Washington, D.C.

NOT 1953 (VERNSTREAM -HAMATTAN RATCHER-C-14 N

From: Chief, Merchant Vessel Inspection Division

To: Commandant

Via: Chief. Office of Marchant Marine Safety

Subj: Merine Board of Investigation; collision involving MV FERRETREAM (Norvegien) and SS HAWAIIAN RANCHER, San Francisco Bay, California, 11 December 1952

- 1. Pursuant to the provisions of Title 46 CFR Part 136, the record of the Harine Board convened to investigate subject casualty, together with its Findings of Fact, Conclusions and Recommendations, has been reviewed and is forwarded herewith.
- 2. In 11 December 1952, the SS HAMAIIAN RANGER, a cargo vescel of 8,353 g.t., was inbound in San Francisco Bay and proceeding to an anchorage, and the MV FERESTREAM (Nervegian) was outbound proceeding to sea. The weather was foggy, with visibility from 1/4 to 7/10 mile, and the sea calm. Both vescels were sounding regulation fog signals and their respective redars were manned by competent personnel. While proceeding on various courses and speeds, errors in judgment of course and speed were made and both vessels collided at 0730, 11 December 1952, in position 121° True, 0.8 miles from Lime Point Lighthouse. The FERESTREAM sank with no loss of life and the HAMAIIAN RANGERS suffered bow damage.
- 3. The Board made the following Findings of Wast:
 - "L. On 11 December 1952, about 0730 P.S.T., the SS HAHAIJAN RANCHER and the Norwegian meter vessel FERESTHEAM cellided during foggy weather on San Francisco Bay, California, in a position about 121° T., 0.8 miles from Line Point Lighthouse (U.S.G. & G.S. Chart No. 5535). The FERESTHEAM mank with no loss of life. The HANAIIAN RANCHER suffered bow damage.
 - "2. The vessels involved were:
 - a. HAWAITAN RANCHER-Official No. 246204, a 95-3" type ocean freight vessel built of steel in 1944 at San Francisco, California. It is of 8,353 gross tone, 468.5 feet registered length and powered with a steen turbine engine of 8,500 horse-power driving a single screw through geared reduction. The vessel

was last inspected and partificated at San Francisco, Galifornia, on 10 April, 1952, as an ocean freight would enthorized to carry 12 persons in addition to the drov. It is count and apparent by Mitson Revigation Company, 215 Market Parent, San Francisco, Galifornia.

b, FRESTRIAL Sorvegian nationality ocean freight vessel, built of steel in 1949 at Gothenburg, Sunden. It use of 4,980 gross tons, 416 feet registered length and possered with a Burnetstee Nais, seven eylinder, two cycle dissel easies of 7,00 sheft horsepower directly driving a single matter. This vessel's home port was Onle, Normay, and was comed by Furnley and Rore. The vessel was operated under authority of a walld Horvegian register, and load line and safety cartificates required by International Conventions. In addition, it had a valid contificate Laureling the U. S. Goast Guard parmitting it to earny basing persons in addition to the crew from U.S. parts. The vessel's local seprementative is Overseen Shipping Company, 310 Sansons Street. San Francisco, California.

- "3. The weather at the time of casualty was wind and see only. It was daylight and a misty for limited whibility from 1/4 mile to 7/10 mile in the area of Presides Shoul between Port Point Idiobact Station and the degenering rungs. The stage of the tide at the time of collision was about one-half hour past high water but the current was still flooding in an easterly direction at a velocity of about one knot.
- "4. The HAMATIAN RANCHER was on a voyage from Hild, Musail, to Sen Francisco, California. It corried him persons in addition to the orest and about 9,000 tons of segar, malesses, cannot pinterple and miscellaneous eachy. The draft leaving Hilo was 26'06" forward and 28'03" art (\$7'046" meta).
- *5. Prior to errival at the San Francisco Light Tassel, the second mate on watch checked the bridge slick against the elementator and then synchronized the bridge elock with the engine room clock by reporting the correct time to the engineer on watch. Differences in time between the bridge ball book, engine ball book, FERNSTRAN'S log books and testinous of the Manager Material Corv members had to be resolved. The Beart determined that the bridge time of the HAVAIIAN RANCHER opened closur to the times stated on Engl. 2 and the testinous of the place of the FERNSTRAN. The times employed in times findings of thems are Pacific Standard Times to which the bridge clock of the BAMAIIAN RANCHER was set.

The course recorder clock of the Right Ribble checked within one misute of the bridge clock time. The gyro error, if any, was so alight it was not considered.

"6. The HAMAITAN RAINER took arrival off the Sax Francisco
Light Vedeel at 0628 hours on 11 December 1962. The english was
terming 60 space. At 0657 speci was reduced to 50 spinic. At
0710) Hile Rock Light Russe was about 0,6 miles off on comme
0650 gyro. Average speci between times pedate was 12.7 knots.
For signals were being sounded. The master was on the bridge
piloting. Assisting him were the chief mate, second nate and
helmonen. The corporator and a leckout ways on the foc'sie 'sed.
The fathemeter was on.

"7. Off Mile Rock Light House, source was changed to 079° gree. At 0716 speed was reduced to alow (20rpms.) and at 0717 speed was increased to half cheed at 40 rpms.

"8. Approximately half vay between Hile Rock and the Gelden Grie Bridge, the second nate seamed the harbor ahead on the Raythese radar scope, set on the four-mile scale. He see susceroes small targets and two larger targets fairly close targets to the matter four niles distant. He reported the larger targets to the matter as chips. They later very determined to be the MY PERSONNEAR and SS OCCROK LUCKERACH.

"9. A minute or two prior to passing under the Golden Gete Bridge, the master started satinging his vessel to the right. It passed under the bridge at 0723 satinging on right rudler. The everage source made good from off Mile Reak to the bridge was should 061°T. The average speed over the ground between these possitions was 9.7 knots. The current was flating in a direction with the vessel at a velocity of about one knot. Under the bridge, the south tower was visible; but, the north tower could not be seen by the lockout, carpester or chief mate. It was determined the HMAIIAN RANCHER passed under the bridge in a position about 500 yards north from the south tower.

"10. When the HAWAITAN RANCIER was approximately under the hadding and swinging right, the second mate again checked the radar people and observed the two larger targets "slightly separated" at a mean distance of about two miles. The bearing of the targets indicated they would be "somewhat to starboard" when the HAWAITAN RANCHER steaded on its course to incharage 7. He reported this

picture to the master; and, upon the master's request, went to the chart room to determine a safe course to anchorage. Before the second mate reported the course to the master, the master ordered the vessel to steer 090° gyro, and at about 0724, the vessel was on this course.

"11. The FERNSTR AM departed from the north side of pier 22 at about 0692 on 11 December 1952, bound for Manila, P.I. It carried 62 eres, 11 persons in addition to the eres and was full loaded with 6,378 tons of cargo, consisting of 3,000 tons of cargo beans in bulk, the balance general cargo and mail. Its draft on departure was 23'09" forward and 25'00" aft. (25'10\frac{1}{2}" mean). The FERNSTREAM was loaded down to one inch above its allowable load line.

"12, San Francisco Bar Pilot, W. J. Olsen, acting under sutherity of his California State license, was on the bridge piloting. With his on the bridge were the master, third officer and helmann. I'm chief mate and carpenter were on the foc sle head standing by the anchors and acting as lookout. Visibility was about 1.5 miles when the FERMSTREAM left the dock and it decreased as the vessel proceeded outbound. The vessel's Sperry radar, set on the two-mile scale, was on and operating satisfactorily. The radar had a plan-position-indicator (PPI) type scope and was located in the wheelhouse.

"13. The vessel's main engine had been running at the lock and was warmed up when the FERRIST LAM departed. As close as can be determined by the testimony, the FERRIST LAM'S maneuvering speeds were about 14 knots at full speed ahead, 10 knots at half speed ahead and 6 knots at slow speed ahead.

"I.A. After the FERNITE: M left the dock, Pilot Cleen headed it is a general northerly direction. Because of other vessels on the bay, Cleen maneuvered on verious speeds and headings. The FERNITE AM passed Blossom Rock Buoy close by on its port side and after rounding the buoy, headed in a general direction toward Pier 45. Both Alcatras Island and Pier 45 were visible. It was when these points were abeam or slightly abaft the beam that the FERNITEEAM overt ok the GECREE LUCKEEDACH about 200 to 300 yards off the FERNITEEAM'S starboard side. The FERNITEEAM'S engine was on full ahead.

"15. According to the testimony of the pilot and chief mate, the FIRNSTREAM passed through the degaussing buoys about 100 yards south of Buoy "A" (time northeremost buoy). The master was guarding the radar ecope and testified the FERNSTREAM "passed the degaussing buoys on the south side". The master later changed his testimony to agree with that of the pilot and this was supported by the chief mate.

"16. Before continuing with the "ERRST SAN'S consuvers, from this point to the point of collision, it should be stated that records maintained on the FERRSTRAM in regard to times of engine manuvers, courses steered, and other information from which a definite fix of this vessel could be assurtained, were lost and not available to the Board. The rough and smooth bridge logs were written up in the morning and afternoon after the collision, respectively, from recollected times and maneuvers. Seither this information nor testimony of FERRSTREAM witnesses established satisfactorily to the Board the time the FERRSTREAM passed the deganssing buoys or the position of the FERRSTREAM is relation to the deganssing buoys.

"17. It was testified that the FERRATRIAM passed the degaussing buoys with its engine on half speed ahead and on course 275° gyro. The master was still guarding the radar. The vessel had been and was still sounding fog signals. The wheel had been relieved earlier at about 0715 with the helm hard left and the relieved helmman was to join the chief mate and carpenter on the foc'sle head as lookout after he called the watch.

"18. Shortly after pessing the degaussing range, the master reported to the pilot that he picked up a target (HAMATIAN RANCHER) just coming through the bridge bearing slightly on the port bow and 1.7 miles off. This observation checked reasonably close with the observation the second mate of the HAMATIAN ANCHER made of the mean distance and bearing of the FERNSTREAM and GEORGE LUCKENBACH when the HAWATIAN RANCHER was about under the bridge (paragraph 10 of facts). A fairly accurate position of the FERNSTREAM was determined to bear about 095°T., 1.7 miles from the HAWATIAN RANCHER'S position under (or slightly inside) the bridge. The time was determined to be 0723 or 0723.5

"19. The speed of the HAMAITAN NANCHER at half shead on 40 ryms., allowing one knot current and 5% positive slip, was determined to be about 9.0 knots.

"20. After the second mate went to the chart room, the master of the MANTAN RANCHER observed the radar scope. Then the second mate returned the master asked him about two targets on the scope. The second mate observed the FERRITHEAN had closed rapidly to a distance of 0.7 to 0.8 miles and hore about 50—on the sturboard how. The time was between 0725 and 9726. The second mate reported the situation to the master who ordered alow speed; heard the fog signal of the FERRITHEAN and extered stop engine. The time was 0726.

"21. Allowing 9 knots speed over the ground and the change of course to 090° gyro, the position of the NAMALIAN HAR HER at 0726 was determined to bear 133°r., 0.6 miles from Line Point Light House.

*22. At 0727 the FE RST:EAM was sighted and reported by the lookout and chief mate of the HAMAIIAH RANGER. The master simultaneously ordered the rudder hard right and the engine full astern and blew three short blasts, followed insediately by an emergency jingle to the engine room. The HAWAIIAH RANGER them heard three short blasts from the FERNSTREAM and it repeated the emergency jingle and three short blasts. When the FERNSTREAM was first sighted it bore about 50 on the storboard bow of the

"23. When the helmsmen on the MA.AIIAN FARCHER received the order "hard right" the meading of that vessel had fallow off to 005° gyro. At about 0729.5 the collision occurred with the MAHAIIAN RANCHER heading 090° gyro. Immediately following the impact the engine was stopped and placed slow sheed for half a minute and then stopped and the helm was put amidality. The vessel's heading fell off to 047° gyro after the collision.

*24. The FERRITE AM'S position at about 07252 when it bore 0950P., and about 0.7 to 0.8 miles from the HAWAIIAN R HCHER, was determined to be within about 0.1 mile east or west of a point bearing 3560 T., 1200 yards from Anita Rock Bell Buoy *1*.

RANCHER as a target to the pilot, the pilot observed the MAMATTAN RANCHER as a target to the pilot, the pilot observed the rader scope. Either before or after the pilot observed the picture, he ordered slow speed and a change of course from 275° gyro to 280° gyro. Between this time and the collision, both the master and

the pilot again observed the radar picture. The helmman, who had been relieved at the wheel, reported on the foctale head as lookout shortly after the vessel passed the degenering buoys.

"26. The next order given by the pilot was to stop engine. The master observed the HAKAIIAN MANCHER on the reder scope a little over half a mile, bearing about 100 on the port bow. The pilot, lookout, and carpenter, prior to seeing the HAWAIIAN HAWCIER, teard its fog signal. Neither the master, chief mate, nor the third sute, heard the fog signal. Shortly after hearing the fog whistle of the HANA LAN RANCHER, it was sighted and reported by telephone to the bridge by the chief mate. When the pilot first our the HAWAIIAN HARCIER, he ordered course changed to 2900 gyre. The pilot thought the vessels would pass clear. After the HAVAITAN RANCIER was clearly visible through the fog. and was observed heading on a collision course, the pilot ordered full astern and sounded three short blasts. Just seconds before the collision, the pilot ordered the wheel "hard-a-post" and the engine full shead. He stopped the engine before the order could be executed to protect the engine room crev.

"27. The vessels collided at an angle of about 20°. The port bow and stem of the MAHAIIAN RANCHER first came in contact with the port side of the FERNSTRIAN just about the bridge, demaging the lifeboat and superstructure. It paretrated the hull at the after part of the engine room, demaging the vetertight bulkhead to No. 4 hold. The bow of the HAWAIIAN RANCHER withdrev from the hole in the FERNSTRIAN within a few seconds. The FERNSTRIAN had one or two knots headway when the collision occurred.

"28. All witnesses testified in average agreement that visibility was a half mile when the vessels first sighted each other.

"29. The position of the collision as determined by the Board was about 1210., 0.8 miles from Lime Foint Light House.

"30. After the collision, the FFRNSTREAM'S engine room crew had no time to close the watertight door to the shaft alley. Its power failed immediately and the NAMA: TAN RANCHER radiced a message which was intercepted by the Coast Guard Fort Foint Lifeboat Station. The HAMAIIAN RANCHER immediately lowered a lifeboat to assist and stood close by. The master of the HAMAIIAN RANCHER offered to come ahead into the hole. He heard no reply other than to stand by close

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to the PERSTREAM. The FERRSTREAM'S master said "yes" to the offer of the HAMAIRN RANCHER'S master to give a tow line but the orew had all abandoned the FERRSTREAM at this time. The error and passengers abandoned the FERRSTREAM in three lifeboats less than fifteen minutes after the collision. The FERRSTREAM slowly listed to port and sank by the sterm. At 0507 it went under and now rests on its side in 152 feet of water.

"31. Goast Guard vescels assisted at the scene—landing survivors, patroling to were shipping, picking up rloating eargo, sounding over the wreck and establishing a buoy marking the wreck. The vescels were CG-38369, CG-36473, CG-83411, CGC CALDET, CGC UTILOW. Passengers and erow were taken to the U. S. Public Health Service Sospital where they were examined and released. One passenger and one crew nameer were slightly cut. The loss of the FERRSTMAN and cargo was estimated to amount to #3,500,000.

"32. The second mate of the HAMAIIAN HANGHER plotted some radar fixes when that vencel was standing by. After he FERNSTHEAM sank, the HAMAIIAN HANGHER proceeded to Bathleber Shippard. It had taken water in the forepeak and damage was extinated to amount to \$40,000.

"33. During the afternoon of the day of casualty, the HANAIRE RANCHER, in the same load condition, deperted Bethleven for Crockett, California, to discharge cargo prior to dry/ocking for repairs. It was in command of a relief master, although its regular master as well as its owner's attorneys, were on board. On the way to Grockett the vessel was subjected to a test simulating closely the maneuvers it made to avoid collision earlier in the day. The result of this maneuvering test helped to confirm the loard's conslusions and the Board's determination of the position of the collision (Par. 21 of Facts.)."

The Board made the following Conclusions:

"34. This is another major marine assualty, in which two westels, each provided with radar in good operating condition and working at the time, collided. The primary cause of the collision was excessive speed, on the part of the FERRSTREAM, at a time when the circumstances and conditions required a moderate speed. In this regard, the FERRSTREAM'S master are pilot are considered negativent and in violation of Article 16 of the Inland Rules of the Road.

The two vessels were separated by 1.7 miles at 0723; and by 0.7 or 0.8 miles at a bout 0725.5. This gives a speed of approper of from 21.6 to 24 knots, if the vessels were approaching head on. Since the vessels were approaching at an angle of 50 to 100, the speed of approach would be slightly greater. Allowing a maximum speed of 9 knots over the ground for the HAMATIAN NAME:ER during this time, the FERRETHEAM'S speed would be from 12.6 to 15 knote over the ground, or from 13.6 to 16 knote through the water. Allowing the FERRITEFAM the besefft of any doubt or argument that this speed was computed over too short a period of time and distance, then the average speed of the FERRETREAS from 0723 until 0729.5 can be established at 9.3 knots over the ground, with the FERRISTRUAN having decalerated to about one or two knots at the time of collision. The testimony to the effect that the FERESTREAM'S engine was only maneuvered slow ahead, stop and full astern during this period of time, must be discredited.

#36. Further evidence of headway on the FERNSTNIAN, at the time of collision, is that its momentum swung the bow of the HAMAITAN RANCHER to the left even after the HAMAITAN RANCHER had come slow ahead on hard right rudder; and, after the collision, the FERNSTREAM continued to mak was in a westerly direction.

"37. The Board agreed that the HAHAIIAN RANCIER was dead in the water and may have had stermmay at the time of collision. The Board was further satisfied that it had lost all headway within its allotted share of one-half of the visibility. In determining this, the Board considered the trial rum data of a sister ship. In the trial test, the vessel had a mean draft of 19 03 sand, from full sheed at 85 rpms. (about 17 knots), it was stopped in the water in 3 minutes and 20 seconds with a head reach of 600 yards. It took 21 seconds to stop the shaft before it started to turn estern. Although the HAWAIIAN ANCIER was about 8 feet deeper in the water, it was going only 9 knots when its engine was stopped for one minute (and its shaft had stopped turning) and before the engine was placed emergency full astern.

"38. Contributing to the collision was the failure of both vessels to take advantage of the full information available to them on roder. The second mate of the HANAIIAN RANCHER was a qualified reder operator; and, the master of the FERNSTREAM had 10 years! experience with rader. In the case of the AUSTRALIA STAR—HINDOO,

1947 ANC 1630, the U. S. District Court for the Southern District of New York said, in part: "Since the heading of a ship can be plotted from its bearing and distance at two or more points in time, the radar operator can with great accuracy plot the heading of a ship after taking a number of radar readings. ... By means of her radar the AUSTRALIA STAR could observe the HINDOO and determine her heading and speed with greater emetitude than if the HINDOO had shown her navigation lights. ... Because both vessels could have done this but failed to do so, the master of each vessel, as well us the pilot of the FURNETHIAM, was institutive to his duties.

- "39. The FERNSTREAM'S maneuvers of changing course to the right 100 when the HAMAIIAN RANCHER was first sighted, and her failure to go astern until after the outline of the HAMAIIAN RANCHER had emerged through the fog, made it opporent that the FERNSTREAM'S pilot, and possibly her master, did not believe danger of collision existed prior to this time. The collision might not have been avoided if the Filot of the FERNSTREAM had immediately put its engine astern, when the HAMAIIAH RANCHER was first sighted; but, damage would have been less and the FERNSTREAM might not have been a total loss.
- "40. In determining the position of the collision, the Board allowed 250 yards head reach from 0726, when the HAMAIIAN RANCHER's engine was stopped, until 0727, when the engine was put full astern. Another 250 yards head reach was allowed from the time the engine was placed full astern until the collision. This position corresponded very closely to the position determined by the master of the HAWAIIAN RANCHER. The 0738 redar fix of the second mate of the MAWAIIAN RANCHER was considered accurate; and, it checked with the sounding he read from the fathometer. Morking back from this redar fix, employing the course recorder, bell books, pitch of the wheel and a slight current, will further confirm the accuracy of the position of the collision.
- "41. The Board cannot understand why the position of collision as determined by the FERMSTREAM'S pilot was so in conflict with established facts. The Board was unfavorably impressed with the rapidity, lack of hesitation and positive manner, in which he established positions. He showed the FERMSTREAM on course 290°T. for one-half mile prior to the collision, when the facts show that this course change was not ordered until after the HAWAIIAM RANCHER was sighted. Other facts, which discredit the FERMSTREAM'S alleged

Chief, MVI Division to

positions, are: That, after rounding Riosem Rock Buoy, the wessel haded in the direction of Pier A5; it then passed south of the GEORGE LECERBACH and in this area the believes was palieved. When the relieving believes reported on the bridge, the rudder was hard left and remained hard left for so long a paried of time that both believes broke tradition and custom by relieving the believes that position. These measurers would place the PERSTRANT elect to shore. The Board did not consider that the "marrow channel" rule governed nevigation in this area.

- "42. Minages from each reseal testified that it was their respective respective vesual which blow the three-biast signal first; although some of the MERETREM'S witnesses testified they heard one blast from the HAMAITAN RANGER gave the three-blast signal determined that the HAMAITAN RANGER gave the three-blast signal first primarily because of the immediate full esterm action taken when the FERMITHIAN was first sighted. The Board concluded that two blasts of the HMAITAN RANGER'S first three-blast signal were given at the same time as one of the manarous for house to navigation in the near vicinity, and therefore were not heard on the FERMITHIAM.
- "43. The testimony of the FEMSTHAM'S believes was eccepted although it appeared nameual that he could not recall any events other than orders to the halm. Testimony of the FEMSTHAM'S master, chief mate(who later wrote up the leg books from various rough notes which were not produced), third mate, assistant engineer, ciler and seemen with, was discredited to a large degree. After the testimony of the assistant engineer a number of the Board talked with the interpreter. The interpreter felt certain that this vitness had understood questions in regard to persons the witness had talked with prior to testifying before the Board.
- "44. It was fortunate that the FERRITICAN was abandoned without loss of life or serious injury. The Board felt, however, that the master should have erdered an emergency erew to remain on board longer. As it was, the vessel remained affect for thirty-seven to thirty-eight nimites, thus allowing sufficient time to take a line on board and tow the FERRITICAN the short distance to shallow water.
- "45. As fer as was determined during the investigation, the FERESTEAN appeared to be in compliance with the provisions of the International Convention for the Sefety of life at Sea of 1948, as well as the provisions of the International Load Line Convention, of which the Government of Horney is a party. The master of the

FIRSTREAM did fail, however, to comply with Recommendation 19 of the Safety Conference of 1948, in regard to navigation of ships equipped with radar.

- "Mo. There was no failure of material on either vessel and all orders given were understood and executed promptly and efficiently. The master of the MANAJIAN RANCHER will be charged with inattention to duty for failure to require a closer guard on the radar and failure to obtain the maximum information the radar was espable of giving him. A hearing will be held at the earliest opportunity.
- "is." A Coast Oward Investigating Officer cannot, at this time, institute disciplinary action against the Federal license of the pilot of the FENETREAM since he was serving under authority of a State license."
- 5. The Board mode the following Recommendations:
 - "48. It is recommended that the pilot of the FiRNSTREAM be cited for violation of 33 USC 192 (Art. 16) for excessive speed, and a suitable penalty assessed, as provided therein. A report of this violation will be submitted to the Commender, Twelfth Coast Guard District, in proper form.
 - "lig. It is recommended that this case be referred to the American Pilots' Association for appropriate action. An extra copy of the investigation is forwarded for this purpose.
 - "50. There being no further action possible by the Board, it is recommended that this case be closed."

RIMARKS

- 6. The recommendation of the Board, paragraph 46, that the pilot of the FERNSTRIAN be cited for violation of 33 USC 192 (Art. 16) for excessive speed, will be held in abeyance until the Coast Guard is informed of the results of the action recommended in paragraph 49.
- 7. The references throughout the Board's report indicating the evidence in the record on which the findings of fact and conclusions are based have been emitted as unnecessary for this report.

Chief, MVI Division to Commindent

8 May 1953 (PLEASTREAM HIWAITAN RANCH & C-12 Bd)

8. Subject to the foregoing remarks, it is recommended that the findings of fact, conclusions, and recommendations of the Marine Board of Investigation be approved,

FIRST INDORSEM NY TO "WI memorandum of 8 May 1953

14 May 1953

Chief, Office of Merchant Marine Safety Commandant From:

To:

Forwarded, recommending approval.

APPROVED: MAY 18 1953

MERLIE O'BILL Vice Admiral, U.S. Coast Guard Commandent