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of the Marine Safety Council

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Cover

The recently established Standard Vessel Boarding Program works to prevent transfer operations accidents like this harbor spill. Our story, by LT Clayton W. Evans, begins on page 27. Official U.S. Coast Guard photos were provided by the Public Information Assist Team.

Initial Success of the Standard Vessel Boarding Program

LT Clayton W. Evans
Port and Environmental Safety Division
U.S. Coast Guard

In October of 1983, we made a major revision to one of the Coast Guard's public safety and enforcement programs: the establishment of what we call the "Standard Vessel Boarding Program." We now have initial indications that it **is** successful in improving the effectiveness and efficiency of commercial vessel boarding while reducing Coast Guard presence in vessels with good records.

The standard vessel boarding program does some important things: it targets boarding efforts upon vessels we call "high priority vessels," that is, vessels with histories of poor performance, and it reduces wasteful boarding of vessels that are likely to be in compliance. It also focuses monitoring and examination on human error, the greatest cause of cargo transfer spills and accidents. Finally, it provides uniform boarding procedures for the local Coast Guard Captains of the Port and Marine Safety Offices throughout the United States.

"We intend to make uniform boarding practices the rule." Here, a team of Coast Guard inspectors discuss concerns with ship officers. (Official U.S. Coast Guard photo)

Insights Into Program Efficiency and Effectiveness

About 3 years ago, we analyzed the effectiveness of our safety and pollution prevention vessel boarding program. We found we could be effective in reducing spills and other accidents during cargo transfer operations, if we could board a high enough percentage of all the vessels entering port. But we really didn't have enough people to attain a boarding level that would achieve significant pollution and accident reduction. This suggested a new approach: targeting boarding activity upon vessels with histories of poor performance, and reducing boarding of other vessels.

We also examined the causes of cargo transfer spills and accidents and took a hard look to see if our boarding procedures worked to prevent those incidents. We found most spills and accidents are the result of operational or procedural problems and not materiel or mechanical failure. Over 80 percent of all oil spills during transfer operations are caused by human error. For example, an oil cargo valve problem can usually be traced back to an error made by the person operating the valve. *The revised program directs boarding efforts to focus on human error.*

Boarding data indicated we frequently boarded the same vessels: in port after port, voyage after voyage. This, in part, resulted

This article was taken from a presentation LT Evans made to the National Safety Congress, Marine Section, on October 29, 1985, in New Orleans, Louisiana.

from the previous program enforcement standards, which required each Coast Guard Captain of the Port or Marine Safety Office to visit a fixed percentage of vessels visiting a port. These standards did not take into account the performance of the vessel or the hazards presented to the port, nor did they allow for the effective use of our limited number of people. *The new program standards place emphasis on vessels whch pose the greatest threat to the port and environment: what we call "high priority vessels."*

A high priority vessel is a ship or barge targeted for boarding under any one of the following criteria:

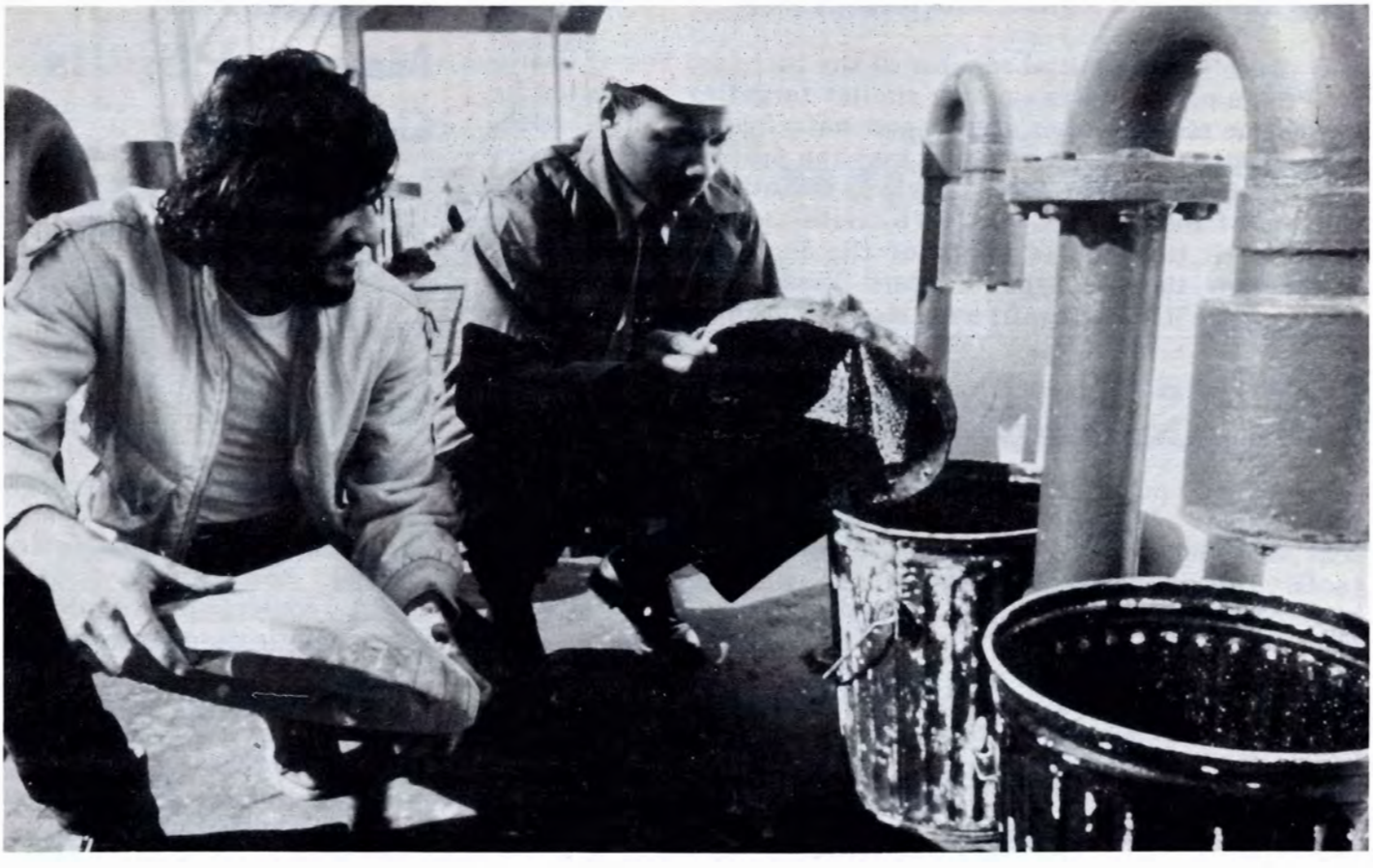
- No Coast Guard inspection or examination for 12 months.
- No cargo or fuel oil monitoring for 6 months (for most vessels).
- The first port on maiden voyage to the United States.
- A recent history of violations (specifically pollution prevention, cargo, or safety violations) with no corrective action.
- A recent history of cargo-related accidents (for example, oil spills or leaking hazardous material containers).
- A situation which causes extra concern to the Captain of the Port over safe vessel operation or transfer of cargo.

We were also aware that boarding practices had differed widely within districts and across the United States. Standard scenarios are now provided as a guide for examinations and monitorings, and a standard boarding form is almost complete. While the program must be flexible enough to allow for differences in the maritime industry in various parts of the country, *we intend to make uniform boarding enforcement practices the rule.*

Help from the Marine Safety Information System

The computerized Marine Safety Informa-

"The revised program focuses on the human error, as well as the equipment failure, behind most spills and accidents." A Coast Guard boarding officer checks preparations for transfer operations. (Official U.S. Coast Guard photo)



"Emphasis is placed on vessels which pose the greatest threat to the port and environment." A Coast Guard boarding officer examines pollution equipment. (Official U.S. Coast Guard photo)

tion System (MSIS) keeps histories of all vessels in U.S. waters and is used as the primary tool to plan boarding activity. Vessels over 1,600 gross tons are required to give the Captain of the Port or Marine Safety Office 24-hour advance notice of arrival. When this notice is received, the vessel's history is retrieved from the MSIS and evaluated to determine the vessel's priority, and a boarding decision is made. After the boarding, vessel records in MSIS are updated, and MSIS is used to communicate vessel information to other Captains of the Port and Marine Safety Offices.

Initial Indications of Success

We now have initial indications that the Standard Vessel Boarding Program is successful in improving the effectiveness and efficiency of our vessel boardings. The percentage of tank and cargo vessels boarded shows a significant downward trend from the beginning of the program while the percentage of vessels boarded is declining, at the same time it appears that a higher deficiency rate is developing. This indicates that with fewer boardings, a higher number of deficiencies per boarding is being observed. Also, more deficiencies with great potential for accidents are being detected. We believe we are seeing a noticeable increase in pollution prevention and cargo system deficiencies.

These are all indications that the targeting of high priority vessels and the improved boarding procedures are doing what we had hoped they would do: improve the effectiveness and efficiency of Coast Guard activities while reducing Coast Guard presence on vessels with good records.

It is important to mention that the personnel hours saved by boarding fewer vessels did not create "excess" people. These personnel hours were used immediately to respond to increasing responsibilities in port contingency planning and enforcement of the new Act to Prevent Pollution from Ships.

continued on next page

Strengthening the Program, with Industry Help

Based on the initial success of the Standard Vessel Boarding Program, we are examining similar targeting strategies for our marine safety harbor patrols and waterfront facility inspections. This all means, we hope, that the people in the industry who work the hardest for safety and pollution prevention will see less of the Coast Guard. We invite the maritime community to tell the local Captain of the Port or Marine Safety Office how **they** see the Standard Vessel Boarding Program working. We'll both benefit **even more** from this program. ↕

Portable Gas Detector Being Developed

A new portable gas detector being developed by the Department of Energy's Argonne National Laboratory could help save the lives of thousands of workers who handle toxic gases. The new device, called a "Chemical Parameter Spectrometer" (CPS-100), is capable of locating and identifying toxic substances in the air.

According to the National Safety Council, about 1,400 people each year are killed by toxic fumes. About 200 of these succumb to gases from toxic chemicals. These fatalities include workers overcome in empty chemical tanks and in transportation accidents involving toxic chemicals.

The CPS-100 is the first device which can identify the type and concentrations of 40 hazardous gases instantly. Weighing only 10 pounds, the portable battery-operated instrument can be used almost anywhere, according to Joseph Stetter, principal developer of the device. "Until now, analyses of this type were lengthy and had to be done in the laboratory," said Stetter.

The CPS-100 is being developed by Argonne for the U.S. Coast Guard's Office of Research and Development. The Coast Guard plans to use the device to aid its Emergency Response Teams in assessing hazards at the scene of a chemical spill and in surveying enclosed spaces such as cargo ship holds. Using the "sniffer," Coast Guard personnel will be able to tell instantly whether it is safe to enter a ship's hold and what chemical cargo it last contained.

Argonne scientists predict that in the future, robots equipped with electronic sniffers could survey hazardous waste sites and report back via radio the types and amounts of toxic chemicals involved. They also see possible applications on future space shuttles to notify crewmen of any toxic gases.

"While early models of the Hazardous Vapor Monitor can identify 40 hazardous gases," said Stetter, "future versions are expected to handle about 100." Continuing research is underway to further miniaturize the CPS-100 and to improve its performance to handle lower concentrations and more complex mixtures of chemicals.

"The Hazardous Vapor Monitor is unique," said Stetter, "because it uses inexpensive, rugged, low-power sensors to do a job that formerly required a laboratory full of expensive equipment. This combined with its ability to instantly analyze toxic gases in the field makes it an important tool for workers in our high-technology society." ↕

Hazardous Material Spills Conference

The 1986 Hazardous Material Spills Conference will be held May 5-8, 1986, in St. Louis, Missouri. The 1986 Conference is the eighth in a series of national conferences held biennially on the preparedness, prevention, control, and cleanup of chemical releases. This year's Conference will continue to focus on major hazardous materials emergencies, prevention of incidents, control of hazardous substance releases from all sources, and pollution abatement in navigable and subsurface waters, soils, sediments, and the atmosphere.

General Information

Attendance at the Conference will be limited; consequently, interested persons are urged to register early. Payment in full or a purchase order should accompany the registration form. Checks or purchase orders should be made payable to Hazardous Material Spills Conference.

Full registration, if received by April 11, 1986, is $195. Thereafter, the fee is $245. **Single day registration** is $90. **Student rates** are available upon request. All fees must be paid in U.S. dollars. Requests for refunds must be received in writing by April 18, 1986. If received by that date, all but a $25 processing fee will be returned.

Requests for additional Conference information should be directed to the Hazardous Material Spills Conference, 655 15th Street, NW, Suite 300, Washington, DC 20005 USA; telephone (202) 639-4366. ↕

The "Penguin" and "Susie" Saved My Life

Joe Gilbert
Gauger, S. Timbalier 86
Ocean Drilling & Exploration Company

In 1982, ODECO management decided to provide each of its drilling rigs and manned production facilities with Imperial survival suits as part of the company's overall safety program. The neoprene suits, nicknamed "the penguin," are designed to prevent hypothermia (loss of body heat which is often fatal) and keep people afloat indefinitely if they are forced into the sea.

ODECO purchased 4,300 suits at a cost of $1.4 million to provide enough suits for 1½ times the normal complement of personnel for every one of its offshore installations around the world. About 2 years later, the U.S. Coast Guard issued a regulation requiring survival suits aboard rigs operating in cold-water regions only.

ODECO's investment of $1.4 million in employee safety paid off in October 1985 for the production workers from South Timbalier Block 86A who were forced into the stormy seas when their platform went down during Hurricane Juan. Here is the story of one survivor who was rescued after more than 20 hours in the Gulf of Mexico.

This article is reprinted with permission from the November 1985 issue of ***ODECO Soundings.***

We were in the quarters watching the World Series pregame show on Sunday night when we heard some banging below. We put on our Mae Wests, our life preservers, and went downstairs to anchor a loose pipe on the cellar deck.

We were working there and heard the most ungodly sound I ever heard in my life. It was like a locomotive. We were standing an estimated 50 feet above the water, but we had to look up to the waves. That's how high it was, a solid wall of water coming over the top of us. The waves just started to wipe everyone out.

Another wave hit, and the platform started self-destructing. It folded the handrails in, which caught my leg. As it hit the water, I was still hung, and it was taking me down. Then it hit something and put a bend in the handrail and relieved the pressure. I got free and came to the top of the water.

Here I was with nothing but a life jacket on in the middle of the Gulf of Mexico at 7 o'clock at night. It was dark with high winds and high seas. We were still getting 50-foot killer waves. My first impression was "My God, why me? Not me, not out here."

And then I started hollering to see if anyone could hear me. But the way the winds were blowing, they couldn't hear me, and I couldn't hear anyone else. I started wondering, "Am I the only one who made it?" All through the night and up until 4:00 or 4:30 Monday afternoon when I was rescued, I thought I was the only one who made it out.

I was in the water maybe 15 or 20 minutes with just a life jacket on, being picked up, beaten, and slung around by the waves. I started praying. I needed some help. I was going to try to help myself, but I needed some help.

About 10 or 15 minutes later, one of our survival suits came floating by. I put a

From his bed in Ochsner Hospital, Gauger Joe Gilbert tells of his harrowing experience. (Photo courtesy of ODECO.)

death grip on it. It was about an hour later before I could really get up enough courage to attempt to put it on in 30- to 40-foot seas. Of course, our Safety Department gave us periodic instructions on how to put the survival suits on, but this was done on the platform. We've always been told you could put it on in the water, but I don't think anyone really believed that. But seeing is believing. You can.

I put one leg in at a time. When I got it on up to my waist, I undid the life jacket. I took a death grip with my teeth holding onto the life jacket to keep my head out of the water. One hand in at a time. I pulled the hood up. Once I zipped it up, I turned loose of the life jacket. I was still in 30- to 40-foot seas, and I said to myself, "Well, I'm going to find out if this thing floats."

When I turned loose of the life jacket, I was on top of the water. The waves would hit me, spin me, toss me about 15 or 20 feet under the water, and I would be rolling. As soon as I hit the trough, I would come back on top of the water, just like a cork.

Later on, a board came floating by. It was one of the 9" by 13" planks from the top deck of the platform. It was roughly 10 to 12 feet long, but it had nails in each end, so I had to be conscious of those nails. I named the board "Susie," and I talked to that board all night and all day long. I even sang to it, "If you knew Susie like I know Susie..." and also some sailor songs that I can't mention here. I did that to try to keep awake. As time went on and daylight grew closer, I got so I could maneuver my board with my body as a rudder. If I wanted to go left, I would get on the right side of it, and the board would move left. If I wanted to go right, I did the opposite. If I wanted to go straight, I got in the middle of the board. My only regret is that I lost my board when they rescued me.

Perhaps you're wondering where the survival suit came from. We usually keep them in a locker on deck, but when the winds and seas kicked up on Sunday afternoon, I told Tony Cuchinelli, the head gauger, that I'd get five survival suits out of the locker and put them out. So when the platform went down, the survival suits floated out, and three of us found them.

I believe I was probably the first one to find a survival suit. I later learned that Tony found one and put it on. About 10 minutes later, another one floated by, and Tony gave it to Jackie Anthony, who was with him. Tommy Davidson, Bob House, and I were all separated.

I guess the best sight, the prettiest sight I ever saw was the the rescue boat, the ALEUTIAN COMMAND. I came up riding the crest of a 30-foot wave and hollered and waved, but it dropped me back down. When I came up again, I didn't see any signs of recognition that they had seen me. Then a 35- or 40-footer picked me up, and I rode the crest and waved again. That's when I saw two deckhands standing outside the wheelhouse waving back. I've got all the respect for them. They did a great job getting me out of the water.

The survival suit didn't hinder me a bit. It's like a wet suit a diver would use. They're not too thick, and once you get into it, you have plenty of movement. But it retains the body heat and the buoyancy. You can't sink in it. Mine lasted 20 hours, and I'm told they will float forever.

Training specialist Don Ducre models one of the survival suits ODECO purchased for its employees. (Photo courtesy of ODECO.)

I was picked up some 22 to 25 miles north of where our platform was. I had traveled that far in 20 hours, so I was doing roughly 1 mile an hour.

The guys on the boat were fantastic. They got me out of the survival suit and my wet clothes, dried me off, and immediately wrapped me in blankets and put me in bed. They were continuously making me something sweet to drink because I was thirsty and dehydrated. When they got ready to transfer me from the boat to the helicopter on the Shell platform, one of the deckhands gave me his clothes to put on. When I told them how much I appreciated the clothes, they told me it's a rule of the sea: "Some day we may have to depend on you all. One good turn deserves another."

ODECO Directs Air/Sea Search

An extensive search by helicopters and offshore ves-

sels for the five men from South Timbalier Block 86 "A" platform was launched at daybreak on Monday, October 28, 1985, and continued throughout the stormy day until all hands were rescued.

Production Superintendent Vay Carboni directed the search efforts by five helicopters and as many offshore supply boats in the Gulf of Mexico area between South Timbalier Block 86 and the Louisiana coastline.

U.S. Coast Guard search and rescue helicopters found and flew to safety the first four platform workers within a few hours after the search began. The helicopters and boats continued running search patterns for the rest of the morning and throughout the afternoon until Gauger Joe Gilbert was sighted and was safe aboard the vessel ALEUTIAN COMMAND between 4:00 and 4:30 p.m.

Production Vice President Herb Price expressed his appreciation to Champlin Oil, which released the ALEUTIAN COMMAND as the standby boat for the OCEAN CHIEF to aid in the search, and to its owners, Command Marine of Lafayette, Louisiana. Price also thanked for their assistance the U.S. Coast Guard, Era Helicopters, Chevron, PHI Helicopters, Exxon, McDermott, Mark Producing and Air Logistics, all of which provided helicopters for the search; Tidewater, Skippin Sue and John E. Graham, which provided search boats, and Shell Oil Company, which permitted use of its platforms in the South Timbalier area. ↥

Isn't it time for YOU to become familiar with exposure suits and their uses?

U.S. House Approves TITANIC Site As Memorial

The U.S. House of Representatives recently approved by voice vote a bill to designate the wreck of the R.M.S. TITANIC an international maritime memorial, Representative Walter B. Jones (D-NC), Chairman of the Merchant Marine and Fisheries Committee and sponsor of the bill, announced in December 1985.

"This legislation seeks to enlist international cooperation so the countries interested in the shipwreck will conduct research, exploration, and, if appropriate, salvage in a manner befitting this historic wreck," Chairman Jones said. "The technology that found her could destroy her. We must not let this happen. The American leader of the joint U.S.-French venture that found the TITANIC, Dr. Robert Ballard, feels this bill is a step toward protecting her special place in maritime history, and I agree."

"The TITANIC story, as we all know, is tragic," Chairman Jones continued. "Touted as the most elegant liner of its time and billed as unsinkable, she struck an iceberg on her maiden voyage and went down, carrying 1,513 passengers to their deaths. Just as the TITANIC disaster was a turning point in introducing tougher safety standards for vessels throughout the world, so should the discovery of her signify the development of international guidelines for dealing with wrecks found in international waters."

The bill directs the Secretary of State to begin negotiations with interested nations and instructs the Administrator of the National Oceanic and Atmospheric Administration (NOAA) to develop guidelines governing activities at the site which (1) are consistent with the ship's historical and cultural significance, (2) promote the safety of individuals involved in any operations, and (3) recognize the sanctity of the shipwreck TITANIC as a maritime memorial. These guidelines should help in framing an international agreement.

"Until an international agreement is reached, the bill encourages research and limited exploration, as long as it enhances public knowledge and the shipwreck is left undisturbed," Chairman Jones explained. "We hope to foster a spirit of cooperation between nations in realizing what we hope is a common goal — protecting the TITANIC and preserving its proper place in maritime history."

The bill must now be passed by the Senate and signed by the President before becoming law. ↥

The Role of the Marine Safety Council

Monitoring the Regulations

RADM Edwin H. Daniels
Chief Counsel of the Coast Guard

The U.S. Coast Guard Marine Safety Council is an internal organization within Coast Guard Headquarters. The purpose of the Council is to manage, monitor, and serve as a focal point within the Coast Guard for the development of regulations affecting the public. It ensures that all regulatory initiatives are well considered and that they impose no greater burden upon the public than is reasonably necessary.

The Council is composed of eight flag officers: the Chiefs of the Offices of Merchant Marine Safety; Navigation; Operations; Marine Environment and Systems; Boating, Public and Consumer Affairs; Engineering; Research and Development; and the Chief Counsel, who is Chairman of the Marine Safety Council.

The Council is the final recommending authority to the Commandant of the Coast Guard on regulatory initiatives and, in routine cases, acts for the Commandant. The Council advises the program directors with active regulatory programs, most commonly the offices of Navigation; Merchant Marine Safety; Marine Environment and Systems; and Boating, Public and Consumer Affairs; as to the acceptability of their initiatives.

We try to ensure that the proposed regulations will be beneficial and not burdensome, and, particularly, we check proposed regulations which will significantly increase the cost for consumers or for individual industries, geographic regions, or government at any level, and proposed regulations which have a potentially significant adverse effect on competition, employment, investment, productivity, and innovation.

We check proposed regulations to see whether they have a substantial public interest, are controversial, or have substantial impact on current major transportation safety programs or regulatory programs. We also check whether proposed regulations are substantially different from international requirements or standards or otherwise change existing policy of the Department of Transportation.

We take into consideration the type and number of affected individuals, businesses, or organizations; the compliance and reporting requirements likely to be involved; and the relationship of the regulations to other programs and agencies, including the direct and indirect effects.

When a program manager proposes a regulation that would affect the public, such as the maritime industry, the Council members examine these various facets to see whether or not the benefits outweigh the burdens, what the problems are, and try to alleviate any problems before we recommend approval by the Commandant. Significant rulemakings have to go to the Secretary of Transportation before they can be approved.

As an example of regulations that have a direct bearing on the Merchant Marine, we have recently considered manning levels. Many modern vessels require fewer watchstanders than vessels in prior years. However, officers and crew cannot be reduced below a safe number. Obviously a vessel has to have a lookout at all times. With an automatic pilot, no one has to steer the vessel constantly, but someone must be available to steer when necessary, and someone must be on the bridge in charge of the vessel. Likewise, a vessel may have engines with bridge controls so that no one has to be in the engine room, but sufficient personnel need to be available in case of a casualty to those controls.

As a body, the Marine Safety Council does not work directly with the industry, but many of the members of the Council do so in their individual capacities as program directors. However, the Council is the designated sponsor for the statutory Towing Safety Advisory Committee (TSAC), which was created to advise the Secretary of Transportation, and the Committee's recommendations are directed to the Council.

The Chief of the Office

of Merchant Marine Safety and the Chairman of the Council are usually present during TSAC meetings. In addition, the Chief of the Office of Marine Environment and Systems, who manages the ports and waterways program, and the Chief of the Office of Navigation attend whenever a subject is being discussed which falls within their programs. The recommendations of TSAC are tendered directly to the Council, and the minutes are sent up to the Commandant and the Secretary.

Keeping in mind the current administration's policy on deregulation, Coast Guard program managers constantly monitor the effectiveness of existing regulations within their areas of responsibility, and they recommend changes to the Marine Safety Council when appropriate.

They work very closely with industry, and they receive suggestions on what needs to be done directly. Our program managers rely on several other highly regarded advisory committees for assistance in this respect, most notably the Chemical Transportation Advisory Committee, the Rules of the Road Advisory Council, and the Boating Safety Advisory Council.

When industry or an advisory committee makes a recommendation for a regulatory change and the recommendation has merit, the program director brings a work plan before the Marine Safety Council which shows what we plan to do and how we plan to accomplish it. The Council discusses the details of the plan before the staffs go to the trouble of drafting regulations. This work plan review has been very effective.

We are very interested in obtaining industry views on our regulations. For virtually all rulemaking projects, a Notice of Proposed Rulemaking is published in the Federal Register, and we typically offer comment periods of 60, 90, or more days to ensure that those affected will have time to become aware of the proposal and respond.

We use direct mailings and trade publications to help spread the word. There are a lot of smart, experienced people out there. We get comments from licensed officers, seamen, and engineroom personnel, as well as managers and chief executive officers. They are highly professional, frequently feel strongly about an issue, and have the experience to suggest practical alternatives. Our final rules are frequently improved by their contributions. ‡

Reprinted with permission from the August 1984 issue of ***News Briefs****, published by the American Maritime Officer's Service.*

All in a day's work . . .

LTJG Richard L. Arnold (left) of USCGC POINT HEYER and LTJG Randall L. Getman of the NAS Alameda Explosives Ordnance Team examine a World War II torpedo warhead that was caught in the nets of a fishing vessel about 30 miles west of San Francisco. The POINT HEYER took LTJG Arnold and Hull Technician 1st Class Scott A. Warren to the dragger. They removed the warhead from the fishing vessel to be safely exploded. (Official U.S. Coast Guard photo by PA1 Paul Powers, 12th District)

Marine Safety Manual, Volume III, Now Available

The **Marine Safety Manual** (MSM) is a 10-volume publication which provides information and guidance to Coast Guard personnel assigned to marine safety duties. First published in 1978, the MSM is being revised to update the subject matter and to comply with the Coast Guard Directives System. Volume IV, "Technical," was published in December 1984, and Volume II, "Materiel Inspection," was published in October 1985.

Seven of the volumes will be available to the general public when revision has been finalized (two volumes are being developed and one is classified):

Volume No.	Title	COMDTINST No.
I	Administration and Management	M16000.6
II	Materiel Inspection	M16000.7
III	Marine Industry Personnel	M16000.8
IV	Technical	M16000.9
V	Investigations	M16000.10
VI	Ports and Waterways Activities	M16000.11
VII	General (MOUs, Acronyms)	M16000.15

The third of the revised MSM volumes, Volume III, "Marine Industry Personnel," is now available from the U.S. Government Printing Office (GPO). For your convenience, we are including a GPO order form in this publication.

Volume III presents the authority, background, and rationale for the various activities performed by the Merchant Vessel Personnel Division (G-MVP) at Coast Guard Headquarters and the regional examination centers (RECs) located throughout the United States.

Similar notifications will be provided in the **Proceedings** when the remaining MSM volumes are published.

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Nautical Queries

The following items are examples of questions included in the Third Mate through Master examinations and the Third Assistant Engineer through Chief Engineer examinations:

ENGINEER

1. All MS contacts are opened and closed by means of

A. operating coils.
B. magnets.
C. manual operation of the master switches.
D. solenoid switches.

Reference: NAVPERS 10546, Electrician's Mate 2 & 3

2. Which part of a large, slow-speed, main propulsion diesel engine is under tension when the engine is running?

A. Bed plate
B. Column
C. Entablature
D. Tie rod

Reference: Harrington, Marine Engineering

3. The last two digits stamped on a fuel oil atomizer sprayer plate represent cross-sectional area ratios of the tangential slots and orifice. This ratio determines the

A. density of the oil spray.
B. amount of atomization.
C. angle of the cone.
D. capacity of the atomizer.

Reference: Osbourne, Modern Marine Engineering Manual, Vol. 1

4. Which statement is true concerning boiler inspections?

A. The marine inspector may require any boiler to be drilled to determine its actual thickness any time its safety is in doubt.
B. At the first inspection for certification after a watertube boiler has been installed for 10 years, it shall be gauged by drilling to determine the actual extent of deterioration.
C. If the thickness found as a result of gauging is less than original thickness, the boiler must be condemned.
C. Any user of a nondestructive testing device must demonstrate that results with an accuracy of plus or minus 1 percent are consistently obtainable.

Reference: 46 CFR 61.05-10(f)

5. A reheater in an air conditioning system is designed to control the

A. dry bulb temperature.
B. primary air temperature.
C. dew point temperature.
D. chilled water temperature.

Reference: Althouse, Turnquist, and Bracciano, Modern Refrigeration and Air Conditioning

DECK

1. When a block and tackle is "rove to advantage," this means that the

A. blocks have been overhauled in preparation for hauling.
B. hauling part of one tackle is attached to the hauling part of another tackle.
C. hauling part leads from the movable block.
D. hauling part leads from the standing block.

Reference: American Merchant Seaman's Manual

2. Mean low water is correctly defined as the average height of

A. the surface of the sea.
B. high waters and low waters.
C. all low waters.
D. the lower of the two daily tides.

Reference: American Practical Navigator

3. A splice that can be used in running rigging, where the line will pass through blocks, is a

I. long splice.
II. short splice.

A. I only
B. II only
C. Both I and II
D. Neither I nor II

Reference: American Merchant Seaman's Manual

4. Which statement is true concerning low pressure atmospheric systems in the Northern Hemisphere?

A. They move generally from west to east.
B. They always move in the

opposite direction of a corresponding high pressure system.

C. They usually bring clearing weather.

D. They are follwed by very high, thin, and fibrous clouds.

Reference: Donn, Meteor-

5. What department of the U.S. government issues charts of U.S. waters, Coast Pilots, Tide Tables, and Tidal Current Tables?

A. National Ocean Survey
B. Defense Mapping Agency
C. U.S. Coast Guard
D. U.S. Naval Observatory

Reference: American Practical Navigator

ANSWERS

1-C;2-D;3-C;4-A;5-A
ENGINEER

1-C;2-C;3-A;4-A;5-A
DECK

If you have any questions about "Nautical Queries," please contact Commanding Officer, U.S. Coast Guard Institute (mvp), P.O. Substation 18, Oklahoma City, Oklahoma 73169; telephone (405) 686-4417.

Keynotes

Final Rule

CGD 85-042, Notice to Mariners/Light Lists (13 December)

The Coast Guard is revising the Marine Information regulations in Part 72 of Title 33 by making editorial changes to update certain sections and by increasing the number of Light List volumes published to seven volumes. The current regulations provide for five Light List volumes distinguished by the area covered. The change in the number of Light Lists is being made due to the anticipated increase in size and price of Light List Volumes I and II, covering the Atlantic and Gulf of Mexico coasts.

Interim Final Rule

CGD 85-094, Licensing of Pilots; Annual Physical Examination (23 December)

This amendment will permit first-class pilots to take the required physical examination at any time during the calendar year, with the stipulation that the time between each physical examination may not exceed 13 months. This rule provides flexibility in scheduling physical examinations in order to accommodate the employment practices in the Merchant Marine.

Advance Notice of Proposed Rulemaking (ANPRM)

CGD 85-061, Intervals for Required Internal Examination and Hydrostatic Testing of Pressure Vessel Type Cargo Tanks on Barges (3 December)

The Coast Guard is considering amending the regulations that govern internal inspection and hydrostatic test intervals for pressure vessel cargo tanks on barges that transport liquefied gaseous cargoes and Grade A flammable liquids at ambient temperatures. In response to industry requests, the Coast Guard is currently studying the effects of extending the intervals between internal examinations and hydrostatic tests of these tanks, and investigating acceptable alternatives to hydrostatic testing of these tanks. This advance notice solicits information that the Coast Guard believes will be helpful in formulating any future proposed rulemaking. Comments must be received on or before March 3, 1986.

Requests for copies of NPRMs should be directed to the Marine Safety Council. The address is Commandant (G-CMC), U.S. Coast Guard, 2100 Second Street, SW, Washington, DC 20593; telephone (202) 426-1477. The office, Room 2110, is open between the hours of 8:00 a.m. and 3:00 p.m. Monday through Friday. Comments are available for inspection or copying during those hours.

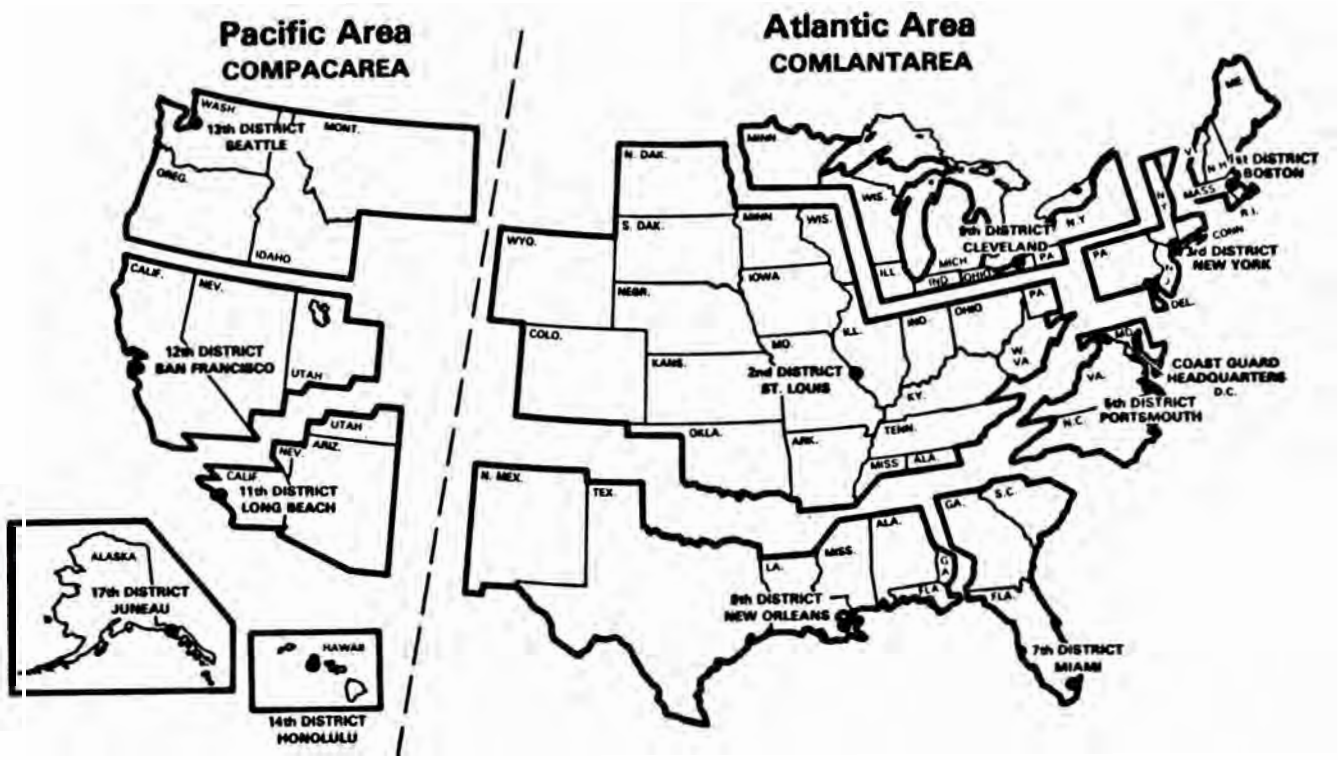
Hazardous Chemical Guide

The Hazardous Chemical Data Manual, 2,200 pages of information describing the chemical and physical characteristics of more than 1,200 chemicals, is now available. The newly revised manual is part of the U.S. Coast Guard's Chemical Hazards Response Information System (CHRIS), and is useful to all of those who are involved in the transportation of hazardous materials.

The new manual may be ordered from the Superintendent of Documents, Government Printing Office, Washington DC 20402; telephone (202) 783-3238. Order CHRIS Manual II, stock number 050-012-00215-1, and enclose a check or money order for $41.00. (Do **not** use the order form on page 36.)

For quick reference:

U.S. Coast Guard Districts



District 1
U.S. Coast Guard
150 Causeway Street
Boston, MA 02114

District 2
U.S. Coast Guard
1430 Olive Street
St. Louis, MO 63103

District 3
U.S. Coast Guard
Governor's Island
New York, NY 10004

District 5
U.S. Coast Guard
431 Crawford Street
Portsmouth, VA 23705

District 7
U.S. Coast Guard
1018 Federal Building
51 SW 1st Avenue
Miami, FL 33130

District 8
U.S. Coast Guard
500 Camp Street
New Orleans, LA 70130

District 9
U.S. Coast Guard
1240 E. 9th Street
Cleveland, OH 44199

District 11
U.S. Coast Guard
400 Oceangate Boulevard
Long Beach, CA 90882

District 12
U.S. Coast Guard
Government Island
Alameda, CA 94501

District 13
U.S. Coast Guard
915 2nd Avenue
Seattle, WA 98174

District 14
U.S. Coast Guard
300 Ala Moana Boulevard
Honolulu, HI 96813

District 17
U.S. Coast Guard
P.O. Box 3-5000
Juneau, AK 99801

NOTE

In the late 1940s, the Coast Guard consolidated a number of districts, thus eliminating Districts 4, 6, 10, 15, and 16.