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OVERSIZE AND OVERLOADED TOW ACCIDENT: THE ELIZABETH M CASE

FOUR DIE IN CATASTROPHE ON THE OHIO RIVER

There are two sides to every story. One side points to the common theme of **greed** that we stressed throughout our original GCMA Report #R-340 on oversize and overloaded tows. That report chronicled a long record of abuse and shows the lengths some companies go to push more revenue-producing barges than a towboat can reasonably handle.

The burden of this type of abuse falls primarily on the lower-level licensed mariner in the pilothouse who is merely an employee at will leaving him with no effective leverage in limiting the size load he must tow or the conditions under which he operates. Even with his years of experience and expertise, his judgment receives little respect when he asks the Coast Guard to step in and limit the size of the tows he is ordered to move. The towing industry saw to that when they killed the Pilots Agree movement in 1999 and, with it, the chance that mariners had to join a well-established and respected maritime union to represent their safety, health, and welfare interests with their employers and before the Coast Guard and Congress.

The other side of the story seeks to blame everything on human error. For example, the AWO bridge allision report released in May 2003 lays the blame for most of the 2,692 reported bridge allisions to human performance ó 78% to pilot error, and 12 % to other operational errors.

However, human error also extends to errors management makes. Management determines the size of the tow as well as when and where it will move. Management issues the orders and can do so carefully or carelessly as it chooses knowing full well that its working mariners are employees at will and can be hired or fired for any reason whatsoever.

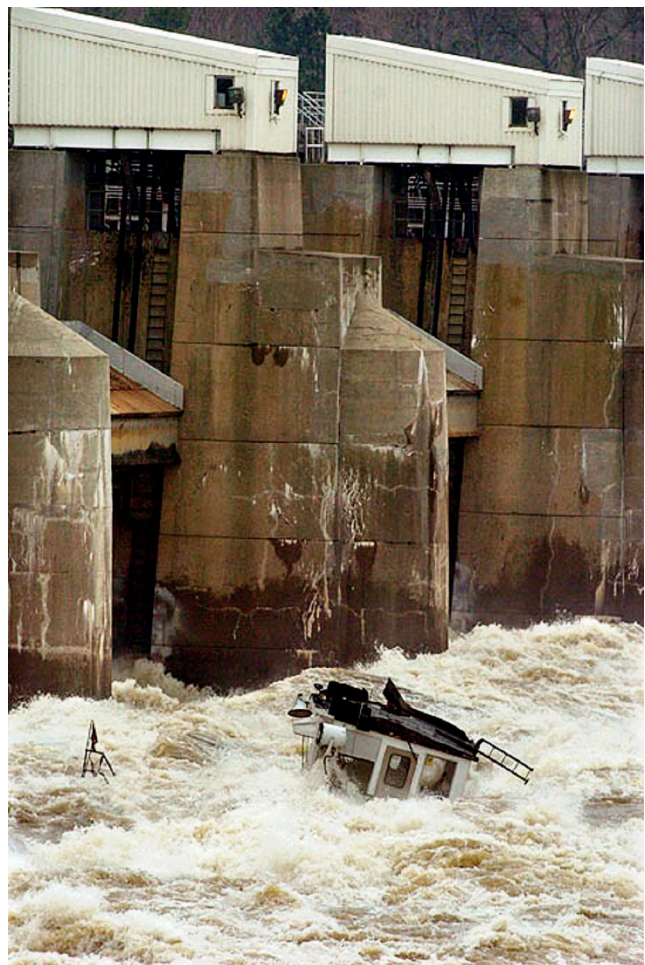
Management puts unbelievable pressure on many pilots to perform. Stress takes its toll on river Pilots as GCMA Report #R-403, Stress and the Licensed Mariner, points out to our readers.

In reality, both human error and moving oversize and overloaded tows are two faces of the same coin.

This report cites a number of articles that appeared in local newspapers reporting on the infamous ELIZABETH M accident. We were not there ó and can offer no first-hand comment. Several years later, the Coast Guard released its report on the accident and determined its probable cause.

3 DEAD, 1 MISSING AS TOWBOAT GOES OVER DAM AND SINKS IN OHIO RIVER

River water churns around the top of the pilothouse of the sunken Elizabeth M just below the Montgomery Locks and Dam in Industry, Beaver County, Pennsylvania.



[Story by Don Hopey, and photograph by Bob Donaldson of the Pittsburgh Post-Gazette. Don Hopey can be reached at dhopey@post-gazette.com or at 412-263-1983. Copyright ©1997-2004 PG Publishing Co., Inc. All Rights Reserved. Reprinted by permission.]

Monday, January 10, 2005

Screams for help echoed from the towboat ELIZABETH M as it sank into the swirling, frigid Ohio River after

tumbling backward through the Montgomery Dam early yesterday morning.

The crew's cries could be heard over the rushing wall of noise from the river as it sluiced through the wide open dam gates, and over traffic noise on state Route 68 in Industry, Beaver County.

"I could hear them screaming all the way across the road at my house," said Stanley Bostwick, a member of the Vanport Volunteer Fire Department, who lives at least 200 yards from the dam. "When I got here the boat was still above water, but it was sinking fast."

Three crewmen of the ELIZABETH M died and another is missing and presumed dead inside the boat in the worst commercial boating accident on the region's rivers in recent memory.

The towboat and the six fully-loaded coal barges it was pushing upriver had just passed through the Montgomery Locks at 2:20 a.m. when the river's muscular current, strengthened by days of heavy rain runoff, grabbed the two front barges and pushed them toward the dam.

The 2,200-horsepower towboat couldn't stop the barges. The pilot pulled his boat free of the barges and circled downriver to get a better pushing angle, but the barges had gained too much momentum and pushed the towboat backward over the dam.

The dead, according to Renea Esoldo, Beaver County deputy coroner, are Edward Crevda, 22, of West Brownsville; Scott Stewart, 36 of Wheeling, W.Va.; and Tom Fisher, 25, of Latrobe and formerly of New Cumberland. Esoldo said autopsies showed all three drowned.

Three crewmen survived, rescued from the river by the towboats LILLIAN G, SANDY DRAKE and ROCKET. The crew of the Rocket pulled in the two crewmen who had been yelling for help from the towboat; the other man was pulled from the water.

One of the men dove into the 38-degree water to grab a ring buoy tossed from the Rocket and then was pulled aboard the rescue ship.

All seven are members of the crew of the ELIZABETH M, owned by Campbell Transportation Co. of Dunlevy, near Charleroi in Washington County. The towboat was pushing the barges from a loading dock on the Kanawha River, near Charleston, W.Va., to a railroad loading terminal in Braddock.

"I've been around since 1971 and, with the loss of life, never seen anything like this," said Dave Sneberger, assistant operations manager for the 23 locks and dams in the Army Corps of Engineers' Pittsburgh District. "We've had deckhands fall in, but this has to be one of the worst."

By mid-morning, carloads of the curious were stopping and walking along the riverbank in Industry where one end of the 1,378-foot-long navigation dam is anchored.

The pilot house of the towboat poking through the surface of the churning, dirty foam below the dam and the jutting end of one of the 195-foot-long barges lodged in the current a quarter mile down the river looked like tombstones on a muddy, glistening field.

Occasionally, a red-and-white ring rescue buoy, still tethered to the back of the towboat, would bob to the surface in the turbulence downriver from the boat.

"What was so bad was that we could hear the guys on the

boat screaming for help over all the river and dam noise but couldn't do anything," said Chuck Ward, assistant fire chief in Industry, one of the fire companies that responded. "The pilot tried to save the barges when they swung around in the current, but things just went from bad to worse."

Richard Bennett, of the Midland Volunteer Fire Department, said his department was called to the river shortly after the accident along with the Chester and Newell, W.Va., fire departments, but none got into the water.

"We were called out to set up emergency lights, but conditions were too bad," Bennett said yesterday morning from a hillside near the dam. "The current was too fast and too much mud had built up on the ramp."

Three of the barges sank and wedged on the front, or upriver, face of the dam. Two others are unaccounted for, but the Army Corps of Engineers, which operates the locks and dam, said they sank in the pool downriver from the dam. The barges against the dam will be salvaged after the river recedes.

John Anderson, the lock master at Montgomery, received a call from the dam at 2:30 a.m. and by the time he arrived a half hour later the towboat was already over the dam and sinking.

"There were two people standing in the boat and we couldn't find one. It was not a pleasant thing," said Anderson, who has worked on the dam for 15 years and been lock master since 1998.

"The lock crew told me that once the barges started turning in that direction the tow couldn't hold them," he said. "The whole thing didn't take more than five or six minutes to happen."

Don Grimm, president of Campbell Transportation, owner of the 54-year-old towboat, said he learned of the accident about 2:45 a.m. yesterday in a telephone call from the operator of another towboat in the area. But Grimm and other company officials were short on details yesterday because they had yet to speak directly to any of the three surviving employees. He also declined to release their names. "I don't know how the accident happened," he said. "It's just a terrible thing."

Campbell Transportation and its sister company, C&C Marine Maintenance Inc., have about 350 employees. In addition to its Washington County headquarters, the company also has operations in Clairton, Georgetown, Beaver County, and Point Pleasant, W.Va.

Campbell Transportation operates 30 towboats and 420 barges along rivers from Huntington, W.Va., to Pittsburgh. The seven-man crew of the Elizabeth M consisted of a pilot, captain, cook and four deckhands. The crew sleeps in shifts, either three or four at a time. The deckhands are required to be on the barges as they pass through locks to maintain control of the vessels. Each barge is 195 feet long, 35 feet wide and 12 feet deep, weighs 400 to 500 tons and can hold 1,000 tons of coal.

Anderson said that during high water flows the currents upriver from the locks are tricky and powerful, and push vessels away from the river bank above the lock. That's especially true when the dam's 10 gates are fully raised to facilitate flows during high water, as they were at the time of the accident.

He said the current was probably running at between 13 and 15 miles per hour, compared with normal, non-storm flow of three to four miles per hour. "You need to stay against the wall of the lock because the river has a lot of out-

Tuesday, January 11, 2005

draft that will push you out, especially with the dam wide open," Anderson said.

He speculated that the crewmembers were on the barges, re-tying them after going through the lock, when the current caught the tow and that's why the pilot tried to save the barges instead of letting them go over the dam when it became apparent the tow couldn't beat the current.

"I think he went around the barges for another push to save the men on the barges," he said. "You wouldn't normally risk your life to save coal barges."

The accident did not damage the dam or the locks, which continued to operate after the accident although no tows locked through yesterday afternoon. The U.S. Coast Guard has restricted river traffic for five miles below the dam because of the danger from the sunken barges.

Richard Lockwood, chief of the Army Corps Pittsburgh District Operations and Readiness Division, said it's not uncommon in high water conditions for barges to be washed into and over navigational dams.

In addition to those lodged against the Montgomery Dam, the corps is dealing with barges that hit this week and are stuck on the lock and dam at Wheeling, W.Va., 84 miles down the Ohio River from Pittsburgh; and the lock and dam, at Reedsville, Ohio, 203 river miles from Pittsburgh. Lockwood said the corps typically does an after-incident review but doesn't foresee any change in the lock and dam operations during high flows. "The river is the river. It's constantly changing," Lockwood said. "We'll look at the standard operating procedure and may issue a notice, but it's up to the boat operators to decide what to do."

The Montgomery Lock and Dam was built in 1935 and underwent a major rehabilitation in 1988.

High water yesterday hampered the search for a missing towboat crewman and retrieval of the towboat lodged in an Ohio River dam in Beaver County.

Investigators from the U.S. Coast Guard began the preliminary steps yesterday to determine how the early Sunday morning accident occurred. Three members of the ELIZABETH M crew lost their lives, three survived and one is missing.

The examination will likely take months and could result in sanctions against Campbell Transportation Co. Inc., owners of towboat and barges, and the towboat pilot and captain, said Cmdr. Wyman W. Briggs, commanding officer of the Coast Guard Marine Safety Office in Pittsburgh.

Sanctions could be imposed if investigators determine there was pilot error or the company was negligent in some manner.

There is also an environmental problem that could result in sanctions because the towboat has 7,500 gallons of diesel fuel and 500 gallons of lubricating oil aboard that may be leaking into the Ohio River, said Lt. Mike Anderson, chief of the Coast Guard's Pittsburgh port operations.

As is routine in other fatal transportation accidents, those involved will be evaluated for drug and alcohol use as part of the investigation, Anderson said.

The bodies of three of the seven crewmembers aboard the ELIZABETH M were found Sunday, but high water has prevented rescue workers from reaching the stranded towboat which they suspect may hold the body of the missing crewman, Rick Conklin, 40, of Crucible, Greene County.

The Coast Guard brought in a helicopter from Detroit and employed another helicopter from Westmoreland Search and Rescue to scan the Ohio River for miles below the Montgomery Locks and Dam in Industry in a search for Conklin.

The victims whose bodies were found are Ed Crevda, 22, of West Brownsville; Tom Fisher, 25, of New Cumberland, W.Va.; and Scott Stewart, 36, of the Elm Grove neighborhood of Wheeling.

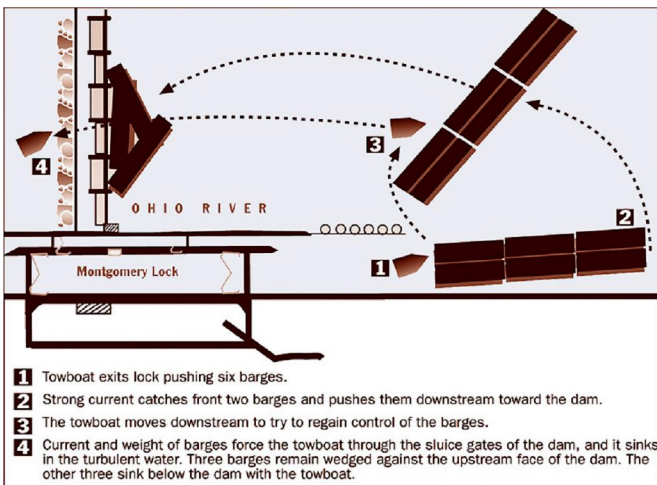
Harry Gallop, chief engineer for AM&O Towing in East Liverpool, Ohio, said the accident had hit the entire towing community like the loss of a family member. "From New Orleans to Pittsburgh and beyond, it's a tight-knit family," he said. "We all help each other. Losing someone like this, it's like losing a brother."

Campbell Transportation is based in Dunlevy, near Charleroi on the Monongahela River. A crew from a sister company, C&C Marine Maintenance Inc., performed what officials yesterday called a "heroic effort" in the rescue of pilot Toby Zappone and crewmember Jacob Wilds. They were clinging to a dangling ladder outside the pilothouse of the partially submerged towboat.

The third person rescued was crewmember John Thomas. Telephone calls to the companies yesterday seeking comment were not returned and even Coast Guard officials said they received scant information from Campbell Transportation.

The river was closed to most traffic between miles 31 and 36 around the Montgomery Locks and Dam as the Coast Guard established a security zone. The locks are open for traffic, but vessels need Coast Guard approval and an escort to move through, said Richard Lockwood, chief of the Army Corps of Engineers Pittsburgh District Operations and Readiness Division.

HIGH WATER HINDERS SEARCH FOR MISSING TOWBOAT CREWMAN



Cathy Tigano/Post-Gazette

[By Mike Bucsko, Pittsburgh Post-Gazette. Staff writer Brian David contributed to this report. Accident diagram by Cathy Tigano. Mike Bucsko can be reached at mbucsko@post-gazette.com or 412-263-1732 Copyright ©1997-2004 PG Publishing Co., Inc. All Rights Reserved. Reprinted with permission.]

The accident occurred about 2:30 a.m. Sunday as the six coal-filled barges left the lock chamber. The current, swollen by days of heavy rain, pushed the two front barges back toward the dam. Zappone apparently tried to move the towboat around the barges to find a better angle to push, but the barges and the deadly current sent the towboat over the dam, where it lodged.

Workers at the Montgomery Locks knew there was a problem when they heard the engine of the towboat revving as the vessel was pushed backward, Lockwood said. Corps employees rushed out onto the dam and tossed out some life preservers. Two towboats, the LILLIAN G. and the SANDY DRAKE, were in the lock pool and their crews were able to begin a rescue effort. Meanwhile, the towboat ROCKET, owned by C&C Marine, was docked just downriver from the lock and its crew quickly moved to assist those stranded on the Elizabeth M.

Three of the barges lodged against the dam, while the three others followed the towboat over the dam. One was located just beneath the dam and the second about a mile downriver, while the third is submerged within two miles of the dam, Briggs said.

NEW CUMBERLAND MAN SURVIVES TOWBOAT DISASTER

By FRED MILLER, Review Staff Writer
[Reprinted with permission]

EAST LIVERPOOL ó A surviving crewmember of the towboat disaster at Industry, Pa., said the boat's captain was ócrazyö for trying to save breakaway coal barges and blamed both the captain and the company for the deaths of crewmembers.

Jacob Wilds, 26, lost his best friend Tom Fisher ó who he called a hero in the tragedy ó when the MV ELIZABETH M went over Montgomery Dam at 2:30 a.m. Sunday. Two other crewmembers also drowned, and a fourth is believed still inside the sunken towboat.

óThe captain was crazy. He went on the backside of the tow. He made a big mistake. He risked our lives about 10 times that night, and he killed my friend,ö said Wilds. Both Wilds and Fisher were living in Latrobe, Pa., but are from the New Cumberland area. Wilds is a son of Rev. Mark and Karen Wilds, formerly of the New Manchester, area. He spoke to The Review in this exclusive telephone interview Monday evening.

The coal-laden barges may have originally come from Charleston, W.Va., as reported, but Wilds said the six-barge tow was made up only hours before, a short distance downstream at C.C. Johnson's. Before the tow left there, making very slow progress against the fast-flowing river, crewmembers on other towboats including the ROCKET warned the ELIZABETH M's crew not to attempt the upriver trip, Wilds said. He also said another towboat was supposed to help push the six barges but never showed up.

Wilds said Monday evening he had not been asleep since being awakened from his bed by the alarm that called all hands to the emergency situation on the boat around 2 a.m. óThe general alarm sounded and I woke up. My buddy Tom Fisher, my lead man, came to make sure I was awake. He said, ÑWe've got to get out on the tow. We went out and the

barges had broke loose, the first two. I ran a lead line out there to the head (of the tow) to secure the first two barges, so we thought. The captain gave us the order. There were four of us out there,ö said Wilds.

The front two barges had broken loose, apparently caught by the heavy current as the tow emerged from the lock. The crew fought for, it seemed to Wilds, for at least half an hour, not the five or six minutes estimated by others. At one point, crewmembers believed they had won the fight and were taking pictures with cameras and camera cell phones, he said. For part of the struggle, the towboat was going in reverse, trying to pull the barges upstream, he confirmed.

The towboat untied from the barges but never lost contact with them, he said. óWe cut them loose but we stayed with them. The captain never let go. He kept trying to get them,ö Wilds said.

When barges hit the dam and began sinking, ówe tied off from the boat to the barges that were sinking. We looked up and we were on the dam. We said, ÑWe need to cut loose, we need to cut loose, we need to cut loose! But it was too late.ö While the towboat was in the process of going over the dam, it was being knocked around by some of the runaway barges, he said.

Wilds said the towboat went over the dam stern first, over the rollersö and then was tossed backwards, up the dam, whether because it was hit by a barge or by some fluke of water flow. Then it went down again over the rolling water below the dam and sank.

óWe went forward then started backing up, away from the dam. It slammed us around like crash dummies. The back of the boat went over the waterfall but we didn't sink. It pushed us back up.ö

óWe went down over the rollers of the dam and everyone else was sucked off. Me and Tom Fisher and that kid Ed (Crevda) watched everyone else go down. That was the last I saw of my buddy.ö

Wilds went under water when the boat sank. óI blacked out. I remember drowning,ö he said. He thought about his little girl Storm, 19 months old, and his fiancé Cindy and other people he loved.

óI remember thinking I gave up. I gave my regards to God.ö Then he said, óI didn't want to drown anymore. It was a miracle and my head popped above the water. Whenever I opened my eyes I was 800, a thousand feet from the dam. I had my life vest on.ö

He saw something floating nearby in the water that he thought was a body but when he grabbed it he found it was a garbage bag. He yelled for help. óI grabbed onto it and I stayed afloat for another hour. They didn't see me for another hour.ö

Crewmen on one of the towboats below the dam found him and pulled him out of the water. He was taken to the Beaver Medical Center, where fellow survivor John Thomas was already being treated in the emergency department. The third survivor, Toby Zapponi, was taken to Aliquippa Hospital.

óI saw John Thomas. He was underneath a heating blanket. I was the only one that walked away,ö said Wilds. He remembers telling himself while in the water óto live, you got to live. If you made it that far, you got to survive.ö

The Beaver County Coroner's office has said Scott

Stewart, 36, of Wheeling, and Tom Fisher, 25, were pronounced dead at the scene. Edward Crevda, 22, of West Brownsville, Pa., was taken to Beaver Medical Center where he later died.

Wilds said the dam "sheared off the top of the pilot house" when it went the first time through the dam. "We never should have been pushing those barges," said Wilds, who was told it was too much of a tow for bigger boats in that kind of water. "The ROCKET, the boat that helped us build that tow, the deckhands told me it was a bad idea to go. We got done building those barges around 10 or 10:15 (p.m.) Everybody was telling us not to go. The RICHARD C. was supposed to be assisting us but it didn't. The office told us to go anyway," Wilds said.

Cindy, mother of his daughter, is very upset because Tom Fisher lived with them and was their friend and godfather to their child, Wilds said. "Tom is part of my family. He was my lead man, my boss, my friend," he said. Tom and Marissa Edwards are also friends who have helped Wilds and Cindy in the past two days, he said.

Tom was a hero because "he told me where to go, go to the yawl. We were all sitting there together when we went over. He said, 'Don't worry, Jake.'"

Wilds said Fisher ran up the stairs to the pilothouse and grabbed Toby Zappone, who had no lifejacket. "He held onto Toby. He saved his life. Tom Fisher saved my life."

TOWBOAT PILOTS MOSTLY UNREGULATED

[By Reid R. Frazier, Tribune-Review, Monday, January 17, 2005. Reid R. Frazier can be reached at rfrazier@tribweb.com or (724) 779-7114]

Long hours, lax regulations and constant pressure to keep cargo moving all are part of life for the towboat captains who must make life-and-death decisions when river currents turn fierce, pilots say.

What role such factors played in the mind of George "Toby" Zappone on Jan. 9 isn't clear. The veteran pilot was the captain that day aboard the Elizabeth M when the 53-year-old vessel tumbled over the Montgomery Lock and Dam in Industry, Beaver County. Three of seven crewmen drowned, and another is missing and presumed dead.

Deckhand Jacob Wilds has charged that Zappone put cargo ahead of the crew, making several desperate maneuvers to snare runaway barges, several times putting the ELIZABETH M between the loose barges and the dam. Wilds, of Derry, Westmoreland County, also charged that other towboat crews on the Ohio River that night advised Zappone not to challenge a current flowing four times faster than normal.

Zappone, of Crucible, Greene County, has declined to comment. The U.S. Coast Guard, which is investigating, and towboat operator Campbell Transportation, of Dunlevy, Washington County, have declined to comment on Wilds' claims.

The Coast Guard has the authority to close rivers, but typically leaves it to towboat companies and pilots to decide whether to proceed in rough waters -- as it did Jan. 9.

Pilots say they frequently make those decisions, relying more on intuition and gut instinct than formal training. If Zappone, a pilot with 20 years of experience, is found to be

at fault, the system bears some responsibility, pilots said.

"He probably thought he'd lose his job if he lost those barges," said Greg Periman, 48, of Siloam Springs, Ark., who has been working rivers since 1976, including those in the Pittsburgh area.

Towing companies often push pilots to their limits, said retired pilot Arthur Harman Sr., 54, of East Liverpool, Ohio, who navigated Pittsburgh's rivers for 30 years. He said he'd been denied work because he wouldn't steer in fog or take on more cargo than he thought was safe.

"You can replace a barge," Harman said. "Once a crewmember gets hurt or killed, you cannot replace that person. He could be a husband and father."

The hours can be excruciating, said pilot Fred Hunter, 53, of Columbia, Mo. The Pittsburgh native who cut his teeth on local rivers said work weeks can stretch to 84 hours, with pilots working six hours on and six hours off six days a week. "If I got four to five hours of sleep a day in a 30-day stretch, I was doing darn good," Hunter said.

The Coast Guard limits pilots' work days to 12 hours. The agency also regulates pilots' licenses. But it imposes no limits on how much cargo towboats can push, something pilots say puts more pressure on them. The Gulf Coast Mariners Association and other maritime groups have called for cargo limits, but the Coast Guard has refused, said Richard Block of the Gulf Coast Mariners Association. "Towboats can tow any amount, any time, with just about any boat. Completely laissez-faire," Block said. "Essentially, it's a Wild West out there."

Jennifer Carpenter, a policy analyst for American Waterways Operators, an industry trade group, said towing limits and guidelines would be too cumbersome to enforce. "There are so many different factors that come into play because of weather conditions, water conditions. It's very hard to sit down and make up a meaningful (standard)," Carpenter said.

Block said another hazard is "paper horsepower," in which towing companies overstate how much power a vessel commands. The Coast Guard and Campbell say the Elizabeth M was a 2,200-horsepower vessel; a lawyer for Wilds said it had only 1,800.

[GCMA Comment: The official Coast Guard accident report released on January 27, 2007 lists the vessel's horsepower as only 1066. We believe the Coast Guard did not check their information carefully.]

The Elizabeth M was pushing six barges each laden with 1,000 tons of metallurgical coal. Whether the vessel had enough horsepower to manage its cargo in a 12- to 15-mph current is one of the questions Coast Guard investigators say they're trying to answer.

At least one aspect of the industry soon will be more heavily regulated. Coast Guard officials expect by midsummer to produce a draft of guidelines for towboat inspections after Congress passed a bill last year requiring the agency to add the vessels to the list of those it inspects.

[GCMA Comment: Two years after the accident, the Coast Guard still has not produced the first draft of the towing vessel inspection regulations.]

Annual deaths on U.S. towboats have averaged 16 since

1994, with a high of 28 in 1997 and a low of nine in 2003, the most recent year for which figures are available. There are about 30,000 towboat crewmen working on 5,000 vessels in the United States. Ninety-five percent of crewmen are non-union.

COAST GUARD ONE-MAN FORMAL INVESTIGATION

The Boat that Never Showed Up

On January 9 2005, the M/V RICHARD C was southbound at Ohio River mile marker 31 taking an empty barge down to Georgetown, PA for repairs

Campbell Transportation Company issued handwritten orders by FAX for the M/V RICHARD C and the M/V ELIZABETH M to meet in Georgetown, PA, build a tow and then head northbound to drop off the tow together. However, the format and wording of the vessel orders were unclear. The ELIZABETH M's orders simply stated, "The RICHARD C will help." This order, read on its own without the benefit of reviewing the RICHARD C orders, did not provide enough detail regarding the purpose of the RICHARD C such as what help the RICHARD C will provide or when that help would be provided. These orders from Campbell Transportation were issued because the river conditions that evening were severe because of the high water.

However, the schedule of the RICHARD C did not provide ample time for the RICHARD C to arrive at the Georgetown fleet in time to assist the ELIZABETH M in building the tow and/or to be standing by when the ELIZABETH M was ready to get underway after building tow.

Consequently, the ELIZABETH M completed building her tow with the assistance of the M/V ROCKET and then departed northbound from Georgetown (Mile 39) with six loaded coal barges but without the assistance of the M/V RICHARD C that apparently was supposed to accompany her because of the severe river conditions.

The RICHARD C (southbound) passed the ELIZABETH M (northbound) near Shippingport, PA, at mile 34.5 where they established a passing agreement by radio. The pilot of the RICHARD C, Mr. ■ made passing arrangements with the pilot on the ELIZABETH M, disregarding the written orders from Campbell Transportation Co. for both vessels to get in tow together and head northbound from Georgetown, PA. Mr. ■ did not know when the M/V ELIZABETH M left Georgetown but should have contacted Campbell Transportation Co. personnel of the ELIZABETH M's disregard for the written orders when he made the passing arrangements. Consequently, Mr. ■ was issued a Letter of Warning from MSU Pittsburgh for his lack of action in this case, which may have been prevented if he had acted on the written orders from Campbell Transportation Co. for the vessels to meet in Georgetown, PA.

The Elizabeth M Goes Over the Dam

The M/V ELIZABETH M was involved in a marine casualty in which four crewmembers died and seven vessels were damaged or lost with damage estimates of \$1,043,580 for the vessels alone. The Coast Guard determined that actions taken by the Master of the vessel before and during the casualty did not adhere to written policy procedures.

At approximately 02:00 the M/V ELIZABETH M completed her northbound lockage at Montgomery L&D. The Pilot, Scott Stewart (deceased) maneuvered the vessel into the lock chamber and the "striker-pilot" (e.g., steersman) Rick Conklin (deceased) maneuvered the vessel out of the lock chamber.

Once the ELIZABETH M and tow were cleared by lock personnel to exit the lock, the deckhand released the line between the lock and the tow. No line was maintained between the towboat, her tow, and the lock.

As the ELIZABETH M began maneuvering to face up to the tow on the fly, she pushed the tow approximately 200 feet out of the lock chamber before releasing the tow and before maneuvering around to the stern of the tow to face up.

While the towboat was maneuvering around to the stern of the tow to face up, the tow was adrift with no positive control.

As the ELIZABETH M completed facing up to the tow, the towboat and part of the tow were still within the main lock chamber. This is the approximate time and location where the effects of the outdraft of water flowing over the dam would have been felt at the head of the tow.

The tow was "out of shape" and being set towards the center of the river by the outdraft. Just after the tow was faced up, the lead deckhand noticed "the head of the tow, it looked weird. It was headed out. The stern of the boat was riding against the land wall." This set lead to an initial allision with the middle lock wall bull nose.

This allision with the bull nose caused all the wires at the coupling between the pair of lead barges and the center pair of barges to separate except the wires on the port string between the port stern of the lead barge and the port bow of the center barge.

After the allision, the towboat and tow continued making headway upstream and angling out toward the center of the river. This was the moment that one of the Lockmen observed the ELIZABETH M was going "out toward the center river a little quicker than what I seen other people do" and "accelerated".

At 02:08 the Master relieved the Pilot and assumed navigational control of the vessel and by 02:20 attempted to maneuver the vessel and tow to the mooring cells located above the upper end of the landside lock wall. At 02:21 the Master, while attempting to regain full control of the barges in the prevailing high-water situation, proceeded inside a restricted area that was clearly marked on an Army Corps of Engineers navigation chart. About the same time, the Master attempted to back the barges upstream, but the ELIZABETH M and her tow were unable to make any headway. Orders were then given to release the tow. Both the towboat and her tow then allided with the dam.

One of the Lockmen who had just completed opening dam gate #9, was walking toward gate #1 when "there was a loud bang, a real big crash" which caused him to lose his balance. At the time, he was standing on the dam in the vicinity of gate #6 and witnessed two barges start to get jammed in gate #6, but they quickly dislodged and went over the dam.

The Lockman's testimony regarding what he witnessed as the ELIZABETH M approached, allided with and went over the dam was "before it started going over the rollers, the whole stern was completely submerged, and the rest of the quarter deck and so forth went very fast, and the only

part I could physically see was the wheelhouse and the tow knees on the bow of the towboat on both sides. I could see maybe a foot of that. The Elizabeth M initially struck the dam sideways at a 45-degree angle on the starboard side of the vessel, then spun and went over the dam stern first through the spillway at dam gate #6.

As a direct result of the sinking, three men die, a fourth was missing, and a fifth man was injured amputating his little finger and suffering frostbite, hypothermia laceration, bumps and contusions.

The Coast Guard's Judgment

The failure of the M/V ELIZABETH M's master, Mr. ■■ to follow company policy and U.S. Army Corps of Engineers policy were major factors in the casualty and its results.

First, the steersman, or striker pilot, Mr. Conklin, was assigned watch with the Pilot, Mr. Stewart. According to the Campbell Transportations Safety Policy, and Procedures Manual, the striker pilot must serve watch under the direct supervision of the Master. This statement is found in evidence #2637982MR04, pg K-18, section B.2.a. The Striker Pilot was at the helm of the Elizabeth M under the supervision of the Pilot when it made the first allision with the bull nose of Montgomery Locks and Dam.

After the first allision, Mr. ■■ (the Master) reported to the pilot house and took control of the vessel. In an attempt to recover the barges that had broken free and damaged from the allision, Mr. ■■ followed the barges into a restricted area upriver of the dam. This restricted area is clearly marked on the Army Corps of Engineers Ohio River Navigation Chart, evidence #2637982MR06, which the M/V ELIZABETH M was required to have in the pilot house. The current of the river in the restricted area was too great for the M/V ELIZABETH M to overcome, and the vessel was pulled through the gates of the dam resulting the crewmember deaths and injuries.

Ignoring company policy and Army Corps of Engineer navigation charts constitute Misconduct on the part of the Master, Mr. ■■.

Campbell Transportation Co., the owner of the ELIZABETH M and all the rest of the damaged equipment, was charged with a violation of 33 U.S. Code §1321(b)(3) for "Discharge of oil or a hazardous substance into the navigable waters of the United States, adjoining shoreline, or contiguous zone of approximately 8,500 gallons of diesel fuel and lube oil. The maximum penalty for the offense is \$11,000 but their recommended penalty was only \$6,000. They had previously been fined 11 times for violating the same statute as well as for three other regulatory violations. We were not told whether the penalty was ever assessed.

The Investigation Continues

Several activities are still under investigation. At this time, we do not know whether the company has settled any pending lawsuits from the case.