BOARD OF PILOT COMMISSIONERS FOR THE BAYS OF SAN FRANCISCO, SAN PABLO, AND SUISUN

INCIDENT REVIEW COMMITTEE INVESTIGATION REPORT

REPORT OF THE DOCKING OF THE P/V STAR PRINCESS AT SAN FRANCISCO (PIER 27), ON OCTOBER 2, 2019 PILOT: CAPTAIN ORRIN FAVRO

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I. INTRODUCTION

1. On the morning of October 2, 2019, the P/V STAR PRINCESS (hereinafter STAR PRINCESS) was inbound from sea to Pier 27 in San Francisco. Captain Andrew Murray piloted the ship from the offshore pilot station to the city front, where he was relieved by Captain Orrin Favro.[1]

2. Captain Favro completed a pilot-to-pilot exchange with Captain Murray and a master-pilot exchange with Captain Manfuso, the captain of the STAR PRINCESS. During this exchange they discussed the planned approach of bringing the ship abeam of Pier 23, then backing into the berth, docking portside to Pier 27.

3. As the ship approached Alcatraz, Captain Favro had the crew of the ship take lines from two tugboats: the Z FOUR was made fast on the starboard bow and the DELTA CATHRYN was made fast on the starboard quarter.

4. At approximately 0630 hours, the ship was making its approach to Pier 23. When the stern cleared Pier 27, Captain Favro used the stern thruster and DELTA CATHRYN to rotate the ship counter-clockwise, utilizing the ebb current pushing on the starboard bow to assist in the rotation, while backing into the berth.

5. When the ship was perpendicular to Pier 27, and approximately halfway through the turn into the berth, the pilot and master relocated from the centerline of the bridge to the port bridge wing, where they could see the face of Pier 27.

6. During the approach to the berth, the pilot received a VHF radio transmission from the DELTA CATHRYN that was indicating that their stern was 20 feet from the dock. Acknowledging without questioning this call, the bridge team interpreted the call to mean the stern of the STAR PRINCESS was 20 feet from Pier 27.

7. In response to this call from the DELTA CATHRYN, the pilot increased the engines from dead-slow ahead to slow-ahead to slow the sternway towards Pier 27. The Master of the STAR PRINCESS requested distance reports from the ship's crew stationed aft, which resulted in a report of 30 meters off the pier. Based on this report, the pilot continued the counter-clockwise rotation and approach to Pier 27.

[1] The San Francisco Bar Pilots maintain a list of pilots who regularly moor cruise ships. This list is comprised of pilots with more than two years of experience who have observed the mooring of cruise ships in a variety of conditions.

8. The next communication from the DELTA CATHRYN, as heard by the pilot, was the tug operator indicating "we touched". This communication did not alarm the pilot, who believed the tug operator was indicating that the tug had "touched-down"[2] on the side of the ship.

9. The next communication from the DELTA CATHRYN operator was a request for the pilot to provide the tug with more room to work. Captain Favro began thrusting the stern to port. The STAR PRINCESS captain apparently asked his crew aft for the distance off the starboard quarter to Pier 23 and received a response of 20 meters off. As the STAR PRINCESS was now closing on Pier 27, this distance would continue to open.

10. Once alongside Pier 27, the conn was passed from the pilot to the Master of the STAR PRINCESS for the final maneuvering alongside the berth.

11. When the pilot was releasing the tugs, the operator of the DELTA CATHRYN reported that the tug had touched some pilings during the evolution and asked the pilot to call him via cell phone.

12. A subsequent inspection of the underside of Pier 23 indicated damage caused by the DELTA CATHRYN's unintended contact with pilings and under-pier support structure.

13. The Incident Review Committee (IRC) consists of Commission President Dave Connolly (public member), as Chair, and Executive Director Allen Garfinkle. The IRC prepared this report pursuant to California Harbors and Navigation Code Section 1180.3 and Title 7, California Code of Regulations Section 210.

Abbreviations in the report refer to the following:

I. **IRC** – Incident Review Committee
II. **BOPC** – Board of Pilot Commissioners
III. **FOIA** – Freedom of Information Act
IV. **USCG** or **CG** – United States Coast Guard or Coast Guard
V. **VHF –** Very High Frequency

II. FINDINGS OF FACTS

1. Vessel Identification and Description

STAR PRINCESS is a passenger ship registered in Burmuda. It was built by Hyundai Heavy Industries, Co., Ltd. in 2007.

Vessel Particulars:
Length: 950 feet Beam: 118feet
Tonnage: 108,977
Built: 2002, Fincantieri Cantieri Navali Italiani, Monfalcone, Italy
Owner: Princess Cruises, Inc.
Management: Princess Cruises, Inc.

[2] The phrase "touched down" is commonly used to indicate that the tug is pressing against the ship and is prepared to push against the hull.

2. Date of vessel movement

Date and Time: October 2, 2019, approximately 0645 hours
Location: San Francisco, California (SF27)

3.Identification of Pilot

BOPC-licensee: Captain Orrin Favro

4. Weather and Sea Conditions

A. Weather Conditions

The weather conditions in the bay at the time of the transit were as follows:

Wind:	Light airs
Visibility:	good – 10 nautical miles
Weather:	Clear

B. Tidal Information

Calculated tide at 0630 hours, San Francisco, Berth 27, on October 2, 2019:

Controlling depth	35' 00"
Height of tide at 0630	+ 2’ 04" and falling
Depth at 0630	37 04"
Deep Draft	29' 00"
UKC at docking (0630)	08 04"

C. Current Information
Calculated current for the San Francisco Pier 23, at 0630 on October 2, 2019:

- **Approximately 1.4** knot ebb

5. Statement of Captain Favro (Docking Pilot)

a. On the morning of October 2, 2019, I was assigned to pilot the cruise ship STAR PRINCESS from the city front to Pier 27, portside to the pier.

b. I took the conn from San Francisco Bar Pilot Captain Andy Murray shortly after 0600 hours following a pilot to pilot exchange of information. I then completed a Master-Pilot information exchange with the ship's captain. During this information exchange we discussed the planned approach for turning the vessel with a 1.8 knot ebb current. The plan was to bring the ship close abeam Pier 23 and then begin to swing the stern to starboard once it was safely inside the face of Pier 27. The plan further detailed that we would keep the bow of the ship close to Pier 23 until much of the vessel was inside the area between the two piers, which avoids exposing the entire length of the ship to the ebb current. Both the captain of the STAR PRINCESS and I had completed this maneuver several times.

c. As we neared Alcatraz and slowed, we made fast two tugboats. The 50-ton bollard pull Z FOUR was made fast on the starboard bow and the 90-ton bollard pull DELTA CATHRYN was made fast on the starboard quarter. It was decided that the higher horsepower DELTA CATHRYN would be better suited to the quarter, as one of the ship's stern thrusters was inoperable. The DELTA CATHRYN would be used to pull the stern to starboard inside the slips between Piers 27 and 23 and then hold the stern off Pier 27 while the bow was allowed to fall toward Pier 27 with the current.

d. At approximately 0630 hours the ship was nearing Pier 23. My plan was to complete the first part of the turn from the centerline of the vessel. I informed the Captain that we would turn from the centerline of the vessel and once the ship was perpendicular to Pier 27, we would move to the port bridge wing so that we could see the port side of the ship (which would be landing alongside Pier 27).

e. As planned, when the vessel's bridge was close abeam Pier 23 and the stern clear of Pier 27, the stern thruster and DELTA CATHRYN were utilized to rotate the ship counter-clockwise as we began coming astern into the slip. During this maneuver, Pier 23 acts as buffer for the ebb current, which causes the exposed bow to fall off to port. When the ship was perpendicular to Pier 27, the vessel's captain and I relocated to the port bridge wing where we could see Pier 27.

f. While continuing the counter-clockwise rotation with slight sternway I received a report from the DELTA CATHRYN concerning the distance from the stern to the pier. My recollection of the radio call was that the operator of the DELTA CATHRYN said, "Our stern is 20 feet from the dock". My response and the response of the bridge team was to focus on the distance astern to Pier 27, interpreting the call from the tug to be in reference to the ship's stern being 20 feet away from

the pier.[3] In response to this call I continued to move the stern of the ship to starboard, to open up more distance from Pier 27.

g. It is common and expected for tugboats to give distance reports relative to the ship and its surroundings as needed. Because the DELTA CATHRYN was far aft on the starboard quarter, we thought he could see across the ship's stern. If this distance report had said "the stern of the tug" or "from Pier 23", or had raised an alarm I would have been alerted to the tug approaching too close to Pier 23. The DELTA CATHRYN should have reported its developing situation when its stern was 50 feet or so from Pier 23 and closing on it.

h. In response to this radio call from the DELTA CATHRYN, I increased the engines from dead-slow ahead to slow ahead to reduce the sternway towards Pier 27. Upon hearing the radio report from the DELTA CATHRYN, the ship's captain immediately requested distance reports from the ship's crew stationed aft, which reported the closest distance of 30 meters from Pier 27. This distance being acceptable, I continued to come slowly astern (reducing the slow ahead bell back to dead-slow ahead) and rotating counter-clockwise.

i. I received a radio call from the operator of the DELTA CATHRYN, to the effect of "we touched." The operator's tone was quiet and gave no indication of a problem. I took this to mean that the tug had touched the side of the ship.[4]

j. Shortly thereafter the tug operator called on the radio saying, "Hey Orrin, can I have some more room here". I immediately began thrusting the stern to port (toward Pier 27). At the same time, the ship's captain requested more distances from the ship's crew on the stern, to which the response was 20 meters. As the vessel was already moving sideways toward Pier 27, this distance would continue to open.

k. Once we were close alongside Pier 27, the conn was passed to the ship's captain, as previously agreed, to final maneuvering alongside the berth. This is customary due to his familiarity with the ship.

l. Upon releasing the tugs, the operator of the DELTA CATHRYN reported by radio that he had touched some pilings during the evolution and requested that I call him.

m. The ship's captain and staff captain were satisfied with the maneuver and thanked me as I was leaving. Captain Murray and I disembarked around 0730 hours.

6. Statement of the Captain Manfuso

a. I am employed by Princess Cruises as the Captain of the STAR PRINCESS. I have been employed by Princess Cruises since March 1988 and my current contract on the STAR PRINCESS commenced on 29 September 2019.

[3] The pilot added that "In retrospect, with the tug still pulling on a half-away order to let its stern get even this close to Pier 23 without saying anything is unexplainable. It would be expected that we would receive tug position reports much sooner and at a greater distance, considering the rate of approach.

[4] Captain Fravro explained that, based on his experience, the use of touch was generally used in reference to the side of the ship, as in "we touched down". He added that any communication to the effect that "the tug's stern touched Pier 23" would have been a cause for alarm.

b. On October 2, 2019, STAR PRINCESS arrived in San Francisco and embarked the pilot at 0520 hours. Following the Master-Bar Pilot conference, the Bar Pilot took the conn at 0525 hours. After proceeding past the Golden Gate Bridge, the Docking Pilot embarked at 0609 hours. A Master-Docking Pilot conference was then held.

c. The Docking Pilot and I agreed to place the strongest tugboat at the stern and the other at the bow. We further agreed that the Docking Pilot would have the conn during the arrival evolution and have communication with the tugboats. The plan was that the Docking Pilot was to start the swing of the stern to starboard when the starboard bridge wing was abeam of the corner of Pier 23, which is the standard procedure for the arrival during ebb currents. The Docking Pilot took the conn from the Bar Pilot at 0616 hours and continued having the conn until just before the ship was in final position alongside Pier 27.

d. Both tugboats were made fast with tug lines with the DELTA CATHRYN at the starboard quarter and Z FOUR at the starboard bow.

e. Once the aft mooring station confirmed that the stern was clear to swing to starboard, the Docking Pilot stopped the STAR PRINCESS and started the maneuver to swing the stern in the basin with the bow and stern thrusters.

f. While making sternway, the STAR PRINCESS proceeded into the basin. The Docking Pilot, Staff Captain, and I transferred to the port side bridge wing to finish the docking maneuver. During the maneuver, I did not hear any order or communication between the Docking Pilot and the tugs.

g. While the STAR PRINCESS was swinging over to port side bow, I heard the 3rd Officer on the starboard bridge wing twice saying, “closing to the pier,” which was relayed by the conav at the center console. I then reminded the Docking Pilot that the stern was opening from Pier 27 and that the stern thruster was still full to starboard. The Docking Pilot then ordered the stern thruster to stop. Within moments after the Docking Pilot ordered the stern thruster stopped, I heard the tug requesting to stop the stern thruster (although it had already been stopped).

h. The aft mooring station confirmed the distance at the starboard quarter was 20 meters and opening. For the remainder of the docking evolution, I heard no other communication from the tugboats at all.

i. Shortly before arriving alongside Pier 27, the Docking Pilot asked if I was happy to finish the maneuver, and I brought the STAR PRINCESS in position alongside.

j. At no moment during the complete arrival maneuver was I informed by the two pilots or the tugboats that something was wrong.

7. Statement of Captain Murray[5] (Bar Pilot)

a. I boarded the ship at the Offshore Pilot Station at 0519 hours that morning and piloted the vessel into the bay. It was an uneventful transit. We passed beneath the Golden Gate Bridge at 0608 hours. Captain Favro boarded at 0610 hours to complete the job and dock the vessel, as I am not a SFBP passenger ship docking pilot. I did stay to observe the job however.

b. At approximately 0620 hours Captain Favro brought the tugs alongside. The tug Z FOUR was made fast on the starboard bow, and the tug DELTA CATHRYN was made fast to the starboard quarter. The ship was off Pier 39 at the time.

c. At approximately 0640 hours we began our approach to the berth at Pier 27. It was an ebb current maneuver, with the ship landing port side alongside, so Captain Favro aligned the ship's bridge with the end of Pier 23, then began to back in towards the berth while allowing the bow to fall with the current towards the face of Pier 27. I stayed with Captain Favro and the ship's master to hear the commands given. Initially we were at the center conning station, but shortly after starting to back down we shifted to the port bridge wing.

d. As we were conducting the maneuver, Captain Favro had the DELTA CATHRYN pulling away, to take the stern to starboard. At around 0650 hours, when the ship had backed fairly far into the slip but was still at a stern first angle towards the face of Pier 27, the DELTA CATHRYN called and said something to the effect that the stern was getting close to the pier. It sounded to me like he said "Your stern is 50 feet from the pier." At this time Captain Favro put the ship's engines dead slow ahead to prevent the stern from closing with the pier astern. The tug continued to pull.

e. There were no further communications from the DELTA CATHRYN for several minutes, until he radioed to ask that Captain Favro move the ship's stern to port, and indicated that he was out of room. At this time, Captain Favro used the ship's stern thrusters to thrust the stern to port. I then walked over to the starboard bridge wing to see what was going on. The tug was flat alongside the ship's starboard quarter at that point, bow facing forward. There wasn't much space between the tug and the face of Pier 23. It was only at this time the ship's officer stationed on the starboard wing made a comment that we were close to Pier 23.

f. The rest of the job proceeded uneventfully. When near final position, Captain Favro gave the conn to the ships master to complete the landing. First Line was at 0704, and we disembarked at 0733.

g. Captain Favro and I discussed the job as we were leaving the ship. We were both surprised that the tug didn't give more warning of the limited distance astern of him. Normally, when tugs are getting close to danger, they aggressively let you know it, by counting down the distance astern of them until they run out of room. That was not the case on this job. Since there was no way to see the starboard side of the ship from the port bridge wing, the pilot relies on the tug operators or ship's crew to provide warning of anything amiss. Based on my review of the PPU replay, and recollection of the job, the warning in this case came after the tug had already made contact with Pier 23.

[5] As a caveat to his statement, Captain Murray noted the passage of time since the incident and this statement, and based it on his recollection, job replay on his Portable Piloting Unit (PPU), and limited notes.

8. Statement of Captain Tom Stephens

(The statement of Captain Tom Stephens was obtained by subpoena and subject to the confidentiality requirements of Government Code 11183, and therefore omitted from public review.)

9. Estimate of Damages

a. In an e-mail from Michael Nerney, Assistant Director, Maritime Division, Port of San Francisco, he stated that a preliminary report from Port Engineering on the damage to Pier 23 caused by the tug allision of October 2, 2019, showed that in addition to fender pile damage, there are three concrete gravity-bearing piles that were completely destroyed by the incident. The destroyed piles are 18-inch octagonal pre-stressed concrete piles, roughly 150 feet long, installed when the apron was enlarged in 1970. In the opinion of Port Maintenance, replacement of the piles will require a private contractor with a large pile driver.

b. Because three load-bearing piles in a row are now gone, the Port will need to red-tag the area until more analysis determines if load limits are appropriate.

c. At the time of this report, studies were still being conducted and the cost of the repairs had yet to be determined.

10. Names of Witnesses

The written statements of witnesses included are as follows:

Captain Orrin Favro	Pilot of the STAR PRINCESS (confidential)
Captain Andrew Murray	Pilot observing berthing of STAR PRINCESS (confidential)
Captain Mariano Manfuso	Captain of the STAR PRINCESS
Captain Tom Stephens	Captain of the DELTA CATHRYN (confidential)

11. Nature and Extent of Injuries

None.

12. Relevant Records from U.S. Coast Guard

Records obtained from the USCG include a copy of the form CG-2692, Report of Marine Casualty filed by Mr. Fred Ellingson, Director of Operations at Baydelta Maritime, one internal USCG email, and four audio segments of telephone recordings captured by Sector San Francisco's Command Center.

13. Pilot work/rest history

As the assignment to the STAR PRINCESS was Captain Favro's first assignment upon returning to work after a week off, he had ample opportunity for rest prior to boarding the STAR PRINCESS. The following is the 96-hour work-rest record:

9/28 0700-2300 off watch and awake
9/28 2300-0700 9/29 off watch and resting
9/29 0700-2200 off watch and awake

9/29 2200-0630 9/30 off watch and resting
9/30 0630-2230 off watch and awake
9/30 2230-0630 10/1 off watch and resting
10/1 0630-2130 off watch and awake
10/1 2130-0430 10/2 off watch and resting
10/2 0545 On watch at Pier 9, San Francisco

14. Results of chemical testing

Department of Transportation chemical panels and alcohol tests were conducted, as well as Board-mandated toxicology urinalysis post-incident testing, was conducted on Captain Favro with negative results.

15. Pilot Licensee Background Information

a. Captain Favro was first licensed as a pilot on December 13, 2012.

b. Captain Favro has two prior incidents, both in 2017, which were presented and reviewed together in May of 2018. Both incidents were minor in nature, but the Board found that there was misconduct on the part of Captain Favro, in that in both events he failed to notify the Port Agent, in violation of section 219, subdivision (g) of title 7 of the California Code of Regulations. Captain Favro's license was suspended for 60 days, but this suspension would be reduced to 30 days if Captain Favro stipulated to the license suspension, and agreed to attend the next scheduled offering of the Board's Combination Course module on the "Legal Aspects of Piloting". Captain Favro completed all mandated training.

III. ANALYSIS AND CONCLUSIONS BY THE IRC

Jurisdiction

The Legislature has delegated authority to the Board to establish an incident review committee to review all reports of misconduct or navigational incidents involving pilots or other such matters for which a license issued by the board may be revoked or suspended. Harbors and Navigation Code §1181 defines misconduct, in part, as (g) negligently, ignorantly, or willfully running a vessel on shore, or otherwise rendering it liable to damage, or otherwise causing injury to persons or damage to property. Based on the evidence collected, the IRC has ruled out ignorance and willfulness in this instance and limited the discussion to an examination of negligence.

Standard of care

The negligence standard of care calls for an evaluation of whether a pilot exercised that degree of care and skill possessed by "the average pilot." He must exercise the degree of skill commonly possessed by others in the same employment, and although he is not liable for mere errors in judgment, he is liable for damage caused by his failure to exercise the diligence which other pilots similarly situated would ordinarily have exercised. This is a high standard of care one would expect of an expert, such as a maritime pilot.

Analysis

There is no dispute that there was damage to Pier 23 as a result of the DELTA CATHRYN allision. There is also a presumption that "When a moving vessel strikes a stationary object, such as a wharf, an inference of negligence arises, and the burden is then upon the owners of the vessel to rebut the inference of negligence".[6] The law further informs us "The presumption of negligence arising from a vessel's collision with a stationary object operates against all parties participation in the management of the vessel at all times when negligent management was a factor in causing the collision".[7] The principles derived from this case law would guide us to conclude that then the combined flotilla of the STAR PRINCESS, DELTA CATHRYN and Z FOUR struck a stationary object, all parties participating in the docking were negligent. Indeed, most collision law treats a tug and tow as if it were a single vessel, but this does not mean that both the tug and the tow are responsible to third persons for negligence in the navigation of the flotilla.[8]

Further, some admiralty case law in the United States indicates that the vessel in control of the flotilla, the "dominant mind," is responsible for the actions of the flotilla and thus responsible in damages if negligent.[9] This is a rebuttable presumption that can be overcome if there is a showing that another vessel in the flotilla is independently negligent. Where the other vessel is a helper tug and is independently negligent in failing to take action or in taking action when it should not do so, the helper tug is held liable, notwithstanding the fact that it was taking orders from the principal tug acting as the "dominant mind". Gulfpenn—Dover Moran, 1933 AMC 1086 (E.D.N.Y.)

Here the Board is very narrowly charged with deciding whether the licensed pilot involved was negligent. The above discussion of admiralty case law provides a useful framework for organizing the facts of this case. As such, the Board can use the legal framework of dominant mind and independent tug negligence to ascertain three key questions: Was the pilot, as the dominant mind in this scenario, negligent in carrying out his duties? Was the operator of the DELTA CATHRYN[10] negligent, and if so, did that negligence rise to the level that would overcome the presumption of negligence of the pilot?

VHF Communication

A critical element of successful shipwork is clear, professional communication. Good communication is the accurate exchange of information.[11] Communication is one element in bridge resource management. Pilot and tug operator interchange has a twofold purpose in shipwork – one is to acquire information, the other is to initiate and complete tug actions.[12] Although the pilot ultimately maneuvers the ship and directs the tugs, he must acquire accurate information on which he can base shiphandling actions. Much of this information can come from the tug.[13]

As the STAR PRINCESS backed into the slip between Piers 27 and 23, the approach was going as planned by the pilot. When the ship was perpendicular to Pier 27, he and the Master relocated to the port bridge wing. The stern thruster and DELTA CATHRYN were being used to rotate the ship's stern to starboard.

[6] General Petroleum Corp. of California v. City of Los Angeles (Hokenesan Maru), Cal Appp., 109 P.2d 754,756.
[7] Patterson Oil Terminals, nc., v. The Port Covington, D.C.E.Dpa 1952, 109F.Supp 954.
[8] Liverppl etc. Navigation Co. v. Brooklyn Terminal, 251 U.S. 48(1919)
[9] Sturgis v.Boyer, 65 U.s. 110 (1861)
[10] The tug Z FOUR was apparently unused in the maneuver, and not considered as an element in the analysis.
[11] Jeff Slesinger,*Shiphandling With Tugs*, Cornell Maritime Press, 2008, Second Edition, pg.365.
[12] Ibid. pg.365
[13] ibid, pg. 365

While on the port wing, the pilot received a VHF radio transmission from the operator of the DELTA CATHRYN concerning its position. This radio exchange is a key element in the error chain, as it presented the first and best opportunity to change the course of events leading to the damage.

This call, in retrospect, appears to be ambiguous in nature, with the operator of the tug meaning to convey that the DELTA CATHRYN was approaching very near to Pier 23, but the pilot interpreted the call to be one concerning the position of the ship's stern. The tug operator believed he conveyed that the DELTA CATHRYN was 25 feet from Pier 23, which would have been a very clear communication with little ambiguity, but the pilot heard something to the effect of "our stern is 20 feet from the dock," which he interpreted to mean the stern of the STAR PRINCESS was 20 feet from the dock.

While we did not have access to the ship Voyage Data Recorder[14], which may have captured the actual radio conversation, the tug operator intended to convey important information about his position, yet that call did not have the intended result of focusing the pilot's attention on the tug, and the tug operator continued to pull half-away, moving closer to danger.

The pilot, having interpreted the call as referring to the ship's stern, focused his attention on the proximity of the ship to Pier 27. Assuring himself that the stern of the ship was in no danger of contacting Pier 27, he continued with the rotation and did not order the tug to stop pulling half-away. Here there was an attempt by the operator of the DELTA CATHRYN to convey that he was getting close to Pier 23, but since the intended recipient did not get the message as intended, the communication failed.

There was another VHF transmission that the pilot recalled, but was not mentioned by the operator of the DELTA CATHRYN. The pilot recalled that he heard a transmission over the VHF where someone said, "we touched." It does not appear from the evidence that the pilot responded or questioned what was meant by this statement.

The next VHF exchange between the operator of the DELTA CATHRYN and the pilot on the STAR PRINCESS was less vague and devoid of the urgency the situation might suggest. The operator of the DELTA CATHRYN requested more room, which the pilot responded to by thrusting the stern to port with the stern thruster. By all indications, this was after the tug's stern had contacted the pilings.

In the VHF call intended to alert the pilot of the tug proximity to Pier 23, the tug operator thought he identified that it was his stern that was proximate to Pier 23, but the pilot thought it was the ship stern and Pier 27 that he was being alerted to. While there is some dispute as to what words were used in the VHF call, the use of the words "stern" and "dock" were ambiguous without further identifying whose stern and which dock. Ambiguous terms or words with multiple meanings should be avoided.[15]

But just as important as unambiguous communication is the verification of the response.[16] Responses such as "roger" or "affirmative" do not provide the necessary confirmation that the intended party understood the transmission. It appears from the evidence that the pilot acknowledged the call from the tug operator that indicated he was twenty feet from the dock, but most likely with a one-word acknowledgment. If he had repeated the information back to the tug operator, rather than simply

[14] When counsel for the STAR PRINCESS was asked if this evidence was preserved post-incident, he declined to confirm whether it was or not.
[15] ibid, pg. 366
[16] "A key axiom of good communication is that the response is as important as the command", ibid, pg. 368

acknowledging the call, it may have alerted the tug operator that there was a misunderstanding. Indeed, the mere act of repeating a call forces the speaker to examine the content more closely.

Similar comments can be made about the call by the tug operator stating, "we touched." Ambiguous in meaning and apparently made without acknowledgment by the pilot.

There might be various explanations why this series of communications broke down. One of the explanations may be that communication is heavily context dependent.[17] Another is the lack of closed-loop communication.[18] Yet another is social role and power, [19]

A major part of the meaning and understanding constructed from communication exchanges is derived from the shared knowledge and mutual context of the actors involved in the communication. A lot is necessarily left unsaid because: it is part of the shared knowledge and skill, and it is part of the mutual context for all the actors involved.[20] But mutual understanding can easily turn in to mutual misunderstanding. Here there was a mutual misunderstanding about whose stern was 20 feet from which pier. There was a further mutual misunderstanding about what was touched in the communication "we touched". The best defense against false mutual understanding is to have clear and efficient procedures for sharing information, such repeating the full communication, or closed-loop communication.

Closed-loop communication contains three very basic steps: 1. Order or observation is spoken out loud and clear; 2. The receiver of the order or observation repeats the exact message, and, 3. The sender of the message confirms that the repeated message is correct.[21]

Another possible explanation for the break down of communications in this instance is social role and power. As in virtually all professional work, social role and power relations in maritime operations influence the form and meaning of communication exchanges. Social roles defined by the division of labor (such as "Officer on Watch" and "Helmsman") and by regulations superimposed on the activity will influence communication.[22] On board ships, the participants are to some extent unequal, in the sense that the different actors participate with their different competence and from their different assignments on board.[23] The roles of "Pilot" and "Assist Tug Operator" are similarly unequal and influenced by an authority gradient.[24] When the authority gradient is steep (an assertive pilot coupled with less assertive tug operator) the result can be one of limiting communication and concealing knowledge.

Here the pilot and tug operator have set social roles where the pilot issues orders and the tug carries them out. This set of social roles may have been further influenced by prior relationships. The evidence

[17] Grech, Horberry, Koestar, *Human Factors in the Maritime Doman, CRC Press, 2008, pg.77*
[18] Ibid, pg. 78
[19] Ibid, pg. 79
[20] Ibid, pg 78
[21] Ibid, pg.79
[22] Ibid. pg.79
[23] Ibid. pg. 80
[24] The concept of authority gradient is used to describe the relationship between people of different rant and /or authority working together. The authority gradient is said to be low (flat) or high (steep) according to the character of the communication and interaction between two people. The authority gradient is the result of the combination of the authority of the captain/officer and the assertiveness of the mate or crew. The authority of the captain could be high and the assertiveness of the crew low. This would make the authority gradient steep. Ibid. pg. 83

indicates that this pilot and tug operator worked together at the same tug company, often on the same vessel, and possibly in a situation with a similar authority gradient (operator/deck hand).

These obstacles to effective communication are important here because, while the tug operator thought he was clear about the position of his boat and the impending contact, the pilot did not clearly understand the situation developing, as he stated "with the tug still pulling on a half-away order, to let its stern get even this close to Pier 23 without saying anything is unexplainable."[25] He further stated "the DELTA CATHRYN should have reported is (sic) developing situation when its stern was 50 feet or so from Pier 23 and closing on it."[26] [redacted]"[27]

While it is done in hindsight, we suggest that the F.A.C.E. model would have been useful in preventing this incident. F.A.C.E. stands for "find out", "alert", "challenge", and "emergency."[28] We believe some form of this process was at work, albeit abbreviated and insufficient to prevent the outcome.

These four stages can be further defined by the "find out" stage, framed to pass information the other party to the conversation may not be aware of, or where the speaker may learn information the other party has that he does not. We assume that is what the operator of the DELTA CATHRYN was attempting to do with the VHF call concerning the distance of his stern to Pier 23. The "alert" stage is when you have failed to convince the other person that something could be wrong, and he/she continues on their own path. In our scenario, the alert appears to be combined with the "find out" stage in one VHF call. The "challenge" stage is the stage where you actually challenge the other person's actions or thinking. It is at this point that you make a very clear statement referring to what the other person is doing, as by now there is no lingering doubt and you will also need to state the probable consequences of their actions. Finally, there is the 'emergency" stage, where on rare occasions, one is confronted by a very serious situation which will require direct and irrevocable intervention in order to prevent a disaster.[29] This stage might include the tug operator pushing on the stern of the STAR PRINCESS in contravention of the pilot's orders. It appears that in our scenario, there was no challenge or emergency stage employed.

Situational awareness

The evidence collected from this event also leads us to an examination of situational awareness. While our primary focus is the actions of the pilot, because our analysis involves an examination of possible independent negligence of the tug operator, we must discuss his situational awareness as well.

Probably the single most important contributory cause to all poor decisions, collisions and groundings is a loss of situational awareness.[30] Situational awareness comprises five elements: geographical, temporal, system, environmental, and tactical. We will focus primarily on geographical and to a lesser

[25] Pilot statement, pg. 2
[26] Ibid. pg. 2
[27] Statement of Captain Stephens, pg. 2. Statement redacted due the confidentiality requirements of Government Code 11183, and therefore omitted from public review.
[28] Crowch, Timothy, *Navigating the Human Element,* 2013, MLB Publishing, pg.69
[29] Ibid., pg. 69-72
[30] Ibid.,, pg.96

extent, system. Geographical refers to maintaining awareness of our vessel's position in relation to other firmly fixed features, and system refers to our full knowledge of the current status and operations of all critical systems on board, their modes, their functionality and what our status might be at any particular moment.[31]

The evidence presented suggests that both the pilot and the tug operator lost situational awareness to some extent. The pilot, in his focus on the port side of the ship, lost geographical awareness of the stern in relation to the available maneuvering area astern of the ship and system situational awareness of the stern thruster continuing to thrust to starboard as the stern moved south. The tug operator, perhaps in his focus on the bow and this line to the ship, lost geographical awareness of his boat's stern in relation to the structure and proximity of Pier 23.

The strongest evidence that the pilot lost situational awareness is presented by the fact that the contact by the tug occurred, or the concept of res ipsa loquitur.[32] Other evidence is derived from the statement of Captain Manfuso. In that statement he says, "While the STAR PRINCESS was swinging over to port side bow, I heard the 3rd Officer on the starboard bridge wing twice saying "closing to the pier," which was relayed by the conav[33] at the center console. I then reminded the Docking Pilot that the stern was opening from Pier 27 and that the stern thruster was still full to starboard. The Docking Pilot then ordered the stern thruster to stop. Within moments after the Docking Pilot ordered the stern thruster stopped, I heard the stern tug requesting to stop the stern thruster (although it had already been stopped)." In this statement, there is both evidence of loss of geographical situational awareness, as the 3rd Officer was passing information about the proximity to Pier 23 (as he was stationed on the starboard wing) and loss of system situational awareness, as Captain Manfuso had to remind the pilot that he was still thrusting to starboard.

The best evidence that the tug operator also lost geographical situational awareness is the lack of alarm in his communication and the apparent lack of concern for the safety of his own boat. It is possible that his stern got under the Pier while his focus was directed [redacted][34] With the stern of his own boat in peril, it is difficult to comprehend the lack of both more deliberate action[35] or alarming communication, and while it is speculative, one possible explanation is he did not realize the peril. We interpret the apparent lack of concern for the safety of his own boat as possible evidence of loss of situational awareness.

It is possible that what the pilot was experiencing was confirmation bias. Confirmation bias is a tendency to search for or interpret information in a way that confirms our preconceptions or further "confirms" our already created mental model.[36] Confirmation bias is a phenomenon wherein decision-makers have been shown to seek out actively and assign more weight to evidence that confirms their hypothesis and ignore or under-weight evidence that could contradict their current perceptions of events.

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[31] Ibid. pg. 96
[32] Res Ipsa loquitur is Latin for *the thing speaks for itself.*
[33] An officer stationed in the wheelhouse, perhaps a conjungation of conning and navigation..
[34] Statement redacted due to the confidentiality requirements of Government Code 11183, and therefore omitted from public review.
[35] More deliberate action could include pushing on the hull of the STAR PRINCESS rather than just stopping his pull, as we are led to believe this boat has sufficient power to move the stern of the STAR PRINCESS.
[36] Ibid., pg. 107

In this event, the pilot was receiving evidence that the STAR PRINCESS was closing on Pier 23, but he chose to continue to relate that evidence to Pier 27.

Conclusion

Here the Board is very narrowly charged with deciding whether the licensed pilot involved was negligent. While it may be useful to rely on the dominant mind principle as an aid in analyzing the facts, in the end, a finding of misconduct must rely on an application of the standard of care, which is the degree of skill commonly possessed by others in the same employment. In applying that standard of care, we ask if the pilot, as the dominant mind in this scenario, carried out those duties with the care that another pilot, similarly situated would have? In that analysis, we should also ask did the operator of the DELTA CATHRYN[37] operate his tug with the care expected of another similarly skilled tug operator, and if not, was his failure to act with that expected standard of care enough to excuse or overcome the presumption of negligence of the pilot?

As stated previously, when a moving vessel strikes a stationary object an inference of negligence arises, and the burden is then upon the owners of the vessel to rebut the inference of negligence. As the dominant mind in control of the flotilla of the STAR PRINCESS and the tugs Z FOUR and DELTA CATHRYN, it is up to the pilot to rebut the inference of negligence.

We believe the inference of negligence by the pilot is well founded. Here there was both a failure of bridge resource management and a loss of situational awareness on the part of the pilot.

The failure of bridge resource management is primarily the grounded in a lack of effective communication, one element of bridge resource management:[38] To support this inference, we look first to the VHF radio call where the tug operator made an attempt to alert the pilot to his boat's proximity to Pier 23. The pilot, whether due to confirmation bias or some other reason, interpreted this call to be referring to the stern of the STAR PRINCESS, thereby missing an opportunity to prevent this incident. When the pilot's visual inspection of the ship position did not match the information in the call from the tug, we feel he had a duty to inquire of the tug further, a duty to seek clarification. It is not sufficient to cast aside information if it does not comport to your mental model. By not closing the loop on this communication, he overlooked an opportunity to break the error chain.

The loss of "geographical" situational awareness is evidenced by the fact that the pilot was not aware how close to Pier 23 the stern of the ship (and the tug) was, in spite of reports from the 3rd Officer on the starboard bridge wing reporting closing on "the pier", and loss of systems situational awareness evidenced by the ship's captain having to remind the pilot that he was still thrusting to starboard.

Even though we find there is sufficient evidence of negligence on the part of the pilot, we should ask if there is sufficient evidence that the helper tug was independently negligent by failing to take action, such that it overcomes the presumption of negligence by the pilot?

It appears undisputed that the operator of the DELTA CATHRYN called the pilot on the VHF radio and passed information on the proximity of his stern with the dock. The question becomes did he have a duty to alert the pilot to the danger his boat was in, and if so, was his call sufficient to meet that duty?

[37] The tug Z FOUR was apparently unused in the maneuver, and not considered as an element in the analysis.
[38] Grech, Horberry, Koestar, *Human Factors in the Maritime Doman, CRC Press, 2008, pg.148*

"The perspective from the tug can be valuable in quickly conveying key information when an unforeseen problem develops. Conveyance of such information can be essential. The pilot does himself and his charge a service by requesting the tug operator's input. The tug operator does well by offering information but respecting the pilot's authority and responsibility."[39] When the unforeseen involves the safety of his own tug, we find there is a duty to alert the pilot. [redacted][40] If the pilot had closed the loop on the call by repeating verbatim the call, it may have alerted the tug operator that he did not understand the message, and that he needed to increase the alert or even challenge the pilot. Instead he felt that the pilot understood his situation and the communication ceased until contact with the pier was made.

While our evidence of failure to meet his duty to inform the pilot is mostly inferred by an absence of alarm in the VHF calls or lack of them, we also have available expert opinion provided by pilot's counsel in the form of a statement by Captain Russel Wright. While taking into consideration that expert opinion is biased toward the party that hired them, we can rely on his statement, not necessarily for the opinion stated, but for the concept of duty of the tug operator. Here Captain Wright offers that "The tug operator is responsible for being constantly vigilant in tight quarters such as this. This includes gauging the tug's stern approach to Pier 23 and advising the pilot if a problem seems to be developing. It is the tug operator's duty to keep the pilot fully informed of any issues regarding either the ship being assisted or the tug itself.[41] We find that the tug operator did not meet that duty and was independently negligent.

Returning to the framework presented in the opening to the analysis, we have a presumption of negligence when a moving vessel strikes a stationary object. When that moving vessel is a "flotilla" comprised of several vessels, the presumption of negligence arising from a vessel's collision with a stationary object operates against all parties participating in the management of the vessel. Yet the case law indicates that when one vessel is in control of the flotilla, the "dominant mind," in this case the pilot on the STAR PRINCESS, is responsible for the actions of the flotilla and thus responsible in damages if negligent.[42] This is a rebuttable presumption that can be overcome if there is a showing that another vessel in the flotilla is independently negligent.

None of this framework alters the standard of care by which negligence is measured, which remains whether the pilot exercised that degree of care expected of an expert in his profession.

We do find that, based on weighing the evidence, that the pilot was negligent by failing to exercise proper bridge resource management and that he experienced a loss of situational awareness. We also find that the tug operator was independently negligent. We believe that the weight of the evidence of negligence by the tug operator required to overcome the presumption of negligence on the pilot for striking a stationary object would properly be "by a preponderance of the evidence". Here we find that the weight of the evidence of the tug operator's independent negligence is equal to the presumption of negligence on the pilot.

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[39] Jeff Slesinger,*Shiphandling With Tugs*, Cornell Maritime Press, 2008, Second Edition, pg.365

[40] The statement is redacted due to the confidentiality requirements of Government Code 11183, and therefore omitted from public review.

[41] Statement of Captain Russell Wright, attachment to Brief by RMC Law, June 11, 2020

[42] Sturgis v.Boyer, 65 U.s. 110 (1861)

In applying the standard of care, we cannot find with certainty that an average pilot, and expert in his field, would have questioned the information in the call from the tug, that the stern was 20 feet from the dock. Furthermore, while we would expect that the average pilot would maintain situational awareness of both sides of the ship, he cannot do this in a vacuum. We realize that the pilot cannot be everywhere at once, and that he must rely on a reliable network of communication and information with which he can make an accurate assessment. In this incident, the evidence indicates that the critical information from the tug was lacking. For these reasons, we find for no misconduct in this case.

Even though we find for no misconduct, there are multiple lessons to be learned from this event. For the pilot, we cannot over-emphasize the importance of closed loop communication and constantly questioning (or routine confirmation of) our mental model of any given situation. And while our jurisdiction begins and ends with the license of the pilot, some lessons that can be learned by the tug would be insisting on closed loop communication, and a practical application of the F.A.C.E. model, which may insure critical communications get the attention they deserve. We would hope that the lessons learned by this incident can be useful to advance better communications between all parties involved in ship movements.

IV. IRC RECOMMENDATIONS TO THE BOARD

Based on the above analysis and conclusions the IRC recommends:

1. That the Board find for no misconduct on the part of the pilot.

2. That this report serves as a lesson learned.

3. That the case be closed with no further action.

Date: June 25, 2020

_____ _____

Dave Connolly, Chairman Allen Garfinkle, Executive Director

///

List of Enclosures (one page each unless otherwise indicated):

Attachment 1 – Initial Incident Report from the Port Agent dated October 2, 2019.
Attachment 2 – Email correspondence with the Port of San Francisco concerning damage to Pier 23, with photos. (5 pages)
Attachment 3 – Post-event report on damage to Pier 23 from /Simpson Gumpertz & Heger, structural engineers, dated March 20, 2020 (9 pages).
Attachment 4 – Response to FOIA request from USCG. (5 pages)
Attachment 5 – Statement by Master of the STAR PRINCESS. (2 pages)
Attachment 6 – Notice of Post-Incident Drug Test for Captain Favro.
Attachment 7 – Investigative Subpoena for statement of tug operator. (3 pages)
Attachment 8 - Legal brief on behalf of Captain Favro, with expert witness opinion. (6 pages)
Attachment 9 – Pilot statement by Captain Favro, received October 23, 2019 (3 pages) (Confidential)
Attachment 10 – Captain Favro's Work/Rest log.
Attachment 11 – Pilot statement by Captain Murray, dated March 27, 2020. (2 pages) (Confidential)
Attachment 12 – Statement of Captain Stephens, dated May 29, 2020. (2 pages) (Confidential)

Garfinkle, Allen@BOPC

From: Port Agent <portagent@sfbarpilots.com>
Sent: Wednesday, October 2, 2019 4:56 PM
To: janzoon@aol.com
Cc: Garfinkle, Allen@BOPC
Subject: Star Princess

Allen-

While berthing the Star Princess this morning at P-27 the assist tug Delta Cathryn made up on the starboard quarter came in contact/close quarters with the dock face on the P23 side. Pilot was Captain Orrin Favro, vessels agent is Kevin Wong 415 816 4692. ETD is 2115 tonight, next port is MRY.

Captain Joseph Long
President
San Francisco Bar Pilots
1.415.393.0450

Garfinkle, Allen@BOPC

Subject: FW: Port of San Francisco soundings to SF Bar Pilots

From: Nerney, Michael (PRT) <michael.nerney@sfport.com>
Sent: Tuesday, October 8, 2019 6:43 PM
To: Garfinkle, Allen@BOPC <Allen.Garfinkle@BOPC.ca.gov>
Subject: RE: Port of San Francisco soundings to SF Bar Pilots

Hi Allen,

Getting back to you on the Pier 23 allision. The damage to pier pilings is significant and is still being investigated by the parties concerned. I will relay your interest in getting an incident report.

Regards, MN

From: Nerney, Michael (PRT)
Sent: Friday, October 4, 2019 11:18 AM
To: Garfinkle, Allen@BOPC <Allen.Garfinkle@bopc.ca.gov>
Subject: Re: Port of San Francisco soundings to SF Bar Pilots

Hi Allen,

Port Engineering survey of Pier 23 is pending. We will forward results to you as soon as available.

Regards, MN

On Oct 4, 2019, at 11:14 AM, Garfinkle, Allen@BOPC <Allen.Garfinkle@bopc.ca.gov> wrote:

> Oh yeah, I guess I should inquire about the possible damage to Pier 23 (by the Delta Cathryn on 10/2). Have your people had a chance to survey the underpinnings of the pier? If you do have a more formal report on that possible damage, would I please be able to get a copy of the report for our investigation ?
>
> Thanks,
>
> Allen

Allen Garfinkle
Executive Director
Board of Pilot Commissioners for the Bays of San Francisco, San Pablo, and Suisun
660 Davis Street, San Francisco, California 94111
allen.garfinkle@bopc.ca.gov
Phone: 415-397-2253
Fax: 415-397-9463

Garfinkle, Allen@BOPC

From: Nerney, Michael (PRT) <michael.nerney@sfport.com>
Sent: Tuesday, October 22, 2019 5:02 PM
To: Garfinkle, Allen@BOPC
Subject: RE: Port of San Francisco soundings to SF Bar Pilots
Attachments: P23 North Apron 3 broken bearing piles.pdf; P23 North Apron Red-Tag Area 2019-10-02.pdf

Hi Allen,

I apologize for the delayed reply, but Fleet Week got in the way and I was out of town last week on business.

Here is a preliminary report from Port Engineering on the damage to Pier 23 caused by the tug allision on 10/2/2019:

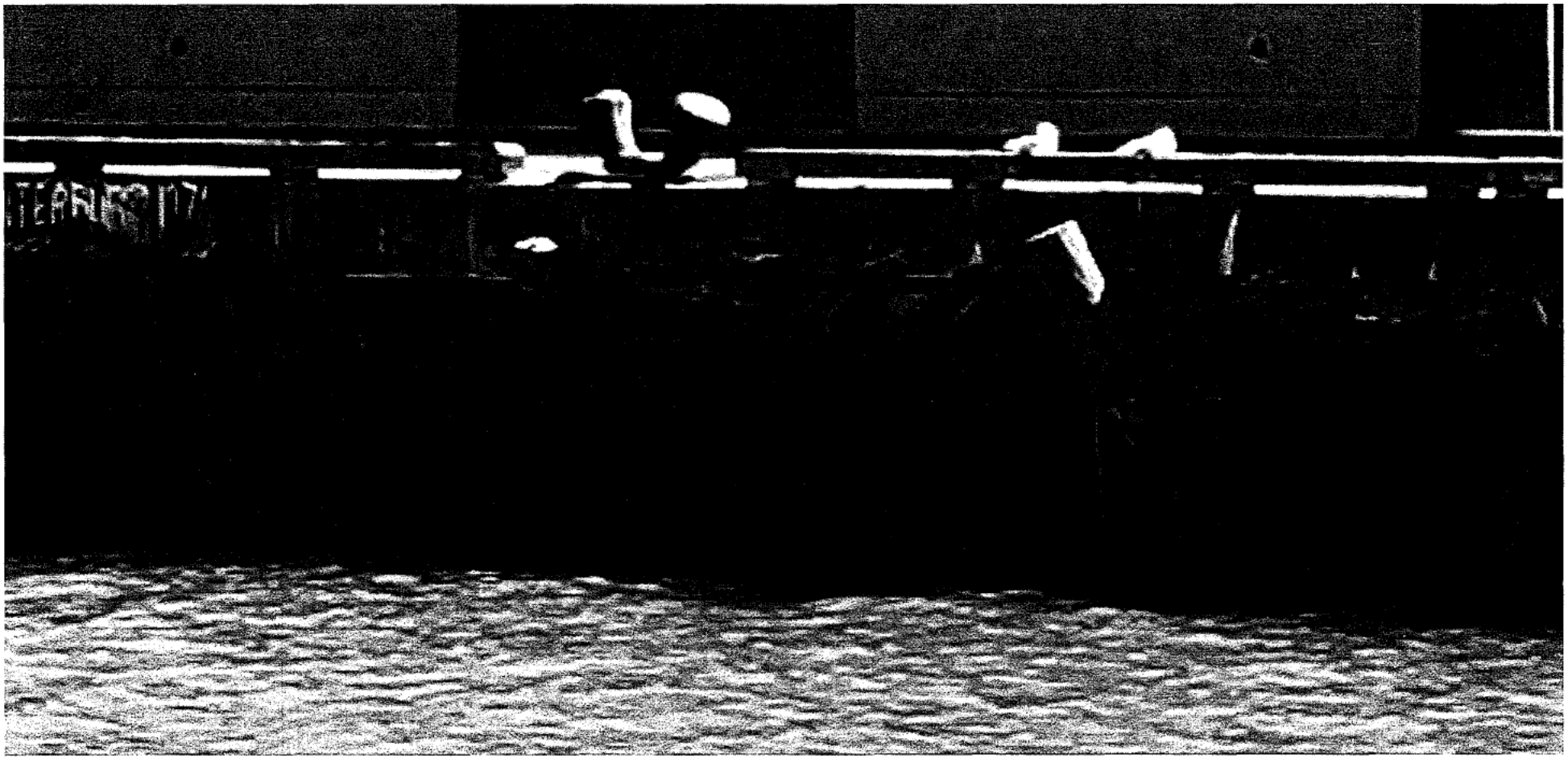
> Port Engineering did a preliminary inspection of Pier 23 North on 10/4/2019. In addition to fender pile damage, there are three concrete gravity-bearing piles that were completely destroyed by the incident. The destroyed piles are 18" octagonal pre-stressed concrete piles, roughly 150 feet long, installed when the apron was enlarged in 1970. In the opinion of Port Maintenance, replacement of these piles will require a private contractor with a large pile-driving barge.
>
> Because three load-bearing piles in a row are now gone, the Port will need to red-tag the area until more analysis determines if load limits are appropriate. Port Maintenance has locked the gate to the Pier 23 North Apron to prevent access. The minimum recommended red-tag area is shown on the attached sketch, and barricades should be installed prior to any re-opening of the apron. The red tagged area leaves a 12' wide path to the outer portion of the apron. Barricades are not required as long as we secure access to the entire apron. There is no evidence that the apron is at risk of collapse, the red tag is a precaution and means to limit overloading over this weakened area.

Subsequent reports to the above by the City Attorney's Office and/or their consultants would be privileged and not available to third parties.

If the Board of Pilot Commissioners has any reports or information on this incident, the Port would appreciate your sharing them with us.

Regards,
Michael Nerney
Assistant Director, Maritime Division
Port of San Francisco
Pier 1, The Embarcadero
San Francisco, CA 94111
415-274-0416
michael.nerney@sfport.com
www.sfport.com

From: Garfinkle, Allen@BOPC <Allen.Garfinkle@BOPC.ca.gov>
Sent: Wednesday, October 9, 2019 10:04 AM
To: Nerney, Michael (PRT) <michael.nerney@sfport.com>
Subject: RE: Port of San Francisco soundings to SF Bar Pilots




1976

SIMPSON GUMPERTZ & HEGER
Engineering of Structures
and Building Enclosures

20 March 2020

Rod K. Iwashita, P.E., F.ASCE
Chief Harbor Engineer
Port of San Francisco
Pier One, The Embarcadero
San Francisco, CA 94111

Project 207504 – Post-Event Structural Reconnaissance of Port of San Francisco Pier 23, San Francisco, CA

Dear Chief Iwashita:

Simpson Gumpertz & Heger Inc. (SGH) and McLaren Engineering Group (McLaren) conducted an above water and underwater inspection of select portions of Port of San Francisco Pier 23 in San Francisco, California, to understand the full condition of the concrete piles and apron structure following a tugboat allision on 2 October 2019. The team was led by Rune Iversen, P.E. from SGH, and the dive operations were led by David Jones, P.E. from McLaren. The team visually examined the above water and underwater portions of the three piles directly impacted by the allision, the nine piles immediately surrounding the impacted piles, and the concrete pier apron soffit on 19 February 2020. The condition of the fender system was not examined as we understood that this system had not been in active use at the time of the allision.

The piles directly impacted in the allision are part of the outer row of piles (Row A) constructed as part of the 1970 expansion of the Pier 23 North Apron. The next row inward (Row B) were the outer edge piles of the original Pier 23, constructed in 1930.

The inspection team observed the following:

- Concrete Apron Piles 14a, 15a, and 16a were severely damaged and are currently without any load carrying capacity. Pile 16a was completely separated from the apron soffit and was not visible. Piles 14a and 15a each failed in shear at the apron and were dangling from the soffit by prestressing strands and swaying with the tide, indicating separation from the underwater portions of the piles.

- The underwater portion of piles 14a, 15a, and 16a are all deflected towards the southwest under the apron.

- The two piles in Row A adjacent to the damaged piles had no signs of damage from the allision and only showed light deterioration leading to a rating of Minor.

- A large portion of the apron soffit cover at Piles 14a and 15a had spalled. Minor corner spalling of the soffit was also observed at these locations.

- None of the piles in Row B appears to have sustained any damage from the allision. However, four out of the seven piles inspected at Row B have deterioration leading to a rating of either Major or Severe. The three other piles inspected in Row B were rated Moderate.

The results from the underwater inspection are presented in the Figure in Attachment A. The condition of individual piles is shown in Photos 1 through 11.

Based on our observations, we conclude the following:

- The structural capacity of the apron between Bents 13a and 17a has been significantly reduced by the loss of the three piles, and, when combined with the heavily deteriorated condition of the piles in Row B, this loss may be a potential life-safety hazard if the apron is loaded by pedestrians, heavy equipment, or emergency vehicles. SGH recommends that this area remain barricaded from access (public, Port, and emergency response) to minimize the risk of overload and further damage to the apron until repairs can be made.

- The remaining components of the fender system are not sufficiently supported in their current state and the remnants in the damage zone are a potential falling hazard. SGH recommends the damaged fender system components be removed to eliminate the hazard and risk to the general public.

- A repair strategy for the damaged area should be developed to ensure that the structural integrity of the damaged area is restored.

If you have any further questions regarding the contents of this letter, please feel free to contact the undersigned.

Sincerely yours,

3/20/2020

Rune Iversen, P.E.
Staff Consultant
CA License No. 76300
I:\OAK\Projects\2020\207504.00-TP23\WP\001RIversen-L-207504.00.els_POSF Pier 23 Inspection.docx

Encls.

Photo 1

Broken Pile 14a

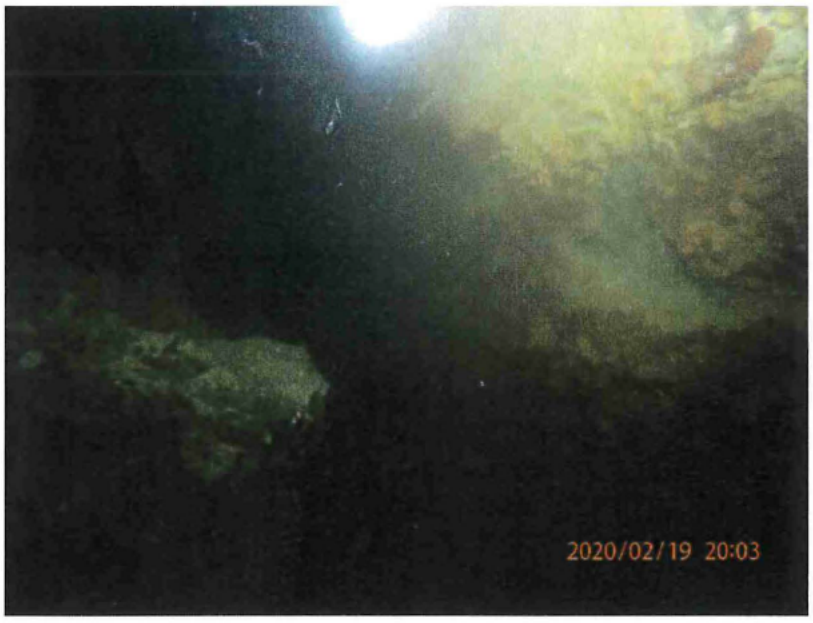


Photo 2

Broken Pile 14a
underwater

Photo 3

Broken Pile 14a
underwater

Photo 4

Broken Pile 15a

Photo 5

Broken Pile 15a
underwater

Photo 6

Broken Pile 16a

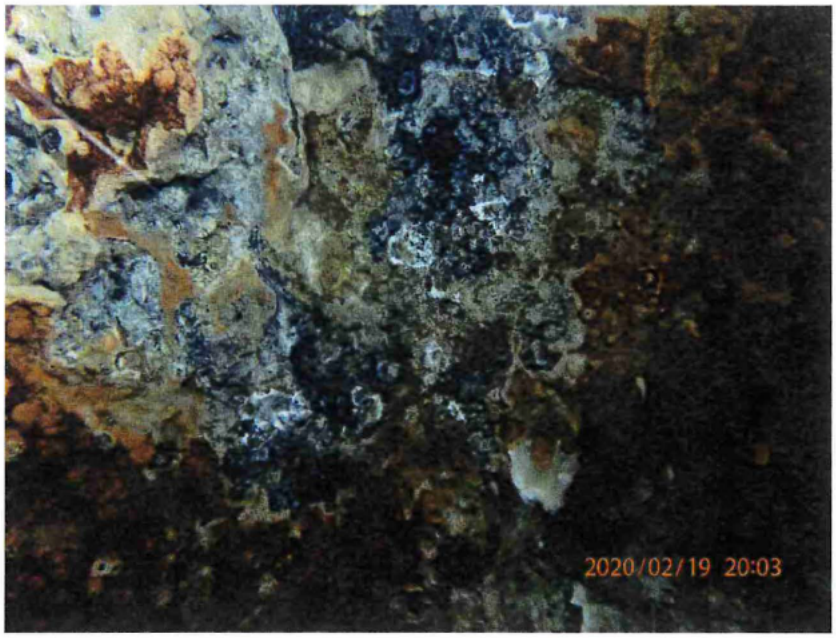


Photo 7

Erosion of pile chamfer at Pile 18B – Pile rated Major

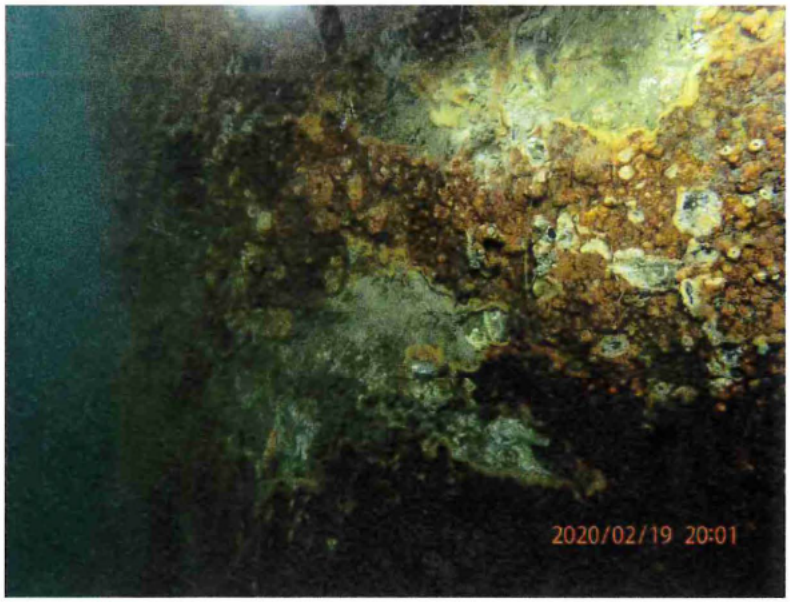


Photo 8

Moderate condition of Pile 21B

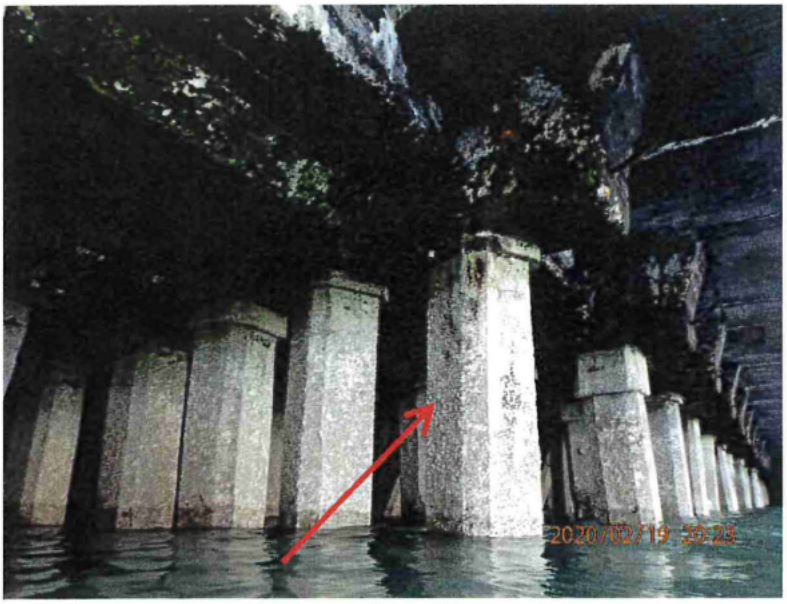


Photo 9

Pile 21B above water

Photo 10

Severe condition of Pile 22B with exposed reinforcing

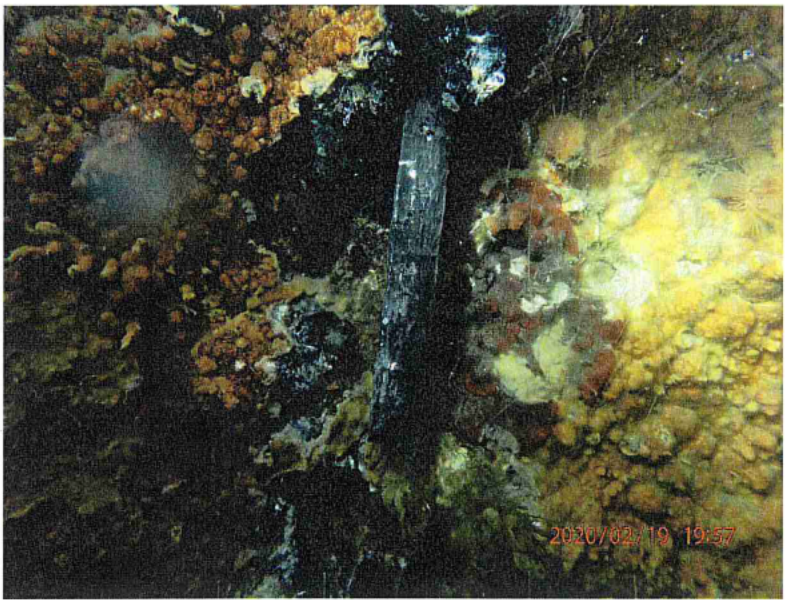


Photo 11

Severe condition of Pile 23B with exposed reinforcing

Project: PoSF Pier 23 Post-Impact Underwater Inspection

Document: Field Inspection Notes

Time & Date: 1350 - 1835, 2/19/2020

Team: D. Jones PE, S. Wigsten EIT, D. Post

Minor Condition - **13a** - Light eff. in deck above pile, No apparent impact-induced defects; No change in marine growth to ML; Intact chamfers on pile; Black coating on pile;

WL to ML 23' & Deck to WL 12.4' at 1745 2/19/20

Severe Condition - **14a** - Large section of concrete pulled out of deck above pile with exposed reinforcement; ~6' segment of prestressed pile hanging from deck by prestressing strands; Bottom segment of piles deflected to the SW, resting on mudline; Top of deflected pile segment located ~4' below MLW positioned ~6" East of pile 9C

UW Photo Location - Top of pile adjacent to 9C

Severe Condition - **15a** - Large section of concrete pulled out of deck above pile with exposed reinforcement; ~3' segment of prestressed pile hanging from deck by prestressing strands; Bottom segment of pile sheared below ML, sheared segment embedded into mudline and positioned approximately 6 inches from the SW corner of pile 12B at the mudline.

UW Photo Location - Pile in mud, soil surrounding it

Severe Condition - **16a** - Large section of concrete pulled out of deck above pile with exposed reinforcement; Pile detached from deck with a shear failure and hanging from strands ~3' above MLW; Bottom segment of pile still embedded into the mudline; condition of bottom segment unknown due to unsafe conditions, i.e. hanging concrete pile; potential for fractures at or near mudline to be investigated following removal of hanging debris

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

General Notes:

A-Row piles are hexagonal pre-stressed concrete piles with ~7" faces

B-Row to E-Row piles are square piles with 6" chamfers; No prestressing observed, potentially precast reinforced concrete piles. Up to 24" of scour at mudline, i.e. no marine growth on concrete element. Potentially caused by thrusters during impact event.

Severe spalling in underdeck with exposed reinforcement (Typ.)

Edge of Deck

14a Pile Debris Location/ Orientation

15a Pile Debris Location/ Orientation

16a Pile Debris Location/ Orientation

a B C D E F G H J

Advanced Condition - **18B** - Light efflorescence in deck and cap above pile (Typ.); No apparent impact-induced defects; No observed change in marine growth to ML; Heavy erosion and up to 3/8" cracking at chamfers in tidal zone, 24" height, on offshore faces - UW Photo Location - Erosion of chamfers

Moderate Condition - **19B** - At top of pile, 6" tall encasement repair with 2-3" annulus; Light to moderate cracking with corrosion staining in encasement repair; Moderate pile chamfer erosion obscured by heavy marine growth (Typ.)

Moderate Condition - **20B** - Top of pile 18" tall encasement repair with 2-3" annulus; Light cracking on S face of encasement repair; Light chamfer erosion 8' below MLW, not impact related, marine growth present over defect, marine growth stops at 12' below MLW

Moderate Condition - **21B** - Top of pile, 6" tall encasement repair with 2-3" annulus; Failed repair on S face; Moderate chamfer erosion 8' below MLW, not impact related, marine growth present over defect;

WL to ML at 10' at 1631 2/19/20

UW Photo Location - Marine growth over erosion at chamfers and failed encasement at top of pile.

Severe Condition - **22B** - Top of pile 12" tall encasement 2-3" annulus; NW face 2' below WL, 2' height, heavy spall/erosion with exposed reinforcement, not likely impact related; Light chamfer erosion 1' below MLW on NW face, varying levels of light to moderate erosion down to 12' below MLW, not impact related, marine growth present over defects

UW Photo Location - Exposed steel reinforcement at spall location

Severe Condition - **23B** - Top of pile 6" tall encasement 2-3" annulus; SW face 2' below WL, 2' height, heavy spall/erosion with exposed reinforcement, not impact related; Light chamfer erosion 1' below MLW, varying levels of light to moderate erosion down to 12' below MLW, not impact related, marine growth present over defects

UW Photo Location - Exposed steel reinforcement at spall location

Advanced Condition - **24B** - E face closed spall 3' below WL, 1' height, no exposed reinforcement observed, not impact related; Light chamfer erosion 1' below MLW, varying levels of light to moderate erosion down to 12' below MLW, not impact related, marine growth present over observed defects

Minor Condition - **17a** - Light efflorescence in deck above pile. No significant deterioration mechanisms observed. No observed sections of impact or abrasion.

McLaren ENGINEERING GROUP

ATTACHMENT 4

U.S. Department of Homeland Security

United States Coast Guard

Commander
United States Coast Guard
Sector San Francisco

1 Yerba Buena Road
San Francisco, CA 94130
Phone: (415) 399-2046
Fax: (415) 399-2047

5720
FOIA 2020-CGFO-00614
April 16, 2020

VIA ELECTRONIC MAIL
allen.garfinkle@bopc.ca.gov

Allen Garfinkle
Executive Director
Board of Pilot Commissioners for the Bays of San Francisco, San Pablo and Suisun
660 Davis Street
San Francisco, CA 94111-1904

Dear Mr. Garfinkle:

This is the response to your October 4, 2019 request to the U.S. Coast Guard (USCG) under the Freedom of Information Act (FOIA) for all records regarding an incident involving the M/V STAR PRINCESS and the TUG DELTA CATHRYN, which made contact with Pier 23, San Francisco, California, on October 2, 2019.

USCG Headquarters' FOIA/Privacy Act Office (CG-6P) assigned FOIA Number 2020-CGFO-00614 to your request, and instructed me to process your request with a response directly to you.

I am granting your request under the FOIA, Title 5 United States Code, Section 552, as amended, and U.S. Department of Homeland Security's (DHS) implementing regulations, Title 6 Code of Federal Regulations (CFR), Chapter I and Part 5.

After conducting a reasonable search, I have determined that all information gathered on the subject incident is electronically filed under Case #1196057. The Case consists of individual Activities generated by the Coast Guard unit(s) involved with the notification and incident investigation. The electronic file records are located in the Marine Information for Safety and Law Enforcement (MISLE) database.

Reports of Marine Casualty Investigations are normally released after final agency action. Release prior to final agency action is limited to factual materials that do not indicate the course of the investigation. You agreed to modified your request to include only factual materials during our telephone conversation on April 14, 2020. As such, I have identified and collected the following factual materials related to the subject incident.

1. Report of Marine Casualty, Form CG-2692, regarding the DELTA CATHRYN and dated October 4, 2019; 3 pages.
2. Email with subject "SEC SF - TUG DELTA CATHRYN ALLISION - SF PIER 23" and dated October 2, 2019; 1 page.
3. Telephone recordings captured by Sector San Francisco's Command Center; 4 audio segments, Wave Sound files; 7.82 MB total file size.

I have reviewed the records for identifying any information exempt from public disclosure, including any personally identifiable information protected under the Privacy Act of 1974. During our telephone conversation on April 14, 2020, you also agreed to allow me to redact and make unreadable or unobtainable any information exempt from public disclosure including any personally identifiable information in the record. Therefore, I am releasing the record with redactions made as appropriate under the personal privacy exemption (5 United States Code, Section 552(b)(6)).

In accordance with Title 49 CFR, Part 7 and Coast Guard policy, I have assessed the fee for processing your request at less than $14.00, and it is waived.

In my effort to provide you with the best customer service possible, I am informing you of Incident Investigation Activity #6835720 (an Activity in Case #1196057) and the link to the USCG Maritime Information Exchange (CGMIX) database at https://cgmix.uscg.mil/ where you can find completed incident investigations.

The CGMIX database is updated when incident investigations are completed. CGMIX provides you with information regarding maritime incidents investigated by the USCG under Part D of Title 46 of the U.S. Code. These published reports are limited to reportable marine casualties (as defined in Section 4.05 of Title 46 of the Code of Federal Regulations) that were closed after October 2002.

This completes the U.S. Coast Guard response to you, and I trust that this information fully satisfies your request. If you need any further assistance or would like to discuss any aspect of your request, please contact me at the address or telephone number above in the letterhead. You may also contact our FOIA Public Liaison by sending an e-mail to EFOIA@uscg.mil or calling (202) 475-3522.

For additional information on the Freedom of Information Act, see the DHS's FOIA webpage at https://www.dhs.gov/freedom-information-act-foia.

Sincerely,

Kevin Fong

KEVIN FONG
Freedom of Information Act Coordinator
U.S. Coast Guard
By direction

Enclosures

Copy: Commandant (CG-611)
Unit FOIA file

DEPARTMENT OF HOMELAND SECURITY
U.S. Coast Guard

OMB No: 1625-0001
Exp. Date: 07/31/2022

REPORT of MARINE CASUALTY, COMMERCIAL DIVING CASUALTY, or OCS-RELATED CASUALTY

Section I - Reporting Vessel/Facility Information

1. Vessel or Facility Name	2. Vessel Official Number or IMO Number	3. Vessel Flag
Delta Cathryn	1218586	US
4. Vessel Length ☒ Feet ☐ Meters: 93	**5. Vessel Gross Tons**: 194	**6. Vessel Propulsion Type**: Mechanical
7. Vessel or Facility Type: Tug	**8. Vessel or Facility Service or Occupation**: Ship Assist	

9. FOR TOWING ONLY

- 9a. Arrangement: ☐ Pushing Ahead ☐ Towing Astern ☐ Towing Alongside
- 9b. Number of Vessels Towed: Empty _____ Loaded _____ Total _____
- 9c. Maximum Size of Tow/Tow-Boat(s): Length _____ feet Width _____ feet
- 9d. Did one or more of the barges in the tow cause or sustain damage in the marine casualty? ☐ Yes ☐ No (*If Yes complete and attach one or more CG-2692A forms to this report*)

Section II - Reason for Submitting this Report *(Check all that apply)*

10. The above vessel was involved in a Marine Casualty consisting in (*46 CFR 4.05-1 and 4.05-10*):
- ☐ 1. Unintended grounding or an unintended strike of (allision with) a bridge
- ☐ 2. Intended grounding or intended strike of a bridge that created a hazard to navigation, the environment or the safety of the vessel, or that meets any of the criteria in 3 through 8 below
- ☐ 3. Loss of main propulsion, primary steering, or any associated component or control system that reduces the maneuverability of the vessel
- ☐ 4. Occurrence materially and adversely affected the vessel's seaworthiness or fitness for service or route
- ☐ 5. Loss of life
- ☐ 6. Injury hat requires professional medical treatment (treatment beyond first aid) and, if the person is engaged or employed on board a vessel in commercial service, hat renders the individual unfit to perform his or her routine duties
- ☒ 7. Occurrence causing property damage in excess of $75,000
- ☐ 8. Occurrence involving significant harm to the environment

11. The above facility or vessel was involved in a Commercial Diving Casualty involving (*46 CFR 197.484*):
- ☐ 1. Loss of life
- ☐ 2. Diving-related injury to any person causing incapacitation for more than 72 hours
- ☐ 3. Diving-related injury to any person requiring hospitalization for more than 24 hours

12. The above facility or vessel was involved in an OCS Facility Casualty Resulting in (*33 CFR 146.30 and 146.35*):
- ☐ 1. Death
- ☐ 2. Injury to 5 or more persons in a single incident
- ☐ 3. Injury causing any person to be incapacitated for more than 72 hours
- ☐ 4. OCS Facility only - Damage affecting the usefulness of primary lifesaving or firefighting equipment
- ☐ 5. OCS Facility only - Damage to the facility exceeding $25,000 resulting from a collision by a vessel with the facility
- ☐ 6. OCS Facility only - Damage to a floating OCS facility exceeding $25,000

Section III - Associated Parties Information *(Fill all fields that apply)*

13. Name of Owner	Telephone	14. Name of Operator or Manager	Telephone
Baydelta Navigation LTD	415-407-4221	Baydelta Maritime LLC	415-407-4221
Address: Pier 17, Suite 300 San Francisco 94111	Email address: fred@baydeltamaritime.com	Address: Pier 17, Suite 300 San Francisco 94111	Email address: fred@baydeltamaritime.com
15. Name of Master or Person-In-Charge *(Last, First, Middle)*: (b) (6) [redacted]	Telephone: 415-407-4221	16. Name of Agent *(Last, First, Middle)*	Telephone
Address: (b) (6) [redacted]	Email address: fred@baydeltamaritime.com	Address	Email address
17. Name of Dive Supervisor *(Last, First, Middle)*	Telephone	18. Name of Pilot *(Last, First, Middle)*	Telephone
Address	Email address	Address	Email address

Section IV - Casualty Information

19. Date/Time *(local)* of Occurrence	20. Location-Name of Body of Water or Waterway: Latitude: 37 48.2N Longitude: 122 24W OR River Mile Marker:
October 2, 2019/0645	San Francisco Bay Pier 23
21. Property Damage Estimated Damage Cost(s) to: Vessel: $1,000 Cargo: $0.00 Facility: $75,000 Other: $0.00	**Descr be the Extent of Property Damage**: Minor cosmetic damage to tug Delta Cathryn and cruise ship Star Princess. Timber, concrete and fender damage to Pier 23

22. Status of Involved Persons (*If there are 1 or more injured, dead or missing persons complete and attach one or more CG-2692C forms to this Report*)

Total Number of Persons: On Board the Vessel: 4 Injured: 0 Dead: 0 Missing: 0

Section IV - Casualty Information *(continued)*

23. Was This Casualty a Serious Marine Incident (SMI) as Defined in 46 CFR 4.03-2?

☐ Yes ☒ No ☐ Not at this Time, But is Likely to Become an SMI *(If Yes or Is Likely to Become an SMI complete/attach one or more CG-2692B forms to this report)*

24a. Is there any evidence of alcohol or drug use by or intoxication of individuals directly involved in the casualty?

☐ Yes ☒ No *(If Yes, identify those individuals for whom evidence has been obtained and specify the method to obtain such evidence in block 24c)*

24b. Did any individual directly involved in a casualty refuse to submit to, or cooperate in, the administration of a timely chemical test, when directed by a law enforcement officer or by the marine employer?

☐ Yes ☒ No *(If Yes, note the individual(s) who refused in block 24c)*

24c. Individuals with evidence of drug or alcohol use, evidence of intoxication, or who refused to submit/cooperate in a timely chemical test *(if more space is needed, continue in block 25c)*

24d. Is there evidence that alcohol use contributed to this casualty?

☐ Yes ☒ No *(If Yes, discuss in block 25b)*

25. Nature and Circumstance of the Casualty:

25a. Activity or Operation Being Conducted at the Time of the Casualty:

Delta Cathyrn assisting Star Princess into Pier 27.

25b. Description of the Casualty (casualty events and the conditions and actions that were believed to be causal factors as well as any hazards created as a result of the casualty. Attach additional sheets if necessary.):

While assisting the passenger vessel Star Princess into San Francisco pier 27 the stern and starboard quarter of our tug made contact with the adjacent pier 23.

25c. Any o her comments, including with respect to use of or need for emergency response equipment:

Section V - Person Making this Report

24. Name *(PRINT) (Last, First, Middle)*	25. Signature:	26. Date
[redacted]	[redacted]	10/04/2019
27. Title Director of Operations	28. Address Pier 17, Suite 300 San Francisco, CA. 94111	
29. Telephone No. 415-407-4221	30. Email fred@baydeltamaritime.com	

From:	Sector San Francisco Command Center
To:	D11-DG-SectorSF-Investigations; D11-DG-SectorSF-Domestics
Cc:	Sector San Francisco Command Center
Subject:	SEC SF - TUG DELTA CATHRYN ALLISION - SF PIER 23
Date:	Wednesday, October 2, 2019 12:31:58 PM

ALCON,

Situation: At 1200 local on 02 October 2019, Sector San Francisco Command Center (SCCSF) received a notification from (b) (6) ((b) (6)) detailing an allision that occurred between the TUG DELTA CATHRYN (1218586) and SF Pier 23 while assisting the CRUISE SHIP STAR PRINCESS with mooring at SF Pier 27. The RP stated that there was some light damage to the pier and a few scratched that were visible on the DELTA CATHRYN.

Reporting Party:
(b) (6)
(b) (6)

Master:
(b) (6)
(b) (6)

Future Actions: IO will contact vessel in regards to dollar estimates for damage. DMI will contact vessel to determine level of marine casualty.

SCC SF briefed IO ((b) (6)), DMI (b) (6)) CASE PENDS.

MISLE Notification: 923604

(b) (6)
Coast Guard Sector San Francisco
Command Center
1 Yerba Buena Rd.
San Francisco CA, 94130
Call: 415-399-7300
Email: SFOSCC@USCG.Mil

ATTACHMENT 5

STATEMENT OF WITNESS

Statement of Mr. (Title) Mariano (Forename) MANFUSO (Surname) Cabin No. 12101

Date of Birth 15-May-56 (dd-mmm-yy) Age 63 Designation Crew (Passenger/Crew/Other) Ship STAR Princess

(If Crew) Employee Number 005362 Occupation Captain

This statement, consisting of 2 pages (each signed by me), is true to the best of my knowledge and belief.

Dated the 24th day of October, 20 19 Signed _____

I am the above named person and am employed by Princess Cruises as the Captain of the Star Princess. I have been employed by Princess Cruises since March 1988 and my current contract on the Star Princess commenced on the 29th September 2019.

On October 2, 2019, Star Princess arrived in San Francisco at the pilot station, embarked the Bar Pilot at 0520 hrs. After the Bar Pilot/Master conference, the Bar Pilot took the conn at 0525 hrs. The Star Princess then proceeded towards the Golden Gate Bridge. After passing the Golden Gate Bridge the Docking Pilot embarked at 0609 hrs. The Docking Pilot/Master conference was then held.

The Docking Pilot and I agreed to place the strongest tugboat at the stern and the other at the bow. We further agreed the Docking Pilot would have the conn during the arrival evolution and have the communication with the tugboats. We further agreed that the Docking Pilot was to start the swing of the stern to starboard when the starboard bridge wing was abeam of the corner of Pier 23, which is the standard procedure for the arrival during ebbing currents. The Docking Pilot took the conn from the Bar Pilot at 0616 hrs and continued having the conn until just before the ship was in final position alongside Pier 27.

Both tugboats were made fast with tug lines with "Delta Cathryn" at the starboard quarter and the "Z-4" at the starboard shoulder.

Once the aft mooring station confirmed that the stern was clear to swing to starboard, the Docking Pilot stopped the Star Princess and started the maneuver to swing the stern into the basin with the bow and stern thrusters.

While making sternway, the Star Princess proceeded into the basin. The Docking Pilot, Staff Captain and I, transferred to the port side bridge wing to finish the docking maneuver. During the maneuver, I did not hear any order or communication between the Docking Pilot and the tugs.

Signed _____ Signature Witnessed By (Sign) _____

Signature Witnessed By (Print) M Wicks - SECO

STATEMENT OF WITNESS
Continuation

Name Mariano MANFUSO Signed _____ Page 2 of 2

While the Star Princess was swinging over to port side bow, I heard the 3rd Officer on the starboard bridge wing twice saying "closing to the pier," which was relayed by the conav at the center console. I then reminded the Docking Pilot that the stern was opening from Pier 27 and that the stern thruster was still full to starboard. The Docking Pilot then ordered the stern thruster to stop. Within moments after the Docking Pilot ordered the stern thruster stopped, I heard the stern tug requesting to stop the stern thruster (although it had already been stopped).

The aft mooring station confirmed the distance at the starboard quarter was 20 meters and opening. For the remainder of the docking evolution, I heard no other communication from the tugboats at all.
Shortly before arriving alongside Pier 27, the Docking Pilot asked if I was happy to finish the maneuver, and I brought the Star Princess in position alongside.

At no moment during the complete arrival maneuver was I informed by the two pilots or the tugboats that something was wrong.

Signed _____ Signature Witnessed By (Sign) _____

NOTICE OF POST-INCIDENT DRUG TEST

BOPC Use Only

RECEIVED
NOV 01 2019
BY: AG

BOARD OF PILOT COMMISSIONERS FOR THE BAYS OF SAN FRANCISCO, SAN PABLO, AND SUISUN (BOPC)

To: Board-Appointed Physicians:

The BOPC has been notified that Captain ORRIN FAVRO ☒ Pilot ☐ Trainee underwent a post-incident drug and alcohol test on or about 10/2/2019 (Date).

The BOPC has directed that the following test information be forwarded to UCSF for review and response:

- The toxicological test.
- The MRO Report – Federal Controlled Substance Testing Results from the San Francisco Bar Pilots.
- U.S. Department of Transportation (DOT) Alcohol Testing Form test results from the San Francisco Bar Pilots.

Submitted by:

ROMA CRISTIA-PLANT	R. Cristia-Plant	10/9/2019
BOPC Staff Name	Signature	Date Sent to UCSF

cc: Port Agent

To: BOPC Executive Director:

☑ I have reviewed the above-mentioned test results. All results are negative.

☐ I have reviewed the above-mentioned test results, and one or more results are positive for one or more drugs referenced in Title 7, California Code of Regulations, §217.15(e).

☐ The Executive Director is requested to refer the pilot or trainee to the Medical Review Officer pursuant to Title 7, California Code of Regulations, §217.30.

Submitted by:

ROBERT KOSNIK		10/31/2019
Physician Name	Signature	Date

☐ Examining Physician
☐ Medical Review Officer

BEFORE THE
BOARD OF PILOT COMMISSIONERS
FOR THE BAYS OF SAN FRANCISCO, SAN PABLO, AND SUISUN
STATE OF CALIFORNIA

In the Matter of the Board of Pilot Commissioners Incident Review Committee Report On: **The Docking of the P/V STAR PRINCESS at San Francisco (Pier 27) on October 2, 2019.**	**INVESTIGATIVE SUBPOENA**

TO CAPTAIN TOM STEPHENS:

Pursuant to the authority conferred upon the Executive Director of the Board of Pilot Commissioners by Government Code sections 11181 through 11191 and Harbor and Navigations Code sections 1156 and 1180.3:

YOU ARE HEREBY ORDERED to appear before the Executive Director of the Board of Pilot Commissioners on **Wednesday, May 27, 2020, at 9:00 a.m.**, to testify and answer questions propounded to you in connection with the above-titled investigation. Due to the City and County of San Francisco's shelter-in-place order, you shall make this appearance by telephoning the Executive Director at (415) 397-2253.

Your appearance is not mandatory provided that the document requested below is received on or before May 27, 2020, via United States Postal Service Certified Mail, addressed to Allen Garfinkle, Executive Director, Board of Pilot Commissioners, 660 Davis Street, San Francisco, CA, 94111:

- A narrative statement of the events that transpired on October 2, 2019, while you operated the tug DELTA CATHRYN during the mooring of the cruise ship STAR PRINCESS, and during which the DELTA CATHRYN made unintended contact with the structure of Pier 23, Port of San Francisco. The statement must include descriptions of your communications with the DELTA CATHRYN crew, the STAR PRINCESS crew, and the pilot conning the STAR PRINCESS (Orrin Favro). If you have a prior relationship with Captain Orrin Favro, the statement must disclose the length and nature of that relationship. The statement must be certified with the following declaration, followed by the date and your signature: "I certify under penalty of perjury under the laws of the State of California that the foregoing is true and correct."

For failure to comply with the commands of this subpoena, you will be liable to the proceedings and penalties provided by law.

Given under my hand this 13th day of May, 2020.

ALLEN GARFINKLE
Executive Director
Board of Pilot Commissioners for the Bays of San Francisco, San Pablo, and Suisun

Board of Pilot Commissioners for the Bays of San Francisco, San Pablo, and Suisun
660 Davis Street., San Francisco, CA 94111
Phone: (415) 397-2253 Fax: (415) 397-9463
E-mail: allen.garfinkle@bopc.ca.gov
www.bopc.ca.gov

PROOF OF SERVICE

On May 13, 2020, I served the attached Subpoena by placing a true copy thereof in a sealed envelope addressed as follows: Chris Tribolet, Cox, Wootton, Lerner, Griffin & Hansen LLP,900 Front Street, San Francisco, CA 94111; Certified Mail 7019 0700 0002 1428 4074). I then deposited the sealed envelope as certified mail with the United States Postal Service, with the postage fully prepaid. I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Signed:

May 13, 2020, Allen Garfinkle

RMC LAW

2213 Monticello Road, Napa, CA 94558

(415) 730-3439

rclack@rmc-law.us

June 11, 2020

VIA EMAIL ONLY
allen.garfinkle@bope.ca.gov

Capt. Allen Garfinkle
Executive Director
Board of Pilot Commissioners
660 Davis Street
San Francisco, CA 94111

Re: Vessel: M/V STAR PRINCESS
Pilot: Capt. Orrin Favro
D/I: 2 October 2019
Our File: 305.49-14

Dear Capt. Garfinkle,

Please allow this letter to serve as our Brief on behalf of Capt. Orrin Favro with respect to the matters now being considered by the Incident Review Committee. It is accompanied by the supporting statement of Capt. Russell Wright, an expert tug operator/captain whose opinions regarding this incident are set forth in his statement.

I. STATEMENT OF PERTINENT FACTS

Capt. Favro submitted his Pilot Statement to the IRC on Oct. 22, 2019. Here we will offer a brief summary of the key facts from that Statement, and those that have been learned during our investigation of the incident.

On the morning of Oct.2, 2019 Capt. Favro was assigned to pilot the cruise ship M/V STAR PRINCESS from the City Front to port side along SFO 27. The M/V STAR PRINCESS has a length of 949 feet and a beam of 118 feet. Capt. Favro had taken the con from SFBP Andy Murray shortly after 0600 and completed his pilot to pilot exchange. Capt. Murray planned to stay on board to observe the Pier 27 docking maneuvers.

Capt. Favro then completed the master pilot exchange with Captain Manfuso, discussing all details of the docking at Pier 23. Capt. Favro and this Captain had completed this maneuver on several previous occasions.

Off of Alcatraz, the tug Z Four was made fast to the starboard bow end. The tug Delta Cathryn was made fast to the starboard quarter. Its job was to pull the stern starboard inside the slip between Piers 27 and 23 while the bow is allowed to fall toward Pier 27 with the current.

At about 0630, the ship was making its approach abeam the face of Pier 23. The plan was to enter the area and turn the ship counter clockwise alongside Pier 27.

While continuing the counter clockwise rotation with slight sternway the bridge team received a report from the Delta Cathryn concerning the distance from the stern to the dock, Capt. Favro believed it was something like "our stern is 20 ft from the dock." The response from the bridge team was to focus on the distance astern to Pier 27 believing that was what the tugboat was referencing. From the tug's position on the stern, it should have had a view of Pier 27. In retrospect, with the tug still pulling on a half away order to let its stern get even this close to Pier 23 without saying anything is unexplainable. It would be expected that the bridge team would receive tug position reports much sooner and at a greater distance.

It is common and expected for tugboats to give distance reports relative to the ship and its surroundings as needed. Because the Delta Cathryn was far aft on the starboard quarter, Capt. Favro thought he could see across the ship's stern. If this distance report had said "the stern of the tug" or "from Pier 23", or had raised an alarm, Capt. Favro would have been alerted to the tug approaching too close to Pier 23. In any event, the Delta Cathryn should have reported is developing situation when its stern was 50 feet or so from Pier 23 and closing on it.

Capt. Favro recalls that, upon hearing the Delta Cathryn's report, Captain Manfuso requested distance reports from the ship's crew aft, reporting a closest distance of 30 meters from Pier 27. With that distance being acceptable, Capt. Favro continued with the approach. This included continuing coming slowly astern with continued counter clockwise rotation. Capt. Favro reduced power back to dead slow ahead with the good report.

Around this time, the tug's operator said something like "we touched." His tone was quiet and gave no indication of a problem. Therefore, Capt. Favro understood this to mean that the tug had touched the side of the ship. Based upon his experience, this would generally refer to the side of the ship, as in "we are touched down" and Capt. Favro had no indication they were close to Pier 23. The view from the port bridge wing as the ship was approaching Pier 27 looked favorable. Any communication to the effect that "the tug's stern touched Pier 23" would have given cause for alarm.

The tug's operator eventually said something like "hey Orrin, can I have some more room here". So Capt. Favro immediately began thrusting the stern to port towards Pier 27, while the bow continued with the ebb in that direction, as planned. At the same time, more distances were requested from the ship's crew on the port side aft mooring station, they responded with a closest distance of 20 meters. At this point, the ship was closing on Pier 27. Capt. Favro believes that the Staff Captain then asked for more detailed information and was informed of 20 meters from the starboard quarter. As they were already moving sideways towards Pier 27, they knew this distance would continue opening. At this point the vessel was moving towards Pier 27 using only the thrusters as most of its length was shielded from the ebb current.

Once they were close alongside Pier 27, the con was given to the ship's Captain as previously agreed, for final maneuvering alongside the berth. This is customary due to his familiarity with the ship. Upon releasing the tugs, the Delta Cathryn's operator simply reported that he had "touched" some pilings during the evolution, and nothing further was stated.

The ship's Captain and Staff Captain were satisfied with the maneuver and thanked Capt. Favro as he was leaving. Capt. Murray and Capt. Favro disembarked around 0730.

Submitted with this letter brief is a Statement of Capt. Russell Wright. Capt. Wright is a retired 40 plus year tug operator/captain. He has operated tugs primarily on the West Coast, including San Francisco Bay. It is his opinion that the tug operator failed in his duty to advise Capt. Favro, as would be expected, and but for this unexplained failure, the incident would have been prevented.

II. STANDARD OF CARE

A. Pilots Are Obligated to Employ the Ordinary Care and Skill of Their Profession

Maritime law provides that pilots may not be held to a standard of perfection. Rather, "a pilot is required to use the ordinary care of an expert in his profession. [Namely], he must exercise the degree of skill commonly possessed by others in the same employment . . ." *General Petroleum Corp. v. City of Los Angeles,* 42 Cal. App. 2d 591, 595 (1941). Still another Court has expressed this standard by explaining that "the duty of the pilot is to exercise that degree of care and skill possessed by the average pilot...." *American Zinc Co. v. Foster,* 313 F. Supp. 671, 682 (S.D. Miss. 1970). Pilot misconduct should only be found if it is shown by a "preponderance of the evidence that a [pilot] operated his vessel in a manner which nautical experience and good seamanship would condemn as unreasonable under the circumstances." *Id* at 1523 [Emphasis added]. Pilots are not required to be "infallible." *American Zinc Co. v. Foster*, 313 F.Supp. 671, 682 (S.D. Miss. 1970).

As has been previously noted, while the Board is not bound to follow this analysis, it does offer a framework for evaluating this matter.

B. The Evaluation Should Not Employ Hindsight in Reaching a Decision

Pilots must make decisions under difficult circumstances and time pressure. The very nature of those decisions can subject them to second guessing and judgment by hindsight. However, the applicable authorities require that pilots should not be judged by hindsight, but rather by what they knew at the time and under the specific circumstances of the event. In *Andros Shipping Co. v. Panama Canal Co.* 298 F.2nd 720 (1st Cir. 1962) the Court expressed this concept when it held as follows:

> "The decisions of a pilot in the delicate and hazardous task of navigating a large ship through the Panama Canal involve a matter of judgment . . . A court must avoid basing its decisions on hindsight, and it must make allowance for the legitimate differences in technique of various pilots." 298 F.2nd at 725.

This rule was stated again in *Peoples Natural Gas Co. v. Ashland Oil, Inc.,* 604 F. Supp. 1517, 1526 (W.D. Pa. 1985), where the court cautioned against the use of hindsight in judging the pilot: "It is of no moment that in light of hindsight Capt. Lysicki would have used an alternative docking procedure ... A pilot is required to exercise only the ordinary degree of care and skill commonly possessed by others in the same field; he is not required to be prescient." These cases show that assessing a pilot's actions based on hindsight is not appropriate.

C. The Theory of The "Dominant Mind" Is Not Helpful In The Analysis of Pilot Misconduct In This Instance.

The development of the "Dominant Mind" theory to evaluate liability involves primarily the issue of liability when a third party seeks damages against a tug and tow. It allows a tow to overcome the presumption of liability by shifting liability from the tow to the tug, which may actually be in control of the tow. Admiralty and Maritime Law, Robert Force, 2d Edition, 2013, at 156.

This is not a tug and tow situation. The appropriate analysis is noted above, where the pilot standard is applied without any presumption of fault.

III. DISCUSSION

Capt. Favro carefully prepared for the transit and docking and maintained good communication with the bridge team. The approach to Pier 27 appeared uneventful to the Captain, Staff Captain and Capt. Favro. In discussions with SFBP Murray, he confirmed the same impression. All of the radio communications with the Delta Cathryn were uneventful. At no time, did the tug, more than 3 football fields away on the stern, give any indication of a problem, either by actual words or tone of voice. No one on the bridge team, Capt. Favro, Capt. Manfuso, the Staff Captain or Pilot Andrew Murray heard anything from the Delta Cathryn about a problem.

When the Delta Cathyrn casually mentioned "more room" Capt. Favro reacted immediately, reversing the stern thruster to port.

In this instance, the Ship's Captain finished the docking, which is customary on many cruise ship dockings. Hence, he was focused and invested in all aspects of the docking. When the docking was complete, he indicated to Capt. Favro that he was satisfied with the docking. The Captain himself, nor any member of the bridge team, had been alerted to a problem. The tug's operator did not even advise Capt. Favro that it contacted some pilings until after the ship was secure along Pier 27 and the tug was released.

A stated by Capt. Wright, the Delta Cathryn failed completely in its duty to Capt. Favro. If it had conducted itself appropriately, this incident would not have occurred. To assert in hindsight that Capt. Favro should have queried the Delta Cathryn's operator further about what sounded like routine communications without any indication of a developing problem is not an assertion that under the law, or in fairness to Capt. Favro, should support a finding of pilot misconduct.

Capt. Favro was making a safe and reasonable docking but for the unexplainable conduct of the tug operator. All of the credible evidence shows that Capt. Favro duly performed his duties with the requisite skill of a San Francisco Bar Pilot.

Respectfully submitted,

/s/

Rex M. Clack
RMC Law

Attachment: (1) Opinion Statement of Capt. Wright

OPINION OF CAPT. RUSSELL WRIGHT

My name is Russell Wright. I have been a tugboat operator/captain since 1975. I have operated tugs primarily on the West Coast, including the Columbia River, Coos Bay, OR, Port Hueneme, CA, Eureka, CA and San Francisco Bay. This work included dredge operations, tug and tow and ship assist. I retired in 2017.

I was asked by attorney Rex Clack to offer an opinion regarding the adequacy of radio communications by the operator of the assist Tug Delta Cathryn with Capt. Orrin Favro and his conduct during the docking of the M/V Star Princess on October 2, 2019 at Pier 27, San Francisco.

To familiarize me with the event I viewed a YouTube video of the Tug Delta Cathryn making contact with Pier 23. I also spoke with Capt. Favro in detail regarding the Tug Delta Cathryn's radio communications and his statement to the IRC as it related to the radio communications from the Tug Delta Cathryn.

It is my opinion that if the tug's operator had communicated with Capt. Favro in the usual custom and practice of a tug providing ship assist for docking, this incident would have been prevented. This opinion is based on several considerations. The tug's operator is responsible for being constantly vigilant in tight quarters such as this. This includes gauging the tug's stern approach to Pier 23 and advising the Pilot if a problem seems to be developing. It is the tug operator's duty to keep the Pilot fully informed of any issues regarding either the ship being assisted or the tug itself. Here, the Pilot was on the ship's bridge over 900 feet away, and the tug's operator should have been well aware that the Pilot was depending on the tug to advise him as needed.

In this instance, the tug's operator should never have allowed his tug to get so close to Pier 23 without early advice to the Pilot. Furthermore, I cannot understand why he never raised an alarm as this developed. In watching a video of the event, I can see that the tug's operator is still backing his tug, and therefore the ship, towards the Pier 23 until 2 seconds before the stern of the tug begins making contact with the pilings. To reiterate, I cannot understand how the tug's operator, who was supposedly alert and paying attention to all aspects of the procedure, did not make attempts to communicate with the Pilot of the ship and alert him to the obvious developing problems in time to avert the incident.

Dated: 6/10/20

/s/

Russell Wright

November 4, 2019

RE: Capt. Favro Work/Rest Schedule for Star Princess October 2, 2019

My last piloting assignment prior to boarding Star Princess was on Tuesday, September 24. The Star Princess was the first assignment of a new week long work shift. Below is a summary of the 96 hours before that assignment.

9/28 0700-2300 off watch and awake
9/28 2300-0700 9/29 off watch and resting
9/29 0700-2200 off watch and awake
9/29 2200-0630 9/30 off watch and resting
9/30 0630-2230 off watch and awake
9/30 2230-0630 10/1 off watch and resting
10/1 0630-2130 off watch and awake
10/1 2130-0430 10/2 off watch and resting
10/2 0545 On watch at Pier 9, San Francisco

Capt. Orrin Favro