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P. O. Box 3589
Houma, LA 70361-3589
Phone: (985) 851-2134
Fax: (985) 879-3911
www.nationalmariners.org

[Formerly Gulf Coast Mariners Association. Founded in 1999.]

REPORT TO CONGRESS: TOWBOATS & BRIDGES – A DANGEROUS MIX

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EXECUTIVE SUMMARY: TOWING VESSEL ALLISIONS WITH BRIDGES

The American public expresses its anger, indignation, and frustration whenever towing vessels and their tows strike, damage, disrupt, or destroy key transportation infrastructure and take innocent lives of unsuspecting motorists or passengers on buses or trains.

Following years of frustration on Sept. 9, 2004, Congress with bi-partisan support finally directed the Coast Guard to bring towing vessels under inspection ten years after the Secretary of Transportation received bad advice from the Coast Guard.⁽¹⁾ [⁽¹⁾Memo, Aug. 7, 2005 from Commandant Robert Kramek to Secretary of Transportation: "The inspection study concludes that a full inspection program is not a cost effective way to reduce towing vessel casualties..." NMA file #A-193-3.]

After the Coast Guard promulgates comprehensive new vessel inspection regulations, they ó or a successor agency ó should be able to enforce the same type of comprehensive inspection and operating standards for towing vessels that are required for almost all other comparably-sized commercial vessels.

Unfortunately, towing vessel inspection regulations are only part of a larger problem. The Coast Guard only half-heartedly enforces existing ðhours-of-serviceö regulations that allow many of the towing vessels our ðlower-levelö mariners work on to serve as floating time bombs capable of causing as much damage to our nation's transportation infrastructure as a terrorist's bomb.

After the 2002 Interstate 10 bridge allision and collapse at Webbers Falls, OK, Congress took the first step to end the uninspected status of towing vessels by ordering their inspection. A reinvigorated National Transportation

Safety Board (NTSB) again elevated "hours-of-service" regulations to its "Most Wanted" category of necessary regulated changes after years of Coast Guard delay and obstruction.

The Coast Guard, as the agency responsible for enforcing work-hour statutes, continues to wring its hands after towing vessels with overworked and fatigued officers continue to strike, damage, and destroy bridges, locks, docks and other public and private facilities placing countless lives in danger. A report based on the Coast Guard's marine casualties database⁽¹⁾ showed that towing vessels accounted for almost 42% of all allisions⁽²⁾ with bridges with 1,047 bridge strikes from 1992 through 2000. Since 1980, 105 people died when boats hit bridges.⁽²⁾ Too many towing vessels strike bridges with catastrophic results in accidents that could be prevented. A later report in May 2003⁽³⁾ prepared by a "partnership" between the Coast Guard and the American Waterways Operators, an industry trade association, quickly pointed the finger of blame for most of these accidents at the towing vessel watch officer who is ultimately held responsible for everything that happens aboard his vessel.⁽⁴⁾ However, a report issued by the Department of Homeland Security's Office of the Inspector General in May 2008 throws into doubt the statistics on which that bridge allision report was prepared. [⁽¹⁾As reported by Sonya Colberg in *The Oklahoman*, June 1, 2002. ⁽²⁾**Vocabulary: Allision; allide** = when a vessel runs into a stationary object; **Collision** = when a vessel runs into another floating object. ⁽³⁾*Coast Guard-AWO Bridge Allision Work Group Report*, May 21, 2003, Executive Summary, p. 4. ⁽⁴⁾Refer to DHS OIG Report #08-51 available on the internet as our Report #R-429-M.]

The rush to judgment after a major casualty is a normal human reaction. Everybody has an opinion about what happened. A transportation accident is quickly followed by an "investigation" by the Coast Guard, and in the case of more serious accidents of national significance, by the NTSB and sometimes jointly by both agencies. These investigations use different resources and techniques to seek and identify the root cause of each accident. Unfortunately, the Coast Guard in Nov. 2006 decided to summarily close almost 4,000 investigations that it deemed to be "low risk" although the Inspector General stated in Report #OIG 08-51 that "some investigations merited reviews because they involved serious incidents requiring causal analysis" and that enforcement action also may have resulted from these investigations. **Coast Guard officials simply abandoned their duty to the public and specifically to our mariners and dumped an unwanted workload of cases.**

Aside from the Coast Guard accident investigation, each accident also is followed by litigation that may or may not uncover additional facts and often drags on for years in the courts. These facts are usually reported independently. Since thorough investigations take time, the media and the general public often lose interest, become distracted. This loss of focus by the public allowed the Coast Guard to believe that they could get away with simply dumping their uncompleted workload. By allowing this to take place, industry and our mariners are denied the safety lessons that a thorough casualty investigation might have generated. On the other hand, vociferous demands by the public for immediate change after an accident often result in "knee-jerk" reactions that deflect blame from the government officials who neglected to enforce safety regulations and penalize the unfortunate mariner (or even an entire class of mariners) who may be victims of unreasonable work hours and poor safety conditions they must operate under.

Our files contain dozens of reports of towing vessel allisions with bridges. Unfortunately, these allisions have become commonplace on our waterways. The national media ignores most unless they result in death or cause the public great inconvenience. In this report, we selected a number of cases we believe are significant and cite their importance in terms that Members of Congress on maritime oversight committees can clearly recognize. The cases we cite have much greater implications both for our mariners and the general public than the title of this paper indicates.

<p style="text-align: center;">MARINERS SPEAK OUT ON VIOLATIONS OF THE 12-HOUR WORK DAY <i>[Source: Our Report #R-201]</i></p>

In June 2000, our Association, then known as the Gulf Coast Mariners Association (GCMA), prepared a book titled Mariners Speak Out on Violations of the 12-Hour Work Day detailing widespread abuse of the existing "12-Hour Rules." The 12-hour work day refers to the statute at 46 U.S. Code §8104 "Watches" and the Coast Guard manning regulations that implement that statute. It also refers to broad areas where "hours of service" remain unregulated for unlicensed mariners.

The "two watch system" and its 84-hour work week govern most "lower-level"⁽¹⁾ licensed mariners who serve on commercial vessels operating in 24-hour service. This book, now available on our website as Report #R-201, contains letters from 57 mariners, reporting violations of work-hour statutes and related abusive and unsafe practices. Our Association delivered this book to senior Coast Guard officials **eight years ago**. However, industry

trade associations put sufficient pressure upon Coast Guard officials at District and Headquarters level so that they never raised a finger to actively probe our allegations. Since our Association widely distributed the book in official circles and posted it on the internet, the Coast Guard has no honest explanation of why they ignored a gathering storm of protest, criticism, and complaints of nonfeasance from two generations of overworked merchant mariners that has built over the years. Sadly, for many years, our mariners grew accustomed to dishonesty from the Coast Guard at the highest levels of command and believe it will not change. We urge Congress to look into this matter starting with reallocating seats on the Towing Safety Advisory Committee.⁽²⁾ [⁽¹⁾**Vocabulary: “Lower-level”** = A Coast Guard term that classifies approximately 126,000 merchant mariners who serve on a vessel of less than 1,600 gross register tons, including all of the nation's tugboats, towboats, and most offshore support vessels. (2) Refer to our Report #R- R-417. Rev. 1, Report to the 110th Congress: Request for Congressional Oversight on the Towing Safety Advisory Committee. (TSAC). 11p.]

Members of our Association urged us to closely examine the fatigue issue. In doing so, we reached the conclusion that the NTSB is on target with its recommendation to recommend scientifically based hours-of-work regulations in all transportation modes and in calling for this as one of their "Most Wanted" safety improvements. However, we are turned off by the Coast Guard attempts to rationalize the existing 84-hour work week for licensed officers in the towing or offshore sectors of maritime industry and their failure to even ask Congress for legislation to set reasonable work-hour standards for unlicensed mariners like deckhands, tankermen, oilers, unlicensed engineers, and deckineers. These mariners are often expected to work excessive hours without regard for their safety and health. We pointed this out in our Report #R-370-G, Crew Endurance: The Call Watch Cover-up. 10p.

Aside from the problem of fatigue, we are concerned about the absence of effective and enforceable federal "whistleblower" legislation that protects our mariners when they report unsafe conditions. We are concerned when the Coast Guard fails to investigate information furnished by mariners in good faith. Existing procedures effectively **discourage** mariners from reporting a variety of unsafe and illegal conditions in the maritime industry. Many of these unreported conditions cause death, injury, property damage, and abuse public and private infrastructure as well as the environment.

[NMA Comment: We continue to petition Congress to improve 46 U.S. Code §2114 to protect "whistleblowers" who report unsafe and illegal conditions in the maritime industry. We appreciate the inclusion by the House of section 316, Protection Against Discrimination, in H.R. 2830, the Coast Guard Authorization Act of 2008.]

In this and other referenced reports, we summarize a number of bridge allisions that significantly impacted the public. In doing so, we remind our readers that most of these incidents quickly fade from our collective memory without an occasional reminder.

TYPES OF BRIDGE ALLISIONS

Overhead Clearance Accidents

One common type of towing vessel accident occurs when the pilot of a towing vessel misjudges his overhead clearance (i.e., ðair draft) and strikes an overhead power line or bridge span. This error is often the result of poor or non-existent voyage planning. In some cases, the pilot has no way to calculate his tow's overhead clearance and is under great pressure to complete the voyage.

Voyage planning received attention by the Towing Safety Advisory Committee (TSAC), a federal advisory committee established by Congress. Unfortunately, the committee dismissed the idea of voyage planning on the rivers and Intracoastal waterway as unnecessary. Shortly thereafter, the Coast Guard informal investigation of the Queen Isabella Causeway Collapse (Incident #5, below) reiterated the importance of detailed voyage planning in these waters.

Because the solution to the problem is rather straightforward, we treat this type of bridge allision separately in our Report #R-293-B, Rev. 5, Congressional Oversight is Necessary to Prevent Continuing Overhead Clearance Accidents.

Bridge Allisions Outside the Navigation Channel

Bridge piers are heavily reinforced and adequately fendered in most places where highway or rail traffic crosses a major navigation channel. However, bridge spans lying in shallower water outside the navigation channel often

are not as heavily protected and often may not even be protected at all. Consequently, these bridge supports may not be able to withstand the lateral impact of slow-moving towboats and barges. The basic, slow-motion crash of the small pushboat CHRIS pushing a single, empty barge in Incident #1, below, provides a classic example of what can happen in a simple but noteworthy case investigated by the NTSB in 2003. Some other accidents like Incidents #2, 4, 5, 6 and 7 also occurred outside the main navigation channel.

Bridge Allisions Inside the Navigation Channel

Even tows inside the navigation channel strike bridges for a variety of reasons. Incidents #8, 9, 10 and 11 are all examples as are dozens of other allisions on the East and West Coasts, the Western Rivers Systems and the Gulf Coast every year.

What Can Be Done to Prevent These Accidents

Over the past eight years, our Association made a number of recommendations to the Coast Guard. This is a small, independent effort to alert our mariners so they can avoid the same errors. We ask Congress to require the Coast Guard or successor agency to make better use of its vast collection of accident statistics and information, and its staff of about 150 accident investigators to make safety recommendations available to our mariners. In recent years, this rarely happened and has been a hot topic for a long time. The mismanagement of Coast Guard investigations came to rest in the lap of Congress in a report by the Department of Homeland Security's Office of the Inspector General that we posted on our website as Report #R-429-M.

The Coast Guard cut off effective input from our mariners for so long and so completely that we now address our reports directly to members of Congress. ***Our "Recommendations"*** appear near the end of the report and appear in paragraphs uniquely marked [A] through [S]. In cases where any of our recommendations refer to facts presented in one or more of the incidents described below, we will slip one of the unique markings in the text.

<p>Incident #1: New Orleans, Louisiana – Towboat CHRIS Brings Down the Judge Seeber Bridge <i>[Source: Edited from NMA File #M-059]</i></p>
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The Accident

One empty barge pushed by the small towboat CHRIS at bare steerage way knocked down a portion of the Judge Seeber Bridge crossing the Industrial Canal in New Orleans killing one motorist and critically injuring two others. This accident was the first in a series of accidents similar to the 2001 Queen Isabella Causeway accident in Texas and the 2002 Arkansas River accident at Webbers Falls, OK. In each of these accidents, bridge supports outside the regular navigation channel were knocked out by an out-of-control towboat and one or more barges.

"About 3:30 p.m. CDT on May 28, 1993, the towboat CHRIS, pushing the empty hopper barge DM-3021, collided with a support pier of the eastern span of the Judge William Seeber Bridge in New Orleans, LA. The bridge, known locally as the Claiborne Avenue Bridge, carries Highway Route 39 over the New Orleans Inner Harbor Navigation Canal, known locally as the Industrial Canal. The impact severed bent #21,⁽¹⁾ causing two approach spans (about 145 feet of bridge deck) and the two-column bent to collapse onto the barge and into the shallow waters of the canal. Two automobiles carrying three people fell with the four-lane bridge deck, resulting in one death to a pregnant woman and serious injuries to the other two people. As a result of the accident, the canal was closed to navigation traffic for 2 days and the bridge was closed to vehicle traffic for 2 months. ^[⁽¹⁾Vocabulary: **Bent** = A transverse frame of a bridge designed to support a vertical load.]

"The (NTSB) determines the probable causes of the collapse of the Judge William Seeber Bridge to be (1) the towboat operator's poor judgment in leaving the wheelhouse of the unsecured towboat unattended and (2) the failure of various responsible Federal, State, and local government agencies to institute an effective program for assessing and managing risks to this bridge.

"Four safety issues were identified in this accident:

- adequacy of operator performance,
- timeliness of toxicological testing,
- vulnerability of the Claiborne Avenue bridge to vessel collision and subsequent collapse, and
- vulnerability of existing bridges nationwide to vessel collision and subsequent collapse.

[NMA Comment: The Captain left the pilothouse to check on the progress of the newly-assigned deckhand

who went below decks to the engineroom to change fuel filters on a malfunctioning main engine. The Coast Guard has failed to recognize the need to formally train engineroom personnel on all vessels of less than 1,600 tons.] [K]

[NMA Comment: The report never questioned the use of untrained engineroom personnel – an unfortunate oversight.] [K]

[NMA Comment: We ask Congress to request the National Research Council to evaluate and update the Marine Engineers Beneficial Association report to Congress dated Jan. 2, 1973 (reprinted in our Report #R-401 Rev. 1, Crew Endurance and the Towing Vessel Engineer – A Direct Appeal to Congress.) to re-evaluate the need to provide safety and/or vocational training for engineers on commercial vessels less than 1,600 GRT.]

In summary, there should be no doubt remaining that even a small towboat pushing a single empty barge at idle speed can "take-out" an inadequately protected bridge. A clear choice exists between spending billions to protect every bridge crossing navigable waters or to bring a poorly regulated industry under control.

Incident #2 – Webbers Falls, Oklahoma; Towboat Robert Y. Love Demolishes Interstate 40 Bridge
[Source: NMA File M-275. Investigations by both the Coast Guard and the NTSB]

This remains an active case until the Coast Guard finally decides an outstanding appeal. For detailed coverage, please refer to our Report #R-370-A, Rev. 2., Report to Congress: Fifth Anniversary of the Webbers Falls I-40 Fatal Bridge Accident: Unresolved Issues Revisited. 12p.

The Accident

The towboat Captain whose barge struck the Interstate Highway 40 fixed bridge and killed 14 motorists reported that in 46 hours leading up to the accident, he was awake 36½ hours and slept only 9½ hours according to information presented at a press conference. [F] However, the NTSB cited an unreported and previously unknown medical condition as the proximate cause of the accident.

The towboat Captain reported that he did sleep for six hours before assuming the watch at 0500 several hours before the crash and did not describe feelings of fatigue during an interview with investigators. A spokesman for barge owner, Magnolia Marine Transport Co., said that the type of sleep schedule the Captain followed was typical in the industry and that he was rested enough to pilot the vessel. The captain told investigators the last thing he remembers before the collision at 0740 was passing green channel buoys about a half-mile south of the bridge. Traveling at 6-7 mph, it would have taken the towboat only five minutes to reach the bridge. The Captain reportedly had no previous violations on his Coast Guard license.

Health records for the Captain did not reveal anything remarkable according to the NTSB. Although unreported heart problems later surfaced. The Captain remained hospitalized and later was transferred to another hospital for further evaluation. A urinalysis was negative for drugs but he was not tested for alcohol.

A Public Affairs officer from Eighth District Headquarters stated that the U.S. Coast Guard, which regulates barge traffic, does not regulate the amount of sleep a towboat captain should have before a shift. She apparently was not familiar with the statutory requirements of 46 U.S. Code §8104(a) that states: "An owner, charterer, managing operator, master, individual in charge, or other person having authority may permit an officer to take charge of the deck watch on a vessel when leaving or immediately after leaving port only if the officer has been off duty for at least 6 hours within the 12 hours immediately before the time of leaving."⁽¹⁾ A Coast Guard Investigator subsequently concluded that the Captain had violated 46 U.S. Code §8104(h) that restricts pilots to working more than 12 hours of work in a 24-hour period. The towing company appealed the conclusion and later appealed the penalty.

An NTSB investigator outlined the Captain's schedule between 1430 Friday, when he was on duty on another towboat in Hermann, MO, and when the barge hit the bridge at 0740 Sunday morning. The captain left his assignment at Hermann, MO, at 1600 Friday by car for his hometown of Florence, MS, arriving 12 hours later after making several stops. He slept there for 3 hours before driving to Fort Smith, AR, where he reportedly boarded the towboat Robert Y. Love. The mileage from Hermann, MO, to Florence MS, is 577.55 miles and the driving time is 10^h12^m and from Florence, MS, to Fort Smith, AR, it is 428.44 miles and 9^h06^m respectively for a total of 1005.99 miles and 19^h18^m driving time.

Was the Captain on-duty or off-duty?

One persistent area of concerns for our deck officers is whether travel time en route to their assigned vessel is "on-duty" or "off-duty" time, especially when they are expected to take over command of the vessel and leave port immediately. Coast Guard policy on that point remains unclear because their policy calls it "neutral time," an undefined and meaningless term. Consequently, in a "Petition for Rulemaking" our Association submitted to the Coast Guard's Marine Safety Council on Apr. 18, 2002, over a month before this accident, we stated that, "The lower-level mariners we represent are distressed with the definition of "travel time" that appears in paragraph 2.d of your policy letter⁽¹⁾ as follows: [⁽¹⁾Policy letter G-MOC #4-00, Sept. 2000.]

"Travel time to a vessel is considered to be neutral time as it is normally not considered to be "rest", "off-duty", or "work" time, but all relevant circumstances should be considered in evaluating whether a mariner complies with the applicable "rest" required by STCW or "off-duty" requirements specified in 46 U.S. Code §8104(a)."

We pointed out that the Coast Guard, at that time, was one of the modal administrations of the U.S. Department of Transportation and our petition was based in part on a NTSB study titled Evaluation of U.S. Department of Transportation Efforts in the 1990s to Address Operator Fatigue.⁽¹⁾ [⁽¹⁾NTSB/SR-99/01].

"We note that "neutral time" is not defined in your policy letter. This leaves the mariner and his employer with the possibility of a misunderstanding as to evaluating whether a mariner is expected to go on watch immediately upon arriving at the vessel or to wait until he has received the required rest. Lacking a clear Coast Guard policy statement, the mariner may feel justified in delaying departure until he is rested and, as a result, be fired or forced by the threat of being fired into committing an unsafe act. This in turn could lead to a fatigue-related accident, suspension or revocation of the mariner's license, and/or lawsuits and liability depending upon the nature and extent of the damage resulting from fatigued operation." [B]

"Our mariners report many 'horror stories' of being forced to drive (or of being driven) for hours and then having to take over a watch immediately upon arrival at the vessel. We reported these matters to the Coast Guard."

"On page 40 (Table 1-1) of the NTSB study cited above, the Federal Railroad Administration (FRA) regulations at 49 CFR §228.7(a)(4) consider 'on-duty' time to include 'Time spent in deadhead transportation en route to a duty assignment.' This is a clear, unequivocal statement. It is followed by this statement: 'Time spent in deadhead transportation by an employee returning from duty to his point of final release may not be counted in computing time off duty or time on duty.' We note that this 'deadhead transportation' takes place mostly on land both for railway employees and for their mariner counterparts."

[NMA Comment: We ask Congress to require that the Coast Guard count travel time to the job site as "on duty" time for all vessel deck officers. We further ask that Congress consider expanding 46 U.S. Code §8904(a) to require all licensed and unlicensed members of the ongoing deck and engine watches be provided an opportunity to obtain adequate rest before going on watch.] [F] [G]

Another growing area of concern for many licensed mariners is their exposure to personal liability for accidents that happen on the job. Many of our mariners still believe their employers will defend them or at least cover their legal fees following an accident or even a horrendous accident such as one that involves loss of life. After such an accident, the unfortunate mariner faces two threats: 1) Administrative Law where the Coast Guard may seek to suspend his license for negligence, incompetence, misconduct, violation of a law or regulation, or conviction for drug law violations, and/or 2) Civil Law: for monetary damages. Unlike most employers who leave their officers in limbo, our Association informs mariners in Report #R-342, Rev.5. License Defense Insurance; Income Protection Insurance and Civil Legal Defense of the purpose and need for license insurance to cover both administrative and civil proceedings.

Maritime Union Comments

In commenting on the Webbers Falls bridge accident, Richard Plant, Director of Special Operations for the International Organization of Masters, Mates and Pilots (MM&P) stated: "For years, the MM&P has been requesting that the Coast Guard be more proactive and less reactive when it comes to our inland mariners who hold lower-level licenses. This part of the industry is the only mode of transportation in the United States that does not require logging of hours worked or the requirement of maintaining a logbook aboard the vessel. [J]

Plant also noted that, "Since these mariners work a 6-hours on, 6-hours off shift, they have no possibility of obtaining the required minimum 7 or more hours of continuous rest to reduce fatigue. Vibration, making locks, moorings, docking, undocking all affect the mariners sleep patterns on inland rivers. Violations of the 12-hour

work rule continue in brown, as well as blue water, with the full knowledge of the Coast Guard. Although this is against the law, why has no corrective action been taken?" [F]

Plant stated that, "The MM&P is not alone in our outcries for corrective action in this industry. (Mariner associations) as well as individuals representing many industry groups attending recent manpower, retention and maritime security meetings have all called for action to be taken."

"The fear of the mariner is that without proper whistleblower legislation and by simply being an 'employee-at-will' in right-to-work states, these mariners cannot, and dare not, report violations of laws, statutes and regulations to the Coast Guard for fear their name will be reported to company management personnel and result in their being fired." [B]

"Mariners would rather attempt to continue to work and receive their pay while knowingly violating the law rather than risk losing their income and job. This is wrong. Any company violating law(s) should be reported and corrective action taken without discrimination against the reporting individual," said Plant.

Incident #3: Lake Pontchartrain, Louisiana: Tugs & Tows Struck Causeway Bridge 16 Times

Since its construction began in 1955, the Lake Pontchartrain Causeway was struck sixteen (16) times according to Debbie Lopreore, Supervisor of Operations for the Greater New Orleans Expressway Authority. "However, this does not mean that portions of the 24-mile twin roadways were knocked down that number of times," she cautioned. However, the scrapbook of newspaper articles and editorials she provided to our Association showed a number of photographs illustrating the damage wrought by out-of-control towing vessels and barges.

Several notable incidents involving towing vessels and the problems they illustrate are cited below. These incidents and the collision involving the towboat M/V Warren J. Doucet pushing a tow carrying approximately 27,000 barrels of crude oil in the nearby waters of the Mississippi River near the Greater New Orleans Bridge on April 6, 1969 with Taiwanese freighter SS Union Faith tolled the loss of twenty-five lives and led to the enactment of the Pilothouse Licensing Act (Public Law 92-339) that first licensed towing vessel "operators" in 1972 ó but clearly did not solve many of the related problems festering today.

Two Incidents in 1964: "Passed out," before barges hit span, first mate quoted.

[Source: Edited from the Times Picayune, June 17, 1964.]

The first mate of the tugboat that pushed two barges into the Lake Pontchartrain Causeway early Tuesday morning told state police he had "passed out" sometime before the accident and was not at the wheel of the tug.

A Continental Trailways bus plunged into the lake, killing six people after the barges had ripped out four 56-foot sections of the bridge.

Capt. Vincent H. Ebeler, Jr., commander of Louisiana State Police, Troop B, said first mate ■, 30, told him he "didn't even feel the crash."

Ebeler quoted ■ as saying he radioed Louisiana Material Co. shortly after taking over the wheel about 12:45 a.m. This ■ said, was about the last thing he remembered until after the crash, which occurred about 1:30 a.m.

To be booked. Capt. Ebeler said, however, that ■ will be booked with negligent homicide after his release from Touro Infirmary. The local state police commander said he decided to book ■ after obtaining a statement from ■■, the tug's captain, that he heard ■ yelling for him immediately after the impact.

Capt. ■■ said he went to the wheel right away, took over from ■ and then gave him series of orders which he followed without showing any signs of physical disability, according to Capt. Ebeler. The state police commander said ■'s condition did not seem to be serious and he was told by hospital attaches the man would be released soon.

Coast Guard Finds Tug Crew Inadequate.

[Source: Edited from the St. Tammany Farmer, Oct. 9, 1964.]

Captain ■■ was asleep. They were the only (two) men aboard at the time. The Coast Guard noted that had another man been on duty at the wheel, the accident might have been avoided.

Findings revealed that the two men had been operating the tug by themselves more or less continuously over a period of 16 days. It was hinted neither man could have received adequate rest. The tug was owned by Ace Towing Co. of Gretna and was under charter to the Louisiana Materials Co. The Coast Guard said the tug's owner and the Master of the vessel were responsible for the inadequate manning of the boat and the excessive working hours.

[NMA Comment: The Coast Guard cannot claim that it adequately enforces even the existing work hour statutes effectively. Nor do they effectively enforce safety regulations that are designed to prevent workplace accidents. Most loss of life on towing vessels results from falls overboard. We ask Congress to require by statute that employers assigning crews of less than three men to any towing vessel (as is common on small towing vessels including "fleet boats") to maintain an "approved" realistic and workable plan and the necessary equipment to alert the pilot of a man overboard and to retrieve that person from the water.] [E] [F] [G]

[NMA Comment: An "at will" employer with the right to "hire and fire" must be held responsible for adequately manning the vessel while the master is responsible for establishing a legal watch schedule – something he can only do if the vessel is adequately manned.] [O]

Television Station Editorial.

[Source: WWL-TV Editorial, July 27, 1964.]

It seems like only yesterday ó and it almost was ó that this station commented on the Lake Pontchartrain Causeway and the awful tragedy of June 16th. Six lives were lost when two barges knocked 230 feet of roadway into the lake, dropping with it a bus carrying eight people. It was the fourth time that the bridge had been knocked out of business, but the first time any lives were lost. We ended the editorial with these words: Perhaps the blame can be placed. But this is not the answer.

This \$51 million bridge will continue to be knocked down ó and perhaps more people will be killed ó unless laws are passed to regulate more stringently the operations of tugs and barges on the lake,⁽¹⁾ and to regulate the men who command these vessels."⁽²⁾ Of course, we did not expect this prediction to be fulfilled so soon. But here we are, only 41 days since the last tragic collision, and we have another. In June the man supposed to be steering the tug and two barges said he "blacked out."

Last Saturday, when another tug and two barges crashed into the bridge ó knocking out 200 feet of roadway ó the man supposed to be steering told the Coast Guard investigators he had fallen asleep. And, passengers of a bus which crossed that portion of the bridge just before the collision, reported that they could see no one in the pilothouse of the tug. Now in the context of logic and normalcy, it seems incredible that Saturday's accident could have happened at all. But then, it is just as incredible that the earlier collision should have happened, and six people killed. The Lake is so big ó 600 square miles. The damages are so great ó about \$500,000 total for both accidents. The stakes are so tremendous. And yet, simply because one man "blacked out," and another fell asleep, tragedy, and chaos resulted. Now we talk about safeguards for the drivers on the bridge. And of radar and other precautions. But until something is done ó and again, we are only repeating ourselves ó until something is done to regulate, to license, to govern what kind of a man can operate tugboats and such on the lake, travel on this \$51 million bridge will be like playing Russian roulette ó purely a matter of changes whether you will get across or not. ⁽¹⁾ *Congress passed the Pilothouse Licensing Act on July 6, 1972 and "grandfathered" existing industry personnel.* ⁽²⁾ *Local regulations passed by the State Legislature are listed below.]*

[NMA Comment: The public should not frame the question as one of "character" but one that closely examines training, experience, realistic work-hours, rest periods, and working conditions.]

One Incident in 1974: Barge Knocks Out Causeway Section.

[Source: Edited from the New Orleans States-Item, July 4, 1967, by Kermit Tarleton.]

A barge rammed into the Lake Pontchartrain Causeway early today, knocking out a 56-foot section and closing the busy span to traffic for the rest of the holiday period.

There was no automobile traffic near the scene of the crash, and there were no injuries. The accident was at nearly the same spot where six persons were killed on June 16, 1964, when a bus plunged into the lake after a section was knocked out by a barge.

Malcolm N. Stein, causeway general manager, said the man piloting the tugboat pushing the barge admitted before an attorney and witnesses that he was asleep at the wheel. [F]

Captain and Owner Cite the Fifth Amendment.

[Source: Edited from the Times-Picayune, Aug. 3, 1974, by Emile Lafourcade.]

Both the Captain of the towboat MISS ANDY and the owner firm's President took the Fifth Amendment Friday at a Coast Guard hearing on the boat's ramming of the Lake Pontchartrain causeway early Thursday.

But a statement written and signed by Captain ■■■■ of Galliano, and introduced into evidence, indicated ■■■■ was asleep at the helm at least 20 minutes before his tow of empty barges struck the northbound span of the causeway, creating a 252-foot gap.

Two motorists ó Tazille Charles Madison, 36, and Edgar E. Dillon, 41, both of New Orleans ó died when the vehicles they were driving crashed through the gap and into the lake soon after the bridge was rammed. Dillon's brother, Wallace, 19, is believed missing in the crash wreckage.

The Coast Guard hearing, which lasted four and a half hours, ended at 5:30 p.m. Friday with the hearing examiner, Lt. (j.g.) Richard C. Wigger telling Capt. ■■■■, "I inform you that the Coast Guard will take action to secure your testimony."

He made the same statement to ■■■■ earlier in the hearing and again to Autry James Dufrene...of...Gretna, president of American Tugs, Inc., owner of the M/V Miss Andy, when he refused to answer the examiner's questions on advice of his legal counsel.

The boat's mate, Larry Stelly, and deckhand, David Knott, both of Arnaudville, were more talkative.

Their testimony characterized American Tugs⁽¹⁾ as a loosely-run outfit lacking clearly defined lines of communication and duties for crew members and with no set work or watch schedules.

Both said that when they were hired (Knott was hired just over a week ago) they were not told of any specific duties they were to perform or at what time of day they were to perform duties. [⁽¹⁾Refer to NMA file #M-190]

They said the matter of duties and their timing were left to the captain.

Stelly said watch duties for him and the captain ran as much as 12 hours at a stretch. He added that he is paid \$40 a day with no accounting for the number of hours worked in a given day. [G]

[NMA Comment: We ask Congress to require maritime employees to record in a vessel's "Official Logbook" the hours that each mariner worked each day. We appreciate the fact that the House included this provision in Section 312 of H.R. 2830, the Coast Guard Authorization Act of 2008.]

Knott testified his workday averages 13 to 14 hours, adding that on some difficult duties he was assisted by Stelly or ■■■■, whichever was not at the boat's wheel at the time.

Asked if a crew of three was sufficient to handle the boat's work load, Knott said three was "not enough." [H]

The hearing progressed tediously at first as the hearing examiner and the attorneys asked numerous questions related to the M/V Miss Andy's log for the 48-hour period prior to the accident.

Lt. Wigger was trying to put together a picture of the pattern of activities aboard the towboat.

Stelly testified that at the time of the accident he was dozing in the bunk room behind the boat's wheelhouse. Knott testified he was asleep below the deck at the time and did not know of the accident until Stelly woke him up a few minutes afterward, telling him to light a fire on the barge in an attempt to caution any motorists who might be headed toward the causeway gap.

The hearing became punctuated with controversy and legal questions during testimony of the third witness, Lt. (j.g.) Terry L. Rice, the Coast Guard's investigating officer at the accident scene.

He said he arrived on the scene shortly after 6 a.m. Thursday and soon after boarded the MISS ANDY with a Jefferson Parish sheriff's deputy.

He testified the deputy placed ■■■■ under arrest and informed him of his rights, adding that Lt. Rice also informed the captain of his rights, but encouraged him to answer his questions and sign a statement.

[NMA Comment: Following an accident, a licensed mariner is caught between a rock and a hard place between company policies and government investigators. A mariner must protect his personal interests, his license, and his job. Only through license insurance can a mariner ensure immediate access to a trained admiralty attorney to protect him. Refer to our Report #R-351.]

He quoted ■■■■ as saying he came on watch at 2:30 a.m. Thursday just before the towboat passed the Florida Avenue Bridge over the Industrial Canal. That he piloted the boat past the Seabrook Bridge and into the lake.

Stelly testified that the night was clear, that he could see lights on the causeway from Seabrook and then retired to his bunk.

Lt. Rice quoted ■■■■ as saying his boat was traveling toward the causeway at four miles an hour.

Lt. Wigger asked Lt. Rice to read the statement given him by ■■■■t and both ■■■■'s attorney, William Crull, and the attorney for American Tugs, George B. Matthews, strenuously objected to admitting the statement into evidence. Crull adding he was concerned about the "wide dissemination" the statement would be given if made public.

The objections were over-ruled and Lt. Rice read that the towboat had "cleared Seabrook and headed for the south draw" of the causeway.

He continued reading from the statement that ■■■■ "came in line with the draw and lined up the tow with the green lights on the south draw. I was about one and a half miles from the draw and then I hit the causeway and that's when I woke up."

Asked what was ■■■■'s apparent condition and general appearance when he (Lt. Rice) boarded the MISS ANDY. Lt. Rice said ■■■■ was "very nervous" and was wearing a white shirt that was dirty and gray pants and "looked like he had been up a while."

Dufrene was then called to the stand, but answered Lt. Wigger's three questions with a Fifth Amendment declaration...

Local Regulations Now Govern Causeway Commercial Boat Traffic

[Source: U.S. Coast Pilot #5]

Notice to commercial maritime interests in Lake Pontchartrain. Local Regulations.

Effective July 14, 1988, the Louisiana Legislature passed and Governor Roemer signed into law LA. Acts (1988) No. 552, regulating navigational safety near the Lake Pontchartrain Causeway Bridges. Key features of this Act:

(1) Require all tugs, towboats, self-propelled dredges, jack-up barges, jack-up rigs and all self-propelled vessels of one hundred net tons or greater, or one hundred feet in overall length or greater, and all vessel flotillas of one hundred aggregate net tons or greater operating on Lake Pontchartrain to be equipped with Loran C equipment suitable for use with the Lake Pontchartrain Collision Avoidance Warning System (CAWS);

(2) Establish a "prohibited zone" paralleling each side of the entire length of the Lake Pontchartrain Causeway Bridge and extending outward for a distance of one mile from the easterly and westerly outboard sides of the causeway bridge twin spans;

(3) Prohibit all privately-owned vessels within the classes listed in paragraph (1), above, from entering, navigating, mooring, or anchoring in any manner within the "prohibited zone," except:

(a) as required to navigate through the Lake Pontchartrain Causeway Bridge openings upon such course and upon such directions as may be given by the Causeway Bridge tender,

(b) as required in an emergency to protect against loss of life or property, or

(c) as otherwise permitted in accordance with permitting procedures set forth by the Act and the Rules and Regulations of the Greater New Orleans Expressway Commission;

(4) Provides for the assessment of a civil penalty in the amount of up to \$1,000 per vessel per violation against the owner, operator, or charterer of any vessel within the classes listed in paragraph (1), above, which impermissibly enters the "prohibited zone," or which enters the "prohibited zone" without the Loran C equipment required by the Act;

(5) Requires that all collisions, accidents or other casualties involving a vessel within any of the classes listed in paragraph (1), above, be reported to the Greater New Orleans Expressway Commission within 48 hours if such casualty has resulted in death or injury, or within 5 days, if such casualty resulted in property damage exceeding \$200.

Incident #4: Seattle, Washington – Lake Washington Pontoon Bridge Allision

Source: For additional details, refer to our Report #R-370-B, Rev. 4, June 1, 2006. Violation of the 12-Hour Rules: The Tug Chinook Strikes and Damages the Lake Washington Bridge. 14p

The "Two Watch" System Limits Licensed Service to 12 Hours Per Day

Many "lower-level" mariners in both the towing and mineral and oil sectors of the marine industry work on vessels operating under the two-watch system. The two-watch system is widely abused since licensed officers are often required or simply expected to operate beyond the legal work-hour limits of 12 hours in any consecutive 24-hour period. Even in the 21st century, Congress still has not provided our unlicensed lower-level mariners such as tankermen, unlicensed engineers, deckhands, òdeckineersö and cooks with the most basic statutory work-hour

limits. Our Association considers enforceable work-hour statute absolutely essential. Unfortunately, the Coast Guard has proven to be unwilling or unable to enforce existing statutes for licensed personnel. [F] [G]

Largely as a result of the formal complaints we lodged with the Coast Guard in our book titled Mariners Speak Out on Violations of the 12-Hour Work Day,⁽¹⁾ the Coast Guard "clarified" the 12-hour rules in G-MOC Policy Letter #04-00⁽²⁾ in September 2000 without changing existing law or regulations and without enhanced enforcement. Nevertheless, this policy statement outlines and clearly delineates responsibilities of 1) employers, 2) mariners, and 3) the Coast Guard. [⁽¹⁾Available on our website as Report #R-201. ⁽²⁾Our Report #R-258, Rev.2]

By regulation,⁽¹⁾ establishing watches is always the job of the vessel's Master whether he has adequate personnel on board or not! On a towing vessel with two licensed officers, both the Master and the Mate/Pilot are limited by statute to a 12-hour work day.⁽²⁾ Often, the Master will establish a 6 hour on-duty and 6 hour off-duty watch schedule although equivalents such as 12-and-12 or 7-and-5 followed by 5-and-7 hour watches are also possible. [⁽¹⁾46 CFR §15.705(a). ⁽²⁾46 U.S. Code §8104(h)]. [Q]

The abuse of these regulations arises when the vessel's Master is expected to perform additional duties above and beyond standing his watch. Such abuse can be either subtle or blatant. In the case covered by this report, company policies clearly were pinpointed as the culprit. To make matters worse, company policies were aggressively supported by the towing industry's trade association, the American Waterways Operators (AWO). [F]

The result was predictable. The Master was found guilty, his license suspended, and a long career afloat ended! [B]

The M/V Chinook Incident

[Source: Marine Casualty Narrative Supplement, Case # MC00009670, Seattle Marine Safety Office.]

In this incident, a towing vessel and its tow veered out of the navigation channel and struck a concrete support pillar of a major highway bridge after the tug's master fell asleep at the wheel. The Captain's desperate last-minute maneuvers upon awakening prevented a major catastrophe and loss of life.

At approximately 0240 on July 29, 2000, the empty gravel barge NWA-100, pushed ahead by the tug CHINOOK, allided with a piling supporting the western high rise bridge of the SR-520 bridge spanning Lake Washington, about 0.3 mile south of Webster Point. The tow was transiting from Kenmore en route to Pier 1 in Seattle.

Damage to the barge was limited to a slight dent and scrape on her starboard bow, while the tug suffered extensive damage to its mast, radio and radar antennas. Damage to the SR-520 bridge: a mile long pontoon bridge across Lake Washington that carries heavy commuter traffic to and from Seattle, was on its high rise section lying outside the main navigation channel. Damage consisted of cracking and separating the southernmost piling in a series of six pilings supporting the western high rise span closing one lane of the bridge.

There were no injuries or pollution, and later drug and alcohol tests conducted on the Master and Mate were negative.

The initial cost estimate for temporary repairs to the bridge was \$250,000. One traffic lane was closed for 11 days and was widely reported in the Seattle papers and on TV. Subsequently, Directors of our Association met with the Seattle journalists who reported the accident.

Background Facts

M/V CHINOOK, official number D299737, is a 60-foot, 78 gross ton, 1020 horsepower, U.S.-flag documented, twin screw steel towboat built in 1965 and outfitted with two (2) radars, VHF-FM radios, and a fathometer. Both radars were on with one on standby at the time of the allision. The barge it was pushing, "NWA-100," official number D298799 is a 237-foot, 1,829 gross ton steel freight barge built in 1965. It was in service transporting gravel at the time of the accident and had a valid documentation certificate. The barge previously held a Certificate of Inspection that expired in Nov. 1990 and was no longer maintained as an inspected vessel. [E]

The tug's Master held a current Operator of Uninspected Towing Vessel (OUTV) license with a radar observer endorsement as required. The Mate held a current Master, 1,600 ton, near-coastal license with a radar observer endorsement. The crewman/engineer had a current able seaman-limited merchant mariner document with a lifeboatman endorsement. At the time of the incident, visibility was unlimited; the winds were calm and variable at less than 3 knots. There were no seas, and air temperature was 60-63°F.

Voyage Summary

At 0150 on July 29, 2000, the tug Chinook departed Kenmore, WA, pushing the empty gravel barge NWA-100 en route to Pier 1, Seattle manned by a Master, Mate, and a "deckhand/engineer." The Master and Mate normally split the navigation watch into a 6-hour watch rotation. After picking up the barge in Kenmore at 0150, the Master

assumed the navigation watch, while the Mate was below in his stateroom. The deckhand was on watch and made the designated rounds of the vessel. Before departing, the Master attempted to contact the bridge tender via mobile phone and left a voice message to arrange to lift the Montlake Cut Bridges around 0300.

The M/V Chinook proceeded down Lake Washington at approximately 7 knots. Around 0230, while approaching Webster Point located 2000 yards east of the Montlake Cut Bridge, the Master slowed the vessel to 5 knots and again tried to contact the bridge tender via VHF-FM but received no reply.

The Master slowed the vessel again; this time to only 3 knots to time his arrival at the bridge with the 0300 lift he previously requested and then started to make the turn around Webster Point. This is the last thing he remembered doing before the bridge appeared 100 yards ahead of him.

The distance from Webster Point to the SR-520 bridge is only 600 yards and six minutes travel time at that speed. The Master remembered hearing a noise and looking up to see the SR-520 bridge only 100 yards ahead, with the tug and barge approaching the western high rise support pilings from the northeast. Seeing the bridge support pilings directly ahead, the Master reversed both engines to full astern to slow the vessel and its tow. However, since he realized the vessel was not slowing fast enough to avoid the pilings, the Master turned the rudder hard to port and went ahead on the starboard engine and turned the bow of the barge slightly to port allowing the barge to miss the first five support pilings. However, this maneuver was not enough to slow the tow's momentum and, at approximately 0240-0245, the barge allided with the last support piling, cracking its hollow cement structure.

While the top of the tug's pilothouse 43-feet above the water fit under the bridge, its mast, radio and radar antennas sheared from the top of the pilothouse as the tug followed the barge under the bridge. The Mate awoke with the impact, went out on deck to see what happened, and then went up to the pilothouse to make sure that the Master was okay. After the vessel and its tow stopped, the Master backed the barge and tug out from underneath the bridge.

Seattle Harbor Patrol Unit 453 was on-scene within 15 minutes of the incident to assist and complete an incident report at 0311. The harbor patrol then escorted the tug and barge to the company's mooring area. Shortly after the vessel moored, an initial interview between the Master, Mate, deckhand, company operations manager, and the regulatory manager took place. During the interview, the Master stated that he "may have fell asleep or blacked out" just before the allision. Drug and alcohol tests were conducted after the initial interview. The Master and Mate sat through a secondary interview on Aug. 7, 2000. The Master submitted to a physical examination on Aug. 4th that showed no evidence of a seizure disorder or cardiac abnormality.

On Aug. 11th, the Coast Guard subpoenaed Sea Coast Towing, Inc. to obtain its

Vessel Operations Manual;

Company Policy and Procedures Manual;

Training guidelines or training plans for vessel operators and crewman;

Vessel logs for the tugs M/V Cascade (D583859) and M/V Glacier (D501938) from July 15-31, 2000.

Vessel logs for M/V Chinook from July 1-26, 2000;

Payroll logs for July 1629, 2000;

Training records for all three crewmembers for a 6-month period prior to July 29, 2000.

The Coast Guard's Findings of Fact

The Master had been licensed as an operator for 27 years.

The Master was on the navigation watch during the transit from Kenmore to the time of the allision.

No fixes or course track lines of the transit were plotted on the local chart.

Current Local Notices to Mariners were available to the Master; all other required publications were current.

All navigation equipment onboard was available and operational at the time of the allision.

No mechanical discrepancies or engine malfunctions were noted or logged.

The Mate was asleep below in his stateroom and the deckhand was in the galley at the time of the allision.

Barge NWA-100 allided with the southernmost piling supporting the western high rise of the SR-520 Bridge causing a crack, and separating the support piling.

The Sea Coast Vessel Operations Manual required the Master to be up and present during all landings and departures with a tow; all transits of Lake Washington from Lake Washington Ship Canal to Kenmore; and all bridge transits. [F] [S]

The licensed officer on watch is responsible for fixing the position of the vessel and **plotting it** on the appropriate chart in intervals of no more than every 30 minutes.

The Master had extensive licensed experience, was on the sixth issue of his towing license, and made many trips in Lake Washington and the Puget Sound area while employed with Sea Coast Towing and other industry vessels. The Master's work period consisted of 4 weeks on and 1 week off. He was into the 3rd. week of his 4-week period on duty at the time of the allision.

Towboats transiting the inland waters of Lake Washington traditionally navigate by using radar and radar ranges, with navigation charts available for reference. No course tracks or fixes appeared on the local chart.

The Sea Coast Vessel Operations Manual, section 2.3.1 recommends fixing and plotting the vessel's position at an interval of 30 minutes. Time intervals between plots may be decreased at the Master's discretion.

The Mate was not designated to act as a "Sea Coast Towing qualified Master"⁽¹⁾ aboard the M/V Chinook.

[NMA Comment: The Mate was experienced and held a 1,600-ton Master's license – a license that was, at the time, superior to the license of the Master in charge of the vessel. If the company did not believe the Mate was sufficiently qualified, it was up to them to provide a licensed officer that was fully qualified.]

Coast Guard Analysis:

Vessel logs for the previous 51 hours point to extensive operating periods for the vessel. Analysis and charting of the vessel's logs with reference to watchkeeping indicate a strong probability of fatigue as the major causal factor in the casualty. [B]

The Master confirmed that he was on watch during all lock transits, bridge transits, transits of Lake Washington, and all barge drops, shifts, and pickups as required or recommended by Sea Coast Vessel Operations Manual sections 2.3.9 and 2.3.10. With the exception of the actual transit of Lake Washington, the Mate and deckhand were on deck assisting with line handling and other deck functions during all above evolutions. [G]

Over a period of 51 hours from midnight, July 27 to 0245 July 29, the Master was off watch for a total of 20 hours and 15 minutes, most of which was a block of 13½ hours.

Further breakdown of work hours from midnight, July 27 to 0730 on July 28 show the Master on watch for almost 24 out of the 31½ hours.

During the 24-hour period between 0400 July 27, 2000 and 0400 July 28, 2000, the Master was involved in the operation of the vessel for at least 16 and possibly as many as 18 hours.

The Master had a rest period of approximately 13 hours and 20 minutes prior to taking the watch for the voyage that resulted in the bridge allision. However, that rest period was interrupted by three instances where his participation in maneuvering evolutions was required. Estimating 15 minutes per evolution, the master's total rest period was only 12 hours and 25 minutes and with the longest uninterrupted period being 5 hours and 40 minutes.

The Sea Coast Towing (SCT) Vessel Operations Manual outlines specific times when the master is required to be up and present on the bridge or on watch.⁽¹⁾ Additionally, the SCT manual also identifies certain geographic areas where the Master must be present on the bridge or on watch. If the vessel is manned with a Mate that is designated a "SCT Qualified Master" then the Master's presence is not required. A "SCT Qualified Master" is a company classification for a person who is considered qualified as a Master for certain vessels within the company, but is filling the position of a Mate. Reviewing the vessel's operational schedule, operating area, and manning, it is difficult if not impossible to comply with the requirements of 46 U.S. Code §8104(h), which states: "no licensed persons shall work more than 12 hours in a consecutive 24-hour period" without a Mate that has the "Sea Coast Towing Qualified Master" designation. [S]

[NMA Comment: Similar time- and geographic-specific company requirements are common throughout the industry. This is the basis of an industry-wide problem that conflicts with existing work-hour statutes. The Coast Guard has ignored this problem and its training implications for over 35 years.] [S]

Investigator's Conclusions

The Master fell asleep while in charge of the navigation watch which led to the allision.

Fatigue is a major causal factor contributing to the allision. The Master lacked proper rest as evidenced by the vessel logs for the three days leading up to the allision. Confirmed log entries indicate that he was either on watch, or available for 24 out of 31.5 hours prior to the allision, and that he was able to get no more than 5 hours and 40 minutes of consecutive rest during that period. It is probable that chronic sleep loss, acute sleep loss, and circadian disruption were all fatigue factors.

A physical examination conducted on the Master did not indicate any medical conditions that could be considered causal factors contributing to the allision.

This vessel's operations and operational area contributed to the Master's lack of proper rest and was a contributing factor in the casualty. The vessel's main operations involved relatively short-distance tows, transits through locks, bridges, and restricted areas, and several barge pickups and drops. In order to comply with the SCT Vessel Operations Manual, the Master was required to be in attendance on the bridge during all of the evolutions listed above. This type of operation minimizes opportunities for lengthy rest periods.

Sea Coast's requirements for vessel Masters to be present in accordance with their vessel operations manual is a contributing factor in this casualty. With only two licensed officers on the vessel, the normal watch rotation is 6 hours on and 6 hours off for a total of 12 watch hours per 24 hour period. Sea Coast's requirement for the Master's presence on the bridge during certain operations and in certain geographic areas, increases the time the master is on the bridge, and **exceeds the work hour limits established by law** and does not comply with Sea Coast's work hour policy. [S]

Investigator's Recommendations

That the Coast Guard **investigate the Master** for: (a) **Negligence**: Falling asleep while on watch and failing to properly navigate his vessel, causing it to strike the SR-520 bridge; (b) **Violation of Law**: Violation of 46 U.S. Code §8104(h), in that the Master worked in excess of 12 hours in a consecutive 24-hour period. (c) **Misconduct**: Violating Sea Coast Towing Company policy by not properly fixing and plotting the vessel's position as required. That the Coast Guard initiate **civil penalty proceedings against Sea Coast Towing** for violation of 46 U.S. Code §8104(h) for not ensuring their licensed personnel do not work more than 12 hours in a consecutive 24 hour period.

That Sea Coast review their Responsible Carrier Program (RCP)⁽¹⁾ manual, specifically sections which mandate the Master's presence on the bridge in certain evolutions and geographical locations. The manual must address possible conflicts between this requirement and the 12 hours in 24 hour period work hour limitation. Eliminating or modifying this requirement may reduce the number of hours the Master is required to be awake and available, reducing the likelihood of fatigue and ensuring compliance with 46 U.S. Code §8104(h). [⁽¹⁾The "RCP" **only applies to members of the American Waterways Operators, an industry trade group.**]

That Sea Coast incorporate the **review procedures for vessel logs** at the operations-manager level or higher to ensure compliance with federal regulations regarding allowable working hours for licensed personnel. There was no log review procedure in place, with the exception of that done by the billing/payroll department that has only limited knowledge of vessel operations or federal regulations. A review at that level is **insufficient** to determine non-compliance with federal regulations by vessel personnel.

Sea Coast should review company policy relative to the manning of vessels with similar operating requirements and areas as the M/V Chinook. The company's internal qualification requirement of "SCT Towing Qualified Master" necessary for a Mate to operate alone in all areas and operations **unduly burdens the Masters** of those vessels, requiring them to attend to the operations of the vessel during their designated rest period. This practice has an even greater impact on vessels engaged in short voyages through congested waterways. On these vessels, only SCT Qualified Masters should fill the Mate's position, eliminating the necessity for the Master to supervise vessel operations during his designated rest period.

The **Officer in Charge, Marine Inspection** concurred with these findings of fact and conclusions.

[NMA Comment: Many aspects of the Responsible Carrier Program are suitable for adoption into an industry-wide Safety Management System where they would become an enforceable public policy. Others clearly are not!] [G]

[NMA Comment: Our Association petitioned the Coast Guard in April 2000 to adopt comprehensive logbook standards for all vessels crewed by lower-level mariners. Since the Coast Guard claimed it lacked the authority to introduce logbook standards, we submitted our report #R-429-G, Rev. 2, to Congress. The report was titled Report to Congress: Sharpening Accident Investigation Tools by Establishing Logbook Standards for Lower-Level Mariners. We appreciate the House of Representatives' inclusion of Section 312, Logbooks, in H.R. 2830, the Coast Guard Authorization Act of 2008.]

Coast Guard Recommendations

Company requirements published in the Sea Coast Towing, Inc. Responsible Carrier Program Safety Manual, Chapter 2, for the Master to attend to certain vessel operations when not on watch, causing him to work more than 12 hours in a 24-hour period, clearly meet neither the letter nor spirit of the Coast Guard regulations covering work periods. Furthermore, this policy conflicts with the company's own policy, published in the same chapter, requiring Masters to work no more than 12 hours in a 24-hour period. For this safety manual to serve the intended purpose, these types of conflicts, both with Coast Guard regulations and with other company policies, must be eliminated.⁽¹⁾

[⁽¹⁾NMA Comment: This report shows that the OCMI in Seattle understood the problem. However, eight years after the accident, the Coast Guard appears unwilling to enforce existing work-hour statutes or their own policy on a national basis. The Coast Guard allows the towing sector of the maritime industry to live a charmed life and continues to place our mariners safety and health at risk.] [S]

Sea Coast's attempt to ensure that persons operating their vessels were qualified to do the job is laudable, but ultimately flawed when a proper relief is not provided to reduce crew fatigue. Burdening the Master with supervising vessel operations during the Mate's watch in addition to standing his own watch may ensure safe operations on the Mate's watch, but it comes at the expense of fatigue for the Master. This problem is exacerbated when the vessel operates on a short route through restricted waterways requiring constant supervision by the Master, as on the night of the allision. Ensuring that all Mates, especially those operating vessels on this type of route, are "SCT Qualified Masters" will eliminate one factor in the fatigue of the vessel masters. *Use of a three-watch system instead of the current two-watch system is another alternative to be considered in some circumstances.*

A routine review of vessel logs by company managers should be standard procedure. Without such a review, there can be no monitoring of compliance with regulations and company policies regarding work hours. Greater oversight of personnel scheduling could have identified the conflicts described above, resulting in corrections before this casualty occurred.

There are ongoing international and domestic efforts to improve crew endurance in the marine industry through scientific research. These efforts involve the Coast Guard, the International Maritime Organization and various organizations and companies within the maritime industry. The most recent step in this ongoing effort is the Sept. 11, 2000 publication of Coast Guard policy (G-MOC #04-00)⁽¹⁾ that clarifies watchkeeping and work-hour limitations for towing vessels, offshore supply vessels and crewboats utilizing a two-watch system. This incident highlights the importance of these efforts. Although this investigation focused primarily on the actions of the Master and one tug Company, there is potential for safety improvements beyond the involved company. To realize this potential, *it is necessary to aggressively audit local towboat company watchkeeping and work-hour policies and procedures for regulatory compliance* and to promote best industry practices. Lessons learned will be appropriately shared via the "Vessel Safety Alert" program managed jointly by the Coast Guard and the American Waterways Operators. Case closed. s/ Captain, U.S. Coast Guard, Officer-in-Charge, Marine Inspection. [⁽¹⁾ Available on our website as our Report #R-258.]

Other Examples of Abusing the 12-Hour Rules

If a vessel is not properly manned either because of an *insufficient number of crewmembers* required to perform the vessel's tasks as assigned by the employer or with *crewmembers with insufficient training* to perform their assigned jobs without constant supervision, somebody is left to take up the slack.⁽¹⁾ [⁽¹⁾ *Our Association presented this problem in detail in NMA Report # R-279, Rev 8, Request to Congress: Review and Set Safe Manning Standards for Mariners Serving on Towing and Offshore Supply Vessels.*]

Aside from duties in the pilothouse, there are other demands on towing vessel officers to supervise and often perform vessel maintenance work. In addition, on many tugs, "seagoing watches" shift to an entirely different schedule of "in-port watches" as soon as the boat reaches its dock or when the sun rises in the morning. By using an insufficient number of crewmembers assigned to the vessel to perform this work, continued violations of work-hours statutes are certain to occur. [H]

Both licensed and unlicensed lower-level mariners are simply expected to adjust to all these situations and "work until they drop." Those who either can't or won't adjust are told to seek employment elsewhere. While some mariners may agree to work an illegal number of hours to satisfy their employer and others do so for economic incentives, they know they will face stiff penalties in the event of an accident. [B]

The Master's Day in Court

The Master was charged with negligence, misconduct and violation of laws and regulations. He was represented by a lawyer and entered into a settlement agreement with the Coast Guard for two-months outright suspension of his license with 6 months remitted on 12 months probation. The Master's license was eventually reinstated.

[NMA Comment: We advise mariners to never enter into any settlement agreement with the Coast Guard without the advice of legal counsel. Current regulations do not provide for the government to provide counsel for merchant mariners. At current pay rates, the cost to the Master of the M/V Chinook would be about \$25,000 – for faithfully following company policies. The company's civil penalty was \$7,500.] [B]

The Company's Day in Court

The Coast Guard's incident report approved by the local Officer in Charge Marine Inspection (OCMI) left open the possibility of legal action against Sea Coast Towing. Sea Coast failed to ensure that its licensed officers in this and other instances that came to light did not work more than 12 hours in a consecutive 24-hour period. To their credit, the local Coast Guard office persisted in their efforts and pushed for a civil penalty of \$22,000 including both sets of violations.

AWO, the industry trade association, attempted to provide cover for its member company by going over the head of the local Coast Guard Marine Safety Office to assemble a "Quality Action Team" to examine the incident. This was an overtly transparent effort to cover up several outstanding shortcomings of the Responsible Carrier Program. We cover this effort in detail in the closing pages of our Report #R-370-B, Rev. 4.

On Jan. 15, 2004, the Coast Guard Hearing Officer in Arlington, VA, forwarded an appeal of a Civil Penalty against Sea Coast Towing, Inc. of Seattle, WA, to the Coast Guard's Office of Maritime and International Law for "final agency action." The Coast Guard eventually denied Sea Coast Towing's appeal and the company was assessed and presumably paid a \$7,500 civil penalty instead of its "preliminary assessment" of \$22,000 and in lieu of the \$99,000 maximum penalty permitted by statute as appropriate in light of the circumstances of the violation.

[NMA Comment: This incident brings into sharp focus that the Coast Guard's Administrative Law and Civil Penalty systems apply a double standard, one to mariners and the other to their employers. This perpetuates the "appearance of impropriety" that permeates the existing system. As we reported to the Assistant Commandant (G-M) on April 25, 2002, our Association does not trust the Coast Guard to protect lower-level mariners, to maintain their confidence in reporting to employers, or to act upon their reports.] [B]

<p>Incident #5 – South Padre Island, Texas: Ramming and Collapse of the Queen Isabella Causeway Bridge <i>[Source: NMA File #M-239; Mnl31.3K Investigated by USCG]</i></p>

The Incident

At 2110 on Sept. 14, 2003, the M/V Brownwater V departed Brownsville, TX pushing four loaded hopper barges ahead of it, lined up in a straight line, single file. At 2400, the Pilot,⁽¹⁾ Captain ■■■, took the helm. The 800-foot tow successfully cleared the Long Island swing bridge at 0145 on Sept. 15th, and at 0200 struck the Queen Isabella Causeway Bridge approximately 375 feet west of the channel almost head on. The collision caused two 80-foot sections of the bridge to collapse. Following the collapse, nine vehicles entered the water through the missing bridge sections resulting in eight deaths and three injuries. The following day, a third section of the bridge collapsed. ^[⁽¹⁾The vessel's "Pilot" is the licensed officer second in command of a towing vessel on inland waters.]

Following the accident, the Pilot voluntarily surrendered his license. The Coast Guard conducted a "One-Person Formal Board of Investigation" and submitted its report several months later. The report was reviewed by MSO Corpus Christi, Eighth District Headquarters, and finally by the Commandant after all sorts of agreements, disagreements, and recommendations for future actions. The formal report finally was released on April 28, 2005 – more than 3½ years after the accident tagged with comments by everybody under the sun. The accident report leaves a mixed message.

Lack of Voyage Planning Was a Major Aspect of This Case

The Coast Guard accident report touched upon "voyage planning" in its formal Safety Recommendation #5714 titled: Voyage Planning for Towing Vessels. An excerpt follows:

It should be noted that the regulatory proposal on "Fire-Suppression Systems and Voyage Planning for Towing Vessels" outlined in the Notice of Proposed Rulemaking, Oct. 6, 1997 (62 FR 52057) originally contained requirements for voyage planning analysis that are directly connected to this particular case.

The proposed regulations required that companies should have documented policies and procedures in place to address decision-making criteria related to risk and route analysis of voyages including equipment size, suitability, and special equipment needs. All towing vessels would have been required to complete a voyage plan that included minimum requirements. ***The following proposed regulations may have prevented the casualty:***

- a.) Navigation charts for the intended route, applicable extracts from publications including Coast Pilot, Coast Guard Light List, and Coast Guard Local Notice to Mariners for the area;
- b.) Applicable current and forecasted weather conditions for the duration of the voyage including visibility, wind, and sea state;
- c.) Extracts from tide and tidal current tables;
- d.) Intended speed and estimated time of arrival at the anticipated waypoints; and
- e.) Master's standing orders for closest points of approach, special conditions, and critical maneuvers.

Unfortunately the proposed rule was modified by the April 29, 2003 Interim Rule contained in Federal Register (68 FR 22604) to require voyage planning for only those towing vessels operating in unprotected waters, beyond the baseline of the territorial sea. In light of this accident, ***we recommend that Commandant reconsider applying the Voyage Planning requirements to all towing vessel voyages.***

Missed Opportunity

Following the M/V Scandia-North Cape oil spill disaster off the Rhode Island coast in January 1996, Congress insisted upon adequate "voyage planning" (as well as "fire suppression"). Unfortunately, the Towing Safety Advisory Committee (TSAC) — a Federal advisory committee dominated by the industry trade association, AWO — gutted the "voyage planning" requirement by pointing out that detailed voyage planning would be a nuisance on the western rivers.

Our Association watched the voyage-planning proposal as TSAC killed its application to inland waters and rivers. Voyage planning on the western rivers was a nuisance because it was clear that the committee, dominated by large river barge line interests, did not want anyone to challenge their corporate decision-making relating to the size of a tow in the number of barges or tonnage, towing vessel horsepower as related to tow size or route, or to inject factors like weather conditions, the effect of tides or currents on their desire to move more cargo more cheaply and to make more money. It is clear that ***the Coast Guard allowed the towing industry too much leeway in self-regulation*** and that this proved to be an embarrassment in this casualty report.

[NMA Comment: We ask Congress to require the Coast Guard or its successor agency to require new towing vessel inspection regulations to establish meaningful and enforceable vessel operation standards including voyage planning.] [A]

This incident resulted from dispatching an overloaded tow that was caught in strong and unfavorable currents of 4 to 5 miles per hour and an exceptionally high tide resulting from the passage of a hurricane offshore. At the time of the bridge collision, the tow had just enough headway to "top" the unprotected causeway bridge supports as its lead barge was swept over the flats by the current far outside the navigation channel. Expressed differently, the tow with its existing power plant reported by an expert witness/investigators to be in poor mechanical condition and unable to deliver its advertised horsepower, was unable to take headway off in time to prevent striking the bridge. [C] [P]

Of the two licensed officers, the Master, who was off duty and asleep at the time appeared to have significantly greater "local knowledge" of the waters at the important turn before passing under the bridge than the Pilot who was on duty at the time of the incident. However, when manning a vessel, ***each licensed officer must have the requisite skill and knowledge that conditions call for.*** In a two-watch system, as exists on most towing vessels, there are no licensed, qualified personnel available to assist a licensed officer who encounters a difficult situation.

[NMA Comment: Our Association favors a three-watch system in company with the 12-hour rule to provide a vessel in 24-hour operation with adequate back-up of licensed officers who can be assured safe, reasonable and healthy work-hours.]

Towing Company Had a History of Other Violations

The towing company involved in the deadly causeway collapse was tied to at least 60 maritime infractions in 10

years. The local Coast Guard OCMI, Capt. A.D. Guerrero, warned the company in 1998 to address alleged safety problems. He said: "I wish to express my deepest concern about the alarming number of accidents involving vessels owned or operated by Brown Water Marine Service." Towing vessels owned or manned by Brown Water Marine Service were involved in at least 30 groundings, 13 collisions, and numerous other mishaps, the San Antonio Express-News reported although there were no injuries in most of the accidents.

The OCMI cited 16 cases during five years in which he described Brown Water as the responsible party. Several of the accidents, Guerrero wrote, "posed grave danger to the marine environment." These incidents included two capsized barges that Brown Water owned, which Guerrero said weren't properly maintained, and the Mar. 26, 1996, sinking of the tugboat BROWN GULF, which resulted in a spill of 1,100 gallons of diesel fuel into waters near the company's dock.

An attorney for the towing company defended the safety standards of Brown Water Marine Service and its associated companies. "We're not saying the vessel hasn't been involved in other incidents," a company spokesman said. "It's a piece of equipment that's out there and anybody who's ever served in the maritime trade knows there's the potential for incidents."

Mikal Watts with Watts and Heard of Corpus Christi handled lawsuits in that case. On June 1, 2002 he is quoted⁽¹⁾ as saying: "After the Queen Isabella Causeway collapse, there was a lot of talk about the Coast Guard coming in and augmenting safety requirements," Watts said. "Unfortunately it was just talk. Unfortunately, our clients in Brownsville appear to have died in vain. And their failure to take precautions has resulted in the deaths of 14 people in Oklahoma." [⁽¹⁾Quote by Sonya Colberg in *The Oklahoman*, June 1, 2002.]

[NMA Comment: Licensed officers are most likely to identify unsafe conditions and illegal activities. However, they are discouraged from reporting by the absence of an effective "whistleblower" statute and by an "investigations" system that often refuses to conduct a meaningful investigations. We appreciate the continued work on remedial "whistleblower" legislation by the House of Representatives and inclusion of Section 316, Protection Against Discrimination, in H.R. 2830, The Coast Guard Authorization Act of 2008.] [R]

[NMA Comment: The Coast Guard did not seek authority from Congress to regulate uninspected towing vessels before the Congress acted to inspect these vessels in Sept. 2004. This oversight left more than 30,000 lower-level mariners on over 5,200 uninspected towing vessels with inadequate workplace protection – and continues today.] [E]

Incident #6 – Norfolk, Virginia: Chesapeake Bay Bridge & Tunnel
[Source: NMA File M-135. Investigated by USCG & NTSB]

The Accident

The Chesapeake Bay Bridge and Tunnel is the principal highway traffic artery joining the Delmarva Peninsula to tidewater Virginia in the Norfolk area. During a fourteen day period following this accident U.S. Highway 13 remained closed. A twenty-mile, twenty-minute trip across Chesapeake Bay became a 400-mile detour. The economic loss to the area in 1972 was conservatively estimated as \$3,397,000 and would be more than \$8,000,000 if the accident had occurred during the summer vacation season.

At 0140, on Sept. 21, 1972, the small tug M/V Carolyn and its tow, the barge Weeks No. 254, struck a trestle on the western side of the Chesapeake Bay Bridge and Tunnel (CBBT). After the initial impact, the tug and barge drifted south and struck the CBBT in various locations. The tug then passed under the bridge and her towing hawser parted. Thereupon, the tug drifted south and grounded on Chesapeake Beach.

The barge Weeks No. 254, buffeted by heavy winds, remained on the west side of the CBBT and pounded the structure for several hours. This pounding extensively damaged bridge pilings, bridge spans, and a portion of the roadway although no deaths or injuries occurred.

The M/V Carolyn and the Weeks No. 254 had been proceeding north in the Atlantic Ocean on Sept. 20th when, because of heavy weather, they headed south to seek refuge in the Chesapeake Bay. As the weather continued to deteriorate, the Coast Guard Cutter Madrona and a commercial tug, the Warrengas, stood by ready to assist the tug and barge.

After the M/V Carolyn and its tow passed over the tunnel portion of the highway, she began to list excessively to port. To facilitate the transfer of fuel from the port to the starboard tanks, the M/V Carolyn was turned into the

wind. During this maneuver, part of the towing hawser coiled on deck washed overboard from the tug and fouled first the port, then the starboard propeller causing a total loss of propulsion. After the crew of the tug was evacuated by the USCGC Madrona and after the cutter made several unsuccessful attempts to take her barge in tow, both the tug and barge drifted into the CBBT.

National Transportation Safety Board (NTSB) Investigation

The NTSB determined that the probable cause of the casualty was: (1) the failure of the Master of the M/V Carolyn to inform the USCGC Madrona or the tug M/V Warrengas that the barge was equipped with a quick-release anchor, and (2) the incorrect decision made by the Commanding Officer of the USCGC Madrona not to take the M/V Carolyn in tow as a last resort. Contributing to the failure was the *fatigued state of the Master of the M/V Carolyn.* Contributing to the incorrect decision was a statement by the Master of the tug to the commanding officer of the USCGC Madrona that his tug was sinking. [F]

Contributing to the collision were the absence of standards or guidelines for safe procedures in towing operations and the absence of a Federal regulation to require that unmanned barges to have an expeditiously controlled anchoring capability.⁽¹⁾ [⁽¹⁾*Similar to the 1996 NTSB & USCG investigations of the grounding of the tugboat SCANDIA and the tank barge NORTH CAPE off Point Judith, RI, with major Coastal pollution and damage to the environment. Ecklof Marine, the company involved the Point Judith accident was fined \$7,000,000. This accident brought the regulation requested thirty years earlier. Refer to NMA file M-099].*

The tug and barge remained essentially undamaged by the forces of the storm. The tug did not sink or capsize, took on very little water, and was moved from its beached location under its own power. There is no indication that the barge suffered any damage before its collision with CBBT. Although the size of the tug (59.2 ft.) may not have been well matched to the size of its barge (234 x 53 ft.), the tug design was sufficient to resist the storm forces. In case of emergency, the barge could have been anchored. [P]

The assisting vessels, if properly utilized, were capable of preventing the bridge allision. However, the personnel involved in the sequence of events, which included the attempts to reach a safe refuge, to remove the list from the tug, to relinquish the tow, and to evacuate the M/V Carolyn's crew, interfered with the overarching mission of preventing the barge from colliding with the CBBT.

Other Factors

Fuel gravitation through cross-connected tanks; poor seamanship in failing to secure hawsers on deck in anticipation of bad weather; *inadequate voyage planning* including no charts of the area; failure of the radar; caused the tug's Master to become overloaded with decisions he could not handle.

Incident #7: Mobile, Alabama – The Sunset Limited – Bayou Canot Accident
[Source: NMA File #M-061. This accident was investigated by USCG and NTSB]

Introduction

In this accident, 47 people died after a flotilla of barges struck and damaged a railroad bridge in a remote bayou during a "shutdown" fog. Seven months after the Sunset Limited accident, the Eighth Coast Guard District released a report of a survey of all bridges in its District to assess their vulnerability to allision from vessels as recommended by the NTSB. This report was dated 4 April 1994.

[NMA Comment: We ask Congress, under provisions of the Truman-Hobbs Act, to adequately fund replacements for obstructive bridges identified by the Coast Guard's Bridge Administration branch. As an example, the BNSF Railway Bridge at Burlington, Iowa, as reported in our Newsletter #9, Sept./Oct. 2001.]

[NMA Comment: Unfortunately, the Coast Guard "misplaced" the extensive bridge vulnerability reports prepared after the Bayou Canot accident in 1993. Our Association supports the return of the Coast Guard's Bridge Administration functions to the U.S. Department of Transportation as proposed in Section 103 of H.R. 2830.]

The Accident

[Source: Edited extract from the NTSB Executive Summary]

"On Sept. 22, 1993, about 0245, barges that were being pushed by the towboat M/V Mauvilla in dense fog struck and displaced the Big Bayou Canot railroad bridge near Mobile, Alabama. About 0253, National Railroad Passenger Corporation (Amtrak) train 2, the Sunset Limited, en route from Los Angeles, CA, to Miami, FL, with 220 persons on board, struck the displaced bridge and derailed. The three locomotive units, the baggage and dormitory cars, and two of the six passenger cars fell into the water. The fuel tanks on the locomotive units ruptured, and the locomotive units and the baggage and dormitory cars caught fire. Forty-two passengers and 5 crewmembers were killed; 103 passengers were injured. The towboat's four crewmembers were not injured.

"The NTSB determines that the probable causes of Amtrak train 2's derailment were the displacement of the Big Bayou Canot railroad bridge when it was struck by the M/V Mauvilla's tow as a result of her Pilot becoming lost and disoriented in the dense fog because of (1) the pilot's lack of radar navigation competency; (2) Warrior & Gulf Navigation Company's failure to ensure that its pilot was competent to use radar to navigate his tow during periods of reduced visibility; and (3) the U.S. Coast Guard's failure to establish higher standards for inland towing vessel operator licensing. Contributing to the accident was the lack of a national risk assessment program to determine bridge vulnerability to marine vessel collision. [C]

"Safety issues discussed in the accident report include towboat operator training and evaluation, bridge risk assessment, bridge identification, emergency response and evacuation procedures, and event recorder crashworthiness."

As a Result of the Accident...

Rulemaking requiring radar training and certification for towing vessel operators quickly followed. This rulemaking eventually placed financial burdens of approximately \$500 per person to obtain radar training on each licensed towing vessel officer rather than upon his/her employer, and an administrative paperwork burden and expense of endorsing radar training and subsequent re-certifications on the mariner's license every five years.

Uninspected towing vessels are now required to carry charts, appropriate nautical publications, and a compass or swing meter depending on their route. While this is common sense, and was already required of inspected vessels, this requirement was little more than a transparent, knee-jerk reaction. Coast Guard Commandant Kramek dissuaded the Secretary of Transportation from taking a comprehensive look at the lack of existing standards for towing vessels that Congress finally had to remedy by statute and bring towing vessels under inspection in 2004. [A]

Unfortunately, to this date, towing vessels are not inspected by the Coast Guard on a regular basis although Congress amended the statute in Sept. 2004."⁽¹⁾ The Coast Guard introduced a new licensing program on May 21, 2001, 8½ years after the accident."⁽²⁾ This program went into full effect after a five-year transition that ended on May 21, 2006. However, because the new program was so poorly disseminated throughout the towing industry and was virtually unknown to its mariners, adverse effects of this regulatory change continue today. This new licensing program retains the same basic knowledge requirements for mariners but will require proficiency testing for new apprentice mates and steersmen as well as for those mariners returning from periods of license suspension and revocation. [⁽¹⁾ Refer to our Report #R-276, Rev. 9 Towing Vessels Must Be Regulated Like Every Other Inspected Vessel. ⁽²⁾Refer to Coast Guard Navigation and Vessel Inspection Circular 4-01 (NVIC 4-01) that describes the current licensing program.]

[NMA Comment: Our Report #R-276, first published in 2000, advocates comprehensive inspection regulations and operational standards for towing vessels to provide the same level of protection as afforded to all mariners serving on other "inspected" vessels.]

Incident #8: St. Louis, Missouri – The Anne Holly-Eads Bridge Allision Endangers Crowded Casino
[Source: NMA file #M-211, accident investigated by NTSB.]

A Potential Catastrophe Narrowly Averted

The M/V **Anne Holly** placed more than 2,200 innocent lives at risk in a spectacular bridge allision with the Eads Bridge in St. Louis, Missouri. The **President Casino**, located on an ancient, permanently moored vessel, the **Admiral**, was almost ripped from its moorings sending approximately 50 casino patrons to the hospital.

If the casino had been ripped from its moorings, it likely would have drifted downstream, rammed the bridge, turned sideways in the swift current during the high river stage, overturned under the bridge arch, and sunk throwing over 2,200 people into swift and very cold river water during hours of darkness. Fortunately, one

mooring line held, and the towboat Master, although at fault, performed a timely and heroic act. He may have prevented the worst maritime disaster in our nation's history from occurring.

The Accident

[Source: Extract from Report NTSB/MAR-00/01, "Ramming of the Eads Bridge by Barges in Tow of the M/V ANNE HOLLY With Subsequent Ramming and Near Breakaway of the President Casino on the Admiral, St. Louis Harbor, Missouri, April 4, 1998."]

On Apr. 4, 1998, a tow of the M/V Anne Holly, which was traveling northbound on the Mississippi River through the St. Louis Harbor, struck the Missouri-side pier of the center span of the Eads Bridge. Eight barges broke away and drifted back through the Missouri span. Three of these barges drifted toward the President Casino on the Admiral, a permanently moored gaming vessel below the bridge on the Missouri side of the river.

The drifting barges struck the moored Admiral, causing most of its mooring lines to break. The Admiral then rotated away from the Missouri riverbank. The Captain of the M/V Anne Holly disengaged his vessel from the remaining barges in the tow and placed his towboat's bow against the Admiral's bow to hold it against the bank.

Although no deaths resulted from the accident, 50 people were examined for minor injuries. Of those examined, 16 had to be sent to local hospitals for further treatment.

The safety issues discussed in the report are: the advisability of the M/V Anne Holly's captain's decision to make the upriver transit⁽¹⁾ and the ***effectiveness of safety management oversight*** on the part of the vessel's owners, American Milling, L.P.; the effectiveness of safety measures provided for the permanently moored vessel President Casino on the Admiral; and the adequacy of public safety for permanently moored vessels. *[⁽¹⁾The M/V Anne Holly was under-powered for the task she had undertaken, a common problem reported by our mariners.]* [P]

[NMA Comment: We ask Congress to direct the Coast Guard or a successor agency to mandate and enforce adequate horsepower-to-barge ratios to reflect maneuvering and handling conditions on individual waterways. Determining horsepower-to-barge ratios should include active input from experienced towing vessel officers with practical experience operating on each waterway.] [P]

[NMA Comment: Recognizing waterways and infrastructure as public property, we ask Congress to require the Coast Guard or successor agency to restrict towing companies from using underpowered and underperforming towing vessels. In doing so, require the Coast Guard to adopt into regulations a scientifically-valid definition of "horsepower" applicable to all towing vessels and incorporate that horsepower into the vessel's Document and Certificate of Inspection. Please refer to our Report #R-400.]

[NMA Comment: We ask Congress to require the Coast Guard or successor agency to address by regulations scientifically based hours of service and legitimate health issues such as fatigue.]

Incident #9: St. Louis, Missouri: Towboat City of Greenville Rams Poplar Street Bridge

[Source: NMA File #M-172. This incident was investigated by the NTSB]

The Accident

About 2320 CST on Apr. 2, 1983, a tow consisting of four single-hull tank barges in tandem, laden with crude oil, and pushed by the towboat **M/V City of Greenville**, collided with one of the piers of the Poplar Street Bridge, that crosses the Mississippi River between St. Louis, MO, and East St. Louis, IL. The tow was headed downriver during high water conditions, en route from Wood River, IL, to Memphis, TN.

One of the two middle barges in the tow was ruptured by the impact of the collision, and crude oil released and ignited almost immediately. One barge remained connected to the towboat, but the other three barges broke loose and floated downriver. One barge sank about one mile from the bridge, while a second barge collided with barges moored at a Monsanto Chemical Company barge loading facility. The other barge collided with a Pillsbury Company grain barge loading terminal. The Monsanto and Pillsbury facilities, both located on the Illinois side of the river, sustained severe damage. Burning oil ignited several fires along about 2 miles of waterfront on the Illinois side of the river and polluted approximately 10 miles of the river.

Although there were no deaths, and only one person working on barges at the Monsanto facility received minor injuries as a result of this accident. The damage to the barge loading facilities, to grain barges and their cargoes, as

well as the damage and loss of cargo sustained by the tow of the M/V City of Greenville, and the cost of oil cleanup operations were estimated to be about \$9,000,000.

Towing Officer Licensing, a Point of Concern

The practice followed by the Coast Guard of licensing operators⁽¹⁾ of towing vessels to operate anywhere on the Western Rivers regardless of their past experience was finally changed in 2006 about ten years after predecessor mariner organizations finally convinced the Coast Guard that operating a towing vessel on the western rivers involves a number of unique skills ó skills that the Coast Guard, as regulators, did not possess and did not understand. We assert that the Coast Guard, as a regulatory agency, took far too long to assimilate this lesson. ⁽¹⁾*The term “operator” was replaced in 2006 by the terms Master, Mate and Pilot and refers to licensed towing vessel officers. The term “steersman” is best described by its companion term “apprentice mate” that refers to a person learning the trade by assisting in the pilothouse.]*

The degree of qualification newly licensed officers achieve depends to a large extent upon whether their employers have an active steersman training program, as well as the quality of instruction the licensed officer can impart to his apprentice.

The accident report indicated that a towing vessel operator should be required to demonstrate to the Coast Guard that he has local knowledge of the routes for which he sought a license. The NTSB suggested that the testing procedures for knowledge of a particular route need not be as rigorous as that required for a First-Class Pilot's license, such as being able to sketch from memory the entire route that the license covers. For a towing officer on Western Rivers, the NTSB suggested testing on specific critical areas, such as St. Louis Harbor area and other similar metropolitan areas, certain bends, and areas of critical waterway infrastructure where current or other conditions severely affect navigational safety. The NTSB recommended that the Coast Guard identify critical areas of the Western Rivers and require that applicants for towing officer licenses be examined for local knowledge of those critical areas covered by the license.

[NMA Comment: In 1996, Eighth District Commander RADM North, delivered the opposite message to all First Class Pilots operating on the Western Rivers system north of Baton Rouge, LA. He virtually eliminated all First Class Pilot licenses for the Western Rivers system above Baton Rouge. That rulemaking discouraged mariners from studying the river and being examined to demonstrate their “local knowledge” This broke a century-old tradition where river pilots were encouraged to study the river and learn its hydrology – knowledge put in practical use by the U.S. Army Corps of Engineers that maintains the navigation channels. Towboat pilots clearly demonstrated their interest in this subject by investing their own time and money to prepare for first class pilotage exams. The Coast Guard's unilateral action destroyed the morale of many licensed towing and passenger vessel officers on the Western Rivers and was reviled in the "Pilots Agree" strike of 1998 and played a role in today's labor shortage.] [M] [O]

Findings by the NTSB

If the operator had been more familiar with the St. Louis area, he could have located the main span of the Poplar Street Bridge quickly, and might have successfully pushed the tow through the bridge.

If the operator had known that he might encounter a draft, or crosscurrent, upstream of the Eads Bridge setting toward the Illinois bank, he could have positioned the tow to compensate for the effects of the current and avoided having his tow set close to the low steel of the left side of the arch thereby averting the need for the maneuver that resulted in aligning his tow at a sharp angle toward the Illinois side of the river.

The operator might have avoided the accident if he had recognized that it was essential to direct the head of his tow back to the right as soon as it cleared the Eads Bridge so he could steer for the main navigation span of the Poplar Street Bridge.

If the operator was more familiar with the St. Louis area, he probably would not have attempted to navigate his downbound tow through the Illinois side span of the Poplar Street Bridge.

The accident might have been avoided if the relief operator, who was familiar with the area, had paid closer attention to the tow's maneuvers, and alerted the operator to the location of the main navigation span of the Poplar Street Bridge in time to align the tow for a safe passage through the bridge.

[NMA Comment: Requiring both licensed officers to be on duty at the same time to “make” locks, bridges and bends violates the 12-hour rule. Refer to incident #4, above.] [S]

Even though one of the three lights in the vertical line of three white lights above the green lights marking the center of the main navigation span of the Poplar Street Bridge was burned out was not a factor in this accident.

If navigational information in a ready reference format like the Coast Pilot was available and used by the operator, he might have learned of the nature of the crosscurrent during high water conditions at the Eads Bridge. He also might have ascertained better the relative location of the piers and spans of the Poplar Street Bridge, which would have helped to prepare him to safely transit St. Louis harbor during high water.

Retro-reflective material should have augmented navigation lights on bridges, where conditions may make the navigation lights difficult to detect.

It may be feasible to use auxiliary lighting to enhance ready identification of the main bridge spans where background lights or other conditions make the prescribed navigation lights difficult to detect.

The ability of newly licensed towing vessel operators to pilot vessels safely through the extensive Western Rivers depends largely upon whether the towing company had an underway training program⁽¹⁾ and the quality of instruction that the company's experienced personnel could provide. *[⁽¹⁾It took 20 years from the date of this accident for the Coast Guard to add a "steersman" program to the regulations.]*

Including questions about areas that are difficult to navigate in the license exams for towing vessel officers could insure more widespread knowledge of how to navigate through these areas. *[⁽¹⁾ Multiple choice questions based on the Corps of Engineers Map Book and the Light List are now part of the Steersman exam and go part of the way to solving the problem.]*

Adding profile drawings of bridges⁽¹⁾ to the Upper Mississippi River navigation charts would enable mariners to determine more readily the configuration of each bridge and the number and location of bridge piers. *[⁽¹⁾ The Corps of Engineers has added these bridge profiles to **all** of their map books.]*

Probable Cause

The NTSB determined that the probable cause of the accident was the failure of the operator of the towboat M/V City of Greenville to identify the main navigation span of the Poplar Street Bridge in time to align his tow for passage through the span.

Incident #10: Houma, Louisiana – Towboat M/V Matthew Reed Strikes Bridge & Releases Hazardous Vapors Causing Evacuation of 2,000 Residents

The Accident

On Dec. 18, 1989, at approximately 1630 CST, the tow of the M/V Matthew Reed pushing the tank barge Hollywood Chem 181, collided with the East Park Avenue drawbridge in Houma, Louisiana. As a result of the allision, the gauge flange on the #1 port tank of the barge was damaged and part of the barge's cargo of propylene was released into the atmosphere. The bridge draw tender was treated for inhalation of propylene. An estimated 2,000 residents in the immediate vicinity were evacuated at the direction of Terrebonne Parish Civil Defense.

The M/V Matthew Reed, O.N.: 636572; was a 56.6-foot, 1,200 horsepower inland towing vessel of 130 gross tons built in 1981 and home-ported in New Orleans. It was owned by Gulf South Marine Towing, Inc.

[NMA Comment: The bridge owner, Louisiana Department of Transportation and Development (DOTD), had in place a policy to close its drawbridges five minutes before the official "curfew time" listed in the Code of Federal Regulations and posted on the bridges. The Master of the towing vessel called ahead ten minutes before the posted closure time and requested clearance through the bridge. The bridge tender chose to use the toilet rather than monitor her approaching traffic and prepare to lift her bridge. The accident occurred within one-quarter mile of the largest hospital in Terrebonne Parish.] [S] [B]

Incident #11: Louisa, Louisiana – Three Tows Ram the Louisa Bridge Within Two Months

The Accidents

Three tows rammed the Louisa Bridge, a òswing bridgeö that crosses the Gulf Intracoastal Waterway in south central Louisiana in the summer of 2001 severely damaging the bridge and isolating people on the island to its south. These rammings were similar to the South Padre Island and Crown Point accidents in that this bridge

provides the only access road for people living south of the Intracoastal Waterway. When dangerous cargo was involved in one of the three separate allisions, hundreds of people had to be evacuated from the surrounding area.

Coast Guard Blames Operator Error for Louisa Bridge Allisions

[Source: Bill Evans, The Waterways Journal]

The Coast Guard's Marine Safety Office in Morgan City, La., recently concluded its preliminary investigations into three recent high-profile allisions with the Louisa Bridge spanning the Gulf Intracoastal Waterway, Mile 134 WHL. Towing vessel operator error was to blame in each case, Coast Guard investigators ruled.

At about noon May 17, the M/V Repent, a 1,600 hp. towboat owned by American Tugs Inc.,⁽¹⁾ Belle Chasse, La., was eastbound on the GIWW with six barges of salt when its tow demolished a portion of the Louisa Bridge south approach and fender works, narrowly missing the nearby bridge tender's control house. *[⁽¹⁾ This towing company is also mentioned in Incident #3, the 1974 Lake Pontchartrain Causeway bridge allision.]*

The waterway was closed to marine traffic for about 30 hours while debris was removed from the channel. In addition, the accident left the bridge inoperable for weeks and temporarily isolated the community of Cypremort, La., south of the Intracoastal Waterway, until ferry service was established to carry vehicles across the canal.

Investigators said Captain ■, 39, of Marrero, La., master of the M/V Repent, "...had been illicitly operating under the influence of a prescription drug not prescribed to him." ■ was cited for misconduct (use of a dangerous drug) and negligence while operating under the influence of Xanax, said by the Coast Guard to be an addictive, prescription anti-anxiety drug.

■ surrendered his Coast Guard-issued license, agreeing to an 18-month suspension while he undergoes what Lt. Felton Gilmore, assistant senior investigating officer, described as a "cure" program. Upon successful completion of the program and the 18-month suspension, his case will be reviewed and the mariner could get his license restored. Failure to meet requirements of the program and suspension will result in license revocation, Gilmore said.

On June 29, the day the Louisa Bridge was scheduled to officially reopen after repairs from the May allision, the M/V Kenneth L, pushing an empty deck barge, struck the bridge's west side at about 5:30 a.m. Neither the barge nor the bridge was seriously damaged. The towboat sustained what the Coast Guard described at the time as "minor damage" and was quickly released for repairs. Another vessel moved the barge to the bank.

Personnel from the Louisiana Department of Transportation and Development and the Coast Guard inspected and tested the bridge and decided it was safe to reopen at the scheduled time, 10 a.m. June 29.

In an announcement August 24, the Coast Guard said a temporary vessel traffic system involving boats at the east and west sides of the Louisa bridge was established after the May 17 allision. Oncoming vessels were to make radio contact with the bridge and get permission to proceed, informing them as to whether or not the bridge was open to vessel traffic.

"The pilot of the M/V Kenneth L had successfully passed through this system several times and knew the method of communication required for transiting the area," the announcement said. "On his return voyage (June 29), he had attempted to make communication with the temporary VTS tugs and when he could not establish contact (he) attempted to hail the bridge without a reply. Hearing nothing, the operator continued ahead with the assumption that the bridge was open, not taking into consideration that things had changed."

The pilot, identified by the Coast Guard as ■■, 61, of Lake Arthur, La., was cited for negligence. His six-month license suspension was stayed, pending successful completion of a 12-month probation.

At about dawn, July 19, a pressure barge being pushed westbound by the M/V Mr. Barry, owned by Taira Lynn Marine Ltd. of Houma, LA., and chartered to Kirby Inland Marine, Inc., Houston, TX, rammed the span. Vent stacks were sheared from two of three tanks aboard the 380 X 53-foot Kirby barge 31801, releasing a plume of the barge's explosive propane-propylene mix cargo into the atmosphere. An estimated 500 residents and workers were evacuated from an area within a five-mile radius of the accident site and a 10-mile section of the Intracoastal Waterway was closed. No injuries were reported the Coast Guard said at the time.

Coast Guard investigators said that prior to the accident, the pilot of the Mr. Barry pushed his one-barge tow up on the north bank, around a bend just east of the Louisa Bridge, awaiting arrival of his relief. He asked the bridge tender to notify him when the relief arrived, investigators said. Once the relief arrived, the pilot's intention was to go through the bridge opening and make the crew change on the north bank, just west of the bridge, said Gilmore.

Two other vessels, the M/V Maggie Rae and M/V Lady Jeanette, safely transited through the bridge a short time before the accident. The M/V Maggie Rae pushed in on the north bank, west of the bridge, to load supplies, Gilmore said. The bridge tender closed the bridge to marine traffic after the two vessels passed through.

When the M/V Mr. Barry's relief pilot arrived at the bridge, he first crossed to the south shore and notified the

bridge tender of his presence and then retraced his route. The bridge tender notified the M/V Mr. Barry pilot that his relief had arrived and that the bridge would be closed to allow him to cross back over the canal, said Gilmore.

"While she was doing that, the M/V Mr. Barry pushed off the shore and started heading toward the bridge," Gilmore said. "When we interviewed the operator, he said he heard the tender say the bridge was open to vessel traffic." However, the pilot of the M/V Maggie Rae confirmed the bridge tender's statement, as did the relief pilot for the M/V Mr. Barry.

"As soon as the relief pilot was across the bridge, said Gilmore, the bridge tender started swinging the bridge open and saw the M/V Mr. Barry approaching. She contacted the vessel and told him the bridge was not open yet and to start backing down. The pilot of the towboat told her he would follow it through" said Gilmore. She told him, "No, you don't understand, the bridge swings toward you."

The Pilot immediately began an unsuccessful attempt to slow down and steer around the bridge.

The Coast Guard filed an action against the license of the Pilot, but neither details nor his identity were released. Gilmore said the mariner is currently working and will have an opportunity to answer the complaint.

The Louisa Bridge has since reopened to vessel and vehicular traffic. The bridge subsequently was replaced with a high-rise concrete structure eliminating the need for a drawbridge.

Capt. David Whitehurst, a member of our Association recommended to the Coast Guard:

Tape record all radio correspondence between the bridge tender and approaching vessels.

Place warning signs 1,000 feet away from the bridge on either side reading "Do not pass this point until bridge is completely open."

Place video surveillance cameras on the bridge.

The Coast Guard noted in its recent announcement that bridge collisions are relatively rare. "For this area, out of 40,000 (vessel) transits this year, only 21 bridges have been bumped or allided with. This means that less than 0.054 percent of all vessel transits have had any problems with bridges," the announcement said. Our Association believes there are other conclusions aside from the Coast Guard's statistics that should be reached from these bridge collisions and took the time to assemble and present this report and safety recommendations that follow. [R]

RECOMMENDATIONS TO IMPROVE OUR MARINERS' SAFETY & HEALTH ON TOWING VESSELS

[A] Promulgate New Inspection Regulations: Before Sept. 2004, the Coast Guard did not vigorously, effectively, or uniformly enforce the existing regulations applicable to uninspected (towing) vessels scattered throughout the Code of Federal Regulations. They claimed Congress never gave them the authority to inspect towing vessels. Although Congress granted them authority in 2004, the Coast Guard has not published a Notice of Proposed Rulemaking to inspect towing vessels. That rulemaking is trapped along with a huge backlog of other regulatory matters. Even though the towing vessels number over 5,200 and employ over 30,000 mariners, the Coast Guard did not have project officers with a background of practical experience in or with the towing industry to prepare the new regulations. The Coast Guard allowed the towing industry free rein to regulate itself for years. Consequently, the personnel they assigned had to learn the industry from scratch.

[B]..Unfair Enforcement Practices. Our "lower-level" mariners do not perceive the Coast Guard's Administrative Law system as fair. Suspension and revocation, the Coast Guard's most widely applied administrative penalties, impose enormous financial burdens on mariners. Experience shows that one month's suspension can cost a licensed towing officer as much as \$13,000. Other less onerous penalties, such as meaningful training, must be made available and utilized.

In addition, many mariners believe the Coast Guard unfairly directs enforcement efforts at them because they are "easier targets" for Coast Guard prosecutors because regulations do not provide them a defense counsel in administrative proceedings. Many executives reject advice furnished by their experienced licensed officers and tell them in effect "If you won't do the job, someone else will." Many mariners will acquiesce in making unsafe decisions in hopes of saving their job yet run afoul of the Coast Guard in doing so.

Corporate executives can allocate funds to hire effective counsel to contest Coast Guard civil penalties. Most lower-level mariners live from paycheck to paycheck and do not have the funds available to hire counsel to represent them at Administrative Law hearings where their credentials (i.e., means of making a living) are at risk. Although our Association recommends it, most mariners do not purchase license insurance⁽¹⁾ to provide coverage for legal representation. ⁽¹⁾ *Cost ranges from \$200 to \$1,000 per year. Refer to our Report #R-342, Rev. 5.]*

[C]..Insufficient Superintendence of Towing Vessels. Absent enforceable towing vessel regulations, the Coast Guard rarely performs in depth checks of safety, sanitation, health, and general mechanical and electrical maintenance on towing vessels. This explains many of the low standards of equipment maintenance found throughout the towing industry. The NTSB faulted to Coast Guard⁽¹⁾ for its failure to promulgate effective preventive maintenance regulations ó but the Coast Guard doesn't seem to understand the message. [⁽¹⁾NTSB/MAR-02/02Port Imperial Manhattan; NTSB/MAR-02/04 Seastreak New York; NTSB recommendation M-02-05]

[D] Potential "Paper Solutions" Were Ineffectively Implemented. The Coast Guard's Cooperative Towing Vessel Examination Program (CTVEP) introduced in the Fifth District in the mid-1990s, was an elaborate "paper" program prepared after the Sunset Limited accident. Unfortunately, Coast Guard Headquarters never funded this promising voluntary vessel õexaminationö program in a comprehensive and effective manner. The responses we received from all the Marine Safety Offices (MSO) revealed that the CTVEP program, where utilized, checked only a small fraction of uninspected towing vessels. Examination decals often were slapped on towing vessels following cursory inspections or simply handed to company management personnel to apply to their own vessels. A number of MSOs, including MSO New Orleans and MSO Morgan City in areas with a heavy concentration of towing vessels, never even implemented the program. Since 9/11 many other Coast Guard units shelved the program for most intents and purposes.

[E] Insufficient workplace Safety Standards. For the past 35 years, neither the Coast Guard nor OSHA effectively enforced workplace safety standards to protect our mariners serving on towing vessels. The U.S. Supreme Court reached a similar conclusion in regard to overlapping authorities on inland drilling rigs on Jan. 9, 2002 in *Chao, Secretary of Labor vs. Mallard Bay Drilling Co., Inc.* In subsequent visits to headquarters of both the Department of Labor and the Coast Guard in April 2002, our Association determined that neither Executive Branch agency actively planned to step in and cover the regulatory enforcement gap (that obviously also applied to towing vessels) after the Supreme Court decision. This left addressing the matter up to Congress. The Coast Guard and Maritime Transportation Act of 2004 finally brought towing vessels õunder inspectionö on Sept. 9, 2004. Unfortunately, the same lack of workplace safety enforcement issues applies to almost 17,000 õuninspectedö dry cargo and other miscellaneous work barges that our mariners work on. We ask Congress to recognize this as a factor in numerous towing industry fatalities because the Coast Guard refuses to do so.

[F] Ineffective Enforcement of Work-Hour Statutes. We ask Congress to draft a statute to require the Coast Guard or successor agency to prepare scientifically based hours of service regulations as outlined in NTSB Recommendation M-99-1. We maintain that the Coast Guard has been unwilling to use means at its disposal to enforce the existing work-hour statutes to prevent the further abuse of our lower-level licensed mariners and to prevent fatigue-based accidents.

Two-Watch System. An internal Coast Guard study does not even consider the validity of the two-watch system. In a letter dated April 28, 2002, we asked the NTSB to carefully evaluate the scientific findings of the Coast Guard's report #CG-D-13-01 and compare them to their hours-of-service recommendations for towing vessels. The towing industry experimented without success with modifying the common 6&6-hour watch schedule to a 7&5/5&7-hour watch schedule to give the illusion of providing an extra hour of sleep. [⁽¹⁾*U.S. Coast Guard Guide for the Management of Crew Endurance Risk Factors, Sept. 2001, #CG-D-13-01. NMA Document #A-772H.*]

[G] Work-Hour Protection for Unlicensed Mariners. We ask Congress to establish statutory work hour limits for all unlicensed crewmembers on every towing vessel in domestic service that meets or exceed international standards. We specifically reject the American Waterways Operators õrecommendedö 15-hour work-hour limit that appears in their Responsible Carrier Program as excessive and without a meaningful mechanism for enforcement. We assert that any work hours exceeding 12 hours in any 24-hour period unacceptable as the basis for regulatory or industry standards.

[H] Safe Manning Document. We ask Congress to require the Coast Guard or its successor agency to update existing manning regulations for towing vessels⁽¹⁾ and to issue and post on every towing vessel a meaningful and reasonable "safe manning document" (i.e., the equivalent of a Certificate of Inspection) that delineates the specific manning requirements applicable to that vessel. [⁽¹⁾46 CFR Part 15.]

[I] Transportation Workers Identification Credential. We ask Congress to require every mariner working on a commercial vessel to be documented, trained, and qualified at least as an entry-level seaman and to hold a TWIC that will satisfy all government security clearance requirements to work in secure areas aboard any commercial vessel and to gain free access to the waterfront in order to come and go from these vessels.

[J] Official Logbooks. We ask Congress to require the Coast Guard or successor agency to introduce and enforce reasonable and effective logbook standards to record watches, working hours, and/or hours of rest. We note that the trucking industry used federally-mandated work-hour logbooks for many years and introduced electronic logbooks to record hours of service. We thank the House for advancing Section 312, Logbooks, of H.R.-2830, The Coast Guard Authorization Act of 2008.

[K] Trained Engineers. We ask Congress to note the unwillingness of both the Coast Guard and operating companies to acknowledge the need for trained engineers to serve on towing vessels. Although existing statutes⁽¹⁾ that apply to all vessels over 100 gross tons treat engine and deck duties separately, many employers widely ignore separation of deck and engine duties and commonly use deckhands ("deckineers") as replacement for Engineers. [⁽¹⁾46 U.S. Code §8104(e). Please refer to our Report #R-428.]

[L] Certain Dangerous Cargoes (CDC). In light of 9/11, the public must adequately informed that dangerous cargo tows pass through population centers. These communities must be alerted and prepared for any eventuality. The public has a right to expect that the movement of hazardous cargo is performed by knowledgeable, informed, alert, and rested mariners who are aware of the specific dangers posed by their cargo. This awareness training should concentrate on applying data found in Material Safety Data Sheets to practical situations that towboat pilots may find themselves in.]

[M] Honor the Mariner. The high turnover rate of entry level mariners in the towing industry attests in part to substandard treatment and exploitation many employers have practiced for years. It is also a product of a lack of understanding and respect accorded them by Coast Guard personnel who have never worked on commercial vessels. While the "Honor the Mariner" program initiated by Admiral Card in the 1990s was a good start, it was largely ignored following his retirement. Until there is genuine respect for the work performed by our mariners by both management and the Coast Guard and as long as mariners are denied a seat at the table, labor shortages will continue. The towing industry remains a dangerous and unhealthy industry with limited safety and vocational training, impenetrable administrative red tape, constant harassment, without a stable career path that leads to retirement. Please refer to our Report #R-417.

[N] Blacklisting. "Blacklisting" is rampant among companies that employ lower-level mariners. It is often used by management to carry on personal vendettas against recalcitrant employees. It effectively destroys careers in a work force that is diminishing in size. We urge Congress to strengthen the Fair Credit Reporting Act to limit blacklisting and to restrict the amount of information an employer can demand a prospective applicant provide to obtain a job. Blacklisting is condemned in most civilized countries.

[O] Right to Join a Union. Our Association is not and never has been a union. However, fierce opposition to labor unions by many employers denies many of our mariners an effective voice in job-related matters. The Coast Guard has been so preoccupied with working with management that they overlook open violation of labor laws⁽¹⁾ as proven in cases affecting over 39 mariners in the Pilots Agree strike of 1998. [⁽¹⁾Refer to Unfair Labor Practices in the River Industry (are) Documented, National Association of Maritime Educators, Newsletter #86, pgs. 3-5.]

[P] Overloaded Towing Vessels. Towing vessels must not be overloaded with too many barges for their available horsepower and for anticipated weather, sea, or river conditions. This often occurs because owners often inflate horsepower figures (e.g., "sales horsepower"). This fraud may accrue extra money for the employer but leaves licensed officers with the problem of handling tows that are too large or unwieldy for boats with inadequate horsepower.

[Q]..Crew Endurance Management Systems. The Coast Guard understands "crew endurance" problems affect its own overworked enlisted personnel. Yet, at the same time, senior Coast Guard officers refuse to address similar

problems faced by our lower-level mariners. The NTSB brought into focus the Coast Guard's own failed performance in the S/V Morning Dew accident⁽¹⁾ [⁽¹⁾ Refer to our Report #R-305.]

An internal study of its own practices⁽¹⁾ cites less than 7 to 8 hours of uninterrupted sleep as "insufficient sleep duration" and "long work hours" as those exceeding 12 hours. So as not to offend corporate managers, the Coast Guard applies a double standard; one standard to its enlisted men and women and another standard to our lower-level mariners. The Coast Guard "Crew Endurance Management Study," that our Association endorses, apparently fell captive to corporate managers who tried to use it to justify the two-watch, 84-hour workweek.

[R] Poor Quality of Casualty Investigation. Serious misgivings with the overall quality of Coast Guard casualty investigations and the Agency's workload backlog were first revealed in an August 1994 internal report titled U.S. Coast Guard Marine Casualty Investigation and Reporting: Analysis and Recommendations for Improvement⁽¹⁾ and a second Coast Guard Quality Action Team report in 1996.⁽²⁾ These misgivings were confirmed by the release of DHS OIG Report #08-51 on May 8, 2008 and in a House Committee on Transportation and Infrastructure Hearing on May 20, 2008.⁽³⁾ [⁽¹⁾ Refer to our Report #R-429-A, Rev. 1. ⁽²⁾ Our Report #R-428-B, Rev. 1. ⁽³⁾ Our Report #R-429-M.]

We see few casualty reports that show the true cost of barge/bridge collisions to the taxpayer. For example, in a recent ship undocking accident and bridge collision,⁽¹⁾ Coast Guard investigators indicated the damage in a ship undocking accident was \$10,775,000 while the NTSB reporting on the same accident reported only \$2,500,000 damage. We also question whether historic limitation of liability statutes should apply in an era where insurance for commercial towing risks is readily available. [⁽¹⁾ NMA File #M-693, involving the tankship *Kition* and three assisting towing vessels in Baton Rouge, LA.]

[S] Company Policies in Conflict With Statutes and Regulations. The Coast Guard vigorously enforces certain company rules in certain Suspension and Revocation (S&R) proceedings citing 46 CFR §5.27 as "human behavior that violates some formal, duly established rule." However, the Coast Guard should ensure that "company policies" do not violate statutes or regulations and find mariners blameless when they mistakenly follow such rules.