

The Benefits

The CAP features several benefits:

Knowing more about the proactive actions of the towing industry during high water alleviates uncertainty. It also reduces the likelihood of imposing less than realistic or necessary restrictions on traffic because of unfamiliarity with the river.

Industry agrees the CAP is useful for setting and maintaining a standard of care, as well as developing the professionalism of new vessel operators. These pilots are often required to navigate portions of the river on which they have little experience or have never transited under extreme conditions.

For the benefit of all, the CAP also established an integrated notification system to provide the quickest "heads up" on rapidly rising water.

In developing the plan, captains and pilots shared their experience and compiled a list of precautions they considered during high water. The navigation parameters of bridges and the many ACOE locks included defacto limits to vessel operation, and industry agreed to provide a representative in the Coast Guard Command Post to track traffic and assist in the evaluation of vessel intentions.

Once in place, the CAP (which identifies who is operating and applying navigational considerations to the intended voyage) should enable the Coast Guard to focus its attention on marginal operations instead of invoking system-wide river closures. The latter hurts those companies operating responsibly.

A Growing And Troubling Trend

The effort to capture the years of experience represented within the NWG led to a discussion of a growing trend in the towing industry: less experienced operators. The only means available to operators to become more knowledgeable is on-the-job training. This initially is provided by more experienced captains on their vessels, and then through personal experience on the river. The availability of a more ready and direct source of information does not exist on the river.

The charts produced by the ACOE do not contain the types of depth or navigational hazard information normally included on coastal charts. Moreover, there is no written *Coastal Pilot* or similar book to become familiar with local-knowledge types of information. The Navigational Subcommittee decided local-knowledge types of information could be included in chart books. Several of the more senior and experienced members of the group met and produced a list of cautionary notes for inclusion in the next annual printing. This really priceless information will now be available to the new pilot, or the experienced one for that matter, who operates infrequently on the Ohio River. It is hoped this will reduce vessel casualties. After debate over possible legal ramifications, it was agreed these changes would be made.

Yet another aspect of input to river charting was the coordination of comments on the ACOE's project to convert the current chart format to one more closely resembling that of coastal charts. Many in the group were opposed to this idea because of familiarity gained by years of use with the existing format. Here, the group was successful in providing feedback to the ACOE to better account for the unique navigational characteristics of the river. Improvements were made to the depiction of docks, day boards, and general navigational characteristics. The group also asked for several alternate channel lines to be put back on the charts. Finally, the Group Commander, from Group Ohio Valley, discussed discrepancies within aids to navigation. The pilots gave the Commander and his cutter officers valuable information on aids to navigation and buoy placement.

Majority No Longer Silent

The river industry has long felt that it has not been represented when it came to the regulatory process. It has, in the past, been kind of a silent majority–one consisting of prudent operators who have to live and abide by rules and regulations imposed by the Federal Government. Normal Coast Guard avenues of communication about new regulations frequently do not reach the deck-plate level until it is too late. Thus, pilots feel imposed upon without any say in the outcome. A number of rule-makings, particularly over the past two years, have been directed at improving the qualifications of pilots and the addition of equipment on towboats to ensure safe operation. By the very nature of their job, vessel operators are removed from the front office and are "out of the loop" when these rules are developed, published, and discussed.

The NWG has been a forum for active pilots to learn and to discuss some of the more recent proposals. For example, in late 1996, the comment period for the proposed towing license and manning regulation was quickly drawing to a close without much "deck-plate" scrutiny. When local pilots learned of the proposal, they quickly voiced great concern that the proposal was ill advised on several points. The NWG quickly disseminated information to local towboat pilots. Well attended public discussions with Coast Guard officials and the regulation's project officer from Coast Guard Headquarters were sought and held in Pittsburgh, Charleston, and Cincinnati.

The NWG—along with many pilots elsewhere–sought significant changes in the regulations and made a strong case for an extension of the comment period. The result was that some of the more onerous provisions of the proposal were dropped. But just as important, this "*silent majority*" knew they had been heard. Another such endeavor was the airing of the pending Tankerman—Person In Charge regulations. This

pending regulation will have a drastic impact on most towing vessels because so many take fuel while underway, a practice known as "mid-streaming". The NWG turned to the local MSO for help. A Regional Examination Center chief traveled to Huntington to present and explain the implications of the new regulation. Local mariners had a chance to ask questions and get answers firsthand, instead of the more typical and less reliable river rumor mill.

Alternatives to Restrictions through Cooperation

Barge break-aways, floundering, and allisions with bridges and dams are always a concern during high water conditions, and in some cases result in river closure, a minimum horsepower-to-barge ratio, or other restrictions. The Coast Guard recognizes the benefit of involving local authorities and operators in determining if restrictions, or other alternatives, are appropriate, and when to initiate them.

Arriving at the answer is a complex process for which various factors must be considered:

- Currents at certain river stages
- Water being released by flood-control and hydroelectric projects
- Precipitation entering the river
- Gradient of the terrain
- Variation of barge capacity and draft
- River-specific flood and water conditions
- Trip wires—such as river stages, dam openings, current velocity, or flood stages—for initiating action

Though the process is still evolving, there is consensus that through communications between authorities and operators, as well as responsible tow draft management, the most appropriate solutions are determined.

Environmental Concerns

The group has also dealt with bank erosion, fleet permits, and tug and tow noise in the Pine Creek area of the Ohio River. Concerned citizens from Wheelersburg, Ohio discussed these things with congressional lawmakers, the U.S. Coast Guard, and the Army Corps of Engineers. For example, the group addressed concerns for queue locations below Greenup Locks and Dam. One recommendation was to dredge below the lock on the left descending bank and install mooring cells. Dredge spoils were suggested to retard the right-descending bank erosion. Captains and pilots had a chance to express their feeling about the problem and had a voice in the solution. Their comments were incorporated into the Ohio River Main Stem Study for additional cell placement below existing locks.

Safety First

Bridge pier placements and bridge locations were other topics for the group. The Coast Guard Bridge Administration had asked for input concerning the Pomeroy-Mason Bridge, as well as pier placement on the Buffalo, West Virginia bridge. The administrator has made personal trips to attend our meetings to hear comments first hand. He answered many questions mariners had pertaining to bridge placement and height of the structure. The group helped the Bridge Branch understand problems they had transiting a bridge or its pier placement. They also received comments about transiting the area during construction. This allowed them to put limited restrictions on the contractor without compromising safety.

Partnership

The scrutiny propelling change is taking place both within the industry itself and without, primarily in the government. Both industry and government have come together in a unique partnership to develop and implement solutions to help ensure continued safety in the nation's barge and towing industry.

One such flourishing partnership between government and industry is the Cooperative Towing Inspection Program. A spokesman for the U.S. Coast Guard said the program was designed to reduce the number of boardings by the Coast Guard and to promote safety on the rivers. The industry is assured that participating vessels are fully compliant with federal safety regulations. The NWG advertised the new initiative. Though there were many questions at first, it was explained how the program would work, and an inspection list was distributed.

(R to L): Fred Nyhis (Environmental River Solutions), John Reynolds (AEP) and Bobby Taylor (AEP)

The Coast Guard put to rest most of the concerns about boardings. It answered all the "who's, what's and if's" pertaining to the program. In addition, the forum made for a smooth entrance into the program and reduced the fears of the mariner.

The Coast Guard enlisted help from the pilots to identify VHF radio interference and "dead" areas. We worked with a member of the Coast Guard Auxiliary and a radio specialist. Several areas were identified at the time of the meeting, and additional areas were reported by written form. Several places identified were in critical navigational areas.

Conclusion

Out of all our successes, the best thing that comes from our group is the developing respect between the U.S. Coast Guard, the Army Corps of Engineers, and the mariners. This success is measured by the willingness of the mariners to share knowledge and the enthusiasm of the government to develop partnerships with industry for the promotion of safety and the facilitation of commerce.

The common goal we are striving for is a better-regulated industry that is safer and more efficient. This goal addresses the concerns of the mariner and meets the needs of government. As barriers come down between industry and government, we need to

- identify problems,
- develop and implement solutions in a cooperative manner, and
- recognize operational diversity.

We in the Ohio Valley Marine Community hope this partnership will work and let the barge and towing industry become safer and remain efficient and productive.

The Coast Guard's Outreach to Small Business

by LT John White, LTJG John Natale, and Mr. Carlton Perry

The Coast Guard has recently initiated an aggressive outreach program to let small businesses know about new regulations that may affect them. Having regulatory authority over thousands of small entities, ranging from small commercial fishing vessels to waterfront facilities, it is easy to see the importance of this program. The Coast Guard estimates that small entities represent about half of the regulated community.

What is a "small entity?" The Regulatory Flexibility Act of 1980 defines "small entities" as certain small businesses, small organizations and small governmental jurisdictions with a population of less than 50,000. (A more precise definition of these terms can be found in Regulatory Flexibility Act, 5 U.S.C. 601(3)-(5)). If you need to determine if a business qualifies as a "small business," the U.S. Small Business Administration (SBA) has established a table of size standards, which defines business size by Standard Industrial Classification (SIC) code. The classification of the business as "small" is determined by either the number of employees or the company's annual income, depending on the SIC code of the business.

The Evolution of Small Business Regulatory Reform

Before we go into the details of the Coast Guard's program, we would like to provide a short background of the small business regulatory reform that has taken place in the United States since 1980. Historically, larger companies have driven the need for a regulation, which was then applied across the board to small businesses as well. This was causing small businesses to share a disproportionate amount of the regulatory burden. In 1980, Congress passed the Regulatory Flexibility Act, which required each federal agency to review its regulations to ensure that small entities are treated fairly. The major goals of the Act were to increase federal agency awareness and understanding of the impact of regulations on small business, to require that agencies communicate and explain their findings to the public, and to provide regulatory relief to small entities.

One of the major provisions of the Regulatory Flexibility Act is that an agency complete a Regulatory Flexibility Analysis when there will be a significant economic impact on a substantial number of small entities. This analysis includes a description of the regulatory alternatives considered that would lessen the impacts on small entities.

In 1996, the Small Business Regulatory Enforcement Fairness Act (SBREFA) was passed. It amended the Regulatory Flexibility Act by allowing small businesses claiming to be adversely affected by an agency's regulations to seek judicial review of the agency's actions. It also required that the Regulatory Flexibility Analysis include more facts and figures to back up its findings; required agencies to publish small entity compliance guides to explain regulations in plain English; required agencies to answer small entity inquiries about regulations; established a Small Business Enforcement Ombudsman to communicate small business grievances to the applicable agency; and established small business regulatory fairness boards to provide the Ombudsman with information on agency activity. Additionally, SBREFA required agencies to establish a program to provide for the reduction or waiver of civil penalties for the violation of a law or regulation by a small entity.

Coast Guard Marine Safety Activities

The Marine Safety and Environmental Protection Directorate maintains an extensive customer service infrastructure, including 43 Marine Safety Offices, 3 Activities, 2 Marine Inspection Offices, the

National Strike Force, 9 District Offices, key Headquarters' units, and Headquarters program staff offices. This nationwide presence allows for significant interaction with the regulated community through telephone inquiries, field inspections, pollution investigations, routine patrols, private meetings, public meetings as part of the regulatory development process, unit and program-wide newsletters, Internet web pages, Association and Standards Committee meetings, local industry days, and public outreach activities.

The Coast Guard's nationwide presence allows for routine face-to-face interaction with the regulated community through both "formal" and "informal" mechanisms. "Formal" mechanisms include scheduled vessel and facility inspections, harbor patrols, marine casualty investigations, courtesy fishing vessel examinations, towing vessel safety exams, pollution investigations, and waterways management activities. As a result, Coast Guard personnel and vessel owners and operators interact on a frequent basis; these interactions provide the public with ample opportunity to ask questions and receive advice regarding how to comply with regulations. Pollution investigations, marine casualty investigations, and harbor patrols bring us into contact with many small entity segments of the industry on a routine basis.

"Informal" interactions may include telephone inquiries, private meetings, public meetings as part of the regulatory development process, industry days, unit and program-wide newsletters, Internet home pages, Association and Standards Committee meetings, Advisory Committee meetings, and public outreach/education activities. Many of these methods are tailored to a particular port or geographic area, focusing on the needs of the local regulated community. Coast Guard field and staff offices are customer-focused organizations, and strive to provide appropriate information and oversight for different segments of the regulated community.

The Coast Guard addresses thousands of inquiries from small entities each year, based on the estimated total number of small entities regulated, our customer service infrastructure (such as small MSOs, medium MSOs, large MSOs), estimated "hits" on Internet home pages, etc. These inquiries take many forms, including telephone inquires, written

inquiries, questions during field inspections, routine patrols, or pollution investigations, questions during public and private meetings, email, web pages, and public outreach activities such as the Sea Partners program.

The Marine Safety and Environmental Protection Home Page on the Internet includes a Small Business section providing information on regulations (proposed and final) that may affect small entities. The SBREFA web page includes a summary of SBREFA; links to the Small Business Administration's Home Page; a list of current regulatory projects that may affect small businesses. Also, for certain rule-makings, the web page has the option to comment on regulations electronically; the names and telephone numbers of individuals who can assist small entities with regulatory compliance; and phone numbers for MSOs.

The SBREFA web page also includes an email "feedback" feature enabling users to communicate directly with Coast Guard staff. Seven Regulatory Development Project Managers on the Standards Evaluation and Development Division (G-MSR) staff at Coast Guard Headquarters stand a monthly SBREFA watch to address small businesses' questions and concerns. The division has been successful in meeting its customer service goal of answering small businesses' questions within 24 hours.

Another important source of information is the Marine Safety Newsletter, which specifically highlights information resources that are available to small businesses. For example, the Regulatory Project section of the newsletter provides point of contact information for small businesses that may need assistance in understanding and complying with regulatory requirements. The Marine Safety Newsletter has a monthly circulation of approximately 9,000 (government and industry addresses combined).

We have also enhanced the regulatory development process to promote small entity involvement. For example, points of contact are established for each regulatory action to assist small entities with regulatory compliance. A combination of field and Headquarters resources is used depending on the nature of a rule. Regulatory preamble text has been modified to address more fully the potential impacts of a rule-making on small entities. An explanation is provided in the preamble describing what efforts

have been made to eliminate or reduce the impact on small entities, such as phase-ins, tiered regulations, short forms, and electronic submissions.

For recent rule-making projects that may affect small entities, we have initiated a liaison with Small Business Development Centers (SBDCs) nationwide. To date, we have received replies from 41 state centers acknowledging that they would assist us in distributing regulatory information to their local offices, which would in turn distribute the information to the small business community. We plan to distribute copies of future rule-makings affecting small entities using this network.

Additional efforts are underway to enhance our SBREFA compliance program during 1998. We are currently developing a database of maritime associations, trade magazines and SBDC State offices to facilitate distributing regulatory compliance information to small entities.

Recreational Boating Safety Activities

The Recreational Boating Safety Program affects almost 20 million private recreational vessels and over 78 million individual boaters. The Program maintains a customer service infrastructure including Coast Guard Group Offices, Coast Guard Activities, Coast Guard Stations, U.S. Coast Guard Auxiliary members, District Offices, Headquarters program staff offices, U.S. Coast Guard Infoline staff and an Office of Boating Safety Web page. This nationwide presence allows for significant interaction with the regulated community through telephone inquiries, especially toll-free telephone numbers at the Coast Guard Infoline and several district offices, routine safety inspection patrols, public meetings as part of the regulatory development process, program-wide newsletters, Internet web pages, National Boating Safety Advisory Council meetings, and public outreach activities.

Recreational Boating Safety Program manufacturer compliance data indicate that there are from 4,500 to 4,700 active recreational boat manufacturers at any given time. Of that number, about 80% are small businesses. Each year about 300-400 new boat manufacturers enter the marketplace; about 95% of these new manufacturers are small businesses. The Recreational Boating Safety Program issues new manufacturer identification codes to these manufacturers so they can produce marketable boats with hull identification numbers. The Program assists these small businesses with written and verbal interpretations and explanations of the statutes and regulations, along with copies of all the applicable statutes, regulations and publications.

The Recreational Boating Safety Program currently has several ongoing methods of reaching out to the recreational boating community. “The Local Notice to Mariners” is published on a weekly basis and provides the phone numbers of the points of contact for various questions and comments. This enables any individual to discuss specific questions concerning minority/small business issues.

The Office of Boating Safety is reorganizing and expanding its Web Page to identify regulatory projects and requirements of specific interest to small entities and include contacts for questions related to Coast Guard regulations. This information will also assist the U.S. Coast Guard Infoline staff and the Coast Guard District Recreational Boating Safety Specialists and Liaisons by referring a caller to a designated contact for technical regulatory assistance.

Drawbridge Operating Regulations

The Coast Guard’s Bridge Administration program produces drawbridge operating regulations, which apply to small and large businesses alike. In addition to being published in the Federal Register, these regulations are announced through Local and Broadcast Notices to Mariners. District offices send copies of public notices to all interested and potentially interested parties. All inquiries from small entities seeking advice, information, or help in complying with drawbridge laws or regulations are directed to the Bridge Administration Program’s district staffs.

Coast Guard Policy for the Reduction or Waiver of Civil Penalties

SBREFA required each agency that regulates small entities to establish a policy or program to provide for the reduction, and in certain cases a

waiver, of civil penalties for violations of laws or regulations. The Coast Guard implements this policy at its three consolidated hearing offices (Atlantic Area Hearing Office North (Boston, MA), Atlantic Hearing Office South (New Orleans, LA), and Pacific Hearing Office (Alameda, CA).

Hearing Officers have the authority to decide when a violation has occurred, and to assess a civil penalty. Reports of any investigation conducted by the Coast Guard, or received from any other agency, which indicate that a violation may have occurred are forwarded to a Coast Guard District Commander. If it is determined that there is sufficient evidence to establish a strong case (prima facie), a civil penalty case file is prepared and forwarded to the Hearing Officer.

Once the Hearing Officer has determined that a violation appears to have been committed, the Hearing Officer notifies the party in writing of the alleged violation, the applicable law or regulations, the amount of penalty that appears to be appropriate, and the Coast Guard's civil penalty procedures. He then issues a preliminary letter to the responsible party. The party then has the right to request a hearing or to submit written evidence in lieu of a hearing.

A final decision is not issued until the party has had the opportunity to respond. The Hearing Officer issues a final decision based upon substantial evidence in the record and then reviews the facts of the case to determine the amount of the penalty.

Since 1995, the Coast Guard has implemented policy to waive certain civil monetary penalties for responsible parties who show that they have used the penalty amount to correct the alleged deficiencies and to comply with the applicable regulations. Hearing Officers have been provided with additional guidance to help them identify circumstances involving small entities and to determine which violations will or will not qualify for a waiver in accordance with the SBREFA program. Hearing Officers now include a statement in the preliminary letter of notification to the party that addresses SBREFA considerations. The statement gives the party the opportunity to demonstrate that it is a small entity and to submit evidence for consideration to qualify for a waiver or reduction of a civil penalty under SBREFA.

Regulatory Development on the Information Superhighway

by LT John G. White, USCG

You have probably spent some time "surfing the Net" recently. Whether you use the Internet for fun or as an essential part of doing business (or both!), you are likely familiar with the vast and ever-growing amount of information available on-line. Perhaps you used the Internet to make life a little easier or enjoyable…made travel reservations, purchased computer accessories, registered for a race, downloaded a tax form, applied to college or graduate school, researched an issue for a paper or presentation, or listened to a sporting event broadcast. The possibilities seem endless. Well, believe it or not, the Internet can also make participating in the regulatory development process a little easier.

The Coast Guard, in the spirit of Vice President Gore's National Partnership for Reinventing Government, recognizes the importance of quality customer service and more responsive government. A key part of our customer service standard is providing you with easier access to agency information and services. Since 1995, the amount of information on the Coast Guard's World Wide Web (WWW) pages has grown significantly, and the number of visits to Coast Guard sites has grown from only a few hundred a month to over 1 million a month. At the same time, Internet technology is becoming more refined and powerful, making new options available to provide a state-of-the-art information service.

In April 1998, we introduced a revamped Marine Safety and Environmental Protection Regulations Home Page. You can access the site directly at http://www.uscg.mil/hq/g-m/regs/reghome.htm, or via the Coast Guard's main home page by following the links for marine safety regulations. On the page, you will find features allowing you to:

- submit email comments to the public docket for selected regulatory projects;
- view information about current regulatory proposals (summary, length of comment period, docket number, etc.);
- view, download, and print copies of regulatory publications in multiple formats;
- view small business regulatory assistance information; and
- find links to other sites with related regulatory compliance guidance.

For the first time, the Coast Guard is accepting email comments to the public docket on selected marine safety and environmental protection regulatory proposals. With this new feature, it is easier than ever before to get involved in the regulatory development process. With a few keystrokes, you can view summaries of regulatory proposals and identify those that might affect you, print out copies of the actual document text, and submit a comment on-line. Of course, you can still submit hard copy comments to the public docket by following the instructions in the published notice or proposed rule.

Submitting an on-line comment is essentially the same as sending us email. You draft your comment using your email software, and you can include an attachment (report, brochure, or other electronic file) with your comment by clicking your software's Attachment icon or Insert File/Attachment command. We accept attachments in Microsoft Word 6.0 or later (.doc) format, text file (.txt) format, or portable document format (.pdf).

The Coast Guard provides a dedicated email address for each notice or proposed rule with the email comment option. We check the address daily, and comments received are printed out, logged, and delivered to the Department of Transportation's (DOT) Docket Management System (DMS). DMS posts the comments in the electronic docket. If you want to verify that your comment was received in its entirety and posted, you can view DOT agency public dockets on-line at http://dms.dot.gov. Your comment should be posted in DMS no later than 5 working days after we receive it.

Look for more features and refinements to the Regulations Home Page during the next few months. We always welcome feedback and suggestions. If there is something you would like to see on the Home Page or have other comments, please let us know.

Technology + Risk Analysis =
New Policy For Dry-docking Passenger Vessels

by CAPT Michael W. Brown (Commanding Officer) and LT Eric J. Bernholz (Chief, Inspections Dept.), Marine Safety Office (MSO) Chicago.

One of the most important aspects of the Coast Guard commercial vessel safety program is the periodic assessment of the underwater hull of the vessel. Traditionally, the assessment has been accomplished through a dry-dock examination.

During a dry-dock examination, inspectors are able to verify the structural and watertight integrity of the hull and examine portions of the vessel not normally accessible when the vessel is in the water, such as sea valves, sea chests, propellers, and tailshafts. Ground and mooring tackle can also be examined during a dry-dock exam. The safety benefits of dry-dock examinations are undisputed. However, the costs can be considerable both in terms of actual expenses and, when the vessel is taken out of service, lost revenues.

Currently, the regulations and published Coast Guard policy allows alternatives to dry-docking for certain vessels. The Underwater Survey In Lieu of Dry-dock (UWILD) program allows professional divers to conduct an underwater examination of the hull under the supervision of a Coast Guard marine inspector for mobile offshore drilling units and coastal freight vessels that meet certain acceptance criteria. This obviates the need to dry-dock the vessels for one "cycle," allowing the vessel to stay on its operating schedule and to eliminate the large cost and coordination required for a dry-dock examination. The required dry-dock examinations usually occur every 2 1/2 years in saltwater service and every 5 years in fresh water service.

Several large passenger vessels, certificated under subchapters "H" and "K" of title 46 Code of Federal Regulations (CFR), operate within the limits of the Officer in Charge, Marine Inspection Chicago Zone. As with all certificated vessels, they undergo routine annual and/or quarterly inspections.

Dry-docking posed major problems for some of the passenger vessels. Three of the certificated vessels operate on the Fox River in Aurora and Elgin. These vessels were built on-site, and launched into the river where they now sail. They are confined by bridges or dams, and cannot reach a "normal" dry-dock to be hauled out.

In addition, four vessels sail on the Des Plaines River in Joliet, IL, which is part of the Illinois Waterway. According to company sources, the closest dry-docks capable of effectively conducting a dry-dock exam are in the New Orleans area, a river voyage of over one thousand miles, which would take the boat out of service (and effectively lay off its staff) for a four week period at best.

The UWILD program did not apply to passenger vessels. Few passenger vessels operating in the MSO Chicago zone could meet the detailed and specific requirements and criteria for a UWILD. It calls for a minimum visibility level, an initial reference video, installation of permanent reference marks on the hull, and other items.

In January 1997, representatives from two large passenger vessel operators approached MSO Chicago about possible alternatives to dry-docking their vessels in the spring of 1998. They detailed the costs a dry-dock examination would cause their operation. The costs included—temporarily closing the vessel to passengers, making a 2000 mile round trip over a four week period minimum, the hauling out and dry-docking procedure, layoffs of employees normally working aboard or in support services for the boats, and potential loss to their customer base in a very competitive environment. In light of this, the passenger vessel operators requested to demonstrate a proposed underwater survey process for passenger vessels to take the place of the five-year dry-dock.

At the same time, MSO Chicago began to evaluate the risk to passengers on the vessels in its zone. The previously mentioned vessels had two

important factors to consider: (1) all the vessels operated on benign river routes, free from heavy weather and seas; and (2) all the vessels operated in water shallow enough that if the vessel were to flood, the highest deck available to accommodate all the passengers would remain above the water level, even with damage stability issues figured in. There was no apparent scenario that would result in a catastrophic sinking of the vessel and massive loss of life. It was still critical to assess the underwater condition because an emergency brought on by structural failure or loss of watertight integrity would still endanger passengers. However, consideration of an alternative hull examination method was appropriate as the operating environment reduced the danger.

Although reduced, this same operating environment posed a problem. While underwater inspections have proven successful on other classes of vessels in other areas, there were significant concerns with its applicability to vessels in the Chicago area. These vessels operate in shallow, riverine environments that make visibility a significant issue. The water is extremely turbid and visibility is limited.

The vessel operators' proposal called for a diving company to conduct a complete tactile and videotape examination of the hull of a large passenger vessel while moored at the dock. Under the proposal, the divers mark the hull with stainless steel cables and tags that allow the diver (and inspector or independent surveyor) to determine their relative position on the underwater body of the vessel via the diver's camera. The initial phase of the survey involved the marking of the hull and having the divers sound the hull by hand, looking for potential problem areas.

Next, the divers, equipped with state of the art underwater video systems, would conduct a detailed inspection of the underwater body, especially in any suspect areas using the "clear box" technology. The clear box is a box fastened around the lens of the camera and flushed with clear filtered water, which replaces the turbid water with clearer water to improve visibility.

The divers would also demonstrate the ability to take shaft and rudder clearances, and conduct any routine maintenance done in connection with a dry-

dock exam. For instance, the divers proposed to plug a sea chest and remove a sea valve while the vessel was in the water.

MSO Chicago saw great merit in the proposal, and forwarded it with a positive endorsement through the Commander, Ninth Coast Guard District to Commandant, Office of Compliance (G-MOC), for approval as an experiment. After careful consideration, G-MOC authorized a demonstration of the survey process to take place.

On May 21, 1997, representatives of MSO Chicago, D9, and G-MOC were present for the demonstration, as were personnel from D8 and MSO St. Louis, interested players with vessels in similar situations in their areas of operation. Various other state regulatory agencies overseeing passenger vessel operations were also on hand, as were representatives of other local vessels who were naturally interested in how the Coast Guard would receive the survey.

After a short description of the process by the vessel operator and diving company, the divers entered the water. Coast Guard personnel oversaw the abbreviated survey by watching a video image taken by a camera mounted on the divers' helmets. The camera's image was sent over a hard-wire system integrated into the diver's umbilical line and projected on a large video monitor. Once the video feed was confirmed, inspectors watched as the diver first conducted a tactile examination of the hull, followed by a short demonstration of the "clear box" technology.

Results from this test were mixed. On the one hand, observers were able to obtain reasonably good views of the hull appurtenances, such as the propellers, shafts, and rudder. The divers were able to demonstrate the ability to take bearing clearances and to satisfactorily plug through hull fittings and remove sea valves.

On the other hand, the extremely narrow field of view of the clear box, however, did not provide a satisfactory overall view of the hull. Perspective and lack of contrast made it extremely difficult to orient the view and know at what you were looking. The inspection team on site decided that in its current form, the clear box did not provide the level of confidence necessary to replace a five-year credit dry-docking. However, the inspection team did feel that under certain circumstances, on a case by case basis, an underwater survey could be useful in determining whether or not a dry-dock extension would be appropriate.

In light of this, several Coast Guard representatives from all organizational levels, along with numerous attendees from the passenger vessel industry, met in Washington, DC during July of 1997 to discuss potential alternatives to traditional dry-docking. Keeping in mind the primary goal of protecting passengers, several ideas were presented and a healthy discussion ensued.

After thorough analysis and review, Coast Guard Headquarters published G-MOC Policy Letter 3-98 entitled, "Dry-dock Extensions for Certain Passenger Vessels". This policy document contains the basic eligibility criteria, application process, requirements for a preparatory meeting with the local OCMI, and survey criteria for use in determining the vessel's fitness for an extension of its dry-dock date. If the OCMI is fully satisfied with the results of the survey, he or she will recommend a dry-dock extension of up to 30 months.

Regulations are a means to an end, not an end in themselves. This new policy and the inspection techniques that support it are truly a new and sensible way of ensuring passenger vessel safety while partnering with industry. The underwater survey process will allow both the Coast Guard and the independent surveyor to have a good view of the vessel's condition.

The key elements here are risk management and a tailoring of requirements to fit changing technologies and circumstances. In this situation the Coast Guard was able to allow a segment of the industry to remain competitive without compromising safety, all within the existing regulatory scheme.

For questions or comments regarding this article, please contact LT Eric Bernholz, Chief, Inspections Department, MSO Chicago, at 630-986-2155 or email: E.Bernholz/MSOChicago (SWS II) or E. Bernholz/MSOChicago@internet.uscg.mil (via the Internet).

Recipe for A Business Plan

by LTJG Nathan French

To sustain the Coast Guard position of leadership under the Government Performance and Results Act (GPRA), the Coast Guard has committed to achieve its performance goals by integrating management and budget processes into performance planning. All Coast Guard Commands, Areas, Districts, and MSOs are carrying out this commitment.

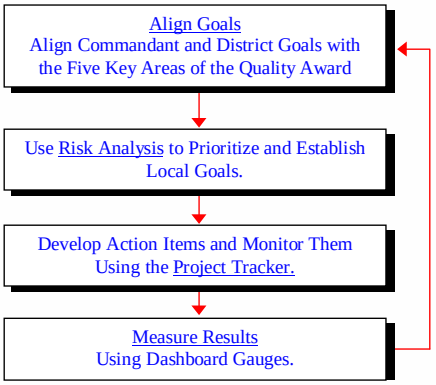
Marine Safety Office Detroit has developed a recipe for linking the Commandant's Quality Award process with their own business plan, as well as that of Headquarters and the District. For the past two years, the MSO struggled with linking its business plan to the quality award package. This article describes the process used in 1997 to align these directives and streamline our strategic planning.

Step 1: Align Goals

MSO Detroit has adopted the five "business areas" of the Commandant's Quality Award as the basis for its Business Plan. Section 7, the results portion of the Commandant's Quality Award application, provides a useful outline that helps define activities, as well as prioritize them.

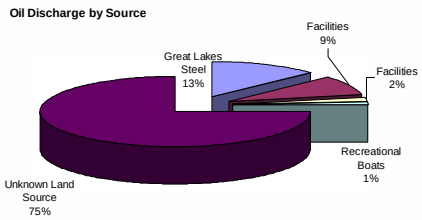
	Key Business Areas
1	Customer Satisfaction Results
2	Financial and Performance Results (external)
3	Human Resources Results
4	Supplier and Partner Results
5	Organization Specific Results (internal)

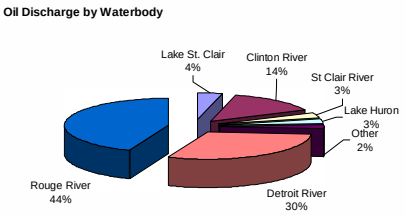
According to the Commandant's Quality Award, the most important attribute of a successful organization is a satisfied customer, followed closely by financial performance. Frequently, units focus primarily on the operational results and neglect the other areas that help form a healthy business. The quality award process has helped demonstrate that employee satisfaction, supplier performance and internal processes are critical to succeeding in areas 1 and 2. Using these five areas as an outline, the QMB organizes the business plan to provide a holistic and balanced approach. The following diagram illustrates the process to link the business plan to the quality award.



Step 2: Risk Analysis

The Business Plan begins with the Mission and Vision Statements. The next action is to conduct a quantitative risk assessment from historical databases like the Marine Safety Information System (MSIS). This information is used to detect trends in incident cause, type, frequency, and location. In addition, the risk analysis includes a brief qualitative assessment of possible or probable marine incidents. The risk assessment portion of the Business Plan is boiled down to 2 or 3 pages of clear, easy to understand graphs like the ones shown below.





The body of the plan consists of the goals and strategies of the Unit catalogued under the Quality Award's five key areas. The Unit aligns Commandant's goals, District's goals and local initiatives with these five areas.

The unit's objective is to approach goal setting in a balanced manner. This is accomplished by aligning the Business Plan with the Quality Award's five key areas. The resultant benefits are improved performance in a broad range of areas.

The unit takes Headquarters and District goals and further develops them for an Area of Responsibility using the port assessment. This maintains focus on goals that most relate to the port.

	Key Business Areas
1	Customer Satisfaction Results
2	Financial and Performance Results (external)
3	Human Resources Results
4	Supplier and Partner Results
5	Organization Specific Results (internal)

	Key Business Areas
2.1	Reduce the amount of oil in the water by 20% over the next 5 years.
2.2	Increase the removal of spilled oil from the water by 10 percent.
2.3	Increase responsible party cleanup expenses to 90%.
2.4	Achieve a 90% pollution ticket collection rate.
2.5	Reduce the number of collisions, allisions, and groundings by 10% over the next 5 years.
2.6	Continue to meet travel ceiling budget.

Continuing with the example, the QMB assigns ownership of goal 2.1 to the Port Operations Department.

Step 3: Develop and Monitor Action Items

The next step is for the Port Operations team to brainstorm ideas for possible action items or strategies derived from the risk analysis. By allowing Port Operations department to figure out "how" to accomplish the goal, it engages the crew in the process which creates ownership and a "bottom up" philosophy. In the example, facilities and unknown land sources are the largest source of oil spills in the Detroit AOR. Using this information, action items are developed to help meet the goal of a 20 percent reduction of oil discharged over a five-year period.

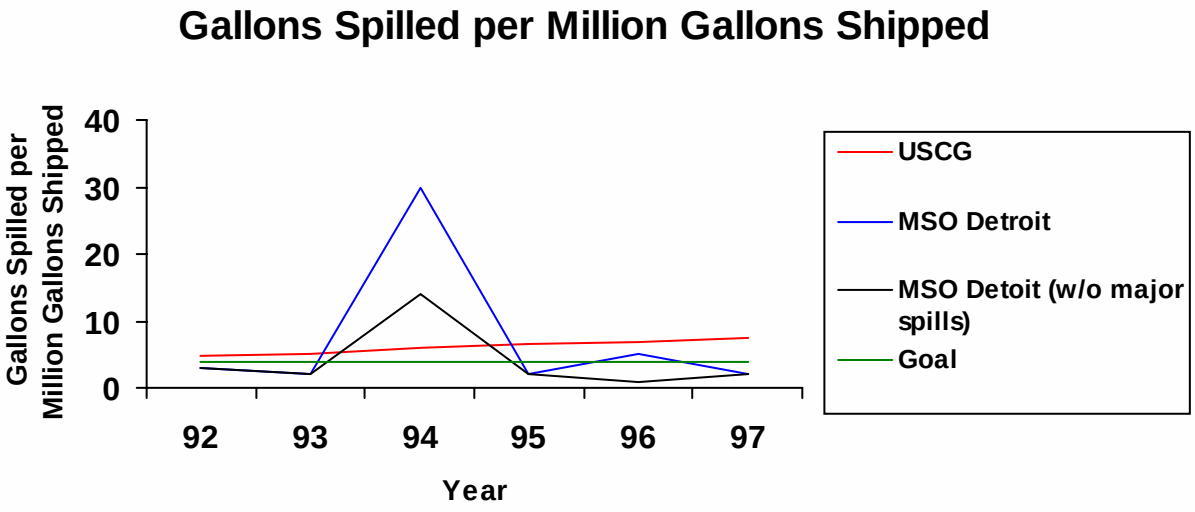
The mechanism to track and manage these action items is called the Project Tracker. It displays the tasks and their links to the Business Plan and is included as an appendix to the plan. At the top of the next page is a "slice" of the project tracker for goal 2.1.

The first two columns list the task or project and link it to a specific goal and quality area. At a glance, columns three through five dictate the department, person in charge, and priority for the department. Columns six and seven track due dates and percentage towards task completion. The final comments column provides specific information concerning the project status.

Project Description	Goal	Prior.	Dept	Person Respon.	Date	% Complete	Progress
Educate facility Owner/operator on spill prevention; bi-annual	2.1	B	POPS	CPOD/ QM1	Feb-97	100%	Educate facility operators on spill prevention. Training is offered bi-annually- 2/27/97
1997 triennial PREP exercise	2.1	A	POPS	CPOD/ QM1/ MST2H	Sept-97	100%	PREP drill, outstanding success. Evaluation report to be conducted in 10/97
Inspect Vessel and DWF for response plans	2.1	A	POPS	CPOD	ONGOING	50%	All facility inspections complete regular monitors & vsl boardings continue- PSC stepped up
ID most frequent oil spill locations & increase monitoring efforts	2.1	B	POPS	MSTC/ MST2H	ONGOING	50%	Targeted areas for harbor patrols are determined by # of spills recorded in that area-Business Plan looks at amount spilled
Conduct 2 unannounced government facility PREP exercises	2.1	A	POPS	CPOD/ MSTC	Oct-97	100%	Facilities Tested: Trumball & Amoco

Step 4: Measure Performance

The QMB then decides upon measures that accurately represent the unit's performance in each of its goals. Only measures that are quantifiable in a way that can be benchmarked and baselined are devised by the QMB. The QMB selects 15 to 20 measures (at least two for each goal), which comprise the bulk of the business plan. In our example, the number of gallons spilled annually is charted to determine the success or failure of action items for goal 2.1.



These measures are then baselined to results from previous years at MSO Detroit and benchmarked to other MSO's. Results are computed and published twice a year so that the unit can visually monitor its progress. The QMB also meets monthly to review the status of the project tracker to monitor the unit's efforts. These measures become the driving force behind the plan and gauge MSO Detroit's success towards meeting the Commandant's Criteria for Quality.

The end result is a streamlined product that is relatively short (15 pages) and is easily implemented by unit personnel. This format also provides an annual external audit of the business plan and quality initiatives with minimal additional effort. Simply update the data in last year's business plan and paste together a Commandant's Quality Award application in January.

The author would like to thank CDR Helland, LCDR Diehl, and LT Wasco from MSO Detroit for their contributions to this article.

Mariners' Seabag

Master - Pilot - Mate Information Exchange

by Anthony H. Murray

In the "Old Days", and by no means on all ships, the voyage was considered more or less over when the bar pilot came aboard to take your vessel on the up-river passage to the dock or anchorage. The pilot would be escorted to the bridge, shake hands with the captain and exchange a newspaper for a cup of coffee. Following a brief and informal introduction, the pilot would be given the ship's con after having been relayed not much more than the draft, heading, speed and engine capabilities. Most of the remaining information needed could he gotten from the "Ship's Particulars List" and the "Ship's Maneuvering Performance Test Results" posted on the bulkhead of the wheelhouse. The mate on watch could also provide details, if so asked by the pilot, as the captain sometimes went below to take care of administrative business. The mate, in turn, would rely on the professional expertise of the pilot to know his or her (until recently there was no "her") business and sometimes offer not much more than a refill on the cup of coffee. The mate, in some cases, was under the assumption that the pilot knew the necessary operational information about the ship and was reluctant to question a pilot's decision.

Today, the voyage is definitely not over for the bridge team and watch personnel until the ship's engine order telegraph rings up F.W.E. and the vessel is fetched-up at the anchorage or made all-fast, safely moored alongside the berth. This is why Bridge Resource Management (BRM) principles are a part of today's safe navigation of ships even during the pilotage of river transits, harbor maneuvers, or offshore moorings. The fundamental principals for good BRM includes transit pre-planning and interpersonal communications among the bridge team and the pilot. The importance of the pilot devising an effective, cooperative working relationship with the bridge team is to fully utilize the resources, personnel and equipment, of each ship. Good BRM should facilitate an exchange of pertinent information between the master, pilot and officer of the watch. This is the Master - Pilot - Mate information exchange.

33 CFR Part 164, "Navigation Safety Regulations" specifies informing the pilot of the ship's characteristics. Also, the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, 1978, as amended (STCW), has developed recommendation that the master and pilot shall exchange information regarding navigation procedures.

At times, when the pilot boards the ship, the situation may allow only the briefest of exchanges. In these cases any navigational information can be exchanged in a pre-arrival message to the pilot and visa versa, utilizing the ship's agent. The sharing of information may be complemented by the exchange of the two "Pilot Cards." One card, supplied by the pilot, should include written information or instructions about navigation in the local pilotage area. The ship's pilot card, provided by the master, includes information about the vessel, its characteristics and condition.

These pilot cards should supplement oral briefings and not be a substitute for a formal exchange of information between master, pilot and mate. The official discussion should begin with the master's brief of the vessel's shiphandling characteristics, operational condition and peculiarities. He or she must identify any deficiencies of instruments, equipment, machinery or personnel that may effect the safe navigation of the vessel. The responsibilities of the bridge team personnel are also discussed along with the defined duties of any other shipboard crew effecting the operational control of the vessel. Discussions may include the expertise of the helmsman, the posting of an alert

lookout, the availability of the anchor detail and the watch manning the engine room.

The pilot shares his latest information on local knowledge, vessel traffic, radio communications, reliability of navigational aids, currents and tidal effects, significant shoals and depths, dredging operations, bridge heights, and the list goes on. Here, the proposed general route plan is discussed, agreement is reached on the passage and the plan is updated as necessary. The pilot should avoid using idioms that includes acronyms, jargon and nick names for regional areas to avoid confusing the bridge team.

Not all circumstances require the master to remain on the bridge for the entire passage, but the initial formal Master-Pilot-Mate information exchange must be conducted. As a result, the mate on watch is relied on more than ever for his or her technical ability and participation in the exchange of information and feedback to the pilot. The watch officer should contribute his or her knowledge of shipboard operations. He or she must maintain situational awareness by keeping an accurate fix of the ship's position and movement, as well as traffic and weather conditions. BRM encourages the mate on watch to take the initiative in coordinating the bridge activities and become adept in error recognition by the use of established bridge watch procedures. It is the bridge team's responsibility that the pilot's orders are understood and acknowledged, while at the same time it is the pilot who is responsible to the master for the safe navigation of the ship. Navigating with a pilot onboard does not relieve either the master or the officer in charge of the watch from his or her duties. Ultimately, it is the master who is accountable for the overall safety the ship.

If the mate on watch is unsure of a pilot's intentions, he must ask questions. The mate can persist in tactfully asking about the passage or situation to gain a complete understanding of the pilot's intentions. The pilot, on the other hand, must be willing to answer questions from the mate about relevant conditions and circumstances regarding the passage. Otherwise, applying the principles of BRM in the Master — Pilot — Mate exchange will be compromised.

Nautical Queries

Deck Questions

1. Displacement refers to the _____.

   A. cubic capacity of a vessel
   B. deadweight carrying capacity of a vessel
   C. gross tonnage of a vessel
   D. number of long tons of water displaced by a vessel afloat

2. Freeing ports on a vessel with solid bulwarks _____.

   A. prevent stress concentration in the bulwark
   B. permit easy jettison of deck cargo in an emergency
   C. provide openings through the bulwarks for mooring lines
   D. allow water shipped on deck to flow off rapidly

3. The type of welding employed in shipyards is primarily _____.

   A. brazing
   B. electric arc
   C. pressure welding
   D. thermite welding

4. Your ship is steaming at night with the gyropilot engaged. You notice that the vessel's course is slowly changing to the right. Which action should you take FIRST?

   A. Notify the engine room of the steering malfunction.
   B. Change to hand steering.
   C. Call the Master.
   D. Send the Quartermaster to the emergency steering station.

5. Ship's officers should check every cargo compartment after it is filled with bulk grain to ensure _____.

   A. all lighting circuits are energized
   B. all void spaces are filled
   C. the correct grade of cargo has been loaded
   D. the heavier grade is in the lower hold

6. "Block stowage" means _____.

   A. having the cargo on pallets
   B. stowing all the cargo for a port in the same area
   C. using port marks on the cargo
   D. using separation cloths to separate different kinds of cargo

7. When loading a container vessel, the operation is basically that of vertical loading. The important factors to be considered when loading containers are port of discharge, _____.

   A. available dunnage, arid chocking
   B. crushability, and inherent vice
   C. sweat, and weight
   D. weight, and refrigeration

8. When backing down with sternway, the pivot point of a vessel is _____.

   A. about one-quarter of the vessel's length from the stern
   B. at the bow
   C. about one-third of the vessel's length from the bow
   D. aft of the propellers

9. The deck beam brackets of a transversely framed vessel resist _____.

   A. hogging stresses
   B. sagging stresses
   C. racking stresses
   D. shearing stresses

10. The exact and complete identification of all cargo on board must be found on the _____.

    A. Cargo Manifest
    B. Mate's Receipt
    C. Hatch Report
    D. Loading List

ANSWERS: 1-D, 2-D, 3-B, 4-B, 5-B, 6-B, 7-D, 8-A, 9-C, 10-A.

Where We Came From:

PROCEEDINGS

of the

MERCHANT MARINE COUNCIL

UNITED STATES COAST GUARD

Vol. 1 January, 1944 No. 1

Things You Can Do

to protect our oceans

Learn all you can.
Read, surf the Web and experience the ocean directly.

Be a smart shopper.
Learn more about the source and quality of your seafood.

Conserve water.
Be careful when washing your car or watering your lawn. Use a broom instead of a hose to clean your driveway or sidewalk.

Reduce household pollutants.
Cut down and properly dispose of herbicides, pesticides and cleaning products.

Reduce waste.
Dispose of trash properly. Where possible, recycle, reuse and compost.

Reduce automobile pollution.
Use fuel efficient vehicles or carpool. Recycle motor oil and repair oil and air conditioning leaks.

Protect ocean wildlife.
Don't dispose of fishing lines, nets or plastic items in or near the water.

Be considerate of sealife habitats.
Don't feed sea birds, mammals and turtles or disturb their nesting grounds. Support marine protected areas.

Get involved.
Take part in a beach cleanup or other ocean-oriented activities.

Care! Pass on your knowledge!

In recognition of the importance the ocean plays in our lives, the United Nations has declared 1998 as the International Year of the Ocean. This designation is an opportunity for organizations and individuals to become more aware of the role the ocean plays in our lives and to initiate charges needed to sustain the marine resources on which we depend.