USCG Activities New York Proposed Findings Regarding the Allision of the Staten Island Ferry *Andrew J. Barberi* on October 15, 2003

Date October 15, 2005*

*Redacted version due to discussion on the legal status of mariner licenses

Eleven (11) pages total including this cover

U.S. Department of Homeland Security

United States Coast Guard

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03 March 2005

MEMORANDUM

From: B. J. HAWKINS, LCDR
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CG ACT NY

Reply to SIO
Attn of: LCDR Hawkins
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To: Robert B. Ford
Lead Marine Accident Investigator
National Transportation Safety Board

Thru: (1) CG ACT NY

Subj: USCG ACTIVITIES NEW YORK PROPOSED FINDINGS REGARDING THE ALLISION OF THE STATEN ISLAND FERRY ANDREW J. BARBERI ON OCTOBER 15, 2003.

Ref: (a) Your ltr dated 12 Oct 2004

1. As you requested in reference (a), I am forwarding our proposed findings, conclusions, recommendations and probable cause for the Board's consideration.

2. At this time Activities New York is close to finishing our own investigation. When we have finished it, it will be forwarded to the Commandant for final agency action. As a result, please note that the enclosed proposed findings are predecisional in nature. These findings are, at this point in time, preliminary only and being provided by our unit to support your report to the National Transportation Safety Board on Tuesday, March 8, 2005.

3. If you would desire a copy of our final report when complete, a copy can be obtained through the Office of Investigation and Analysis at U. S. Coast Guard Headquarters.

4. Thank you very much for this opportunity to provide input for the Board's consideration. Additionally, please accept our sincere appreciation for the privilege to work with the National Transportation Safety Board in this investigation. It was a very rewarding and education experience for myself and my staff. Please feel free to contact me if you have any questions or comments.

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Enclosure: (1) U.S. Coast Guard Activities New York Proposed Findings Regarding The Allision Of The Staten Island Ferry ANDREW J. BARBERI On October 15, 2003.

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U.S. Coast Guard Activities New York Proposed Findings Regarding the Allision of the Staten Island Ferry ANDREW J. BARBERI on October 15, 2003

Incident Summary

The Staten Island Ferry ANDREW J. BARBERI is a 310 ft, 3335 gross ton passenger vessel constructed at Equitable Shipyards in New Orleans, Louisiana in 1981. She is certificated by the United States Coast Guard (USCG) to carry up to 6000 passengers on inland waters, and is owned and operated by the New York City Department of Transportation with regular ferry service between the New York City Boroughs of Manhattan and Staten Island.

On October 15th, 2003, at about 1500 local time, the ANDREW J. BARBERI departed the Whitehall Ferry Terminal in Manhattan on a regularly scheduled voyage to St. George Ferry Terminal on Staten Island. There were approximately 1500 passengers aboard the vessel. The vessel was on an approximate heading of 230 degrees at a service speed of around 16 knots. The weather was clear, approximately 60F with 25 knot winds out of the west with gusts up to 35 knots. The tide was ebbing.

The transit was ordinary in all respects until the vessel was in the vicinity of the "KV" buoy near Staten Island. At that point, the vessel normally reduces speed and changes course to starboard in preparation for docking at the St. George Ferry Terminal. However, the vessel continued on its course and speed until it allided with a maintenance pier immediately adjacent to the ferry terminal on the East side. This pier was approximately 1800 feet away from the vessel's destination, Slip #5. As a result of the allision, the ANDREW J. BARBERI sustained over eight million dollars in damage, 11 people died and over 70 people were injured.

Conduct of the Investigation

Upon arriving at the St. George Ferry Terminal, USCG Activities New York (ACTNY) Marine Investigators found the ANDREW J. BARBERI docked at Slip #5 and multiple municipal emergency response agencies on scene including: New York City Fire Department (FDNY), New York City Police Department (NYPD), and several ambulance services. Injured passengers had been moved to the embarkation area on the vessel's lower deck for treatment and transportation to local medical facilities. Included were the bodies of several deceased passengers.

Once onboard the vessel, ACTNY's investigation team proceeded to the Pilothouse to begin interviews and conduct post casualty alcohol testing of the crew. NYPD had already begun questioning the crew; so, upon completion of the alcohol testing, crewmembers were taken to NYPD Precinct #120 for further interviews with representatives from both the NYPD and ACTNY present.

U.S. Coast Guard Activities New York Proposed Findings Regarding the Allision of the Staten Island Ferry ANDREW J. BARBERI on October 15, 2003

The USCG contacted the National Transportation Safety Board (NTSB) per previously established protocols due to the scope and severity of the casualty. The NTSB, in accordance with their own regulations and a Memorandum of Understanding with the USCG, assumed the role of Lead Investigative Agency and dispatched an investigative team. Upon arriving, the NTSB's Lead Investigator assumed responsibility for the investigation and initiated a field investigation in accordance with standard NTSB protocols. This included the formation of four separate investigative teams to conduct the on scene investigation. Each team was comprised of members from the NTSB, ACTNY, New York State Department of Transportation, NYPD, and New York City Department of Transportation Staten Island Ferry Operations Division. The on scene investigation lasted for approximately 8 days before it was concluded by the NTSB Lead Investigator.

Proposed Analysis

ACTNY's marine investigations team has established the following facts:

1. Just prior to the allision, Assistant Captain Richard Smith passed out or became otherwise incapacitated.
2. At the time of the casualty, Richard Smith was suffering from fatigue due to recent changes at home that did not allow him to obtain adequate rest.
3. Prior to the casualty, Assistant Captain Richard Smith was taking multiple prescription medications for assorted health problems.
   a) The medications prescribed included: *Ambien, Tramadol, Lisinopril, Triamterene* and *Lipitor.*
   b) Some side effects of these medications, when taken individually, include: drowsiness, unusual fatigue and unconsciousness. Taken together, these medications act synergistically heightening the side effects.
   c) Richard Smith's post casualty toxicological report revealed residual levels of the prescription narcotic pain reliever *Tramadol* in his blood stream.
4. Richard Smith renewed his U. S. Merchant Mariner's License in August, 2000. As part of his renewal application he submitted a *Merchant Mariner's Report of Physical Examination (CG-719K)* to USCG Regional Examination Center New York. Pertinent and required information was omitted from the *CG-719K.*
   a) Richard Smith's *CG-719K* did not fully disclose his medical condition or list all the prescription medications he was taking at the time of the examination.
   b) Richard Smith's personal physician conducted the examination and prescribed his medications.
   c) Richard Smith's personal physician completed and signed the *CG-719K.*

5. Current U. S. regulations allow any physician or physician's assistant to perform the physical examinations required by the USCG for U. S. Merchant Mariner credentials. There is no certification or training requirements for physicians or physician's assistants who perform these physical examinations of U. S. Merchant Mariners.
6. [redacted]
7. Although not required by law or regulation, the New York City Department of Transportation did not have a safety management system or standard operating procedures establishing policies and protocols for safe vessel operation, personnel responsibilities, crew training or proper vessel manning.
8. Two crewmembers, who were only required to hold U. S. Merchant Mariner licenses as Non-navigating Mates, were responsible for supervising the deck hands at the time of the casualty. However, because of their designation as "Non-navigating" they were not expected to directly contribute to the ferry's safe navigation through such activities as standing Lookout or navigating the vessel. In fact, they were not even expected to know how to perform such activities. Despite this, they were placed in a supervisory position over the deck hands whose duties did include standing a Lookout Watch.
   a) The USCG Certificate of Inspection for the ANDREW J. BARBERI required two (2) Non-navigating Mates as part of the regular crew. This requirement dated back to the initial certification of the ferry in 1981 when Title 46 CFR 10.05 contained provisions for issuing a license limited to non-navigating duties.
   b) At the time of the casualty the Staten Island Ferries employed four (4) mariners to whom the USCG issued Non-Navigating Mate licenses in the 1980's
   c) The regulations of Title 46 CFR 10.05, which originally supported issuance of the Non-navigating Mate licenses, were repealed after 1987. ACTNY, however, continued to renew the above licenses under the regulatory authority of Title 46 CFR 10.202(h) from 1987 through 2003.

d) The Non-navigating Mates are not responsible for performing many of the duties traditionally associated with the position of Mate. Specifically, they do not directly contribute to the safe navigation of the ferry by performing such duties as standing Lookout or navigating.

e) The deck hands, who work for the Non-navigating Mates, do perform duties that contribute to the safe navigation of the ferry. Specifically, the deck hands serve as part of the Pilothouse Watch as a Lookout.

f) On the day of the allision, the two crewmembers filling the Non-navigating Mate positions did, in fact, hold licenses that were not limited by the "Non-navigating" designation. Despite this higher level of qualification and training, they did not feel they had any responsibility to directly contribute to the safe navigation of the ferry by serving as Lookouts.
   i) One Mate held a license as a "Mate" while the other held a license as a "Chief Mate".
   ii) During post casualty interviews both men clearly indicated that they had no responsibility for directly contributing to the safe navigation of the ferry.

g) Each Non-navigating Mate is on "Watch" for only one ferry run direction. In other words, one Mate would stand Watch for the Manhattan to Staten Island run. On the return trip, that Mate would be off, and the other Mate would have the Watch. This passing of the Watch from one run to the next would continue for the duration of their shift.

h) At the time of the casualty one of these Mates was in the Pilothouse with Richard Smith.
   i) He was preparing work orders for repairs needed on one of the vessel's doors. He was sitting on a low couch that did not provide much visibility outside the Pilothouse.
   ii) He was not on Watch, but had chosen the Pilothouse as a quiet place to do his work.
   iii) Because he was not on Watch, he was not part of the Pilothouse Watch required by Title 46 CFR 78.30-5.

i) As the ferry approached St. George Terminal, the Non-navigating Mate on Watch was at the bow on the Main Deck in preparation for mooring. In addition, three (3) deck hands were also on the bow, one on the Main Deck and two on the Second Deck (Salon Deck), preparing for mooring.

j) None of the crewmembers on the bow were keeping a lookout or realized the vessel was not on a course which would take it safely to its destination at St. George Terminal.

9. The prevailing practice of the crew aboard the Staten Island Ferries did not ensure the Captain or Assistant Captain had a dedicated, proper Lookout for the entire voyage between Manhattan and Staten Island.
   a) The Inland Navigation Rules Act of 1980 requires every vessel to maintain a proper Lookout at all times by sight and hearing as well as by all available means appropriate in the prevailing circumstances and conditions to make a full appraisal of the situation and of the risk of collision.

b) Title 46 CFR 78.30-5 further requires at least one additional member of the crew to be on Watch in or near the Pilothouse at times when the vessel is being navigated. Those on Watch must be focused on and directly engaged in the safe navigation of the vessel. Aboard the Staten Island Ferries one of the deck hands would stand the Pilothouse Watch with either the Captain or Assistant Captain.
c) It was common practice for deck hands serving in the Pilothouse to depart shortly before mooring in order to attend to deck duties involved with mooring the ferry. This would leave the Captain or Assistant Captain to stand the Pilothouse Watch alone.
d) During the subject voyage the deck hand in the Pilothouse left a few moments earlier than usual to open a door on the Second Deck (Salon Deck) that had been secured due to a broken latch.
e) A Non-navigating Mate was present in the Pilothouse after the deck hand laid below. However, as previously discussed, he was not on Watch; therefore, Assistant Captain Richard Smith was left to stand the Pilothouse Watch by himself.
f) Outside of the Pilothouse Watch, no one was assigned to act as a Lookout as a matter of standard practice.

10. Title 46 CFR 78.30-20 underscores the Master's (i.e. the Captain's) responsibility to keep a proper Lookout at all times.
    a) Captains aboard the ferries knew about the prevailing practice of the crew where one member of the Pilothouse Watch would leave in preparation for mooring.
    b) On the day of the casualty, Captain Michael Gansas did not take any action to ensure a proper Pilothouse Watch was stood in accordance with regulatory requirements. Furthermore, he did not ensure a proper Lookout was maintained at all times.
11. Captain Michael Gansas is believed to have been in the other Pilothouse at the opposite end of the vessel from Assistant Captain Richard Smith during the run to Staten Island. He did not notice that the vessel was not approaching its destination slip.
12. The New York City Department of Transportation Ferry Operations Division did not have procedures in place to ensure USCG credentialed crewmembers remained current with the regulatory requirements necessary to keep their Merchant Mariner licenses or documents valid.
    a) [redacted] a survey was conducted of the remaining First Class Pilots employed by the Staten Island Ferries. The results revealed over half the Pilots [redacted] had failed to comply with the annual physical examination requirement of Title 46 CFR 10.709(b).
13. The USCG does not have a process to verify and ensure mariners operating under the authority of a First Class Pilot Endorsement remain current with physical examination requirements.

Proposed Conclusion

As is too often the case in situations such as this, many elements occur collectively and create a scenario that permits a casualty to take place. Eliminate just one element and the casualty may be averted. Tragically that did not happen in this case where a poor safety culture, noncompliance with federal safety regulations, gaps in oversight and the poor health of the Assistant Captain coalesced as causal factors that led to the deaths of 11 people and over 70 injuries.

Recognizing the inherent risks of navigation, the USCG has established numerous regulations to help prevent marine casualties. Two such regulations require that a proper lookout be maintained at all times and a Pilothouse Watch be stood by no less than two people. These requirements were violated and directly contributed to this casualty. When the deck hand standing the Pilothouse Watch with the Assistant Captain laid below before the ferry was moored, the Assistant Captain was the only person left on Watch in the Pilothouse. At that moment in time, he was the only person directly involved in the safe navigation of the ferry. Thus, when he apparently became unresponsive there was no backup Watch to recognize the danger that the vessel was in and to prevent the casualty. Had a proper lookout been present, in or out of the Pilothouse, it would have become immediately apparent that the vessel was not under the command of the Assistant Captain and emergency actions could have been taken.

As a licensed Merchant Mariner, the Assistant Captain had the responsibility to ensure he stood his Watch prudently in accordance with good seamanship and all applicable regulations. However, the ultimate responsibility for the vessel's safety fell to the Master. It was the Master's responsibility to ensure a proper Pilothouse Watch was stood. It was the Master's responsibility to ensure a proper Lookout was posted at all times. Most tragically in this case, it was the Master who knew of the crew's prevailing practice that regularly left him or his Assistant Captain to stand the Pilothouse Watch alone yet failed to do anything about it. Had he fulfilled his ultimate responsibilities someone would have been present when the Assistant Captain became incapacitated.

Recognizing that a mariner's poor health can endanger a vessel, the USCG has also implemented specific safety regulations in an effort to preclude the possibility of mariners being rendered physically incapable of performing their duties. By requiring U. S. Merchant Mariners to undergo recurring physical examinations every five years, the USCG has tried to ensure mariners are capable of withstanding the rigors of their job. In this instance, however, Richard Smith and his physician circumvented the intent of the regulations by failing to fully disclose his medical conditions or his prescription medications. Had they done so, it is highly unlikely he would have been permitted to continue to hold a U. S. Merchant Mariner's license as the USCG would have lost confidence in his fitness to safely navigate a vessel.

Along the same vein, the USCG has recognized the greater risks posed to vessels while navigating close to shore and within harbors and, therefore, instituted requirements for First Class Pilots to help ensure the vessel's safety. In these situations a Pilot is often navigating in close quarters situations where there is little or no margin for error – including the incapacitation of the Pilot. As a result, Pilots are required to undergo a physical exam annually instead of every five years. Again, Richard Smith failed to adhere to the regulations and did not obtain the required annual physical exam. [redacted] but increased the risks posed to the vessel and passengers as his medical conditions continued to persist unmonitored.

These facts raise questions and concerns of how such practices and circumstances could be allowed to develop and continue without oversight or intervention. The public would expect that an organization such as the New York City Department of Transportation, responsible for the safe conveyance of millions of public commuters across the complex waterway of the Port of New York, would create and foster a higher standard of safety and prudence. Instead, an attitude prevailed within the ferry organization where the safety of the passengers and crew was not necessarily of paramount importance. The normal practice of the crew left the Captains and Assistant Captains alone in the Pilothouse during the highly risky maneuver of approaching the ferry terminal. The position of Non-navigating Mate held little responsibility for contributing to the safe navigation of the ferries, and Management knew little of whether or not the Captains, to whom they entrusted the vessels, crew and passengers, complied with federal qualification requirements.

Despite the fact the Staten Island Ferries carry over twenty million passengers per year, the New York City Department of Transportation had not instituted a documented safety management system or standard operating procedures at the time of the allision. Such a system would not only have laid the foundation for the indoctrination and training of all ferry employees but would have also established the preventative processes and protocols necessary to ensure the safe operation of the vessels. Ostensibly, such a documented system would define the roles and responsibilities of each crewmember as well as instituting a system for ensuring each crewmember complies with internal, local and federal requirements regarding their fitness and qualification for the duties to which they've been assigned.

By reissuing licenses to Non-Navigating Mates and allowing them as part of the ferries' crew, the contributions that full Mates could have added to the safe navigation of the vessel were not fully realized. Instead of being an extension and instrument of the Captain to aid in safe navigation, they simply became supervisors of the deck hands who, by their own admission, did not directly contribute to the vessel's safe navigation. This mind-set carried over into their subordinates, the deck hands, who developed less than professional attitudes evidenced by the fact that they failed to realize the danger the vessel was in as it approached St. George Terminal.

Furthermore, the USCG's medical oversight program presently may allow a mariner to obtain a Merchant Mariner license despite not meeting the minimum health standards – whether it be intentionally or unintentionally. The required physical examinations need not be conducted by a physician familiar with the requirements of the maritime industry. Federal guidance to physicians, Regional Exam Centers and Marine Safety Offices regarding what medications are acceptable for mariners is not clear and consistent. There is no proactive effort to ensure First Class Pilots comply with the annual physical examination requirement. Finally, there is no clear requirement for a mariner to report changes in his physical condition. The potential result is a mariner who, despite being unfit for service, continues to be placed in a position of responsibility and liability.

None of this, however, can relieve the mariner of his burden to champion safety of life and property even to the detriment of his own welfare. In this instance, Richard Smith, with the aid of his physician, was obviously cognizant of his poor health and the risks associated with the mixture of prescription medications he was taking. He perpetuated a situation where he was responsible for the lives of thousands of people every day despite being physically unfit to carry out those responsibilities with minimal risk. His decisions, made in the context of the elements discussed above, led directly to the ANDREW J. BARBERI's allision.

Proposed Probable cause

ACTNY has determined that the probable cause of this casualty is Assistant Captain Richard Smith's apparent unresponsiveness, or unconsciousness, while in navigational control of the ANDREW J. BARBERI. The exact reason for his unresponsiveness has not been conclusively determined. However, based upon the mixture of prescription medications he was taking and his questionable health, it is most likely the cumulative effect of the drugs combined with his fatigued state that rendered him unresponsiveness to his surroundings and incapable of processing the sensory information required to safely navigate the ferry or execute the emergency procedures necessary to avoid the allision.

Proposed Recommendations

The USCG should create and implement a Marine Medical Examiner program similar to the Federal Aviation Administration's existing flight certification program. Implementing such a program will ensure physicians are certified and familiar with the requirements of personnel engaged in the marine industry. Adoption of such a program will also ensure physical examination requirements are met.

In order to give guidance to mariners, the USCG should develop policy or regulations providing amplifying information as to when medical conditions, or medications, would preclude mariners from safely fulfilling their duties and responsibilities.

The USCG should discontinue the practice of reissuing "Non-Navigating Mate" licenses. While the license was previously supported by regulation, and the reissuance of that license is presently supported, its use is contrary to the mission of marine safety. As presented in Commandant's Decision on Appeal 2021, it is inadvisable to place a mariner with a "limited" license in a position where it can be reasonably expected that he would be required to exercise the duties and responsibilities of a similar mariner whose license was not likewise constrained. Mariners with such licenses should be re-evaluated and issued an appropriate credential upon their next renewal.

Additionally, the New York City Department of Transportation should eliminate the position of "Non-Navigating Mate" on all Staten Island Ferries and develop other ways to manage the existing crew hierarchy within the ferry system while working towards enhancing marine safety. Action is already being taken in this regard as ACTNY is working with the New York City Department of Transportation to remove the COI requirement for "Non-navigating Mates" and requiring a traditional Mate as part of the required crew.

The New York City Department of Transportation should develop a safety management system structured upon existing international guidance to ensure each ferry is properly manned, all crewmembers understand their responsibilities and all regulatory requirements are met for the vessel's safe operation. With the aid and advice of ACTNY, the Department of Transportation has already undertaken this project.