



NATIONAL TRANSPORTATION SAFETY BOARD
Office of Marine Safety
Washington, D.C. 20594

SURVIVAL FACTORS GROUP FACTUAL REPORT

DCA10FM017

ACCIDENT

Vessel: *Andrew J. Barberi*
Date: May 8, 2010
Time: 0919 EDT
Location: Slip 5, St. George terminal, Staten Island, NY,
Owner: New York City Department of Transportation

SURVIVAL FACTORS GROUP

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1
2 **SUMMARY**
3

4 On Saturday, May 8, 2010, at 0902 local time, the passenger ferry *Andrew J. Barberi* departed
5 slip No. 1 at Whitehall Ferry Terminal in lower Manhattan for its regularly scheduled 0900
6 voyage to St. George ferry terminal, Staten Island. A review of the pilothouse closed-circuit
7 television (CCTV) video of the transit from Whitehall to St. George indicates that the voyage
8 was uneventful until the ferry approached slip No. 5 at St. George.
9

10 The Coast Guard's (CG) New York Harbor Vessel Traffic Service (VTS) vessel
11 trackline shows that the *Andrew J. Barberi* had a speed-over-ground (SOG) of approximately 16
12 knots before it began its planned slowing to the terminal, which starts when the vessel is abeam
13 of the KV (Kill Van Kull) buoy, about 1,000 yards from the slip entrance. From the buoy to the
14 entrance to slip No. 5, the Assistant Captain made a series of engine speed and ahead/astern pitch
15 reductions in preparation for docking and at 0917 the vessels speed was 15 knots. At 09:18:04
16 video shows that the Assistant Captain had both ahead/astern pitch control levers in the full
17 astern position, where they remained until the impact about 29 seconds later. The VTS trackline
18 does not provide the resolution required to precisely determine the speed at the time of allision.
19 The vessel was not fitted with a voyage data recorder (VDR), or (SVDR), nor was one required.
20

21 The Captain sounded the danger signal on the ships whistle and the Mate made an announcement
22 on the public address system of "brace, brace, brace" just prior to impact. Video data shows that
23 some deckhands began directing passengers off the exterior forward embarkation areas, and
24 others passengers prepared for impact. At 9:18:33 a.m. EDT, the vessel struck the boarding
25 apron and transition bridge (which both serve to embark and disembark passengers from the
26 vessel to the terminal), and the concrete terminal structure on slip No. 5.
27

28 The shoreside operator of the transition bridge noticed that the speed of the ferry was faster than
29 usual as it entered the slip. He stayed at his station in the face of the incoming ferry and
30 positioned the transition bridge to align with the main deck, which is also performed for a normal
31 docking. The transition bridge is not fixed, but is raised and lowered through a sheave and cable
32 system operated by a member of the shoreside dock team. The transition bridge is designed to
33 absorb some impact by releasing from its saddle in the event of hard landing. This occurred as a
34 result of the hard landing and the slip sustained moderate damage. This design feature and
35 related emergency response procedures are incorporated into training and drill for dock team
36 employees.
37

38 The pilothouse crew, or bridge team, consisted of four persons: captain, assistant captain, mate,
39 and lookout. The assistant captain was at the helm at the time of the allision, with the captain
40 observing. The Captain and Assistant Captain share operating officer responsibilities during the
41 round trip transits between Whitehall Terminal and the St. George Terminal. The captain
42 operated the vessel from Staten Island to Manhattan, and the assistant captain piloted it from
43 Manhattan to Staten Island. The accident trip was the fourth run of the day for those
44 crewmembers (and for the vessel).
45

1 Both the captain and the assistant captain were CG–licensed first-class pilots for the route. The
2 captain was 27 years old and a 2005 U.S. maritime academy graduate. He had worked for the
3 Staten Island Ferry since graduation and had docked ferries over 1,000 times, the *Andrew J.*
4 *Barberi* hundreds of times. The assistant captain was 47 years old and a 1982 graduate of a
5 foreign merchant marine academy. He had worked in the U.S. marine industry since 1998 and
6 started with the Staten Island Ferry in 2004 as a deckhand, ultimately progressing to assistant
7 captain in 2008. He had docked the *Andrew J. Barberi* many times.
8

9 At the time of the accident, the chief engineer was on duty in the below decks engine control
10 room. Conditions were apparently normal, and no alarms sounded before the allision. The chief
11 engineer became aware of a problem when he heard the audible pitch of the engine increase. He
12 looked at the CCTV and saw that the vessel was in the rack and moving too fast in relation to the
13 slip. He instructed the crew in the engine control room to brace for impact.
14

15 The CCTV video shows passengers jostled in their seats and some standing passengers falling to
16 the deck during the accident. Approximately fifty people reported minor injuries, primarily
17 muscle injuries and pain to the jaw, neck, shoulder, back, hip, knee, or legs. One person also
18 reported a minor head laceration. Some of the injured walked off the vessel, and some were
19 removed by stretcher.
20

21 A memorandum of understanding (MOU) dated February 2006 between the USCG and
22 NYCDOT, set forth the terms by which USCG and NYCDOT will coordinate and execute the
23 inspections of vessels operated by NYCDOT Ferry Division. The vessel is a double-ended ferry
24 whose design allowed it to approach and leave its slips without turning around. It is symmetric
25 about the midpoint with pilothouses at each end. The end that docked in Manhattan was
26 designated the New York-end; similarly, the end that docked in Staten Island was designated the
27 Staten Island-end. At the time of the accident, the crew was controlling the vessel from the
28 Staten Island-end pilothouse.
29

30 The vessel is propelled by cycloidal propulsion units, one mounted at each end of the vessel (two
31 diesel engines are coupled to each propulsion unit). The engines driving the Staten Island-end
32 propulsion unit stopped at the time of or immediately after the allision. The engines were not
33 stopped manually by the crew. The New York-end cycloidal propulsion unit was still operating
34 at 50 to 60 percent ahead thrust after the accident. The vessel’s electrical power and lighting
35 circuits were never interrupted during the accident. The operator controls the vessel through
36 three inputs: cycloidal athwartships pitch controls (which is the equivalent of the ship’s wheel, or
37 steering), cycloidal ahead/astern pitch control, and engine speed in revolutions per minute, or
38 throttle, which directly increases the rotational speed of the cycloidal units providing more
39 steering or ahead/astern thrust per given commands.
40

41 Results of post accident testing of both ends propulsion systems indicated that the Staten Island-
42 end propulsion unit operated satisfactorily, while the New York-end propulsion unit did not
43 respond properly to commands. Following an assessment of the propulsion control system,
44 investigators replicated the control issue on the New York-end propulsion unit. Certain
45 propulsion control components on the New York-end propulsion unit were identified as possibly
46 defective and replaced (similar components were also replaced on the Staten Island end). After

1 the components were replaced, dockside testing showed the New York-end propulsion unit to be
2 working properly. Investigators sent the removed propulsion control components and oil samples
3 from the New York-end propulsion unit to NTSB headquarters for further analysis. The oil
4 sample analysis indicated it was “normal”, effectively eliminating oil quality as causal.
5 Examination by the Materials Lab identified a broken bronze internal ring at one end of a
6 solenoid. It was determined that the failed ring would account for the lack of a proper response
7 of the New York ends propulsion unit.
8

9 In 2003, the Safety Board investigated a Staten Island Ferry accident involving the *Andrew J.*
10 *Barberi* that claimed 10 lives. The only remaining NTSB recommendation that is not “closed”
11 from the previous allision is M 05-6; requiring all U.S.-flag ferry operators to implement SMS.
12 This recommendation is currently “open- acceptable response.” The CG Authorization act of
13 2010 proposed SMS for passenger vessels with at least 399 passengers; which the NTSB replied
14 to on July 7, 2011; stating it was too high a threshold.
15



16
17 *Picture shows the Staten Island end of the Andrew J. Barberi ferry that allided with the*
18 *pier. This photo was taken at the Ferry Maintenance Facility, Staten Island, NY,*
19 *following the May 8, 2010 collision.*

20
21 **DETAILS OF THE INVESTIGATION**
22

1 **Injuries**

2
3 The injuries sustained in the *Andrew J. Barberi* accident, shown in table 1, are categorized
4 according to the injury criteria of the International Civil Aviation Organization (ICAO). The
5 Safety Board uses the ICAO injury criteria in all its accident reports, regardless of transportation
6 mode.

7
8 **Table 1.** Injuries sustained in *Andrew J. Barberi* accident.

Type of Injury	Crew	Passengers	Other	Total
Fatal	0	0	0	0
Serious	0	3	0	3
Minor	6	38	3 ¹	47
None	14	203	0	217

Title 49 CFR section 830.2 defines a fatal injury as any injury that results in death within 30 days of an accident. It defines serious injury as that which requires hospitalization for more than 48 hours, commencing within 7 days from the date the injury was received; results in a fracture of any bone (except simple fractures of fingers, toes, or nose); causes severe hemorrhages, nerve, muscle, or tendon damage; involves any internal organ; or involves second- or third- degree burns, or any burn affecting more than 5 percent of the body surface.

9
10 **Medical and Pathological Information**

11
12 The New York City Fire Department (FDNY) reported it treated 35 people on scene and
13 transported 33 to the Richmond University Medical Center (RUMC) for further evaluation.
14 Three people spent more than 48 hours in the RUMC. All three patients were kept in the
15 hospital for observation, evaluation and testing. All of the injuries occurred when the *Andrew J.*
16 *Barberi* came to an abrupt stop after striking the pier and passengers fell, bumped into objects,
17 fell onto stairs or had other people fall on them. Injuries consisted of aches, pains, soreness, and
18 contusions. Parts of the body that were affected included: Back, neck, body, arms, legs, chest,
19 elbow, knee, head, ankle, foot, jaw, and hip.

20
21 Approximately 50 people reported injuries. This number was calculated by cross-referencing the
22 names of the 40 people seen by the RUMC who said they were seeking medical attention for
23 injuries incurred during the *Andrew J. Barberi* accident; nine names listed on the FDNY On-Site
24 Triage Tracking form not listed as being seen by the RUMC; and one name from the New York
25 City Police Department (NYPD) aided reports, noting an injury that was absent from the RUMC
26 list. Of the 40 people seen by the RUMC; three of the names were not listed on either the On-Site
27 Triage Tracking form nor an NYPD aided report. One injured individual was not on board the
28 vessel. He was the NYC DOT employee assigned to operate the ferry boarding apron.

29
30 **Closed Circuit Television**

31

¹ “Other” includes two NYPD patrolmen assigned to the *Andrew J. Barberi* and the shore-side Staten Island Ferry employee who operated the shore-side boarding apron designed to hook to the *Andrew J. Barberi* main deck.

1 The *Andrew J. Barberi* used closed circuit cameras for monitoring security. The cameras
2 captured the movement of passengers and crew during the accident. Footage showed that a few
3 seconds before the impact, passengers hurriedly moved back from the bow and that most of those
4 who were not in a seat, fell to the deck upon impact. Those in seats were jostled, but did not fall
5 to the deck. As a result of the collision, the ferry main deck ended underneath the ramp such that
6 the ramp was approximately five feet above the main deck. The video showed that a gangway
7 was placed on the main deck of the *Andrew J. Barberi* and connected to the ferry boarding ramp.
8 Using the gangway, passengers departed the vessel single file. Response personnel moved on
9 and off the vessel by climbing up and down the ramp and eventually used the gangway after
10 passengers who did not need assistance had departed the vessel.

11 **Crew Response**

12 The *Andrew J. Barberi* used closed circuit cameras for monitoring security. The cameras
13 captured the movement of passengers and crew during the accident. Footage showed that a few
14 seconds before the impact, passengers hurriedly moved back from the bow and that most of those
15 who were not in a seat, fell to the deck upon impact. Those in seats were jostled, but did not fall
16 to the deck.

17 Mate #2, 25 years of age, was assigned to a mooring station located on the main deck on the
18 Staten Island end, Brooklyn side². She heard the announcement for the crew to proceed to their
19 mooring stations. She arrived at her station and began opening doors on the main deck. She told
20 NTSB investigators that it was raining; the vessel was traveling faster in the slip than normal; she
21 did not hear a public address announcement; she heard people shouting; she heard a danger
22 signal; and she did not notice any attempt to slow the vessel. No passengers were around the
23 doors with the exception of a mother and child on the outside deck. Anticipating a hard landing,
24 Mate #2 grabbed the mother and took the mother and child back into the main deck cabin space,
25 sat down with the mother and child and wrapped her arms around both of them just before the
26 collision.

27 Deckhand #2, 55 years of age, was assigned to the main deck Staten Island/Brooklyn side with
28 Mate #2. Deckhand #2 told NTSB investigators that he noted the vessel speed was too fast
29 before entering the slip when the ferry was “still in open water”. He noted that the vessel
30 maintained the same speed – he did not feel any acceleration or deceleration. He warned Mate
31 #2 of his concern. He said he heard the ship’s whistle when the vessel was half way inside the
32 ferry rack. He did not hear a public address announcement or an alarm bell. During impact, he
33 was already inside the cabin doors. After the collision, he checked with Mate #2 to make sure she
34 was ok. He said he attended to a female passenger injured on the Saloon Deck and said Mate #1
35 brought a first aid box to him.

36 Deckhand #3, 52 years of age, was serving as a bridge lookout during the transit from Manhattan
37 to Staten Island. As the ferry reached the KV buoy, he made an announcement over the public

² The ferry’s symmetrical design allows it to approach and leave its berth without turning around. The end that docks in Manhattan is known as the New York end, and the end that docks in Staten Island is called the Staten Island end. The sides of the ferry are referred to as the Brooklyn side and the New Jersey side. The starboard side on the trip to Manhattan is the Brooklyn side, while on the trip to Staten Island the New Jersey side is starboard.

1 address system, for the crew to go to their mooring stations. After making the announcement, he
2 was relieved as lookout and went to his mooring station on the Saloon deck on the New Jersey
3 side of the ferry. He told investigators that when the vessel was 50 feet from the end of the
4 apron, he noted that the vessel's speed was faster than normal and accelerated inside of the slip.
5 He said he heard a danger signal and did not hear a public address announcement or any warning
6 on his crew hand held radio. He estimated the ferry speed at five knots and said he knew right
7 away that he had to get passengers back. He told 12-20 passengers on a ramp to get back/inside
8 and yelled at passengers to hold on and brace for impact. He said that some passenger complied
9 with his orders and some did not. He saw the impact. After the impact he calmed people down
10 until paramedics and fire department personnel came on board the vessel.

11
12 Deckhand #5, 55 years of age, was at the deckhand Men's Room on Saloon Deck just before the
13 collision. He told NTSB investigators that he heard someone say the boat was coming in too
14 fast. He said he heard the whistle followed by beeping but could not recall if he heard the
15 whistle before or after the collision. He said he fell down at impact and then immediately began
16 to conduct crowd control duties.

17
18 A 34-year old New York policeman with seven years on the force was assigned to patrol the
19 *Andrew J. Barberi*. He noted the usual early Saturday morning light load of passengers. He told
20 NTSB investigators that he was leaning against the hand rails of the New York end stairs on the
21 saloon deck and out of the corner of his eye, saw that the timbers of the ferry rack were passing
22 by faster than usual. He said he told his partner, adjacent to him, that the ferry was going to
23 crash. The officer said he held on tight to the railing and no one else was in their vicinity.

24
25 Immediately before the impact he heard a "loud", "Brace, Brace, Brace" over the public address
26 system. Immediately after the impact, he used his police radio to call for ambulances and then
27 began walking the decks looking for any injured. With regard to the horn, the officer said, "I
28 have heard the horn a million times. I did not hear the horn".

29
30 Eight passengers were interviewed by telephone following the accident. Some of the
31 interviewed passengers told NTSB investigators they:

- 32
33
- Noticed the ferry was coming into the slip faster than normal.
 - They and other people fell because of the impact.
 - Reported crew, EMS, fireman, and policemen moving about the ferry to check on everyone and identify the injured.
 - Were to remain where they were if injured, or could depart the ferry on their own power.
- 36
37

38 A 59-year old male passenger told NTSB investigators that he got up and walked towards the
39 front of the boat and stayed inside the doors for a few minutes before the collision. He said the
40 impact threw him, so he grabbed a rail so he would not go through a door.

41
42 He told NTSB investigators that his left knee hurt as a result of the accident. After the accident,
43 he said someone in a navy blue pants and shirt told everyone to sit down. He said there were
44 many crew members, policemen, and firemen on board the ferry after the accident. He said he
45 sat down behind a woman who was bleeding from her head. He told NTSB investigators that a

1 female in front of him could not get up. EMS personnel asked him about his back, arm and legs.
2 He said two firemen carried him off the ferry. Forty-five minutes after leaving the ferry he was
3 placed on a city bus and taken to Richmond University Medical Center. He spent two hours in
4 the hospital where staff checked his legs and back. He said the hospital gave him medication for
5 pain and recommended that he follow up with a doctor.
6

7 One of the passengers, a 32-year old fire safety director at a Manhattan Hotel, told NTSB
8 investigators that she has an ear and an eye for safety. She was on the lower deck on the Staten
9 Island end with her 11-year old godson. Only she and her godson were outside because of the
10 rain. Doors on the main deck were closed. She told NTSB investigators that she did not feel any
11 change in the engine speeds and that a female crew member yelled, ‘Get inside. Get inside.’
12 And seconds before impact she heard an alarm. She noted some people were hurt and that crew
13 members were asking people if they were OK.
14

15 She told NTSB investigators that she walked off the boat and described going over two
16 gangways to get off the boat. When leaving the boat, she had to climb up a ladder and duck her
17 head to get under the deck of the vessel’s bridge deck, before getting on the first gangway.
18

19 **Notification and Response**

20

21 Two NYPD officers assigned to the Ferry Security Unit were on board the *Andrew J. Barberi*
22 during the accident that occurred at 0919. After the accident, one of the officers used his
23 handheld radio to call for assistance on a precinct wide communication frequency. This call was
24 logged at 0921 in the police communications log. Shortly after the initial call from the officer on
25 board the ferry, the Commanding Officer of the NYPD Ferry Security Unit confirmed the
26 accident had occurred and activated a Level One rapid mobilization of police resources. The
27 NYPD notified the Coast Guard at 0922 and the FDNY (Fire and emergency medical services) at
28 0923.
29

30 Immediately after the accident, the two NYPD officers, Staten Island Ferry (SIF) mates and deck
31 hands moved about the decks of the vessel looking for any passengers who needed immediate
32 medical attention. Deckhand #2 stated in an SIF incident report that he placed a first-aid kit
33 bandage on a cut on the forehead of a female passenger. The FDNY Battalion Commander (BC)
34 22 first arrived at the site of the accident at 0930 and served as the initial incident commander.
35 BC 22 established the incident command post on the pier near the bow of the *Andrew J. Barberi*.
36 Also at 0930, Engine Company (E) 155 searched for and assisted passengers on the Bridge deck
37 of the ferry. At 0931, E153 searched for and tended to passengers on the Saloon deck of the
38 ferry and Ladder Company (L) 077 tended to passengers on the Main and Saloon decks of the
39 ferry. At 0933 the FDNY Division 8 Deputy Fire Chief relieved BC 22 as the incident
40 commander. BC 22 then supervised the response on the Main and Saloon decks of the ferry.
41 Also at 0933, Rescue Squad (RS) 05 began evaluating damage and injuries in the ferry
42 wheelhouse and below decks. At 0940 FDNY Marine Unit (MR) 06 searched the waters around
43 the moored ferry searching for any persons who may have entered the water. At 0957, BC 40
44 supervised and E159 coordinated the triage area they established on the pier, near the *Andrew J.*
45 *Barberi*.
46

1 The FDNY assigned supervisors to the lower decks of the ferry, the upper deck of the ferry, and
2 to the triage area. FDNY personnel (including emergency medical services personnel)
3 administered first-aid, conducted searches for passengers, surveyed the vessel for any damage
4 that could cause the vessel to sink, supervised the disembarkation of those passengers who could
5 move on their own, and then evacuated others needing assistance, including the injured.
6 Backboards were used to move some of the injured off the vessel. The FDNY incident report
7 states that the incident was cleared at 1209. Twenty-three FDNY units responded to the scene of
8 the allision. A table showing the participating FDNY units, their arrival time and their role in the
9 response is included as appendix one.

10
11 From the triage area, two of the 33 of the injured persons were taken to the RUMC by ambulance
12 at 1015. The others were transported to the RUMC by a New York City Metropolitan Transport
13 Authority Bus.

14
15 NYPD harbor units responded to the accident and searched for anyone who may have entered the
16 water. No one had entered the water. Police officers from the 120th precinct interviewed the
17 passengers and crew, searched the decks for any injured and secured the area around the vessel.
18 NYPD Commissioner Raymond Kelly responded to the accident scene.

19 20 **Safety Management System**

21
22 The Staten Island Ferry uses a safety management system. This system includes many
23 procedures for how employees carry out their assignments, how they respond in emergencies,
24 how they receive their training to learn the procedures. The safety management system includes
25 a personnel familiarization procedure that specifies training requirements for new personnel and
26 those promoted or assigned new functions. This procedure includes the use of a checklist known
27 as FORM-17 (F-17). F-17 includes entries covering safety management system training, crowd
28 control training, and training and drills required by the Coast Guard regulations applicable to the
29 *Andrew J. Barberi*.

30
31 The SIF safety management system includes an independent procedure called, “Crowd Control –
32 Crisis Management Response Procedure”. This procedure is also part of other ferry emergency
33 response procedures, such as the fire response and flooding response procedures. This one-page
34 procedure calls for the crew to move passengers away from any danger and for the crew to
35 remain visible, act confidently and provide clear and concise direction and factual information
36 when communicating with passengers. The SIF procedures provide for the crew to administer
37 first aid and to call FDNY emergency medical services personnel for a medical emergency.

38
39 The safety management procedure also included the publication of an annual schedule of ferry
40 drills and exercises on FORM-01. On this form, under a section called “additional notes” was a
41 sentence that read, “All Drills and exercise shall include elements of Emergency Communication
42 (EPM 3.1) and Crowd Control & Crisis management (EPM 3.3).”

43
44 The Emergency Communication Procedure (ECP 3.1) describes how Captains shall inform
45 passengers of an emergency. The Captain indicated that he sounded the ships whistle and the

1 mate on the bridge announced, “Brace, Brace, Brace” over the public address system just prior to
2 the collision.
3

4 The Coast Guard regulations for training and drills, found in 46 CFR 199.180, applicable to
5 personnel onboard the *Andrew J. Barberi* require every crewmember: With emergency duties
6 assigned on the muster list must be familiar with their assigned duties before the voyage begins;
7 must participate in at least one abandon-ship drill and one fire drill every month; and must
8 receive onboard training and instruction in the use of lifesaving and fire-extinguishing
9 appliances.
10

11 **Training and Experience**

12

13 Mate #2 was a 2008 graduate of the US Merchant Marine Academy. She held a third mates
14 license. Prior to her employment with the Staten Island Ferry³, she was the mate (operator) of a
15 harbor tug in the port of Philadelphia, PA working a six hour on/six hours off schedule every
16 other week.
17

18 She began working for the SIF in November of 2009. As a new employee she said she attended
19 a nine-day orientation course, worked as Deck Hand for 2 weeks and had one and a half months
20 of Mate Training. Her work schedule on the ferry at the time of the accident was to work four
21 days and then have three off-days.
22

23 Mate #2 noted that mate trainees are extra crew, and yet were paid mates wages. She listed the
24 regular drills and training she participated in, including allision/collision training and drills;
25 weekly fire & boat drills, steering and anchor drills; monthly security training and crowd control.
26

27 Deckhand #2 is originally from Colombo, Sri Lanka. He had been employed by Staten Island
28 Ferries for seven months. He had been a Dunkin Donut store manager for five stores from 2006-
29 2009 in Manhattan, NY. He had applied and been waiting for three years to be employed by the
30 Staten Island Ferries. Deckhand #2 holds a U.S. merchant mariner document Ordinary
31 Seaman/Wiper/Food Handler rating. He stated that he had served as a ship’s boatswain for 24
32 years in the Sri Lankan merchant marine and in 1973 had completed a six month rating course at
33 the Columbo Nautical College.
34

35 Deckhand #2 said that training he received as a SIF employee included: Crowd control,
36 passenger safety, and completing the Form 17 qualification sheet. He told NTSB investigators
37 that he was “trained for almost everything.” He said that his initial employment interview, for a
38 deckhand position, included high level employees, including the Director of Ferry Operations.
39

40 Deckhand #3 had been with the SIF for 10 years. He told NTSB investigators that he had 15-18
41 years of experience as a deck hand on commercial fishing vessels and charter fishing vessels.
42 He described the weekly and monthly drills he participated in and said that he had attended
43 firefighting and safety courses taught by Global Maritime and Transportation School. He said
44 crowd control training was a regular part of drills and after every drill they held debriefs,
45 discussing what went well/not well during the drill. He said that SIF has a form, Form 17 that

³ New York City Department of Transportation Staten Island Ferry

1 other employees sign off when that employee believes the individual is competent in a skill listed
2 on the Form 17.

3
4 Deckhand #5 had been with the New York City NYC DOT for 15 years; 11 years as a deckhand
5 on the pier, handling lines and four years as a deck hand on ferries. He told NTSB investigators
6 that he was a pier side line handler during at 2003 *Andrew J. Barberi* allision.

7
8 Deckhand #5 served eight years in the Navy as a Third Class Petty Officer Navy Aviation
9 Boatswain’s Mate (Fuels). He stated that he had participated in crowd control drills. He also
10 knowledgeable answered NTSB questions regarding the SIF safety management procedures for
11 an emergency response.

12
13 To comply with the Safety Management System event reporting procedure, the deckhands and
14 other crew members completed FORM-16A, a witness statement for an event such as an
15 accident. One of the questions on the form asked, “In relation to this event, what type of training
16 (including drills) have you participated in?” Each of the deckhands and a restroom attendant
17 listed crowd control and first aid training in their answers.

18
19 SIF senior management told NTSB investigators that at least one member of senior management
20 is required to participate in the interview of all candidates for SIF positions, including for the
21 position of deckhand.

22 23 **Toxicological Testing**

24
25 Shortly after the accident, the *Andrew J. Barberi* crew, were tested for the presence of illegal
26 drugs and alcohol⁴. For all crewmembers, the results were negative for alcohol and the five drugs
27 of abuse that the U.S. Department of Transportation (US DOT) screens in post accident testing
28 (marijuana, cocaine, opiates, amphetamines, and phencyclidine [PCP]).

29 30 **Stair and Ramp Warning Signs**

31
32 NTSB investigators saw many signs posted on bulkheads and on overheads of ramps that read,
33 “Due to ferry movement, you are cautioned to remain off rampways at all times until ferry is
34 safely docked. When using rampways, please use handrails and watch your step. Stairwells
35 were posted with similar signs that replaced the word “rampway” with “stairway”. There are no
36 Coast Guard regulations that address where passengers should wait while a ferry docks in its slip.
37 The NYC DOT safety management system procedure for the disembarkation of passengers
38 addresses passenger restrictions during a ferry docking. During the docking in question, the
39 mates and deckhands said that passengers complied with the restrictions.

40

⁴ Federal regulations at 46 CFR Part 4.06 require post accident drug and alcohol testing on all individuals engaged in or employed on board a vessel who are directly involved in any accident meeting the criteria of a serious marine incident as defined at 46 CFR 4.03-2 On June 20, 2006, new Coast Guard regulations (46 CFR 4.06-3) took effect requiring alcohol testing within 2 hours of a serious marine incident and the collection of drug-test specimens within 32 hours. The five drugs for which tests are conducted are amphetamines, cocaine, marijuana, opiates, and phencyclidine.

1 **Public Address System**

2
3 On May 13, 2010 an NTSB investigator and SIF employees tested the *Andrew J. Barberi* public
4 address (PA) system, while the ferry was dockside at the SIF maintenance facility. The NTSB
5 investigator ran two tests, recording the pre-recorded arrival message and a SIF employee
6 repeating, “testing, testing, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10. The arrival announcement was slightly
7 muffled in certain locations on the vessel. Both announcements were hard to hear near the doors
8 at the end of the vessel and very difficult to hear outside of the closed doors. No engines or
9 machinery were operating on board the *Andrew J. Barberi* during the tests.

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13 Appendix One: FDNY Responding Units