VIEW MESSAGE

SUBJECT: Re: Cosco Busan investigation
FROM: RPaetzold@edptlaw.com
TO: rothrot@ntsb.gov
SENT: Thu 20 Nov 2008 12:41:49 EST
EXPIRES: Thu 04 Dec 2008 12:41:49 EST

Reply | Reply to All | Forward | Delete | Move to Folder ... | Move

Dear Tom:

At Board President Miller's request, I am forwarding the following attachments:

The Addendum to the Board's Party Submission along with the four enclosures mentioned therein.

Enclosure (1) - the complete IRC report, is broken down into multiple parts because of its length and the amount of memory required. The text of the report is included with the Addendum and the other enclosures (legislation dealing with pilot physicals and with Board oversight and its incident investigation procedures and the Oregon Pilot Commission Symposium agenda). The attachments and exhibits to the IRC report are divided into six parts, most of them in 30-page blocks and are attached as noted above.

Kindly let me know if you would also like a hard copy or a CD of the above, or if we can be of any further assistance.

Best regards

Ray

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>
>
> "Thomas Roth-Roffy" <rothrot@ntsb.gov> wrote:
> Mike,
> Your can you use this secure mail system to send large attachments back to NTSB.

ATTACHMENT FILENAME	TYPE	SIZE
Addendum_of_11-18-08_with_encl.pdf	Adobe Acrobat Document	2.25 MB
AE_part_1.pdf	Adobe Acrobat Document	1.27 MB
AE_Part_2.pdf	Adobe Acrobat Document	1.49 MB
AE_Part_3.pdf	Adobe Acrobat Document	3.21 MB
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☑	AE_Part_4.pdf	Document	4.53 MB
☑	AE_Part_5.pdf	Adobe Acrobat Document	5.12 MB
☑	AE_Part_6.pdf	Adobe Acrobat Document	5.02 MB

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Addendum

to

Party Submission

by

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

NTSB Investigation

COSCO BUSAN Allision with the

San Francisco – Oakland Bay Bridge,

San Francisco, California

November 7, 2007

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The Board of Pilot Commissioners for the Bays of San Francisco, San Pablo and Suisun provides the following addendum to its Party Submission, which was submitted on August 14, 2008.

The Board's Incident Investigation

Captain Cota retired effective October 1, 2008. The IRC's report was presented to the Board at its October 23 meeting at which the Board voted to accept the report. With the exception of the pilot's statement to the IRC and the investigator's confidential report which are precluded from public disclosure by state law, the complete IRC report is now a public document and is attached as Encl. (1).

For the reasons set forth in the Party Submission, the accusation against Captain Cota's state pilot license was dismissed upon his retirement and resignation as a state licensed pilot. That license remained suspended from November 30, 2007 until the date of his retirement.

Pilot Training In And Use of Electronic Navigation Systems

The Curriculum Committee has held several meetings to develop specific recommendations for changing the pilot training curriculum and is scheduled to meet November 19, 2008 to receive and evaluate several proposals to provide comprehensive training which includes enhanced training in advanced electronic navigation systems. A copy of the revised training curriculum will be forwarded upon adoption by the Board.

Rulemaking re Use of Portable Pilot Units

The AGPA (Associate Government Policy Analyst) referred to in the Board's Party Submission has now been hired and commenced work on the rulemaking to require pilots to be equipped and trained in the use of portable pilot units. Delay in hiring an AGPA was occasioned by the California budget process and the unprecedented delay in passing a state budget this year.

Pilot Fitness Issues

The legislation referred to in the Board's Party Submission regarding pilot physicals and interim reporting requirements for changes in medication was passed. A chaptered copy of the bill is attached as Encl. (2).

Incident Investigation Procedures

1. Issues regarding the frequency and severity of Captain Cota's pre-COSCO BUSAN incident record (and the perception that both were increasing) were re-evaluated. The following additional observations are provided:

At the outset, it should be noted that the Board must apply a very specific standard in considering whether to suspend or revoke a pilot's state license. Under California law, the standard which applies to cases seeking the suspension or revocation of a professional license is "clear and convincing evidence to a reasonable certainty." See, e.g., Hughes v. Board of Architectural Examiners, CA Supreme Court, 17 Cal. 4th 763 (1998). This contrasts with the "preponderance of the evidence" standard that applies to suspending or revoking a Coast Guard license. 33 CFR Section 20.701.

The IRC was established in 1993. As detailed in the Board's comments on the NTSB Technical Review Draft Factual Report, Captain Cota was involved in four shiphandling incidents between 1993 and 2007, two of which did not involve pilot error, and one incident which was treated as a medical issue (the TARAWA):

4/97 - MARE CASPIUM - contact with gantry crane (which was out of position) while ship was being docked by a pilot trainee under Captain Cota's supervision - minimal damage - Minor Pilot Error

7/02 - CHIMBORAZO - springline caught on dock due to longshore and crew error in handling mooring line - minimal damage - no pilot error

10/02 - GINGA KITE - vessel interaction reported after both vessels had left - caused moored vessel to pull off dock to extent of slack in mooring lines - no damage - no attributable pilot error

10/04 - TARAWA - shiphandling was not in issue as Captain Cota reportedly did a very good job of docking the vessel under adverse conditions. His over-reaction to the crew's refusal to remove the tag line - which he deemed a safety hazard - was the issue.

2/06 - PIONEER - grounding in the mud at a sharp turn in the river at very slow speed - no damage - pilot error

As noted in the Board's earlier comments and submissions, data for incidents investigated before the establishment of the IRC is limited and inconclusive regarding pilot error. Eight incidents involving Captain Cota were investigated between 1983 and 1991. The last such incident was 11/91 involving the report of wake damage from

a passing vessel piloted by Captain Cota. The Board's record only notes "pilot counseled."

The next shiphandling incident in which there was a finding of pilot error was 5.5 years later in 4/97 (involving minimal damage and minor pilot error), followed by the PIONEER 8.8 years later in 2/06 (involving no damage but a finding of pilot error). Two of the intervening incidents did not find pilot error - one involving minor damage and the other no damage.

The TARAWA is the only other intervening incident. It did not involve damage or pilot error but was investigated because of Captain Cota's reportedly unprofessional conduct. Captain Cota's job performance was closely monitored for five months after he was cleared by medical professionals to return to work with no evidence of further unprofessional conduct.

While Captain Cota's incident frequency involving pilot error did not appear to show a substantial increase in frequency or severity, the Board recognized that improvements in its investigation procedures can be made. In conducting its investigations, the IRC has implemented a more detailed and systematic review of a pilot's prior incident history pending completion of a comprehensive review of the IRC's investigation and reporting procedures.

2. Legislation significantly effecting the Board's incident investigation, oversight of the Board and other aspects of the Board's functions was passed and signed into law in the period since the Board's Party Submission. That legislation will go into effect on January 1, 2009. A chaptered copy of that legislation is attached as Encl. (3).

Communications Among Pilot Commissions

On November 6 and 7, 2008, a conference of Pilot Commissions from the states of California, Oregon, Washington, and Alaska, and from British Columbia was hosted by the Oregon Commission. A copy of the agenda is attached hereto as Encl. (4). Further efforts to maintain regular communication among these pilot commissions are anticipated.

Enclosure 1

WHILE INCLUDED IN THE REPORT, THE COMPLETE IRC REPORT IS ATTACHED SEPARATELY DUE TO ITS LENGTH

Board of Pilot Commissioners for the Bays of San Francisco, San Pablo and Suisun

INCIDENT REVIEW COMMITTEE REPORT:

NOVEMBER 7, 2007 ALLISION WITH THE SAN FRANCISCO-OAKLAND BAY BRIDGE

VESSEL: *M/V COSCO BUSAN*
PILOT: CAPT. JOHN COTA

Presented: October 23, 2008

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BOARD OF PILOT COMMISSIONERS
INCIDENT REVIEW COMMITTEE REPORT:
M/V COSCO BUSAN - CAPT. JOHN COTA - NOVEMBER 7, 2007

REPORT

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SUPPLEMENTAL MATERIALS
(Maintained in Separate Binder)

APPENDICES:

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EXECUTIVE SUMMARY

The Board of Pilot Commissioners for the Bays of San Francisco, San Pablo and Suisun (the "Board") licenses and regulates the approximately 60 San Francisco bar pilots and one inland pilot who provide pilotage services on San Francisco Bay and its tributaries and on Monterey Bay. The Board has many duties, one of which is the responsibility to review all reports of misconduct or navigational incidents involving bay pilots or inland pilots or other matters for which a license issued by the Board may be revoked or suspended. This responsibility is delegated to the Board's Incident Review Committee ("IRC"). (Harb. & Nav.Code § 1180.3(b)). Following its investigation, the IRC must present a written report to the Board. (Harb. & Nav.Code § 1180.3(b) &(c)).

This report constitutes the findings and conclusions of the IRC based on its investigation of the *M/V COSCO BUSAN's* allision with the fendering system around the Delta Tower of the San Francisco-Oakland Bay Bridge ("Bay Bridge") at 0830 hours on November 07, 2007. At the time of the allision, the *M/V COSCO BUSAN* was transiting from her berth in the Oakland Inner Harbor to sea under the navigational control of Captain John Cota, a Board-licensed pilot.

The purpose of the IRC's investigation was to determine whether there was pilot error or "misconduct" on the part of Captain Cota, and if so, whether such misconduct was sufficient to warrant the suspension or revocation of his state pilot license.

The IRC has not been tasked with determining whether there was misconduct, negligence or errors on the part of other individuals or parties. To that end, any comments on the actions of other individuals or entities appear in this report only to the extent that they help explain whether pilot error was involved. Consequently, any such comments are not intended to reflect, and should not be interpreted as, the IRC's opinion with respect to the relative culpability, if any, of other individuals or parties.

It should also be noted that, as Captain Cota has turned in his state pilot license and retired, this matter did not go through a full evidentiary hearing before an administrative law judge. Accordingly, this report reflects only the findings and conclusions of the IRC without having afforded the pilot an opportunity to test the evidence relied upon by the IRC in an administrative hearing. Furthermore, because of ongoing litigation, many witnesses were inaccessible. Under the Board's regulations, this report by the IRC is nevertheless required.

As a result of its investigation, the IRC concluded that pilot misconduct was a factor in the allision. The IRC's conclusions are summarized as follows:

(1) That, prior to getting underway, Captain Cota failed to utilize all available

resources to determine visibility conditions along his intended route when it was obvious that he would have to make the transit to sea in significantly reduced visibility;

(2) That Captain Cota had exhibited significant concerns about the condition of the ship's radar and a lack of familiarity with the ship's electronic chart system, but then failed to properly take those concerns into account in deciding to proceed;

(3) That, considering the circumstances of reduced visibility and what Captain Cota did and did not know about the ship and the conditions along his intended route, he failed to exercise sound judgment in deciding to get underway;

(4) That Captain Cota failed to ensure that his plans for the transit and how to deal with the conditions of reduced visibility had been clearly communicated and discussed with the master;

(5) That, once underway, Captain Cota proceeded at an unsafe speed for the conditions of visibility;

(6) That, when Captain Cota began making his approach to the Bay Bridge, he noted further reduced visibility and then reportedly lost confidence with the ship's radar. While he could have turned south to safe anchorage to await improved visibility or to determine what, if anything was wrong with the radar, Captain Cota failed to exercise sound judgment and instead continued on the intended transit of the M/V Cosco Busan, relying solely on an electronic chart system with which he was unfamiliar; and

(7) That Captain Cota failed to utilize all available resources to determine his position before committing the ship to its transit under the Bay Bridge.

Based on the nature of the misconduct and after considering the factors listed in Section 210(e) of the Board's regulations, the IRC recommended a temporary suspension of Captain Cota's state pilot license pending a hearing, as authorized by Harbors and Navigation Code Section 1180. The Board followed this recommendation and voted to suspend the license pending the hearing. Thereafter the IRC filed an Accusation. The Accusation recommended the suspension or revocation of Captain Cota's license. He then filed a timely Notice of Defense denying the allegations of misconduct.

The Office of Administrative Hearings assigned an Administrative Law Judge and set a hearing date. The Board elected to hear the matter sitting with the administrative law judge, as provided by law. The hearing date was postponed twice by order of the administrative law judge to permit the parties to obtain necessary evidence for the hearing.

On June 30, 2008, before the matter could be heard, Captain Cota gave notice of his retirement as a San Francisco bar pilot on the earliest effective date permitted by the

applicable statute. He cited as reasons that pending criminal charges against him arising out of this incident made it impossible for him to defend the administrative action against his state license.

By operation of law, his state pilot license, which had remained suspended in the interim, would cease to exist upon his retirement. Thus Captain Cota's retirement effectively rendered moot any action the Board could have taken against his license if it had found pilot error. Captain Cota's retirement became effective on October 1, 2008, and the Accusation has now been dismissed.

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FINDINGS OF FACT

1. VESSEL INFORMATION

1.1. *Ownership/Registration/Management:* *M/V COSCO BUSAN* is a motor container vessel registered in Hong Kong, with Hong Kong Chinese crew and officers. Regal Stone, Ltd. owns the vessel and Fleet Management, Ltd. manages it. The vessel's agent in San Francisco is Norton Lilly. (*See*, Exhibits 1, 4 and 8)

1.2. *Mechanical Specifications:* The vessel is single screw; right turning, fixed pitch propeller. There is a 2,700 hp bow thruster. The vessel was built in 2001 by Hyundai Heavy Industries, Ulsan, South Korea. Its general specifications are as follows:

Length:	901' Beam: 131'
Draft:	39' 09" fwd, 40' 04" aft
Tonnage:	65,131 grt 34,078 net
Engine:	Man B&W, 77,600hp

Its engine command specifications are as follows:

Bell Signal	RPM	Speed
Dead Slow	24	6
Slow	35	9
Half	50	13
Full	65	17
Sea speed	104	25.9

(*See*, Exhibits 3, 4 and 10)

1.3. *Master & Pilot:* The master of the *M/V COSCO BUSAN* was Capt. M. C. Sun. (*See*, Exhibits 4, 8) The pilot of the *M/V COSCO BUSAN* was Captain John Cota, SFBP. (*See*, Exhibits 1, 3, 8)

1.4. *Planned Transit:* The *M/V COSCO BUSAN* was en route from Oakland, Berth 56 to sea. (*See*, Exhibits 3, 8)

1.5. *Assisting Vessels*: The tug assisting at the time of the Incident was:

Name: *REVOLUTION*
Operator: Douglas Alfers
Owner: American Navigation
Length: 78' Beam: 34' Draft: 14'
Tonnage: 144 grt
Propulsion configuration: Twin Z drive, 5,080 bhp Bollard pull: 135,000#

(*See*, Exhibits 3, 4 and 8)

2. ENVIRONMENTAL CONDITIONS

On the day of the Incident, Captain Cota boarded the *M/V COSCO BUSAN* at 0600 hours at Port of Oakland, Berth 56, with an anticipated departure time of 0630 hours. The actual time of departure was 0748 hours and the time of the allision was approximately 0830 hours. The relevant environmental conditions during these time periods were as follows:

2.1. *Relevant Conditions at Berth 56*:

Sunrise was expected at 0641 hours. At the time of Captain Cota's boarding of the *M/V COSCO BUSAN*, a "dense fog" was present. Prior to departure Captain Cota saw the tug *SOLANA* from a distance of at least 0.25 miles. He could not confirm if visibility extended to 0.5 miles, but could see across the channel prior to departure.

At approximately 0800 hours the Tug *SOLANA* approached the middle harbor channel. After passing buoys 7 and 8 at the Oakland Inner Harbor Entrance, the Tug *SOLANA* reported seeing the bow of the *M/V COSCO BUSAN* at a distance of approximately 1000 feet (0.18 miles).

At the time of the *M/V COSCO BUSAN's* departure, at most, there was a slight lifting of the fog.

2.2. *Visibility Along Intended Route as Reported Prior to Departure*:

Captain Cota had no information regarding the visibility along his intended route from Berth 56 to the Pilot Station, and did not contact anyone to ascertain such visibility.

Cota did not inquire of Tug *SOLANA* what conditions were in the outer channel, even though the tug had just traversed that region of the Bay. On its transit from the Bay Bridge construction site to the Oakland Inner Harbor, the Tug *SOLANA* experienced visibility as low as 200 yards.

The crew boat *PROWLER* reported conditions as "very foggy" along its route from Port of San Francisco, Pier 50 to the Bridge construction site.

Multiple vessels were scheduled to depart or transit the Bay between 0600 and 0900 hours on November 7, 2007. Pilots on these vessels reported limited visibility:

Visibility	Pilot	Vessel	Location	Est. Time
0.125 miles (660 feet)	Lobo	SEA LAND METEOR	Oakland Berth 23	0600
Less than 0.5 miles	Gates	CHEMBULK BARCELONA	Richmond Berth 11	0700
0.15 miles (800 feet)	Gans	STROFADES	Anchorage 9	0730
Ranging from 0.17 miles (900 feet) to 0.25 miles (1320 feet)	Dohm	ITAL LIBERA	Oakland Berth 37	0830
Ranging from less than 0.75 mile to 0.25 mile	Villas	LIHUE	Oakland Berth 68	0900
No more than 0.2 miles (1056 feet)	S. Teague	S H BRIGHT	Inbound from Golden Gate to Anchorage 8	0830

At Richmond Berth 11 visibility did not improve until 1015 hours. At Oakland Berth 37, the *ITAL LIBERA* delayed its scheduled 0830 departure until 1100 hours due to poor visibility.

2.3. *Relevant Conditions During Transit From Berth 56 to Yerba Buena Island*

Captain Cota reported no greater than 0.25 nautical mile of visibility during his transit from Oakland Berth 56 to Yerba Buena Island.

2.4. *Relevant Conditions in Vicinity of Yerba Buena Island at 0830 hours:*

Wind: SW, 7-10 kts.
Visibility: fog, 1/4 mile or less
Tide Height: 5.6 feet, rising
Current: 0.8 kt, flood
(*See*, Exhibits 3, 6, 8)

Immediately before the allision, *PROWLER* noted visibility of approximately 0.1 miles in the vicinity of the "C" tower of the Bay Bridge. This puts visibility at just over half the length of the *M/V COSCO BUSAN.*

3. INCIDENT & MISCONDUCT UNDER INVESTIGATION

The specific incident investigated is the allision of the *M/V COSCO BUSAN* with the Delta Tower of the Bridge, at 0830 hours on November 07, 2007. Besides the allision itself, the actions of Captain Cota leading up to the allision were also investigated. Thus, the investigation reviewed Captain Cota's actions from the time he boarded the *M/V COSCO BUSAN* at 0600 hours on the morning of November 07, 2007 until he left the vessel at 0945.

4. ESTIMATED DAMAGES RESULTING FROM INCIDENT

One of the factors the IRC must consider in determining the appropriate corrective action to be imposed, (and to consider when going outside the guidelines provided by Section 210(f) of the Board's regulations), is "the nature and extent of any injuries, property damage or harm to the environment resulting from the incident." The purpose of this section of the report is to provide information regarding the order of magnitude of the consequences resulting from Incident. It is not intended to quantify exact damages of individual parties or determine liability therefor.

4.1 *Physical Damage*

The *M/V COSCO BUSAN* sustained a gash approximately 220 feet long, 14 feet high and 8 feet deep. The depth of the gash varied from scraping and bending of the shell plating, to penetration of voids, ballast and fuel tanks. The longitudinal bulkhead in way of #2 cargo hold was partly buckled and punctured. Two fuel oil tanks were penetrated, allowing bunker fuel to gravitate to the lowest level of contact with the fendering. Approximately over 50,000 gallons of heavy fuel oil were discharged. This reasonably equates in volume to the capacity of four and a half 40 foot shipping containers.

The allision also damaged the fendering system of the Delta Tower of the Bridge.

4.2 Valuation of Damages

The heavy fuel oil spilled following the allision dispersed over much of the greater San Francisco Bay and affected a combined 26 miles of coastline inside the Bay and outside the Golden Gate. Extensive clean up efforts were undertaken by the vessel's owners and operator, and by federal, state and local governments, private concerns and volunteers. The oil spill has been blamed for the contamination of wildlife habitat and protected marine resources and for the deaths of thousands of birds.

The opening of the normal fishing and crabbing season was delayed, causing substantial losses to the fishermen and related industries. Two class actions were filed on behalf of various fishermen and crabbers claiming to represent some 1500 class members for their losses. Their losses have not been quantified.

The federal government and three municipalities filed suits in federal and state courts. These law suits seek clean up and response costs, natural resource damages and other losses and civil penalties. The suits name as defendants the vessel, its owners, operator and the pilot.

The California Department of Transportation filed suit for the costs of repairs to the Bay Bridge, which it estimated at $2 million.

The ship owner, operator and cargo interests have all suffered losses as a result of the damage to the vessel and her detention. The ship owner has estimated its current and future losses as a result of this incident, including its liability for the actions of the pilot, to exceed $80 million. Such damages include repair to the vessel (estimated to be in excess of $2.5 million), loss of hire, and clean up and recovery costs.

5 WITNESSES & INFORMATION OBTAINED FROM SAME

See Appendix 1.

6 NATURE AND EXTENT OF INJURIES

No physical injuries were reported or came to the attention of the IRC.

7 SUMMARY OF PRIOR INCIDENTS INVOLVING SAME PILOT

See Appendix 2.

8 RELEVANT INFORMATION FROM U.S. COAST GUARD

The IRC obtained information and materials directly from the US Coast Guard. In addition, the IRC gained benefit from other materials obtained by the U.S. Coast Guard and ultimately released to other agencies or entities. These materials include:

A. Photos of the navigational bridge, including the radar, electronic chart and other navigational equipment on board the *M/V COSCO BUSAN*;

B. Information regarding the operational status of buoys in the vicinity of the Bay Bridge Delta tower. This included a report that the San Francisco Sector conducted a survey and found the following buoys were operational:
   a. Pier D North Buoy (LLNR-4450)
   b. Pier D South Buoy (LLNR-4455)
   c. Yerba Buena Lt / Sound Signal (LLNR-4595);

C. Information regarding the damage to the fendering system on the Bay Bridge Delta tower;

D. Information regarding the operational status of the RACON above the Delta-Echo span of the Bay Bridge. This information indicated that the last reported malfunction of any Bay Bridge RACON occurred in July of 2007, and that as of November 7, 2007 all RACONs were operating;

E. Information regarding the horizontal clearance available for navigation, between the fenders of the Bay Bridge towers.

9 CHRONOLOGY OF INVESTIGATION & ACTION TAKEN PURSUANT TO HARBORS & NAVIGATION CODE 1180.6

See Appendix 3.

10 SUMMARY OF FACTUAL BACKGROUND

10.1. *Boarding And Pre-Departure Activities*

At about 0600 on Wednesday November 7, 2007, Captain John Cota boarded the container vessel *M/V COSCO BUSAN* at Oakland Berth 56, to take it to sea. The vessel was scheduled to sail at 0630 hours. Once aboard, Captain Cota was escorted to the bridge where he met the master, Captain Sun, along with a mate. He and Captain Sun discussed the dense fog and decided to wait for visibility to improve before sailing. At 0630 Stand By Engine was ordered in preparation for departure. Sunrise was at 0641, but visibility remained very poor. (*See*, Exhibits 3, 5, 6, 8)

Captain Cota and Captain Sun reviewed the SFBP Master-Pilot Exchange Card. Captain Cota found the tuning of the two radars to be unacceptable. He, the master, and the mate spent 45-60 minutes tuning the radars and testing the automatic plotting features (ARPA), until they were able to successfully acquire, track, and plot a target. (However, Captain Cota stated prior to departure. "I've tried to target five times, never plots. That's not good for fog." Captain Cota observed that the heading flasher of the radars was correct for the channel heading as moored. The radars were set on either 1.5 or 3-mile scale. (*See*, Exhibits 2, 3)

After convincing himself that he could rely on the radar, Captain Cota examined the electronic chart (EC). Captain Cota noted that the symbols on the electronic chart were not familiar to him and he did not see any track lines appearing on it. He also did not

review any paper chart on the bridge. He asked Captain Sun to point out the center of the D-E span of the Bay Bridge. Captain Sun pointed to what he said was the center of the span. Captain Cota failed to recognize that Captain Sun was pointing to the buoys marking Delta Tower, midway between the prominently marked RACONs (RAdar beaCONs) on C-D and D-E spans.

Captain Cota considered Captain Sun's command of English nominal, and only sufficient enough to understand navigational terms. Captain Cota was unaware that Captain Sun and his crew had only joined the vessel on Oct 24 (two weeks previously) when there was a change in the vessel's ownership. (Exhibit 3)

10.2. *Layout And Navigational Equipment Of M/V COSCO BUSAN Bridge*

The bridge layout of the *M/V COSCO BUSAN* consisted of a midship helm station with consoles to port and starboard. The port console was the navigation station. From midship outboard, it consisted of a radar monitor, a ship control function monitor, an electronic chart display and another radar monitor. Captain Cota was unable to distinguish between the 3 cm radar and 10 cm radar monitors. While he asked the Captain for clarification, he was not able to understand the response. Captain Cota did not have or use a personal computer with charting software and AIS interface. He was under the incorrect impression that the American Pilots' Association discourages the use of such devices due to potential liability issues.

The starboard console was the engine/machinery control area and had the engine order telegraph and bow thruster controls as well as engine function readouts.

10.3. *Departure From Berth 56*

By 0630, visibility had gradually improved and Captain Cota believed he could see across the estuary for a distance of about 0.25 mile. That distance was hard to quantify due to the flat land in the area.

At 0645 Captain Cota directed the assist tug *REVOLUTION* into position and to put up a headline to the vessel's port quarter. The tug was fast at 0648. He visually observed the tug *SOLANA* and two barges proceeding up the estuary and noted the tug's range to be 0.25 mile. *SOLANA* had just entered the estuary after passing Oakland berth 38. The operator stated that while he passed close to it, he had been unable to see that berth. The tug operator also noted that he had passed Buoy 6 in the Inner Harbor Entrance Channel at 200 yards without being able to see it. Indeed, the *SOLANA's* operator stated he had 0.25 mile of visibility or less throughout his transit from the Bay Bridge construction site to the Oakland Inner Harbor entrance.

After determining visibility to be about 0.25 mile at the vessel, Captains Cota and Sun agreed to depart. Captain Cota contacted the operator of the *SOLANA* and agreed to remain at the berth until the tug and barges were past and clear.
(*See*, Exhibits 2, 3, 8)

At 0714 lines were singled up aft. (That is, the only mooring lines remaining aft were a single stern line, a breast line and a spring line). At 0745 lines were singled up forward and all lines were ordered to be let go. The last line was let go at 0748. At 0755, with the tug and barges clear astern and all lines clear, the *REVOLUTION* was directed to back and using the bow thruster, the vessel was moved off the berth to mid-channel.

At 0800 the tug *REVOLUTION* was directed to let go and put a headline up to the center chock on the stern of the *M/V COSCO BUSAN* and follow the vessel and to keep a slack line. Captain Cota advised the tug he would keep them there until the vessel was clear of the Oakland Bar Channel.

At 0808 slow ahead was ordered and the vessel began to move out of the estuary.
(*See*, Exhibits 2, 4, 5)

As the vessel moved out of the estuary, Captain Cota visually observed Lights 7 and 8 at the edge of the channel, as well as Lights 5 and 6. A review of AIS readouts shows the vessel favoring the north side of the channel. Captain Cota purposely held to the right side of the channel due to the flood current. At 0820 hours, in the vicinity of Buoys 1 and 2, speed was increased to half ahead. Captain Cota did not see Buoys 1 and 2, but later stated he was not looking for them since he was he was concentrating on the radar picture. The tug *REVOLUTION* continued to follow the *M/V COSCO BUSAN*, maintaining a slack line. However, after clearing the Oakland Bar Channel, Captain Cota did not release the tug. He later acknowledged this was because he had forgotten about its presence.
(*See*, Exhibits 2, 3, 5)

10.4. *Approach To Yerba Buena Island*

Captain Cota planned to set the radar's variable range marker (VRM) to 0.33 mile and to maintain that distance from Yerba Buena Island (YBI) as he approached the Bay Bridge. This is consistent with the practice of other pilots in transiting under the D-E span of the Bay Bridge in reduced visibility.
(*See*, Exhibits 2, 3)

Captain Cota believes he was using the radar monitor located next to the helmsman most of the time. He set the VRM and maneuvered the vessel to 0.33 mile south of the tip of YBI and began his starboard turn per his plan. After commencing the turn he again asked Captain Sun for the location of the center of D-E span on the electronic chart. Captain Sun did so, but apparently pointed to the Delta Tower, rather than the D-E span.

Captain Cota noted he would be turning short of that point and steadied the vessel briefly, checking the turn and deviating from his plan of turning 0.33 mile off the shoreline of YBI. However, Captain Cota had again failed to recognize that Captain Sun was pointing to the buoys between that marked the Delta Tower.
(*See*, Exhibits 2, 3)

10.5. *Allision With Bridge*

Captain Cota maintains that, as he was beginning his starboard turn, the radar picture on both radars began to deteriorate. He stated the radar was not displaying the RACON on the D-E span of the Bay Bridge, nor was it displaying the towers, or the buoys near the Delta Tower. The Bay Bridge image had, according to Captain Cota, become a thick green ribbon on the radar screens. He stated that he lost confidence in the accuracy of the radar and did not trust the radar image, including the VRM. He believes that at about the same time the fog became thicker, further reducing visibility. (*See*, Exhibits 2, 3)

As the vessel approached the Bay Bridge, the Westar Marine Services 41-foot crew boat *PROWLER* was proceeding from San Francisco Pier 50 to the Bay Bridge construction site to pick up surveyors. Its operator reported conditions as "very foggy" and he proceeded along the SF waterfront to Alpha Tower and waited there for an inbound vessel to pass. That vessel was the *M/V S. H. BRIGHT*, which diverted to Anchorage 8. From there *PROWLER* proceeded to Charlie Tower and held position waiting for the *M/V COSCO BUSAN* to pass through D-E span. From the vicinity of Charlie Tower the operator could see a faint outline of Delta Tower, a distance of 0.20 mile. (*See*, Exhibits 8)

Captain Cota resumed the turn and shortly thereafter received a radio call from USCG Vessel Traffic Service (VTS). After making contact with Captain Cota, VTS radioed him stating: "AIS shows you on 235 heading. What are your intentions? Over." Captain Cota was standing at a radar consol and looked at the heading flasher. It showed the vessel passing through 280°T and still swinging to starboard. Captain Cota replied to VTS, "Um, I'm coming around. I'm steering 280 right now." VTS radioed in response, "Roger, understand you're still intending the Delta-Echo span, over." Captain Cota replied, "Yeah, we're still Delta-Echo."

Having lost confidence in the radars, Captain Cota moved to the electronic chart to see what it showed. He again asked Captain Sun to point out the center of D-E span, which he did. According to what Captain Sun pointed to on the electronic chart, Captain Cota believed that the vessel was headed to the center of D-E span. Captain Cota again failed to recognize that, in reality, Captain Sun had pointed to the Delta Tower itself. (*See*, Exhibits 2, 3)

At 0827 Captain Cota ordered full ahead and hard right rudder to steer the vessel in a direction that he believed would be closer to Echo Tower. The increased speed and

propeller wash caused the line to the tug *REVOLUTION* to tighten and the operator released the winch brake to let the towline run to avoid tripping the boat and to maintain a slack line. (*See*, Exhibits 2, 3, 5)

Shortly after the speed increase and change of rudder, Captain Cota heard a call to Captain Sun on his handheld radio. The exchange was apparently in Chinese and Captain Cota was unable to understand what was said. Soon after that, Captain Cota observed Delta Tower looming out of the fog close on the port bow. He then finally realized that Captain Sun had been pointing to the tower instead of the center of the span. He could see that the vessel's port side was going to contact the tower's fendering system and ordered hard left rudder to lift the stern away. At 0830 the vessel contacted the fendering system on the East-South-East corner of the Delta Tower. (*See*, Exhibits 2, 3, 4, 8)

Captain Cota reported that he did not feel the vessel shudder or heel or otherwise show that they were scraping along the fendering system. At 0830.5 he ordered dead slow ahead. The tug *REVOLUTION* also slowed. As the tug passed the Delta Tower, its operator observed floating fender pile debris and oil in the water. At 0832 the *M/V COSCO BUSAN* crew reported oil leakage to the bridge. Captain Sun advised Captain Cota who advised the USCG. At 0834 the engine was stopped. (*See*, Exhibits 3, 4, 5)

10.6. *Post-Allision Events*

At 0836 the engine was ordered slow ahead. Captain Cota radioed VTS and advised them that he had contacted the fendering system on Delta Tower and was proceeding to Anchorage 7 off Treasure Island ("TI"). Captain Cota used his cell phone to call the Port Agent (Captain McIsaac) and advise him of the incident. At 0855, using the ship's radar to determine range, the *M/V COSCO BUSAN* was anchored 0.5 mile off the North-West corner of TI in Anchorage 7. At 0858 the *REVOLUTION* was let go. Captain Cota told the operator "*REVOLUTION*, you're released. I guess I forgot about you in all of the excitement." (*See*, Exhibits 2, 3, 4)

Captain McIsaac gathered several other pilots from the Pilot Station and embarked in the *P/V GOLDEN GATE* to inspect the fendering system and go to the vessel. When the *P/V GOLDEN GATE* arrived at Anchorage 7 he noted that there was still a small amount of oil leaking from a long gash in the vessel's side. This was the first direct observation of the damage. At about 0900 Captain Frank Hoburg boarded the vessel and went to the bridge to relieve Captain Cota. While the *P/V GOLDEN GATE* was alongside, Captain McIsaac noted that the flow of oil from the vessel had stopped. (*See*, Exhibits 2, 3, 8)

At about 0905 Captain Coney also boarded the *M/V COSCO BUSAN* to assist. When Captain Coney arrived on the bridge he found that Captain Cota was preparing to conduct an alcohol swab test on himself. Captain Coney witnessed the test. He noted

visibility to be about 0.25-0.5 mile. At 0945 hours Captains Cota and Coney departed the *M/V COSCO BUSAN* aboard the *P/V DRAKE*. They proceeded to the Pilot Station where, at approximately 1030 Captain Cota was given a drug screening test by a contract service retained to perform such screenings. All screening tests came back negative for the presence of drugs and/or alcohol.

11. FINDINGS OF PILOT ERROR

Based on its investigation, the IRC found misconduct on the part of Captain John Cota in relation to the Incident. The misconduct found is as follows:

11.1. Failure to Utilize All Available Resources to Determine Conditions Along His Intended Route. Captain Cota, while recognizing the extremely limited visibility caused by the fog on the morning of November 7, 2007, did not take advantage of any of several sources to determine the visibility along his proposed route. He did not attempt contact other vessels and did not ask VTS for information regarding conditions along his intended route. In fact, visibility was less than 0.25 nautical miles in the vicinity of the Bay Bridge and at other locations along his route. According to the operator of the *PROWLER*, the visibility at the Bay Bridge was approximately 1000 feet. If accurate, that meant that Captain Cota, from his position on the vessel's bridge, would have been able to see only about 200 feet beyond the bow of the *M/V COSCO BUSAN*.

11.2. In Deciding to Depart, Failed to Properly Take Into Account Concerns Regarding the Vessel's Navigational Equipment. Captain Cota had exhibited significant concerns about the condition of the ship's radar and a lack of familiarity with the ship's electronic chart system, but then failed to properly take those concerns into account in deciding to proceed. For instance, Captain Cota noted it took upwards of 45 minutes of work with the radar system to allow it to operate as he believed it should. Even so, he noted "I've tried to target five times, never plots. That's not good for fog." There was apparently no effort to determine what had caused the issues that prevented the radar from operating in its intended manner, nor whether the radar had exhibited any malfunctions in the recent past. Furthermore, Captain Cota failed to clarify for himself the bandwidth of the radar monitors. Finally, Captain Cota did not examine the electronic chart closely enough to become familiar with, and assure himself that he understood the symbols used on the electronic chart. It appears that in the end Captain Cota never gained complete confidence in the radar system, as he instructed the tug *REVOLUTION* to tie a stern line to the vessel. In addition, when he saw a "band" on the radar as he approached the Bay Bridge, he immediately disregarded the positional fix he

had just obtained from the radar relative to Yerba Buena Island. He abandoned this fix even though there was no indication that it was erroneous when obtained. These facts indicate that, considering the limited visibility, Captain Cota never reached an appropriate level of confidence in the vessel's navigational equipment.

11.3. Failure to Exercise Sound Judgment in Deciding to Depart. At the time of departure, Captain Cota had, at most, 0.25 nautical miles of visibility, with no indication that visibility would improve during transit. The operator of the tug *SOLANA* estimated the visibility in the vicinity of the *M/V COSCO BUSAN* as low as 200 yards, and no more than 0.25 nautical miles, if that. Nevertheless, Captain Cota participated in the decision to depart, even though there was no pressure on the vessel to leave at or near its scheduled departure time. Captain Cota agreed to depart despite his knowledge of the crew's limited language ability, his unfamiliarity with the Electronic Chart, the 45 minute effort needed to adjust the radar, and his failure to refer to (and/or note the presence of) a paper chart. In fact, Captain Cota's own concern about the conditions at the time of departure is evidenced by his instruction to the tug *REVOLUTION* to attach a stern line to the *M/V COSCO BUSAN*. In light of the known conditions, Captain Cota failed to exercise sound judgment in deciding to depart.

11.4. Failure to Ensure That His Plans for Transit, And His Plans For Dealing with Reduced Visibility Were Clearly Communicated with the Master. As far as Captain Cota knew, the crew had nominal English abilities, and perhaps no more than the ability to understand basic maneuvering commands. He was unable to get all the information he sought regarding the conditions and settings of the radar prior to departure. Prudence would have dictated that Captain Cota use extra care in ensuring that the master understood their plan for navigating in such reduced visibility, in instructing the members of the bridge team in what was expected of them, and in instructing the lookouts as to what they should be looking for and reporting. Prudence would have also dictated that a bridge team member be instructed to take periodic fixes of the vessel's location.

11.5. Proceeding at an Unsafe Speed. Notwithstanding the extremely limited visibility, Captain Cota ordered "Half Ahead" when the ship exited the Oakland Inner Harbor Entrance Channel and maintained that engine order for seven minutes. That engine order brought the ship's speed under prevailing circumstances to between 10 and 11 knots, and perhaps as high as 12 knots. The approximate speed of the ship when it allided with the Bay Bridge was 11 knots. (The Full Ahead order minutes before the allision, coupled with a hard right rudder, and then left full rudder moments before the allision, would not have appreciably increased the ship's speed at the time of contact with the Bay Bridge's fendering system.) Under the circumstances, with as little as 200 feet of visibility beyond the bow of the vessel, this represents an unsafe speed.

11.6. Failure to Exercise Sound Judgment in Continuing His Transit Under the Bay Bridge. After Captain Cota had guided the vessel to a distance of .33 miles from the southern tip of YBI and was ready to make his final approach to transit under the center of the D-E span of the Bay Bridge, Captain Cota lost confidence in what he described as a malfunctioning radar. (The IRC found no evidence that the radar actually malfunctioned, although it was not in a position to determine what, if anything was done with the radar prior to its inspection by government authorities, and will leave that to others to address.) As a result, Captain Cota shifted his reliance to an electronic chart with which he was not familiar, and on the master's misinterpretation of the center of the span – an interpretation that Captain Cota had reason to doubt. In fact, by that time, Captain Cota had asked three different times for Captain Sun to point to the center of the D-E span on the electronic chart. In addition, he had received an indication from VTS of a heading significantly different from that which was being read on the vessel. At that point, prudence would have dictated that he abort the attempted transit and turn south to a safe anchorage, either to determine what was wrong with the radar (if anything) or to await better visibility conditions. Instead of aborting the attempted transit, Captain Cota altered his intended route to a point further west along the Bay Bridge, a point that turned out to be the Delta Tower of the Bay Bridge rather than the center of the D-E span.

11.7. Failure to Utilize Available Resources Prior to Allision. As Captain Cota approached the Bay Bridge, visibility began to deteriorate. At that juncture (and perhaps even as the radar picture deteriorated), Captain Cota still had the option of utilizing VTS to fix his position and/or abandon the transit and use the availability of Anchorage 8 or 9. In addition, he had the availability of crew members to fix the vessel's position, and potentially the vessel's lookouts to identify any structures. None of these resources were utilized. Instead, Captain Cota continued to rely exclusively on resources in which he had limited or no confidence.

12. RESPONSE OF THE IRC

Based on its findings, the IRC determined that the corrective actions it has the power to administer were insufficient with respect to the level of pilot error. Consequently, the IRC exercised its option to file an Accusation seeking suspension or revocation of Captain Cota's license. This Accusation was filed within 30 days of the Incident, on December 6, 2007. In response, Captain Cota filed a timely Notice of Defense.

A preliminary hearing date in April 2008 was set. This date was set primarily in response to the Office of Administrative Hearing's ("the OAH") internal requirement to immediately set a hearing date. At the first status conference, the hearing was moved to July, 2008. At the next status conference Captain Cota sought, and was granted, a continuance to and until September 2, 2008. The OAH granted the continuance to allow

the parties adequate time to complete discovery, especially in light of the multiple legal proceedings filed in relation to the Incident.

In the meantime, on June 30, 2008, Captain Cota gave notice of his retirement effective October 1, 2008. (As the Board knows, a pilot must give at least three months notice of retirement, and such retirement must begin the first day of a fiscal quarter.)

By giving notice of his retirement, Captain Cota rendered moot the two actions the Board could have taken - suspension or revocation - had it found misconduct. Accordingly, the parties entered into a stipulation that voided the September, 2008 hearing schedule and set the matter to be closed once Captain Cota's retirement went into affect. Accordingly, the case pending in front of the OAH was closed shortly after Captain Cota's retirement became effective on October 1, 2008.

13. OTHER ACTIONS TAKEN

Following the Incident, the Board, the Board's President, the Board's Executive Director, and/or the IRC have taken other actions beyond the investigation. They are listed here in order to provide a historical record of such actions. The actions taken include:

13.1. Participation in NTSB on-site investigation and hearings;

13.2. Participation in the Harbor Safety Committee's Review of the *San Francisco, San Pablo and Suisun Bays Harbor Safety Plan*;[1]

13.3. Initiation of a review of issues having to do with Pilot Fitness, including a review of the Board's existing procedures to assure the good physical and mental health of pilots;

13.4. Initiation of a review of the Board's Incident Review process;

13.5. Participation in efforts to increase communication among pilot commissions;

[1] In connection with this, the IRC recommends that the Port Agent ensure that all pilots review the Harbor Safety Plan, including minimum visibility standards.

13.6. Involvement in the Harbor Safety Committee's analysis of certain issues related to the use of shipboard and portable electronic navigation systems by pilots; and

13.7. Formation of a Navigation Technology Committee to investigate the different types of navigation systems found on ships calling on the San Francisco Bay Area and the sufficiency of pilot training in the use of such systems, and to evaluate portable electronic navigation chart systems that can be brought aboard by pilots to assist in navigation. This committee has already presented its preliminary report to the Board, and the Board has acted upon it.

Further details of these actions can be found in Appendix 4.

14. CONCLUSION

Having concluded its investigation, and having followed the recommended course of action through to its final conclusion, the IRC respectfully submits this report for the Board's review and acceptance pursuant to the Board's Regulations (Title 7, California Code of Regulations, § 210(g)).

[redacted]

Captain ~~Patrick Moloney~~
Executive Director
State Board of Pilot Commissioners
Member, Incident Review Committee

[redacted]

Knute Michael Miller
President
State Board of Pilot Commissioners
Member, Incident Review Committee

Enclosure 2

SB 1217, Chaptered

Senate Bill No. 1217

CHAPTER 568

An act to add Section 1157.5 to, and to repeal and add Section 1176 of, the Harbors and Navigation Code, relating to vessels, and making an appropriation therefor

[Approved by Governor September 29, 2008. Filed with Secretary of State September 29, 2008.]

LEGISLATIVE COUNSEL'S DIGEST

SB 1217, Yee. Vessels: Board of Pilot Commissioners: pilots: fitness for duty.

Existing law establishes in state government the Board of Pilot Commissioners, with jurisdiction over Monterey Bay and the Bays of San Francisco, San Pablo, and Suisun. Existing law authorizes the board to appoint an executive director to perform various duties.

This bill would require the board, on or before April 15, 2010, and annually thereafter, to submit to the Secretary of the Senate and the Chief Clerk of the Assembly a report containing specified information describing its activities for the preceding calendar year.

Existing law continuously appropriates the funds in the Board of Pilot Commissioners' Special Fund for the payment of the compensation and expenses of the board, its officers and employees, and training programs.

By imposing the duty to submit an annual report of the board's activities, the bill would make an appropriation.

Existing law requires pilots and inland pilots to undergo physical examinations in accordance with standards prescribed by the board in conjunction with the renewal of their licenses. Existing law requires that the examination designate that each pilot or inland pilot is fit to perform his or her duties as a pilot.

This bill would, instead, require the board to appoint a physician or physicians who are qualified to determine the suitability of a person to perform his or her duties as a pilot, an inland pilot, or a pilot trainee in accordance with specified requirements, that include, among other things, an evaluation of the effects of the prescription medications that the pilot, inland pilot, or pilot trainee is taking, and would require the appointed physician to designate to the board whether the pilot, inland pilot, or pilot trainee is fit to perform his or her duties as a pilot, inland pilot, or pilot trainee.

The bill would require the board to terminate a pilot trainee or suspend or revoke the license of a pilot or an inland pilot who fails to submit the prescribed medication information required by these provisions.

This bill would also provide that certain provisions would be operative only if SB 1627 and this bill are both enacted and become effective on or before January 1, 2009, and other provisions would be operative only if this bill is enacted and becomes effective on or before January 1, 2009, and SB 1627 is not enacted

Appropriation: yes.

The people of the State of California do enact as follows:

SECTION 1 Section 1157.5 is added to the Harbors and Navigation Code, to read:

1157.5 On or before April 15, 2010, and annually thereafter, the board shall submit to the Secretary of the Senate and the Chief Clerk of the Assembly a report describing the board's activities for the preceding calendar year. The report shall include, but not be limited to, all of the following:

(a) The number of vessel movements across the bar, on the bays, and on the rivers within the board's jurisdiction.

(b) The name of each licensed pilot, inland pilot, and pilot trainee, and the status of each person. If a person has had more than one status during the reporting year, each status and the length of time in that status shall be indicated. For the purposes of this section, "status" includes all of the following designations:

(1) Licensed and fit for duty.

(2) Licensed and not fit for duty.

(3) Licensed and on authorized training.

(4) Licensed and on active military duty.

(5) Licensed and on leave of absence.

(6) Licensed but license suspended.

(c) A summary of each report of misconduct or a navigational incident involving a pilot, inland pilot, or pilot trainee, or other matters for which a license issued by the board may be revoked or suspended. For those cases that have been closed, the summary shall include a description of findings made by the incident review committee and of the resulting action taken by the board. For those cases that are still under investigation, the summary shall include a description of the reported incident and an estimated completion date for the investigation. For those closed cases involving a pilot who has been involved in a prior incident where a finding of pilot error had been made, the report shall also include a summary of that incident.

SEC. 2 Section 1157.5 is added to the Harbors and Navigation Code, to read:

1157.5. On or before April 15, 2010, and annually thereafter, the board shall submit to the Secretary of the Senate, the Chief Clerk of the Assembly, and the Secretary of Business, Transportation and Housing a report describing the board's activities for the preceding calendar year. The report shall include, but not be limited to, all of the following:

(a) The number of vessel movements across the bar, on the bays, and on the rivers within the board's jurisdiction.

(b) The name of each licensed pilot, inland pilot, and pilot trainee, and the status of each person. If a person has had more than one status during the reporting year, each status and the length of time in that status shall be indicated. For the purposes of this section, "status" includes all of the following designations:

(1) Licensed and fit for duty.

(2) Licensed and not fit for duty.

(3) Licensed and on authorized training.

(4) Licensed and on active military duty.

(5) Licensed and on leave of absence.

(6) Licensed but license suspended.

(c) A summary of each report of misconduct or a navigational incident involving a pilot, inland pilot, or pilot trainee, or other matters for which a license issued by the board may be revoked or suspended. For those cases that have been closed, the summary shall include a description of findings made by the incident review committee and of the resulting action taken by the board. For those cases that are still under investigation, the summary shall include a description of the reported incident and an estimated completion date for the investigation. For those closed cases involving a pilot who has been involved in a prior incident where a finding of pilot error had been made, the report shall also include a summary of that incident.

SEC. 3. Section 1176 of the Harbors and Navigation Code is repealed.

SEC. 4. Section 1176 is added to the Harbors and Navigation Code, to read:

1176. (a) The board shall appoint a physician or physicians who are qualified to determine the suitability of a person to perform his or her duties as a pilot, an inland pilot, or a pilot trainee in accordance with subdivision (c).

(b) An applicant for a pilot trainee position or for a pilot or inland pilot license as well as a pilot or inland pilot seeking renewal of his or her license shall undergo a physical examination by a board appointed physician in accordance with standards prescribed by the board. Within 30 days prior to the examination, the applicant or licensee shall submit to the physician conducting the physical examination a complete list of all prescribed medications being taken by or administered to the applicant or licensee.

(c) On the basis of both the examination and an evaluation of the effects of the prescription medications named on the submitted list, the physician shall designate to the board whether or not the pilot, inland pilot, or pilot trainee is fit to perform his or her duties as a pilot, inland pilot, or pilot trainee.

(d) The license of a pilot or inland pilot shall not be renewed unless he or she is found fit for duty pursuant to subdivision (c).

(e) Whenever a pilot, inland pilot, or pilot trainee is prescribed either a new dosage of a medication or a new medication, or suspends the use of a prescribed medication, he or she shall, within 10 days, submit that

information to the board appointed physician having possession of the prescribed medication list submitted pursuant to subdivision (b). Whenever the physician receives the updated information, the physician shall determine whether or not the medication change affects the licensee's or trainee's fitness for duty. If the physician determines that the medication change results in the pilot, inland pilot, or pilot trainee being unfit for duty, the physician shall inform the board.

(f) The board may terminate a pilot trainee or suspend or revoke the license of a pilot or an inland pilot who fails to submit the prescribed medication information required by this section.

SEC. 5. (a) Section 1 of this bill shall only become operative if this bill is enacted and becomes effective on or before January 1, 2009, and Senate Bill 1627 is not enacted, in which case Section 2 of this bill shall not become operative.

(b) Section 2 of this bill shall only become operative if both this bill and Senate Bill 1627 are enacted and become effective on or before January 1, 2009, in which case Section 1 of this bill shall not become operative.

O

Enclosure 3

SB 1627, Chaptered

BILL NUMBER: SB 1627 CHAPTERED
BILL TEXT

CHAPTER 567
FILED WITH SECRETARY OF STATE SEPTEMBER 29, 2008
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AMENDED IN SENATE MAY 5, 2008
AMENDED IN SENATE APRIL 22, 2008
AMENDED IN SENATE APRIL 2, 2008

INTRODUCED BY Senator Wiggins
(Coauthor: Senator Alquist)
(Coauthors: Assembly Members DeVore, DeSaulnier, Evans, Huffman, and Lieber)

FEBRUARY 22, 2008

An act to amend Section 13975 of the Government Code, to amend Sections 1130, 1137, 1150, 1152, 1153, 1154, 1155, 1156, 1156.5, 1156.6, 1157, 1158, 1159, 1159.1, 1171.5, 1180.6, 1181, and 1182 of, and to add Sections 1117, 1157.1, 1157.2, 1157.3, 1157.4, 1159.5, 1195.1, 1195.3, 1196.1, and 1196.3 to, and to add and repeal Section 1159.4 of, the Harbors and Navigation Code, relating to pilot commissioners, and making an appropriation therefor.

LEGISLATIVE COUNSEL'S DIGEST

SB 1627, Wiggins. Board of Pilot Commissioners for the Bays of San Francisco, San Pablo, Suisun, and Monterey.

(1) Existing law provides for the regulation and licensing of pilots for the Bays of San Francisco, San Pablo, Suisun, and Monterey by the Board of Pilot Commissioners for the Bays of San Francisco, San Pablo, and Suisun. Under existing law, the board consists of 7 members who are appointed by the Governor, with the consent of the Senate. Existing law requires the board to appoint and license the number of pilots needed to carry out these provisions and requires the board to consider various factors in making this determination. Existing law specifies that the board has the sole authority to determine the qualifications and requirements for obtaining a pilot license, and it also authorizes the board to suspend or revoke licenses for misconduct, and it specifies procedures for that action. Existing law establishes various rights and duties of these pilots. Existing law provides for an administrative assistant/secretary of the board and assigns various duties to that position. Existing law also prescribes pilotage rates for vessels and requires vessels inward or outward bound to pay a specified rate of bar pilotage through the Golden Gate and into or out of the Bays of San Francisco, San Pablo, and Suisun, and vessels navigating the waters of Monterey Bay are also required to pay a specified rate. Under existing law,

there is a San Francisco Bar Pilot Pension Plan, and existing law specifies benefits, administration, eligibility, financing, and other matters relating to the operation of the plan. Existing law also imposes various surcharges for, among other things, pilot trainee training, pilot training, and board operations. Existing law authorizes the board to appoint an executive director who serves at the pleasure of the board.

This bill would revise and recast those provisions by making the board a part of the Business, Transportation and Housing Agency, to be renamed the Board of Pilot Commissioners for the Bays of San Francisco, San Pablo, and Suisun. The bill would eliminate the position of the administrative assistant/secretary and reassign its duties to the board. The bill would establish the position of an assistant director who is appointed by, and serves at the pleasure of, the Governor. The bill would make the Secretary of the Business, Transportation and Housing Agency an ex officio member of the board. The bill would also require the Secretary of the Business, Transportation and Housing Agency to act as the executive director during the absence of the executive director from the state or during a vacancy.

The bill would, until January 1, 2011, require that the Bureau of State Audits complete specified audits of the board by December 1, 2009, and January 1, 2010, respectively. The bill would also require the Business, Transportation and Housing Agency to provide comments and recommendations, if any, to the board and the Legislature based on the final audits by the Bureau of State Audits no later than 6 months from the date of the receipt of the audits. The bill would provide for reimbursement of the bureau's actual costs in conducting these audits to the extent that these costs are not covered by a legislative appropriation. The bill would make an appropriation of $350,000 for this purpose.

(2) Existing law provides for the appointment of a port agent by a majority of the licensed pilots subject to the approval of the board and assigns to the port agent various duties, including carrying out the orders of the board and other applicable laws and otherwise administering the affairs of the pilots.

This bill would specify additional duties of the port agent.

(3) Existing law authorizes the board to issue a subpoena for a witness in a case pending before the board. A witness who disobeys the subpoena is subject to a civil penalty of $100.

This bill would increase the civil penalty to $500.

(4) Existing law requires that a register of pilots appointed by the board be kept.

This bill would, instead, require the board to keep specified records of each pilot appointed and licensed by the board and would require pilots to provide the board with a notice of change of specified records within 30 days of the change. The bill would specify that personal information in the records is confidential and would require the board to establish procedures for access to that information. An agent of the board who, without authorization, willfully discloses confidential information is subject to a civil penalty not to exceed $2,500.

(5) Existing law authorizes an incident review committee to take certain action after full consideration of the evidence related to an incident, misconduct, or other matter for which a license may be revoked or suspended.

This bill would, instead, authorize the board, after full

consideration of the evidence, report, and recommendations from the incident review committee, to take certain action, including remanding the matter to the incident review committee for further investigation. The executive director would be required to notify the board of any pilot or inland pilot who fails, or refuses, to complete training, practice trips, or other corrective action imposed by the board.

(6) Existing law authorizes the revocation or suspension of a pilot or inland pilot license under specified circumstances.

This bill would, additionally, authorize the revocation or suspension of a license for a pilot's or inland pilot's failure or refusal to complete corrective action imposed by the board.

Appropriation: yes.

THE PEOPLE OF THE STATE OF CALIFORNIA DO ENACT AS FOLLOWS:

SECTION 1. The Legislature finds and declares that providing transparency and accountability to the Board of Pilot Commissioners is in the public interest and it is the intent of the Legislature to enhance, preserve, and continue the state's commitment to state licensure of pilotage on the Bays of San Francisco, San Pablo, and Suisun in order to ensure safe navigation, promote commerce, and protect the environment.

SEC. 2. Section 13975 of the Government Code is amended to read:

13975. The Business and Transportation Agency in state government is hereby renamed the Business, Transportation and Housing Agency. The agency consists of the State Department of Alcoholic Beverage Control, the Department of the California Highway Patrol, the Department of Corporations, the Department of Housing and Community Development, the Department of Motor Vehicles, the Department of Real Estate, the Department of Transportation, the Department of Financial Institutions, the Department of Managed Health Care, and the Board of Pilot Commissioners for the Bays of San Francisco, San Pablo, and Suisun; and the California Housing Finance Agency is also located within the Business, Transportation and Housing Agency, as specified in Division 31 (commencing with Section 50000) of the Health and Safety Code.

SEC. 3. Section 1117 is added to the Harbors and Navigation Code, to read:

1117. "Commission investigator" means a person employed by or under contract with the board and assigned to investigate and report on a navigational incident involving a vessel piloted by a pilot or inland pilot licensed by the board, or other matter, incident, misconduct, suspected safety violation, or other activity reported to, or identified by, the board.

SEC. 4. Section 1130 of the Harbors and Navigation Code is amended to read:

1130. (a) A majority of all of the pilots licensed by the board shall appoint one pilot to act as port agent to carry out the orders of the board and other applicable laws, and to otherwise administer the affairs of the pilots. The appointment is subject to the confirmation of the board.

(b) The port agent shall be responsible for the general supervision and management of all matters related to the business and official duties of pilots licensed by the board.

(c) The port agent shall immediately notify the executive officer

of the board of a suspected violation, navigational incident, misconduct, or other rules violation that is reported to him or her or to which he or she is a witness. The board shall adopt regulations for the manner and content of a notice provided pursuant to this section.

SEC. 5. Section 1137 of the Harbors and Navigation Code is amended to read:

1137. (a) The account required pursuant to Section 1136 shall show all of the following:

(1) The name of each vessel piloted.

(2) The name of the vessel's master.

(3) The name of each vessel for which pilotage has been charged or collected.

(4) The amount charged to or collected for each vessel.

(5) Any rebates made and allowed and for what amounts.

(6) Where the vessel is registered.

(7) The depth of each vessel's draft and its highest gross tonnage.

(8) Whether the vessel was inward or outward bound.

(b) The board shall record the accounts in full detail in a book prepared for that purpose. The account book is a public record.

SEC. 6. Section 1150 of the Harbors and Navigation Code is amended to read:

1150. (a) There is in the Business, Transportation and Housing Agency a Board of Pilot Commissioners for the Bays of San Francisco, San Pablo, and Suisun, consisting of seven members appointed by the Governor, with the consent of the Senate, as follows:

(1) Two members shall be pilots licensed pursuant to this division.

(2) Two members shall represent the industry and shall be persons currently engaged as owners, officers, directors, employees, or representatives of a firm or association of firms that is a substantial user of pilotage service in the Bay of San Francisco, San Pablo, Suisun, or Monterey, one of whom shall be engaged in the field of tanker company operations, and one of whom shall be engaged in dry cargo operations. The board of directors of a regional maritime trade association controlled by West Coast vessel operators that specifically represents the owners and operators of vessels or barges engaged in transportation by water of cargo or passengers from or to the Pacific area of the United States shall nominate, rank, and submit to the Governor the names of three persons for each category of industry member to be appointed.

(3) Three members shall be public members. Any person may serve as a public member unless otherwise prohibited by law, except that during his or her term of office or within the two years preceding his or her appointment, no public member appointed may have (A) any financial or proprietary interest in the ownership, operation, or management of tugs, cargo, or passenger vessels, (B) sailed under the authority of a federal or state pilot license in waters under the jurisdiction of the board, (C) been employed by a company that is a substantial user of pilot services, or (D) been a consultant or other person providing professional services who had received more than 20 percent in the aggregate of his or her income from a company that is a substantial user of pilot services or an association of companies that are substantial users of pilot services. Ownership of less than one-tenth of 1 percent of the stock of a publicly traded corporation is not a financial or proprietary interest in the ownership of tugs,

cargo, or passenger vessels.

(4) Notwithstanding any other provision of law, this chapter does not prohibit the Governor from notifying the nominating authority identified in paragraph (2) that persons nominated are unacceptable for appointment. Following that notification, the nominating authority shall submit a new list of nominees to the Governor, naming three persons, none of whom were previously nominated, from which the Governor may make the appointment. This process shall be continued until a person nominated by the nominating authority and satisfactory to the Governor has been appointed.

(b) Each of the members appointed pursuant to paragraphs (1) and (2) of subdivision (a) shall be appointed for a four-year term, and may not be appointed for more than two terms. Members appointed pursuant to paragraph (3) of subdivision (a) shall be appointed with staggered four-year terms with the initial four-year terms expiring on December 31 of the years 1988, 1990, and 1991, respectively, and a person may not be appointed for more than two terms. Vacancies on the board for both expired and unexpired terms shall be filled by the appointing power in the manner prescribed by subdivision (a).

(c) A quorum of the board members consists of four members. All actions of the board shall require the vote of four members, a quorum being present.

(d) The Secretary of the Business, Transportation and Housing Agency shall serve as an ex officio member of the board who, without vote, may exercise all other privileges of a member of the board.

SEC. 7. Section 1152 of the Harbors and Navigation Code is amended to read:

1152. (a) The public members of the board shall receive, as compensation for their services, the amount that the board may, from time to time, determine, which shall not exceed six hundred dollars ($600) each per month.

(b) The appointed members and employees of the board shall also be allowed necessary traveling and other verified expenses incurred by them in the performance of their duties.

SEC. 8. Section 1153 of the Harbors and Navigation Code is amended to read:

1153. (a) The board shall organize itself by electing a president, and shall provide offices in San Francisco or Alameda County, in which it shall meet once a month, and it may adjourn its regular meetings from time to time.

(b) Meetings of the board are subject to the Bagley-Keene Open Meeting Act (Article 9 (commencing with Section 11120) of Chapter 1 of Part 1 of Division 3 of Title 2 of the Government Code).

SEC. 9. Section 1154 of the Harbors and Navigation Code is amended to read:

1154. (a) The board is vested with all functions and duties relating to the administration of this division, except those functions and duties vested in the Secretary of Business, Transportation and Housing.

(b) The board's vested powers include the power to make and enforce rules and regulations that are reasonably necessary to carry out its provisions and to govern its actions. These rules and regulations shall be adopted in accordance with Chapter 3.5 (commencing with Section 11340) of Part 1 of Division 3 of Title 2 of the Government Code.

SEC. 10. Section 1155 of the Harbors and Navigation Code is amended to read:

1155. The president of the board may administer oaths in regard to any matter properly before it and he or she may issue subpoenas for witnesses in like cases. A witness disobeying the subpoena served on him or her shall incur a penalty of five hundred dollars ($500), for which judgment may be recovered by the board in a civil action. This section shall not apply to proceedings conducted in accordance with Chapter 5 (commencing with Section 11500) of Part 1 of Division 3 of Title 2 of the Government Code.

SEC. 11. Section 1156 of the Harbors and Navigation Code is amended to read:

1156. (a) The board may appoint, fix the compensation of, and from time to time adjust the compensation of, an executive director who is exempt from the civil service laws, and other employees as may be necessary. The executive director shall be well qualified for the position, with experience in government. The executive director may perform all duties, exercise all powers, discharge all responsibilities, and administer and enforce all laws, rules, and regulations under the jurisdiction of the board, with the approval of the board, including, but not limited to, all of the following:

(1) The administration of personnel employed by the board in accordance with the civil service laws.

(2) To serve as treasurer of the board and keep, maintain, and provide the board with all statements of accounts, records of receipts, and disbursements of the board in accordance with the law.

(3) The issuance and countersigning of licenses that shall also be signed by the president of the board.

(4) The administration of matters and the maintenance of files pertaining to action taken against licenses issued by the board.

(5) The administration of investigations of, and reporting on, a navigational incident or other matter for which a license issued by the board may be revoked or suspended.

(6) To work with board members, staff, and other interested stakeholders to recommend improvements in the pilot training program.

(7) Under the direction of the board, to coordinate with other state and federal agencies charged with protecting the environment and with the oil and hazardous chemical shipping industry.

(8) Any other function, task, or duty as may reasonably be assigned by the president of the board, including, but not limited to, performing research and obtaining documents and other evidence for board activities, including rate hearings.

(b) The Governor shall appoint one assistant director to serve at the pleasure of the Governor. The assistant director shall have the duties as assigned by the executive director, and shall be responsible to the executive director for the performance of his or her duties.

(c) The board may employ personnel necessary to carry out the purposes of this chapter. All personnel shall be appointed pursuant to the State Civil Service Act (Part 1 (commencing with Section 18000) of Division 5 of Title 2 of the Government Code), except for the executive director and the assistant director, who shall be exempt from state civil service. The board may fix the compensation of, and from time to time adjust the compensation of, any employees as may be necessary.

(d) All personnel of the board shall be appointed, directed, and controlled by the board, the executive director, or the board's authorized deputies or agents to whom it may delegate its powers.

(e) The board may contract and employ commission investigators. The board shall adopt regulations for the minimum standards for a commission investigator that shall include, but are not limited to, a basic knowledge of investigative techniques and maritime issues.

SEC. 11.5 Section 1156.5 of the Harbors and Navigation Code is amended to read:

1156.5. (a) The executive director shall serve at the pleasure of the board and shall be under the direct supervision of the board. The term of office to which the executive director is appointed is five years.

(b) The Secretary of Business, Transportation and Housing, or his or her designee, shall act as the executive director during the absence from the state or other temporary absence, disability, or unavailability of the executive director, or during a vacancy in that position.

SEC. 12. Section 1156.6 of the Harbors and Navigation Code is amended to read:

1156.6. (a) Whenever suspected safety standard violations concerning pilot hoists, pilot ladders, or the proper rigging of pilot hoists or pilot ladders are reported to the board, the executive director shall assign a commission investigator to personally inspect the equipment for its compliance with the relevant safety standards promulgated by the United States Coast Guard and the International Maritime Organization. The commission investigator shall report preliminary conclusions, including an assessment of the equipment's compliance with the relevant safety standards, to the executive director as soon as possible. If, in the preliminary report, the equipment is found to be in violation, or in likely violation in the opinion of the commission investigator, of the relevant safety standards, the executive director shall immediately alert the Coast Guard Marine Safety Office. The commission investigator shall submit a written report to the incident review committee as established by subdivision (a) of Section 1180.3 that shall remain confidential until reported to the board. The incident review committee, in turn, shall report its findings and recommendations, if any, to the board. The board shall receive the incident review committee's findings, which may include other reports, information, or statements from interested parties. The board shall specify, by regulation, the information that shall be contained in the report.

(b) This section applies to the pilotage grounds, as defined in Section 1114.5. Whenever a vessel passes outside of the pilotage grounds, the commission investigator's report shall include that fact along with a description of the incident.

(c) The record of the investigation and the board's findings and recommendations, if any, shall be a public record maintained by the board.

SEC. 13. Section 1157 of the Harbors and Navigation Code is amended to read:

1157. The board shall keep a written record of all the board's proceedings and acts.

(a) The board shall also keep a complete record of each pilot appointed and licensed by the board that includes at a minimum, his or her current mailing address, residence, the date of the initial issuance and renewal of the license, the date of completion for initial and any subsequent training, and a record of any reports of meritorious activities, commendation, misconduct, safety violations,

or other incidents or information related or relevant to the issuance and use of his or her pilot license.

(b) All pilots or inland pilots licensed by the board shall provide the board with written notice of any change of name, mailing address, or residence within 30 days of that change in a manner prescribed by the board.

SEC. 14. Section 1157.1 is added to the Harbors and Navigation Code, to read:

1157.1. (a) Except as provided in Section 1157.4, all records of the board relating to the personal information of a pilot, collected pursuant to subdivision (b) of Section 1157, are confidential and shall not be open to public inspection.

(b) For purposes of this section, "personal information" means information, other than the name and mailing address, that identifies an individual, including an individual's photograph, social security number, address, telephone number, and medical or disability information, but does not include other information related to licensing such as incidents, rules or safety violations, misconduct, training records, commendations, and license status.

SEC. 15. Section 1157.2 is added to the Harbors and Navigation Code, to read:

1157.2. The board shall establish procedures for access to confidential or restricted information from its records to protect the confidentiality of its employees and licensees. If confidential or restricted information is released to an agent of a person authorized to obtain information, the person shall require the agent to take all steps necessary to ensure confidentiality and prevent the release of information to a third party. An agent shall not obtain or use confidential or restricted records for any purpose other than the reason the information was requested.

SEC. 16. Section 1157.3 is added to the Harbors and Navigation Code, to read:

1157.3. A member of the board, the executive director, the assistant director, or an employee of the board who willfully discloses confidential information from the board record to a person not authorized to receive it shall be liable for a civil penalty not to exceed two thousand five hundred dollars ($2,500) for each violation, which may be assessed and recovered in a civil action.

SEC. 17. Section 1157.4 is added to the Harbors and Navigation Code, to read:

1157.4. Upon a request to the board by a federal, state, or local law enforcement agency, the executive director shall make available to the requesting agency any information contained in the board's records.

SEC. 18. Section 1158 of the Harbors and Navigation Code is amended to read:

1158. The public members, the executive director, the assistant director, and employees of the board shall not engage in an employment, activity, or enterprise that is clearly inconsistent, incompatible, in conflict with, or inimical to his or her duties as a state officer or employee or make, participate in making, or attempt to use his or her official position to in any way influence a governmental decision in which he or she knows or has reason to know that he or she, or any member of his or her immediate family, has a financial interest.

SEC. 19. Section 1159 of the Harbors and Navigation Code is amended to read:

1159. (a) All moneys received by the board pursuant to the provisions of any law shall be accounted for at the close of each month to the Controller in the form that the Controller may prescribe and, at the same time on the order of the Controller, all these moneys shall be paid into the State Treasury to the credit of the Board of Pilot Commissioners' Special Fund.

(b) Notwithstanding Section 13340 of the Government Code, the moneys deposited in the State Treasury to the credit of the Board of Pilot Commissioners' Special Fund are appropriated without regard to fiscal years for the payment of the compensation and expenses of the board and its officers and employees.

SEC. 20. Section 1159.1 of the Harbors and Navigation Code, as added by Section 9 of Chapter 1423 of the Statutes of 1990, is amended to read:

1159.1. (a) The vessel shall pay a board operations surcharge, the purpose of which is to fully compensate the board and the Business, Transportation and Housing Agency for the official services, staff services, and incidental expenses of the board and agency. The amount of the surcharge shall be 7.5 percent of all pilotage fees charged by pilots and inland pilots, pursuant to Sections 1190 and 1191 unless the board establishes, with the approval of the Department of Finance, a lesser percentage, not to exceed any percentage consistent with subdivision (d).

(b) The surcharge shall be billed and collected by the pilots and inland pilots. The pilots and inland pilots shall pay all surcharges collected by them to the board monthly or at such later time as the board may direct.

(c) The board shall quarterly review its ongoing and anticipated expenses and adjust the surcharge to reflect any changes which have occurred since the last adjustment.

(d) The board operations surcharge shall not represent a percentage significantly more than that required to support the board and any costs of the Business, Transportation and Housing Agency related to the administration of the board pursuant to subdivision (a) in addition to the maintenance of a reasonable reserve.

SEC. 21. Section 1159.4 is added to the Harbors and Navigation Code, to read:

1159.4. (a) The Bureau of State Audits by January 1, 2010, shall complete a comprehensive performance audit of the Board of Pilot Commissioners, and by December 1, 2009, shall complete a comprehensive financial audit of the Board of Pilot Commissioners pursuant to Chapter 6.5 (commencing with Section 8543) of Division 1 of Title 2 of the Government Code.

(b) (1) The actual costs incurred by the Bureau of State Audits in conducting the audits required pursuant to this section shall be paid out of the operations surcharge collected pursuant to Section 1159.1.

(2) The Bureau of State Audits shall apprise the board of the estimated costs of each of the two audits prior to initiating each audit.

(3) Notwithstanding subdivision (d) of Section 1159.1, the board shall make surcharge adjustments pursuant to subdivision (c) of Section 1159.1, as necessary, to comply with this section. The actual costs incurred in conducting audits required by this section shall be considered official services and shall include the staff services and incidental expenses of both the board and the bureau.

(4) The board shall reimburse the Bureau of State Audits for the

actual costs incurred in conducting the audits required by this section. Reimbursement shall be made upon a demonstration by the bureau that any costs incurred in conducting the audits were not otherwise covered by an appropriation made by the Legislature for this purpose. If needed, these costs may be reimbursed through an interagency agreement between the board and the Bureau of State Audits.

(c) This section shall remain in effect only until January 1, 2011, and as of that date is repealed, unless a later enacted statute, that is enacted before January 1, 2011, deletes or extends that date.

SEC. 22. Section 1159.5 is added to the Harbors and Navigation Code, to read:

1159.5. The Business, Transportation and Housing Agency shall provide comments and recommendations, if any, to the board and the Legislature based on the final audits of the Bureau of State Audits completed pursuant to Section 1159.4 no later than six months from the date that the agency receives the final audit.

SEC. 23. Section 1171.5 of the Harbors and Navigation Code is amended to read:

1171.5. (a) The board shall adopt, by regulation, licensing standards that equal or exceed standards for obtaining federal endorsements and that conform with and support the state policy specified in Sections 1100 and 1101.

(b) The board shall adopt reasonable rules and regulations that require pilots to be qualified to perform all pilot duties.

(c) The board shall adopt, by regulation, training standards and a training program for pilots, inland pilots, and pilot trainees. In the case of pilot trainees, the training program shall be for a minimum of one year and a maximum of three years. In the case of pilots and inland pilots, the board shall specify the type, nature, duration, and frequency of the training required and the identity of the pilots or inland pilots who are required to undergo training in the next 12-month period. Pursuant to Section 1182, the license of a pilot or inland pilot may be revoked or suspended if he or she fails to complete the training required by this subdivision during the period specified. The board shall also require that an evaluation of the pilot's or inland pilot's performance be prepared by the institution selected by the board to provide pilot training, and the institution shall provide copies of the evaluation to the pilot or inland pilot and to the pilot evaluation committee.

(d) The board shall adopt, by regulation, the qualifications, standards, and rating criteria for admission of pilot trainees to the training program. Notwithstanding subdivision (f), the board shall administer and conduct the pilot trainee admission selection in accordance with the regulations for admission.

(e) The board shall establish a pilot evaluation committee consisting of five active pilots who each have at least 10 years' experience as a pilot on the Bays of San Francisco, San Pablo, and Suisun. The board shall select the members of the pilot evaluation committee. A member may not serve for more than two four-year terms, except that two of the initial members appointed to the pilot evaluation committee shall serve terms of two years.

(f) The pilot evaluation committee shall conduct and supervise the pilot training programs pursuant to the direction and regulation of the board and consistent with the intent of this division.

(g) The board shall issue a certificate of completion to each

pilot trainee who satisfactorily completes the training program. The board shall not issue a pilot's license to any person who does not receive a certificate of completion of the training program from the board, although the board may refuse to issue a pilot license to a pilot trainee who has received this certificate.

(h) The training and continuing education programs for pilots, inland pilots, and pilot trainees shall be funded from revenues collected for these purposes as determined by the board pursuant to Sections 1195 and 1196 and deposited into the Board of Pilot Commissioners' Special Fund pursuant to Section 1159.

SEC. 24. Section 1180.6 of the Harbors and Navigation Code is amended to read:

1180.6. (a) The board, after full consideration of the evidence, report, and recommendations presented by the incident review committee relating to an incident, misconduct, or other matter pursuant to Section 1180.3, shall take one or more of the following actions:

(1) Serve an accusation for suspension or revocation of the pilot's or inland pilot's license on the pilot or inland pilot, as provided in Chapter 5 (commencing with Section 11500) of Part 1 of Division 3 of Title 2 of the Government Code, pursuant to Sections 1181 and 1182.

(2) Enter into a written stipulation for corrective action to be performed by the pilot or inland pilot, which may include, but is not limited to, further training or supervised practice trips.

(3) Provide counseling for the pilot or inland pilot relating to the duties and obligations of a pilot.

(4) Issue a warning letter of reprimand to the pilot or inland pilot.

(5) Take any other action, as provided in the guidelines adopted pursuant to subdivision (e).

(6) Close the investigation without further action.

(7) Remand the matter to the incident review committee for further investigation.

(b) Action required pursuant to subdivision (a) shall be taken by a majority vote of the board.

(c) A member of the board shall not sit on the board as a trier of fact for those cases in which he or she has served on the incident review committee recommending action to the board.

(d) The executive director shall note any action taken by the board pursuant to this section in a pilot's or inland pilot's record and shall establish a suspense file to ensure that all training, practice trips, or other corrective action required to be performed pursuant to subdivision (a) by the pilot or inland pilot are completed as required. The executive director shall report to the board each month on the progress of any training, supervised practice trips, or other corrective action or the completion of any other action required pursuant to subdivision (a).

(e) The executive director shall notify the board of a pilot or inland pilot who fails, or refuses, to complete training, practice trips, or other corrective action imposed by the board pursuant to subdivision (a). If the board determines that the pilot or inland pilot has intentionally failed to complete training, practice trips, or other corrective action, the board may take additional action as specified in subdivision (a).

(f) The board shall adopt guidelines for the determination by the

incident review committee of the action to be taken pursuant to subdivision (a) at the completion of an investigation conducted pursuant to Section 1180.3.

SEC. 25. Section 1181 of the Harbors and Navigation Code is amended to read:

1181. The license of a pilot or inland pilot may be revoked or suspended before its expiration only for reasons of misconduct, which shall include, but not be limited to, the following:

(a) Neglect, for 30 days after it becomes due, to render an account to the board of all money received for pilotage.

(b) Neglect, for 30 days after it becomes due, to pay over to the board the percentage of all pilotage money received, as set by the board.

(c) Rendering to the board a false account of pilotage received.

(d) Absence from duty for more than one month at any one time without leave granted by the board, unless sickness or personal injury causes the absence. This subdivision does not apply to inland pilots.

(e) Refusing to exhibit the pilot or inland pilot license when requested to do so by the master of any vessel boarded.

(f) Intoxication or being under the influence of any substance or combination of substances that so affects the nervous system, brain, or muscles as to impair, to an appreciable degree, the ability to conduct the duties of a pilot or inland pilot while on duty.

(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. However, this subdivision does not apply to a vessel of less than 300 gross tons unless a pilot or inland pilot is required by law.

(h) Willful violation of the rules and regulations adopted by the board for the government of pilots or inland pilots.

(i) Inability to comply with the standards of health or physical condition requisite to the duties of a pilot or inland pilot, but in that case the burden of proving compliance with these standards is upon the licensee, unless prior to the hearing the licensee takes and passes those tests or examinations required by the board.

(j) Failure or refusal, to complete training, practice trips, or other corrective action imposed on that pilot or inland pilot by the board pursuant to Section 1180.6.

SEC. 26. Section 1182 of the Harbors and Navigation Code is amended to read:

1182. If, after a hearing, the board finds that the pilot or inland pilot is guilty of misconduct sufficient for deprivation of the license, the board shall revoke or suspend the license of the pilot or inland pilot. The order shall be entered in the minutes and placed in the record of the pilot maintained pursuant to Section 1157. The proceedings shall be conducted in accordance with Chapter 5 (commencing with Section 11500) of Part 1 of Division 3 of Title 2 of the Government Code, and the board shall have all the powers granted pursuant to that chapter.

SEC. 27. Section 1195.1 is added to the Harbors and Navigation Code, to read:

1195.1. (a) The moneys charged and collected each month from the pilot trainee surcharge pursuant to Section 1195 shall be paid to the Board of Pilot Commissioners' Special Fund pursuant to Section 1159. The moneys shall be used only to fund the pilot trainee training program referred to in subdivision (h) of Section 1171.5 and Section

1195.3.

(b) Information regarding moneys remitted to the Board of Pilot Commissioners' Special Fund pursuant to Section 1159 collected from the surcharge authorized pursuant to Section 1195, or otherwise collected by the board for that purpose, and information regarding moneys spent as pilot trainee training program expenses authorized by Section 1195.3 shall be made available to the public upon request and to the board or its finance committee.

SEC. 28. Section 1195.3 is added to the Harbors and Navigation Code, to read:

1195.3. Expenses of the pilot trainee program shall include all costs incurred by the board in the operation and administration of the pilot trainee training program and all costs resulting from any contracts entered into for the purchase or lease of goods and services required by the board, including, but not limited to, the costs of testing, test preparation, advertising and soliciting for trainee applicants, trainee stipends, worker's compensation insurance premiums, reimbursement of costs of services provided to the board by other governmental entities, and for the costs for any other goods and services necessary for effectuating the purposes of training as determined by the board.

SEC. 29. Section 1196.1 is added to the Harbors and Navigation Code, to read:

1196.1. (a) The moneys charged and collected each month from the pilot and inland pilot continuing education surcharge pursuant to Section 1196 shall be paid to the Board of Pilot Commissioners' Special Fund pursuant to Section 1159. The moneys shall be used only to fund the pilot and inland pilot continuing education program referred to in subdivision (h) of Section 1171.5 and Section 1196.3.

(b) Information regarding moneys remitted to the Board of Pilot Commissioners' Special Fund pursuant to Section 1159 collected from the surcharge authorized pursuant to Section 1196, or otherwise collected by the board for that purpose, and information regarding moneys spent as pilot and inland pilot continuing education expenses authorized by Section 1196.3 shall be made available to the public upon request and to the board or its finance committee.

SEC. 30. Section 1196.3 is added to the Harbors and Navigation Code, to read:

1196.3. Pilot and inland pilot continuing education expenses shall include all costs incurred by the board in the operation and administration of the pilot and inland pilot continuing education program and all costs resulting from any contracts entered into for the purchase or lease of goods and services required by the board, including, but not limited to, the reimbursement of costs of services provided to the board by other governmental entities, and for the costs for any other goods and services necessary for effectuating the purposes of continuing education as determined by the board.

SEC. 31. The sum of three hundred fifty thousand dollars ($350,000) is hereby appropriated from the operations surcharge collected pursuant to Section 1159.1 of the Harbors and Navigation Code to the Bureau of State Audits for the purpose of reimbursing the bureau for conducting the audits required pursuant to subdivision (a) of Section 1159.4 of the Harbors and Navigation Code.

Enclosure 4

Advance Agenda of November 6-7, 2008
Regional Meeting of Pilot Commissions

MEETING NOTICE

REGIONAL MEETING

Oregon Board of Maritime Pilots

Board of Pilot Commissioners for the Bays of San Francisco, San Pablo & Suisun – California

Washington Board of Pilot Commissioners

Alaska Board of Marine Pilots

Pacific Pilotage Authority – British Columbia

WHERE:

Port of Portland Commission Room

121 N.W. Everett

Portland Oregon

November 6-7, 2008

8:30 a.m.

If you would like to receive any of the documents referenced in this agenda, please contact the Board's office. This meeting is being held in a facility that is accessible for persons with disabilities. If you need some form of assistance to participate in this meeting due to a disability, please notify the Administrator at 971-673-1530 at least two working days prior to the meeting.

REGIONAL MEETING
NOVEMBER 6-7, 2008
ADVANCE AGENDA

November 6

8:30	Introductions by each Authority	
10:30	Break	
10:45	Navigation Technology	COLRIP Presentation Mike Miller, Pres., Board of Pilot Commissioners, S.F.
11:30	Zero Tolerance	Discussion All
12:00	Lunch	Phil Cummings, BMC, USCG - Presentation on the NVIC 04-08
1:30	Cosco Busan Update	Mike Miller, Pres., Pat Maloney, Exec. Dir., Board of Pilot Commissioners, S.F.
2:15	Best Practices for State Pilot Commissions in Preparing for and Responding to Major Marine Incidents	Paul Kirchner, Exec. Dir., American Pilots Association
2:45	Break	
3:00	Pilot Liability	Kevin Davis, Attorney at Law
4:00	Criminalization of the Marine Sector	Kevin Obermeyer, Pres. & CEO, Pacific Pilotage Authority, CA
4:30	Adjourn	

November 7

8:30	Ratemaking Process	Discussion All
9:15	Incident Review Process	Discussion All
10:15	Break	
10:30	Training & Continued Professional Development	Manned Model Evaluation Trip Report – Oregon Board of Maritime Pilots Pilot Assessments & Training – Kevin Obermeyer
11:30	Pilot Safety	Discussion All

12:30	Lunch Break	
2:00	Vessel Exemption Process	Discussion All
3:00	Wrap up discussion Adjourn	Possible mechanisms for communication among the Boards

APPENDIX 1

BOARD OF PILOT COMMISSIONERS
INCIDENT REVIEW COMMITTEE REPORT:
M/V COSCO BUSAN - CAPT. JOHN COTA
NOVEMBER 7, 2007

APPENDIX 1:
WITNESS INFORMATION

I. PILOTS ON BOARD OTHER VESSELS ON MORNING OF NOVEMBER 7, 2007

A. Capt. Lobo
B. Capt. Gates
C. Capt. Gans
D. Capt. Dohm
E. Capt. Villas
F. Capt. S. Teague

II. PILOTS ON BOARD *M/V COSCO BUSAN* DURING NOVEMBER 2007 CALL ON SAN FRANCISCO

A. Capt. Nyberg
B. Capt. Hoburg
C. Capt. Atthowe
D. Capt. Kelso
E. Capt. Carlier

III. WITNESSES FROM OTHER VESSELS ON BAY DURING MORNING OF NOVEMBER 7, 2007

A. Capt. Coney
B. Capt. McNamara
C. Operator Albernez

IV. OTHER WITNESSES

A. Capt. McIsaac

V. OTHER AVAILABLE WITNESS INFORMATION

In addition to the witnesses above, the IRC had access to interview transcripts released by the National Transportation Safety Board. These include tr4anscripts of interviews of Capt. John Cota, and various VTS personnel. The IRC could not obtain any meaningful access to any of the crew members of the *M/V COSCO BUSAN.*

APPENDIX 2

BOARD OF PILOT COMMISSIONERS
INCIDENT REVIEW COMMITTEE REPORT:
M/V COSCO BUSAN - CAPT. JOHN COTA
NOVEMBER 7, 2007

APPENDIX 2:
CAPTAIN COTA'S PRE-*COSCO BUSAN* INCIDENT RECORD

Captain Cota was first licensed as a state pilot in 1981. Due to changes in the Board's incident investigation and reporting practices, incident summaries are substantially more detailed and structured for incidents investigated since establishment of the Incident Review Committee in 1993 than for those investigated before its establishment.

INCIDENT INVESTIGATION REPORTING PROCEDURES

The Incident Review Committee (IRC) and the current procedures for investigating piloting incidents were established by statute in 1993. The IRC's responsibilities include investigating and reporting to the full Pilot Commission all reports of misconduct or navigational incidents involving a vessel piloted by a pilot licensed by the Commission.

Written guidelines for the conduct and reporting of investigations by the IRC and for determining appropriate corrective action are found at Title 7, California Code of Regulations (CCR), Section 210. When a vessel with an assigned pilot or inland pilot on board is involved in a navigational incident, including, but not limited to, "all incidents involving the grounding of a vessel, the striking of any object or injury or damage to persons or property" the pilot or inland pilot is required to report the incident. 7 CCR Section 219(g) and (h). Failure to report an incident can result in disciplinary action.

Before 1993, piloting incidents were investigated by one of the Commission members. The investigations were less structured and the results were generally reported orally to the Commission, leaving a relatively sparse record. There were no statutory or regulatory provisions or written guidelines for determining appropriate corrective action, or requiring a clear determination of whether pilot error was involved unless the incident resulted in the filing of an accusation seeking suspension or revocation of the pilot's license.

For incidents that did not result in the filing of an accusation, most were closed with a terse notation in the Board's minutes of "pilot counseled, case closed." That notation appears to have been used both for incidents involving relatively minor pilot error, as well as for incidents in which there was no pilot error but which appeared to provide an opportunity for counseling on means to avoid a similar incident.

CAPTAIN COTA's INCIDENT HISTORY BEFORE 1993

In the 13 years before the establishment of the IRC, Captain Cota was involved in a total of eight incidents. Three appeared to involve relatively minor damage during docking or undocking. One involved a flat tow (the movement of a ship without the aid of its engines) in which the ship's hull was dented when set down on a pier face by wind. One involved striking a submerged object in the channel off Potrero Point. One involved an anchor that fouled an underwater phone line in the vicinity of a terminal. One involved a soft grounding when there was poor response from the ship. One was a report of wake damage by a moored vessel. It is not possible from the sparse record to determine accurately how many of these involved some level of pilot error. The last of these incidents was in 1991.

The precise number of ship movements each pilot made was not tracked. But using averages, Captain Cota would have acted as pilot on an estimated 1500 ship movements between the time he was first licensed and the incident in 1991. The above incident record would equate to an incident-free rate of about 99.5%.

COTA INCIDENT HISTORY SINCE 1993

Since its establishment in 1993 (and before the COSCO BUSAN allision), the IRC investigated four navigational incidents involving Captain Cota, and one

incident on board the USS TARAWA, which was treated as a medical issue. Those incidents are summarized below:

A. 23 April 1997 - MARE CASPIUM - *Allision* with gantry crane at Oakland 37

- IRC finding: "Minor pilot error - positioning of crane contributed to incident."

The inbound, 642-foot long container ship MARE CASPIUM was being handled by a pilot trainee under Captain Cota's supervision. The ship's intended berth was in an exposed area of the Oakland Outer Harbor and onshore winds were of sufficient strength to make the docking challenging.

On the ship's final approach to the berth, a gust of wind pushed her bow in about two degrees from parallel, causing light contact between the cap rail and two containers on the ship and the outboard legs of the gantry crane. The contact was so light that none of the officers on the ship felt it or were otherwise aware of it until notified by shoreside personnel.

Damage was deemed primarily cosmetic and consisted of a one-inch gouge on the cap rail requiring only touch up paint, a one foot long 3" by 1" gouge on the interior corners of the crane's outboard legs (estimated repair costs were $2,500) and a slight indentation to two containers. The damage did not result in any downtime for either the crane or the containers.

The Commission directed that a letter be written to the terminal operator advising that the Commission had concluded that the crane's position had contributed to the incident and recommending that cranes be moved away from the intended berth before a ship's arrival.

B. 15 July 2002 - M/V CHIMBORAZO – "*allision* with Amorco wharf"

– IRC finding: "No pilot error."

As the CHIMBORAZO was preparing to depart her berth, the ship's crew was taking in her mooring lines when one of the lines caught first on a metal strip on the pier and then on a pipe cover. The stern of the ship landed on the pier during the attempt by the crew to haul in the line (using the mechanical power of a winch) and the pilot's attempt to reduce the strain on the line. The hard landing jarred loose some outboard planking on the pier.

As was the case in the MARE CASPIUM incident, a number of forces are at play during a vessel's docking and undocking. In addition to wind and current, these forces can include those caused when a mooring line is being hauled in with the use of the ship's winches. If a line happens to foul (catch on a piece of equipment) and the crew is not immediately aware of it or does not respond quickly enough, it can cause the vessel to be pulled back against the dock.

During a vessel's undocking, the pilot may request that mooring lines be brought aboard in a particular order but oversight of the crew involved in line-handling is ordinarily left to the ship's officers. If the pilot becomes aware of a line coming under tension such as happened here, he or she may use the ship's engine or one of the tugs to try to ease that tension so that the line can be freed and brought aboard. If there is a possibility of a line in the water anywhere near the propeller, the pilot may not be able to use the ship's engine in response until that line has been cleared.

Here Captain Cota used a tug to help ease the tension on the fouled mooring line. It appears this would have been successful if the crew had stopped heaving in on the line. The IRC found no pilot error.

C. 6 October 2002 - M/V GINGA KITE - *vessel interaction* with moored tanker (ALLEGIANCE) at Avon Terminal

- IRC finding: "No attributable pilot error."

As used in this investigation, the term "vessel interaction" refers to the hydraulic effect on a moored vessel caused by the displacement of water as another vessel passes nearby. It does not involve any contact between the two vessels. The degree of vessel interaction will vary with a number of factors, including the number, elasticity and condition of the mooring lines on the moored vessel and how well those lines are being tended, as well as the size, speed and proximity of the passing vessel and the depth and contour of the navigation channel.

Here, both the moored vessel and the passing vessel had left before the matter was brought to the IRC's attention. The report of the incident came from the terminal operator, not the vessel that had been moored. There had been no damage to the terminal or the moored vessel, but the terminal operator reported that the passage of the GINGA KITE had caused the moored tanker to move more than two feet from the dock, requiring a temporary shut down of transfer operations in accordance with local regulations.

Based on the information that was available, the IRC determined that the GINGA KITE had passed another vessel moored at a terminal a half mile downstream from the ALLEGIANCE at Half Ahead (8 knots) with no observed effects on that moored vessel. GINGA KITE passed the

ALLEGIANCE five minutes later, still at Half Ahead. She was stemming a 0.8 kt. current. Under the circumstances, the IRC felt that her speed did not seem excessive, noting:

> "The fact that a relatively small vessel (485 ft) caused a much larger vessel to move a modest distance (4 ft) off the berth tends to indicate that the moored vessel may have had breast lines that were not tight enough or were too elastic."

Consistent with using the investigation report as an opportunity to remind pilots of means to reduce the risk of similar incidents, the IRC also noted: "Regardless of causes of this incident, pilots should pay close attention to potential vessel interaction situations and proceed at minimum speeds consistent with good vessel maneuverability."

The term "No attributable pilot error" has been used by the IRC when the available evidence does not support a finding of pilot error but for one reason or another, corroborating information on some issues was unavailable and the circumstances did not warrant keeping the file open to obtain additional information.

In this instance, the speed at Half Ahead stemming a 0.8 knot current did not appear excessive for the circumstances. The piloted vessel passed another moored vessel and a dredge at the same speed and in the same general vicinity with no apparent adverse effects.

No damage was done to the ALLEGIANCE, the berth, the mooring lines or the cargo transfer hoses. The moored vessel stopped cargo operations during the passing, as would be good practice, given the vessel's exposed position only 100 yards from the main shipping channel.

Subsequent vessel calls at this terminal reportedly have required extra mooring lines.

D. USS TARAWA 09 October 2004 -

- IRC Finding: Treated as a medical issue

Captain Cota's reportedly irrational and offensive behavior as pilot of a Naval vessel was treated as a medical issue. He was ultimately found fit for duty (FFD) following evaluation by two psychiatrists (one retained by the Commission, one he retained), and after a trial period, was returned to unrestricted duty in August 2005.

The IRC commenced its investigation when the Port Agent reported what was reported to him to be irrational and/or unprofessional conduct by Captain Cota prior to and after boarding the USS TARAWA at the offshore pilot station for an inbound trip to the San Francisco waterfront.

Captain Cota had reportedly asked the crew to remove a tag line (used by the crew to hoist the pilot ladder when not in use), which is not permitted on commercial ships and which was deemed a safety hazard by the pilot. When the crew refused, he cut it off with a pocketknife. Once aboard the ship, Captain Cota reportedly used offensive and derogatory language with the TARAWA's captain and crew ("What are you trying to do, kill a **** pilot?").

Captain Cota was reported to have docked the ship safely under challenging environmental conditions, thus his ship handling was not considered to be in issue.

The IRC treated the matter as a medical issue as it did not appear to fit into any definition of "misconduct" in Harbors and Navigation Code (HNC) Section 1181. The Port Agent removed Captain Cota from normal assignment rotation until his fitness for duty could be assessed.[1]

Evaluations and testing were conducted by both Captain Cota's own physicians, including a psychiatrist, and by Board-retained physicians (including an examining physician on the Board's approved list and a Qualified Medical Evaluator in Psychiatry). Additionally, Captain Cota underwent extensive psychological testing by a licensed psychologist.

In the opinion of each of the physicians who examined him, Captain Cota was found to have met the requisite physical and mental fitness standards applicable to state-licensed pilots

Following a period of re-entry and completion of a 5-month trial of performing duties without further incident, the matter was closed with a "letter of concern" issued to Captain Cota in August 2005 by the IRC. Among other things the letter noted: "While the IRC has treated this incident as a medical issue, it has informed you that the conduct described by the captain and officers of the TARAWA was, in the IRC's view, unprofessional and had the potential of distracting the bridge team from the safe navigation of the vessel." The letter of concern was made a part of Captain Cota's file with the Board.

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[1] The Port Agent's duties are described in Section 218 of the Board's regulations, and include the assignment of pilots to ships and to report to the Board matters which affect the ability of a pilot to carry out his or her duties. Title 7, Calif. Code of Regulations, Section 218.

Most of the information as to what transpired on board the TARAWA came from e-mails and witness statements provided by the Navy. The captain of the TARAWA was interviewed by phone, but most of the witnesses were not interviewed in person. Captain Cota disputed some aspects of those statements and believed his conduct to have been understandable given what he felt to be a safety issue.

To place this in context, pilot ladder incidents involving serious injuries and a number of deaths have been of significant concern to pilots worldwide. Several years prior to this incident, the San Francisco Bar Pilots had been instrumental in having a state law passed requiring the IRC to investigate reports of pilot ladder violations. Captain Cota had reportedly participated in that effort.

While Captain Cota's safety concerns regarding the tag lines found on the TARAWA's pilot ladder did not excuse the unprofessional conduct reported by witnesses in this case, it did provide a mitigating factor.

E. 20 Feb. 2006 - M/V PIONEER *grounding* in New York Slough

- IRC Finding: issued letter of reprimand noting loss of situational awareness.

Captain Cota piloted a 730 ft single screw gypsum carrier with twin rudders from Anchorage 9 to Domtar Terminal, located on the Sacramento River in Antioch. Two tugs were made up to assist in maneuvering through New York Slough. Flood current was 0.9 kts.

The ship proceeded at Dead Slow Ahead, speed 6 kts over the ground. Approaching Light 10 in the East Reach, Captain Cota ordered a turn to port

for a 26 degree bend in the channel. The vessel did not turn as fast as the bend due to the slow speed and following current and grounded gently in the mud at the starboard bow. The vessel's bow was refloated after allowing another vessel to pass, and proceeded to terminal uneventfully.

There were several mitigating circumstances to this soft grounding of the bow in the mud at the edge of a channel in a river bend. The vessel was difficult to steer at slow speeds due to the unusual rudder configuration. The bend in the river at 26 degrees was a significant turn. The vessel had a following 0.9 knot current, adding to the steering difficulty. The pilot was proceeding at Dead Slow Ahead, the slowest the vessel could go and still have steerageway. With the following current, the vessel was making six knots. The vessel was being followed by another ship. The vessel was refloated without damage or delay after the trailing ship passed.

Nevertheless, the IRC concluded that the pilot had ample resources to safely maneuver the vessel through New York Slough. It felt that he should have been able to recognize more quickly that the vessel would not be able to make the turn unassisted and therefore did not take timely corrective action. It therefore issued a Warning Letter of Reprimand.

By November 2007, as Captain Cota prepared to pilot the COSCO BUSAN, the IRC estimated that Captain Cota had piloted in excess of 3400 ships over the course of his career. Thus up to the time of the COSCO BUSAN, over 99.6% of his transits would have been incident-free.

APPENDIX 3

BOARD OF PILOT COMMISSIONERS
INCIDENT REVIEW COMMITTEE REPORT:
M/V COSCO BUSAN - CAPT. JOHN COTA
NOVEMBER 7, 2007

APPENDIX 3:
COSCO BUSAN IRC/NTSB PARTICIPATION

DATE	*EVENT*
November 7, 2007 Wednesday	*M/V COSCO BUSAN* allides w/ San Francisco-Oakland Bay Bridge Board of Pilots ("BOP") advised by Port Agent of allision. Executive Director visits San Francisco Bar Pilot's ("SFBP") office and is briefed by Port Agent.
November 8, 2007 Thursday	R. Reynolds assigned as IRC investigator.
November 9, 2007 Friday	R Reynolds boards *M/V COSCO BUSAN* while at anchor.
November 10, 2007 Saturday	Executive Director assigned to NTSP investigation team.
November 11, 2007 Sunday	Executive Director attends NTSB meetings and is assigned to Operations Group.
November 12, 2007 Monday (Holiday)	Executive director continues working with NTSB Operations Group. BOPC Investigator continues investigation.
November 13, 2007 Tuesday	Executive director continues working with NTSB Operations Group. BOPC Investigator continues investigation.
November 14, 2007 Wednesday	Executive director continues working with NTSB Operations Group. BOPC Investigator continues investigation.
November 15, 2007 Thursday	Executive director continues working with NTSB Operations Group. BOPC Investigator continues investigation.

DATE	*EVENT*
November 16, 2007 Friday	Executive director continues working with NTSB Operations Group. BOPC Investigator continues investigation. Executive Director on board *M/V COSCO BUSAN* for shift from Anchorage 9 to drydock at Pier 70.
November 17, 2007 Saturday	Begin preparation of IRC Report.
November 18, 2007 Sunday	Executive director interviewed by NTSB
November 19, 2007 Monday	Executive director continues working with NTSB Operations Group.
November 20, 2007 Tuesday	IRC meeting.
November 21, 2007 Wednesday	Preparation of IRC report.
November 22, 2007 Thursday (Holiday)	Preparation of IRC report.
November 23, 2007 Friday (Holiday)	IRC meeting. IRC interview of Captain John Cota.
November 24, 2007 Saturday	Preparation of IRC report.
November 25, 2007 Sunday	Preparation of IRC report.
November 27, 2007 Monday	Preparation of IRC report.
November 30, 2007 Friday	IRC recommends suspension of Captain Cota's license pending hearing. BOP votes to suspend license, as recommended.

DATE	*EVENT*
December 6, 2007 Thursday	IRC files Accusation.
June 6, 2008 Wednesday	IRC opposes Cota motion to continue hearing on Accusation set to begin on September 2, 2008.
July 24, 2008 Thursday	Following Capt. Cota's June 30, 2008 notice of retirement, IRC recommends that the BOP enter into a stipulation to ultimately dismiss Accusation upon effective date of Captain Cota's retirement. BOP votes to enter into the recommended stipulation.
October 1, 2008 Wednesday	IRC reports to Office of Administrative Hearing that Captain Cota's retirement became effective, and requests that Accusation matter be closed.
October 23, 2008 Thursday.	IRC presents its report to the Board.

APPENDIX 4

BOARD OF PILOT COMMISSIONERS
INCIDENT REVIEW COMMITTEE REPORT:
M/V COSCO BUSAN - CAPT. JOHN COTA
NOVEMBER 7, 2007

Party Submission

by

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

NTSB Investigation

COSCO BUSAN Allision with the

San Francisco – Oakland Bay Bridge,

San Francisco, California

November 7, 2007

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Party Submission by BOARD OF PILOT COMMISSIONERS FOR THE BAYS OF SAN FRANCISCO, SAN PABLO AND SUISUN – NTSB Investigation of COSCO BUSAN Allision with San Francisco-Oakland Bay Bridge, San Francisco, California on November 7, 2007

The Board of Pilot Commissioners for the Bays of San Francisco, San Pablo and Suisun (hereinafter "the Board" or "Pilot Commission") licensed the pilot, Captain John J. Cota, who was piloting the COSCO BUSAN at the time of the allision. The Commission is a party to the NTSB investigation. At the invitation of the NTSB, it provides the following Party Submission.

Prior Board Participation in the NTSB Investigation

During the initial phase of the NTSB investigation following the allision of the COSCO BUSAN with the San Francisco – Oakland Bay Bridge, the Board's President, Commissioner Knute Michael Miller, and its Executive Director, Captain Patrick A. Moloney, met with the advance investigation team led by NTSB Member Deborah Hersman and Chief Investigator Thomas Roth-Roffy and offered the Board's assistance and cooperation. Captain Moloney was asked to participate as a member of NTSB investigation team that focused on vessel operations, which he did throughout the team's presence in the Bay Area. Captain Moloney was also interviewed during the same period in his capacity as the Board's Executive Director, and again in January 2008.

Both Board President Miller and Captain Moloney participated in the NTSB public hearings held in Washington D.C. in April 2008. The Board also provided comments on the NTSB Technical Review Draft Factual Report dated June 27, 2008.

The Board's Incident Investigation

Immediately following the incident, the Pilot Commission, through its Incident Review Committee (IRC), commenced an investigation to determine whether the incident was caused by pilot error. The Board summarily suspended the pilot's state license on November 30, 2007 pending the timely filing of charges and a hearing on those charges.

On December 6, 2007, the IRC filed charges against the pilot in the form of an Accusation alleging that the pilot had reason to doubt whether the ship could safely proceed under the prevailing circumstances; that the pilot proceeded with insufficient information about the level of visibility along his intended route; that he proceeded at a speed that was excessive for the circumstances; and that he failed to make full use of all available resources to determine the vessel's position prior to attempting a transit between the Delta and Echo towers of the bridge in conditions of reduced visibility. A copy of the Accusation is attached as Encl. (1).

The pilot denied the charges and requested a hearing. A hearing on the charges was initially scheduled for April 28, 2008, with the Board members, sitting with an administrative law judge, to decide the facts and determine the appropriate sanction, if pilot error was found. The pilot's state license remained suspended pending a hearing. (Technically, the license expired on February 1, 2008 and would have been subject to renewal but for the existing suspension.)

Both parties encountered difficulties in securing evidence for the hearing due to the filing of a spate of lawsuits in state and federal courts, the potential for criminal sanctions against the pilot and the crew, and the refusal of the crew to be interviewed or to testify. The administrative hearing on the IRC's charges against the pilot's state

license was ultimately rescheduled for September 2, 2008 to allow each party additional time to gather the evidence. The pilot's state license would remain suspended until the conclusion of the hearing. The hearing was estimated to take 16 court days and was scheduled over a four-week period.

In late June, after unsuccessfully seeking another continuance of the hearing, the pilot issued his letter of intent to retire as a state licensed pilot effective October 1, 2008, the earliest date he could retire under existing state law. A stipulation was entered into permitting the conditional dismissal of the IRC's charges, recognizing that the pilot's state license would expire by operation of law upon the pilot's retirement and would remain suspended until then, and that the only sanction the Board could impose if it found pilot error was the suspension or revocation of his state license. If for any reason the pilot withdraws his request before the effective day of his retirement, the hearing would be rescheduled. A copy of the Administrative Law Judge's Order, which includes the Stipulation to that effect, is attached as Encl. (2).

Once the pilot's retirement takes effect, and any potential for withdrawing the notice of retirement is permanently removed, the IRC will submit its report to the full Board. By law, the IRC cannot do so before then. It is currently anticipated that the IRC's report will be submitted to the Board at its October 23 meeting, at which time it would be come public and can be made available to the NTSB.

Pilot Training In and Use of Electronic Navigation Systems

One of the issues raised in the various investigations into the causes of the allision focused on the electronic navigation system aboard the COSCO BUSAN and whether the pilot was able to make full use of the information provided by it.

In response to the allision and the ensuing oil spill, Governor Schwarzenegger had directed a state investigation into the causes of, and response to, the accident and the spill. The Governor's directive outlined a number of issues to ensure "any action necessary to prevent this from ever happening again." The state Office of Oil Spill Prevention and Response (OSPR) tasked the Harbor Safety Committee of San Francisco Bay Region (HSC) to "analyze the navigational safety-related issues of the Governor's directive and to make appropriate recommendations regarding the prevention aspects of the incident." The HSC agreed to consult with the Pilot Commission on certain issues related to the use of shipboard and portable electronic navigation systems by pilots.

The Board's Navigation Technology Committee

In response to the incident and the Governor's directive, the Pilot Commission formed a Navigation Technology Committee to investigate the different types of navigation systems found on ships calling on the San Francisco Bay Area and the sufficiency of pilot training in the use of such systems; and to evaluate portable electronic navigation chart systems that can be brought aboard by pilots to assist in navigation.

The Navigation Technology Committee was chaired by Rear Admiral Frank X. Johnston, United States Maritime Service, (Ret.), who was appointed by Governor Schwarzenegger to the Pilot Commission in January 2008. Committee members included the chairs of the navigation technology committees for the San Francisco Bar Pilots, Captain Sean Gabe, and for the Jacobsen Pilot Service in Long Beach, Captain Vic Schissler, as well as a retired master mariner who helped Exxon develop an advanced electronic navigation system for its tanker fleet, Captain Tom Hill.

The Committee held well-attended public workshops in February, March and April, 2008, with participation or presentations by experts in navigation technology and in the training and education of mariners in that subject, including Professor Sam Pecota of the California Maritime Academy, Executive Director Glen Paine of the Maritime Institute of Technology and Graduate Studies, Training Director Scott Humphrey of the Coast Guard Vessel Traffic Service for San Francisco Bay Area, Human Factors Expert Dr. Richard Mogford from NASA and various commercial providers of portable pilot navigation units.

The Committee also reviewed how portable pilot units are regulated in other pilotage jurisdictions and various comprehensive reports on their use, liability issues and interface with shipboard equipment.

The Committee presented its initial report to the Pilot Commission on April 17, 2008, recommending that the Commission's Pilot Training Curriculum Committee be directed to consider incorporating enhanced training in advanced electronic navigation systems that would provide exposure to a greater number of systems and variety of presentations than what is provided by the current training program. In addition, the Committee recommended that the Commission adopt by regulation a requirement that pilots licensed by the Commission be equipped with, and trained in the use of, portable electronic navigation equipment, commonly known as portable pilot units (PPUs), with specified minimum capabilities and other relevant provisions.

At its May 22, 2008 meeting, the Pilot Commission voted unanimously to direct its Curriculum Committee to consider incorporating enhanced training in advanced electronic navigation systems and directed its staff to begin the formal rulemaking

process for adopting the regulation recommended by the Navigation Technology Committee.

Enhanced Training in Advanced Electronic Navigation Systems

The Maritime Institute of Technology and Graduate Studies (MITAGS) has a contract with the Pilot Commission to provide specified training to pilots as mandated by current regulations. The curriculum is specified in the contract. That contract ends June 30, 2009. (A copy of that contract was previously provided to NTSB investigators.)

The Commission's Pilot Training Curriculum Committee will need to review the current curriculum taught by MITAGS under the contract, possible options to provide enhanced training in advanced electronic navigation systems, and how such training can be incorporated into the current training program within the Commission's regulatory and budget constraints.

Preliminary estimates are that it will take several meetings over a period of two to three months to develop specific recommendations for changing the curriculum and for the Board to take action on those recommendations, followed by possible contract negotiations with MITAGS and the preparation and execution of contract amendments. (Contract matters are handled through the California Department of Consumer Affairs.)

If the resulting contract expenses remain within the Commission's budget, the enhanced training, if adopted, could be in place by November 1, 2008. If the additional training expenses would exceed the Board's budget, the Board may need to seek an increase in its spending authorization unless spending on other program areas

can be reduced. Such a request could add a minimum of three to four months to the process.

Rulemaking Re Use of Portable Pilot Units

The rulemaking process is governed by the California Administrative Procedures Act (APA), and by budgetary constraints imposed by the Department of Finance (DOF) and the Legislature. The Pilot Commission has been directed by DOF to use temporary part time government employees known as AGPAs (Associate Government Policy Analysts) to meet the Commission's future rulemaking needs. The Board's current budget does not authorize expenditures for such employees, but there is such authority in the proposed budget for F/Y 08/09, which has not yet been approved. Once that budget has been approved (as part of the annual state budget approval process), the Board can proceed with the retention of an AGPA and begin the rulemaking process.

The AGPA will need to ensure compliance with APA requirements; prepare the notice of proposed rulemaking and supporting documentation including a fiscal analysis and have them approved by the Office of Administrative Law and, if necessary, the Department of Finance; guide the Pilot Commission through the public comment period (minimum of 45 days from the publication of the notice of proposed rulemaking and 15 additional days following notice of any substantive amendments to the original rulemaking language); guide the Board through the public rulemaking hearing or hearings, until the rulemaking language has been adopted by the Commission; prepare the final rulemaking package and supporting documents; and guide the rulemaking through the approval process before the Office of Administrative

Law (OAL). Once approved by OAL, the rulemaking is filed with the Secretary of State and ordinarily becomes law 30 days later.

The entire process can take from six to nine months or more. On an expedited basis, it is possible that the rulemaking could be completed by early 2009.

The Harbor Safety Committee recently reviewed the Board's proposals relative to providing enhanced training to pilots in advanced electronic navigation systems and to the use of portable pilot units by pilots. It has also examined other operational issues to help reduce the risk of a similar accident. Its report to the Office of Oil Spill Prevention and Response, including a summary of its recommendations and its reports on "Guidelines for Navigating San Francisco Bay in Reduced Visibility" and "Pilot Use of Navigational Tools" are enclosed as Encl. (3).

Pilot Fitness Issues

By California law, pilots are required to be of good mental and physical health and to undergo physical examinations in accordance with standards prescribed by the Board. The Board's current procedures for determining physical and mental competency of pilots are set forth in Title 7, California Code of Regulations § 217.

Pilots are also required to meet all Coast Guard standards, and hold and maintain a Coast Guard license.

Following the allision questions were raised regarding the standards used by both the Board and the U.S. Coast Guard in determining pilots' physical and mental competency, and the procedures used to ensure that pilots meet such standards.

In response, the Board's Pilot Fitness Committee has been tasked with:

(1) Conducting a comprehensive review of the physical and mental fitness standards for pilots, including review of the Board's current standards as outlined in the Reference Guide for Physicians for the Physical Examination for Duty Status of Seafarers in the U.S. Merchant Marine adopted by the Seafarers Health Improvement Program (SHIP); current U.S. Coast Guard Physical Evaluation Guidelines for Merchant Mariner's Documents and Licenses (NVIC 2-98); the proposed draft replacement to NVIC 2-98; any other amendments to those guidelines currently under consideration; and recommendations by the National Transportation Safety Board regarding the fitness of pilots (including M-97-44);

(2) Preparing recommendations to the Board for the adoption of standards that meet or exceed Coast Guard standards to ensure that each pilot is physically and mentally fit to perform the duties of a pilot in light of the above review and any lessons learned from the COSCO BUSAN incident;

(3) Preparing recommendations to the Board for the amendment of its procedures to determine a pilot's physical and mental competency, including procedures to ensure the disclosure and appropriate evaluation of the history and presence of any medical conditions, symptoms or medication use that would affect an individual's fitness to pilot a vessel;

(4) Addressing state of the art/methodology in detecting decline in a pilot's situational awareness, including his or her ability to keep track of and timely act on various communications and information relevant to the vessel's safe navigation and to plan ahead for upcoming traffic and environmental situations;

(5) Preparing recommendations to improve appeal procedures to ensure protection of both the public and the pilot's interests (currently the pilot may appeal a Not Fit For Duty determination, but there is no comparable process for the public or the Board to appeal a Fit For Duty determination);

(6) Considering pros and cons/costs and benefits and possible procedures of requiring an evaluation by a second medical examiner to review fitness determinations by the physician conducting the fitness evaluation (currently pilots are examined by a physician designated by the Board, but the Board only receives a determination whether the pilot is fit for duty (FFD), not fit for duty (NFFD) or permanently not fit for duty (PNFFD)).

These tasks are likely to take a minimum of 9 to 12 meetings over a one-year period. (The Coast Guard's efforts have been in progress for over two years.) Current standards are not specific to pilots but apply to all mariners. Standards specific to pilots may be warranted. Sleep deprivation and fatigue issues are likely to be among those at the forefront and pose challenging issues that will need to be resolved.

In addition, state legislation has been proposed that would require pilots to report all medications at the time of their physical and any changes in their medication that takes place between physicals. A copy of the proposed legislation is attached as Encl. (4).

Incident Investigation Procedures

The Board has provided comments on the NTSB Technical Review Draft Factual Report, addressing the pilot's pre-COSCO BUSAN incident record at length. Questions regarding the investigation review process raised during the NTSB public

hearings in April have also been considered, including the degree to which current incident review procedures, both at the IRC level and at the Board level, can be improved to identify patterns of substandard performance or other problems that warrant further Board action beyond the specific response to a single incident. The Board has sought funding for an audit of the Board's incident review procedures and anticipates receiving such funding for the current fiscal year, once the state budget is approved. A copy of the Board's funding request ("Spring Finance Letter") is attached as Encl. (5). It addresses the proposed IRC audit, as well as funding for the Board's Pilot Fitness Committee review, and navigation technology rulemaking.

There have also been legislative initiatives that could effect the Board's review of the IRC's reports, but those initiatives remain in flux. If legislation is adopted that would significantly change the Board's incident investigation procedures prior to the NTSB's report, a copy will be forwarded to the NTSB.

Communications Among Pilot Commissions

The COSCO BUSAN incident highlighted a number of challenges faced by pilot commissions. Pilot commissions do not have a national organization to which they belong or an existing mechanism to facilitate communications among them to identify challenges and their solutions, best practices, and other items of mutual interest.

Both preceding and following the NTSB hearings in April, Board President Miller has participated in an effort to establish such communications, for the present, concentrating on West Coast pilot commissions. A West Coast conference of pilot commissions is currently scheduled for November 6 and 7, 2008 in Portland, Oregon. The draft agenda currently includes: (1) update on the COSCO BUSAN incident; (2)

current issues being addressed by each authority; (3) developing best practices; (4) protocols for sharing information; and (5) establishing a regular means of communication among the West Coast pilotage oversight authorities. Representatives from the pilot commissions in California, Oregon, Washington, British Columbia and Alaska have been contacted and have placed the regional meeting on their respective calendars.

ENCLOSURE 1

Filed 06 Dec. 2007

BEFORE THE BOARD OF PILOT COMMISSIONERS

FOR THE BAYS OF SAN FRANCISCO, SAN PABLO AND SUISUN

In re the Matter of the Accusation Against:	Case No.: No. 07-01
Captain JOHN J. COTA,	ACCUSATION

To: Captain JOHN J. COTA, Pilot on the Bays of San Francisco, San Pablo and Suisun, State License No. 902-27:

The Incident Review Committee of the Board of Pilot Commissioners for the Bays of San Francisco, San Pablo and Suisun (hereinafter "the IRC" and "the Board," respectively), having investigated the navigational incident described herein, under the authority of Section 1180.6 of the California Harbors and Navigation Code (hereinafter "the Code") and Section 210 of the Board's Regulations (Title 7, California Code of Regulations, § 210), makes the following accusation against Captain John J. Cota (hereinafter "Captain Cota"), the Respondent,

General Background

1. At all times relevant, Captain Cota was the holder of Pilot License Number 902-27, issued on February 1, 2007 by the Board pursuant to Chapter 4 of Division 5 the Code.

2. The Board has the authority to suspend or revoke a pilot license issued by it as provided by Sections 1181 and 1182 of the Code.

3. Captain Cota has subjected his license to suspension or revocation in that, on 07 November 2007, while serving as the pilot of the outbound M/V COSCO BUSAN, he negligently caused the

allision of that vessel's port side with the fendering system of the "D" or "Delta" tower of the San Francisco-Oakland Bay Bridge, as more fully described below.

4. The M/V COSCO BUSAN is a motor container vessel registered in Hong Kong. The vessel has a gross registered tonnage of 65,301 GRT, a length of 901 feet, a beam of 131 feet, and at the time of the allision had a draft of 39' 09" forward and 40' 04" aft. The vessel is configured with a single, fixed pitch, right turning propeller and a 2,700 hp bow thruster.

BASIS OF ACCUSATION

5. At about 0600 on Wednesday, 07 November 2007, Captain Cota boarded the M/V COSCO BUSAN at Oakland Berth 56 to act as its pilot for its transit from Berth 56 to sea. The vessel was scheduled to sail at 0630.

6. Once aboard the vessel, Captain Cota was escorted to the bridge where he met the ship's captain and bridge team, whose English skills were limited, as was their familiarity with the ship and her navigation equipment.

7. Captain Cota was unfamiliar with the ship's electronic chart system and the markings thereon. Additionally, Captain Cota had concerns regarding the operational status of the radars prior to departure.

8. At 0748 the COSCO BUSAN left the safety of the berth under Captain Cota's guidance. At the time of departure, he had reason to doubt whether the ship could proceed safely and he had insufficient information about the level of visibility along his intended route. Under the circumstances, the COSCO BUSAN's departure from Berth 56 was contrary to the guidelines in the *San Francisco, San Pablo and Suisun Bays Harbor Safety Plan* ("HSP"), which provide for various factors to be considered before moving a vessel (see Section XIV. Pilotage) and further

provide that: "Vessels within the Bay at a dock ... should not commence movement if visibility is less than .5 nautical miles throughout the intended route, unless the operator's assessment of all variables is that the vessel can proceed safely." HSP at pp. 5 and 43.

9. Once clear of the berth and in mid-channel, Captain Cota directed the assist tug, REVOLUTION, to put up a line to the ship's stern and follow the ship with a slack line. He planned to let the tug go once they were out of the estuary.

10. Captain Cota ordered "Half Ahead" when the ship exited the Oakland Inner Harbor Entrance Channel. That engine order would bring the ship's speed under prevailing circumstances to about 11 knots as the ship would be stemming a one-knot flood current. The engine order remained at Half Ahead for about 7 minutes, at which time Captain Cota ordered "Full Ahead." The ship allided with the bridge less than 3 minutes after the Full Ahead bell.

11. During the period that the ship was at Half Ahead, the visibility in the approach to the bridge was reduced to about 0.1 nm, the ship's radar pictures deteriorated to the point that Captain Cota lost confidence in them, and he lost situational awareness to accurately assess the vessel's position, although he had the means to do so.

12. Under the circumstances, prudence and compliance with Inland Navigation Rules 6, 7 and 19 would have dictated that Captain Cota reduce speed and/or proceed to Anchorage 9 rather than continue to attempt to transit under the bridge between the Delta and Echo towers, which he could not see on radar and which were not visible due to the dense fog.

13. The Bay Bridge has a fixed green light with 3 white lights in a vertical line on the bridge and a radar beacon (RACON) above the center of the channel between the Delta and Echo towers. In addition, there is a nun buoy with a radar reflector on each side of the Delta Tower, fog horns on both the Delta and Echo towers and a bell marking the Charlie tower of the bridge. As the pilot

with local knowledge, Captain Cota should have ensured that the lookout had been properly instructed as to what to look and listen for and what to report prior to approaching the bridge.

14. Captain Cota failed to make full use of all available resources, including the tug REVOLUTION, which remained tethered to the stern and thus useless to him, of the Coast Guard Vessel Traffic Service, which could have provided more information as to his position and heading if he had requested it, and of his ship's lookout, who could have provided information on the bridge's fog signals and lights if the lookout had been properly instructed.

DAMAGES CAUSED BY ALLISION

15. As a direct result of Captain Cota's piloting, the vessel struck the fendering system surrounding the Delta Tower, damaging the ship and the bridge's fendering system, and spilling an estimated 58,000 gallons of fuel oil from the ship's fuel tanks, which were ruptured by the allision. The resulting property damage and damage to the marine environment is estimated in the tens of millions of dollars.

ACCUSATION OF MISCONDUCT

16. Captain Cota's conduct, under all the circumstances described herein, constituted "misconduct" within the meaning of HNC Section 1181(g), which states in relevant part:

> The license of a pilot or inland pilot may be revoked or suspended before its expiration only for reasons of misconduct, which shall include, but not be limited to, the following:
>
> > ....(g) Negligently, ignorantly, or willfully running any vessel on shore, or otherwise rendering it liable to damage, or otherwise causing injury to persons or damage to property....

Captain Cota's conduct also violated the provisions of Title 7, California Code of Regulations, Section 219(t), (u) and (v) which state in relevant part:

> (t) A pilot ... shall not, through ignorance, willfulness or neglect, run a vessel on shore, or otherwise render a vessel liable for damage to persons, property or the marine environment during the performance of his or her duties as a pilot...;
>
> (u) A pilot ... shall always obey the applicable Rules of the Road for the navigation of vessels and shall, under all circumstances, perform his or her duties in a manner so as not to endanger persons, property or the marine environment or cause damage...; and
>
> (v) While engaged in any piloting activity, a pilot ... shall obey all applicable laws and conduct himself or herself so as not to cause injury or damage to persons, property or the marine environment.

17. Captain Cota's misconduct as described above warrants the suspension or revocation of his pilot license.

WHEREFORE, you are notified that the Board will determine whether revocation or suspension of your pilot license, or other appropriate sanction, should be imposed.

[Add standard Admin. Procedures Act instructions re demand for hearing, etc.]

Dated: December 06, 2007 By THE INCIDENT REVIEW COMMITTEE

_____/s/_____
Commissioner Gunnar Lundeberg
Public Member

_____/s/_____
Captain P. A. Moloney
Executive Director, Member

ENCLOSURE 2

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

In the Matter of the Accusation Against: CAPTAIN JOHN J. COTA, Respondent.	Case No. 07-01 OAH No. 2008010073 **ORDER GRANTING CONTINUANCE**

This matter is currently set for hearing before the Board of Pilot Commissioners for the Bays of San Francisco, San Pablo, and Suisun, September 2 to 5, 8 to 11, 15 to 18, 22 to 25, 2008, at the Elihu Harris State Building, 1515 Clay Street, Oakland, California. A further Prehearing Conference is scheduled for August 8, 2008. Complainant, the Incident Review Committee of the Board of Pilot Commissioners for the Bays of San Francisco, San Pablo, and Suisun, is represented by Gary R. Gleeson, Attorney at Law. Respondent Captain John J. Cota is represented by John F. Meadows, Attorney at Law. A telephonic conference was held on July 30, 2008.

* * * * *

On July 25, 2008, the parties filed an executed stipulation. Under the terms of the stipulation, the parties agree to vacate the hearing dates in view of respondent's impending retirement. The stipulation is, in effect, an agreement to vacate the Prehearing Conference and to continue the hearing so that the parties may resolve this matter without the necessity of a hearing. Good cause for a continuance of the hearing within the meaning of Government Code section 11524 has been demonstrated, and the motion is granted.

The parties request that a status conference be set for the purpose of scheduling new hearing dates should the retirement fail to be effectuated in accordance with the terms of the stipulation. All parties are available on October 3, 2008. A telephonic status conference shall take place at 4:45 p.m. on that date.

ORDER

1. The parties' request for a continuance is GRANTED. The Prehearing Conference scheduled for August 8, 2008, and the hearing dates of September 2 to 5, 8 to 11, 15 to 18, and 22 to 25, 2008, are vacated.

2. A Telephonic Status Conference shall take place on October 3, 2008, at 4:45 p.m. The Office of Administrative Hearings will generate the call to counsel at their telephone numbers on file, unless the office is notified of alternate numbers.

DATED: 7-31-08

[redacted]

MELISSA G. CROWELL
Administrative Law Judge
Office of Administrative Hearings

PROOF OF SERVICE

Case Name: Captain John J. Cota **OAH No.: 2008010073**

I, Helen Tsai, declare as follows: I am over 18 years of age and am not a party to this action. I am employed by the Office of Administrative Hearings. My business address is 1515 Clay Street, Suite 206, Oakland, CA 94612. On **July 31, 2008**, I served a copy of the following document(s) in the action entitled above:

ORDER GRANTING CONTINUANCE

to each of the person(s) named below at the addresses listed after each name by the following method(s):

Gary R. Gleason, Attorney at Law
Farbstein & Blackman
411 Borel Avenue, Suite 425
San Mateo, CA 94402
By Facsimile only: 650-554-6240

John F. Meadows, Attorney at Law
Jedeiken, Spaulding, Meadows & Schneider
333 Pine Street, 5th Floor
San Francisco, CA 94104
By Facsimile only: 415-421-5658

☒ **Fax Transmission.** I personally transmitted the above-described document(s) to the person(s) at the fax number(s) listed above, from fax machine number **(510) 622-2743**, pursuant to Government Code section 11440.20 and California Code of Regulations, title 1, section 1008, subdivision (d). The fax transmission was reported as complete and without error. A copy of the transmission report showing the date and time of transmission, properly issued by the transmitting machine, is attached to this declaration of service.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct. This declaration was executed at Oakland, California on **July 31, 2008**.

[redacted]
Helen Tsai, Declarant

GARY R. GLEASON (SB#136167)
FARBSTEIN & BLACKMAN
A Professional Corporation
411 Borel Avenue, Suite 425
San Mateo, California 94402-3518
TELEPHONE: (650) 554-6200
FACSIMILE: (650) 554-6240

Attorneys for Incident Review Committee

BEFORE THE BOARD OF PILOT COMMISSIONERS

FOR THE BAYS OF SAN FRANCISCO, SAN PABLO AND SUISUN

In re the Matter of the Accusation Against: Captain JOHN J. COTA	Case No.: No. 07-01 STIPULATION AND ORDER RE: DISMISSAL OF ACTION

This stipulation is entered into between Respondent, Captain John J. Cota and the Incident Review Committee of the Board of Pilot Commissioners for the Bays of San Francisco, San Pablo and Suisun (hereinafter "the IRC" and "the Board" respectively) and is subject to the Board's approval.

1. On 07 November 2007, the M/V COSCO BUSAN allided with the Delta Tower of the San Francisco-Oakland Bay Bridge causing substantial environmental and property damage. At the time of the incident, Captain Cota was piloting the vessel under the authority of his state pilot license issued by the Board.

2. After an investigation, the IRC preferred an accusation as authorized by California Harbors and Navigation Code Section 1180.6 alleging pilot misconduct associated with the allision. Captain Cota filed a timely Notice of Defense, denying the allegations and requesting a hearing. In the

interim, the Board suspended Captain Cota's state pilot license pending a hearing on the charges set forth in the Accusation, as authorized by Harbors and Navigation Code Section 1180. By agreement of the parties, that suspension remains in effect pending a resolution of the issues raised by the Accusation and Captain Cota's Notice of Defense.

3. The hearing in this matter is currently scheduled to begin September 02, 2008 before the Board sitting with an administrative law judge.

4. By letter dated June 23, 2008 Captain Cota gave written notice to the Board of his intent to retire as a state licensed pilot effective October 1, 2008. By retiring, Captain Cota does not admit fault for the allision.

5. In view of Captain Cota's impending retirement, and conditioned thereon, the parties agree that continuing to proceed with a hearing under these circumstances would not be productive, as in the event of a finding of pilot misconduct, the Board's authority to take any action against Captain Cota's professional license is limited to its suspension or revocation and would become moot upon his retirement.

6. In consideration of the IRC's agreement to seek a conditional dismissal of the hearing herein, Captain Cota hereby agrees and stipulates that he will not withdraw his notice of retirement prior to its effective date or request reissuance of his state pilot license from the Board. Captain Cota further acknowledges that he is not authorized to pilot under his state license during the period of suspension and that his license expires by operation of law on the effective date of his retirement.

7. For the reasons set forth above, the parties stipulate that the action against Captain Cota's state pilot license pending herein may be conditionally dismissed pending Captain Cota's retirement, and that the dismissal becomes final upon the effective date of such retirement.

Pursuant to Title 7, California Code of Regulations, §221(e), the parties jointly request Board approval hereof, and request that the hearing scheduled for September 02, 2008 herein, be taken off calendar.

For Respondent:

Date: 7-18-08

[redacted]
Captain John J. Cota
Respondent

Date: 7.14.08

[redacted]
John F. Meadows, Esq.
Counsel for Respondent

For the IRC:

Date: 7-24-08

[redacted]
Commissioner Knute Michael Miller
Chair, Incident Review Committee

Date: 24 July '08

[redacted]
Captain Patrick Moloney
Member, Incident Review Committee

Date: 7.21.08

[redacted]
Gary R. Gleason, Esq.
Counsel for Petitioner

The Board has reviewed and accepted the terms of the above stipulation and hereby requests the Office of Administrative Hearings to take the hearing currently scheduled for September 02, 2008 off calendar.

Date: 7-24-08

[redacted]
Commissioner Knute Michael Miller
President

IT IS SO ORDERED.

Date: 7/30/08

[redacted]

Hon. Melissa G. Crowell, Judge
Office of Administrative Hearings

ENCLOSURE 3

Harbor Safety Committee
of the San Francisco Bay Region

Mandated by the California Oil Spill Prevention and Response Act of 1990

July 24, 2008

Lisa Curtis, Administrator
Office of Spill Prevention and Response
1700 K Street, Suite 250
Sacramento, CA 95811

Attn: Bud Leland, Deputy Administrator

SUBJECT: Harbor Safety Committee of the San Francisco Bay Region: Final Report, Response to Governor Schwarzenegger's Directive to Analyze the Cosco Busan Allision

Dear Ms. Curtis:

Following the November 7, 2007 Cosco Busan oil spill, Governor Schwarzenegger directed the Office of Spill Prevention and Response (OSPR) to investigate the causes of and response to the allision and resulting oil spill. OSPR called upon the Harbor Safety Committee of the San Francisco Bay Region (HSC) to analyze the navigational safety-related issues of the Governor's directive and make appropriate recommendations regarding the prevention aspects of the incident. The twenty-member committee, established by the state legislature, is comprised of port authorities; cargo, tanker, tug barge and ferry operators; labor; bar pilots; recreational boaters; environmental organizations; commercial fishermen; the Coast Guard Captain of the Port; BCDC; NOAA and the Corps of Engineers.

Beginning in late November 2007, the Harbor Safety Committee proceeded to address the following navigational and operational safety issues outlined in the Governor's directive: speed limit restriction, tugboat escorts, inclement weather sailing conditions, crew staffing, navigational equipment, Vessel Traffic Service system, and Physical Oceanographic Real time System (PORTS). The HSC Work Groups of maritime experts discussed the issues, and based on facts known of the allision at the time, developed recommendations to improve vessel transit in the Bay. (Public input is strongly encouraged: all meetings are open to the public, publicly noticed and agendized under the Ralph M. Brown Open Meeting Act).

Summary of Adopted Recommendations:

> **Physical Oceanographic Real Time System (PORTS)**: On January 10, 2008, the HSC adopted the PORTS Work Group recommendation to permanently fund the San Francisco Bay Region PORTS from the Oil Spill Prevention and Administration Fund (OSPAF), as PORTS has proven value to the maritime community. The Work Group also recommended a prioritized list of additional sensors to be deployed in critical locations in San Francisco Bay, which has a series of microclimates.

Tug Escorting: The HSC on March 13, 2008 adopted the Tug Escorts Work Group finding that there was no evidence to suggest tug escorting would have prevented the Cosco Busan incident or similar incidents from occurring. Additionally, the Work Group concluded that the risks associated with using an escort tug as a "leader" in limited visibility outweighs potential benefits.

Navigating in Reduced Visibility: On March 13, 2008, the HSC adopted 'Guidelines for Navigating in Reduced Visibility' and designated Critical Maneuvering Areas, which were developed primarily by the San Francisco Bar Pilots and the Coast Guard, and reviewed by the Navigation Work Group, as Best Maritime Practices for large vessels. The guidelines will be incorporated into the San Francisco Bar Pilots' Operations Guidelines as well as the Pilots' Tide Book, the Coast Guard Vessel Traffic Service (VTS) Training Manual, U.S. Coast Pilot 7, and the San Francisco, San Pablo and Suisun Bays Harbor Safety Plan. Similar guidelines are being developed for vessels smaller than 1600 gross tons.

Vessel Traffic Service, Coast Guard Authority: The HSC on March 13, 2008 adopted the Prevention Through People Work Group finding that adequate Coast Guard authority to regulate shipping and control vessel movements already exists in current law, and that the best skills for maneuvering a vessel originate from onboard the ship itself, not from the Vessel Traffic Service. VTS Operators on Yerba Buena Island do not have instantaneous knowledge of the particular ship's characteristics (on average, more than 900 different ships enter the Bay each year) and of the tidal and wind forces acting on a vessel.

Navigational Safety for Commute Ferries: To increase the safe transport of commute passengers as a major segment of maritime traffic on San Francisco Bay, the HSC on May 8, 2008 adopted ferry routes developed by the Ferry Operations Work Group with ferry operators, ferry masters and the VTS, to be incorporated into the Harbor Safety Plan and by NOAA on area nautical charts. In 2007, commute ferries carried a total of five million passengers on six routes. Additional routes are planned within the next few years.

Speed Restrictions: On May 8, 2008, the HSC adopted the Navigation Work Group findings that federal regulations and international guidelines adequately limit the speed of large vessels transiting the Bay during periods of reduced visibility. The San Francisco Bay region, consisting of several bays and rivers, is one of the foggiest harbors in the United States. To aid mariners, the Coast Guard established Regulated Navigational Areas (RNAs) designed to improve safety by organizing traffic patterns and limiting vessel speeds.

Crewing Requirements: On May 8, 2008, the HSC adopted the Navigation Work Group findings that sufficient regulations and guidelines exist under federal and international law for crewing requirements.

Navigation Tools: The HSC voted on July 10, 2008 to urge the Board of Pilot Commissioners, which has oversight authority over licensed San Francisco Bar Pilots, to work with the Bar Pilots to incorporate in the Pilot training program enhanced training in advanced electronic navigation systems, providing exposure to a greater number of systems and variety of presentations, as a near-term priority. The HSC also supports adoption of a regulation to require that pilots licensed by the Board be equipped with portable electronic navigation equipment, commonly known as Portable Pilot Units ("PPUs") at all times while piloting San Francisco Bay.

The Harbor Safety Committee has begun developing "Best Maritime Practices" for safe navigation in the San Francisco Bay Region, a requirement by OSPR to incorporate in each committee's Harbor Safety Plan. "Best Practice" topics under discussion are policies for closing the Bar to shipping and for operation of tugs and barges and high speed commute ferries during inclement weather. Additionally, the Committee contacted the California Department of Transportation (Caltrans) to discuss the fendering protection of bridges adjacent to Bay Area shipping lanes; Caltrans representatives subsequently briefed the HSC on guidelines for bridge fendering. As a result of this discussion, the HSC then recommended in a letter that Caltrans engineers independently analyze the energy-absorbing capacities of key bridge fendering protection systems adjacent to high volume shipping lanes in the Bay Region to ensure adequate protection of the integrity of the bridges and to minimize damage to the vessel to reduce the chance of a possible oil spill.

The Committee is actively working to promote safe navigation in the San Francisco Bay Region to protect our environment. We are available for any further consultation you may require. I can be reached at (415) 461-4566.

Sincerely,

Joan L. Lundstrom, Chair
Harbor Safety Committee of the
San Francisco Bay Region

cc: Gary Toledo, OSPR
Steve Sawyer, OSPR
Larry Bowling, National Transportation Safety Board
Harbor Safety Committee

Enclosures: Work Group Reports sent to OSPR, as approved by the HSC

March 19, 2008

TO: Lisa Curtis, Administrator, Office of Spill Prevention and Response

FROM: Joan Lundstrom, Chair, Harbor Safety Committee of the San Francisco Bay Region

SUBECT: Governor's Directive to Analyze the Cosco Busan Oil Spill Incident,

Harbor Safety Committee Recommendation: Guidelines for Navigating San Francisco Bay in Reduced Visibility

Introduction

In response to the Cosco Busan oil spill incident, Governor Schwarzenegger directed a state investigation into the causes of and response to the oil spill. The directive outlined a number of issues to ensure "any action necessary to prevent this from ever happening again." OSPR tasked the Harbor Safety Committee (HSC) of the San Francisco Bay Region to "analyze the navigational safety-related issues of the Governor's directive and make appropriate recommendations regarding the prevention aspects of the incident."

The HSC Work Groups addressed the issues raised in the Governor's directives based on information available, noting that the National Transportation Safety Board (NTSB) report on the cause is not expected to be completed until autumn 2008, and the State Board of Pilot Commissioners Accusation (Case No. 07-01) of the pilot is scheduled for hearing before an Administrative Law Judge beginning September 2, 2008. Other investigations are focused on oil spill response efforts.

The Navigation Work Group met January 23 and March 4, 2008, to address issues related to navigating San Francisco Bay in inclement weather, specifically, those affecting large vessels transiting during reduced visibility. To advance this effort, the San Francisco Bar Pilots and the Coast Guard developed Guidelines for Navigating in Reduced Visibility ("Guidelines"), which were reviewed by the Navigation Work Group, and which are part of this recommendation.

Note: The following findings and recommendations should be considered preliminary, as not all evidence was accessible. As new information becomes available, the Harbor Safety Committee may revisit or address other policy implications.

Report From the Navigation Work Group on Navigating San Francisco Bay in Reduced Visibility

Navigating the San Francisco Bay Region during periods of reduced visibility requires mariners to exercise additional caution and vigilance. The Bay region, consisting of several bays and rivers, is one of the foggiest harbors in the United States. In-Bay distances are long. There is not a single regional climate, but a series of microclimates with variable fog. During summer, 30 to 40 percent of parts of the Bay may experience foggy conditions. In winter, the fog may be denser, originating from a different direction than summer fog.

Role of Reduced Visibility in Cosco Busan Incident

Reduced visibility was a causal factor in the Cosco Busan incident: the State Board of Pilot Commissioners found in its Accusation (Case No. 07-01) that, "At the time of departure [from the dock], [the pilot] had reason to doubt whether the ship could proceed safely and...had insufficient information about the level of visibility along [the] intended route. Under the circumstances, the Cosco Busan's departure from Berth 56 was "contrary to the guidelines in the San Francisco, San Pablo and Suisun Bays Harbor Safety Plan ("HSP"), which provide for various factors to be considered before moving a vessel..." and further provide that "vessels within the Bay at a dock...should not commence movement if visibility is less than .5 nautical miles throughout the intended route, unless the operator's assessment of all variables is that the vessel can proceed safely."

In reviewing the Harbor Safety Plan guidelines quoted above, the Navigation Work Group determined there was a need to clarify and expand on the guidelines because, as was noted, the Bay region is a series of microclimates with variable fog conditions.

Recommended Guidelines for Navigating in Reduced Visibility

These guidelines should be used by the mariner when planning, initiating or navigating a transit in the Bay during periods of reduced visibility. These guidelines acknowledge that **Large Vessels** are not as maneuverable as smaller vessels and therefore define **Large Vessels** as power driven vessels of 1600 gross tons or more, and tugs with barges of 1600 gross tons or more. Mariners are at all times to comply with the requirement of the International Regulations for Avoiding Collisions at Sea, or COLREGS.

Critical Maneuvering Areas (CMAs): There are areas within the Bay where additional standards of care are required due to the restrictive nature of the channel, proximity of hazards, or the prevalence of adverse currents. Large vessels should not transit through CMAs when visibility is less than 0.5 nautical miles.

Locations within the Bay identified as Critical Maneuvering Areas:

Redwood Creek
San Mateo-Hayward Bridge
Oakland Bar Channel*
Islais Creek Channel
Richmond Inner Harbor
Richmond-San Rafael Bridge, East Span
Union Pacific Bridge
New York Slough, up-bound
Rio Vista Lift Bridge

*Note: the Oakland Bar Channel is identified due to cross currents and its proximity to the Bay Bridge and Yerba Buena Island.

Vessels docked: Large vessels at a dock within the Bay should not commence a movement if visibility is less than 0.5 nautical miles at the dock.

Vessels proceeding to dock: Large vessels proceeding to a dock should anchor if visibility at the dock is known to be less than 0.5 nautical miles, unless, under all circumstances, proceeding to the dock is the safest option.

Note: Vessel pilots or operators should notify VTS upon determination that a scheduled movement will be delayed or cancelled. If underway, they shall make a sailing plan deviation report per VTS regulations.

Navigation Work Group Recommendations to the Harbor Safety Committee:

1. The Work Group recommends that the "Guidelines for Navigating in Reduced Visibility" developed by the San Francisco Bar Pilots and the Coast Guard be adopted as "Best Maritime Practices for Large Vessels" and that the guidelines be incorporated into the San Francisco Bar Pilots' Operations Guidelines as well as their Tide Book, the Coast Guard Vessel Traffic Service (VTS) Training Manual, U.S. Coast Pilot 7, and the San Francisco Harbor Safety Plan.

The Navigation Work group concluded the proposed guidelines would increase safe navigation in San Francisco Bay, and thereby respond in part to the Governor's directive to analyze navigational safety-related issues of the Cosco Busan incident and make appropriate recommendations regarding the prevention of future incidents.

2. The Work Group recommends the Harbor Safety Committee consider drafting guidelines for navigating in reduced visibility for certain vessels less than 1600 gross tons.

3. The Work Group recommends the Harbor Safety Committee review the "Guidelines for Navigating in Reduced Visibility" within one year of adoption.

4. The Work Group recommends that the Harbor Safety Committee address issues surrounding the capacity and management of Coast Guard designated anchorages in San Francisco Bay.

5. The Work Group recommends that the Harbor Safety Committee assess the use of and advances in navigational aid technology to improve safe transit on San Francisco Bay. The Board of Pilot Commissioners has formed a Navigation Technology Committee to investigate the different types of navigation systems generally found on ships calling the Bay Area. A preliminary report is expected June 1, 2008. The HSC Navigation Work Group will review the report in considering recommendations to the full HSC.

Harbor Safety Committee Action: The Harbor Safety Committee unanimously adopted the Navigation Work Group findings and recommendations at its March 13, 2008 regular meeting. (Note: as a committee established by the State of California, all Harbor Safety Committee meetings are open to the public and publicly noticed and agendized under the provisions of the Ralph M. Brown Open Meeting Act).

July 15, 2008

TO: Lisa Curtis, Administrator, Office of Spill Prevention and Response

FROM: Joan Lundstrom, Chair, Harbor Safety Committee of the San Francisco Bay Region

SUBJECT: Governor's Directive to Analyze the Cosco Busan Oil Spill Incident,
Harbor Safety Committee Recommendation: Pilot Use of Navigational Tools

Attn: Bud Leland, Deputy Administrator

Introduction

In response to the Cosco Busan oil spill incident, Governor Schwarzenegger directed a state investigation into the causes of and response to the oil spill. The directive outlined a number of issues to ensure "any action necessary to prevent this from ever happening again." OSPR tasked the Harbor Safety Committee (HSC) of the San Francisco Bay Region to "analyze the navigational safety-related issues of the Governor's directive and make appropriate recommendations regarding the prevention aspects of the incident."

The HSC Work Groups addressed the issues raised in the Governor's directives based on information available, noting that the National Transportation Safety Board (NTSB) report on the cause is not expected to be completed until autumn 2008. Other investigations are focused on oil spill response efforts.

To date the Navigation Work Group completed recommendations to the HSC related to large vessel transit of the San Francisco Bay Region as well as the speed of large vessels the region during periods of reduced visibility.

To respond to the Governor's directive to develop recommendations regarding the use of advanced technology to aid pilots in navigating San Francisco Bay, the HSC agreed to coordinate with the San Francisco Board of Pilot Commissioners. The Navigation Work Group met June 27, 2008, to develop its recommendations to the HSC, based upon the adopted recommendations of the Board of Pilot Commissioners.

Note: the following findings and recommendations should be considered preliminary, as not all evidence was accessible. As new information becomes available, the Harbor Safety Committee may revisit or address other policy implications.

Report From Navigation Work Group on Pilot's Use of Navigational Tools

Background

In response to the Cosco Busan incident, the Governor directed OSPR to investigate the potential role of navigational technology in reducing the risk of vessel collisions in the San Francisco Bay Region. The HSC Navigation Work Group agreed to coordinate its review of the subject with the work of the Board of Pilot Commissioners ("Pilot Commission"), which formed a Navigation Technology Committee to develop recommendations for the enhancement of pilots' ability to safely navigate using shipboard and portable electronic navigation systems.

The State Board of Pilot Commission, created in 1850, regulates the Bar Pilots of the San Francisco Bay Region. The Commission consists of seven members appointed by the Governor with the consent of the Senate: three are public members who are neither pilots nor work for companies that use pilots, two are pilots licensed by the Pilot Commission and two are industry members - one from the tanker industry and one from the dry cargo industry.

Over the course of several months, in investigating different types of navigation systems found on ships calling on the San Francisco Bay Area and the sufficiency of pilot training in the use of such systems, the Pilot Commission Technology Committee considered presentations by experts in navigation technology and in the education of mariners in the use of the technology. The committee also evaluated portable electronic navigation chart systems that can be brought aboard by pilots, various comprehensive reports on their use, liability issues and interface with shipboard equipment and how portable pilot units are regulated in other jurisdictions.

Work Group Discussion

The HSC Navigation Work Group met June 27, 2008, to review the recommendations adopted by the Pilot Commission and to develop recommendations to the Harbor Safety Committee. (Attachment: *Draft Board of Pilot Commission status report on Pilot Commission's actions to enhance pilots' ability to safely navigate ships with the use of advanced navigation technology.*)

The Work Group noted that prudent mariners rely on an array of informational sources when navigating, including paper charts, electronic charts, Army Corps of Engineers charts, USCG Notices to Mariners, etc. Portable electronic navigation chart systems that can be brought aboard by pilots, or Portable Pilot Units ("PPUs"), are an additional navigational tool proposed to be carried by Pilot Commission-licensed pilots in San Francisco Bay. These units cannot supplant onboard systems; however, their use is appropriate in the Bay due to its variety of microclimates and periods of dense fog.

To further navigational safety, the Work Group agreed to support international efforts to standardize symbols used on onboard charts. Confusion can result when piloting the more than 900 different ships that transit the Bay, many of which carry different charting systems featuring proprietary symbology. Future training of Pilot Commission-licensed pilots will include the symbology used on different charts.

Conclusion: In discussing issues related to the use of advanced navigational technology systems, the Navigation Work Group found that Portable Pilot Units are an additional tool of value to increase navigation safety in the Bay Region, along with enhanced training of Pilot Commission-licensed pilots in advanced electronic navigation systems.

Navigation Work Group Recommendations to the Harbor Safety Committee

1. Urge the Board of Pilot Commissioners, as a near-term priority, to work with the San Francisco Bar Pilots to incorporate in the Pilot training program enhanced training in advanced electronic navigation systems, providing exposure to a greater number of systems and variety of presentations.

2. Support adoption by the Board of Pilot Commissioners of a regulation to require that pilots licensed by the Pilot Commission be equipped with, and trained in the use of, portable electronic navigation equipment, commonly known as Portable Pilot Units ("PPUs"). The regulation should require that pilots be equipped with PPUs at all times while piloting except when the pilot deems that embarking on or disembarking from a vessel while carrying a PPU may present an unacceptable safety hazard to the pilot or when circumstances would prevent its use.

Such PPUs shall, at a minimum, have the following capabilities:

(a) Displaying approved electronic navigation charts (ENCs) issued by the cognizant U.S. government authority;

(b) Displaying the vessel's position and heading on such ENCs to the accuracy required by the International Maritime Organization (IMO) for Automatic Identification Systems (AIS); and

(c) Displaying other navigational information as provided through the vessel's AIS pilot plug.

Harbor Safety Committee Action: The Harbor Safety Committee unanimously adopted the Navigation Work Group findings and recommendations at its July 10, 2008 regular meeting. (Note: as a committee established by the State of California, all Harbor Safety Committee meetings are open to the public and publicly noticed and agendized under the provisions of the Ralph M. Brown Open Meeting Act).

Attachment

Draft Board of Pilot Commissions status report on Pilot Commission's actions to enhance pilots' ability to safely navigate ships with the use of advanced navigation technology

Following the COSCO BUSAN accident and oil spill in San Francisco Bay in November 2007, the state Board of Pilot Commissioners appointed a special committee to develop recommendations for the enhancement of pilots' ability to safely navigate ships with the use of advanced navigation technology. The Commission recently accepted the preliminary recommendations of its Navigation Technology Committee and commenced the process for incorporating enhanced training in advanced electronic navigation systems and for the adoption by regulation of a requirement that pilots licensed by the Commission be equipped with, and trained in the use of, portable electronic navigation equipment that the pilots would carry with them when they go aboard a ship. The development of these recommendations, progress to date and estimated timetable to full implementation are summarized below.

INTRODUCTION

In response to the COSCO BUSAN's allision with the fendering system of the Delta Tower of the San Francisco-Oakland Bay Bridge and the ensuing oil spill, Governor Schwarzenegger directed a state investigation into the causes of, and response to, the accident and the spill. The Governor's directive outlined a number of issues to ensure "any action necessary to prevent this from ever happening again." The state Office of Oil Spill Prevention and Response (OSPR) tasked the Harbor Safety Committee of San Francisco Bay Region (HSC) to "analyze the navigational safety-related issues of the Governor's directive and to make appropriate recommendations regarding the prevention aspects of the incident." The HSC agreed to consult with the state agency that licensed the pilot, the Board of Pilot Commissioners for the Bays of San Francisco, San Pablo and Suisun (the Pilot Commission), on certain issues related to the use of shipboard and portable electronic navigation systems by pilots.

BOARD OF PILOT COMMISSIONERS

Immediately following the incident, the Pilot Commission, through its Incident Review Committee (IRC), commenced an investigation to determine whether the incident was caused by pilot error. On December 6, 2007, the IRC filed charges against the pilot in the form of an Accusation alleging that the pilot had reason to doubt whether the ship could safely proceed under the prevailing circumstances, proceeded with insufficient information about the level of visibility along his intended route, proceeded at a speed that was excessive for the circumstances and failed to make full use of all available resources to determine the vessel's position prior to attempting a transit between the Delta and Echo towers of the bridge in conditions of reduced visibility. The pilot has denied the charges and requested a hearing. A hearing on the charges is currently scheduled for September 2, 2008.

The Pilot Commission summarily suspended the pilot's state license on November 30, 2007. That license remains suspended pending the hearing on the IRC's charges.

One of the issues raised in the investigation focused on the electronic navigation system aboard the COSCO BUSAN and whether the pilot was able to make full use of the information provided by it.

NAVIGATION TECHNOLOGY COMMITTEE OF THE BOARD OF PILOT COMMISSIONERS

In response to the incident, the Pilot Commission formed a Navigation Technology Committee to investigate the different types of navigation systems found on ships calling on the San Francisco Bay Area and the sufficiency of pilot training in the use of such systems; and to evaluate portable electronic navigation chart systems that can be brought aboard by pilots to assist in navigation.

The Navigation Technology Committee was chaired by RADM Frank X. Johnston, MARAD, (Ret.), who was appointed by Governor Schwarzenegger to the Pilot Commission in January 2008. Committee members included the chairs of the navigation technology committees for the San Francisco Bar Pilots, Captain Sean Gabe, and for the Jacobsen Pilot Service in Long Beach, Captain Vic Schissler, as well as a retired master mariner who helped Exxon develop an advanced electronic navigation system for its tanker fleet, Captain Tom Hill.

The Committee held well-attended public workshops in February, March and April, 2008, with participation or presentations by experts in navigation technology and in the training and education of mariners in that subject, including Professor Sam Pecota of the California Maritime Academy, Executive Director Glen Paine of the Maritime Institute of Technology and Graduate Studies, Training Director Scott Humphrey of the Coast Guard Vessel Traffic Service for San Francisco Bay Area, Human Factors Expert Dr. Richard Mogford from NASA and various commercial providers of portable pilot navigation units.

The Committee also reviewed how portable pilot units are regulated in other pilotage jurisdictions and various comprehensive reports on their use, liability issues and interface with shipboard equipment. (Copies of the Committee's meeting minutes and the various reports reviewed by the Committee are available from the Pilot Commission.)

The Committee presented its initial report to the Pilot Commission on April 17, 2008, recommending that the Commission's Pilot Training Curriculum Committee be directed to consider incorporating enhanced training in advanced electronic navigation systems that would provide exposure to a greater number of systems and variety of presentations than what is provided by the current training program. In addition, the Committee

recommended that the Commission adopt by regulation a requirement that pilots licensed by the Commission be equipped with, and trained in the use of, portable electronic navigation equipment, commonly known as portable pilot units (PPUs), with specified minimum capabilities and other relevant provisions.

At its May 22, 2008 meeting, the Pilot Commission voted unanimously to direct its Curriculum Committee to consider incorporating enhanced training in advanced electronic navigation systems and directed its staff to begin the formal rulemaking process for adopting the regulation recommended by the Navigation Technology Committee.

ENHANCED TRAINING IN ADVANCED ELECTRONIC NAVIGATION SYSTEMS

The Maritime Institute of Technology and Graduate Studies (MITAGS) has a contract with the Pilot Commission to provide specified training to pilots as mandated by current regulations. The curriculum is specified in the contract. That contract ends June 30, 2009.

The Commission's Pilot Training Curriculum Committee will need to review the current curriculum taught by MITAGS under the contract, possible options to provide enhanced training in advanced electronic navigation systems, and how such training can be incorporated into the current training program within the Commission's regulatory and budget constraints.

Preliminary estimates are that it will take several meetings over a period of two to three months to develop specific recommendations for changing the curriculum and for the Board to take action on those recommendations, followed by possible contract negotiations with MITAGS and the preparation and execution of contract amendments. (Contract matters are handled through the Department of Consumer Affairs.)

If the resulting contract expenses remain within the Commission's budget, the enhanced training, if adopted, could be in place by October 1, 2008. If the additional training expenses would exceed the Board's budget, the Board may need to seek an increase in its spending authorization unless spending on other program areas can be reduced. Such a request could add a minimum of three to four months to the process.

RULEMAKING RE USE OF PORTABLE PILOT UNITS

The rulemaking process is governed by the California Administrative Procedures Act (APA), and by budgetary constraints imposed by the Department of Finance (DOF) and the Legislature. The Pilot Commission has been directed by DOF to use temporary part time government employees known as AGPAs (Associate Government Policy Analysts) to meet the Commission's future rulemaking needs. The Board's current budget does not

authorize expenditures for such employees, but there is such authority in the proposed budget for F/Y 08/09, which begins July 1, 2008. Once that budget has been approved (as part of the annual state budget approval process), the Commission can proceed with the retention of an AGPA and begin the rulemaking process.

The AGPA will need to ensure compliance with APA requirements; prepare the notice of proposed rulemaking and supporting documentation including a fiscal analysis and have them approved by the Office of Administrative Law and, if necessary, the Department of Finance; guide the Pilot Commission through the public comment period (minimum of 45 days from the publication of the notice of proposed rulemaking and 15 additional days following notice of any substantive amendments to the original rulemaking language); guide the Board through the public rulemaking hearing or hearings, until the rulemaking language has been adopted by the Commission; prepare the final rulemaking package and supporting documents; and guide the rulemaking through the approval process before the Office of Administrative Law (OAL). Once approved by OAL, the rulemaking is filed with the Secretary of State and ordinarily becomes law 30 days later.

The entire process can take from six to nine months or more. On an expedited basis, it is possible that the rulemaking could be completed by early 2009.

It should be noted that investigations are ongoing at both the state and federal level, and that the reports and recommendations that will ultimately come out of those investigations, along with various legislation now under consideration, may result in changes or additions to the above actions.

June 5, 2008. Source: Board of Pilot Commission Navigation Technology Committee Report.

ENCLOSURE 4

Amendment 24

On page 4, between lines 13 and 14, insert:

SEC. 3. Section 1176 of the Harbors and Navigation Code is repealed.

~~1176. Pilots and inland pilots shall undergo physical examinations in accordance with standards prescribed by the board in conjunction with the renewal of their license. The examination shall designate that each pilot or inland pilot is fit to perform his or her duties as a pilot.~~

SEC. 4. Section 1176 is added to the Harbors and Navigation Code, to read:

1176. (a) The board shall appoint a physician or physicians who are qualified to determine the suitability of a person to perform his or her duties as a pilot, an inland pilot, or a pilot trainee in accordance with subdivision (c).

(b) An applicant for a pilot trainee position or for a pilot or inland pilot as well as a pilot or inland pilot seeking renewal of his or her license shall undergo a physical examination by a board appointed physician in accordance with standards prescribed by the board. Within 30 days prior to the examination, the applicant or licensee shall submit to the physician conducting the physical examination a complete list of all prescribed medications being taken by or administered to the applicant or licensee.

(c) On the basis of both the examination and an evaluation of the effects of the prescription medications named on the submitted list, the physician shall designate to the board whether or not the pilot, inland pilot, or pilot trainee is fit to perform his or her duties as a pilot, inland pilot, or pilot trainee.

(d) The license of a pilot or inland pilot shall not be renewed unless he or she is found fit for duty pursuant to subdivision (c).

(e) Whenever a pilot, inland pilot, or pilot trainee is prescribed either a new dosage of a medication or a new medication, or suspends the use of a prescribed medication, he or she shall, within 10 days, submit that information to the board appointed physician having possession of the prescribed medication list submitted pursuant to subdivision (b). Whenever the physician receives the updated information, the physician shall determine whether or not the medication change affects the licensee's or trainee's fitness for duty. If the physician determines that the medication change results in the pilot, inland pilot, or pilot trainee being unfit for duty, the physician shall inform the board.

(f) The board may terminate a pilot trainee or suspend or revoke the license of a pilot or an inland pilot who fails to submit the prescribed medication information required by this section.

Amendment 25

On page 4, line 14, strike out "SEC. 3." and insert:

SEC. 5.

AMENDED IN ASSEMBLY JUNE 11, 2008

AMENDED IN ASSEMBLY MAY 6, 2008

SENATE BILL No. 1217

Introduced by Senator Yee

February 14, 2008

An act to add Section 1157.5 to the Harbors and Navigation Code, relating to vessels, and making an appropriation therefor.

LEGISLATIVE COUNSEL'S DIGEST

SB 1217, as amended, Yee. Board of Pilot Commissioners.

Existing law establishes in state government the Board of Pilot Commissioners, with jurisdiction over Monterey Bay and the Bays of San Francisco, San Pablo, and Suisun. Existing law authorizes the board to appoint an executive director to perform various duties.

This bill would require the board, on or before ~~February~~ *April* 15, 2010, and annually thereafter, to submit to the Secretary of the Senate and the Chief Clerk of the Assembly a report *containing specified information* describing its activities for the preceding calendar year. The bill would also require the board, on or before April 15, 2010, and annually thereafter, to submit to the Secretary of the Senate, the Chief Clerk of the Assembly, the Department of Finance, and the Joint Legislative Budget Committee a summary of the board's finances.

Existing law continuously appropriates the funds in the Board of Pilot Commissioners' Special Fund for the payment of the compensation and expenses of the board, its officers and employees, and training programs.

By imposing the duty to submit an annual report of the board's activities and a summary of the board's finances, the bill would make an appropriation.

This bill would provide that certain provisions would be operative only if SB 1627 and this bill are both enacted and become effective on or before January 1, 2009, and other provisions would be operative only if this bill is enacted and becomes effective on or before January 1, 2009, and SB 1627 is not enacted.

Vote: majority. Appropriation: yes. Fiscal committee: yes. State-mandated local program: no.

The people of the State of California do enact as follows:

SECTION 1. Section 1157.5 is added to the Harbors and Navigation Code, to read:

1157.5. (a) On or before ~~February~~ *April* 15, 2010, and annually thereafter, the board shall submit to the Secretary of the Senate and the Chief Clerk of the Assembly a report describing the board's activities for the preceding calendar year. The report shall include, but not be limited to, all of the following:

(1) The number of vessel movements across the bar, on the bays, and on the rivers within the board's jurisdiction.

(2) The name of each licensed pilot, *inland pilot,* and pilot trainee, and the status of each person. *If a person has had more than one status during the reporting year, each status and the length of time in that status shall be indicated. For the purposes of this section, "status" includes all of the following designations:*

(A) Licensed and fit for duty.

(B) Licensed and not fit for duty.

(C) Licensed and on authorized training.

(D) Licensed and on active military duty.

(E) Licensed and on leave of absence.

(F) Licensed but license suspended.

(3) A summary of each report of misconduct or a navigational incident involving a pilot, inland pilot, or pilot trainee, or other matters for which a license issued by the board may be revoked or suspended. For those cases that have been closed, the summary shall include a description of findings made by the incident review committee and of the resulting action taken by the board. For those cases that are still under investigation, the summary shall include a description of the reported incident and an estimated completion date for the investigation. *For those closed cases involving a pilot who has been involved in a prior incident where a finding of pilot*

error had been made, the report shall also include a summary of that incident.

(b) On or before April 15, 2010, and annually thereafter, the board shall submit to the Secretary of the Senate, the Chief Clerk of the Assembly, the Department of Finance, and the Joint Legislative Budget Committee a summary of the board's finances. Information to be included in the summary and its format shall be specified by the Department of Finance.

SEC. 2. Section 1157.5 is added to the Harbors and Navigation Code, to read:

1157.5. (a) On or before ~~February~~ *April* 15, 2010, and annually thereafter, the board shall submit to the Secretary of the Senate, the Chief Clerk of the Assembly, and the Secretary of Business, Transportation and Housing a report describing the board's activities for the preceding calendar year. The report shall include, but not be limited to, all of the following:

(1) The number of vessel movements across the bar, on the bays, and on the rivers within the board's jurisdiction.

(2) The name of each licensed pilot, *inland pilot,* and pilot trainee, and the status of each person. *If a person has had more than one status during the reporting year, each status and the length of time in that status shall be indicated. For the purposes of this section, "status" includes all of the following designations:*

(A) Licensed and fit for duty.

(B) Licensed and not fit for duty.

(C) Licensed and on authorized training.

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(E) Licensed and on leave of absence.

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error had been made, the report shall also include a summary of that incident.

(b) On or before April 15, 2010, and annually thereafter, the board shall submit to the Secretary of the Senate, the Chief Clerk of the Assembly, the Secretary of Business, Transportation and Housing, the Department of Finance, and the Joint Legislative Budget Committee a summary of the board's finances. Information to be included in the summary and its format shall be specified by the Department of Finance. The summary shall set forth separate reports for the following funds:

(1) Board of Pilot Commissioners' Special Fund.

(2) Pilot Trainee Fund.

(3) Pilot and Inland Pilot Continuing Education Fund.

SEC. 3. (a) Section 1 of this bill shall only become operative if this bill is enacted and becomes effective on or before January 1, 2009, and Senate Bill 1627 is not enacted, in which case Section 2 of this bill shall not become operative.

(b) Section 2 of this bill shall only become operative if both this bill and Senate Bill 1627 are enacted and become effective on or before January 1, 2009, in which case Section 1 of this bill shall not become operative.

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Substantive

AMENDMENTS TO SENATE BILL NO. 1217
AS AMENDED IN ASSEMBLY JUNE 11, 2008

Amendment 1
In line 1 of the title, after the second "to" insert:

, and to repeal and add Section 1176 of,

Amendment 2
On page 2, line 3, strike out "(a)"

Amendment 3
On page 2, line 8, strike out "(1)" and insert:

(a)

Amendment 4
On page 2, line 10, strike out "(2)" and insert:

(b)

Amendment 5
On page 2, line 15, strike out "(A)" and insert:

(1)

Amendment 6
On page 2, line 16, strike out "(B)" and insert:

(2)

Amendment 7
On page 2, line 17, strike out "(C)" and insert:

(3)

Amendment 8
On page 2, line 18, strike out "(D)" and insert:

(4)

Amendment 9
On page 2, line 19, strike out "(E)" and insert:

(5)

Amendment 10
On page 2, line 20, strike out "(F)" and insert:

(6)

Amendment 11
On page 2, line 21, strike out "(3)" and insert:

(c)

Amendment 12
On page 3, strike out lines 3 to 8, inclusive

Amendment 13
On page 3, line 11, strike out "(a)"

Amendment 14
On page 3, line 17, strike out "(1)" and insert:

(a)

Amendment 15
On page 3, line 19, strike out "(2)" and insert:

(b)

Amendment 16
On page 3, line 24, strike out "(A)" and insert:

(1)

Amendment 17
On page 3, line 25, strike out "(B)" and insert:

(2)

Amendment 18
On page 3, line 26, strike out "(C)" and insert:

(3)

Amendment 19
On page 3, line 27, strike out "(D)" and insert:

(4)

Amendment 20
On page 3, line 28, strike out "(E)" and insert:

(5)

Amendment 21
On page 3, line 29, strike out "(F)" and insert:

(6)

Amendment 22
On page 3, line 30, strike out "(3)" and insert:

(c)

Amendment 23
On page 4, strike out lines 3 to 13, inclusive

Amendment 24

On page 4, between lines 13 and 14, insert:

SEC. 3. Section 1176 of the Harbors and Navigation Code is repealed.

~~1176. Pilots and inland pilots shall undergo physical examinations in accordance with standards prescribed by the board in conjunction with the renewal of their license. The examination shall designate that each pilot or inland pilot is fit to perform his or her duties as a pilot.~~

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(b) An applicant for a pilot trainee position or for a pilot or inland pilot as well as a pilot or inland pilot seeking renewal of his or her license shall undergo a physical examination by a board appointed physician in accordance with standards prescribed by the board. Within 30 days prior to the examination, the applicant or licensee shall submit to the physician conducting the physical examination a complete list of all prescribed medications being taken by or administered to the applicant or licensee.

(c) On the basis of both the examination and an evaluation of the effects of the prescription medications named on the submitted list, the physician shall designate to the board whether or not the pilot, inland pilot, or pilot trainee is fit to perform his or her duties as a pilot, inland pilot, or pilot trainee.

(d) The license of a pilot or inland pilot shall not be renewed unless he or she is found fit for duty pursuant to subdivision (c).

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(f) The board may terminate a pilot trainee or suspend or revoke the license of a pilot or an inland pilot who fails to submit the prescribed medication information required by this section.

Amendment 25

On page 4, line 14, strike out "SEC. 3." and insert:

SEC. 5.

ENCLOSURE 5

BOARD OF PILOT COMMISSIONERS
FOR THE BAYS OF SAN FRANCISCO, SAN PABLO AND SUISUN
FY 2008-09 SPRING FINANCE LETTER
M/V COSCO BUSAN Incident/Board Task Review
SFL # 8530-01
Priority #1

A. Nature of Request

The Board of Pilot Commissioners (Board) requests a special fund budget augmentation of $367,000 in FY 2008-09, $58,000 in FY 2009-10, and $39,000 ongoing, to fund expenses incurred in the investigation and administrative hearing following the M/V (motor vessel) COSCO BUSAN allision with the San Francisco/Oakland Bay Bridge in November 2007, and also to review and assess Board procedures to address questions that have surfaced as a result of the incident.

M/V COSCO BUSAN

The Board's Incident Review Committee (IRC) has investigated the M/V COSCO BUSAN incident and brought charges (termed an "accusation") against the Board-licensed pilot who was directing navigation of the vessel at the time it struck the San Francisco/Oakland Bay Bridge. The accusation will result in an administrative hearing and may result in suspension or revocation of the pilot's state license. The Administrative Law Judge (ALJ) has scheduled the hearing for early September 2008.

Failure to proceed with the administrative action would undermine public confidence and the ability of the state to regulate pilotage in waters under its jurisdiction. Public interest in the incident and the Board's response justify the highest priority with respect to continued funding, expenditure authority and the ability to continue the administrative hearing to completion. A Deficiency Funding Request of $255,000 for FY 2007/08 to meet unanticipated legal costs was previously submitted and is awaiting legislative approval.

BOARD TASK REVIEW

As a result of this incident, the Board has identified a number of areas in which its procedures can be strengthened to provide the public with increased assurance that steps will be taken to further reduce the risk of rare, but potentially catastrophic accidents such as the M/V COSCO BUSAN. These steps include a comprehensive review of pilot fitness standards, training in shipboard and portable electronic navigation systems that are intended to provide pilots with the best achievable means of safely navigating in reduced visibility conditions, and strengthening the Board's incident investigation procedures to ensure early identification of possible problem areas for pilots.

The Board's task review will include a review of navigation technology, pilot fitness standards, the Board's IRC, staff and commissioner training, drug and alcohol testing for pilot trainees, and selection diversity outreach.

B. Background/History

M/V COSCO BUSAN

On November 7, 2007, the M/V COSCO BUSAN, a 902-foot long container ship, struck a blow to the "Delta Tower" of the San Francisco-Oakland Bay Bridge. The vessel damaged the fendering system of the bridge and, in turn, suffered a gash in the shell plating approximately 100 feet long, 10 feet tall, and from several inches to several feet deep. The gash penetrated two fuel tanks, causing an oil spill of approximately 54,000 gallons of heavy bunker fuel into the bay. A board-licensed pilot was directing the vessel at the time of the accident. The IRC dispatched an investigator and began its review to determine whether pilot error was involved. The IRC subsequently determined that there was sufficient cause to file charges of negligence against the pilot and recommended summary suspension of his license pending a suspension or revocation hearing. On November 30, 2007, the Board voted to summarily suspend the pilot's state license. On December 6, 2007, the IRC filed an accusation.

During the course of the investigation, the Board incurred extraordinary legal expenses, which have exceeded current budgeted levels of funding. A hearing is scheduled for early September 2008. It is in the public's best interest that this hearing proceed. Outside counsel will present the case against the pilot at the administrative hearing in September. After two pre-hearing conferences with the ALJ, the ALJ has estimated that the hearing will take 16 court days allocated over four weeks to reach its conclusions. A criminal investigation by the U.S. Attorney's office that has resulted in criminal charges against the pilot, difficulties with accessing witnesses and processing admissible evidence from the ship, as well as various other ongoing lawsuits, have complicated and prolonged the process.

BOARD TASK REVIEW

Navigation Technology

As a result of the M/V COSCO BUSAN incident, the Board established a Navigation Technology Committee. The committee has been tasked with investigating the different types of navigation systems generally found on ships entering the San Francisco Bay Area, the sufficiency of pilot training in the use of these systems, and to evaluate Portable Pilot Units (portable electronic chart systems brought aboard a ship by a pilot to assist in navigation). The Navigation Technology Committee will also work with the regional Harbor Safety Committee's various subcommittees to help develop "best practices" in response

to lessons learned from the M/V COSCO BUSAN, particularly those dealing with navigation issues.

While much of the Committee's preliminary work should be completed during the current fiscal year, it is expected to continue evaluating this complex and evolving area on an ongoing basis. The committee's recommendations are likely to result in changes to the current training provided in shipboard electronic navigation systems and initiate training in portable pilot units. These recommendations are expected to result in new rulemaking, which will require additional regulations addressing these issues. Proposed changes to current training curriculum will be reviewed and evaluated by the Board's Pilot Training Curriculum Committee, which also evaluates potential vendors that provide such training. Currently, the Maritime Institute of Technology & Graduate Studies, as mandated by Title 7 California Code of Regulations (CCR) § 215(b) (2), is providing training in advanced electronic navigation systems.

Pilot Fitness Standards

Harbors and Navigation Code (HNC) §§ 1175 and 1176 require pilots to be of good mental and physical health and to undergo physical examinations in accordance with standards prescribed by the Board. The Board's current procedures for determining physical and mental competency of pilots are set forth in Title 7, CCR § 217.

Following the M/V COSCO BUSAN allision, questions were raised regarding the physical and mental competency of the pilot, the standards used by state and federal agencies in determining pilots' physical and mental competency, and the procedures used to ensure that pilots meet such standards. In response, the Board's Pilot Fitness Committee has been tasked with:

1) Conducting a comprehensive review of the physical and mental fitness standards for pilots, including review of the Board's current standards as outlined in the Reference Guide for Physicians for the Physical Examination for Duty Status of Seafarers in the U.S. Merchant Marine adopted by the Seafarers Health Improvement Program (SHIP); current U.S. Coast Guard Physical Evaluation Guidelines for Merchant Mariner's Documents and Licenses (NVIC 2-98); the proposed draft replacement to NVIC 2-98 published in the Federal Register on 9/28/06; recommendations by the National Transportation Safety Board regarding the fitness of pilots (including M-97-44).

2) Preparing recommendations to the Board for the adoption of standards that meet or exceed Coast Guard standards to ensure that each pilot is physically and mentally fit to perform the duties of a pilot.

3) Preparing recommendations to the Board for the amendment of its procedures to determine a pilot's physical and mental competency, including procedures to ensure the disclosure and appropriate evaluation of the history and presence of any medical conditions, symptoms, or medication use that would affect an individual's fitness to pilot a vessel.

4) Addressing state of the art methodology to proactively detect a decline in a pilot's situational awareness, that is, the ability to track and act on various communications and information relevant to the vessel's safe navigation, and to plan ahead for upcoming traffic and environmental situations.

5) Preparing recommendations to improve appeal procedures to ensure protection of the public and provide due process for pilots.

6) Evaluating the costs and benefits of requiring the opinion of a second medical examiner.

These tasks are likely to require a minimum of nine to twelve meetings over a one-year period. Current standards are not specific to pilots, but for the most part, apply to all mariners. Standards specific to pilots may be warranted. Sleep deprivation and fatigue issues are likely to be among those at the forefront and pose challenging issues that will need to be resolved.

Review of the Board's Incident Review Committee

The Board's Incident Review Committee (IRC) is established by HNC § 1180.3 to review and investigate all reports of misconduct or navigational incidents involving pilots. Its procedures are set forth in Title 7 CCR § 210.

Following the M/V COSCO BUSAN incident, questions were raised regarding the sufficiency of reviewing a pilot's incident history to determine whether there is a pattern of underlying problems that warrant follow up or further investigation. In addition, there has not been a comprehensive review of the Board's incident investigation procedures since the establishment of the IRC in 1993. As a result, the Board has initiated plans for a comprehensive review of the Board's investigation procedures and the guidelines for the IRC. The purpose is to ensure that the incident investigation and review process is sufficiently rigorous to enable the Board to carry out its functions of pilot oversight and to take steps to minimize the risk of recurrence of preventable incidents.

Staff/Commissioner Training

During FY 2007/08, the Board initiated its first staff training programs using CPS Human Resource Services as the vendor. The training programs are specific to matters affecting the administration of the Board. Examples include performance

appraisal, administrative writing, and an E-communications workshop. Current year training is focused on the state budget process and budget change proposals. CPS offers many courses that would be of use to the Board's staff and commissioners, increasing their knowledge and professionalism.

Additionally, questions have been raised concerning the use of electronic navigation devices by the pilot of the M/V COSCO BUSAN. Recent changes in the rapidly evolving field of electronic navigation make it imperative that the Board's executive director, who also is the Board's chief investigator, obtain a thorough knowledge of electronic navigation and remain current in the developments of this field. The Board intends to maintain regular training programs for staff and commissioners in the future. The Board will require additional funding to accommodate the ongoing training needs.

Mandatory Trainee Drug and Alcohol Testing

Federal rules now require that the Board implement a mandatory pilot trainee drug and alcohol testing program. This is a new requirement for the Board. It is anticipated that regulations will be required to outline the procedures.

Pilot Trainee Selection Diversity Outreach

The Legislature has raised concerns about the diversity of the Board's licensees in subcommittee meetings. The Board has established an Ad Hoc Committee on Pilot Selection. The Ad Hoc Committee on Pilot Selection is expected to provide the Board with options intended to increase the diversity of pilot trainees and the pilots licensed by the Board. One mechanism to achieve greater diversity among pilots is to establish and maintain a recruiting program to encourage qualified women and minority cadets and mariners, to sit for the Board's trainee selection examination, which is administered every few years. The recruitment program may be a joint effort with the California Maritime Academy or the Board may contract with an independent contractor.

C. State Level Considerations

The Legislature has recognized the importance of the Board, as noted in Harbors and Navigation Code:

> Section 1100. The Legislature finds and declares that it is the policy of the state to ensure the safety of persons, vessels, and property using the Bays of San Francisco, San Pablo, and Suisun, and the tributaries thereof, and to avoid damage to such waters and the surrounding ecosystems, as a result of vessel collision or damage by providing competent, efficient, and regulated pilotage for vessels required by this division to secure pilotage services.

Section 1101. The Legislature further finds and declares all of the following:

(c) The increase in vessel size and traffic, and the increase in cargoes carried in bulk, particularly oil and gas and hazardous chemicals, creates substantial hazards to the life, property, and values associated with the environment of such waters.

(e) A program of pilot regulation and licensing is necessary in order to ascertain and guarantee the qualifications, fitness, and reliability of qualified personnel who can provide safe pilotage of vessels entering and using the Bays of San Francisco, San Pablo, and Suisun.

(h) The individual physical safety and well being of pilots is of vital importance in providing required pilot services.

The M/V COSCO BUSAN allision and resulting oil spill, calls into focus all of the Legislature's findings and declarations. The Board's continuing response to the allision and the Board's task augmentation proposals are consistent with the Legislature's intention.

The Board of Pilot Commissioners for the Bays of San Francisco, San Pablo and Suisun is a specially funded agency. Funds are collected through user fees paid by shippers who use pilotage services. This proposal has no impact on other state departments and does not require funding from any other source, including the general fund.

D. Facility/Capital Outlay Considerations

There are no new facilities or capital needs. The Board office can be used for meetings or workshops and contractors provide their own facilities.

E. Justification

M/V COSCO BUSAN

The Board's legal counsel estimates additional expenses in FY 2008/09 of approximately $96,335 to complete trial preparations and the administrative hearing. There will be an additional cost of $5,000 for interpreter services. The crew of the M/V COSCO BUSAN speak Chinese or minimal nautical English. An interpreter will be needed to interview witnesses for the administrative hearing.

The Board anticipates additional Office of Administrative Hearing fees in the amount of $36,100 for services of the ALJ during FY 2008/09 (190 hours at $190 per hour for 16 days of hearing and decision preparation). The total estimated cost to complete the hearings for the M/V COSCO BUSAN allision in FY 2008/09 is $137,435.

Attachment 1 provides a cost summary of this entire proposal.

BOARD TASK REVIEW

Total FY 2008/09 Estimated Cost: $229,075

The Board requests funding for a temporary help position in the Associate Governmental Program Analyst (AGPA) classification to complete the necessary tasks related to rulemaking and to prepare required filing and documentation, as needed. The Board estimates the need for a 0.5 position and funding in the first two years and minimal funding ongoing. Specific tasks and associated costs for the AGPA are listed in Attachment 2.

The accumulated expansion of Board responsibilities over the years and the recent tasking in response to the M/V COSCO BUSAN incident are causing a burden to Board staffing and resources. This Spring Finance Letter (SFL) identifies those issues and provides cost estimates. The Navigation Technology, Pilot Fitness and IRC Review issues are discrete and once completed, will require a periodic review. The staff/commissioner training, drug testing program and outreach program are ongoing and will require an increase in the Board's ongoing expenditure authority. Each area of concern is listed below and is summarized on Attachment 1:

A) Navigation and Technology

The Navigation and Technology Committee has been directed to report and make recommendations to the Board with respect to its findings. It is anticipated that the committee will propose policy changes that will result in formal rulemaking. The rulemaking process would begin, and likely conclude in early FY 2008/09. Costs associated with committee meetings and review and advice from the Board's maritime attorney are expected to remain within the existing budget.

B) Pilot Fitness Standards

Review of the Board's physical and mental fitness standards and physical examination processes for licensees requires contracting with one or more medical specialists who have expertise in occupational medicine and who have or can acquire a thorough understanding of the profession and challenges of maritime piloting. This is a new one-time task and would be part of the Board's

operating expenses. It cannot be covered under the present pilot physical examination authority in FY 2008/09.

The Board anticipates working with the staff of the University of California at San Francisco Medical Center or other northern California teaching hospitals in connection with this study. Consulting physicians are expected to cost $300 per hour.

This review is expected to result in recommendations for amendments to the current regulations and possibly in amendments to the authorizing statute. These regulatory activities would occur after FY 2008/09.

C) Review of the Board's Incident Review Committee

Review of the Board's IRC is an important element of the Board's overall review of its mission and practices. This review is likely to require a minimum of eight workshops and will commence early in FY 2008/09. The focus of the review will be to: ensure industry, pilot and public participation and input; develop directions for an audit; review audit results; and develop recommendations to the Board.

The first workshop will focus on bringing subject matter experts together to examine current IRC procedures and identify the general direction of the review. The second will be to develop the initial scope of work for the consulting contract; the third will be to finalize the scope of work. After the contractor completes its work, three workshops would be held to review the contractor's report and proposals. The last two workshops will finalize the report.

D) Staff/Commissioner Training

The Board seeks expenditure authority for staff and commissioner training to maintain and enhance skills needed to carry out the mandate of the Board.

The Board seeks expenditure authority for FY 2008/09 for thirteen days of CPS or equivalent training at $150 per class day plus travel and per diem. Most courses are given in Sacramento. The Board anticipates that the training would be allocated as three days for the Executive Director, two days for the Administrative Assistant, five days for the analyst, and three days for commissioners. Further, the Board seeks expenditure authority to send its Executive Director to an electronic navigation training workshop. Generally, these courses are five days in duration and require out-of-state travel and per diem. Course cost is expected to be $300 per day per participant. Total estimated cost for these training programs is $5,000 including travel.

The Board seeks expenditure authority to send its Executive Director and the Chair of the Board's IRC to a training program focused on investigation of marine incidents, e.g., collisions and groundings, and the USCG and International

Maritime Organization requirements regarding pilot ladders and other pilot transfer equipment. These will likely be separate programs. Generally, these courses are expected to be five days in duration for investigation courses, and two days for pilot ladder courses. The Board seeks to continue ongoing training for the Executive Director and committee chairs, as needed, to maintain a level of competency in the evolving fields of marine investigation, navigation technology and pilot training. Courses are expected to cost $300 per day per participant plus out-of-state travel and per diem. Total estimated cost is $10,000 annually.

E) Mandatory Trainee Drug and Alcohol Testing

The Board seeks to establish a new line item to provide mandatory drug and alcohol testing for pilot trainees in accordance with recent changes in U.S. Coast Guard requirements. Presently there are 13 trainees in the training program. Annual costs are estimated at 13 trainees at $75.00 per test or $975.

F) Pilot Trainee Selection Diversity Outreach

The Board seeks to establish a new line item to fund an interagency agreement with the California Maritime Academy or to contract with an independent contractor to conduct recruiting and outreach to qualified minority and women mariners to compete for entry into the Board's pilot trainee training program. Estimated cost is $25,000 in FY 2008/09 to cover initial development of the outreach program and first year recruitment efforts, and $10,000 ongoing.

F. Outcomes and Accountability

This proposal is expected to have the following outcomes:

- Complete rulemaking proposals aimed at improving safety for the public, pilot trainees, and licensed pilots.
- Identify improvements to navigation technology and update pilot training.
- Audit incident review procedures.
- Establish new procedures for the evaluation of pilot fitness standards.
- Evaluate staff and commissioner training programs.
- Implement new drug and alcohol testing requirements.
- Achieve greater diversity in pilot recruitment programs.

The establishment of the identified committees will ensure that ongoing evaluations of technology, pilot fitness standards, staff and commissioner training, and increased diversity will meet the needs of increased public and pilot safety standards.

The Board's Navigation Technology Committee, Pilot Training Curriculum Committee, Pilot Fitness Committee, and Ad Hoc Committee on Pilot Selection will conduct periodic follow-up meetings to track the progress of implementation

and to assess the efficacy of the changes made as a result of their recommendations. Annual reports on the results of their assessments will be provided to the Board. Guidelines for these assessments are to be included in the committees' initial recommendations.

Board staff will report annually on all training provided to staff and commissioners to permit reassessment and planning for the following year's training.

The Executive Director will report annually to the Board on the results of random drug testing of pilot trainees consistent with the timeline required for providing such reports to the U. S. Coast Guard.

G. Analysis of Feasible Alternatives

Alternate 1: Approve a special fund expenditure authority budget augmentation of $367,000 in FY 2008/09, $58,000 in FY 2009/10, and $39,000 ongoing. This alternative would provide the Board with the resources needed to address the concerns of the legislature and the public in the aftermath of the M/V COSCO BUSAN allision. It would also enable the Board to review and update current regulations, complete an audit review of Board procedures, proactively address increased pilot physical and mental fitness standards, improve the availability of new technology, improve ongoing staff and commissioner training needs, meet the new U.S. Coast Guard drug and alcohol testing requirements, and provide for a diversity outreach selection process.

Alternate 2: Approve only one of the major initiatives (Navigation Technology rulemaking, Pilot Fitness Standards, or Review of the Board's Incident Review Committee). This would reduce the cost and burden on Board members and staff. However, this alternate would limit the anticipated improvement to public and pilot safety. The Board believes that with the availability of part-time AGPA assistance it can successfully address the increased workload.

Alternative 3: Do nothing. This alternative would neglect to address the specific areas of concern raised by the legislature and the public. Public safety would remain at increased risk.

H. Timetable

Beginning July 1, 2008: Begin recruiting to fill the temp help AGPA position.

Board to act on initial recommendations of Navigation Technology Committee.

Pilot Training Curriculum Committee to review training contracts for possible changes in curriculum as recommended by Navigation Technology Committee and directed by Board.

Commence rulemaking process identified by Navigation Technology Committee and approved by Board following timetable required by Administrative Procedures Act and OAL regulations.

Upon recruitment of AGPA, commence scope of work and selection process for medical consultant(s).

September 2008: Administrative hearing on IRC's Accusation

October 2008: Decision rendered following hearing on IRC's Accusation

Commence or continue Pilot Fitness Committee workshops to guide, consider and evaluate the research and recommendations of medical consultant.

November 2008: Complete interagency agreement with CMA or independent contractor for recruitment/diversity outreach.

December 2008: Selection of IRC auditor, commence workshops to guide, consider and evaluate results of audit.

Board staff/commissioner training to be scheduled based on availability of classes throughout FY 08/09.

I. Recommendations

Alternative 1 is the only alternative that gives the Board the resources to address public and pilot protection needs.

EXHIBIT 1

BOARD OF PILOT COMMISSIONERS
INCIDENT REVIEW COMMITTEE REPORT:
M/V COSCO BUSAN - CAPT. JOHN COTA
NOVEMBER 7, 2007

PRELIMINARY INCIDENT REPORT

BY HAND DELIVERY OR FAX

State Board of Pilot Commissioners
for the Bays of San Francisco, San Pablo and Suisun
Pier 9, Suite 102
San Francisco, CA 94111

Commissioners:

This is a preliminary notice of the following incident.

Pilot: J. COYA

Date: 7-NOV-07 Time: 0830±

Vessel: COSCO BUSAN

Vessel's Agent: HANJIN

Location: SF BAY

Nature of Incident:

( ) grounding

( ) collision (name of other vessel _____)

(X) allision (object allided with DELTA TOWER BAY BRIDGE

( ) other _____

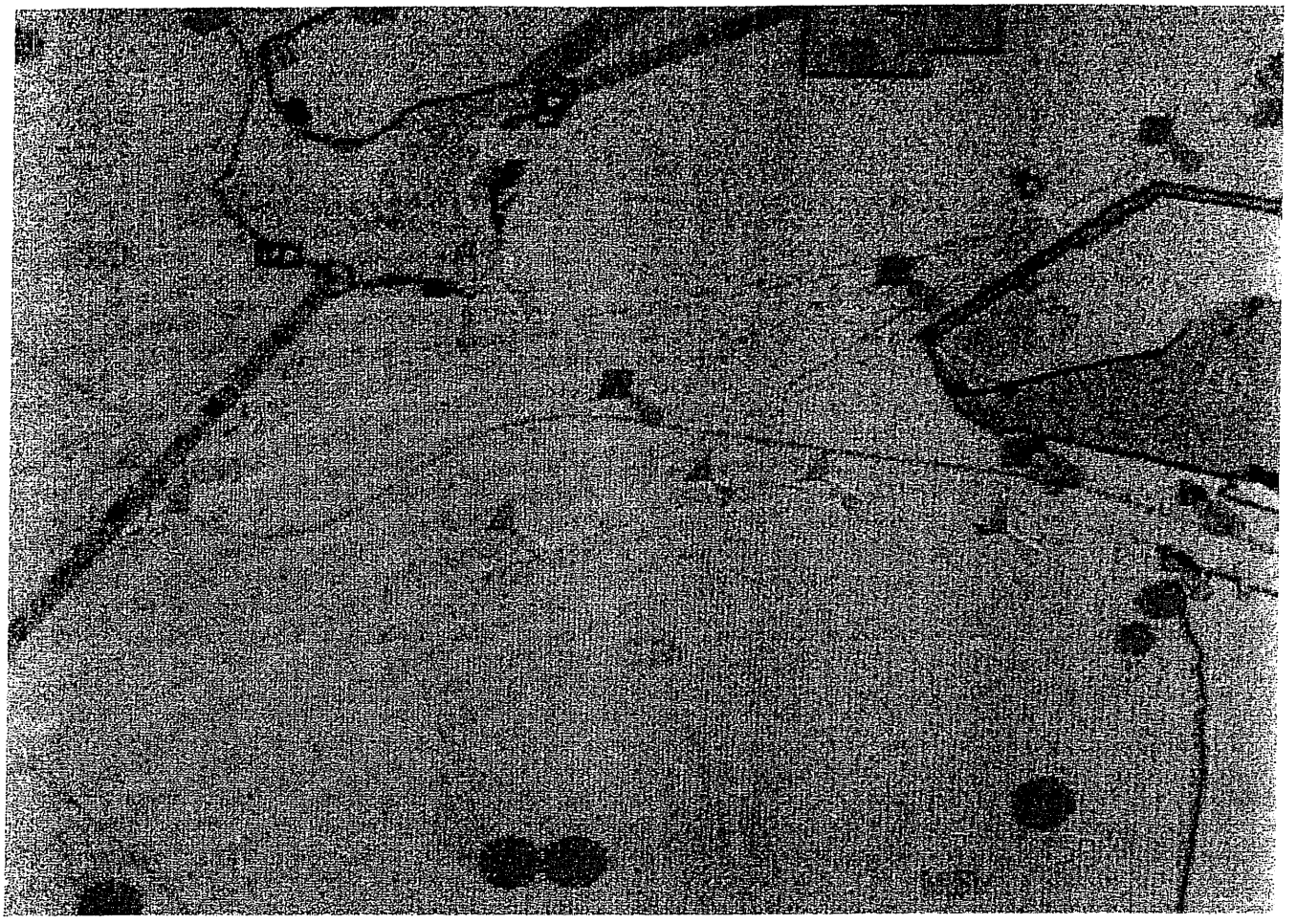
The pilot involved will report further as may be appropriate under California State Harbors and Navigation Code and Commission regulations.

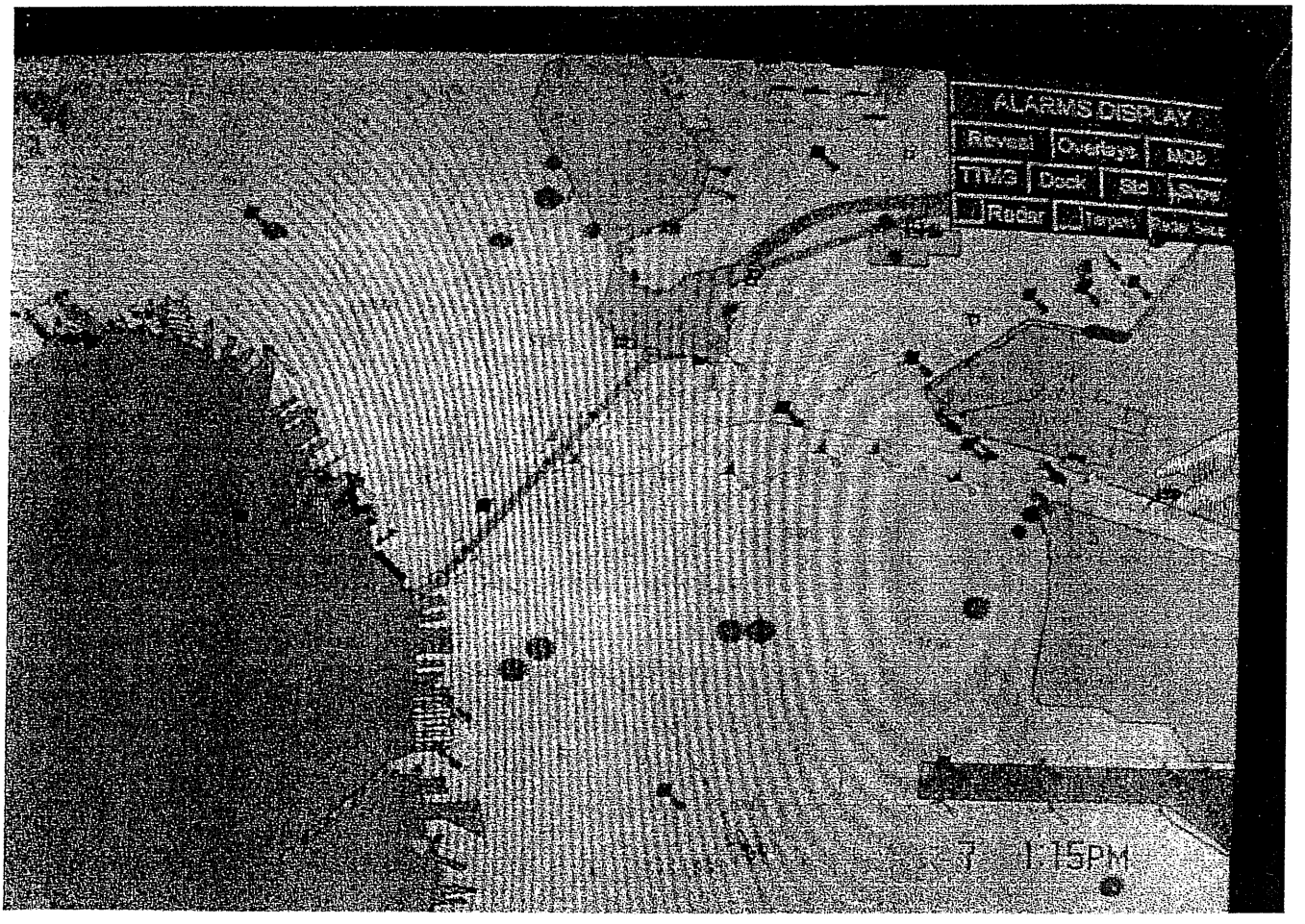
[redacted]
Port Agent

Encl: (1)

EXHIBIT 2

BOARD OF PILOT COMMISSIONERS
INCIDENT REVIEW COMMITTEE REPORT:
M/V COSCO BUSAN - CAPT. JOHN COTA
NOVEMBER 7, 2007

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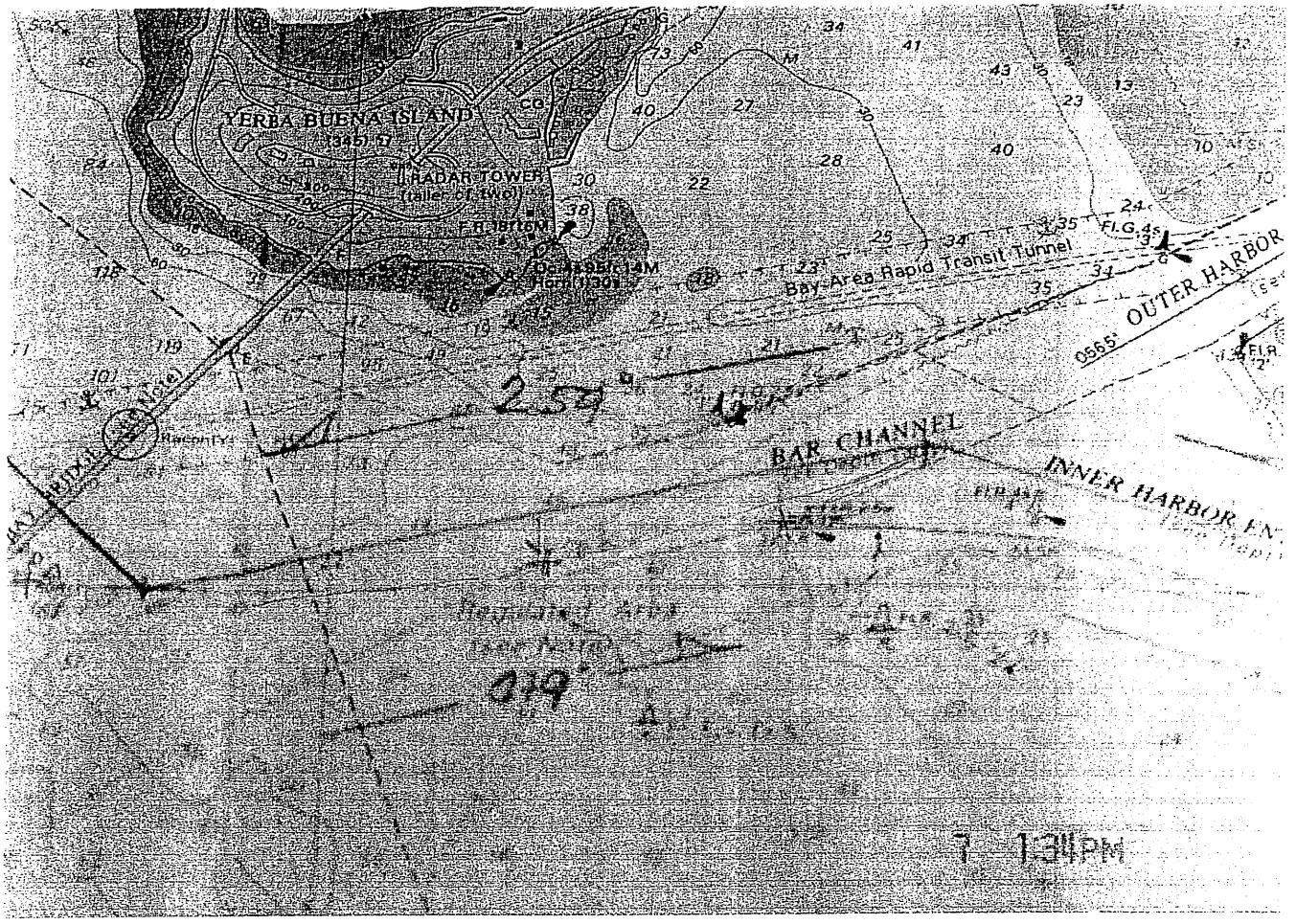
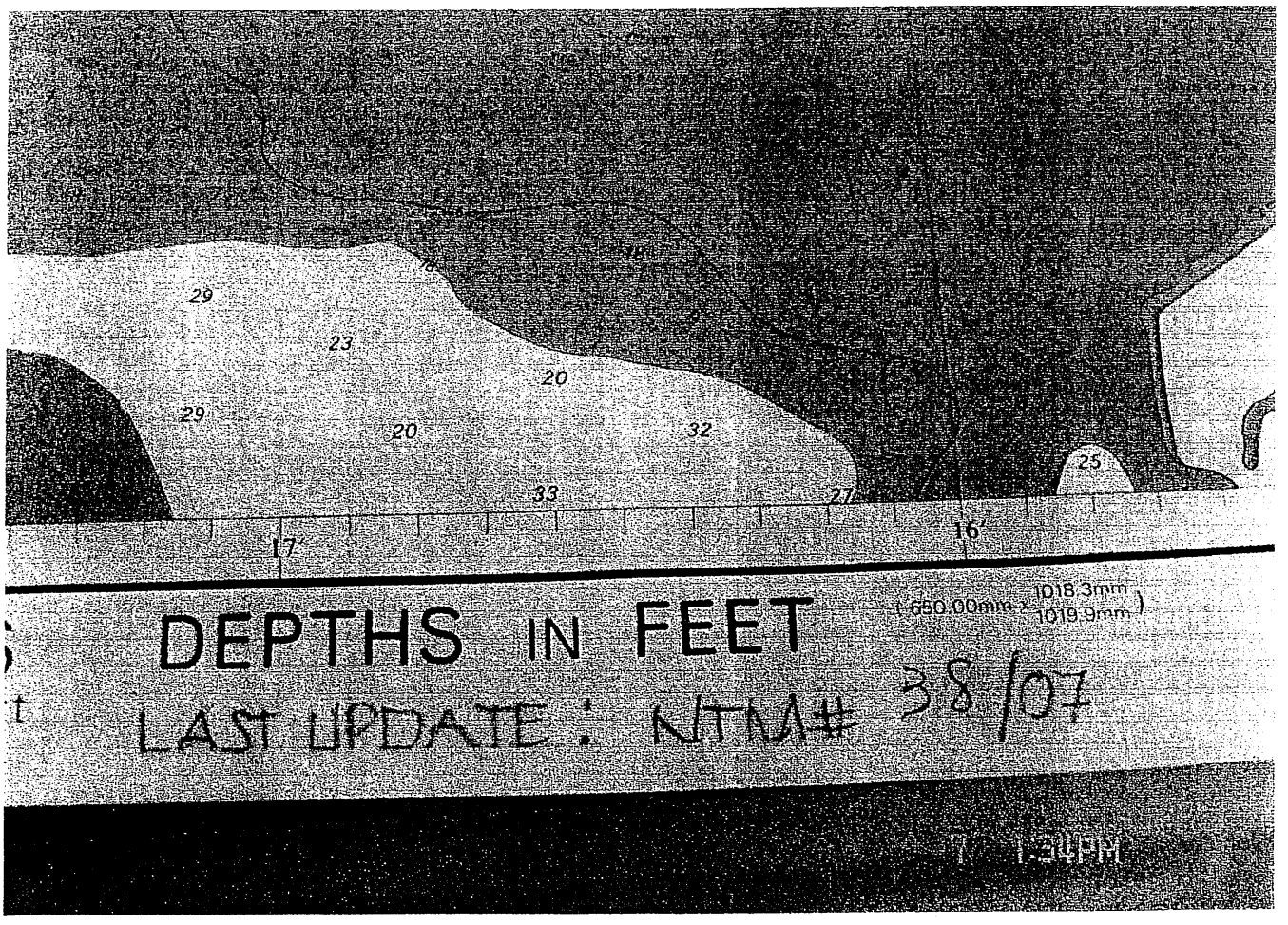
Reveal
Overlays
Mode
TM/S
Dock
Sea
Radar
Target
7 1 15PM


YERBA BUENA ISLAND
RADAR TOWER
(Tallest Structure)
Bay Area Rapid Transit Tunnel
FL.G.4s
OUTER HARBOR
2.5
BAR CHANNEL
INNER HARBOR
019°
7 1:34PM


29
23
20
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20
32
33
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25
17
16'
DEPTHS IN FEET
LAST UPDATE: NTM# 38/07
1:34PM

OMB Control No. 1625-0001

U.S. DEPARTMENT OF HOMELAND SECURITY
U.S. COAST GUARD
CG-2692 (Rev. 8-04)

REPORT OF MARINE ACCIDENT, INJURY OR DEATH

RCS No. G-MOR-
MISLE NOTIFICATION NUMBER

SECTION I. GENERAL INFORMATION

1. Name of Vessel or Facility	2. Official No.	3. Nationality	4. Call Sign	5. USCG Certificate of Inspection issued at
COSCO BUSAN	HK-2012	HONG KONG	VRDI6	

6. Type (Towing, Freight, Fish, Drill, etc.)	7. Length	8. Gross Tons	9. Year Built	10. Propulsion (Steam, diesel, gas, turbine)
FREIGHT	270.67m	65131	2001	DIESEL

11. Hull Material (Steel, Wood)	12. Draft (Ft - In) FWD	AFT	13. If Vessel Classed, By Whom (ABS, LLOYDS, DNV, BV etc)	14. Date of Occurrence	15. TIME (Local)
STEEL	12.12m	12.23m	GL	07. NOV. 2007	0830 HRS

16. Location (See instruction No. 16A)
TOWER DELTA - SAN FRANCISCO BAY BRIDGE

17. Estimated Loss or Damage TO:
VESSEL UNKNOWN
CARGO UNKNOWN
OTHER UNKNOWN

18a. Name, Address & Telephone No. of Operating Co.
REGAL STONE LTD
16TH FLOOR - MASS MUTUAL TOWER, 9 DUD. ESTER ROAD
WANCHAI - HONGKONG - 00852 2525 2122

18. Name of Master or Person in Charge	USCG License	19. Name of Pilot	USCG License	State License
CAPT. SUN MAO CAI	YES ☑ NO	CAPT. JOHN COTA	☐ YES ☐ NO	☐ YES ☐ NO

18a. Street Address (City, State, Zip Code)	18b. Telephone Number	19a. Street Address (City, State, Zip Code)	19b. Telephone Number
DALIAN LIAONING CHINA		UNKNOWN	UNKNOWN

21. Casualty Elements (Check as many as needed and explain in Block 44.)

NO. OF PERSONS ON BOARD 24
DEATH - HOW MANY? NIL
MISSING - HOW MANY? NIL
INJURED - HOW MANY? NIL
☐ HAZARDOUS MATERIAL RELEASED OR INVOLVED (Identify Substance and amount in Block 44.)
☑ OIL SPILL - ESTIMATE AMOUNT: UNKNOWN
☐ CARGO CONTAINER LOST/DAMAGED
☑ COLLISION (Identify other vessel or object in Block 44.)
☐ GROUNDING ☐ WAVE DAMAGE

☐ FLOODING, SWAMPING WITHOUT SINKING
☐ CAPSIZING (with or without sinking)
☐ FOUNDERING OR SINKING
☐ HEAVY WEATHER DAMAGE
☐ FIRE
☐ EXPLOSION
☐ COMMERCIAL DIVING CASUALTY
☐ ICE DAMAGE
☐ DAMAGE TO AIDS TO NAVIGATION
☐ STEERING FAILURE
☐ MACHINERY OR EQUIPMENT FAILURE
☐ ELECTRICAL FAILURE
☐ STRUCTURAL FAILURE

☐ FIREFIGHTING OR EMERGENCY EQUIPMENT FAILED OR INADEQUATE (Describe in Block 44.)
☐ LIFESAVING EQUIPMENT FAILED OR INADEQUATE (Describe in Block 44.)
☐ BLOW OUT (Petroleum exploration/production)
☐ ALLISION INVOLVEMENT (Describe in Block 44.)
☐ DRIFTING INVOLVEMENT (Describe in Block 44.)
☐ OTHER (Specify)

22. Conditions

A. Sea or River Conditions (wave height, river stage, etc.)

B. WEATHER: ☐ FAIR ☐ RAIN ☐ SNOW ☑ FOG ☐ OTHER (Specify)

C. TIME: ☑ DAYLIGHT ☐ TWILIGHT ☐ NIGHT

D. VISIBILITY: ☐ GOOD ☐ FAIR ☑ POOR

E. DISTANCE (miles of visibility): VARIOUS

F. AIR TEMPERATURE (F): 11°D (C)

G. WIND SPEED & DIRECTION: SW X3

H. CURRENT SPEED & DIRECTION: UNKNOWN

23. Navigation Information
☐ MOORED, DOCKED OR FIXED
☐ ANCHORED ☑ UNDERWAY OR DRIFTING
SPEED AND COURSE: VARIOUS

24. Last Port Where Bound: LONG BEACH / BUSAN

24a. Time and Date of Departure: 0748 CT 07 NOV. 07

25.	25a. NUMBER OF VESSELS TOWED: Empty	Loaded	Total	25b. TOTAL H.P. OF TOWING UNITS	25c. MAXIMUM SIZE OF TOW WITH TOW-BOATS: Length	Width	25d. (Describe in Block 44.)
FOR TOWING ONLY							☐ PUSHING AHEAD ☐ TOWING ASTERN ☐ TOWING ALONGSIDE ☐ MORE THAN ONE TOW-BOAT OR TOW

SECTION II. BARGE INFORMATION

26. Name	26a. Official Number	26b. Type	26c. Length	26d. Gross Tons	26e. USCG Certificate of Inspection issued at:

26f. Year Built	26g. ☐ SINGLE SKIN ☐ DOUBLE	26h. Draft FWD	AFT	26i. Operating Company

26j. Damage Amount	26k. Describe Damage to Barge
BARGE	
CARGO	
OTHER	

PREVIOUS EDITION IS OBSOLETE

3 PMSOBA 039 JEN

"EVIDENCE: _____"

PAGE 2 OF CG-2692 (REV. 06-04)

SECTION III. PERSONNEL ACCIDENT INFORMATION

27. Person Involved
☐ MALE or ☐ FEMALE
☐ DEAD ☐ INJURED
☐ MISSING

27a. Name *(Last, First, Middle Name)*

27b Address *(City, State, Zip Code)*

27c. Status
☐ Crew
☐ Passenger
☐ Other

28. Birth Date

29. Telephone No.

30. Job Position

31. *(Check here if off duty)* ☐

32. Employer - *(if different from Block 18., fill in Name, Address, Telephone No.)*

33. Person's Time

	YEAR(S)	MONTH(S)
A. IN THIS INDUSTRY -		
B. WITH THIS COMPANY -		
C. IN PRESENT JOB OR POSITION -		
D. ON PRESENT VESSEL/FACILITY -		
E. HOURS ON DUTY WHEN ACCIDENT OCCURRED -		

34. Industry of Employer *(Towing, Fishing, Shipping, Crew Supply, Drilling, etc.)*

35. Was the Injured Person Incapacitated 72 Hours or More?

36. Date of Death

37. Activity of Person at Time of Accident

38. Specific Location of Accident on Vessel/Facility

39. Type of Accident *(Fall, Caught between, etc.)*

40. Resulting Injury *(Cut, Bruise, Fracture, Burn, etc.)*

41. Part of Body Injured

42. Equipment Involved in Accident

43. Specific Object, Part of the Equipment in block 42., or Substance *(Chemical, Solvent, etc.)* that directly produced the injury.

SECTION IV. DESCRIPTION OF CASUALTY

44. Describe how accident occured, damage, information on alcohol/drug involvement and recommendations for corrective safety measures. *(See instructions and attach additional sheets if necessary).*

VESSEL BOUND FROM BERTH OAKLAND 56 FOR SEA. UNDERWAY AT 0734 IN RESTRICTED VISIBILITY WITH PILOT JOHN COTA CONNING. TUG REVOLUTION ASSISTING. FOG SIGNALS SOUNDED, AT 0830 PORT SIDE OF VESSEL STRUCK D PIER OF OAKLAND BAY BRIDGE. CAUSING DAMAGE TO VESSEL & MC SPILL. AUTHORITIES NOTIFIED & VESSEL PROCEEDED TO ANCHOR.

45. Witness *(Name, Address, Telephone No.)*
SUN HAO CAI

46. Witness *(Name, Address, Telephone No.)*
WANG HONG ZHI

SECTION V. PERSON MAKING THIS REPORT

47. Name (PRINT) *(Last, First, Middle)*
SUN HAO CAI

47a. Signature [redacted]

47b. Address *(City, State, Zip Code)*
DALIAN LIAONING CHINA

47c. Title
CAPTAIN

47d. Telephone No.

47e. Date 12 NOV 2007

FOR COAST GUARD USE ONLY | REPORTING OFFICE:

MISLE Incident Investigation Activity Data Entry:

☐ NONE ☐ PRELIMINARY ☐ DATA COLLECTION ☐ INFORMAL ☐ FORMAL

MISLE Incident Investigation Activity Number (if applicable)

Serious Marine Incident ☐ Yes ☐ No Major Marine Casualty ☐ Yes ☐ No	INVESTIGATOR *(Name)*	DATE	APPROVED BY *(Name)*	DATE

OMB Control No. 1625-0001

DEPARTMENT OF HOMELAND SECURITY
U.S. COAST GUARD
CG-2692 (Rev. 3-2003)

REPORT OF MARINE ACCIDENT, INJURY OR DEATH

RCS No. G-MOA
MISLE NOTIFICATION NUMBER

SECTION I. GENERAL INFORMATION

1. Name of Vessel or Facility	2. Official No.	3. Nationality	4. Call Sign	5. USCG Certificate of Inspection issued at:
Revolution	1185956	U.S.	WDD2974	N/A

6. Type (Towing, Freight, Fish, Drill, etc.)	7. Length	8. Gross Tons	9. Year Built	10. Propulsion (Steam, diesel, gas, turbine...)
Towing	78	144	2006	Diesel

11. Hull Material (Steel, Wood...)	12. Draft (Ft. - in.) FWD	AFT.	13. If Vessel Classed, By Whom: (ABS, LLOYDS, DNV, BV, etc.)	14. Date (of occurrence)	15. TIME (Local)
Steel	15'	15'6"	N/A	11/7/2007	0830

16. Location (See Instruction No. 10A)
37 deg. 48.039 'N 122 deg. 22.484 'W West span of Bay Bridge

17. Estimated Loss of Damage TO:
VESSEL None to Tugs
CARGO
OTHER unknown

18. Name, Address & Telephone No. of Operating Co.
510-834-8847
AmNav Maritime Services
201 Burma Road, Oakland, CA 94607

19. Name of Master or Person in Charge	USCG License	20. Name of Pilot	USCG License	State License
Doug Alfers	☒ YES ☐ NO	John Cota	☐ YES ☐ NO	☐ YES ☐ NO

19a. Street Address (City, State, Zip Code)	19b. Telephone Number	20a. Street Address (City, State, Zip Code)	20b. Telephone Number
1920 Lafayette, Alameda,	415-871-7200	Unknown	Unkown

21. Casualty Elements (Check as many as needed and explain in Block 44.)

- ☐ NO. OF PERSONS ON BOARD
- ☐ DEATH - HOW MANY?
- ☐ MISSING - HOW MANY?
- ☐ INJURED - HOW MANY?
- ☐ HAZARDOUS MATERIAL RELEASED OR INVOLVED (Identify Substance and amount in Block 44.)
- ☒ OIL SPILL - ESTIMATE AMOUNT: unknown
- ☐ CARGO CONTAINER LOST/DAMAGED
- ☒ COLLISION (Identify other vessel or object in Block 44.)
- ☐ GROUNDING ☐ WAKE DAMAGE
- ☐ FLOODING, SWAMPING WITHOUT SINKING
- ☐ CAPSIZING (with or without sinking)
- ☐ FOUNDERING OR SINKING
- ☐ HEAVY WEATHER DAMAGE
- ☐ FIRE
- ☐ EXPLOSION
- ☐ COMMERCIAL DIVING CASUALTY
- ☐ ICE DAMAGE
- ☐ DAMAGE TO AIDS TO NAVIGATION
- ☐ STEERING FAILURE
- ☐ MACHINERY OR EQUIPMENT FAILURE
- ☐ ELECTRICAL FAILURE
- ☐ STRUCTURAL FAILURE
- ☐ FIREFIGHTING OR EMERGENCY EQUIPMENT FAILED OR INADEQUATE (Describe in Block 44.)
- ☐ LIFESAVING EQUIPMENT FAILED OR INADEQUATE (Describe in Block 44.)
- ☐ BLOW OUT (Petroleum exporation/production)
- ☐ ALCOHOL INVOLVEMENT (Describe in Block 44.)
- ☐ DRUG INVOLVEMENT (Describe in Block 44.)
- ☐ OTHER (Specify)

22. Conditions

A. Sea or River Conditions (wave height, river stage, etc.): Bay-Calm

B. WEATHER: ☐ CLEAR ☐ RAIN ☐ SNOW ☒ FOG ☐ OTHER (Specify)

C. TIME: ☒ DAYLIGHT ☐ TWILIGHT ☐ NIGHT

D. VISIBILITY: ☐ GOOD ☐ FAIR ☒ POOR

E. DISTANCE (miles of visibility): 1000 ft

F. AIR TEMPERATURE (F): 55 deg.

G. WIND SPEED & DIRECTION: n/a

H. CURRENT SPEED & DIRECTION: 1.4kt 172 deg

23. Navigation Information
☐ MOORED, DOCKED OR FIXED
☐ ANCHORED ☒ UNDERWAY OR DRIFTING
SPEED AND COURSE: 12 kts 335 deg

24. Last Port Where Bound: Oakland Berth 56 to sea

24a. Time and Date of Departure: 0755 11/7/07

25. FOR TOWING ONLY	25a. NUMBER OF VESSELS TOWED	Empty	Loaded	Total	25b. TOTAL H.P. OF TOWING UNITS	25c. MAXIMUM SIZE OF TOW WITH TOW-BOAT(S)	Length	Width	25d. (Describe in Block 44.)
									☐ PUSHING AHEAD ☐ TOWING ASTERN ☐ TOWING ALONGSIDE ☐ MORE THAN ONE TOW-BOAT ON TOW

SECTION II. BARGE INFORMATION

26. Name	26a. Official Number	26b. Type	26c. Length	26d. Gross Tons	26e USCG Certificate of Inspection Issued at:

26f. Year Built	26g. ☐ SINGLE SKIN ☐ DOUBLE	26h. Draft FWD	AFT	26i. Operating Company

26j. Damage Amount
BARGE
CARGO
OTHER

26k. Describe Damage to Barge

PREVIOUS EDITION IS OBSOLETE

ORIGINAL

SECTION III. PERSONNEL ACCIDENT INFORMATION

27. Person Involved
☐ MALE or ☐ FEMALE
☐ DEAD ☐ INJURED
☐ MISSING

27a. Name *(Last, First, Middle Name)*: N/A

27b. Address *(City, State, Zip Code)*:

27c. Status
☐ Crew
☐ Passenger
☐ Other

28. Birth Date:

29. Telephone No.:

30. Job Position:

31. *(Check here if off duty)* ☐

32. Employer - *(if different from Block 18., fill in Name, Address, Telephone No.)*:

33. Person's Time

	YEAR(S)	MONTH(S)
A. IN THIS INDUSTRY -		
B. WITH THIS COMPANY -		
C. IN PRESENT JOB OR POSITION -		
D. ON PRESENT VESSEL/FACILITY -		
E. HOURS ON DUTY WHEN ACCIDENT OCCURRED -		

34. Industry of Employer *(Towing, Fishing, Shipping, Crew Supply, Drilling, etc.)*:

35. Was the Injured Person Incapacitated 72 Hours or More?

36. Date of Death:

37. Activity of Person at Time of Accident:

38. Specific Location of Accident on Vessel/Facility:

39. Type of Accident *(Fall, Caught between, etc.)*:

40. Resulting Injury *(Cut, Bruise, Fracture, Burn, etc.)*:

41. Part of Body Injured:

42. Equipment Involved in Accident:

43. Specific Object, Part of the Equipment in block 42., or Substance *(Chemical, Solvent, etc.)* that directly produced the Injury.:

SECTION IV. DESCRIPTION OF CASUALTY

44. Describe how accident occured, damage, information on alcohol/drug involvement and recommendations for corrective safety measures. *(See instructions and attach additional sheets if necessary).*

0645- Pilot "R" on COSCO BUSAN asked tug REVOLUTION to put up a single headline on the port quarter of the ship. 0755- Pilot asks us to back easy, working up to half, assisting ship off the dock. Approximately 0800 - Pilot orders us to cast off and shift to center lead aft, slack line. Pilot then informed us that he would keep us until he passed the Bar Channel. We proceeded out the center of the channel at slow speed. At buoys #1 and #2, the ship increased its speed to approximately 12 kts and turned hard to port. We continued following at ¾ throttle at the stern of the vessel, starboard of the ship's propeller wash, with slack line. When the bow of the ship was approximately abeam of "D" Tower, the ship turned hard to starboard and increased speed without warning. The increased speed and propeller wash required me to release our winch brake to maintain a slack line to the ship. Approximately one minute later, the ship turned hard to port, steadied up, and slowed down as we passed "D" tower. I observed floating fender pile debris and oil in the water. We proceeded, slack line, to Anchorage No. 7. The Pilot then told us "REVOLUTION, you're released, I guess I forgot about you in all of the excitement." We returned to the dock and went to be drug tested. We haven't yet received the results of the test.

45. Witness *(Name, Address, Telephone No.)*: Angel Jimenez 201 Burma Road, Oakland, CA 94607 [redacted]

46. Witness *(Name, Address, Telephone No.)*:

SECTION V. PERSON MAKING THIS REPORT

47. Name (PRINT) *(Last, First, Middle)*: Alfers, Doug Wood

47a. Signat[redacted]

47b. Address *(City, State, Zip Code)*: [redacted]

47c. Title: Master

47d. Telephone No.: [redacted]

47e. Date: 11/8/2007

FOR COAST GUARD USE ONLY

REPORTING OFFICE:

MISLE Incident Investigation Activity Data Entry:

☐ NONE ☐ PRELIMINARY ☐ DATA COLLECTION ☐ INFORMAL ☐ FORMAL

MISLE Incident Investigation Activity Number (if applicable)

Serious Marine Incident ☐ Yes ☐ No Major Marine Casualty ☐ Yes ☐ No	INVESTIGATOR *(Name)*	DATE	APPROVED BY *(Name)*	DATE

EXHIBIT 3

BOARD OF PILOT COMMISSIONERS
INCIDENT REVIEW COMMITTEE REPORT:
M/V COSCO BUSAN - CAPT. JOHN COTA
NOVEMBER 7, 2007

PILOT'S REPORT

WHILE INCLUDED IN THE REPORT, THESE DOCUMENTS HAVE BEEN REMOVED FROM THIS VOLUME AS THEY ARE NOT PART OF THE PUBLIC RECORD. (7 C.C.R. § 210(c)(11))

EXHIBIT 4

BOARD OF PILOT COMMISSIONERS
INCIDENT REVIEW COMMITTEE REPORT:
M/V COSCO BUSAN - CAPT. JOHN COTA
NOVEMBER 7, 2007

0827 MAKE RUDDER TO STB.

0830 VESSEL CLOSE THE SAN FRANCISCO – OAKLAND BAY BRIDGE PORTSIDE TOUCH THE BRIDGE CENTER BILLOADS.
37°48.0 N 122°25.0 W.

0832 VESSEL MAKE HARD TO STB. CREW REPORT LEAKAGE LOCATE NEAR PORT SIDE OF THE VESSEL HULL. PILOT REPORT TO U.S.C.G

0847 VSL GOING TO ANCHORAGE AREA ACCORDING TO PILOT ORDER FOR INSPECTION.

0855 DROP STB ANCHOR 5 SHACKLE IN WATER
37°49.618 N 122°23.599 W

0858 LET GO AFT TUG

0900 ANOTHER PILOT COME ON BOARD. REPORT C/E TRY TO TRANSFER OIL FROM PORT TANK

0905 THE THIRD PILOT ~~COAST GUARD~~ COME ON BOARD TO STB TANK.

0915 TRANSFERING OIL TO STB'S TANK

0925 VSL POSITION: 37°49.66 N 122°23.26 W

0930 C/E TOOL DECK CREW SOUNDING BALLAST TANK NO.4

0935 U.S.C.G BOAT COME AND MAKE PHOTO FOR THE HULL

0945 TWO PILOTS DISEMBARK AND REMAIN ON BOARD

0955 COAST GUARD COME ON BOARD & START INSPECTION

1002 START HEAVING UP ANCHOR S.B. WITH ⚓

1020 ANCHOR AWEIGH START USE BOW THRUSTER & ENGINE

1030 VSL CLOSE SAN-FRASCICO – OAKLAND BAY BRIDGE
POSN: 37°48.3 N 122°23.5 W

1038 PASSING SAN-OAK BAY BRIDGE 37° 47.5 N 122° 22.9 W

1040 VSL GOING TO ANOTHER ANCHORAGE.

45 OIL LEAKING COMING DOWN.

00 TWO COAST GUARD COME TO BRIDGE

1104 TWO C.G. LEAVE FROM BRIDGE

1200 THREE C.G. OFFICER STAY ON BRIDGE FOR INSPECTION

Encl: (4B)

1105 DROP PORT ANCHOR & SHACKLE IN WATER
POS N: 37°46.2N 122°21.5W.

1110 CAPT TELL CREW CHECK F&A DRIFT. SOUNDING TANK AGAIN.

1112 ANCHOR HOLD: 3 COAST GUARD. COME TO BRIDGE

1124 F. W. E.

Manoeuvring Order Book

Arrival / Departure Port OAKLAND Date 7-NOV-07 Voyage No 013W

hrs Tested (Telegraph) at Steering Gear/Rudder at Clocks at hrs

hrs Stand by E/R 0630 hrs Ready (Dk/Eng) at hrs

Time	Movements and Events
0600	C.H.N TO E/R
0610	B/C UNMOOR CUT. FWD OK
0620	P.O.B JET ENGINE FROM AFT SIDE
0630	S.B.E
0648	AFT TUG FAST + ACCELERATION
0714	AFT SINGLE UP
0725	FWD SINGLE UP
0748	A.E. CAST OFF. S.B. AWAY ASHORE
0800	SHIFT TUG TO AFT CENTRE
0823	UCC TOUCH. BRIDGE [illegible]
0847	T&L HAND TO THE MERCAZ 4654
	37°47.1N 122°23.5W
0905	PROP STB ANCHOR 5 SHACKLES
	IN WATER
	37°47.1S, 122°23.59W
0958	CET ON AFT TUG
0900	PANAMA PILOT COME ON BOARD
0905	COAST GUARD COME ON BOARD

TO NEXT

[redacted] Master/Chief Engineer

Officer on watch [redacted]

Encl: (4c)

Manoeuvring Order Book

Arrival/Departure: Port OAKLAND Date 7-NOV-07 Voyage No. C13W

Tested telegraph at Steering engines at ____ Clocks at ____ hrs

Stand by/ SOP ____ at ____ hrs COP/ FWE ____ at ____ hrs

Time	Movements and Events
0715	TRANSFERING OIL FROM PIET'S TANK
	TO STD'S
0745	PILOT ONS & EMBARK
1002	START HEAVING UP ANCHOR
1020	ANCHOR AWEIGH. START TOSS FROM
	THRUSTER & ENGINE
1038	PASSING BRIDGE (SAN - OAK BAY)
	37°47.5N 122°22.9W
1105	DROP ANCHOR (PORT) 6 SHACKLE
	IN WATER: 37°46.2N 122°21.5W
1112	ANCHOR HOLD
1124	T. W. E.

Master/Chief Engineer ____ Officer on watch [redacted]

Manoeuvring Order Book

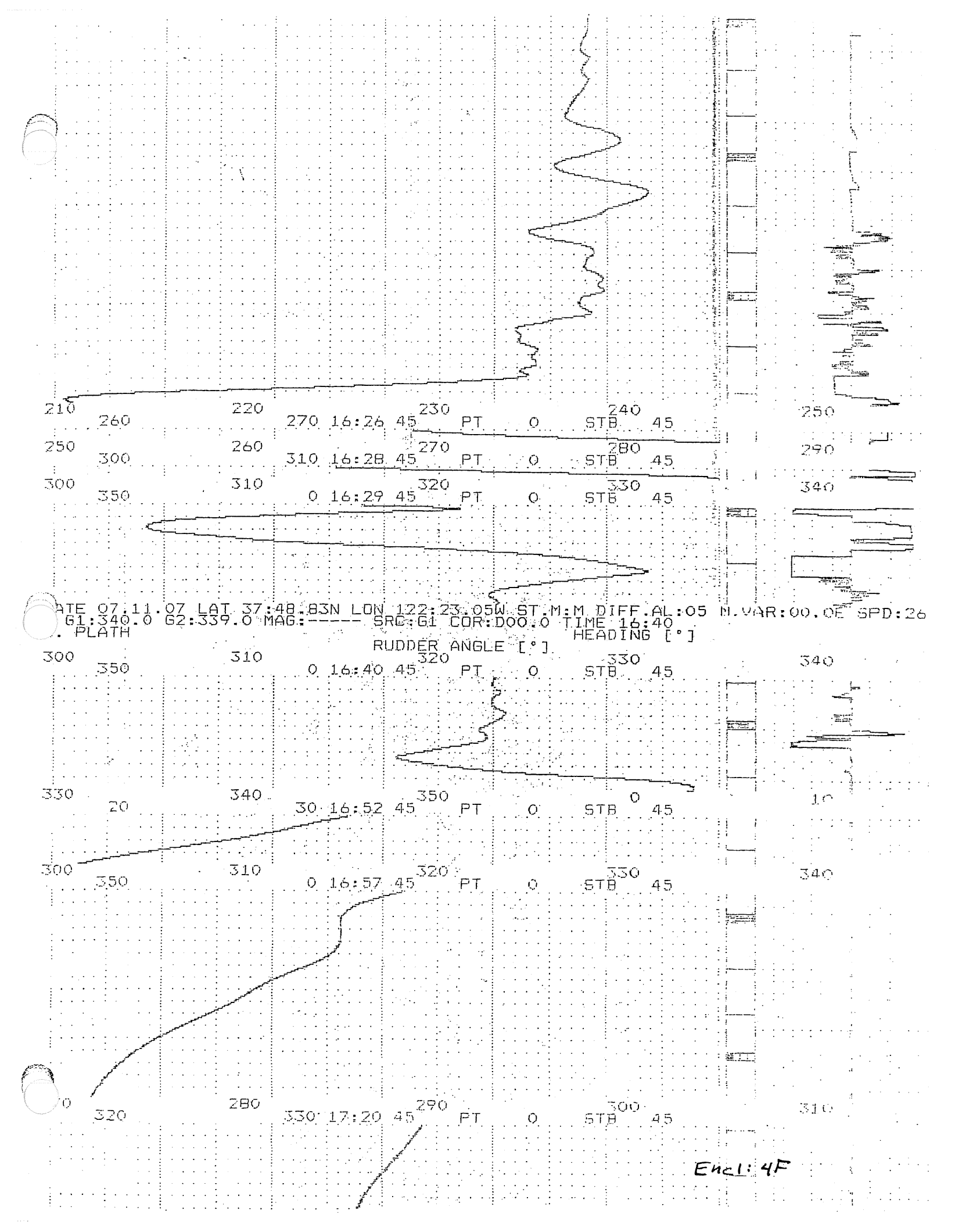
Arrival/Departure Port ____ Date ____

Tested telegraph at Steering engines at: ____

Stand by/ COP ____ at ____ hrs

Time	

Master/Chief Engineer ____ Off


ATE 07.11.07 LAT 37:48.83N LON 122:23.05W ST.M:M DIFF.AL:05 M.VAR:00.0E SPD:26
G1:340.0 G2:339.0 MAG:----- SRC:G1 COR:000.0 TIME 16:40
. PLATH
HEADING [°]
RUDDER ANGLE [°]
210 220 230 240 250
260 270 16:26 45 PT 0 STB 45 290
250 260 270 280
300 310 16:28 45 PT 0 STB 45 340
300 310 320 330
350 0 16:29 45 PT 0 STB 45
300 310 320 330 340
350 0 16:40 45 PT 0 STB 45
330 340 350 0
20 30 16:52 45 PT 0 STB 45 10
300 310 320 330 340
350 0 16:57 45 PT 0 STB 45
0 280 290 300 310
320 330 17:20 45 PT 0 STB 45

Encl: 4F

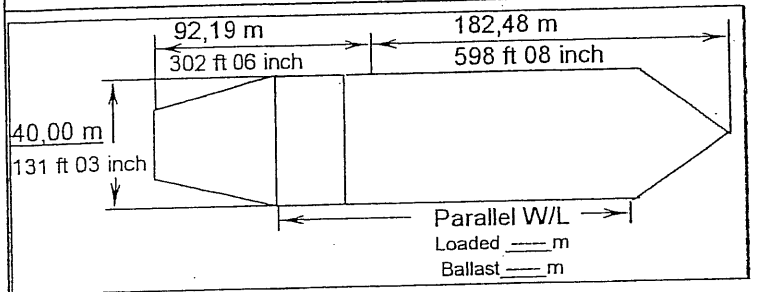
PILOT CARD

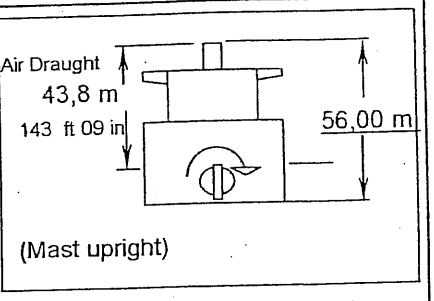
for the port of **OAKLAND** DATE: 7-Nov-07

Draught Aft: 12,23 m =40 ft 01 inch	Draught Fwd: 12,12 m =39 ft 09 inch		
Ship´s name	MV "COSCO BUSAN"	Displacement(max): 92,149.9 t	
Call sign	VRDI 6	Deadweight (S & W) 68086.5 tonnes (max)	Year built 2001

SHIP´S PARTICULARS

Length overall:	274,67 m	Anchor chain:	Port 13,5 shackles (1 shakle = 27,5 m)
Breadth :	40,00 m		Starboard 13 shackles (1 shakle = 15 ftms)
Bulbous bow	Yes		Stern -- shackles





STEERING PARTICULARS

Type of rudder: SEMI BALANCED Maximum angle 35 ° P&S Hard-over to hard-over 28 s

Rudder angle for neutral effect ___ ° port/starboard

Thruster : BOW 2000 kW (2700 Hp) Stern ___ kW (___ Hp)

Type of engine: B & W 10K98 Maximum power 57000 kW (77600Hp)

Type of propeller FIXED BLADES; RIGHT HANDED

Manoeuvering engine order	Rpm/pitch	Speed (knots) Loaded	Ballast
Full ahead	65	17	18
Half ahead	50	13	14
Slow ahead	35	9	10
Dead slow ahead	24	6	7
Dead slow astern	24		
Slow astern	35		
Half astern	50		
Full astern	65		

Time limit astern 10,2 min

Full ahead to full astern 16,25 min

Max. no of consecutive starts 9

Minimum RPM = 24 / 6 knots

Astern power = ___ ahead

CHECKED IF ABOARD AND READY

- Anchors.....2..... ☑
- Wistle.....2..... ☑
- Radar 3cm ☑ 10cm ☑
- ARPA..... ☑
- Speed log.. ☑
  - Water speed..... ☑
  - Ground speed.... ☑
  - Dual-axis..... ☑
- Engine telegraphs..... ☑
- Steering gear..... ☑
- Number of power units operating .4... ☑
- Indicators: Rudder..... ☑
  - Ppm/pitch... ☑
  - Rate of turn. ☑
- Compass system..... ☑
- Constant gyro error+/- 0 °
- VHF ..... ☑
- Electronic position fixing system ☑
  - Type: DGPS
  - ....
  - ....

OTHER INFORMATION: GRT: 65131 NRT: 34078

PILOT SIGNATURE [redacted] Rec'd only

Tug – Pawlowski's

Encl: (4I)

CREW LIST

Ship's name / Call sign	Port of	arrival / departure	Voyage No.
M/V "Cosco Busan" VRDI6	Oakland	2007-11-09	013W
Nationality of ship	Port arrived from / Destination		
HONG KONG			

No.	Family name	Given name	Rank	Nationality	Date of birth	Place of birth	Sign On Date	Sign On Place
1	SUN	MAO CAI	Master	Chinese	27-Sep-60	LIAONING	24-Oct-07	Pusan
2	HU	KONG XIANG	C/O	Chinese	13-Aug-72	ANHUI	24-Oct-07	Pusan
3	ZHAO	SHUN BIAO	2/O	Chinese	5-Apr-80	ANHUI	24-Oct-07	Pusan
4	WANG	HONG ZHI	3/O	Chinese	12-Dec-77	ANHUI	24-Oct-07	Pusan
5	YAO	YING QUAN	C/E	Chinese	17-Nov-71	JIANGSU	25-Sep-07	Shanghai
6	SHEN	YI ZHONG	2/E	Chinese	17-Feb-76	SHANGHAI	24-Oct-07	Pusan
7	XIONG	HAN XIONG	3/E	Chinese	20-Nov-76	HUBEI	24-Oct-07	Pusan
8	ZHONG	PENG	4/E	Chinese	28-Nov-83	HUBEI	24-Oct-07	Pusan
9	BAO	JIAN GUO	E/O	Chinese	18-Sep-67	FUJIAN	24-Oct-07	Pusan
10	ZHENG	LIANG XIAN	BSN	Chinese	1-Apr-69	FUJIAN	24-Oct-07	Pusan
11	LI	ZONG BIN	AB	Chinese	24-Aug-78	HENAN	24-Oct-07	Pusan
12	YAO	YING FU	AB	Chinese	26-May-78	HENAN	24-Oct-07	Pusan
13	FU	YU YONG	AB	Chinese	27-May-85	SHANDONG	24-Oct-07	Pusan
14	ZHAO	YOU GANG	OS	Chinese	20-Nov-70	TIANJIN	24-Oct-07	Pusan
15	WU	CHANG HAI	OS	Chinese	4-Nov-73	ANHUI	24-Oct-07	Pusan
16	TANG	CHUAN JIE	D/CDT	Chinese	18-Feb-85	HUBEI	24-Oct-07	Pusan
17	LI	WEI	FTR	Chinese	26-Jun-68	JIANGSU	24-Oct-07	Pusan
18	WANG	YU	OLR	Chinese	11-Dec-83	ZHEJIANG	24-Oct-07	Pusan
19	MA	WEN WEI	OLR	Chinese	20-Jun-68	HENAN	24-Oct-07	Pusan
20	ZHANG	ZHEN HUA	OLR	Chinese	31-Jan-56	TIANJIN	24-Oct-07	Pusan
21	QI	JIN SONG	WPR	Chinese	17-Jul-74	TIANJIN	24-Oct-07	Pusan
22	XU	ZUO JIA	E.E/C	Chinese	1-Sep-83	JIANGSU	24-Oct-07	Pusan
23	YE	TIE SHENG	C/CK	Chinese	17-Jan-52	TIANJIN	24-Oct-07	Pusan
24	GONG	WEI RONG	M/B	Chinese	4-Apr-79	SHANGHAI	24-Oct-07	Pusan
27								
28								
29								

Encl: (4 L)

EXHIBIT 5

BOARD OF PILOT COMMISSIONERS
INCIDENT REVIEW COMMITTEE REPORT:
M/V COSCO BUSAN- CAPT. JOHN COTA
NOVEMBER 7, 2007

	RPM	SPEED (KNOTS)
NAV: FULL	104	27.3
FULL	65	16.9
HALF	50	13.0
SLOW	35	9.1
DEAD SLOW	24	6.2

07 NOV 07 08.06:13
EVENT LOG :
****

****
END OF PERIODIC LOG

0 RPM
Dead band check :
STB. BR. WING CONTR.
Control location :
Reply.: STAND BY
Order.: STAND BY
Sub telegraph pos :
Reply.: STOP
Order.: STOP
Telegraph pos :
****
07 NOV 07 08.00:00
PERIODIC LOG :
****

>STB. BR. WING CONTR.
Control Loc.: 07.46:14
>O:STOP 9 RPM
BRIDGE CONTRL 06.49:10
>O:D.SLOW AHEAD 0 RPM
BRIDGE CONTRL 06.49:00
>O:STOP 12 RPM
BRIDGE CONTRL 06.47:42
>O:D.SLOW AHEAD 0 RPM
BRIDGE CONTRL 06.47:34
>BRIDGE CONTROL
Control Loc.: 06.46:24
>O:STOP 0 RPM
CTRL.R CONTRL 06.44:32
>R:STOP 0 RPM
CTRL.R CONTRL 06.44:30
>O:D.SLOW AHEAD 0 RPM
CTRL.R CONTRL 06.42:46
>R:D.SLOW AHEAD 0 RPM
CTRL.R CONTRL 06.42:42
>CONTROL ROOM CONTROL
Control Loc.: 06.42:36
>BRIDGE CONTROL
Control Loc.: 06.42:32
>CONTROL ROOM CONTROL
Control Loc.: 06.42:02
>BRIDGE CONTROL
Control Loc.: 06.41:58
>O:STAND BY 0 RPM
CTRL.R CONTRL 06.28:59
>R:STAND BY 0 RPM
CTRL.R CONTRL 06.28:37
>N:SLOW DOWN 06.12:38
>N:SHUT DOWN 06.12:38
****
07 NOV 07 06.12:39
EVENT LOG :
****

****
END OF PERIODIC LOG

SLOW DOWN

BRIDGE CONTRL 10.16:06
>
0 RPM
BRIDGE CONTRL 08.54:03
>O:STOP 10 RPM
BRIDGE CONTRL 08.53:54
>
23 RPM
BRIDGE CONTRL 08.52:42
>
31 RPM
BRIDGE CONTRL 08.52:33
>O:D.SLOW AHEAD 0 RPM
>BRIDGE CONTRL 08.52:26
>BRIDGE CONTRL 08.51:28
>
- 24 RPM
BRIDGE CONTRL 08.51:17
>O:D.SLOW ASTERN- 60 RPM
BRIDGE CONTRL 08.50:48
>
- 58 RPM
BRIDGE CONTRL 08.49:28
>O:FULL ASTERN- 51 RPM
BRIDGE CONTRL 08.49:16
>
- 49 RPM
BRIDGE CONTRL 08.48:15
>O:HALF ASTERN- 36 RPM
BRIDGE CONTRL 08.48:04
>
- 33 RPM
BRIDGE CONTRL 08.47:51
>O:SLOW ASTERN- 26 RPM
BRIDGE CONTRL 08.47:38
>O:D.SLOW ASTERN 0 RPM
BRIDGE CONTRL 08.47:20
>
0 RPM
BRIDGE CONTRL 08.46:12
>
10 RPM
BRIDGE CONTRL 08.45:46
>O:STOP 18 RPM
BRIDGE CONTRL 08.45:38
>
25 RPM
BRIDGE CONTRL 08.45:21
>O:D.SLOW AHEAD 35 RPM
BRIDGE CONTRL 08.45:08
>
37 RPM
BRIDGE CONTRL 08.36:40
>
39 RPM
BRIDGE CONTRL 08.36:29
>O:SLOW AHEAD 21 RPM
BRIDGE CONTRL 08.36:18
>O:D.SLOW AHEAD 0 RPM
BRIDGE CONTRL 08.36:14
>
0 RPM
BRIDGE CONTRL 08.34:36
>
10 RPM
BRIDGE CONTRL 08.34:19
>O:STOP 18 RPM
BRIDGE CONTRL 08.34:08
>
26 RPM
BRIDGE CONTRL 08.30:51
>O:D.SLOW AHEAD 64 RPM
BRIDGE CONTRL 08.30:24
>
66 RPM
BRIDGE CONTRL 08.27:56
>
59 RPM
BRIDGE CONTRL 08.27:16
>O:FULL AHEAD 51 RPM
BRIDGE CONTRL 08.27:06
>A SLD CANCELED 08.20:56
>
49 RPM
BRIDGE CONTRL 08.20:25
>O:HALF AHEAD 35 RPM
BRIDGE CONTRL 08.20:12
>
33 RPM
BRIDGE CONTRL 08.09:02
>O:SLOW AHEAD 29 RPM
BRIDGE CONTRL 08.08:56
>
22 RPM
BRIDGE CONTRL 08.08:35

Encl: (5c)

04-11-07	12:26:01.6?20	MS045	ELEVATOR ABNORMAL	XA			ALARM	ALARM
04-11-07	12:26:05.4?79	MS045	ELEVATOR ABNORMAL	XA			ALARM	RETURN
04-11-07	12:52:03.0?49	MS025	TOPPING-UP AIR COMP. ABNORMAL	XA			ALARM	ALARM
04-11-07	13:27:22.1?25	MS025	TOPPING-UP AIR COMP. ABNORMAL	XA			ALARM	RETURN
11-07	13:50:00.?19	GD043	NO.4 G/E L.O SUMP TK L.L	LAL			ALARM	ALARM
11-07	13:52:09.?8?	GD043	NO.4 G/E L.O SUMP TK L.L	LAL			ALARM	RETURN
11-07	14:08:58.?940	GD043	NO.4 G/E L.O SUMP TK L.L	LAL			ALARM	ALARM
04-11-07	14:10:41.?021	GD043	NO.4 G/E L.O SUMP TK L.L	LAL			ALARM	RETURN
04-11-07	14:28:41.?451	GD043	NO.4 G/E L.O SUMP TK L.L	LAL			ALARM	ALARM
04-11-07	14:30:02.0?29	GD043	NO.4 G/E L.O SUMP TK L.L	LAL			ALARM	RETURN
04-11-07	14:55:24.1?7	MS025	TOPPING-UP AIR COMP. ABNORMAL	XA			ALARM	ALARM
04-11-07	15:21:01.?48	MS025	TOPPING-UP AIR COMP. ABNORMAL	XA			ALARM	RETURN
04-11-07	15:37:01.?795	MS025	TOPPING-UP AIR COMP. ABNORMAL	XA			ALARM	ALARM
04-11-07	15:41:28.?02	MS025	TOPPING-UP AIR COMP. ABNORMAL	XA			ALARM	RETURN
04-11-07	21:19:49.?163	GD043	NO.4 G/E L.O SUMP TK L.L	LAL			ALARM	ALARM
04-11-07	21:21:14.?336	GD043	NO.4 G/E L.O SUMP TK L.L	LAL			ALARM	RETURN
04-11-07	22:12:56.?83	MS025	TOPPING-UP AIR COMP. ABNORMAL	XA			ALARM	ALARM
05-11-07	00:59:47.?42	MS025	TOPPING-UP AIR COMP. ABNORMAL	XA			ALARM	RETURN
05-11-07	03:41:31.?70	ML075	NO.2 MAIN L.O PURIFIER ABNORMAL	XA			ALARM	ALARM
05-11-07	03:42:41.?67	ML075	NO.2 MAIN L.O PURIFIER ABNORMAL	XA			ALARM	RETURN
05-11-07	09:17:31.?61	MC014	M/E NO.2 OIL MIST DETECTOR FAIL	XA			ALARM	ALARM
05-11-07	09:20:26.?16	MC012	M/E NO.1 OIL MIST DETECTOR FAIL	XA			ALARM	ALARM
05-11-07	09:29:50.?39	MA027	M/E NO.9 CYL EXH. GAS OUT TEMP	TIAHH	99.8	DEG.C	OFFSC	ALARM
05-11-07	10:21:04.?06	MS025	TOPPING-UP AIR COMP. ABNORMAL	XA			ALARM	ALARM
05-11-07	11:16:03.?76	MS025	TOPPING-UP AIR COMP. ABNORMAL	XA			ALARM	RETURN
05-11-07	17:04:44.?24	MS045	ELEVATOR ABNORMAL	XA			ALARM	ALARM

LIST for HANJIN CAIRO — KONGSBERG NORCONTROL AS — DC C20

Date	Time	Tagname	Tag description	Func	Value	Eng.	Cond.	State
05-11-07	17:04:46.0?54	MS045	ELEVATOR ABNORMAL	XA			ALARM	RETURN
05-11-07	21:06:49.1?1	GD043	NO.4 G/E L.O SUMP TK L.L	LAL			ALARM	ALARM
05-11-07	21:09:04.?46	GD043	NO.4 G/E L.O SUMP TK L.L	LAL			ALARM	RETURN
05-11-07	22:55:01.?90	ML500	ALPHA LUBR., COMMON ALARM	XA			ALARM	ALARM
05-11-07	22:55:03.0?9	ML500	ALPHA LUBR., COMMON ALARM	XA			ALARM	RETURN
05-11-07	22:55:11.4?6	ML500	ALPHA LUBR., COMMON ALARM	XA			ALARM	ALARM
05-11-07	23:37:01.7?4	ML500	ALPHA LUBR., COMMON ALARM	XA			ALARM	RETURN
06-11-07	02:40:32.2?9	GC043	NO.3 G/E L.O SUMP TK L.L	LAL			ALARM	ALARM
06-11-07	02:57:19.6?4	GC043	NO.3 G/E L.O SUMP TK L.L	LAL			ALARM	RETURN
06-11-07	04:30:42.6?6	ML075	NO.2 MAIN L.O PURIFIER ABNORMAL	XA			ALARM	ALARM
06-11-07	04:32:31.3?2	ML075	NO.2 MAIN L.O PURIFIER ABNORMAL	XA			ALARM	RETURN
06-11-07	06:21:10.3?7	ML055	M/E NO.1 L.O FILTER DIFF PRESS	DPIAH	0.83	KG/CM2	HIGH	ALARM
06-11-07	06:21:12.0?0	SD003	M/E MAIN L.O PRESS LOW	SHD			SHD-AL	RETURN
06-11-07	06:21:11.7?6	ML056	M/E NO.2 L.O FILTER DIFF PRESS	DPIAH	0.86	KG/CM2	HIGH	ALARM
06-11-07	06:21:12.9?5	ML055	M/E NO.1 L.O FILTER DIFF PRESS	DPIAH	0.80	KG/CM2	HIGH	RETURN
06-11-07	06:21:13.0?5	ML056	M/E NO.2 L.O FILTER DIFF PRESS	DPIAH	0.80	KG/CM2	HIGH	RETURN
06-11-07	06:21:17.9?1	ML003	M/E PISTON C.L.O IN PRESS	PIAL	1.60	KG/CM2	LOW	RETURN
06-11-07	06:21:21.0?0	SD005	M/E T/C L.O PRESS LOW	SHD			SHD-AL	RETURN
06-11-07	06:21:21.0?0	SL008	M/E T/C L.O INLET PRESS LOW	SLD			SLD-AL	RETURN
06-11-07	06:21:22.0?0	SL001	M/E SLOW DOWN	SLD			ALARM	RETURN
06-11-07	06:21:23.0?0	SD004	M/E CAMSHAFT L.O PRESS LOW	SHD			SHD-AL	RETURN
06-11-07	06:21:23.0?0	SD001	M/E SHUT DOWN	SHD			ALARM	RETURN
06-11-07	06:21:23.0?7	MC006	M/E SAFETY SYS ABNORMAL	XA			ALARM	RETURN
06-11-07	06:21:28.6?6	ML081	M/E NO.1 T/C L.O INLET PRESS	PIAL	1.20	KG/CM2	LOW	RETURN
06-11-07	06:21:42.6?4	ML083	M/E NO.3 T/C L.O INLET PRESS	PIAL	1.20	KG/CM2	LOW	RETURN
06-11-07	06:21:44.0?3	ML082	M/E NO.2 T/C L.O INLET PRESS	PIAL	1.20	KG/CM2	LOW	RETURN
06-11-07	06:21:55.3?7	ML083	M/E NO.3 T/C L.O INLET PRESS	PIAL	1.17	KG/CM2	LOW	ALARM
06-11-07	06:22:02.5?2	ML082	M/E NO.2 T/C L.O INLET PRESS	PIAL	1.18	KG/CM2	LOW	ALARM

Evidence: 20950330 052-JDH

Encl: (5D)

[illegible]	[illegible]	[illegible]	M/E START BLOCKED	AH			ALARM	RETURN
06-11-07	19:25:54.000	MC037	M/E NOT READY	XA			ALARM	RETURN
06-11-07	19:26:47.654	MC019	M/E SAFETY AIR P.L	PAL			ALARM	ALARM
06-11-07	19:26:47.654	MC017	M/E CONTROL AIR PRESS	PIAL	-0.03	KG/CM2	LOW	ALARM
06-11-07	19:26:50.003	MC019	M/E SAFETY AIR P.L	PAL			ALARM	RETURN
06-11-07	19:27:02.871	MC018	M/E EXH. V/V SPRING AIR PRESS	PIAL	4.80	KG/CM2	LOW	ALARM
[illegible]-11-07	19:27:06.000	MC036	M/E CONTROL POSITION MISSING	XA			ALARM	RETURN
[illegible]-11-07	19:27:06.000	MC004	M/E REMOTE CONTROL SYS ABNORMAL	XA			ALARM	RETURN
06-11-07	19:27:30.563	MC018	M/E EXH. V/V SPRING AIR PRESS	PIAL	5.50	KG/CM2	LOW	RETURN
06-11-07	19:27:37.268	MC017	M/E CONTROL AIR PRESS	PIAL	5.50	KG/CM2	LOW	RETURN
06-11-07	19:37:30.537	MC017	M/E CONTROL AIR PRESS	PIAL	5.33	KG/CM2	LOW	ALARM
06-11-07	19:37:41.722	MC017	M/E CONTROL AIR PRESS	PIAL	5.50	KG/CM2	LOW	RETURN
06-11-07	19:40:46.038	MC012	M/E NO.1 OIL MIST DETECTOR FAIL	XA			ALARM	RETURN
06-11-07	19:40:59.313	MC014	M/E NO.2 OIL MIST DETECTOR FAIL	XA			ALARM	RETURN
06-11-07	19:47:56.679	GC043	NO.3 G/E L.O SUMP TK L.L	LAL			ALARM	ALARM
06-11-07	20:11:37.323	GC043	NO.3 G/E L.O SUMP TK L.L	LAL			ALARM	RETURN
06-11-07	20:26:11.000	MC033	M/E SLOW DOWN CANCELLED	XA			ALARM	ALARM
06-11-07	20:26:10.715	MC006	M/E SAFETY SYS ABNORMAL	XA			ALARM	ALARM
06-11-07	20:56:39.740	GC043	NO.3 G/E L.O SUMP TK L.L	LAL			ALARM	ALARM
06-11-07	20:59:36.196	GC043	NO.3 G/E L.O SUMP TK L.L	LAL			ALARM	RETURN
06-11-07	21:03:26.027	MS045	ELEVATOR ABNORMAL	XA			ALARM	ALARM
06-11-07	21:03:29.426	MS045	ELEVATOR ABNORMAL	XA			ALARM	RETURN
06-11-07	21:29:32.156	GC043	NO.3 G/E L.O SUMP TK L.L	LAL			ALARM	ALARM
06-11-07	21:32:08.639	MA032	M/E NO.4 CYL EXH. GAS DEV. TEMP	TDIAHL	-56.5	DEG.C	LOW	ALARM
06-11-07	21:32:08.839	MA037	M/E NO.9 CYL EXH. GAS DEV. TEMP	TDIAHL	67.5	DEG.C	HIGH	ALARM
06-11-07	21:32:24.864	MA038	M/E NO.10 CYL EXH. GAS DEV. TEMP	TDIAHL	50.3	DEG.C	HIGH	ALARM
06-11-07	21:32:09.311	MA038	M/E NO.10 CYL EXH. GAS DEV. TEMP	TDIAHL	50.0	DEG.C	HIGH	RETURN

Date	Time	Tagname	Tag description	Func	Value	Eng.	Cond.	State
06-11-07	21:33:29.583	GC043	NO.3 G/E L.O SUMP TK L.L	LAL			ALARM	RETURN
06-11-07	21:34:05.423	MA032	M/E NO.4 CYL EXH. GAS DEV. TEMP	TDIAHL	-50.0	DEG.C	LOW	RETURN
06-11-07	21:36:34.614	MA037	M/E NO.9 CYL EXH. GAS DEV. TEMP	TDIAHL	50.0	DEG.C	HIGH	RETURN
06-11-07	21:09:27.626	GC043	NO.3 G/E L.O SUMP TK L.L	LAL			ALARM	ALARM
06-11-07	22:09:28.525	GC043	NO.3 G/E L.O SUMP TK L.L	LAL			ALARM	RETURN
06-11-07	22:14:59.490	AB010	BOILER FEED FILTER TK L.H	LAH			ALARM	ALARM
06-11-07	22:51:43.943	MF042	NO.3 HFO PURIFIER ABNORMAL	XA			ALARM	ALARM
06-11-07	22:51:47.322	MF042	NO.3 HFO PURIFIER ABNORMAL	XA			ALARM	RETURN
06-11-07	22:52:40.897	MF042	NO.3 HFO PURIFIER ABNORMAL	XA			ALARM	ALARM
06-11-07	22:52:45.824	MF042	NO.3 HFO PURIFIER ABNORMAL	XA			ALARM	RETURN
06-11-07	23:12:47.996	MF042	NO.3 HFO PURIFIER ABNORMAL	XA			ALARM	ALARM
06-11-07	23:12:52.284	MF042	NO.3 HFO PURIFIER ABNORMAL	XA			ALARM	RETURN
06-11-07	23:17:20.688	MF042	NO.3 HFO PURIFIER ABNORMAL	XA			ALARM	ALARM
06-11-07	23:14:57.694	MF042	NO.3 HFO PURIFIER ABNORMAL	XA			ALARM	RETURN
06-11-07	23:32:03.129	MF042	NO.3 HFO PURIFIER ABNORMAL	XA			ALARM	ALARM
06-11-07	23:32:12.956	MF042	NO.3 HFO PURIFIER ABNORMAL	XA			ALARM	RETURN
07-11-07	00:29:00.054	MA037	M/E NO.9 CYL EXH. GAS DEV. TEMP	TDIAHL	50.6	DEG.C	HIGH	ALARM
07-11-07	00:29:23.150	MA032	M/E NO.4 CYL EXH. GAS DEV. TEMP	TDIAHL	-50.8	DEG.C	LOW	ALARM
07-11-07	00:29:51.320	MA031	M/E NO.3 CYL EXH. GAS DEV. TEMP	TDIAHL	-50.5	DEG.C	LOW	ALARM
07-11-07	00:30:22.159	MA029	M/E NO.1 CYL EXH. GAS DEV. TEMP	TDIAHL	-51.2	DEG.C	LOW	ALARM
07-11-07	00:31:17.984	MA031	M/E NO.3 CYL EXH. GAS DEV. TEMP	TDIAHL	-50.0	DEG.C	LOW	RETURN
[illegible]-11-07	00:31:30.990	MA029	M/E NO.1 CYL EXH. GAS DEV. TEMP	TDIAHL	-50.0	DEG.C	LOW	RETURN
[illegible]-11-07	00:32:05.297	MA037	M/E NO.9 CYL EXH. GAS DEV. TEMP	TDIAHL	50.0	DEG.C	HIGH	RETURN
[illegible]-11-07	00:32:41.646	MA032	M/E NO.4 CYL EXH. GAS DEV. TEMP	TDIAHL	-50.0	DEG.C	LOW	RETURN
07-11-07	01:54:54.795	AB010	BOILER FEED FILTER TK L.H	LAH			ALARM	RETURN
07-11-07	02:07:11.247	AB010	BOILER FEED FILTER TK L.H	LAH			ALARM	ALARM
07-11-07	02:07:19.372	AB010	BOILER FEED FILTER TK L.H	LAH			ALARM	RETURN
07-11-07	02:22:02.092	AB010	BOILER FEED FILTER TK L.H	LAH			ALARM	ALARM
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]	[illegible]

			ELEVATOR ABNORMAL	XA			ALARM	RETURN
11-07	12:26:01.920	MS045	ELEVATOR ABNORMAL	XA			ALARM	ALARM
11-07	12:26:05.979	MS045	ELEVATOR ABNORMAL	XA			ALARM	RETURN
11-07	12:52:03.049	MS025	TOPPING-UP AIR COMP. ABNORMAL	XA			ALARM	ALARM
11-07	13:27:22.125	MS025	TOPPING-UP AIR COMP. ABNORMAL	XA			ALARM	RETURN
11-07	13:50:00.919	GD043	NO.4 G/E L.O SUMP TK L.L	LAL			ALARM	ALARM
11-07	13:52:09.986	GD043	NO.4 G/E L.O SUMP TK L.L	LAL			ALARM	RETURN
11-07	14:08:58.840	GD043	NO.4 G/E L.O SUMP TK L.L	LAL			ALARM	ALARM
11-07	14:10:41.321	GD043	NO.4 G/E L.O SUMP TK L.L	LAL			ALARM	RETURN
11-07	14:28:41.451	GD043	NO.4 G/E L.O SUMP TK L.L	LAL			ALARM	ALARM
11-07	14:30:02.029	GD043	NO.4 G/E L.O SUMP TK L.L	LAL			ALARM	RETURN
11-07	14:55:24.137	MS025	TOPPING-UP AIR COMP. ABNORMAL	XA			ALARM	ALARM
11-07	15:21:01.409	MS025	TOPPING-UP AIR COMP. ABNORMAL	XA			ALARM	RETURN
11-07	15:37:01.895	MS025	TOPPING-UP AIR COMP. ABNORMAL	XA			ALARM	ALARM
11-07	15:41:26.002	MS025	TOPPING-UP AIR COMP. ABNORMAL	XA			ALARM	RETURN
11-07	21:19:49.563	GD043	NO.4 G/E L.O SUMP TK L.L	LAL			ALARM	ALARM
11-07	21:21:14.336	GD043	NO.4 G/E L.O SUMP TK L.L	LAL			ALARM	RETURN
11-07	22:12:56.887	MS025	TOPPING-UP AIR COMP. ABNORMAL	XA			ALARM	ALARM
11-07	00:59:47.542	MS025	TOPPING-UP AIR COMP. ABNORMAL	XA			ALARM	RETURN
11-07	03:41:31.970	ML075	NO.2 MAIN L.O PURIFIER ABNORMAL	XA			ALARM	ALARM
11-07	03:42:41.067	ML075	NO.2 MAIN L.O PURIFIER ABNORMAL	XA			ALARM	RETURN
11-07	09:17:31.461	MC014	M/E NO.2 OIL MIST DETECTOR FAIL	XA			ALARM	ALARM
11-07	09:20:26.716	MC012	M/E NO.1 OIL MIST DETECTOR FAIL	XA			ALARM	ALARM
11-07	09:29:50.939	MA027	M/E NO.9 CYL EXH. GAS OUT TEMP	TIAHH	99.8	DEG.C	OFFSC	ALARM
11-07	10:21:04.706	MS025	TOPPING-UP AIR COMP. ABNORMAL	XA			ALARM	ALARM
11-07	11:16:03.976	MS025	TOPPING-UP AIR COMP. ABNORMAL	XA			ALARM	RETURN
11-07	17:04:44.324	MS045	ELEVATOR ABNORMAL	XA			ALARM	ALARM

e	Time	Tagname	Tag description	Func	Value	Eng.	Cond.	State
11-07	17:04:46.054	MS045	ELEVATOR ABNORMAL	XA			ALARM	RETURN
11-07	21:06:49.171	GD043	NO.4 G/E L.O SUMP TK L.L	LAL			ALARM	ALARM
11-07	21:09:04.846	GD043	NO.4 G/E L.O SUMP TK L.L	LAL			ALARM	RETURN
11-07	22:55:01.390	ML500	ALPHA LUBR., COMMON ALARM	XA			ALARM	ALARM
11-07	22:55:03.059	ML500	ALPHA LUBR., COMMON ALARM	XA			ALARM	RETURN
11-07	22:55:11.436	ML500	ALPHA LUBR., COMMON ALARM	XA			ALARM	ALARM
11-07	23:37:01.704	ML500	ALPHA LUBR., COMMON ALARM	XA			ALARM	RETURN
11-07	02:40:32.269	GC043	NO.3 G/E L.O SUMP TK L.L	LAL			ALARM	ALARM
11-07	02:57:19.624	GC043	NO.3 G/E L.O SUMP TK L.L	LAL			ALARM	RETURN
11-07	04:30:42.056	ML075	NO.2 MAIN L.O PURIFIER ABNORMAL	XA			ALARM	ALARM
11-07	04:32:51.382	ML075	NO.2 MAIN L.O PURIFIER ABNORMAL	XA			ALARM	RETURN
11-07	06:21:10.387	ML055	M/E NO.1 L.O FILTER DIFF PRESS	DPIAH	0.83	KG/CM2	HIGH	ALARM
11-07	06:21:12.000	SD003	M/E MAIN L.O PRESS LOW	SHD			SHD-AL	RETURN
11-07	06:21:11.766	ML056	M/E NO.2 L.O FILTER DIFF PRESS	DPIAH	0.86	KG/CM2	HIGH	ALARM
11-07	06:21:12.915	ML055	M/E NO.1 L.O FILTER DIFF PRESS	DPIAH	0.80	KG/CM2	HIGH	RETURN
11-07	06:21:13.035	ML056	M/E NO.2 L.O FILTER DIFF PRESS	DPIAH	0.80	KG/CM2	HIGH	RETURN
11-07	06:21:17.961	ML003	M/E PISTON C.L.O IN PRESS	PIAL	1.60	KG/CM2	LOW	RETURN
11-07	06:21:21.000	SD005	M/E T/C L.O PRESS LOW	SHD			SHD-AL	RETURN
11-07	06:21:21.006	SL008	M/E T/C L.O INLET PRESS LOW	SLD			SLD-AL	RETURN
1-07	06:21:22.000	SL001	M/E SLOW DOWN	SLD			ALARM	RETURN
1-07	06:21:23.000	SD004	M/E CAMSHAFT L.O PRESS LOW	SHD			SHD-AL	RETURN
1	06:21:23.000	SD001	M/E SHUT DOWN	SHD			ALARM	RETURN
1	06:21:23.357	MC006	M/E SAFETY SYS ABNORMAL	XA			ALARM	RETURN
1-	06:21:28.676	ML081	M/E NO.1 T/C L.O INLET PRESS	PIAL	1.20	KG/CM2	LOW	RETURN
1-07	06:21:42.804	ML083	M/E NO.3 T/C L.O INLET PRESS	PIAL	1.20	KG/CM2	LOW	RETURN
1-07	06:21:44.033	ML082	M/E NO.2 T/C L.O INLET PRESS	PIAL	1.20	KG/CM2	LOW	RETURN
1-07	06:21:55.357	ML083	M/E NO.3 T/C L.O INLET PRESS	PIAL	1.17	KG/CM2	LOW	ALARM
1-07	06:22:02.522	ML082	M/E NO.2 T/C L.O INLET PRESS	PIAL	1.18	KG/CM2	LOW	ALARM

'-11-07	05:01:46.840	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.61	M	OFFSC	RETURN
'-11-07	05:01:48.849	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.91	M	HIGH	ALARM
'-11-07	05:19:53.593	ML075	NO.2 MAIN L.O PURIFIER ABNORMAL	XA			ALARM	ALARM
'-11-07	05:21:14.623	ML075	NO.2 MAIN L.O PURIFIER ABNORMAL	XA			ALARM	RETURN
'-11-07	05:41:17.359	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.60	M	HIGH	RETURN
'-11-07	05:41:18.538	GC043	NO.3 G/E L.O SUMP TK L.L	LAL			ALARM	ALARM
'-11-07	05:41:23.925	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.66	M	HIGH	ALARM
'-11-07	05:41:55.683	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.60	M	HIGH	RETURN
'-11-07	05:41:57.557	AB010	BOILER FEED FILTER TK L.H	LAH			ALARM	ALARM
'-11-07	05:41:57.901	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.65	M	HIGH	ALARM
'-11-07	05:42:15.033	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.60	M	HIGH	RETURN
'-11-07	05:42:19.960	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.66	M	HIGH	ALARM
'-11-07	05:42:39.716	GD043	NO.4 G/E L.O SUMP TK L.L	LAL			ALARM	ALARM
'-11-07	05:42:39.510	GD043	NO.4 G/E L.O SUMP TK L.L	LAL			ALARM	RETURN
'-11-07	05:45:38.999	GC043	NO.3 G/E L.O SUMP TK L.L	LAL			ALARM	RETURN
'-11-07	05:47:07.302	AB010	BOILER FEED FILTER TK L.H	LAH			ALARM	RETURN
'-11-07	07:04:34.609	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.60	M	HIGH	RETURN
'-11-07	07:04:36.837	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.65	M	HIGH	ALARM
'-11-07	07:06:11.446	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.60	M	HIGH	RETURN
'-11-07	07:06:14.664	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.65	M	HIGH	ALARM
'-11-07	07:07:51.660	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.60	M	HIGH	RETURN
'-11-07	07:07:55.420	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.65	M	HIGH	ALARM
'-11-07	07:09:29.413	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.60	M	HIGH	RETURN
'-11-07	07:09:31.502	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.64	M	HIGH	ALARM
'-11-07	07:09:37.909	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.60	M	HIGH	RETURN
'-11-07	07:09:40.387	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.65	M	HIGH	ALARM

te	Time	Tagname	Tag description	Func	Value	Eng.	Cond.	State
'-11-07	07:10:25.645	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.60	M	HIGH	RETURN
'-11-07	07:10:28.104	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.64	M	HIGH	ALARM
'-11-07	07:10:57.094	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.60	M	HIGH	RETURN
'-11-07	07:11:00.881	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.65	M	HIGH	ALARM
'-11-07	07:11:05.198	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.60	M	HIGH	RETURN
'-11-07	07:11:07.597	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.64	M	HIGH	ALARM
-11-07	07:11:30.726	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.60	M	HIGH	RETURN
-11-07	07:11:33.654	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.65	M	HIGH	ALARM
-11-07	07:11:59.273	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.60	M	HIGH	RETURN
-11-07	07:12:01.812	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.62	M	HIGH	ALARM
-11-07	07:12:17.665	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.60	M	HIGH	RETURN
-11-07	07:12:22.192	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.66	M	HIGH	ALARM
-11-07	07:12:34.636	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.60	M	HIGH	RETURN
-11-07	07:12:39.013	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.64	M	HIGH	ALARM
-11-07	07:12:53.670	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.60	M	HIGH	RETURN
-11-07	07:12:57.897	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.64	M	HIGH	ALARM
-11-07	07:13:54.384	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.60	M	HIGH	RETURN
-11-07	07:13:59.411	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.66	M	HIGH	ALARM
-11-07	07:14:11.334	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.60	M	HIGH	RETURN
-11-07	07:14:16.141	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.63	M	HIGH	ALARM
-11-07	07:14:29.064	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.60	M	HIGH	RETURN
-11-07	07:14:34.281	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.66	M	HIGH	ALARM
-11-07	07:14:38.139	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.60	M	HIGH	RETURN
-11-07	07:14:40.727	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.64	M	HIGH	ALARM
-11-07	07:15:26.646	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.60	M	HIGH	RETURN
-11-07	07:15:31.544	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.61	M	HIGH	ALARM
-11-07	07:15:42.149	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.60	M	HIGH	RETURN
-11-07	07:15:44.571	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.63	M	HIGH	ALARM
-11-07	07:16:00.047	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.60	M	HIGH	RETURN

07-11-07	07:17:26.960	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.60	M	HIGH	RETURN
07-11-07	07:17:31.528	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.65	M	HIGH	ALARM
07-11-07	07:17:36.425	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.60	M	HIGH	RETURN
07-11-07	07:17:38.704	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.61	M	HIGH	ALARM
07-11-07	07:17:42.922	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.60	M	HIGH	RETURN
-07	07:17:49.093	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.65	M	HIGH	ALARM
-07	07:18:44.447	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.60	M	HIGH	RETURN
07-11-07	07:18:48.395	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.63	M	HIGH	ALARM
07-11-07	07:18:53.223	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.60	M	HIGH	RETURN
07-11-07	07:18:57.140	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.65	M	HIGH	ALARM
07-11-07	07:19:00.199	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.60	M	HIGH	RETURN
07-11-07	07:19:04.716	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.64	M	HIGH	ALARM
07-11-07	07:19:08.504	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.60	M	HIGH	RETURN
07-11-07	07:19:12.492	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.62	M	HIGH	ALARM
07-11-07	07:19:20.976	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.60	M	HIGH	RETURN
07-11-07	07:19:27.632	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.62	M	HIGH	ALARM
07-11-07	07:19:42.145	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.60	M	HIGH	RETURN
07-11-07	07:19:46.625	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.65	M	HIGH	ALARM
07-11-07	07:20:13.221	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.60	M	HIGH	RETURN
07-11-07	07:20:17.418	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.61	M	HIGH	ALARM
07-11-07	07:20:17.548	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.60	M	HIGH	RETURN
07-11-07	07:20:22.165	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.64	M	HIGH	ALARM
07-11-07	07:20:27.053	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.60	M	HIGH	RETURN
07-11-07	07:20:36.518	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.64	M	HIGH	ALARM
07-11-07	07:20:46.218	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.60	M	HIGH	RETURN
07-11-07	07:20:51.715	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.64	M	HIGH	ALARM

Date	Time	Tagname	Tag description	Func	Value	Eng.	Cond.	State
07-11-07	07:21:03.378	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.60	M	HIGH	RETURN
07-11-07	07:21:09.514	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.64	M	HIGH	ALARM
07-11-07	07:21:18.830	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.60	M	HIGH	RETURN
07-11-07	07:21:24.936	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.64	M	HIGH	ALARM
07-11-07	07:21:38.090	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.60	M	HIGH	RETURN
07-11-07	07:21:43.799	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.63	M	HIGH	ALARM
07-11-07	07:21:53.095	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.60	M	HIGH	RETURN
07-11-07	07:21:56.073	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.63	M	HIGH	ALARM
07-11-07	07:22:08.066	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.60	M	HIGH	RETURN
07-11-07	07:22:13.122	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.64	M	HIGH	ALARM
07-11-07	07:22:15.451	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.60	M	HIGH	RETURN
07-11-07	07:22:18.179	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.64	M	HIGH	ALARM
07-11-07	07:22:22.327	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.60	M	HIGH	RETURN
07-11-07	07:22:27.804	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.65	M	HIGH	ALARM
07-11-07	07:22:36.659	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.60	M	HIGH	RETURN
07-11-07	07:22:40.737	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.63	M	HIGH	ALARM
07-11-07	07:22:45.108	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.60	M	HIGH	RETURN
07-11-07	07:22:47.436	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.63	M	HIGH	ALARM
07-11-07	07:22:52.324	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.60	M	HIGH	RETURN
07-11-07	07:22:57.900	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.61	M	HIGH	ALARM
07-11-07	07:23:07.046	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.60	M	HIGH	RETURN
07-11-07	07:23:15.261	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.62	M	HIGH	ALARM
07-11-07	07:23:23.126	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.60	M	HIGH	RETURN
07-11-07	07:23:33.810	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.62	M	HIGH	ALARM
07-11-07	07:23:39.837	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.60	M	HIGH	RETURN
07-11-07	07:23:44.240	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.63	M	HIGH	ALARM
07-11-07	07:23:48.158	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.60	M	HIGH	RETURN
07-11-07	07:23:50.956	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.63	M	HIGH	ALARM
07-11-07	07:23:58.418	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.60	M	HIGH	RETURN

07-11-07	07:24:55.294	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.60	M	HIGH	RETURN
07-11-07	07:24:59.721	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.61	M	HIGH	ALARM
07-11-07	07:25:00.041	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.60	M	HIGH	RETURN
07-11-07	07:25:06.177	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.67	M	HIGH	ALARM
07-11-07	07:25:09.735	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.60	M	HIGH	RETURN
[illegible]07	07:25:20.379	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.63	M	HIGH	ALARM
[illegible]07	07:25:26.456	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.60	M	HIGH	RETURN
[illegible]07	07:25:36.760	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.64	M	HIGH	ALARM
07-11-07	07:25:41.538	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.60	M	HIGH	RETURN
07-11-07	07:25:46.409	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.62	M	HIGH	ALARM
07-11-07	07:25:47.858	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.60	M	HIGH	RETURN
07-11-07	07:25:54.874	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.65	M	HIGH	ALARM
07-11-07	07:26:00.001	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.60	M	HIGH	RETURN
07-11-07	07:26:08.467	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.64	M	HIGH	ALARM
07-11-07	07:26:11.125	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.60	M	HIGH	RETURN
07-11-07	07:26:13.774	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.64	M	HIGH	ALARM
07-11-07	07:26:18.591	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.60	M	HIGH	RETURN
07-11-07	07:26:26.446	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.64	M	HIGH	ALARM
07-11-07	07:26:35.182	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.60	M	HIGH	RETURN
07-11-07	07:26:45.251	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.63	M	HIGH	ALARM
07-11-07	07:26:52.817	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.60	M	HIGH	RETURN
07-11-07	07:27:04.530	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.64	M	HIGH	ALARM
07-11-07	07:27:13.046	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.60	M	HIGH	RETURN
07-11-07	07:27:21.412	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.63	M	HIGH	ALARM
07-11-07	07:27:31.927	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.60	M	HIGH	RETURN
07-11-07	07:27:39.892	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.62	M	HIGH	ALARM

Date	Time	Tagname	Tag description	Func	Value	Eng.	Cond.	State
07-11-07	07:27:45.041	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.60	M	HIGH	RETURN
07-11-07	07:27:49.639	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.63	M	HIGH	ALARM
07-11-07	07:27:52.467	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.60	M	HIGH	RETURN
07-11-07	07:27:58.053	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.63	M	HIGH	ALARM
07-11-07	07:28:03.093	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.62	M	OFFSC	ALARM
07-11-07	08:43:17.704	MF007	HFO OVERFLOW TK LEVEL	LIAH	1.61	M	OFFSC	RETURN
07-11-07	08:56:47.730	AB010	BOILER FEED FILTER TK L.H	LAH			ALARM	ALARM
07-11-07	09:01:29.168	AB010	BOILER FEED FILTER TK L.H	LAH			ALARM	RETURN
7-11-07	09:31:11.306	MA024	M/E NO.6 CYL EXH. GAS OUT TEMP	TIAHH	-11.5	DEG.C	LO-LO	ALARM
7-11-07	09:31:14.000	SL015	M/E CYL EXH GAS OUTLET TEMP HIGH	SLD			SLD-AL	ALARM
7-11-07	09:32:02.075	MA024	M/E NO.6 CYL EXH. GAS OUT TEMP	TIAHH	1.1	DEG.C	LO-LO	RETURN
7-11-07	09:32:03.000	SL015	M/E CYL EXH GAS OUTLET TEMP HIGH	SLAHH	-14.7	DEG.C	LO-LO	RETURN
7-11-07	09:32:08.000	SL015	M/E CYL EXH GAS OUTLET TEMP HIGH	SLD	4.00		OFFSC	ALARM
7-11-07	09:32:19.741	MA024	M/E NO.6 CYL EXH					

7-11-07	09:32:44.629	MA024	M/E NO.6 CYL EXH. GAS OUT TEMP	TIAHH	-15.9	DEG.C	OFFSC	ALARM
7-11-07	10:49:53.445	MC006	M/E SAFETY SYS ABNORMAL	XA			ALARM	RETURN
7-11-07	10:50:00.303	MC006	M/E SAFETY SYS ABNORMAL	XA			ALARM	ALARM

7-11-07	10:56:49.376	MC006	M/E SAFETY SYS ABNORMAL	XA			ALARM	ALARM
7-11-07	10:56:51.000	SD006	M/E J.C.F.W INLET PRESS LOW	SHD	2.00		BROKEN	ALARM
7-11-07	10:56:51.000	SD006	M/E J.C.F.W INLET PRESS LOW	SHD	4.00		BROKEN	RETURN
7-11-07	10:57:01.333	MC006	M/E SAFETY SYS ABNORMAL	XA			ALARM	RETURN
7-11-07	10:57:03.000	MC032	M/E SHUT DOWN CANCELLED	XA			ALARM	ALARM
7-11-07	10:57:08.074	MC006	M/E SAFETY SYS ABNORMAL	XA			ALARM	ALARM
7-11-07	10:57:36.000	SD006	M/E J.C.F.W INLET PRESS LOW	SHD	2.00		BROKEN	ALARM
7-11-07	10:57:38.000	SD006	M/E J.C.F.W INLET PRESS LOW	SHD	4.00		BROKEN	RETURN
7-11-07	10:58:55.151	MC006	M/E SAFETY SYS ABNORMAL	XA			ALARM	RETURN
7-11-07	10:59:00.159	MC006	M/E SAFETY SYS ABNORMAL	XA			ALARM	ALARM
7-11-07	10:59:31.000	SD006	M/E J.C.F.W INLET PRESS LOW	SHD	2.00		BROKEN	ALARM
7-11-07	10:59:33.000	SD006	M/E J.C.F.W INLET PRESS LOW	SHD	4.00		BROKEN	RETURN
7-11-07	11:00:40.000	SD006	M/E J.C.F.W INLET PRESS LOW	SHD	2.00		BROKEN	ALARM
7-11-07	11:00:42.000	SD006	M/E J.C.F.W INLET PRESS LOW	SHD	4.00		BROKEN	RETURN
7-11-07	11:01:23.000	SD006	M/E J.C.F.W INLET PRESS LOW	SHD	4.00		OFFSC	ALARM
7-11-07	11:01:50.280	MC006	M/E SAFETY SYS ABNORMAL	XA			ALARM	RETURN
7-11-07	11:01:57.138	MC006	M/E SAFETY SYS ABNORMAL	XA			ALARM	ALARM
7-11-07	11:02:00.497	MC006	M/E SAFETY SYS ABNORMAL	XA			ALARM	RETURN
7-11-07	11:02:07.459	MC006	M/E SAFETY SYS ABNORMAL	XA			ALARM	ALARM
7-11-07	11:04:36.103	MC006	M/E SAFETY SYS ABNORMAL	XA			ALARM	RETURN
7-11-07	11:04:43.021	MC006	M/E SAFETY SYS ABNORMAL	XA			ALARM	ALARM
7-11-07	11:11:21.255	AB010	BOILER FEED FILTER TK L.H	LAH			ALARM	ALARM
7-11-07	11:13:21.739	AB010	BOILER FEED FILTER TK L.H	LAH			ALARM	RETURN
7-11-07	11:42:07.753	MC006	M/E SAFETY SYS ABNORMAL	XA			ALARM	RETURN
7-11-07	11:42:14.552	MC006	M/E SAFETY SYS ABNORMAL	XA			ALARM	ALARM
7-11-07	11:54:58.938	MA024	M/E NO.6 CYL EXH. GAS OUT TEMP	TIAHH	-16.5	DEG.C	OFFSC	RETURN
7-11-07	11:55:13.853	MA024	M/E NO.6 CYL EXH. GAS OUT TEMP	TIAHH	-11.4	DEG.C	LO-LO	ALARM
7-11-07	11:55:17.391	MA031	M/E NO.3 CYL EXH. GAS DEV. TEMP	TDIAHL	50.1	DEG.C	HIGH	ALARM
7-11-07	11:55:19.390	MA031	M/E NO.3 CYL EXH. GAS DEV. TEMP	TDIAHL	50.0	DEG.C	HIGH	RETURN
7-11-07	11:55:36.344	MA024	M/E NO.6 CYL EXH. GAS OUT TEMP	TIAHH	-11.4	DEG.C	OFFSC	ALARM
7-11-07	11:56:26.029	MC006	M/E SAFETY SYS ABNORMAL	XA			ALARM	RETURN
7-11-07	11:56:32.887	MC006	M/E SAFETY SYS ABNORMAL	XA			ALARM	ALARM
7-11-07	11:59:34.636	MC006	M/E SAFETY SYS ABNORMAL	XA			ALARM	RETURN
7-11-07	11:59:41.503	MC006	M/E SAFETY SYS ABNORMAL	XA			ALARM	ALARM
7-11-07	12:00:24.334	MC006	M/E SAFETY SYS ABNORMAL	XA			ALARM	RETURN
7-11-07	12:30:31.221	MC006	M/E SAFETY SYS ABNORMAL	XA			ALARM	ALARM
7-11-07	12:03:51.272	MC006	M/E SAFETY SYS ABNORMAL	XA			ALARM	RETURN
7-11-07	12:03:58.160	MC006	M/E SAFETY SYS ABNORMAL	XA			ALARM	ALARM

ate	Time	Tagname	Tag description	Func	Value	Eng.	Cond.	State
7-11-07	12:11:45.208	MC006	M/E SAFETY SYS ABNORMAL	XA			ALARM	RETURN
7-11-07	12:11:52.076	MC006	M/E SAFETY SYS ABNORMAL	XA			ALARM	ALARM
7-11-07	12:14:05.746	MC006	M/E SAFETY SYS ABNORMAL	XA			ALARM	RETURN
7-11-07	12:14:12.594	MC006	M/E SAFETY SYS ABNORMAL	XA			ALARM	ALARM
7-11-07	13:24:34.750	GC043	NO.3 G/E L.O SUMP TK L.L	LAL			ALARM	ALARM
7-11-07	13:25:05.252	GC043	NO.3 G/E L.O SUMP TK L.L	LAL			ALARM	RETURN
7-11-07	14:26:54.918	MA032	M/E NO.4 CYL EXH. GAS DEV. TEMP	TDIAHL	50.7	DEG.C	HIGH	ALARM
7-11-07	14:27:17.988	MA032	M/E NO.4 CYL EXH. GAS DEV. TEMP	TDIAHL	55.0	DEG.C	HIGH	RETURN
7-11-07	14:36:30.560	MA024	M/E NO.6 CYL EXH. GAS OUT TEMP	TIAHH	-11.3	DEG.C	OFFSC	RETURN
7-11-07	14:37:40.965	MA024	M/E NO.6 CYL EXH. GAS OUT TEMP	TIAHH	-10.4	DEG.C	LO-LO	ALARM
7-11-07	14:39:49.568	SG002	NO.2 S/G MOTOR NO-VOLTAGE	XA			ALARM	ALARM
7-11-07	14:39:57.755	SG002	NO.2 S/G MOTOR NO-VOLTAGE	XA			ALARM	RETURN
7-11-07	14:40:09.240	SG001	NO.1 S/G MOTOR NO-VOLTAGE	XA			ALARM	ALARM
7-11-07	14:40:10.630	SG007	NO.1 S/G CONTROL POWER FAIL	XA			ALARM	ALARM
7-11-07	14:40:17.218	SG001	NO.1 S/G MOTOR NO-VOLTAGE	XA			ALARM	RETURN
7-11-07	14:43:16.097	MA037	M/E NO.9 CYL EXH. GAS DEV. TEMP	TDIAHL	88.2	DEG.C	HIGH	ALARM
7-11-07	14:43:16.097	MA038	M/E NO.10 CYL EXH. GAS DEV. TEMP	TDIAHL	59.2	DEG.C	HIGH	ALARM

07-11-07	14:49:32.067	MA037	M/E NO.9 CYL EXH. GAS DEV. TEMP	TDIAHL	50.0	DEG.C	HIGH	RETURN
07-11-07	14:49:42.133	MA029	M/E NO.1 CYL EXH. GAS DEV. TEMP	TDIAHL	50.8	DEG.C	HIGH	ALARM
07-11-07	14:50:40.380	SG002	NO.2 S/G MOTOR NO-VOLTAGE	XA			ALARM	ALARM
07-11-07	14:50:45.747	SG007	NO.1 S/G CONTROL POWER FAIL	XA			ALARM	RETURN
[illegible]-07	14:50:48.209	MA029	M/E NO.1 CYL EXH. GAS DEV. TEMP	TDIAHL	50.0	DEG.C	HIGH	RETURN
[illegible]-07	14:51:03.293	MA037	M/E NO.9 CYL EXH. GAS DEV. TEMP	TDIAHL	50.2	DEG.C	HIGH	ALARM
[illegible]-07	14:51:58.129	MA037	M/E NO.9 CYL EXH. GAS DEV. TEMP	TDIAHL	50.0	DEG.C	HIGH	RETURN
07-11-07	14:52:13.444	MA034	M/E NO.6 CYL EXH. GAS DEV. TEMP	TDIAHL	-217.2	DEG.C	LOW	RETURN
07-11-07	14:55:09.479	SG008	NO.2 S/G CONTROL POWER FAIL	XA			ALARM	ALARM
07-11-07	14:55:28.388	SG008	NO.2 S/G CONTROL POWER FAIL	XA			ALARM	RETURN
07-11-07	14:56:06.092	MA024	M/E NO.6 CYL EXH. GAS OUT TEMP	TIAHH	1.0	DEG.C	LO-LO	RETURN
07-11-07	14:56:08.873	SG002	NO.2 S/G MOTOR NO-VOLTAGE	XA			ALARM	RETURN
07-11-07	14:56:22.098	MA024	M/E NO.6 CYL EXH. GAS OUT TEMP	TIAHH	23.2	DEG.C	OFFSC	ALARM
07-11-07	14:58:46.140	MA024	M/E NO.6 CYL EXH. GAS OUT TEMP	TIAHH	22.6	DEG.C	OFFSC	RETURN
07-11-07	15:05:35.228	AB005	BOILER ABNORMAL	XA			ALARM	ALARM
07-11-07	15:06:04.458	GA019	NO.1 G/E H.T WATER INLET PRESS	PIAL	0.00	BAR	LOW	ALARM
07-11-07	15:06:04.468	GA021	NO.1 G/E L.T WATER INLET PRESS	PIAL	0.86	BAR	LOW	ALARM
07-11-07	15:06:09.566	GA022	NO.1 G/E L.T WATER INLET TEMP	TIAH	63.9	DEG.C	HIGH	ALARM
07-11-07	15:06:09.855	GA019	NO.1 G/E H.T WATER INLET PRESS	PIAL	2.18	BAR	LOW	RETURN
07-11-07	15:06:10.765	GA021	NO.1 G/E L.T WATER INLET PRESS	PIAL	3.47	BAR	LOW	RETURN
07-11-07	15:06:23.676	MA024	M/E NO.6 CYL EXH. GAS OUT TEMP	TIAHH	-4.0	DEG.C	LO-LO	ALARM
07-11-07	15:06:25.757	GA022	NO.1 G/E L.T WATER INLET TEMP	TIAH	43.5	DEG.C	HIGH	RETURN
07-11-07	15:08:15.679	MA024	M/E NO.6 CYL EXH. GAS OUT TEMP	TIAHH	-17.6	DEG.C	OFFSC	ALARM
07-11-07	15:09:04.987	AB001	BOILER TRIP	XA			ALARM	ALARM
07-11-07	15:10:16.166	AB001	BOILER TRIP	XA			ALARM	RETURN
07-11-07	15:10:21.226	AB002	BOILER DRUM STEAM PRESS	PIAHL	4.98	KG/CM2	LOW	ALARM
07-11-07	15:10:26.158	AB002	BOILER DRUM STEAM PRESS	PIAHL	5.00	KG/CM2	LOW	RETURN
07-11-07	15:10:38.897	AB002	BOILER DRUM STEAM PRESS	PIAHL	4.97	KG/CM2	LOW	ALARM
07-11-07	15:10:49.868	AB002	BOILER DRUM STEAM PRESS	PIAHL	5.00	KG/CM2	LOW	RETURN
07-11-07	15:10:54.197	AB002	BOILER DRUM STEAM PRESS	PIAHL	4.97	KG/CM2	LOW	ALARM
[illegible]-07	15:12:15.752	MA024	M/E NO.6 CYL EXH. GAS OUT TEMP	TIAHH	-17.5	DEG.C	OFFSC	RETURN
[illegible]-07	15:14:21.207	AB002	BOILER DRUM STEAM PRESS	PIAHL	5.00	KG/CM2	LOW	RETURN
07-11-07	15:17:43.000	MC033	M/E SLOW DOWN CANCELLED	XA			ALARM	RETURN
07-11-07	15:19:51.000	MC032	M/E SHUT DOWN CANCELLED	XA			ALARM	RETURN
07-11-07	15:19:50.702	MC006	M/E SAFETY SYS ABNORMAL	XA			ALARM	RETURN
07-11-07	15:21:50.321	AB011	BOILER FEED FILTER TK L.L	LAL			ALARM	ALARM
07-11-07	15:22:20.715	AB005	BOILER ABNORMAL	XA			ALARM	RETURN

LARM LIST for HANJIN CAIRO — KONGSBERG NORCONTROL AS — DC C20

Date	Time	Tagname	Tag description	Func	Value	Eng.	Cond.	State
07-11-07	15:23:43.514	AB001	BOILER TRIP	XA			ALARM	ALARM
07-11-07	15:24:07.727	AB001	BOILER TRIP	XA			ALARM	RETURN
07-11-07	15:24:11.708	AB011	BOILER FEED FILTER TK L.L	LAL			ALARM	RETURN
07-11-07	15:24:20.733	MS025	TOPPING-UP AIR COMP. ABNORMAL	XA			ALARM	ALARM
07-11-07	15:24:53.843	MA037	M/E NO.9 CYL EXH. GAS DEV. TEMP	TDIAHL	56.9	DEG.C	HIGH	ALARM
07-11-07	15:26:20.569	MS025	TOPPING-UP AIR COMP. ABNORMAL	XA			ALARM	RETURN
07-11-07	15:26:50.905	MA037	M/E NO.9 CYL EXH. GAS DEV. TEMP	TDIAHL	51.9	DEG.C	HIGH	RETURN
07-11-07	15:27:30.258	MS025	TOPPING-UP AIR COMP. ABNORMAL	XA			ALARM	ALARM
07-11-07	15:29:51.134	MA037	M/E NO.9 CYL EXH. GAS DEV. TEMP	TDIAHL	68.2	DEG.C	HIGH	ALARM
07-11-07	15:29:59.040	MA038	M/E NO.10 CYL EXH. GAS DEV. TEMP	TDIAHL	52.6	DEG.C	HIGH	ALARM
[illegible]-07	15:29:59.760	MA032	M/E NO.4 CYL EXH. GAS DEV. TEMP	TDIAHL	-54.0	DEG.C	LOW	ALARM
[illegible]-07	15:30:05.259	MA029	M/E NO.1 CYL EXH. GAS DEV. TEMP	TDIAHL	-53.5	DEG.C	LOW	ALARM
07-11-07	15:30:08.028	MA031	M/E NO.3 CYL EXH. GAS DEV. TEMP	TDIAHL	-52.1	DEG.C	LOW	ALARM
07-11-07	15:30:14.555	MA030	M/E NO.2 CYL EXH. GAS DEV. TEMP	TDIAHL	-51.1	DEG.C	LOW	ALARM
07-11-07	15:30:47.281	MA030	M/E NO.2 CYL EXH. GAS DEV. TEMP	TDIAHL	-50.0	DEG.C	LOW	RETURN
07-11-07	15:31:30.573	MA038	M/E NO.10 CYL EXH. GAS DEV. TEMP	TDIAHL	50.0	DEG.C	HIGH	RETURN
07-11-07	15:31:34.495	MA031	M/E NO.3 CYL EXH. GAS DEV. TEMP	TDIAHL	-50.0	DEG.C	LOW	RETURN

7-11-07	15:48:28.000	MC033	M/E SLOW DOWN CANCELLED	XA			ALARM	RETURN
7-11-07	15:48:28.147	MC006	M/E SAFETY SYS ABNORMAL	XA			ALARM	RETURN
7-11-07	15:48:40.687	AB010	BOILER FEED FILTER TK L.H	LAH			ALARM	ALARM
7-11-07	15:50:00.491	MS025	TOPPING-UP AIR COMP. ABNORMAL	XA			ALARM	RETURN
7-11-07	15:52:10.025	AB010	BOILER FEED FILTER TK L.H	LAH			ALARM	RETURN
[illegible]-07	16:58:40.000	SD006	M/E J.C.F.W INLET PRESS LOW	SHD	4.00		OFFSC	RETURN
[illegible]-07	16:59:11.000	SL015	M/E CYL EXH GAS OUTLET TEMP HIGH	SLD	4.00		OFFSC	RETURN
[illegible]-07	17:11:52.535	MA029	M/E NO.1 CYL EXH. GAS DEV. TEMP	TDIAHL	-72.8	DEG.C	LOW	ALARM
7-11-07	17:11:52.535	MA032	M/E NO.4 CYL EXH. GAS DEV. TEMP	TDIAHL	-79.8	DEG.C	LOW	ALARM
7-11-07	17:11:52.535	MA037	M/E NO.9 CYL EXH. GAS DEV. TEMP	TDIAHL	85.3	DEG.C	HIGH	ALARM
7-11-07	17:11:52.535	MA038	M/E NO.10 CYL EXH. GAS DEV. TEMP	TDIAHL	72.1	DEG.C	HIGH	ALARM
7-11-07	17:11:59.942	MA031	M/E NO.3 CYL EXH. GAS DEV. TEMP	TDIAHL	-51.5	DEG.C	LOW	ALARM
7-11-07	17:13:30.441	MA036	M/E NO.8 CYL EXH. GAS DEV. TEMP	TDIAHL	68.6	DEG.C	HIGH	ALARM
7-11-07	17:13:46.000	MC033	M/E SLOW DOWN CANCELLED	XA			ALARM	ALARM
7-11-07	17:13:45.257	MC006	M/E SAFETY SYS ABNORMAL	XA			ALARM	ALARM
7-11-07	17:13:58.301	MA027	M/E NO.9 CYL EXH. GAS OUT TEMP	TIAHH	430.2	DEG.C	HIGH	ALARM
7-11-07	17:14:01.759	MA027	M/E NO.9 CYL EXH. GAS OUT TEMP	TIAHH	430.0	DEG.C	HIGH	RETURN
7-11-07	17:14:04.718	MA031	M/E NO.3 CYL EXH. GAS DEV. TEMP	TDIAHL	-50.0	DEG.C	LOW	RETURN
7-11-07	17:14:26.620	MA036	M/E NO.8 CYL EXH. GAS DEV. TEMP	TDIAHL	50.0	DEG.C	HIGH	RETURN
7-11-07	17:14:35.727	MA038	M/E NO.10 CYL EXH. GAS DEV. TEMP	TDIAHL	50.0	DEG.C	HIGH	RETURN
7-11-07	17:15:12.419	MA029	M/E NO.1 CYL EXH. GAS DEV. TEMP	TDIAHL	-50.0	DEG.C	LOW	RETURN
7-11-07	17:15:50.980	MA037	M/E NO.9 CYL EXH. GAS DEV. TEMP	TDIAHL	50.0	DEG.C	HIGH	RETURN
7-11-07	17:15:55.855	MA032	M/E NO.4 CYL EXH. GAS DEV. TEMP	TDIAHL	-50.0	DEG.C	LOW	RETURN
7-11-07	17:16:25.765	MA035	M/E NO.7 CYL EXH. GAS DEV. TEMP	TDIAHL	-50.5	DEG.C	LOW	ALARM
7-11-07	17:19:06.563	MA035	M/E NO.7 CYL EXH. GAS DEV. TEMP	TDIAHL	-61.8	DEG.C	LOW	RETURN
7-11-07	17:38:07.835	MS025	TOPPING-UP AIR COMP. ABNORMAL	XA			ALARM	ALARM
7-11-07	17:48:45.764	MS025	TOPPING-UP AIR COMP. ABNORMAL	XA			ALARM	RETURN
7-11-07	17:57:32.080	MS025	TOPPING-UP AIR COMP. ABNORMAL	XA			ALARM	ALARM
7-11-07	18:00:25.907	MS025	TOPPING-UP AIR COMP. ABNORMAL	XA			ALARM	RETURN
7-11-07	18:00:39.997	MS021	NO.1 MAIN AIR RESERVOIR PRESS	PIAL	14.93	KG/CM2	LOW	ALARM
7-[illegible]-07	18:00:52.437	MS021	NO.1 MAIN AIR RESERVOIR PRESS	PIAL	15.00	KG/CM2	LOW	RETURN
7-[illegible]-07	18:03:01.832	MS021	NO.1 MAIN AIR RESERVOIR PRESS	PIAL	14.00	KG/CM2	LOW	ALARM
[illegible]-07	18:03:03.641	MS022	NO.2 MAIN AIR RESERVOIR PRESS	PIAL	14.92	KG/CM2	LOW	ALARM
7-11-07	18:03:09.782	MC016	M/E STARTING AIR PRESS	PIAL	14.51	KG/CM2	LOW	ALARM
7-11-07	18:03:19.355	MS022	NO.2 MAIN AIR RESERVOIR PRESS	PIAL	15.00	KG/CM2	LOW	RETURN
7-11-07	18:03:47.820	MC016	M/E STARTING AIR PRESS	PIAL	15.00	KG/CM2	LOW	RETURN
7-11-07	18:04:35.148	MA030	M/E NO.2 CYL EXH. GAS DEV. TEMP	TDIAHL	-58.9	DEG.C	LOW	ALARM
7-11-07	18:04:35.148	MA032	M/E NO.4 CYL EXH. GAS DEV. TEMP	TDIAHL	-62.3	DEG.C	LOW	ALARM

ARM LIST for HANJIN CAIRO — KONGSBERG NORCONTROL AS — DC C20

ate	Time	Tagname	Tag description	Func	Value	Eng.	Cond.	State
7-11-07	18:04:35.148	MA037	M/E NO.9 CYL EXH. GAS DEV. TEMP	TDIAHL	65.0	DEG.C	HIGH	ALARM
7-11-07	18:04:35.148	MA038	M/E NO.10 CYL EXH. GAS DEV. TEMP	TDIAHL	53.5	DEG.C	HIGH	ALARM
7-11-07	18:04:40.428	MS021	NO.1 MAIN AIR RESERVOIR PRESS	PIAL	15.00	KG/CM2	LOW	RETURN
7-11-07	18:05:18.913	MA030	M/E NO.2 CYL EXH. GAS DEV. TEMP	TDIAHL	-50.0	DEG.C	LOW	RETURN
7-11-07	18:05:22.802	MA030	M/E NO.2 CYL EXH. GAS DEV. TEMP	TDIAHL	-50.3	DEG.C	LOW	ALARM
7-11-07	18:05:35.457	MA029	M/E NO.1 CYL EXH. GAS DEV. TEMP	TDIAHL	-52.0	DEG.C	LOW	ALARM
7-11-07	18:06:08.019	MA031	M/E NO.3 CYL EXH. GAS DEV. TEMP	TDIAHL	-50.2	DEG.C	LOW	ALARM
7-11-07	18:06:16.315	MA031	M/E NO.3 CYL EXH. GAS DEV. TEMP	TDIAHL	-50.0	DEG.C	LOW	RETURN
7-11-07	18:06:17.155	MA030	M/E NO.2 CYL EXH. GAS DEV. TEMP	TDIAHL	-50.0	DEG.C	LOW	RETURN
7-11-07	18:06:56.322	MA038	M/E NO.10 CYL EXH. GAS DEV. TEMP	TDIAHL	50.0	DEG.C	HIGH	RETURN
7-[illegible]-07	18:07:07.919	MA029	M/E NO.1 CYL EXH. GAS DEV. TEMP	TDIAHL	-50.0	DEG.C	LOW	RETURN
7-[illegible]-07	18:07:22.564	MA037	M/E NO.9 CYL EXH. GAS DEV. TEMP	TDIAHL	50.0	DEG.C	HIGH	RETURN
7-[illegible]-07	18:07:38.897	MA032	M/E NO.4 CYL EXH. GAS DEV. TEMP	TDIAHL	-50.0	DEG.C	LOW	RETURN
7-11-07	18:22:56.000	MC033	M/E SLOW DOWN CANCELLED	XA			ALARM	RETURN
7-11-07	18:22:56.303	MC006	M/E SAFETY SYS ABNORMAL	XA			ALARM	RETURN
7-11-07	18:27:26.394	MS021	NO.1 MAIN AIR RESERVOIR PRESS	PIAL	14.54	KG/CM2	LOW	ALARM
7-11-07	18:28:14.700	MS021	NO.1 MAIN AIR RESERVOIR PRESS	PIAL	15.00	KG/CM2	LOW	RETURN

07-11-07	19:51:23.180	ML003	M/E PISTON C.L.O IN PRESS	PIAL	0.44	KG/CM2	LOW	ALARM
07-11-07	19:51:24.000	SD004	M/E CAMSHAFT L.O PRESS LOW	SHD			SHD-AL	ALARM
07-11-07	19:51:24.862	ML081	M/E NO.1 T/C L.O INLET PRESS	PIAL	0.86	KG/CM2	LOW	ALARM
07-11-07	19:51:25.000	SL008	M/E T/C L.O INLET PRESS LOW	SLD			SLD-AL	ALARM
07-11-07	19:51:26.000	SD005	M/E T/C L.O PRESS LOW	SHD			SHD-AL	ALARM
07-11-07	19:51:27.846	ML083	M/E NO.3 T/C L.O INLET PRESS	PIAL	1.01	KG/CM2	LOW	ALARM
07-11-07	19:51:30.195	ML082	M/E NO.2 T/C L.O INLET PRESS	PIAL	1.06	KG/CM2	LOW	ALARM
07-11-07	19:51:30.000	SD001	M/E SHUT DOWN	SHD			ALARM	ALARM
07-11-07	19:51:31.000	SL001	M/E SLOW DOWN	SLD			ALARM	ALARM
07-11-07	19:51:36.005	MC006	M/E SAFETY SYS ABNORMAL	XA			ALARM	ALARM
07-11-07	19:53:59.227	MC006	M/E SAFETY SYS ABNORMAL	XA			ALARM	RETURN
07-11-07	19:54:00.000	SD003	M/E MAIN L.O PRESS LOW	SHD			SHD-AL	ALARM
07-11-07	19:54:06.105	MC006	M/E SAFETY SYS ABNORMAL	XA			ALARM	ALARM
07-11-07	19:54:28.227	GC002	NO.3 G/E L.O LOW PRESS	SHD			ALARM	ALARM
07-11-07	19:56:54.686	GC002	NO.3 G/E L.O LOW PRESS	SHD			ALARM	RETURN
07-11-07	23:20:13.156	GD043	NO.4 G/E L.O SUMP TK L.L	LAL			ALARM	ALARM
07-11-07	23:23:07.613	GC043	NO.3 G/E L.O SUMP TK L.L	LAL			ALARM	ALARM
07-11-07	23:27:24.145	GD043	NO.4 G/E L.O SUMP TK L.L	LAL			ALARM	RETURN
07-11-07	23:29:24.115	GC043	NO.3 G/E L.O SUMP TK L.L	LAL			ALARM	RETURN
08-11-07	00:22:31.149	MF021	NO.3 HFO BUNKER TK(P) TEMP	TIAH	60.1	DEG.C	HIGH	ALARM
08-11-07	00:22:31.678	MF021	NO.3 HFO BUNKER TK(P) TEMP	TIAH	60.0	DEG.C	HIGH	RETURN
08-11-07	00:22:50.151	MF021	NO.3 HFO BUNKER TK(P) TEMP	TIAH	60.1	DEG.C	HIGH	ALARM
08-11-07	00:22:53.760	MF021	NO.3 HFO BUNKER TK(P) TEMP	TIAH	60.0	DEG.C	HIGH	RETURN
08-11-07	00:23:10.623	MF021	NO.3 HFO BUNKER TK(P) TEMP	TIAH	60.1	DEG.C	HIGH	ALARM
08-11-07	00:23:10.913	MF021	NO.3 HFO BUNKER TK(P) TEMP	TIAH	60.0	DEG.C	HIGH	RETURN
08-11-07	00:23:15.345	MF021	NO.3 HFO BUNKER TK(P) TEMP	TIAH	60.1	DEG.C	HIGH	ALARM
08-11-07	00:23:19.884	MF021	NO.3 HFO BUNKER TK(P) TEMP	TIAH	60.0	DEG.C	HIGH	RETURN
08-11-07	00:23:26.632	MF021	NO.3 HFO BUNKER TK(P) TEMP	TIAH	60.1	DEG.C	HIGH	ALARM
08-11-07	00:23:29.691	MF021	NO.3 HFO BUNKER TK(P) TEMP	TIAH	60.0	DEG.C	HIGH	RETURN
08-11-07	00:23:32.030	MF021	NO.3 HFO BUNKER TK(P) TEMP	TIAH	60.2	DEG.C	HIGH	ALARM
08-11-07	00:23:36.137	MF021	NO.3 HFO BUNKER TK(P) TEMP	TIAH	60.0	DEG.C	HIGH	RETURN
08-11-07	00:23:40.005	MF021	NO.3 HFO BUNKER TK(P) TEMP	TIAH	60.1	DEG.C	HIGH	ALARM
08-11-07	00:23:40.455	MF021	NO.3 HFO BUNKER TK(P) TEMP	TIAH	60.0	DEG.C	HIGH	RETURN
08-11-07	00:23:50.541	MF021	NO.3 HFO BUNKER TK(P) TEMP	TIAH	60.1	DEG.C	HIGH	ALARM
08-11-07	00:23:59.756	MF021	NO.3 HFO BUNKER TK(P) TEMP	TIAH	60.0	DEG.C	HIGH	RETURN
08-11-07	00:24:02.347	MF021	NO.3 HFO BUNKER TK(P) TEMP	TIAH	60.2	DEG.C	HIGH	ALARM
08-11-07	00:24:06.215	MF021	NO.3 HFO BUNKER TK(P) TEMP	TIAH	60.0	DEG.C	HIGH	RETURN

Date	Time	Tagname	Tag description	Func	Value	Eng.	Cond.	State
08-11-07	00:24:09.514	MF021	NO.3 HFO BUNKER TK(P) TEMP	TIAH	60.1	DEG.C	HIGH	ALARM
08-11-07	00:24:16.763	MF021	NO.3 HFO BUNKER TK(P) TEMP	TIAH	60.0	DEG.C	HIGH	RETURN
08-11-07	00:24:22.352	MF021	NO.3 HFO BUNKER TK(P) TEMP	TIAH	60.2	DEG.C	HIGH	ALARM
08-11-07	04:07:01.818	MF023	NO.3 HFO BUNKER TK(S) TEMP	TIAH	62.1	DEG.C	HIGH	ALARM
08-11-07	04:07:02.747	MF023	NO.3 HFO BUNKER TK(S) TEMP	TIAH	62.0	DEG.C	HIGH	RETURN
08-11-07	04:07:08.275	MF023	NO.3 HFO BUNKER TK(S) TEMP	TIAH	62.1	DEG.C	HIGH	ALARM
08-11-07	04:07:23.129	MF023	NO.3 HFO BUNKER TK(S) TEMP	TIAH	62.0	DEG.C	HIGH	RETURN
08-11-07	04:07:28.577	MF023	NO.3 HFO BUNKER TK(S) TEMP	TIAH	62.1	DEG.C	HIGH	ALARM
08-11-07	04:07:35.837	MF023	NO.3 HFO BUNKER TK(S) TEMP	TIAH	62.0	DEG.C	HIGH	RETURN
08-11-07	04:07:41.375	MF023	NO.3 HFO BUNKER TK(S) TEMP	TIAH	62.2	DEG.C	HIGH	ALARM
08-11-07	06:09:04.734	ML075	NO.2 MAIN L.O PURIFIER ABNORMAL	XA			ALARM	ALARM
08-11-07	06:11:35.443	ML075	NO.2 MAIN L.O PURIFIER ABNORMAL	XA			ALARM	RETURN
08-11-07	07:10:42.899	ML500	ALPHA LUBR., COMMON ALARM	XA			ALARM	ALARM
08-11-07	07:10:44.378	ML500	ALPHA LUBR., COMMON ALARM	XA			ALARM	RETURN
08-11-07	07:10:52.935	ML500	ALPHA LUBR., COMMON ALARM	XA			ALARM	ALARM
08-11-07	07:11:01.765	ML055	M/E NO.1 L.O FILTER DIFF PRESS	DPIAH	0.93	KG/CM2	HIGH	ALARM
08-11-07	07:11:02.000	SD003	M/E MAIN L.O PRESS LOW	SHD			SHD-AL	RETURN

08-11-07	07:11:12.001	SD001	M/E SHUT DOWN	SHD			ALARM	RETURN
08-11-07	07:11:12.000	SL001	M/E SLOW DOWN	SLD			ALARM	RETURN
08-11-07	07:11:17.093	ML091	M/E NO.1 T/C L.O INLET PRESS	PIAL	1.20	KG/CM2	LOW	RETURN
08-11-07	07:11:32.245	ML083	M/E NO.3 T/C L.O INLET PRESS	PIAL	1.20	KG/CM2	LOW	RETURN
08-11-07	07:11:38.121	ML082	M/E NO.2 T/C L.O INLET PRESS	PIAL	1.20	KG/CM2	LOW	RETURN
08-11-07	07:21:03.779	ML058	MAIN L.O SUMP TK LEVEL	LIAHL	0.61	M	LOW	ALARM
08-11-07	07:21:47.163	ML058	MAIN L.O SUMP TK LEVEL	LIAHL	0.63	M	LOW	RETURN
08-11-07	07:22:28.462	ML058	MAIN L.O SUMP TK LEVEL	LIAHL	0.62	M	LOW	ALARM
08-11-07	07:23:06.263	ML058	MAIN L.O SUMP TK LEVEL	LIAHL	0.63	M	LOW	RETURN
08-11-07	07:25:44.266	ML058	MAIN L.O SUMP TK LEVEL	LIAHL	0.62	M	LOW	ALARM
08-11-07	07:26:31.722	ML058	MAIN L.O SUMP TK LEVEL	LIAHL	0.63	M	LOW	RETURN
08-11-07	07:27:03.502	ML058	MAIN L.O SUMP TK LEVEL	LIAHL	0.61	M	LOW	ALARM
08-11-07	07:27:24.000	MC036	M/E CONTROL POSITION MISSING	XA			ALARM	RETURN
08-11-07	07:27:36.187	ML058	MAIN L.O SUMP TK LEVEL	LIAHL	0.63	M	LOW	RETURN
08-11-07	07:27:41.020	MC017	M/E CONTROL AIR PRESS	PIAL	5.12	KG/CM2	LOW	ALARM
08-11-07	07:27:42.023	MW013	M/E J.C.F.W COMMON OUT TEMP	TIAHL	53.2	DEG.C	LOW	ALARM
08-11-07	07:27:42.028	MW002	M/E JACKET C.F.W IN TEMP	TIAL	54.1	DEG.C	LOW	ALARM
08-11-07	07:27:47.316	MC017	M/E CONTROL AIR PRESS	PIAL	5.50	KG/CM2	LOW	RETURN
08-11-07	07:28:01.532	ML058	MAIN L.O SUMP TK LEVEL	LIAHL	0.62	M	LOW	ALARM
08-11-07	07:28:22.890	ML058	MAIN L.O SUMP TK LEVEL	LIAHL	0.63	M	LOW	RETURN
08-11-07	07:29:57.747	ML058	MAIN L.O SUMP TK LEVEL	LIAHL	0.62	M	LOW	ALARM
08-11-07	07:30:00.595	ML058	MAIN L.O SUMP TK LEVEL	LIAHL	0.63	M	LOW	RETURN
08-11-07	07:30:27.000	MC037	M/E NOT READY	XA			ALARM	RETURN
08-11-07	07:30:28.000	MC002	M/E START BLOCKED	XA			ALARM	RETURN
08-11-07	07:30:28.000	MC004	M/E REMOTE CONTROL SYS ABNORMAL	XA			ALARM	RETURN
08-11-07	07:31:16.263	ML058	MAIN L.O SUMP TK LEVEL	LIAHL	0.62	M	LOW	ALARM
08-11-07	07:31:26.689	ML058	MAIN L.O SUMP TK LEVEL	LIAHL	0.63	M	LOW	RETURN
08-11-07	07:39:10.031	GA022	NO.1 G/E L.T WATER INLET TEMP	TIAH	45.1	DEG.C	HIGH	ALARM
08-11-07	07:39:11.231	GA022	NO.1 G/E L.T WATER INLET TEMP	TIAH	43.1	DEG.C	HIGH	RETURN
08-11-07	07:41:11.000	MC030	M/E SOLENOID VALVE LOOP FAIL	XA			ALARM	ALARM
08-11-07	07:41:12.000	MC030	M/E SOLENOID VALVE LOOP FAIL	XA			ALARM	RETURN
08-11-07	07:47:41.361	MW002	M/E JACKET C.F.W IN TEMP	TIAL	60.0	DEG.C	LOW	RETURN
08-11-07	07:47:43.469	MW002	M/E JACKET C.F.W IN TEMP	TIAL	59.9	DEG.C	LOW	ALARM
08-11-07	07:47:44.478	MW002	M/E JACKET C.F.W IN TEMP	TIAL	60.0	DEG.C	LOW	RETURN
08-11-07	07:50:36.936	MW013	M/E J.C.F.W COMMON OUT TEMP	TIAHL	60.0	DEG.C	LOW	RETURN
08-11-07	08:05:39.724	MF023	NO.3 HFO BUNKER TK(S) TEMP	TIAH	62.0	DEG.C	HIGH	RETURN
08-11-07	08:05:45.661	MF023	NO.3 HFO BUNKER TK(S) TEMP	TIAH	62.1	DEG.C	HIGH	ALARM
08-11-07	08:06:17.457	MF023	NO.3 HFO BUNKER TK(S) TEMP	TIAH	62.0	DEG.C	HIGH	RETURN

ALARM LIST for HANJIN CAIRO — KONGSBERG NORCONTROL AS — DC C20

Date	Time	Tagname	Tag description	Func	Value	Eng.	Cond.	State
08-11-07	08:06:32.731	MF023	NO.3 HFO BUNKER TK(S) TEMP	TIAH	62.2	DEG.C	HIGH	ALARM
08-11-07	08:06:33.001	MF021	NO.3 HFO BUNKER TK(P) TEMP	TIAH	71.6	DEG.C	OFFSC	ALARM
08-11-07	08:06:48.415	MF023	NO.3 HFO BUNKER TK(S) TEMP	TIAH	62.0	DEG.C	HIGH	RETURN
08-11-07	08:07:34.620	MF023	NO.3 HFO BUNKER TK(S) TEMP	TIAH	62.1	DEG.C	HIGH	ALARM
08-11-07	08:07:35.909	MF023	NO.3 HFO BUNKER TK(S) TEMP	TIAH	62.0	DEG.C	HIGH	RETURN
08-11-07	08:08:31.681	MF023	NO.3 HFO BUNKER TK(S) TEMP	TIAH	61.8	DEG.C	OFFSC	ALARM
08-11-07	09:19:20.852	MA032	M/E NO.4 CYL EXH. GAS DEV. TEMP	TDIAHL	-54.4	DEG.C	LOW	ALARM
08-11-07	09:19:20.852	MA037	M/E NO.9 CYL EXH. GAS DEV. TEMP	TDIAHL	83.1	DEG.C	HIGH	ALARM
08-11-07	09:19:20.852	MA038	M/E NO.10 CYL EXH. GAS DEV. TEMP	TDIAHL	61.5	DEG.C	HIGH	ALARM
08-11-07	09:19:30.488	MA031	M/E NO.3 CYL EXH. GAS DEV. TEMP	TDIAHL	-51.3	DEG.C	LOW	ALARM
08-11-07	09:19:32.000	MC033	M/E SLOW DOWN CANCELLED	XA			ALARM	ALARM
08-11-07	09:19:33.786	MC006	M/E SAFETY SYS ABNORMAL	XA			ALARM	ALARM
08-11-07	09:19:37.456	MA029	M/E NO.1 CYL EXH. GAS DEV. TEMP	TDIAHL	-51.7	DEG.C	LOW	ALARM
08-11-07	09:21:55.900	MA031	M/E NO.3 CYL EXH. GAS DEV. TEMP	TDIAHL	-50.0	DEG.C	LOW	RETURN
08-11-07	09:22:04.167	MA029	M/E NO.1 CYL EXH. GAS DEV. TEMP	TDIAHL	-50.0	DEG.C	LOW	RETURN
08-11-07	09:23:32.352	MA038	M/E NO.10 CYL EXH. GAS DEV. TEMP	TDIAHL	50.0	DEG.C	HIGH	RETURN
08-11-07	09:23:33.960	MA032	M/E NO.4 CYL EXH. GAS DEV. TEMP	TDIAHL	-50.0	DEG.C	LOW	RETURN

08-11-07	09:26:30.923	MA027	M/E NO.9 CYL EXH. GAS OUT TEMP	TIAHH	432.4	DEG.C	HIGH	ALARM
08-11-07	09:27:31.994	MA031	M/E NO.3 CYL EXH. GAS DEV. TEMP	TDIAHL	-50.0	DEG.C	LOW	RETURN
08-11-07	09:27:49.157	MA038	M/E NO.10 CYL EXH. GAS DEV. TEMP	TDIAHL	50.0	DEG.C	HIGH	RETURN
08-11-07	09:27:50.017	MA029	M/E NO.1 CYL EXH. GAS DEV. TEMP	TDIAHL	-50.0	DEG.C	LOW	RETURN
[illegible]11-07	09:28:02.162	MA024	M/E NO.6 CYL EXH. GAS OUT TEMP	TIAHH	433.6	DEG.C	HIGH	ALARM
[illegible]-11-07	09:28:09.955	GC043	NO.3 G/E L.O SUMP TK L.L	LAL			ALARM	ALARM
[illegible]11-07	09:28:59.944	GC043	NO.3 G/E L.O SUMP TK L.L	LAL			ALARM	RETURN
08-11-07	09:29:06.289	MA027	M/E NO.9 CYL EXH. GAS OUT TEMP	TIAHH	430.0	DEG.C	HIGH	RETURN
08-11-07	09:29:08.491	MA024	M/E NO.6 CYL EXH. GAS OUT TEMP	TIAHH	430.0	DEG.C	HIGH	RETURN
08-11-07	09:29:09.331	MA037	M/E NO.9 CYL EXH. GAS DEV. TEMP	TDIAHL	50.0	DEG.C	HIGH	RETURN
08-11-07	09:29:12.829	MA032	M/E NO.4 CYL EXH. GAS DEV. TEMP	TDIAHL	-50.0	DEG.C	LOW	RETURN
08-11-07	09:29:35.680	MA035	M/E NO.7 CYL EXH. GAS DEV. TEMP	TDIAHL	-50.8	DEG.C	LOW	ALARM
08-11-07	09:32:05.791	MA035	M/E NO.7 CYL EXH. GAS DEV. TEMP	TDIAHL	-60.9	DEG.C	LOW	RETURN
08-11-07	09:35:19.361	MF041	NO.2 HFO PURIFIER ABNORMAL	XA			ALARM	ALARM
08-11-07	09:35:20.571	MF041	NO.2 HFO PURIFIER ABNORMAL	XA			ALARM	RETURN
08-11-07	09:36:18.271	MF041	NO.2 HFO PURIFIER ABNORMAL	XA			ALARM	ALARM
08-11-07	09:36:41.472	MF041	NO.2 HFO PURIFIER ABNORMAL	XA			ALARM	RETURN
08-11-07	09:37:11.155	MF041	NO.2 HFO PURIFIER ABNORMAL	XA			ALARM	ALARM
08-11-07	09:37:28.979	MF041	NO.2 HFO PURIFIER ABNORMAL	XA			ALARM	RETURN
08-11-07	09:37:58.167	MF041	NO.2 HFO PURIFIER ABNORMAL	XA			ALARM	ALARM
08-11-07	09:38:38.274	MF041	NO.2 HFO PURIFIER ABNORMAL	XA			ALARM	RETURN
08-11-07	09:45:59.211	MA024	M/E NO.6 CYL EXH. GAS OUT TEMP	TIAHH	663.6	DEG.C	IFH	ALARM
08-11-07	09:47:22.138	MA032	M/E NO.4 CYL EXH. GAS DEV. TEMP	TDIAHL	-60.4	DEG.C	LOW	ALARM
08-11-07	09:47:22.138	MA037	M/E NO.9 CYL EXH. GAS DEV. TEMP	TDIAHL	83.5	DEG.C	HIGH	ALARM
08-11-07	09:47:22.138	MA038	M/E NO.10 CYL EXH. GAS DEV. TEMP	TDIAHL	52.5	DEG.C	HIGH	ALARM
08-11-07	09:47:26.255	MA031	M/E NO.3 CYL EXH. GAS DEV. TEMP	TDIAHL	-51.2	DEG.C	LOW	ALARM
08-11-07	09:47:27.655	MA029	M/E NO.1 CYL EXH. GAS DEV. TEMP	TDIAHL	-51.8	DEG.C	LOW	ALARM
08-11-07	09:47:59.263	MA024	M/E NO.6 CYL EXH. GAS OUT TEMP	TIAHH	582.5	DEG.C	IFH	RETURN
08-11-07	09:47:59.263	MA038	M/E NO.10 CYL EXH. GAS DEV. TEMP	TDIAHL	50.9	DEG.C	HIGH	RETURN
08-11-07	09:48:01.832	MA038	M/E NO.10 CYL EXH. GAS DEV. TEMP	TDIAHL	60.8	DEG.C	HIGH	ALARM
[illegible]11-07	09:49:35.632	MA038	M/E NO.10 CYL EXH. GAS DEV. TEMP	TDIAHL	50.0	DEG.C	HIGH	RETURN
[illegible]11-07	09:49:42.639	MA031	M/E NO.3 CYL EXH. GAS DEV. TEMP	TDIAHL	-50.0	DEG.C	LOW	RETURN
08-11-07	09:49:43.439	MA029	M/E NO.1 CYL EXH. GAS DEV. TEMP	TDIAHL	-50.0	DEG.C	LOW	RETURN
08-11-07	09:49:47.688	MA037	M/E NO.9 CYL EXH. GAS DEV. TEMP	TDIAHL	50.0	DEG.C	HIGH	RETURN
08-11-07	09:50:12.513	MA032	M/E NO.4 CYL EXH. GAS DEV. TEMP	TDIAHL	-50.0	DEG.C	LOW	RETURN
08-11-07	09:50:33.974	MA035	M/E NO.7 CYL EXH. GAS DEV. TEMP	TDIAHL	-50.5	DEG.C	LOW	ALARM
08-11-07	09:51:00.775	MA033	M/E NO.5 CYL EXH. GAS DEV. TEMP	TDIAHL	-53.3	DEG.C	LOW	ALARM

Date	Time	Tagname	Tag description	Func	Value	Eng.	Cond.	State
08-11-07	09:51:02.374	MA035	M/E NO.7 CYL EXH. GAS DEV. TEMP	TDIAHL	-49.4	DEG.C	LOW	RETURN
08-11-07	09:51:21.661	MA033	M/E NO.5 CYL EXH. GAS DEV. TEMP	TDIAHL	-50.0	DEG.C	LOW	RETURN
08-11-07	10:01:43.884	MF041	NO.2 HFO PURIFIER ABNORMAL	XA			ALARM	ALARM
08-11-07	10:01:54.039	MF041	NO.2 HFO PURIFIER ABNORMAL	XA			ALARM	RETURN
08-11-07	10:02:49.662	MF041	NO.2 HFO PURIFIER ABNORMAL	XA			ALARM	ALARM
08-11-07	10:03:57.347	MF041	NO.2 HFO PURIFIER ABNORMAL	XA			ALARM	RETURN
08-11-07	10:28:48.616	MF015	HFO LOW SUL. SETTLING TK LEVEL	LIAHL	0.08	M	LOW	ALARM
08-11-07	10:31:08.868	MF015	HFO LOW SUL. SETTLING TK LEVEL	LIAHL	0.10	M	LOW	RETURN
08-11-07	10:31:53.955	MF009	HFO TRANS P/P DISCH. PRESS	PIAL	-0.01	KG/CM2	LOW	ALARM
[illegible]-11-07	10:39:17.255	MF037	D.B HFO BUNKER TK TEMP	TIAH	68.1	DEG.C	HIGH	ALARM
[illegible]11-07	10:39:19.484	MF037	D.B HFO BUNKER TK TEMP	TIAH	68.0	DEG.C	HIGH	RETURN
[illegible]1-07	10:39:24.750	MF037	D.B HFO BUNKER TK TEMP	TIAH	68.1	DEG.C	HIGH	ALARM
08-11-07	10:39:40.292	MF037	D.B HFO BUNKER TK TEMP	TIAH	68.0	DEG.C	HIGH	RETURN
08-11-07	10:39:48.376	MF037	D.B HFO BUNKER TK TEMP	TIAH	68.1	DEG.C	HIGH	ALARM
08-11-07	10:39:49.706	MF037	D.B HFO BUNKER TK TEMP	TIAH	68.0	DEG.C	HIGH	RETURN
08-11-07	10:40:05.927	MF037	D.B HFO BUNKER TK TEMP	TIAH	68.1	DEG.C	HIGH	ALARM
08-11-07	10:40:08.475	MF037	D.B HFO BUNKER TK TEMP	TIAH	68.0	DEG.C	HIGH	RETURN

08-11-07	11:17:32.630	MA037	M/E NO.9 CYL EXH. GAS DEV. TEMP	TDIAHL	64.4	DEG.C	HIGH	ALARM
08-11-07	11:17:32.630	MA038	M/E NO.10 CYL EXH. GAS DEV. TEMP	TDIAHL	55.4	DEG.C	HIGH	ALARM
08-11-07	11:18:54.681	MA038	M/E NO.10 CYL EXH. GAS DEV. TEMP	TDIAHL	50.0	DEG.C	HIGH	RETURN
08-11-07	11:19:37.770	MA032	M/E NO.4 CYL EXH. GAS DEV. TEMP	TDIAHL	-50.0	DEG.C	LOW	RETURN
08-11-07	11:21:28.685	MA032	M/E NO.4 CYL EXH. GAS DEV. TEMP	TDIAHL	-52.2	DEG.C	LOW	ALARM
08-11-07	11:21:31.934	MA038	M/E NO.10 CYL EXH. GAS DEV. TEMP	TDIAHL	51.5	DEG.C	HIGH	ALARM
08-11-07	11:21:47.349	MA029	M/E NO.1 CYL EXH. GAS DEV. TEMP	TDIAHL	-52.6	DEG.C	LOW	ALARM
08-11-07	11:21:50.608	MA031	M/E NO.3 CYL EXH. GAS DEV. TEMP	TDIAHL	-51.4	DEG.C	LOW	ALARM
08-11-07	11:22:47.589	MA031	M/E NO.3 CYL EXH. GAS DEV. TEMP	TDIAHL	-50.0	DEG.C	LOW	RETURN
08-11-07	11:23:24.718	MA038	M/E NO.10 CYL EXH. GAS DEV. TEMP	TDIAHL	50.0	DEG.C	HIGH	RETURN
08-11-07	11:23:34.505	MA029	M/E NO.1 CYL EXH. GAS DEV. TEMP	TDIAHL	-50.0	DEG.C	LOW	RETURN
08-11-07	11:25:05.165	MA032	M/E NO.4 CYL EXH. GAS DEV. TEMP	TDIAHL	-50.0	DEG.C	LOW	RETURN
08-11-07	11:25:07.694	MA037	M/E NO.9 CYL EXH. GAS DEV. TEMP	TDIAHL	50.0	DEG.C	HIGH	RETURN
08-11-07	11:36:02.170	AB005	BOILER ABNORMAL	XA			ALARM	ALARM
08-11-07	11:36:57.557	AB005	BOILER ABNORMAL	XA			ALARM	RETURN
08-11-07	11:36:56.296	AB001	BOILER TRIP	XA			ALARM	ALARM
08-11-07	11:36:59.246	AB001	BOILER TRIP	XA			ALARM	RETURN
08-11-07	11:37:01.305	AB005	BOILER ABNORMAL	XA			ALARM	ALARM
08-11-07	11:37:02.095	AB005	BOILER ABNORMAL	XA			ALARM	RETURN
08-11-07	11:37:04.174	AB005	BOILER ABNORMAL	XA			ALARM	ALARM
08-11-07	11:37:07.643	AB005	BOILER ABNORMAL	XA			ALARM	RETURN
08-11-07	11:37:11.362	AB005	BOILER ABNORMAL	XA			ALARM	ALARM
08-11-07	11:38:11.324	AB002	BOILER DRUN STEAM PRESS	PIAHL	4.98	KG/CM2	LOW	ALARM
08-11-07	11:38:18.937	AB005	BOILER ABNORMAL	XA			ALARM	RETURN
08-11-07	11:38:22.765	AB005	BOILER ABNORMAL	XA			ALARM	ALARM
08-11-07	11:38:37.840	AB005	BOILER ABNORMAL	XA			ALARM	RETURN
08-11-07	11:38:39.910	AB005	BOILER ABNORMAL	XA			ALARM	ALARM
08-11-07	11:42:04.081	AB001	BOILER TRIP	XA			ALARM	ALARM
08-11-07	11:42:09.449	AB001	BOILER TRIP	XA			ALARM	RETURN
08-11-07	11:49:16.136	AB002	BOILER DRUM STEAM PRESS	PIAHL	5.00	KG/CM2	LOW	RETURN
08-11-07	11:52:19.362	AB011	BOILER FEED FILTER TK L.L	LAL			ALARM	ALARM
08-11-07	11:55:41.502	AB011	BOILER FEED FILTER TK L.L	LAL			ALARM	RETURN
08-11-07	12:02:26.193	MA029	M/E NO.1 CYL EXH. GAS DEV. TEMP	TDIAHL	-64.6	DEG.C	LOW	ALARM
08-11-07	12:02:26.193	MA031	M/E NO.3 CYL EXH. GAS DEV. TEMP	TDIAHL	-57.6	DEG.C	LOW	ALARM
08-11-07	12:02:26.193	MA032	M/E NO.4 CYL EXH. GAS DEV. TEMP	TDIAHL	-87.2	DEG.C	LOW	ALARM
08-11-07	12:02:26.193	MA037	M/E NO.9 CYL EXH. GAS DEV. TEMP	TDIAHL	90.8	DEG.C	HIGH	ALARM
08-11-07	12:02:26.193	MA038	M/E NO.10 CYL EXH. GAS DEV. TEMP	TDIAHL	64.4	DEG.C	HIGH	ALARM
08-11-07	12:02:28.165	MA030	M/E NO.2 CYL EXH. GAS DEV. TEMP	TDIAHL	-51.2	DEG.C	LOW	ALARM

ALARM LIST for HANJIN CAIRO — KONGSBERG NORCONTROL AS — DC C20

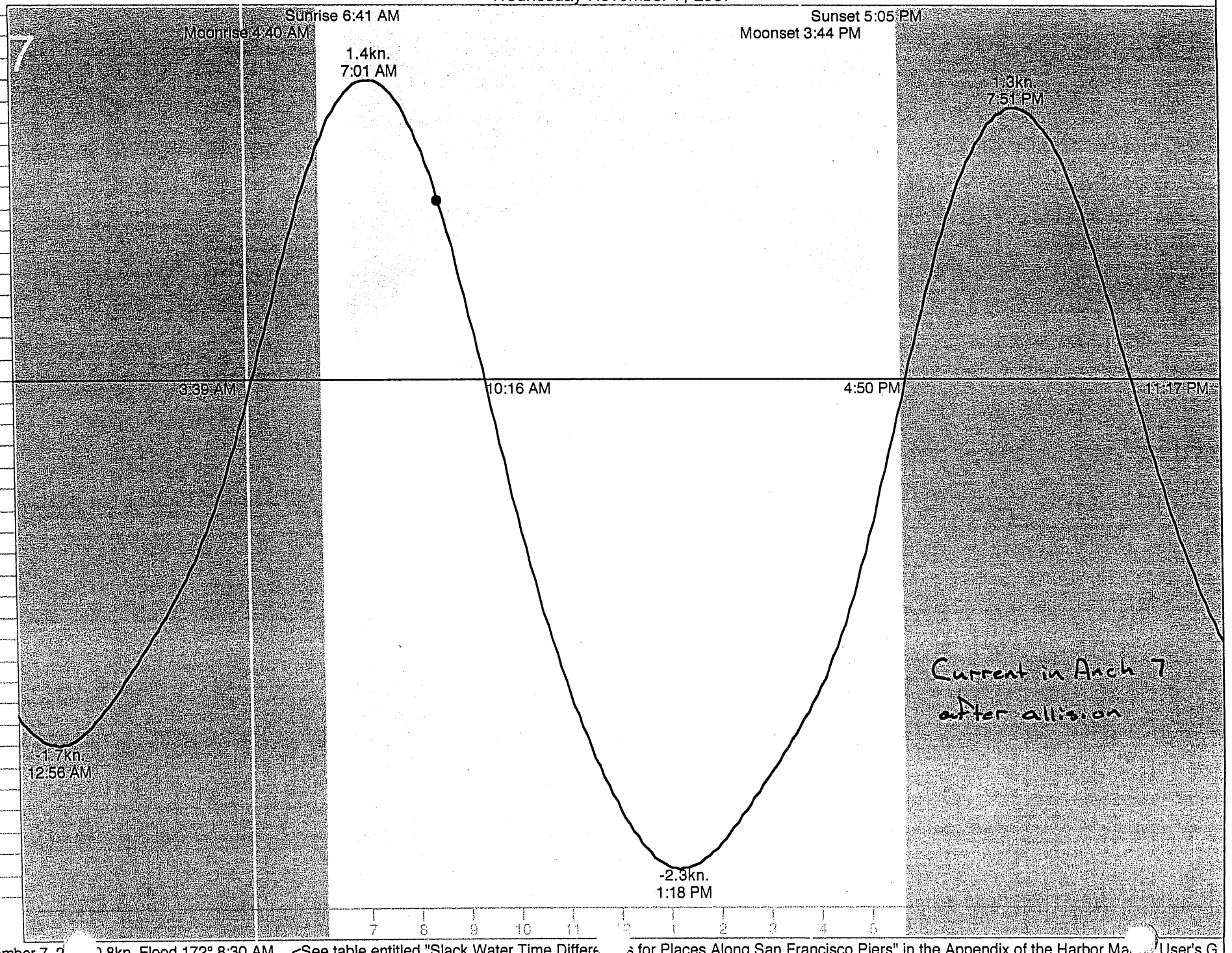
Date	Time	Tagname	Tag description	Func	Value	Eng.	Cond.	State
08-11-07	12:02:50.353	MA030	M/E NO.2 CYL EXH. GAS DEV. TEMP	TDIAHL	-50.0	DEG.C	LOW	RETURN
08-11-07	12:03:17.234	MA031	M/E NO.3 CYL EXH. GAS DEV. TEMP	TDIAHL	-50.0	DEG.C	LOW	RETURN
08-11-07	12:03:25.934	MA029	M/E NO.1 CYL EXH. GAS DEV. TEMP	TDIAHL	-50.0	DEG.C	LOW	RETURN
08-11-07	12:04:04.071	MA032	M/E NO.4 CYL EXH. GAS DEV. TEMP	TDIAHL	-50.0	DEG.C	LOW	RETURN
08-11-07	12:04:19.968	MA038	M/E NO.10 CYL EXH. GAS DEV. TEMP	TDIAHL	50.0	DEG.C	HIGH	RETURN
08-11-07	12:04:45.119	MA038	M/E NO.10 CYL EXH. GAS DEV. TEMP	TDIAHL	50.7	DEG.C	HIGH	ALARM
08-11-07	12:04:58.063	MA038	M/E NO.10 CYL EXH. GAS DEV. TEMP	TDIAHL	50.0	DEG.C	HIGH	RETURN
08-11-07	12:05:16.237	MA037	M/E NO.9 CYL EXH. GAS DEV. TEMP	TDIAHL	50.0	DEG.C	HIGH	RETURN
08-11-07	12:14:25.281	AB005	BOILER ABNORMAL	XA			ALARM	RETURN
08-11-07	12:18:15.318	MF009	HFO TRANS P/P DISCH. PRESS	PIAL	-0.05	KG/CM2	LOW	RETURN
08-11-07	12:22:30.976	MC021	M/E NO.2 AUX. BLOWER FAIL	XA			ALARM	ALARM
08-11-07	12:22:30.976	MC022	M/E NO.3 AUX. BLOWER FAIL	XA			ALARM	ALARM
08-11-07	12:22:33.409	MC022	M/E NO.3 AUX. BLOWER FAIL	XA			ALARM	RETURN
08-11-07	12:22:33.438	MC021	M/E NO.2 AUX. BLOWER FAIL	XA			ALARM	RETURN
08-11-07	12:24:44.000	MC036	M/E CONTROL POSITION MISSING	XA			ALARM	ALARM
08-11-07	12:24:44.000	MC004	M/E REMOTE CONTROL SYS ABNORMAL	XA			ALARM	ALARM
08-11-07	12:32:36.000	MC002	M/E START BLOCKED	XA			ALARM	ALARM

EXHIBIT 6

BOARD OF PILOT COMMISSIONERS
INCIDENT REVIEW COMMITTEE REPORT:
M/V COSCO BUSAN- CAPT. JOHN COTA
NOVEMBER 7, 2007

326 37° 49.3' N 22.7' W Treasure Island, 0.2 mile west of Flood 172° Ebb 343°

Wednesday November 7, 2007

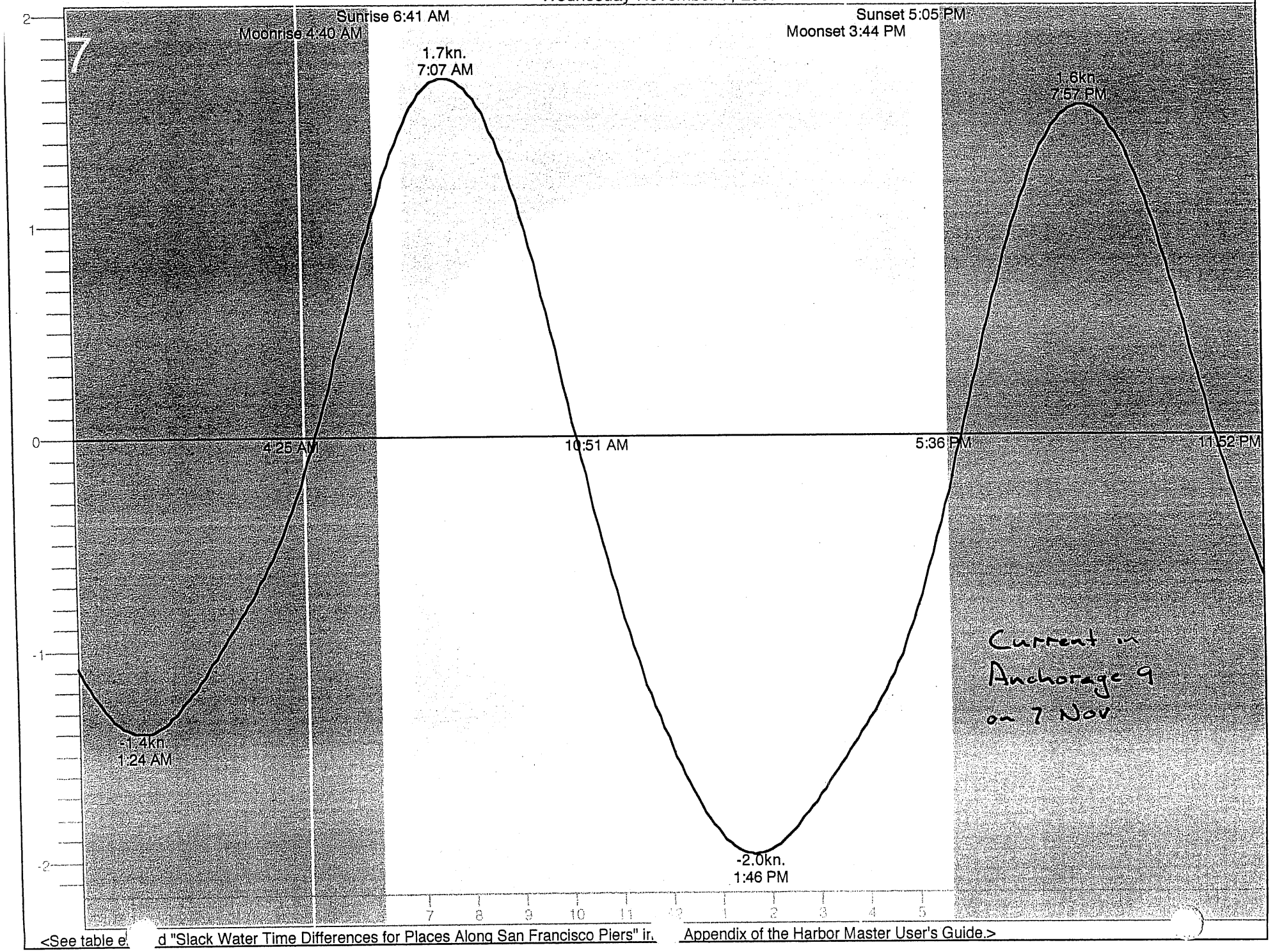


Encl: (6)

November 7, 2... 0.8kn. Flood 172° 8:30 AM <See table entitled "Slack Water Time Differe... ...s for Places Along San Francisco Piers" in the Appendix of the Harbor Ma... User's G

431 37° 45.0' N 20.0' W Potrero Point, 2 miles east of Flood 159° Ebb 328°

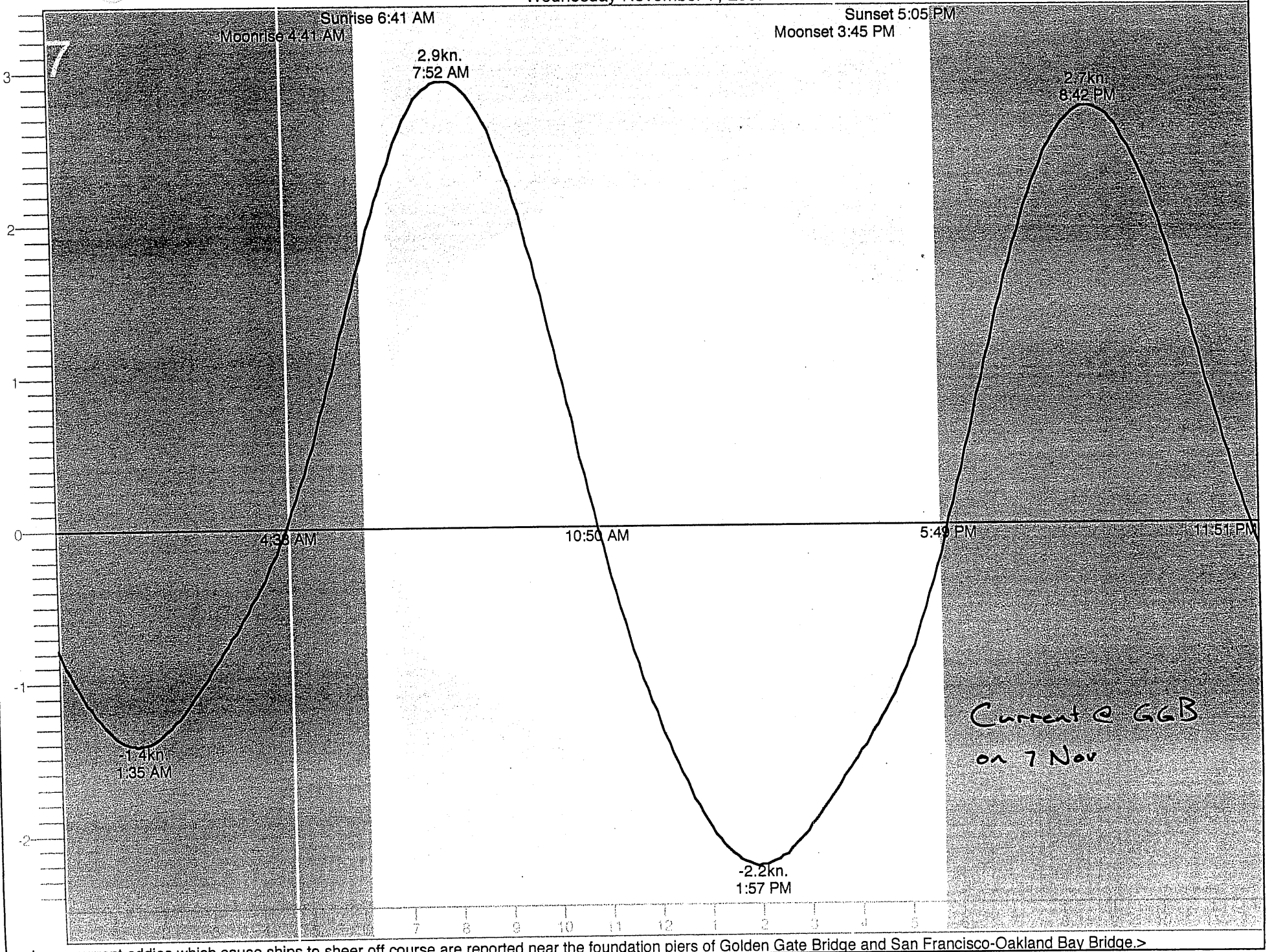
Wednesday November 7, 2007



<See table e d "Slack Water Time Differences for Places Along San Francisco Piers" ir Appendix of the Harbor Master User's Guide.>

271 37° 49.7' N 27.7' W GOLDEN GATE BRIDGE Flood 55° Ebb 237°

Wednesday November 7, 2007

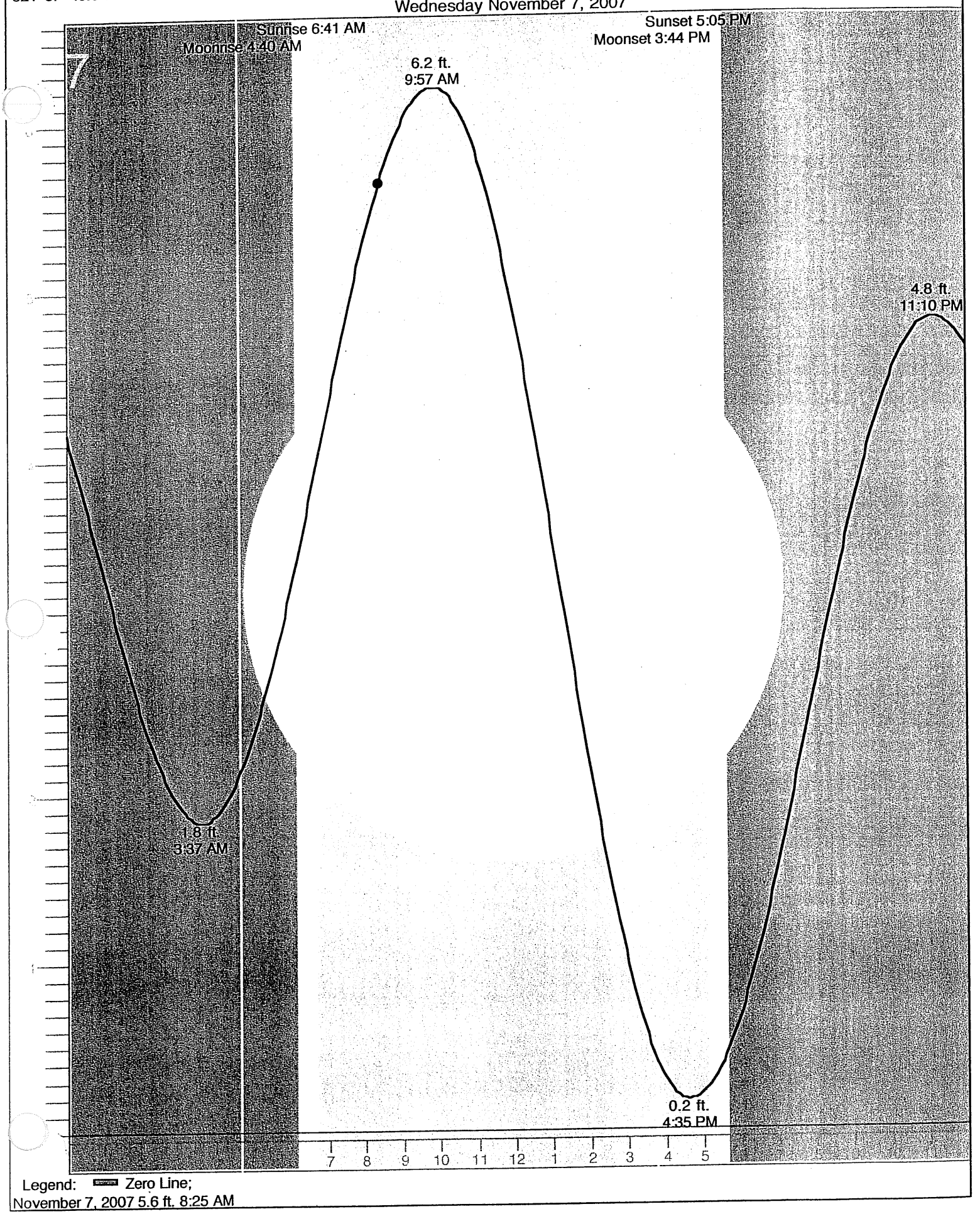


Current @ GGB on 7 Nov

<Large current eddies which cause ships to sheer off course are reported near the foundation piers of Golden Gate Bridge and San Francisco-Oakland Bay Bridge.>

521 37° 48.6' N 122° 21.6' W Yerba Buena Island, San Francisco Bay

Wednesday November 7, 2007



Legend: Zero Line;

November 7, 2007 5.6 ft. 8:25 AM

EXHIBIT 7

BOARD OF PILOT COMMISSIONERS
INCIDENT REVIEW COMMITTEE REPORT:
M/V COSCO BUSAN- CAPT. JOHN COTA
NOVEMBER 7, 2007

VESSEL TRAFFIC SERVICES AREA
(see note C)

REGULATED NAVIGATION AREA
165.1185 (see note A)

R "2"
Fl R 6s

TREASURE I NORTH LT
Fl R 2.5s 30ft 5M "6"

"E"
Fl 2s
Priv

"D"
Fl 2s
Priv

"C"
Fl 2s
Priv

"I"
Fl 2s
Priv

"H"
Fl 2s
Priv

"M"
Fl 2s
Priv

"B"
Fl 2s
Priv

"G"
Fl 2s
Priv

"L"
Fl 2s
Priv

"F"
Fl 2s
Priv

"A"
Fl 2s
Priv

"K"
Fl 2s
Priv

"J"
Fl 2s
Priv

GENERAL ANCHORAGE NO. 6
110.224 (see note A)

Tide rips

TREASURE ISLAND

TEMPORARY ANCHORAGE NO. 7
110.224 (see note A)

G "3"
Fl G 2.5s

Cable and Pipeline Area

Subm piles

Rk

RADIO TOWER

CUPOLA

Subm piles

Subm ped pier ruins

Obstructions

Bridge under construction (see note)

SAN FRANCISCO-OAKLAND BAY BRIDGE (see bridge note)

Fish Obstructions

Piles

Being filled

Iso R 6s 36ft 3

Iso Y 6s 42ft

Iso G 6s 35ft

Q G 25ft

Subm pile

Q Y 6 QB Fl G 4s

G "5"
Fl G 4s

G "7"
Fl G 2.5s

OAKLAND OUTER HARBOR

Pile

Fl R 4s 14ft "4"

Fl R 4s 14ft "6"
Stake PA

Fl G 4s 17ft "7"

Fl R 2s 14ft "2"
PA
Rep (1974)

Fl R 4s 17ft "8"

Emeryville Marina

ANNUAL DECREASE 6'

Duck blind (ruins)

Piles

Subm pile

Obstn

R TR (WEST OF THREE)
(KABL) 960 kHz

R TRS
(KQH) 1010 kHz

R TR (CENTER OF THREE)
(KAIA) 1310 kHz

Snag

Dol

M Sh

UPRR

RESTRICTED AREA
334.1065 (see note A)

YERBA BUENA I C G DEPOT

RADAR TOWER
(TALLER OF TWO)

F R 18ft

YERBA BUENA I
Oc 4s 95ft 14M
HORN

Cable Area

(see note B)

Rapid Transit Tunnel

OUTER HARBOR ENTRANCE CHANNEL

Seventh Street
Marine Terminal

Riprap

Fl R 2.5s 19ft "2" Priv

Fl R 2.5s 19ft "1" Priv

TR

Shallow Water Habitat
(under construction)

MIDDLE
HARBOR

Fl G 4s "A"

Fl G 4s 30ft 7M "7"

Fl G 4s "C"

Under construction

Piling

Pier 27

Pier 23

Pier 19

Pier 17

Pier 15

Pier 9

F 29ft Priv

F R 26ft Priv

F 26ft Priv

Pier 3

Pier 1

PYRAMIDAL
BUILDING

FERRY TOWER

Tunnel ventilator
23ft

Iso 2s 16ft
Priv

Iso R 2s 16ft
Priv

RACON (----)

BAR CHANNEL
(See tabulation)

R "2A"
Fl R 2.5s

R "4" 28
Fl R 4s

R "6"
Fl R 2.5s

R "2"
Fl R 2.5s

REGULATED NAVIGATION AREA
165.1181 (see note A)

Fl R 6s 15ft 4M "8"

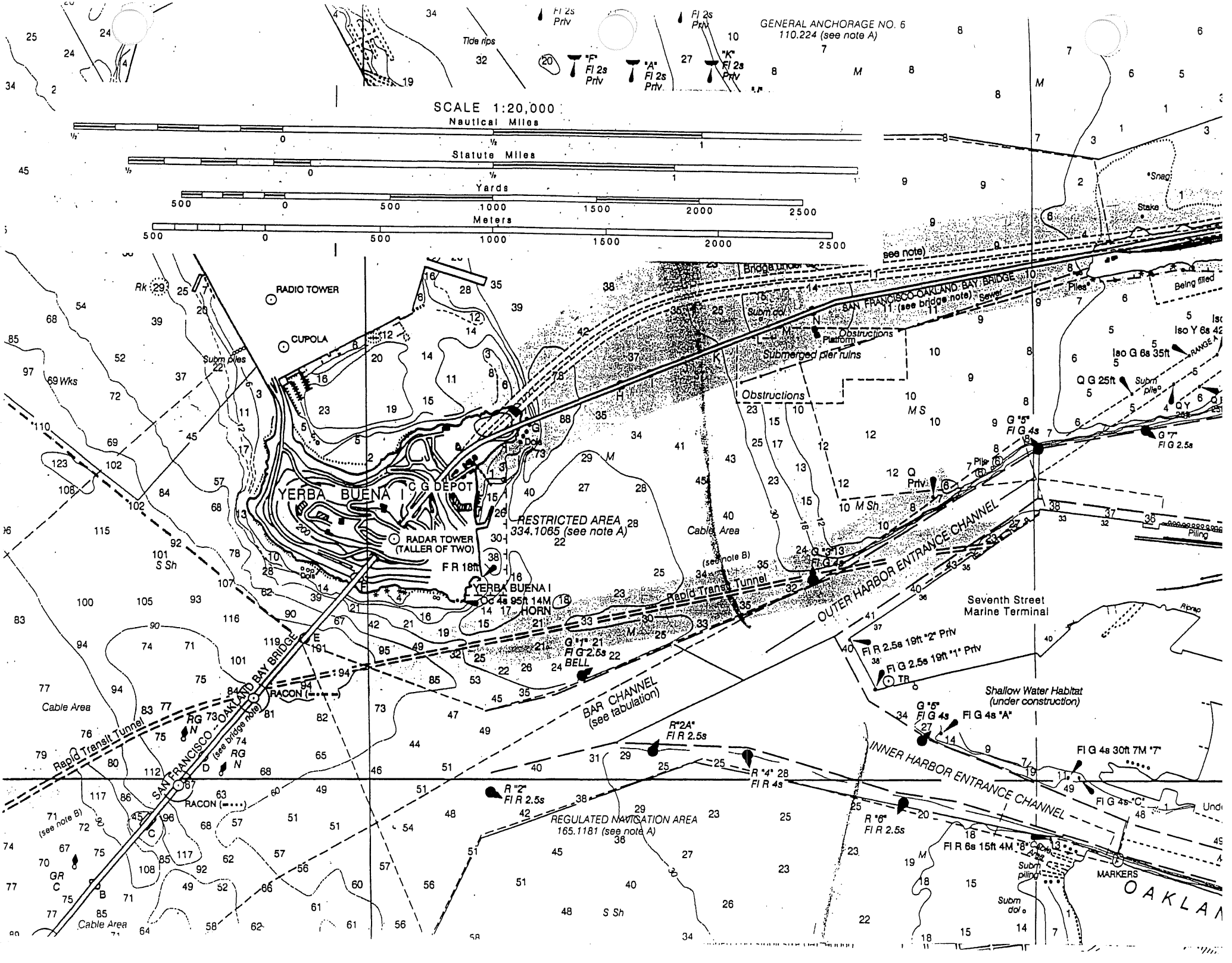
MARKERS

MEASURED NAUTICAL MILE 105°32' TRUE

OAKLAND I

Under construction

Encl: (7)


GENERAL ANCHORAGE NO. 6
110.224 (see note A)
SCALE 1:20,000
Nautical Miles
Statute Miles
Yards
Meters
RADIO TOWER
CUPOLA
YERBA BUENA I C G DEPOT
RADAR TOWER (TALLER OF TWO)
YERBA BUENA I
HORN
RESTRICTED AREA
334.1065 (see note A)
Cable Area
Rapid Transit Tunnel
SAN FRANCISCO - OAKLAND BAY BRIDGE
RACON
BAR CHANNEL
(see tabulation)
OUTER HARBOR ENTRANCE CHANNEL
INNER HARBOR ENTRANCE CHANNEL
Seventh Street
Marine Terminal
Shallow Water Habitat
(under construction)
REGULATED NAVIGATION AREA
165.1181 (see note A)
Submerged pier ruins
Obstructions
Subm piles
Subm pile
Subm dol
Piling
Riprap
Being filled
Stake
Snag
MARKERS
OAKLAN

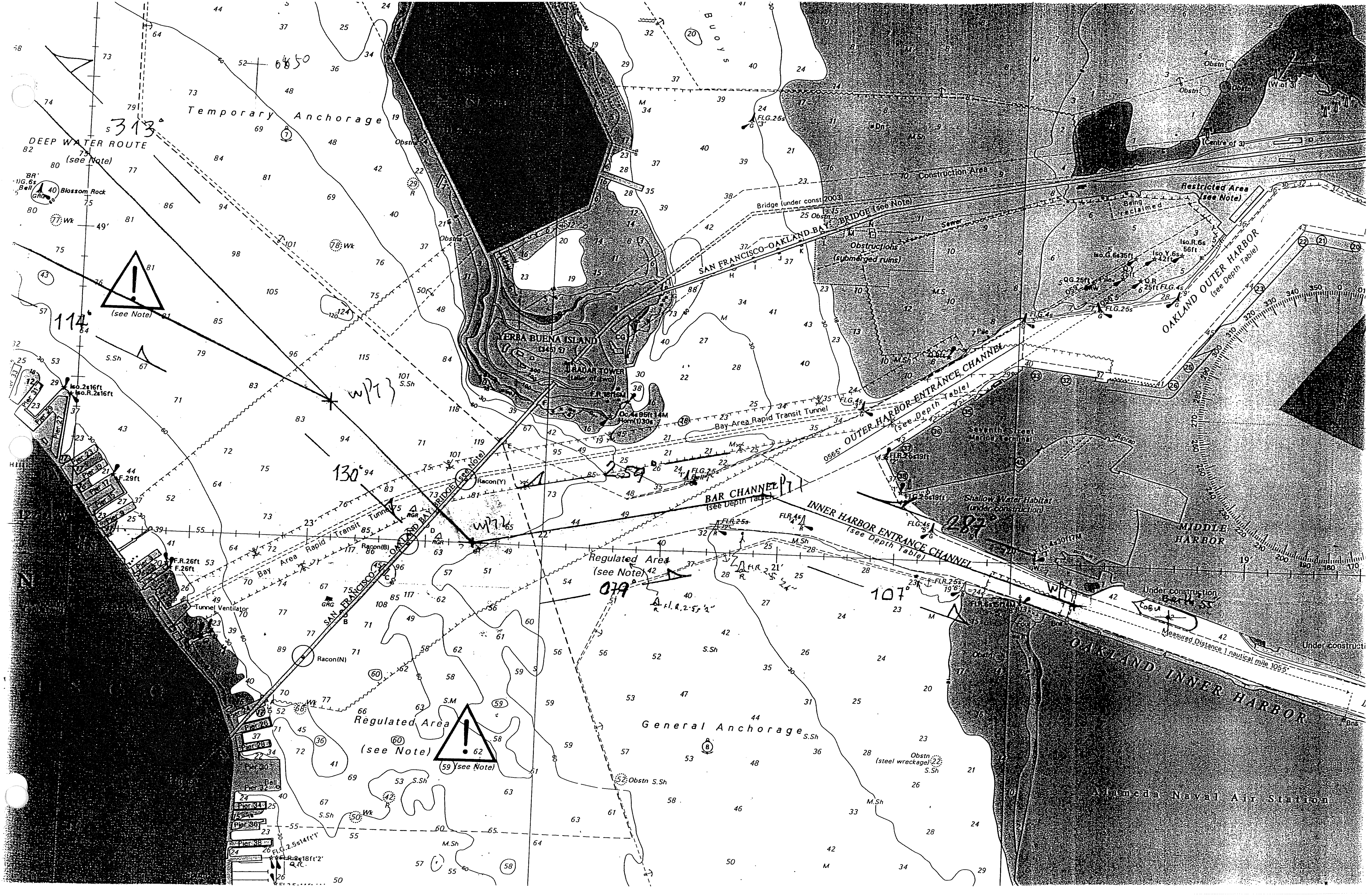

Temporary Anchorage
DEEP WATER ROUTE
(see Note)
'BR'
Bell
Blossom Rock
Wk
49'
(see Note)
S.Sh
Iso.2s16ft
Iso.R.2s16ft
Pier 33
Pier 31
Pier 29
Pier 27
Pier 23
Pier 19
Pier 17
Pier 15
Pier 9
F.29ft
F.R.26ft
F.26ft
Tunnel Ventilator
Pier 24
Pier 26
Pier 28
Pier 30
Bell
Pier 32
Pier 34
Pier 36
Pier 38
Fl.G.2.5s14ft'1'
Fl.R.2s18ft'2'
Q.R.
Racon(N)
Racon(B)
Racon(Y)
SAN FRANCISCO-OAKLAND BAY BRIDGE (see Note)
Bay Area Rapid Transit Tunnel
RGR
GRG
Regulated Area
(see Note)
General Anchorage
Obstn
(steel wreckage)
Buoys
Fl.G.2.5s
'3'
YERBA BUENA ISLAND
(345)
RADAR TOWER
F.R.16ft6M
Oc.4s95ft14M
Horn(1)30s
Bridge (under const 2003)
Obstructions
(submerged ruins)
Construction Area
Restricted Area
(see Note)
Being reclaimed
Sewer
Iso.G.6s35ft
Iso.Y.6s
42ft
Iso.R.6s
56ft
Q.G.25ft
Pile
Q.R.
25ft
Fl.G.4s
Fl.G.2.5s
(Centre of 3)
(W of 3)
OAKLAND OUTER HARBOR
(see Depth Table)
OUTER HARBOR ENTRANCE CHANNEL
(see Depth Table)
056.5°
BAR CHANNEL
(see Depth Table)
INNER HARBOR ENTRANCE CHANNEL
(see Depth Table)
Fl.G.2.5s
'1' Bell
Fl.R.2.5s
Fl.R.4s
'4'
Fl.R.2.5s19ft
Fl.G.2.5s19ft
Seventh Street
Marine Terminal
Riprap
Shallow Water Habitat
(under construction)
MIDDLE HARBOR
Fl.G.4s
'5'
Fl.G.4s30ft7M
Under construction
Measured Distance 1 nautical mile 105.5°
OAKLAND INNER HARBOR
Alameda Naval Air Station
19'
313°
114°
130°
WPT3
WPT2
259°
079°
107°
287°
0850
Berth 55

EXHIBIT 8

BOARD OF PILOT COMMISSIONERS
INCIDENT REVIEW COMMITTEE REPORT:
M/V COSCO BUSAN - CAPT. JOHN COTA
NOVEMBER 7, 2007

INVESTIGATOR'S REPORT

WHILE INCLUDED IN THE REPORT, THESE DOCUMENTS HAVE BEEN REMOVED FROM THIS VOLUME AS THEY ARE NOT PART OF THE PUBLIC RECORD. (7 C.C.R. § 210(c)(11))

EXHIBIT 9

BOARD OF PILOT COMMISSIONERS
INCIDENT REVIEW COMMITTEE REPORT:
M/V COSCO BUSAN - CAPT. JOHN COTA
NOVEMBER 7, 2007

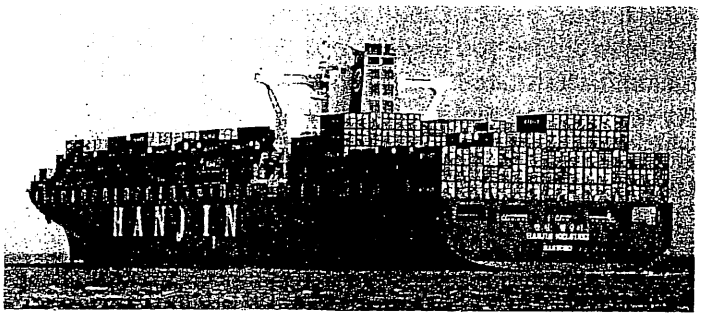
Photos -

1. Jane's Merchant Ships ( ) general view
2. View of damage - taken fm Pilot Boat 16 Nov 07
3. "
4. "
5. Port side bridge consol - from left: radar,
6. elect. chart display, vessel control data monitor, radar, helm consol.
6. Stbd side bridge consol - from centerline: helm consol, engine order telegraph - lever w/ black knob is bow thruster, vessel control gauges, monitor for engine functions - at bridge windows - Capt Sun, Capt Miller
7. Radar screen, next to helm consol
8. Electronic Chart Monitor, next to outboard radar
9. Elect. Chart Monitor - vessel approaching Pier 70 complex. Note stern appears to be in allision with pier. Note "Chart Warnings" box at lower left of screen
10. Elect. Chart Monitor - Vessel docking at shipyard. Note: stern appears to be in allision with pier: Note: "Chart Warnings" "Chart is not ECDIS Compliant Data"

Laura Maersk *The Shipping Information Service (G Boulton) / 0114174*

156 *M²FK H1* UD

LAURA MAERSK DIS/De (Odense) 2001; Con; 50,721 gt/63,200 dwt; 265.84 x 37.38 x 14.00 m *(872.18 x 122.64 x 45.93 ft)*; M (B & W); 24 kt; 3,700 TEU.
Sisters: **LARS MAERSK** (DIS); **LAUST MAERSK** (DIS); **LEDA MAERSK** (DIS); **LEXA MAERSK** (DIS); **LICA MAERSK** (DIS); **LUNA MAERSK** (DIS)

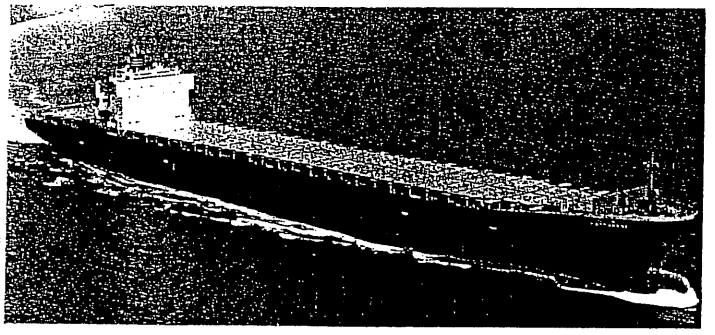


Hanjin Helsinki *The Shipping Information Service (D Hazell) / 0558862*

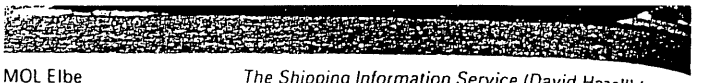
Ming Cosmos *The Shipping Information Service (D Hazell) / 0567660*

157 *M²FK H1* UD

MING PLUM Pa/Ko (Hyundai) 2000; Con; 64,254 gt/68,413 dwt; 274.69 x 40.00 (mb) x 12.00 m *(901.21 x 131.23 x 39.37 ft)*; M (Sulzer); 26 kt; 5,512 TEU (including 400 reefer).
Sister: **MING ORCHID** (Pa)
Probable sisters: **MERCURY BRIDGE** (Li) ex-*Ming Cypress*; **MING GREEN** (Tw)
Similar: **CSCL SEATTLE** (Li) ex-*Hansa Columbia*; **HANJIN CAIRO** (MI); **HANJIN GOTHENBURG** (MI); **HANJIN HELSINKI** (MI); **HANJIN TAIPEI** (Ge)
Similar (builder — China SB): **JUPITER BRIDGE** (Li) ex-*Ming Bamboo*; **MING COSMOS** (Pa); **VENUS BRIDGE** (Li) ex-*Ming Pine*; **YM WEALTH** (Li)



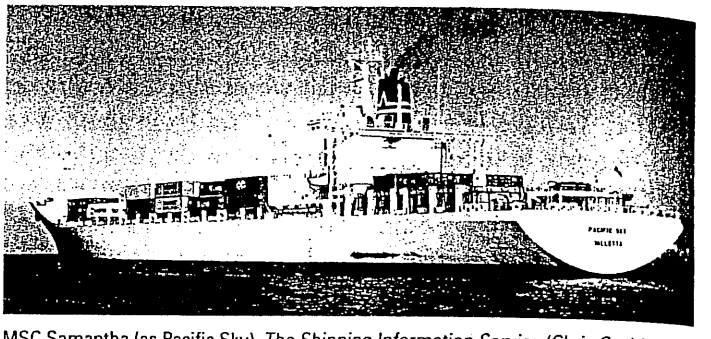
Katsuragi *(builder — IHI) / 0019497*



MOL Elbe *The Shipping Information Service (David Hazell) / 0533440*

158 *M²FK H1* VE

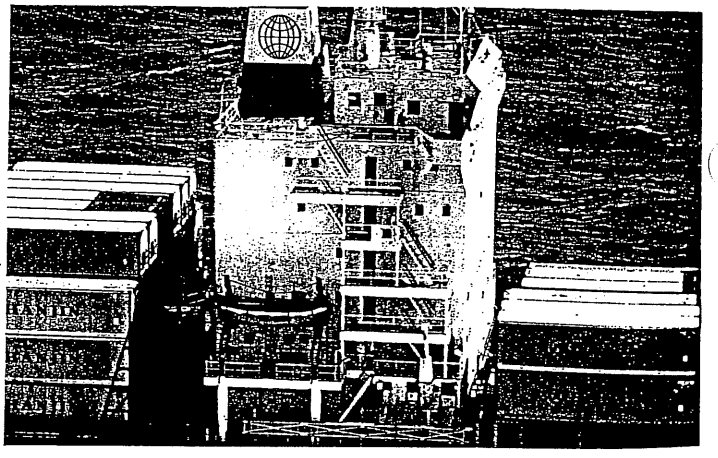
MOL ELBE Ja/Ja (IHI) 1990; Con; 50,352 gt/58,112 dwt; 292.15 x 32.20 (mb) x 13.03 m *(958.50 x 105.64 x 42.75 ft)*; M (Sulzer); 23.9 kt; ex-*Elbe*; 3,796 TEU (including 305 reefer)
Sister: **MOL INGENUITY** (Pa) ex-*Danube*
Similar: **KATSURAGI** (Pa)



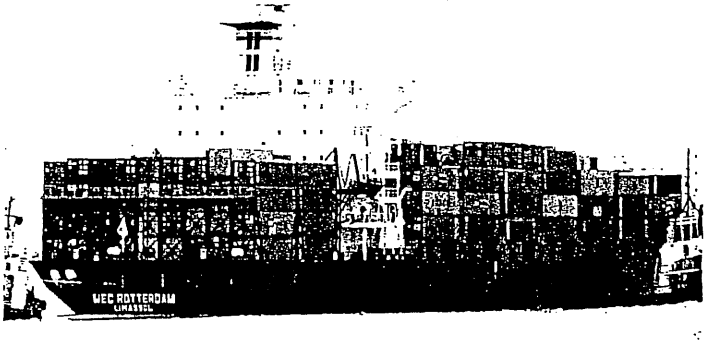
MSC Samantha (as Pacific Sky) *The Shipping Information Service (Chris Gee) / 0572572*

159 *M²FK H1* UD

MSC SAMANTHA Pa/Ja (IHI) 1982; Con; 30,955 gt/34,098 dwt; 210.01 x 32.21 (mb) x 12.02 m *(689.01 x 105.68 x 39.44 ft)*; M (Sulzer); 18.8 kt; ex-*S A Vaal*; 1,855 TEU (including 510 reefer). **See entry number 12/357** — original sisters. Some of the latter also have this appearance now ('N' masts removed from superstructure).



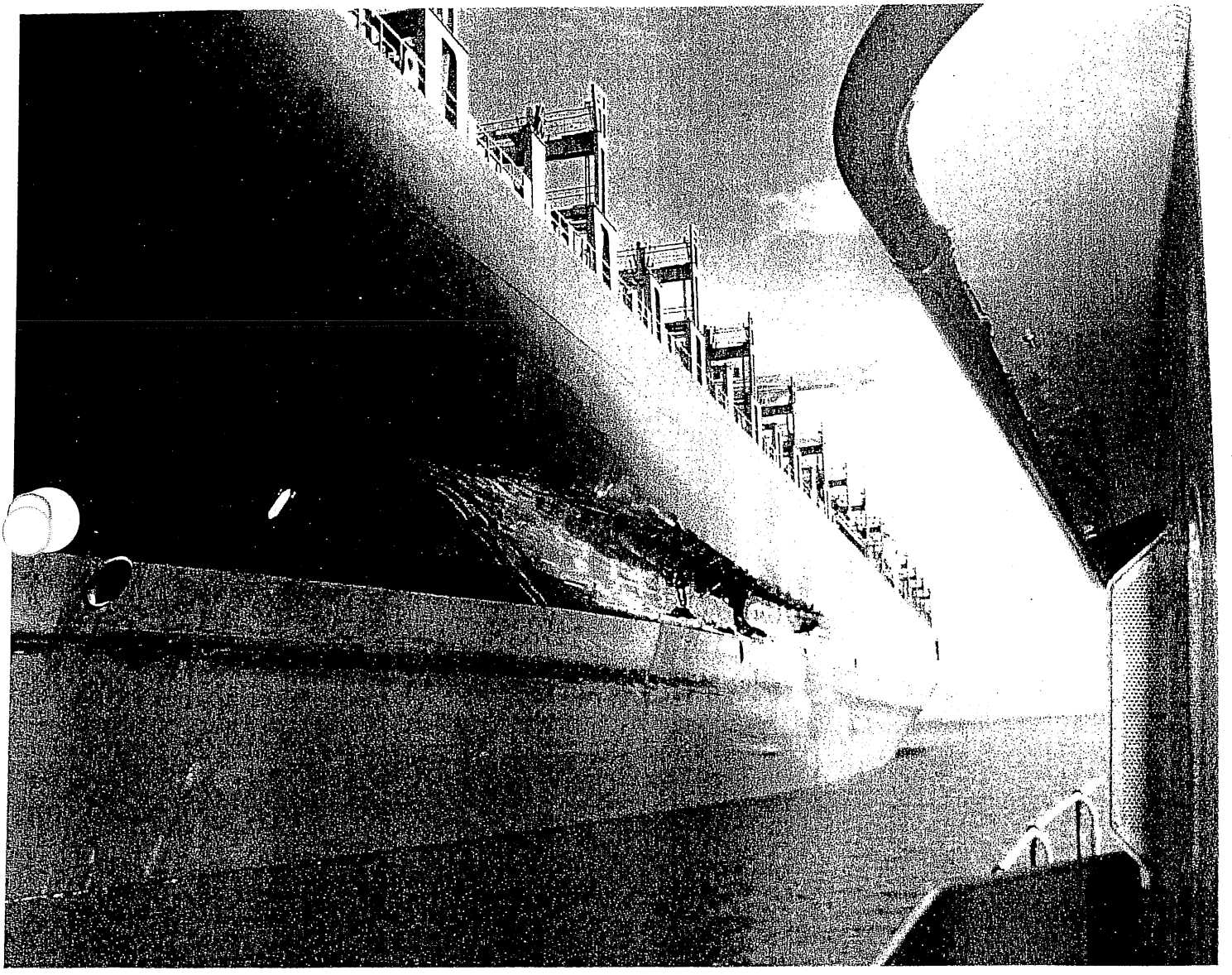
P&O Nedlloyd Kilindini (as Global Horizon) *92WG DETA RAAF 1998 / 0106969*



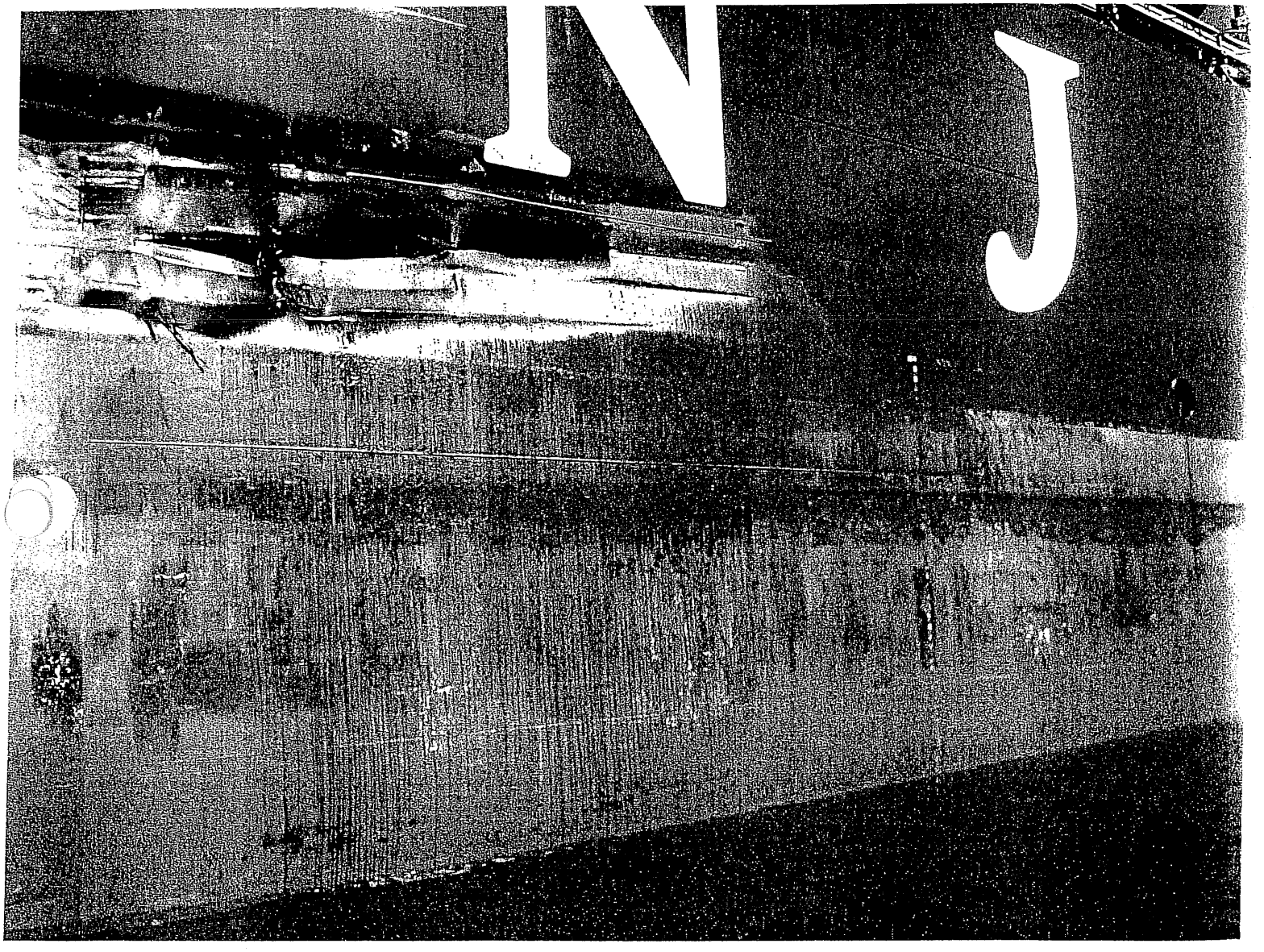
WEC Rotterdam *The Shipping Information Service (Jane Ellen Hazell) / 0568594*

160 *M²FK H1* VE

P&O NEDLLOYD KILINDINI Ma/Sp (AESA) 1982; Con; 19,872 gt/19,185 dwt; 184.00 x 27.06 x 9.52 m *(603.67 x 88.78 x 31.23 ft)*; M (B & W); 19 kt; ex-*Almudena*; 1,552 TEU (including 134 reefer)
Sister: **WEC ROTTERDAM** (Cy) ex-*Pilar*

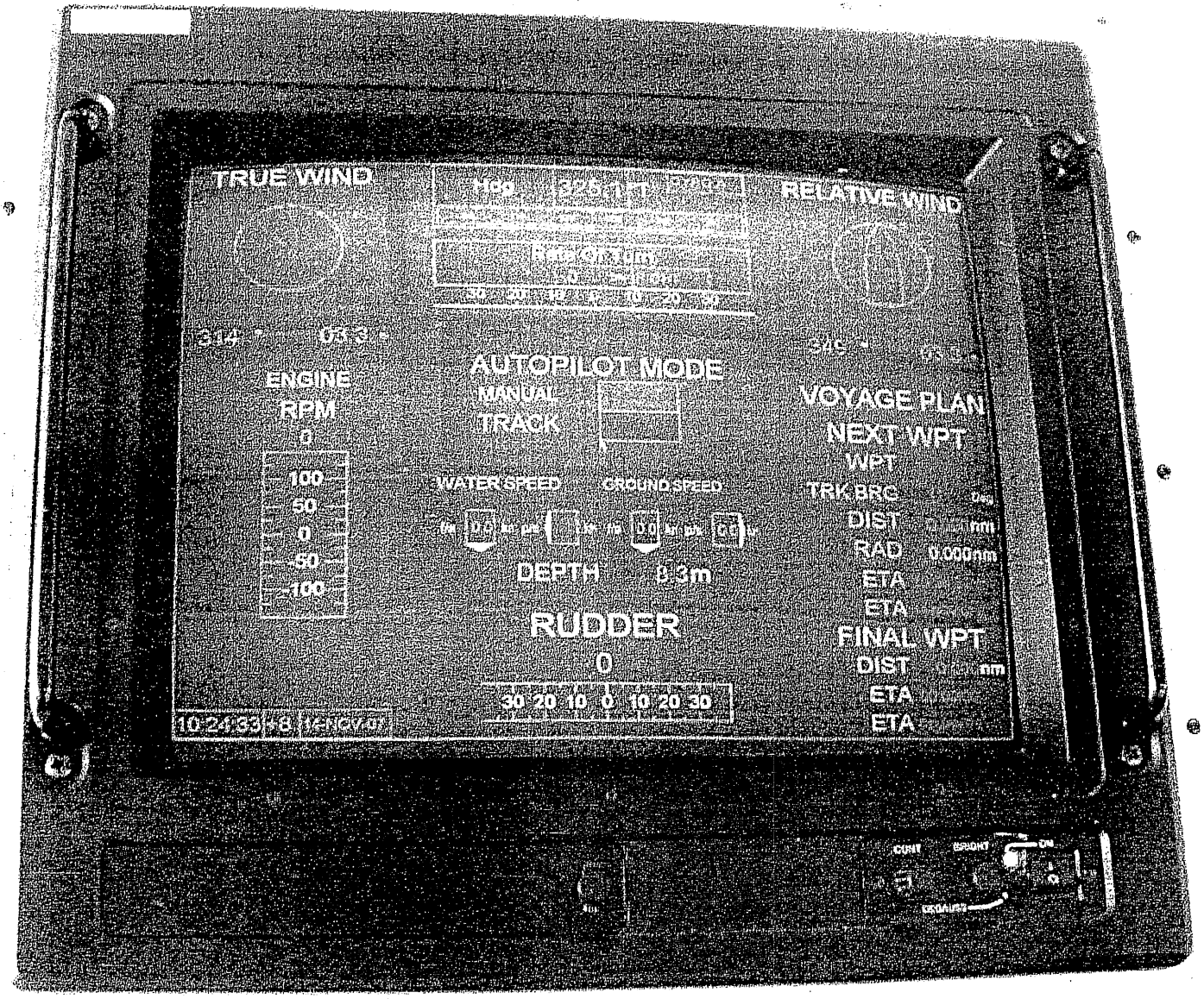


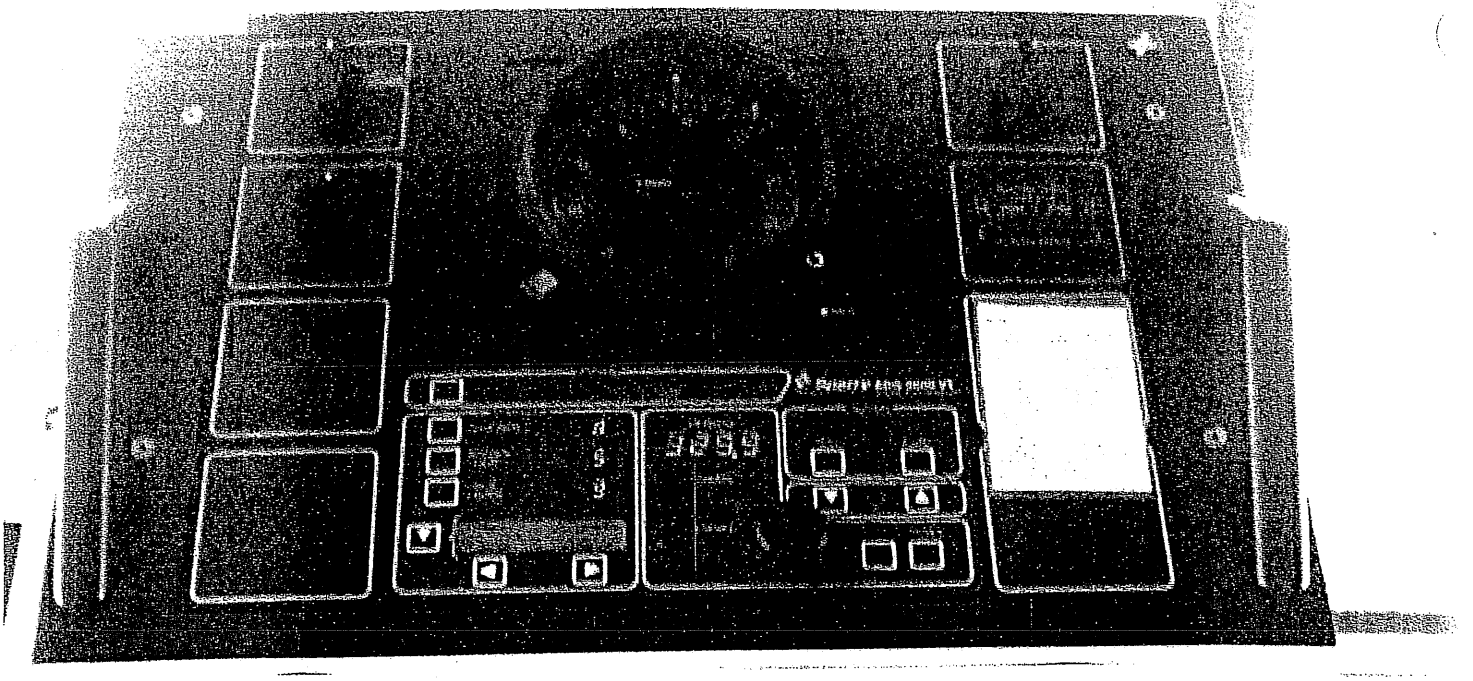

HANJIN

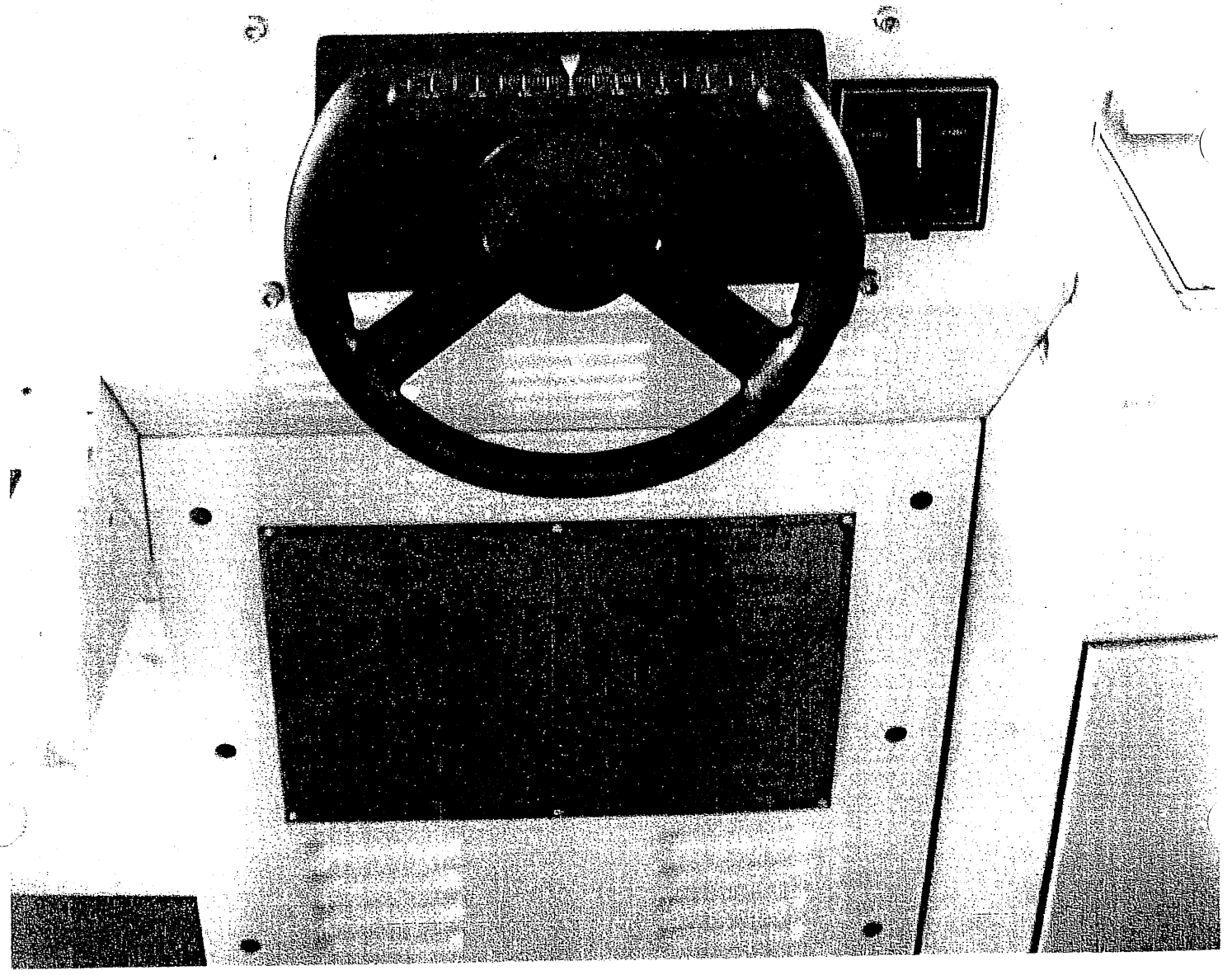

N
J

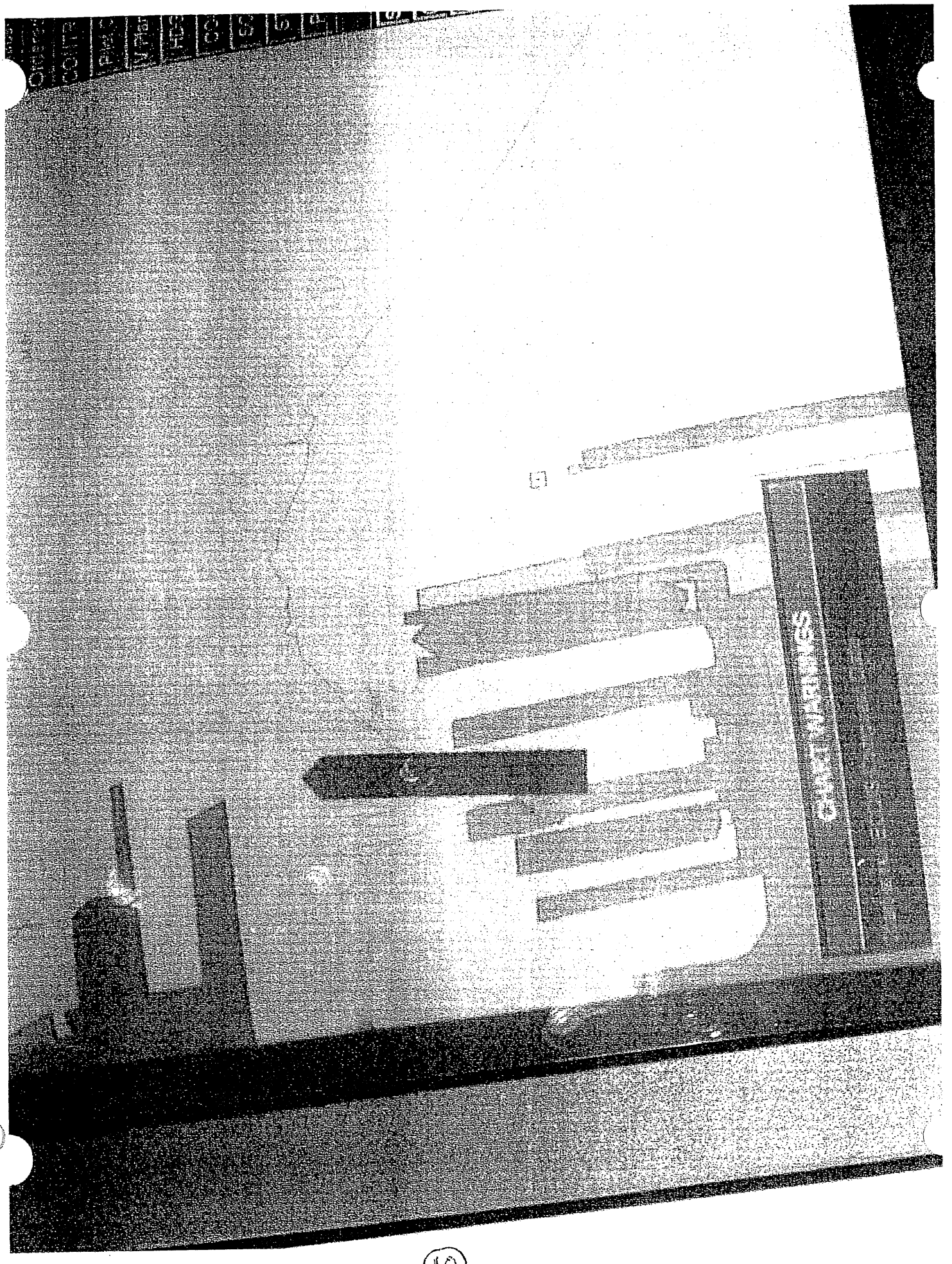
BARCO

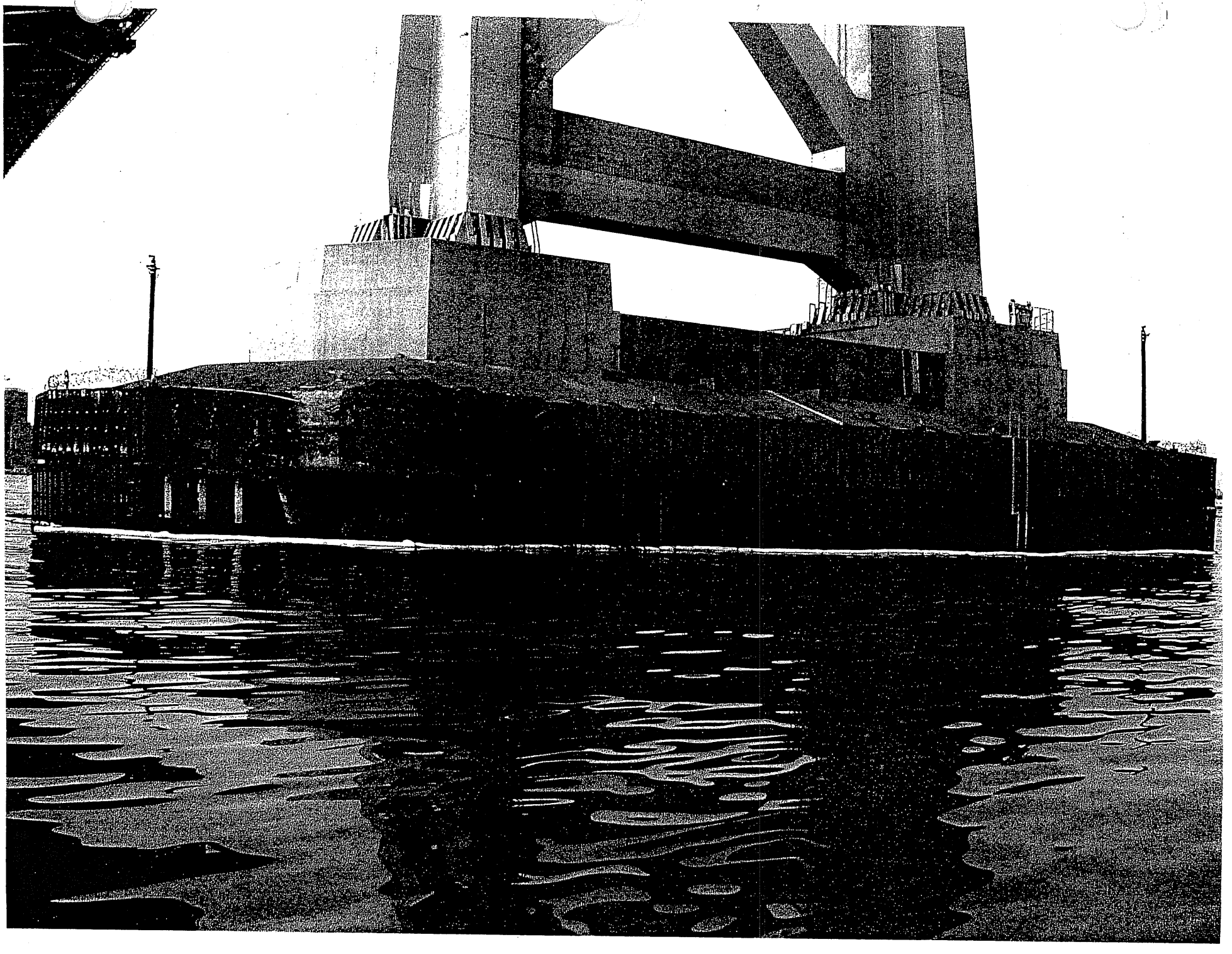
ARPA/RM Set/Clr
Range/Dir Offset
Time/Dist Clr
Trails Clr
Ordered Appearance Clr
CONTROL OFF
Pilot Clr
Erase
Pan OAK+PIER+SJP
HDG
COG
SOG
STW
POS
Set & Drift
Clr
EBL 1
EBL 2
VRM
Anchor
Radar Ofs
Chart Ofs
Chart
Acquire
Zoom
Cancel
Scale 17.500 OVER
CHART WARNINGS

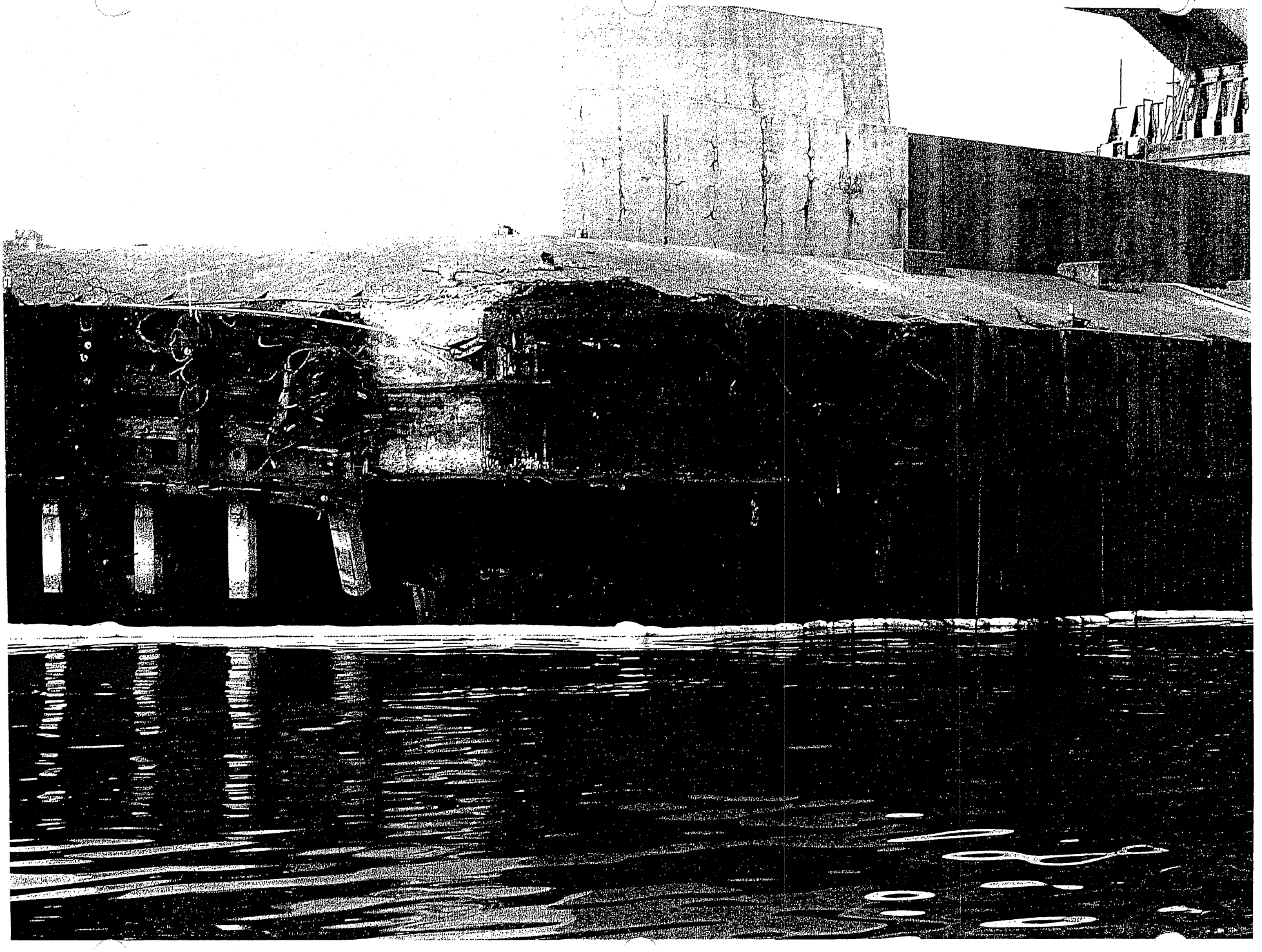

TRUE WIND
RELATIVE WIND
AUTOPILOT MODE
MANUAL
TRACK
ENGINE
RPM
0
100
50
0
-50
-100
WATER SPEED
GROUND SPEED
DEPTH
8.3m
RUDDER
0
30 20 10 0 10 20 30
VOYAGE PLAN
NEXT WPT
WPT
TRK BRG
DIST
RAD
0.000nm
ETA
ETA
FINAL WPT
DIST
ETA
ETA
CONT
BRIGHT
ON
DEGAUSS

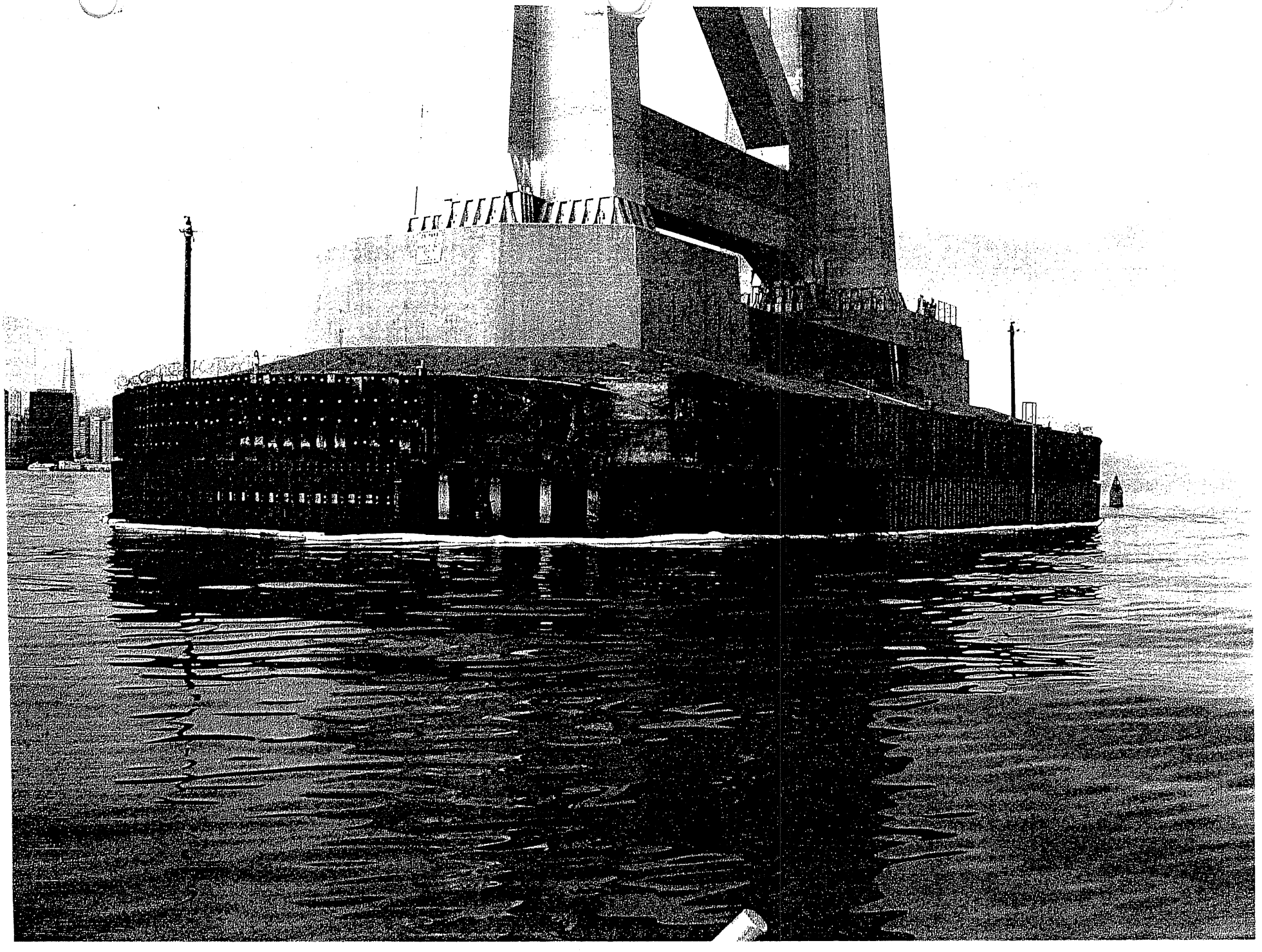












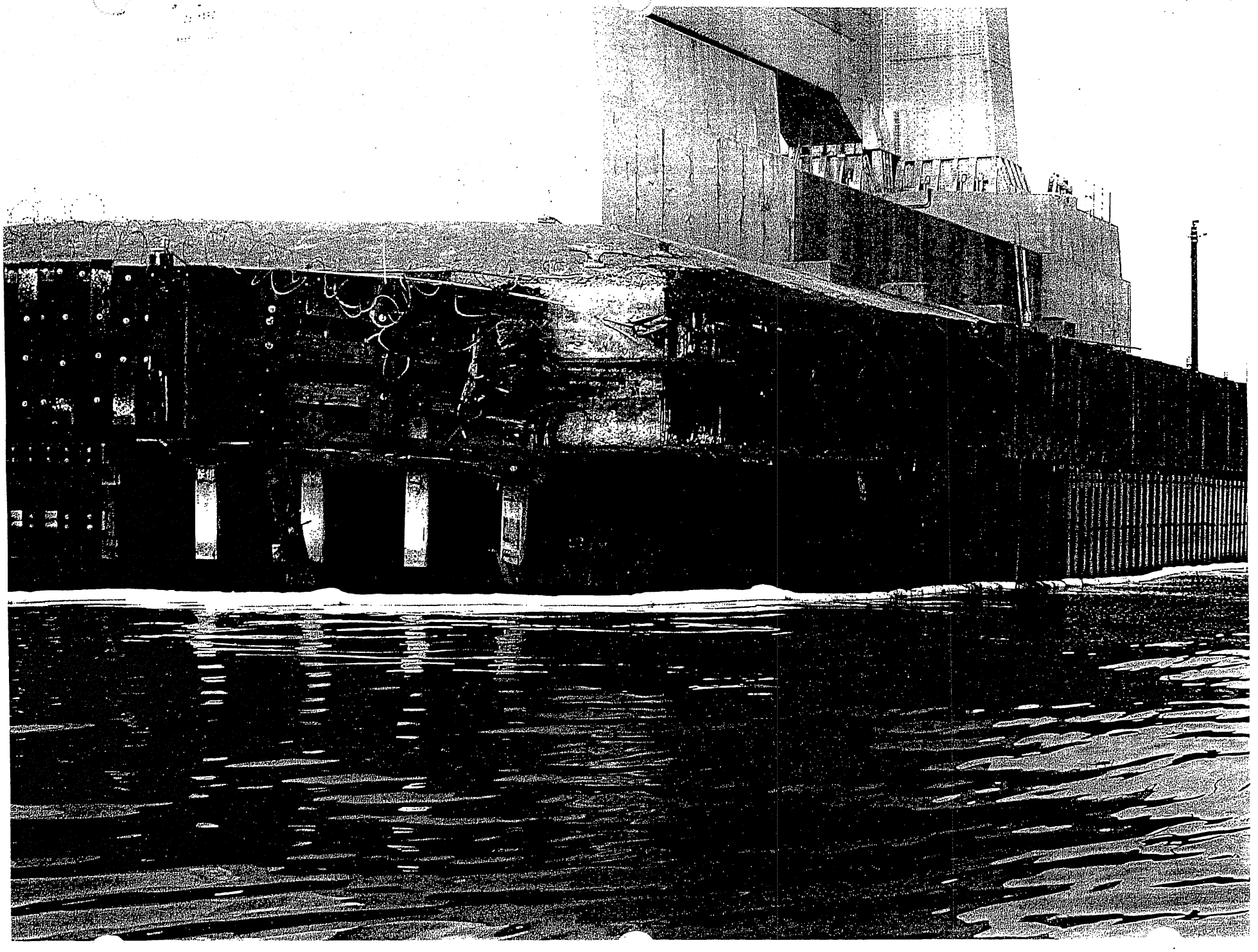


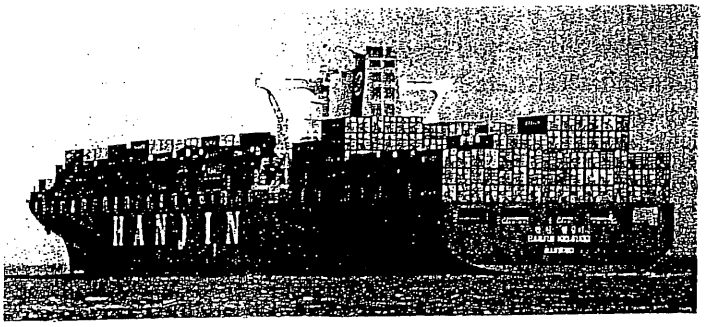
EXHIBIT 10

BOARD OF PILOT COMMISSIONERS
INCIDENT REVIEW COMMITTEE REPORT:
M/V COSCO BUSAN - CAPT. JOHN COTA
NOVEMBER 7, 2007

Laura Maersk *The Shipping Information Service (G Boulton) / 0114174*

156 *M²FK H1* UD

LAURA MAERSK DIS/De (Odense) 2001; Con; 50,721 gt/63,200 dwt; 265.84 x 37.38 x 14.00 m *(872.18 x 122.64 x 45.93 ft)*; M (B & W); 24 kt; 3,700 TEU.
Sisters: **LARS MAERSK** (DIS); **LAUST MAERSK** (DIS); **LEDA MAERSK** (DIS); **LEXA MAERSK** (DIS); **LICA MAERSK** (DIS); **LUNA MAERSK** (DIS)

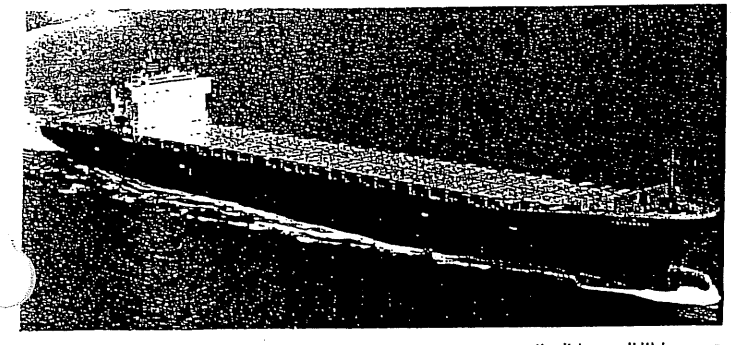


Hanjin Helsinki *The Shipping Information Service (D Hazell) / 0558862*

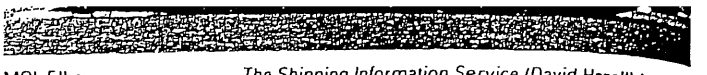
Ming Cosmos *The Shipping Information Service (D Hazell) / 0567660*

157 *M²FK H1* UD

MING PLUM Pa/Ko (Hyundai) 2000; Con; 64,254 gt/68,413 dwt; 274.69 x 40.00 (mb) x 12.00 m *(901.21 x 131.23 x 39.37 ft)*; M (Sulzer); 26 kt; 5,512 TEU (including 400 reefer).
Sister: **MING ORCHID** (Pa)
Probable sisters: **MERCURY BRIDGE** (Li) ex-*Ming Cypress*; **MING GREEN** (Tw)
Similar: **CSCL SEATTLE** (Li) ex-*Hansa Columbia*; **HANJIN CAIRO** (MI); **HANJIN GOTHENBURG** (MI); **HANJIN HELSINKI** (MI); **HANJIN TAIPEI** (Ge)
Similar (builder — China SB): **JUPITER BRIDGE** (Li) ex-*Ming Bamboo*; **MING COSMOS** (Pa); **VENUS BRIDGE** (Li) ex-*Ming Pine*; **YM WEALTH** (Li)



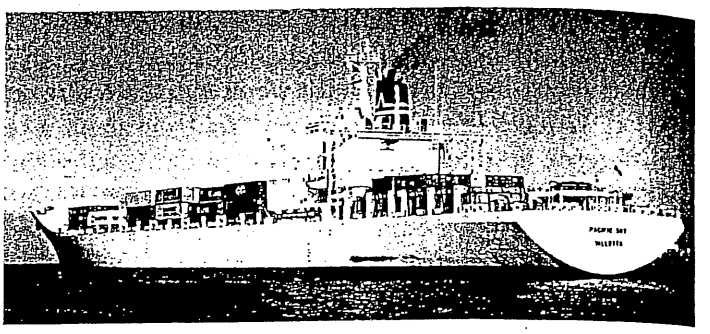
Katsuragi *(builder — IHI) / 0019497*



MOL Elbe *The Shipping Information Service (David Hazell) / 0533440*

158 *M²FK H1* VT

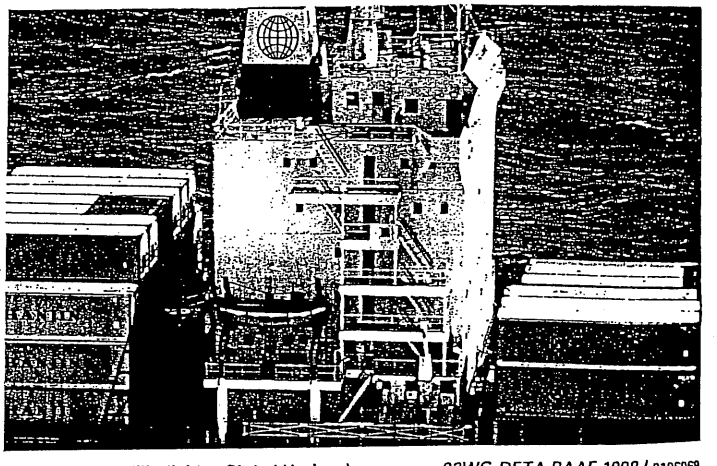
MOL ELBE Ja/Ja (IHI) 1990; Con; 50,352 gt/58,112 dwt; 292.15 x 32.20 (mb) x 13.03 m *(958.50 x 105.64 x 42.75 ft)*; M (Sulzer); 23.9 kt; ex-*Elbe*; 3,796 TEU (including 305 reefer)
Sister: **MOL INGENUITY** (Pa) ex-*Danube*
Similar: **KATSURAGI** (Pa)



MSC Samantha (as Pacific Sky) *The Shipping Information Service (Chris Gee) / 0572572*

159 *M²FK H1* UD

MSC SAMANTHA Pa/Ja (IHI) 1982; Con; 30,955 gt/34,098 dwt; 210.01 x 32.21 (mb) x 12.02 m *(689.01 x 105.68 x 39.44 ft)*; M (Sulzer); 18.8 kt; ex-*S A Vaal*; 1,855 TEU (including 510 reefer). **See entry number 12/357** — original sisters. Some of the latter also have this appearance now ('N' masts removed from superstructure).



P&O Nedlloyd Kilindini (as Global Horizon) *92WG DETA RAAF 1998 / 0106969*

WEC Rotterdam *The Shipping Information Service (Jane Ellen Hazell) / 0568594*

160 *M²FK H1* VT

P&O NEDLLOYD KILINDINI Ma/Sp (AESA) 1982; Con; 19,872 gt/19,185 dwt; 184.00 x 27.06 x 9.52 m *(603.67 x 88.78 x 31.23 ft)*; M (B & W); 19 kt; ex-*Almudena*; 1,552 TEU (including 134 reefer)
Sister: **WEC ROTTERDAM** (Cy) ex-*Pilar*

9110315
SDU5
CR-952084

HANJIN BOMBAY

Korea French Banking Corp (SOGEKO)
Hanjin Shipping Co Ltd
Inchon *South Korea*
SatCom: Inmarsat A
MMSI: 440051000

16,252 Class: KR
9,669
27,209

1995-02 Hanjin Heavy Industries Co., Ltd. — Ulsan Yd No: 622
Loa 167.00 (BB) Br ex 26.24 Dght 9.916
Lbp 158.00 Br md 26.20 Dpth 13.80
Welded, 1 dk

Bulk
Grain: ; Bale: 34,100
Compartments: 5 Ho, ER
5 Ha: ER

1 oil engine driving 1 FP propeller
Total Power: 5,480kW(7,450hp)
B&W
1 x 2 Stroke 5 Cy. 500 x 1,620
Hyundai Heavy Industries Co., Ltd. -Ulsan

14.0kn
5L50MC

9128142
SEP4
CR-972764

HANJIN BRISBANE

Korea French Banking Corp (SOGEKO)
Hanjin Shipping Co Ltd
Inchon *South Korea*
SatCom: Inmarsal B
MMSI: 440211000

16,270 Class: KR
9,620
27,362

1997-03 Hanjin Heavy Industries Co., Ltd. — Ulsan Yd No: 632
Loa 167.00 Br ex - Dght 9.916
Lbp 158.00 Br md 26.20 Dpth 13.80
Welded, 1 dk

Bulk Carrier
Grain: 35,155; Bale: 34,100
Compartments: 5 Ho, ER
5 Ha: (13.4 x 13.6) 4(13.4 x 17.6) ER
Cranes: 4x30t

1 oil engine driving 1 FP propeller
Total Power: 6,657kW(9,050hp)
B&W
1 x 2 Stroke 5 Cy. 500 x 1,620
Hyundai Heavy Industries Co., Ltd. -Ulsan
Fuel: 181.0(d.o.) 1008.0(i.f.o.) 25.8pd

14.5kn
5L50MC

9200691
DIGW

HANJIN BRUSSELS
completed as Brussel -2000
KG ms 'Brussel' Verwaltungs-u Bereederungsges mbH & Co
NSB Niederelbe Schiffahrtsgesellschaft mbH & Co KG
Hamburg *Germany*
MMSI: 211378370

66,278 Class: GL
36,993
68,790

2000-05 Hanjin Heavy Industries Co., Ltd. — Pusan Yd No: 069
Loa 278.80 (BB) Br ex - Dght 14.000
Lbp 265.00 Br md 40.30 Dpth 24.10
Welded, 1 dk

Container Ship (Fully Cellular)
TEU 5618 C Ho 2588 TEU C Dk 3030 TEU incl 500 ref C
Compartments: 5 Cell Ho, ER, 2 Cell Ho
17 Ha: ER

1 oil engine driving 1 FP propeller
Total Power: 54,900kW(74,638hp)
Sulzer
1 x 2 Stroke 10 Cy. 960 x 2,500
AuxGen: 3 x 2,800kW a.c.
Thrusters: 1 Thwart. FP thruster (f)
Fuel: 362.5(d.o.) (Part Heating Coils) 7307.4(hvf)

26.3kn
10RTA96C

9117367
P3VB7

HANJIN BUSAN

Busan Maritime Co Ltd
Varship Shipping Co Ltd
Limassol *Cyprus*
SatCom: Inmarsal A

17,933 Class: KR (AB)
6,062
18,700

1979-08 Hyundai Heavy Industries Co., Ltd. — Ulsan Yd No: 1895
Loa 200.62 (BB) Br ex 23.88 Dght 8.340
Lbp 189.72 Br md 23.80 Dpth 14.33
Welded, 2 dks

Container Ship (Fully Cellular)
TEU 1150 C Ho 306 TEU C Dk 269 TEU incl 48 ref C.
Compartments: 5 Cell Ho, ER
28 Ha: ER

1 oil engine driving 1 FP propeller
Total Power: 13,422kW(18,248hp)
Sulzer
1 x 2 Stroke 9 Cy. 760 x 1,550
Mitsubishi Heavy Industries Ltd.-Kobe
AuxGen: 3 x 600kW 450V a.c.
Thrusters: 1 Thwart. FP thruster (f)
Fuel: 60.0pd

17.0kn
9RND76

9231743
DPSQ

HANJIN CAIRO

Conti Cairo (MI) Shipping Ltd
NSB Niederelbe Schiffahrtsgesellschaft mbH & Co KG
Hamburg *Germany*
MMSI: 211391150

65,131 Class: GL
34,078
68,086

2001-12 Hyundai Heavy Industries Co., Ltd. — Ulsan Yd No: 1381
Loa 275.00 (BB) Br ex - Dght 14.000
Lbp - Br md 40.00 Dpth 24.20
Welded, 1 dk

Container Ship (Fully Cellular)
TEU 5551 C Ho 2603 TEU C Dk 2948 TEU incl 500 ref C.
Compartments: 5 Cell Ho, ER, 2 Cell Ho

1 oil engine driving 1 FP propeller
Total Power: 57,100kW(77,633hp)
MAN-B&W
1 x 2 Stroke 10 Cy. 980 x 2,400
Hyundai Heavy Industries Co., Ltd. -Ulsan
AuxGen: 4 x 2,000kW 440/220V a.c.
Thrusters: 1 Thwart. FP thruster (f)
Fuel: 250.0(d.o.) (Heating Coils) 7800.0(hvf) 230.0pd

25.9kn
10K98MC

9128104
DSEO5
ICR-972612

HANJIN CALCUTTA

Korea French Banking Corp (SOGEKO)
Hanjin Shipping Co Ltd
Inchon *South Korea*
SatCom: Inmarsat B
MMSI: 440304000

16,270 Class: KR
9,669
27,365

1997-02 Hanjin Heavy Industries Co., Ltd. — Pusan Yd No: 037
Loa 167.00 Br ex - Dght 9.916
Lbp 158.00 Br md 26.20 Dpth 13.80
Welded, 1 dk

Bulk Carrier
Grain: 35,155; Bale: 34,100
Compartments: 5 Ho, ER
5 Ha: (13.4 x 13.6) 4(13.4 x 17.6) ER
Cranes: 4x30t

1 oil engine driving 1 FP propeller
Total Power: 6,657kW(9,050hp)
B&W
1 x 2 Stroke 5 Cy. 500 x 1,620
Hyundai Heavy Industries Co., Ltd. -Ulsan
Fuel: 181.0(d.o.) 1008.0(i.f.o.) 25.8pd

14.5kn
5L50MC

9054224
DSNX5
SGR-048964

HANJIN CAPETOWN

Misaki Maritime SA
Hanjin Shipping Co Ltd
Sogwipo *South Korea*
MMSI: 440399000

76,954 Class: KR (AB)
48,886
151,525

1993-02 Daewoo Shipbuilding & Heavy Machinery, Ltd. — Okpo Yd No: 1060
Loa 274.00 (BB) Br ex - Dght 16.919
Lbp 264.00 Br md 45.00 Dpth 23.20
Welded, 1 dk

Bulk Carrier
SBT
Grain: 169,448
Compartments: 9 Ho, ER
9 Ha: (13.8 x 15.3) 8(13.8 x 20.4) ER

1 oil engine driving 1 FP propeller
Total Power: 10,158kW(13,810hp)
B&W
1 x 2 Stroke 5 Cy. 700 x 2,674
Korea Heavy Industries & Constr. Co., Ltd. (HANJUNG) Changwon
AuxGen: 3 x 600kW 450V 60Hz
Fuel: 277.5(d.o.) 3203.0(hvf) 42.3pd

13.5kn
5S70MC

9248162
A8CI2
11927

HANJIN CHICAGO

Bereederungs-und Schiffahrtsgesellschaft mbH & Co ms 'Chicago' KG
NSB Niederelbe Schiffahrtsgesellschaft mbH & Co KG
Monrovia *Liberia*

65,918 Class: GL
36,896
68,037

2003-07 Hanjin Heavy Industries Co., Ltd. — Pusan Yd No: 106
Loa 278.00 (BB) Br ex 40.30 Dght 14.020
Lbp 265.24 Br md 40.30 Dpth 24.57
Welded, 1 dk

Container Ship (Fully Cellular)
Double Hull
Dble hull construction
TEU 5752 C Ho 2794 TEU C Dk 2958 TEU incl 500 ref C.

1 oil engine driving 1 FP propeller
Total Power: 54,896kW(74,638hp)
Sulzer
1 x 2 Stroke 10 Cy. 960 x 2,500 (made 2004)
Hyundai Heavy Industries Co., Ltd. -Ulsan
AuxGen: 3 x 2,800kW 440/220V a.c.
Thrusters: 1 Tunnel thruster (f)

26.3kn
10RTA96C

9082960
A8FS6

HANJIN COLOMBO

ugia Maritime Inc
derel F Laelsz GmbH
nrovia *Liberia*
ISI: 636012485

51,754 Class: AB (GL) (KR)
29,349
62,742
T/cm
81.2

1994-12 Hanjin Heavy Industries Co., Ltd. — Pusan Yd No: 017
Loa 289.50 (BB) Br ex 32.30 Dght 13.019
Lbp 277.00 Br md 32.20 Dpth 21.46
Welded, 1 dk

Container Ship (Fully Cellular)
TEU 4024 C Ho 2020 TEU C Dk 2004 TEU incl 250 ref C.
Compartments: 7 Cell Ho, ER, 1 Cell Ho
16 Ha: ER

1 oil engine driving 1 FP propeller
Total Power: 40,500kW(55,061hp)
Sulzer
1 x 2 Stroke 10 Cy. 840 x 2,400
Korea Heavy Industries & Constr. Co., Ltd. (HANJUNG) Changwon
AuxGen: 2 x 1,900kW 450/230V 60Hz, 2 x 1,350kW 450/230V 60Hz
Thrusters: 1 Thwart. CP thruster (f)

24.0kn
10RTA84C

9200689
DHDM

NJIN COPENHAGEN

nti Calla Schiffahrtsges mbH & Co KG ms Conti Canberra'
B Niederelbe Schiffahrtsgesellschaft mbH & Co KG
Hamburg *Germany*
MMSI: 211.

66,278 Class: GL
36,993
68,996

1999-12 Hanjin Heavy Industries Co., Ltd. — Pusan Yd No: 068
Loa 278.80 (BB) Br ex - Dght 14.020
Lbp 265.24 Br md 40.30 Dpth 24.10
Welded, 1 dk

Container Ship (Fully Cellular)
TEU 5618 C Ho 2588 TEU C Dk 3030 TEU incl 500 ref C
Compartments: 5 Cell Ho, ER, 2 Cell Ho
17 Ha: ER

1 oil engine driving 1 FP propeller
Total Power: 54,900kW(74,638hp)
Sulzer
1 x 2 Stroke 10 Cy. 960 x 2,500
In South Korea
AuxGen: 3 x 2,800kW a.c.
Thrusters: 1 Thwart. FP thruster (f)
Fuel: 362.5(d.o.) (Part Heating Coils) 7307.4(hvf)

26.3kn
10RTA96C

9211144
HANJIN DAMPIER

110,541 Class: KR (AB)

1989-11 Hyundai Heavy Industries Co., Ltd. —

x Carrier

1 oil engine reverse geared to sc. shaft driving 1 FP

9215646
DHZQ

HANJIN GF
ex Cosco Ti... 05 ex Hanjin Geneva -20(
ex Conti Porto -2000
Conti Porto Shipping Corp
NSB Niederelbe Schiffahrtsgesellschaft mbH & Co KG
Hamburg *Germar*
MMSI: 211377300

9321620
DSFZ3
SGR-028945

HANJIN GLADSTONE

Hanjin Shipping Co Ltd
-
Sogwipo *South Kore*

9235103
DMXJ

HANJIN GOTHENBURG

Conti Goteborg (MI) Shipping Ltd
NSB Niederelbe Schiffahrtsgesellschaft mbH & Co KG
Hamburg *Germany*
MMSI: 211394220

9321668
DSNB6
SGR-028960

HANJIN HAYPOINT

Hanjin Shipping Co Ltd
-
Sogwipo *South Korea*
SatCom: Inmarsat B
MMSI: 441284000

9235098
DPUM7

HANJIN HELSINKI

Conti Helsinki (MI) Shipping Ltd
NSB Niederelbe Schiffahrtsgesellschaft mbH & Co KG
Hamburg *Germany*
MMSI: 211391170

9110339
DSEC4
CR-952410

HANJIN HOUSTON

Korea French Banking Corp (SOGEKO)
Hanjin Shipping Co Ltd
Inchon *South Korea*
SatCom: Inmarsat C
MMSI: 440068000

9321693
DQQO7
DEXT1

HANJIN IRENE
ex Hanjin Tokyo -2005
Master Fame SA
Tsakos Shipping & Trading SA
Panama *Panama*
MMSI: 351498000

9128116
SBP23
CR-972881

HANJIN ISTANBUL

Korea French Banking Corp (SOGEKO)
Hanjin Shipping Co Ltd
Inchon *South Korea*
SatCom: Inmarsat B
MMSI: 440223000

9082957
A8NJ6

HANJIN KAOHSIUNG

Florencia Shipping Co Ltd
J P Samartzis Maritime Enterprises Co SA
Limassol *Cyprus*
SatCom: Inmarsat A
MMSI: 212651000

9117742
DVUM4

HANJIN KWANGYANG
ex Ever Victory -1983
Kwangyang Maritime Co Ltd
Varship Shipping Co Ltd
Limassol *Cyprus*
SatCom: Inmarsat A

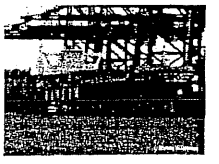
9128148

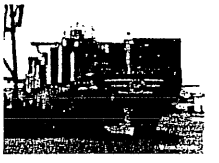
HANJIN LISBON

Bereederung... chiffahrt GmbH & Co ms'Lisbon
NSB Niederelbe Schiffahrtsgesellschaft mbH

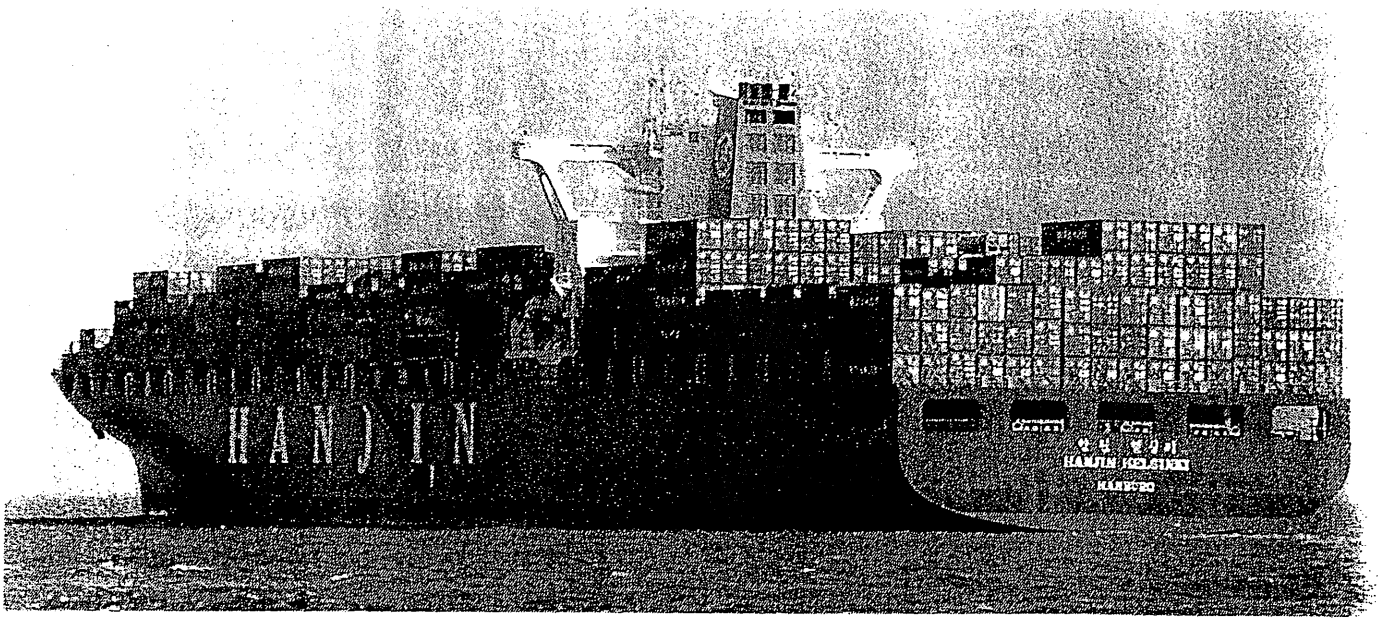
Encl: (10)

Name:	COSCO Busan
Type:	Container ship
SKN-nr:	**000058**
Length:	274,67 m
Beam:	40,00 m
Draugth:	14,00 m
GT:	65.131 t
Capacity:	5.750 TEU
Owner/Manager:	NSB Niederelbe
Built:	2001
Shipyard:	Hyundai Heavy Ir
Flag:	Germany
Port of registry:	Hamburg
IMO-number:	9231743
Callsign:	DPSQ
Date:	09.11.2006
Location:	Predöhlkai 1 - Eu





USCG Sp.11 Reporting 399-3547



Hanjin Helsinki *The Shipping Information Service (D Hazell)* / 055886

Ming Cosmos *The Shipping Information Service (D Hazell)* / 056766

157 *M²FK H1* UD

MING PLUM Pa/Ko (Hyundai) 2000; Con; 64,254 gt/68,413 dwt; 274.69 x 40.00 (mb) x 12.00 m *(901.21 x 131.23 x 39.37 ft)*; M (Sulzer); 26 kt; 5,512 TEU (including 400 reefer).

Sister: **MING ORCHID** (Pa)

Probable sisters: **MERCURY BRIDGE** (Li) ex-*Ming Cypress*; **MING GREEN** (Tw)

Similar: **CSCL SEATTLE** (Li) ex-*Hansa Columbia*; **HANJIN CAIRO** (MI); **HANJIN GOTHENBURG** (MI); **HANJIN HELSINKI** (MI); **HANJIN TAIF** (Ge)

Similar (builder — China SB): **JUPITER BRIDGE** (Li) ex-*Ming Bamboo*; **MING COSMOS** (Pa); **VENUS BRIDGE** (Li) ex-*Ming Pine*; **YM WEALTH** (Li)

EXHIBIT 11

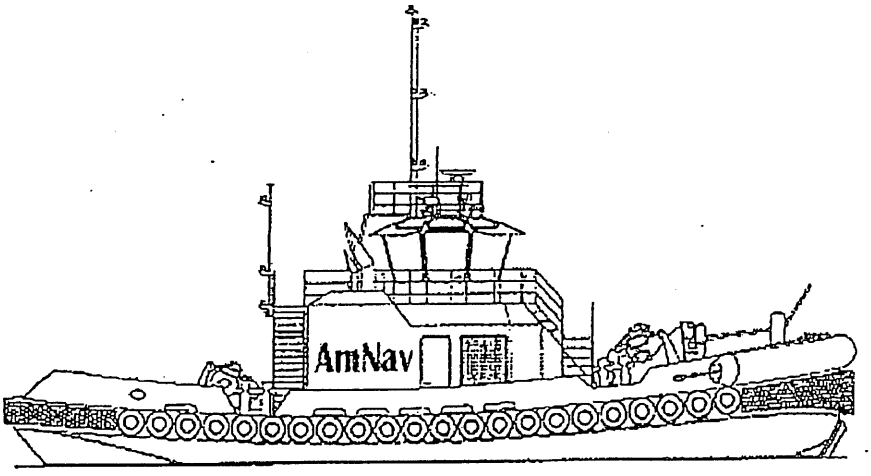
BOARD OF PILOT COMMISSIONERS
INCIDENT REVIEW COMMITTEE REPORT:
M/V COSCO BUSAN- CAPT. JOHN COTA
NOVEMBER 7, 2007

TUG DATA SHEET

Name of vessel: COSCO BUSAN

Name: **REVOLUTION** Operator: Douglas Alters
Owner: AM NAV
Length: ' Beam: ' Draft: '
tonnage: grt
Propulsion configuration: twin Z drive,
Bollard pull: 135,000#

Encl: (11)



Dolphin Class

Principle Characteristics

Length	78'0"
Breadth	34'0"
Draft	14'0"
Design Speed	12.0 Knots
Certified Bollard Pull	65 Tons Ahead
	60 Tons Astern
Diesel Oil Capacity	10,000 Gallons
Fresh Water Capacity	500 Gallons
Registry	U. S. Flag
Regulatory Tonnage	Under 200 Gross Tons

144 grt

Major Equipment

Main Engines	CAT 3512 B HD Series II
	2,540 HP each at 1,800 RPM
ASDs	US 205 FP Rolls Royce
Forward Hawser Winch	Markey Model DEPGF-42
Stern Hawser Winch	Markey DEPC-32

EXHIBIT 12

BOARD OF PILOT COMMISSIONERS
INCIDENT REVIEW COMMITTEE REPORT:
M/V COSCO BUSAN - CAPT. JOHN COTA
NOVEMBER 7, 2007

PILOT INCIDENT FACTORS CHECK LIST
M/V COSCO BUSAN

Human Factors:

_____ Fatigue (pilot/crew)*
_____ Complacency
_____ Confusion
_____ Over confidence
_____ Reflex Action
_____ Distraction (personal life events)
_____ Distraction (on/off ship events)
_____ Sickness/injury
_____ Forgetfulness
_____ Lack of confidence
_____ Habit
_____ Substance use/abuse

Communications:*

_____ Communication not understood
_____ Communication did not occur
_____ Communication not verified
_____ Communication format inadequate
_____ External communication failure
_____ Use of standard communications with tug(s)

Performance Pressure:
_____ Task overload
_____ Time constraint
_____ Failure to ask for help
_____ Performance anxiety
_____ Fear of consequences
_____ Fear of failure

Personal Choice:
_____ Disregard of instruction
_____ Risk considered acceptable
_____ Convenience
_____ Personal comfort

External:

_____ Speed*
_____ Visibility
_____ Traffic*
_____ Weather*
_____ Tugs
_____ Mechanical*

EXHIBIT 13

BOARD OF PILOT COMMISSIONERS
INCIDENT REVIEW COMMITTEE REPORT:
M/V COSCO BUSAN - CAPT. JOHN COTA
NOVEMBER 7, 2007

INCIDENT INVESTIGATION CHECKLIST

Name of ship: COSCO BUSAN

☑ 1. Preliminary Investigation Report from SFBP

☑ 2.
A. USCG Documents
B. NTSB Documents
C. Press releases

☑ 3.
A. Pilot's Report of the Incident
B. Correspondence w/ Pilot/Att'y

☑ 4.
A. Master's Report of the incident
B. Copy of Bridge Log
C. Copy of Bell Book
D. Copy of Radio Log or Tape
E. Copy of Chart
F. Copy of Course Recorder
G. Fathometer Record
H. Copy of Official Log
I. Vessel's Particulars
J. Statements from other Deck Dept Witnesses
K. GPS/AIS Printout
L. Crew List (Customs form)
M. Vessel's turning/maneuvering characteristics.
N. Port damage report documents.
O. Vessel cargo plan
P. Correspondence with vessel's agent

☑ 5.
A. Chief Engineer's Report of Incident
B. Copy of Engine Log
C. Engine Recorder Copy
D. Statements from other Engine Dept Witnesses

☑ 6. Tidal Conditions

☑ 7. Overview of Port Area

☑ 8.
A. Investigator's Report
B. Investigator's Worksheet
C. Exec. Director's Documents

☑ 9.
A. Photo or Drawing of Ship
B. Photos of Damage

Encl: NWI

- ☑ 10. Lloyds Register or Jane's Merchant Ships Info.
- ☑ 11. Tug Data Sheets
- ☑ 12 Pilot Incidents
- ☑ 13 Factors Checklist.
- ☑ 14 Investigation Checklist.