

1041

91/14  
C 73/2  
91-98

74  
. C 73/2  
91-98

**VESSEL BRIDGE-TO-BRIDGE RADIOTELEPHONE ACT**

GOVERNMENT

DOCUMENTS

Storage

NOV 17 1971

**HEARING**

BEFORE THE

THE LIBRARY  
KANSAS STATE UNIVERSITY

**MERCHANT MARINE SUBCOMMITTEE**

OF THE

**COMMITTEE ON COMMERCE**

**UNITED STATES SENATE**

**NINETY-FIRST CONGRESS**

**SECOND SESSION**

ON

**H.R. 6971**

TO REQUIRE A RADIOTELEPHONE ON CERTAIN VESSELS  
WHILE NAVIGATING UPON SPECIFIED WATERS OF THE  
UNITED STATES

**H.R. 15549**

TO FURTHER THE EFFECTIVENESS OF SHIPMENT OF  
GOODS AND SUPPLIES IN FOREIGN COMMERCE BY PRO-  
MOTING THE WELFARE OF UNITED STATES MERCHANT  
SEAMEN THROUGH COOPERATION WITH THE UNITED  
SEAMEN'S SERVICE, AND FOR OTHER PURPOSES

NOVEMBER 18, 1970

**Serial No. 91-98**

Printed for the use of the Committee on Commerce



U.S. GOVERNMENT PRINTING OFFICE

KSU LIBRARIES

✓

A11900 965363

AY  
2/27/52  
82-18

DOOR  
RAM

COMMITTEE ON COMMERCE

WARREN G. MAGNUSON, Washington, *Chairman*

JOHN O. PASTORE, Rhode Island	NORRIS COTTON, New Hampshire
VANCE HARTKE, Indiana	HUGH SCOTT, Pennsylvania
PHILIP A. HART, Michigan	WINSTON PROUTY, Vermont
HOWARD W. CANNON, Nevada	JAMES B. PEARSON, Kansas
RUSSELL B. LONG, Louisiana	ROBERT P. GRIFFIN, Michigan
FRANK E. MOSS, Utah	HOWARD H. BAKER, Jr., Tennessee
ERNEST F. HOLLINGS, South Carolina	CHARLES E. GOODELL, New York
DANIEL K. INOUYE, Hawaii	MARLOW W. COOK, Kentucky
JOSEPH D. TYDINGS, Maryland	
WILLIAM B. SPONG, Jr., Virginia	

FREDERICK J. LORDAN, *Staff Director*  
MICHAEL PERTSCHUK, *Chief Counsel*  
EMANUEL ROUVELAS, *Staff Counsel*  
ARTHUR PANKOFF, Jr., *Minority Staff Director*  
HENRI F. RUSH, Jr., *Minority Staff Counsel*

MERCHANT MARINE SUBCOMMITTEE

RUSSELL B. LONG, Louisiana, *Chairman*

JOHN O. PASTORE, Rhode Island	ROBERT P. GRIFFIN, Michigan
ERNEST F. HOLLINGS, South Carolina	WINSTON PROUTY, Vermont
DANIEL K. INOUYE, Hawaii	CHARLES E. GOODELL, New York
JOSEPH D. TYDINGS, Maryland	NORRIS COTTON, New Hampshire
WILLIAM B. SPONG, Jr., Virginia	

## CONTENTS

	Page
Opening statement by the chairman.....	1
Text of bills:	
H.R. 6971.....	2
H.R. 15549.....	7
Agency comments on H.R. 6971:	
Deputy Attorney General.....	11
Department of State.....	11
General Counsel of the Commerce Department.....	11
Secretary of Transportation.....	12
Federal Communications Commission.....	12, 21
Barry, Francis J., president, Circle Line-Sightseeing Yachts, Inc., Circle Line-Statute of Liberty Ferry, Inc., and Hudson River Day Line, Inc.....	38
Clark, Earl, codirector, Labor Management-Maritime Committee; accompanied by Hoyt S. Haddock, codirector.....	78
Prepared statement.....	79
Elder, Scott H., general counsel for Lake Carriers Association.....	41
Prepared statement.....	44
Gano, Vice Adm. Roy A. U.S. Navy (retired), president, United Seamen's Service; accompanied by Edward J. Sette, executive director; and John I. Dugan, general counsel.....	64
Prepared statement.....	66
Rea, Rear Adm. William F., Office of Merchant Marine Safety, U.S. Coast Guard; accompanied by Comdr. Clifford DeWolf, Office of Chief Counsel.....	23
Questions of Senator Inouye and the answers thereto.....	26
Reynolds, James J., president, American Institute of Merchant Shipping; accompanied by Albert May, vice president; and Odell Kominers, counsel.....	31
Prepared statement.....	34

### ADDITIONAL ARTICLES, LETTERS, AND STATEMENTS

Barry, Francis J., president, Circle Line-Sightseeing Yachts, Inc., letter of December 14, 1970.....	81
Beckwith, S. S., U.S. Government Memorandum of November 10, 1970.....	97
Bender, Adm. C. R., U.S. Coast Guard Commandant, letter of June 19, 1970.....	63
Brix, Peter J., president, Lafferty Transportation Co., letter of November 13, 1970.....	82
Clothier, Ernest A., president, American Pilots' Association, Inc., letter of November 12, 1970.....	82
Cotton, Hon. Norris, U.S. Senator from New Hampshire, letter of May 20, 1970.....	62
Federal Communications Commission, statement on H.R. 5189 and H.R. 6971.....	14
Garmatz, Hon. Edward A., U.S. Representative from Maryland, questions and answers thereto of Daniel K. Child, Chief, Aviation and Marine Division of the Safety and Special Radio Services Bureau, FCC.....	16
Haddock, Hoyt S., executive director, AFL-CIO Maritime Committee, statement.....	94
Johnson, Oscar G., special assistant to the vice president-general manager, Bourns/Cal, Inc., Systems Division, letter of February 11, 1970.....	97
Jordan, Hon. Len B., U.S. Senator from Idaho, letter of November 17, 1970.....	82

	Page
Kuykendall, J. R., director, Government Relations, Matson Navigation Co., letter of November 19, 1970-----	89
Maskin, Alfred, executive director, American Maritime Association, letter of November 16, 1970-----	87
McNeal, William C., American Waterways Operators, Inc., statement-----	83
Reed, John H., chairman, National Transportation Safety Board, letter of November 4, 1970-----	21
Steinberg, W. R., president, American Radio Association, AFL-CIO, letter of November 25, 1970-----	97
Strichartz, Harvey, technical director, American Radio Associations, AFL-CIO, statement-----	89
Sullivan, Hon. Leonor, U.S. Representative from Missouri, questions and answers thereto of Daniel K. Child, Chief, Aviation and Marine Division of the Safety and Special Radio Services Bureau, FCC-----	14

# VESSEL BRIDGE-TO-BRIDGE RADIOTELEPHONE ACT

WEDNESDAY, NOVEMBER 18, 1970

U.S. SENATE,  
COMMITTEE ON COMMERCE,  
SUBCOMMITTEE ON MERCHANT MARINE,  
*Washington, D.C.*

The subcommittee met at 10 a.m. in room 5110, New Senate Office Building, Hon. Daniel K. Inouye presiding.

Present: Senator Inouye.

## OPENING STATEMENT BY THE CHAIRMAN

Senator INOUE. The hearing will come to order. This morning we take up two bills. The first is H.R. 6971 to require a radiotelephone on certain vessels while navigating on specified waters of the United States. This is a safety measure intended to help prevent vessel collisions that have resulted in increasing loss of life, injury, and property damage as our waters become more congested.

The second bill is H.R. 15549, which would authorize the Secretary of Defense to cooperate and provide certain assistance to the United Seamen's Service in foreign areas whenever the President finds it necessary in the interest of the United States to do so. The United Seamen's Service is a nonprofit charitable organization which maintains facilities in several ports around the world. Its work in Vietnam, at the centers in Cam Ranh Bay and Qui Nhon has received particular praise. USS provides lodging and recreation centers for seamen, repatriation for men separated from their vessels because of sickness or accident, legal assistance and comforting services for men in detention centers, and mail and telephone communication services. The United Seamen's Service is wholly funded by the patronage of seamen of its facilities and by private contributions.

H.R. 15549 would authorize the Secretary of Defense to cooperate in providing transportation, reimbursible meals and quarters, surplus office space, free passports, and certain currency conversion services to USS much in the manner as is currently done for the U.S.O. and Red Cross.

(The bills and agency comments follow:)

Staff member assigned to this hearing: Emanuel Rauvelas.

91ST CONGRESS  
1ST SESSION

# H. R. 6971

---

IN THE HOUSE OF REPRESENTATIVES

FEBRUARY 18, 1969

Mr. GARMATZ introduced the following bill; which was referred to the Committee on Merchant Marine and Fisheries

---

## A BILL

To require a radiotelephone on certain vessels while navigating upon specified waters of the United States.

1       *Be it enacted by the Senate and House of Representa-*  
2       *tives of the United States of America in Congress assembled,*  
3       That this Act may be cited as the "Vessel Bridge-to-Bridge  
4       Radiotelephone Act".

5       SEC. 2. For the purpose of this Act—

6             (1) "Secretary" means the Secretary of the Depart-  
7       ment in which the Coast Guard is operating, and

8             (2) "power-driven vessel" means any vessel pro-  
9       pelled by machinery.

10       SEC. 3. (a) Except as provided in section 6 of this Act—

1           (1) every power-driven vessel of three hundred  
2 gross tons and upward while navigating;

3           (2) every vessel of one hundred gross tons and  
4 upward carrying one or more passengers for hire while  
5 navigating; and

6           (3) every dredge and floating plant engaged in or  
7 near a channel or fairway in operations likely to restrict  
8 or affect the navigation of other vessels—

9 shall have a radiotelephone capable of operation from its  
10 navigational bridge or, in the case of dredge, from its main  
11 control station and capable of transmitting and receiving on  
12 the frequency or frequencies within the 156-162 Mega-Hertz  
13 band using the classes of emissions designated by the Federal  
14 Communications Commission, after consultation with other  
15 cognizant agencies, for the exchange of navigational informa-  
16 tion.

17           (b) The radiotelephone required by subsection (a) shall  
18 be carried on board the described vessels, dredges, and float-  
19 ing plants upon the navigable waters of the United States  
20 inside the lines established pursuant to section 2 of the Act  
21 of February 19, 1895 (28 Stat. 672, as amended), but not  
22 including—

23           (1) the Great Lakes or their connecting or tributary  
24 waters;

25           (2) the Mississippi River or its tributaries above

1 the rail and highway bridge at mile 234 above Head of  
2 Passes, Louisiana; or

3 (3) the Atchafalaya River above its junction with  
4 the Plaquemine-Morgan City alternate waterway.

5 SEC. 4. The radiotelephone required by section 3 of this  
6 Act is for the exclusive use of the master or person in charge  
7 of the vessel, or the person designated by the master or per-  
8 son in charge to pilot or direct the movement of the vessel,  
9 who shall maintain or cause to be maintained a listening  
10 watch on the designated frequency when he is not using it for  
11 authorized traffic. The master or person in charge may permit  
12 the use of the radiotelephone on other authorized frequencies  
13 within the maritime mobile band whenever there is no im-  
14 mediate risk of collision.

15 SEC. 5. Whenever radiotelephone capability is required  
16 by section 3 of this Act, a vessel's radiotelephone equipment  
17 shall be maintained in effective operating condition. If the  
18 radiotelephone equipment carried aboard a vessel ceases to  
19 operate, the master shall exercise due diligence to restore it  
20 to effective operating condition at the earliest practicable  
21 time. The failure of a vessel's radiotelephone equipment shall  
22 not, in itself, constitute a violation of this Act, nor shall it  
23 obligate the master of any vessel to moor or anchor his ves-  
24 sel; however, the loss of radiotelephone capability shall be  
25 given consideration in the navigation of the vessel.

1        SEC. 6. The Secretary may, if he considers the radiotele-  
2 phone required by section 3 of this Act unnecessary or inef-  
3 fective for the purposes of marine navigational safety, exempt  
4 from the provisions of section 3 of this Act any vessel or class  
5 of vessels.

6        SEC. 7. (a) The Federal Communications Commission  
7 shall, after consultation with other cognizant agencies, pre-  
8 scribe regulations necessary to specify operating and tech-  
9 nical conditions and characteristics including frequencies,  
10 emission, and power of radiotelephone equipment required  
11 under section 3 of this Act.

12        (b) The Secretary shall, subject to the concurrence of  
13 the Federal Communications Commission, prescribe regula-  
14 tions for the enforcement of this Act.

15        SEC. 8. (a) Whoever, being the master or person in  
16 charge of a vessel subject to section 3 of this Act, fails to  
17 enforce or comply with the provisions of this Act or the  
18 regulations hereunder; or

19        Whoever, being designated by the master or person in  
20 charge of a vessel subject to section 3 of this Act to pilot  
21 or direct the movement of the vessel, fails to enforce or  
22 comply with the provisions of section 3 of this Act or the  
23 regulations thereunder—

24        Is liable to a civil penalty of \$500 to be assessed by  
25 the Secretary.

1           (b) Every vessel navigating in violation of this Act or  
2 the regulations hereunder is liable to a civil penalty of \$500  
3 to be assessed by the Secretary for which the vessel may be  
4 proceeded against in any district court of the United States  
5 having jurisdiction.

6           (c) Any penalty assessed under this section may be  
7 remitted or mitigated by the Secretary upon such terms as  
8 he may deem proper.

9           SEC. 9. This Act shall become effective January 1,  
10 1970, or six months after the promulgation of regulations  
11 which would implement its provisions, whichever is later.

91ST CONGRESS  
2D SESSION

# H. R. 15549

---

## IN THE HOUSE OF REPRESENTATIVES

JANUARY 27, 1970

Mr. GARMATZ (by request) introduced the following bill; which was referred to the Committee on Merchant Marine and Fisheries

---

## A BILL

To further the effectiveness of shipment of goods and supplies in foreign commerce by promoting the welfare of United States merchant seamen through cooperation with the United Seamen's Service, and for other purposes.

1        *Be it enacted by the Senate and House of Representa-*  
2        *tives of the United States of America in Congress assembled,*  
3        That this Act may be cited as the "Seamen's Service Act".

4        SEC. 2. It is the purpose of this Act, by authorizing  
5        appropriate departments and agencies of the United States  
6        Government to cooperate with the United Seamen's Service  
7        (a nonprofit, charitable organization incorporated under the  
8        laws of the State of New York) in the establishment and op-  
9        eration of facilities for United States merchant seamen in

1 foreign areas, to promote the welfare of such seamen, essential  
2 to the overall interests of shipment of United States goods  
3 and supplies to such areas.

4 SEC. 3. Chapter 155 of title 10, United States Code, is  
5 amended—

6 by adding the following new section at the end  
7 thereof:

8 **“§ 2604. United Seamen’s Service: cooperation and assist-**  
9 **ance**

10 “(a) Whenever the President finds it necessary in the  
11 interest of United States commitments abroad to provide fa-  
12 cilities and services for United States merchant seamen in  
13 foreign areas, he may authorize the Secretary of Defense  
14 under such regulations as the Secretary may prescribe to co-  
15 operate with and assist the United Seaman’s Service in es-  
16 tablishing and providing such facilities and services.

17 “(b) Personnel of the United Seamen’s Service who are  
18 performing duties in connection with the cooperation and  
19 assistance under subsection (a) may be furnished—

20 “(1) transportation, at the expense of the United  
21 States, while traveling to and from and while perform-  
22 ing, those duties, in the same manner as civilian em-  
23 ployees of the armed forces;

24 “(2) meals and quarters, at their expense or at  
25 the expense of the United Seamen’s Service, except that

1 where civilian employees of the armed forces are quar-  
2 tered without charge, employees of the United Sea-  
3 men's Service may also be quartered without charge;  
4 and

5 “(3) available office space (including space for  
6 recreational activities for seamen), warehousing, wharf-  
7 age, and means of communication, without charge.

8 “(c) No fee may be charged for a passport issued to  
9 an employee of the United Seamen's Service for travel out-  
10 side the United States to assume or perform duties under  
11 this section.

12 “(d) Supplies of the United Seamen's Service, includ-  
13 ing gifts for the use of merchant seamen, may be trans-  
14 ported at the expense of the United States, if it is determined  
15 under regulations prescribed under subsection (a) that they  
16 are necessary to the cooperation and assistance provided  
17 under this section.

18 “(e) Where practicable, the President shall make ar-  
19 rangements with the receiving country for free entry of  
20 shipments under (d) and for making available by that  
21 country of local currencies for the purpose of defraying the  
22 transportation cost of such shipments from the port of entry  
23 of the receiving country to the designated shipping point  
24 of the consignee.

25 “(f) Where practicable, the President shall also make

1 arrangements for convertibility of local currencies by the  
2 United Seamen's Service, in connection with its activities  
3 under this section.

4       “(g) For the purposes of this section, employees of the  
5 United Seamen's Service may not be considered as em-  
6 ployees of the United States.”

7       by adding the following new item at the end of  
8 the analysis:

“2604. United Seamen's Service : cooperation and assistance”.

OFFICE OF THE DEPUTY ATTORNEY GENERAL,  
Washington, D.C., January 19, 1970.

HON. WARREN G. MAGNUSON,  
Chairman, Committee on Commerce,  
U.S. Senate, Washington, D.C.

DEAR SENATOR: This is in response to your request for the views of the Department of Justice on H.R. 6971, a bill "To require a radiotelephone on certain vessels while navigating upon specified waters of the United States."

The bill has been examined. Whether this legislation should be enacted involves questions as to which the Department of Justice defers to the Department of Transportation.

The Bureau of the Budget has advised that there is no objection to the submission of this report from the standpoint of the Administration's program.

Sincerely,

RICHARD G. KLEINDIENST,  
Deputy Attorney General.

DEPARTMENT OF STATE,  
Washington, D.C., February 5, 1970.

HON. WARREN G. MAGNUSON,  
Chairman, Committee on Commerce,  
U.S. Senate, Washington, D.C.

DEAR MR. CHAIRMAN: The Secretary has asked me to reply to your letter of December 31, 1969 requesting comment on H.R. 6971, a bill "To require a radiotelephone on certain vessels while navigating upon specified waters of the United States".

The Department of State approves of the objectives of the proposed legislation but foresees possible foreign relations difficulties if pilots in U.S. waters are unable to provide unequipped foreign vessels with the necessary VHF equipment. Until foreign vessels have had sufficient time to obtain this equipment, it is hoped that the discretionary powers which the proposed legislation assigns to the Secretary of Transportation will be used to exempt these vessels from punitive action.

The Bureau of the Budget advises that from the standpoint of the Administration's program there is no objection to the submission of this report.

Sincerely yours,

H. G. TORBERT, JR.,  
Acting Assistant Secretary,  
for Congressional Relations.

GENERAL COUNSEL OF THE DEPARTMENT OF COMMERCE,  
Washington, D.C., March 10, 1970.

HON. WARREN G. MAGNUSON,  
Chairman, Committee on Commerce,  
U.S. Senate,  
Washington, D.C.

DEAR MR. CHAIRMAN: This is in further reply to your request for the views of this Department with respect to H.R. 6971, an act to require a radiotelephone on certain vessels while navigating on specified waters of the United States.

H.R. 6971 would require radiotelephones, to provide a positive means of exchanging navigational information, in the operation on the navigable waters of the United States of (a) every power-driven vessel of 300 gross tons and upward, (b) every vessel of 100 gross tons and upward carrying one or more passengers for hire, (c) every towing vessel of 26 feet or over at the waterline, and (d) every dredge and floating plant engaged in or near a channel or fairway in operations likely to restrict or affect the navigation of other vessels.

The Federal Communications Commission would be directed to prescribe technical regulations, and the Secretary of the Department in which the Coast Guard is operating would be directed, subject to the concurrence of the Federal Communications Commission, to prescribe enforcement regulations. Such Secretary would be authorized to grant exemption from the provisions of H.R. 6971 where he considers that marine navigational safety will not be adversely affected or where a local communications system fully complies with the intent of the concept. Penalty provisions would be provided for failure to comply with this Act or regulations issued thereunder

The objective of H.R. 6971 is to promote navigational safety. We support this objective. With respect to the precise provisions of this Act, however, we defer to the Department of Transportation and the Federal Communications Commission.

We have been advised by the Bureau of the Budget that there would be no objection to the submission of this report from the standpoint of the Administration's program.

Sincerely,

JAMES T. LYNN,  
*General Counsel.*

OFFICE OF THE SECRETARY OF TRANSPORTATION,  
*Washington, D.C., March 27, 1970.*

HON. WARREN G. MAGNUSON,  
*Chairman, Committee on Commerce,  
U.S. Senate, Washington, D.C.*

DEAR MR. CHAIRMAN: Reference is made to your request for the views of this Department on H.R. 6971, an act to require a radiotelephone on certain vessels while navigating upon specified waters of the United States.

The Act would require that certain vessels navigating or operating upon the navigable waters of the United States, inside a specified line of demarcation, be equipped with and utilize short-range radiotelephones for the exchange of navigational information. The vessels included are all foreign and domestic power-driven vessels of 300 gross tons and upward, all vessels of 100 gross tons and upward carrying passengers for hire, towing vessels of twenty-six feet or over, and dredges and floating plants engaged in or near a channel or fairway in operations likely to affect the navigation of other vessels. Its purpose is to provide a positive means whereby the operators of approaching vessels can communicate their intentions to one another through voice radio, located convenient to the operator's navigation station.

The Department of Transportation fully supports H.R. 6971.

As you are aware, H.R. 6971, in its original form, and its companion bill, S. 1240, were introduced at the request of the Department of Transportation. In its present form, H.R. 6971 incorporates several amendments made in the House of Representatives. These amendments include the addition of a statement of purpose and the elimination of certain specific exemptions. The Secretary's discretionary exemption authority, however, was accordingly broadened. These changes do not detract from the thrust of the bill nor do they cause us in any way to withhold our complete support of the Act.

We recommend that several minor changes of a technical nature be made. These are attached as an enclosure hereto.

The Bureau of the Budget advises that from the standpoint of the Administration's program there is no objection to the submission of this report for the consideration of the Committee.

Sincerely,

JAMES A. WASHINGTON, Jr.

RECOMMENDED TECHNICAL CHANGES TO H.R. 6971

1. On page 2, line 9 the words "section 6" should be "section 7".
2. On page 2, line 17 the words "at the water line" present a problem in enforcement because of the practical difficulties in measuring length at the water line rather than over the deck. We therefore recommend that those words either be deleted or be amended to specify over the deck length measurement. See, e.g. 46 CFR § 24.10-17.
3. On page 3, line 7 the word "this" should be "the".

FEDERAL COMMUNICATIONS COMMISSION,  
*Washington, D.C., November 17, 1970.*

HON. WARREN G. MAGNUSON,  
*Chairman, Committee on Commerce,  
U.S. Senate,  
Washington, D.C.*

DEAR MR. CHAIRMAN: This is in reply to your request for the Commission's comments on H.R. 6971, an Act to require a radiotelephone on certain vessels while

navigating upon specified waters of the United States, which was referred to the Senate Committee on Commerce for further consideration.

Mr. Daniel K. Child, Chief of the Aviation and Marine Division of the Safety and Special Radio Services Bureau testified on two identical bills, H.R. 6971 and H.R. 5189 on July 17, 1969 before the Subcommittee on Coast Guard, Coast and Geodetic Survey, and Navigation of the House Committee on Merchant Marine and Fisheries. A copy of his statement which reflects the views of the Commission is enclosed. (Annex I).

During the hearings Congresswoman Leonor K. Sullivan and Congressman Edward A. Garmatz asked Mr. Child to supply certain additional technical information for the record. The Commission submitted this information but unfortunately the questions and answers were not included in the printed record of the Bridge-to-Bridge Radiotelephone Hearings of the House Committee on Merchant Marine and Fisheries, Serial No. 91-15. This material reflects the Commission's views on certain operating and technical aspects of H.R. 6971, and is enclosed for your information. (Annex II).

In addition, other testimony before the subcommittee by various parties (Quoted below in Annex III) has brought into focus certain difficulties in the language of Section 5 of the bill as presently written whose implementation would become under Section 8 the responsibility of this Commission. The Commission is of the opinion, in view of its previously stated position on watch standing and of the testimony of Admiral Murphy and Messrs. King, Glynn and Strichartz quoted below that the exception to Section 5 given in lines 14-17 of page 3 of the text of the present bill can only lead to confusion and administrative impotence and can serve no useful purpose. That exception, would, in essence, replace a navigational device by a communications device and in so doing would tend to vitiate the salutary purpose of Section 2 of the bill and contribute to making less "positive" the intended means of exchanging navigational information.

It is therefore recommended that the last sentence of Section 5 of the bill as presently written, beginning "The master or person in charge . . ." should be deleted in its entirety.

This would enhance the effectiveness of the equipment from the point of view expressed in Section 2; it would further the aim of Admiral Murphy as given in Quote 1; it would meet the stipulation of Mr. King in Quote 2; it would allay the concern of Mr. Glynn in Quote 3, and remove the objections of Mr. Strichartz in Quote 4.

To avoid ambiguity and to effect the purposes of the Act to provide for the exchange of navigational information between the bridges of vessels, it is recommended that the following changes be made:

A. Insert an additional definition in Section 3, reading "(4) 'Exchange of navigational information' means the transmission or reception of information relating directly to the process of moving a vessel from one point to another on navigable waters of the United States specified in Section 4(b), with a view to the safety of all vessels involved."

B. Delete the second sentence of Section 5, page 3, lines 14-17.

We note that there are several changes in the provision of the bill that was originally introduced and upon which Mr. Child testified on July 17, 1969, and the amended version of H.R. 6971, which was passed by the House of Representatives on December 16, 1969. The amendments made to H.R. 6971, as introduced, were basically to provide a statement of purpose in Section 2 and to grant the Secretary of Transportation authority in Section 7 to exempt individual existing communications systems operating in major ports in the country, notably New York and San Francisco, and it will be relatively easy for these existing systems to be adapted to the requirements of this legislation.

In addition, the House eliminated the statutory exemption contained in Section 3(b) of H.R. 6971, as introduced, which had excluded, (1) the Great Lakes, (2) the Upper Mississippi River System, and (3) the Atchafalaya River from the purview of the bill. We note that the House Committee added a new Section 4(a)(3) to require a bridge radiotelephone on all commercial towing vessels of twenty-six feet or over in length at the water line while navigating. We believe that these amendments will reduce the possibility of collision on our inland waters and in congested major harbor areas.

If I can be of any further help, please call on me.

Sincerely yours,

ROBERT E. LEE,  
Acting Chairman.

STATEMENT OF THE FEDERAL COMMUNICATIONS COMMISSION ON H.R. 5189 AND H.R. 6971, 91ST CONGRESS, BILLS TO REQUIRE A RADIOTELEPHONE ON CERTAIN VESSELS WHILE NAVIGATING UPON SPECIFIED WATERS OF THE UNITED STATES

My name is Daniel K. Child. I am Chief of the Aviation and Marine Division of the Safety and Special Radio Services Bureau of the Federal Communications Commission.

The Commission appreciates the Committee's invitation to appear and testify on legislative proposals H.R. 5189 and H.R. 6971. These identical bills, cited as the "Vessel Bridge-to-Bridge Radiotelephone Act," would require a radiotelephone on certain vessels while navigating upon specified waters of the United States. The Commission, particularly through Commissioner Robert T. Bartley, and the Coast Guard have been studying jointly the matter of bridge-to-bridge radiotelephone communications since 1964. On December 21, 1966, the Commission approved certain legislative recommendations which resulted from these joint studies. The proposed Act for the most part embodies the conclusions and recommendations agreed on by the Joint FCC-Coast Guard Committee.

Specifically, the legislative proposal would require every power driven non passenger vessel of 300 gross tons or more and every passenger vessel of 100 gross tons or more operating in specified waters to have a radiotelephone capable of operation from its navigational bridge. Operation of these radiotelephones would be conducted within the 156-162 MHz band. Usage of the radiotelephone would be limited to the master of the vessel or persons engaged in piloting and directing the movement of the vessel. A listening watch on the frequencies authorized for the exchange of navigational information would also be required.

Enactment of this legislation will greatly contribute to insuring the safety of cargo and passengers carried on vessels on navigable waters of the United States. Radio has proven to be an invaluable asset in the protection of lives and cargo. The effect of this legislation will be to expand the marine communication safety network by increasing the number of vessels with which radiotelephone contact can be made. This greater communication capacity should increase the opportunity for ships in distress to receive prompt assistance. Therefore, the Commission urges enactment of this proposal.

BEFORE THE HOUSE COMMITTEE ON MERCHANT MARINE AND FISHERIES ON H.R. 6971 AND H.R. 5189

The Congresswoman from Missouri, Mrs. Sullivan on July 17, 1969, presented a number of questions for the FCC witness, Mr. Child. A copy of these questions was presented to Mr. Child by Chairman Garmatz with a request that the answers be furnished in writing to the Chairman. The questions together with the answers are as follows:

1. *One of the dilemmas confronting us in this legislation is that while we want the necessary equipment installed on vessels to insure their safe operation, we don't want to impose unnecessary regulations and burden the operators and personnel with needless equipment. Can you tell us, Mr. Child, what type of radio equipment is used now on the vessels in the inland waterways? I have in mind the vessels using such inland waterways as the Missouri, the Illinois and the Ohio rivers, as well as the entire Mississippi.*

Answer. Vessels of the United States which do not go into the open sea are not compulsorily equipped with radio transmitting equipment. The Commission license records do not list ships according to inland waterway areas.

Vessels of the United States may, at their option, use maritime mobile telephone communication channels in the medium frequencies (MF). High frequencies (HF) and the Very High frequencies (VHF). As a practical matter those commercial vessels on inland waterways may have only MF; however, the trend is toward VHF and we are advised VHF now may be on most (possibly over 80%) of the commercial towing vessels.

2. *Do they for example, now use AM or VHF, or both?*

Answer. AM (amplitude modulation) is used on the maritime mobile MF and HF radiotelephone channels. FM (frequency modulation) is used on the VHF maritime mobile channels. Some vessels have only AM (using MF and HF channels) some use only FM (VHF channels) and some have both.

3. *How many speakers in a wheelhouse for each system?*

Answer. The wizardry of electronics forces me to change the question from speakers to radio frequency channels, since many channels could be funneled through one speaker or one channel could be monitored on any number of speakers.

A typical installation would include one speaker with capability to monitor one channel for each transmitter-receiver (transceiver) installed. MF and HF equipment is readily combined into one transceiver therefore one speaker ordinarily is used for this combination. Ordinarily only one speaker is used also for the VHF. In systems where selective ringers are installed some vessels can be called on any of six or eight channels and the speaker can be silenced except when the vessel is called.

4. *Is it possible that the FCC would require that four speakers be on simultaneously in a wheelhouse?*

Answer. Commission Rules concerning the Maritime Mobile Services require that when the radio station is in operation the distress telephone channel will be monitored except when the station is in use for other purposes. Therefore, as a maximum we would require that a vessel having a ship radio station operating on VHF frequency channels to monitor the distress channel 156.8 Mc/s when the station is in operation. If the same radio station also includes MF equipment in operation the international distress channel 2182 kc/s also would be monitored. We would not require this to be on the ship's bridge.

These requirements would prevail even if an additional channel is required for navigation purposes on the bridges of vessels. Note, however, that by special provision of Part 83.106 (b) (5) of the Commission's Rules single or dual channel VHF equipment may be used solely for navigational purposes on a ship's bridge provided the ship has no requirement for other VHF communications.

This means, taking into consideration existing rules plus the intent of HR 6971 and HR 5189, that only one channel would be required to be monitored on the bridge.

If the "bridge" radio is a multichannel set physically located on the bridge it will be necessary to monitor the "bridge-to-bridge" channel plus the distress channel 156.8 Mc/s.

5. *How many and which type inland vessels to your knowledge, do not now have radio equipment?*

Answer. We do not have knowledge of the numbers and distribution of vessels on inland waters that do not have radio equipment.

6. *Specifically what type of equipment and how much is needed so that the vessels on the inland waterways will be able to navigate safely by means of bridge-to-bridge communications? Is AM sufficient? Should it be VHF?*

Answer. As a minimum the ship would have to have a single channel transmitter-receiver set. It could be either portable or permanently installed. An amplitude modulated (AM) transmitter operating on channels on MF and HF channels would not be sufficient. A single VHF channel set would meet the requirements of the subject bill.

6. (Continued). *What really is needed so that we know what to write into legislation to make it mandatory that every vessel have radiotelephone equipment to insure safe navigation, be it AM or VHF? Can you help me?*

Answer. The ideal situation would be that the man in charge of the vessel while on the bridge would be able to communicate with the person in charge on the bridge of every other vessel in the area. To do this it should be mandatory for every vessel to have VHF transmitter and receiving equipment on the vessel so installed that the microphone and speaker is under the direct control of the person in charge of the operation of the vessel on the bridge. It would be necessary, also that vessels be required to monitor the designated frequency channel at all times while the vessel is under way to avoid the possibility of the responsible officer on the bridge missing a message from another vessel in the area. Provisions should be made for standardization of equipment and operating procedures.

7. *Can you tell us whether this radiotelephone equipment is purchased by the vessel owner or rented?*

Answer. It is normally purchased.

8.—*In either case can you tell us the cost of installation?*

Answer. The cost will vary depending on the desires of the purchaser for convenience equipment, i.e., number of channels required for business purposes, number of remote control points on the vessel, etc. The cost of typical installation are reported to us at as high as \$3,000.00 and as low as perhaps \$500.00. Single channel sets would probably not represent much of a savings as some portable single channel sets sell in the order of 600-700 dollars. We do not have any information on equipment rentals.

QUESTIONS ASKED OF MR. CHILD, FCC, BY CONGRESSMAN EDWARD A. GARMATZ,  
CHAIRMAN, COMMITTEE ON MERCHANT MARINE AND FISHERIES

1. Can you explain to a neophyte exactly what is meant when the bill states: "Capable of transmitting and receiving on the frequency or frequencies within the 156-162 Mega-Hertz band using the classes of emissions designated by the Federal Communications Commission"?

A. For example, does this mean there are six frequencies in this band and just one will be used?

Answer. There are a number of maritime mobile frequency channels in the 156-162 Mega-Hertz band. One, channel 16, is used for distress, safety and calling. Seven are designated for Port Operation, One, channel 13, is provided for Navigational (bridge-to-bridge) communications, Nine for Public Correspondence etc. Under present FCC rules one channel (channel 13) has been designated exclusively for the type of communications envisaged in the subject Bills. Additional channels can be similarly designated if this becomes desirable. In this regard there is some indication that with many vessels in a relatively congested area, there must be some method of keeping the number of ships on one channel at a reasonable figure. The proponents of this view would note that with say fifty vessels within communications range the problems of identification would be practically insurmountable. Sectorization of such an area could be required with a traffic advisory service passing vessels from one sector to another. A separate radio frequency channel might be required in each sector.

B. If so, how do we know all the ships in a designated area will be on that one frequency?

Answer. The subject Acts when implemented will designate the types of vessels and areas in which monitoring of the Navigation (bridge-to-bridge) channel is required. If and when more than one channel becomes necessary it may be necessary that the channel in use be identified with the area involved. A traffic advisory service as mentioned in the answer to A above might be one possible method of assuring that ships tune to the proper designated channel.

C. What does "classes of emissions" mean?

Answer. Emissions are classified according to whether they are amplitude modulated (AM), frequency modulated (FM) or other. They are at the same time classified into whether they are telegraphy, telephony, facsimile, etc. The class of emission designated by the Commission for use in the 156. 162 Mega-Hertz band is FM telephony (F3).

2. You say use of the equipment will be limited to the master or the person piloting the vessel. Since this is radio equipment, shouldn't it be operated by the radioman aboard? Won't this radio equipment require the expertise of a radioman?

Answer. Operation of this equipment will require operational but not technical expertise and it will be necessary for whoever operates it to have the grade of FCC license customarily required for the operation of compulsory installations of this class. In general, since what is involved here is fixed-frequency telephone operation the emphasis will be rather on the operator's having a sound knowledge of procedures and the applicable regulations rather than that he be expert in technical radio matters. A third class radio-telephone license would in all likelihood be sufficient for operation of bridge-to-bridge radio, and will probably be required.

3. Section 7(a) of the bill states that the FCC shall prescribe regulations "to specify operating and technical conditions and characteristics", etc. Can you tell me, will this be pursuant to the rule-making authority of the Administrative Procedures Act and will those subject to these regulations have the APA safeguards of notice, hearing, etc.?

Answer. Yes.

4. Am I correct, Mr. Child, that the way the regulatory authority is split under the bill, the FCC and not the Coast Guard will regulate the radio-telephone equipment on a vessel?

Answer. Essentially that is correct. The division and perhaps the overlap in authority between the Coast Guard and the FCC is different in this case from that which exists with respect to other compulsory marine radio communications and navigational requirements. Present compulsory equipment and transmitting and receiving capability requirements aboard certain types of passengers and cargo vessels are embodied in the Communication Act of 1934. For a period dating back to the time of the *Titanic* disaster in 1912, Congress has placed the statutory responsibility for marine safety radiocommunications under one agency.

In general compulsory marine radio requirements are now imposed by the terms of the Communications Act of 1934, as amended, and treaties concerned with the use of radio and Safety of Life at Sea. Usually the terms dealing with Radio of treaties such as the Safety of Life at Sea Convention (London, 1960) are reflected in amendments to the Communications Act and responsibility for enforcement of the basic mandatory requirements as well as the promulgation and enforcement of subsidiary technical and other regulations pertaining to the installation and operations of the equipment has been a FCC statutory responsibility. In this case the basic requirement and presumably responsibility for enforcement of that requirement will be a Coast Guard function. The FCC responsibility will be to designate the frequency channel or channels, to type accept the radio transmitting equipment, to license and inspect the radio installation, and, in addition, to license the operators.

5. *Mrs. Sullivan asked a number of questions concerning this equipment on inland vessels, I would like to ask some questions regarding radiotelephone equipment on ocean-going vessels.*

A. *What type of radiotelephone equipment, if any, is now used on U.S. flag ocean-going vessels?*

Answer. There are three types of radiotelephone equipment now being used on our ocean-going vessels: HF phone for high seas operation, MF phone primarily for use around harbors and ports, and VHF phone also used for short range contacts. A chart showing how the different equipment is required and used on the various classes of vessels is attached and may be found helpful.

B. *What radio equipment should be required on ocean-going vessels to insure safe navigation?*

Answer. Radiotelegraphy, direction finders, radars, long-range navigation equipment, MF or VHF for intercommunication.

C. *In your opinion, are there any reasons why different equipment should be required for use on inland vessels, deep ocean-going vessels, intercostal vessels?*

Answer. Yes. These vessels have different range requirements. The different types of equipment have different range capabilities. Thus, VHF equipment is generally limited to line of sight; HF equipment can operate over distances of more than a thousand miles.

FEDERAL COMMUNICATIONS COMMISSION  
 PRESENT-DAY RADIOCOMMUNICATIONS USAGE ON BOARD VARIOUS CATEGORIES OF VESSELS<sup>1</sup>

Type of vessel.....	Open sea, coastal, international voyages		Voyages on tidewaters		Voyages on all other inland waters	
	Passenger.....	Cargo over 1,600 gross tons.	Passenger.....	All others.....	Passenger.....	Other s.
Type of voyage.....		Cargo between 1,600 and 300 gross tons.				
Radio installation required.	Telegraphy with 3 operators.	MF telephony.....	MF or <sup>2</sup> VHF telephony.	None.....	None.....	None.
Often supplemented by.	HF, MF, and/or VHF telephony.	VHF telephony.....	None.....	MF or VHF telephony.	MF or VHF telephony.	MF or VHF telephony.

<sup>1</sup> Except for voyages on the Great Lakes.

<sup>2</sup> Subject to certain distance limitations.

## ANNEX III

The following extracts from the Hearings on Bridge-To-Bridge Radiotelephones before the Subcommittee on Coast Guard, Coast and Geodetic Survey, and Navigation of the Committee on Merchant Marine and Fisheries, House of Representatives, July 14, 15, 17 and 29, 1969, Serial No. 91-15, are highlighted in order to ensure that the purposes of H.R. 6971, as amended, will be effectuated.

## QUOTE 1

Rear Admiral Charles P. Murphy, Chief, Office of Merchant Marine Safety, United States Coast Guard, stated the purpose of H.R. 6971 quite clearly in his opening statement in support of the proposed legislation:

"This bill requiring a radiotelephone for exchange of navigational information is considered by the Coast Guard to be a necessary addition to our navigation laws. Such a radiotelephone is viewed as a limited-use device when operated on the safety of navigation frequency, and as an electronic extension of the ship's whistle.

"It would be used only by pilots or masters to tell one another whether they are turning, on what side they intend to pass, whether they intend to anchor, that they are getting underway, that they are approaching a certain bend, or similar maneuvering information." (Hearings—Page 11)

Further, under questioning by Congressman Lennon and Congresswoman Sullivan, he stated at page 22 of the Hearings, Admiral Murphy stated "It would be a single frequency limited to this purpose of exchanging navigational information."

## QUOTE 2

Mr. Patrick J. King, International representative; International Organization of Masters, Mates, and Pilots, AFL-CIO, made perfectly plain the limited purpose of this legislation:

"The point we wish to emphasize most strongly today is that this proposal would provide another aid to navigation, and simply that. It is not proposed as a means of communicating for any other purpose." (Hearings—Page 82)

## QUOTE 3

Mr. Joseph Glynn, President, The Radio Officers Union, AFL-CIO, also expressed his concern over the vague and ambiguous language use in Section 4 of H.R. 6971, as introduced, which is equally relevant to the provisions contained in Section 5 of H.R. 6971, as amended:

"The use of multichannel equipment for bridge-to-bridge navigational communications is really in *diametrical opposition to the purposes of the bill*. The bill—within prescribed geographical limits—would impose a compulsory listening watch upon a designated frequency for purposes of safety. This is fine, but along comes section 4 of the bill which permits anyone using multichannel equipment to make his own decision as to whether he should maintain the "compulsory" listening watch, or switch over to some other sort of communications work. It is that simple.

"This means that with multichannel equipment involved, someone is going to have to make a judgment as whether or not it is "safe" to move away from the safety frequency to another channel. The judgment may be made in the best of faith, and with careful consideration of the facts available at the time, but, nevertheless, if the judgment does prove to be faulty, another tragedy might occur.

"This certainly is not the intent of the bill, nor should it be the result of legislation."

"This matter of 'leaving' the safety frequency has been the subject of some discussion in these hearings. Representative Lennon, Counsel Zincke, and Admiral Murphy discussed this matter (pp. 24 and 25 of the hearings) at some length and there was a doubt as to the words 'immediate risk' as contrasted with 'probable risk' or even 'possible risk'. Underlying the discussion was the thought as to who would make the decision to leave the safety channel and under what conditions.

"Multichannel equipment would compound what has already become a problem: namely, who is responsible for the listening watch on the bridge-to-bridge safety frequency. Admiral Murphy (p. 19, line 10, and p. 24, line 32) is draping some of this responsibility upon the pilots, but the pilots are saying 'not so'".

But yet (on p. 48) Admiral Murphy does state that:

"It is true that in the case of the ship's installed equipment that the master and the mate control this equipment. They could, in a given circumstance, as the bill permits, switch it off to another channel for some other purpose and this would take it away from the pilot in effect. It would not be available to him."

"We do not agree with everything that the representatives of the pilots organizations have said, but we can readily see why a pilot would not want to be held responsible for a listening watch while someone else was using the radiotelephone for another purpose—such as ordering groceries—on another channel."

Captain Cothier (p. 100) states one of the positions of the pilots:

"... we do not feel that we should be responsible for a listening watch on ships' equipment when we have no control over it, and we cannot tell anybody to do it. We can advise them that they should listen to it."

"We suggest that the pilots would not be so deeply concerned with this matter if single-channel equipment were used exclusively and when the equipment was in operation they knew that they were listening to the proper channel.

"And this brings us to another point.

Turning away from the safety channel represents one inherent danger in the use of multichannel equipment. An even greater danger exists when the equipment is inadvertently left on a nonsafety channel but everyone believes that they are listening to the safety channel.

"In such a situation, multichannel equipment would cease to be an aid to navigation and would become a menace to navigation. If you are sailing down a river and are about to meet another vessel, it would be nice to know that he is listening on the right channel if you have to talk with him. With multichannel equipment, you could never be 100 per cent certain. That is a fact." (Hearings—Pages 146-147)

#### QUOTE 4

Mr. Harvey Strichartz, Technical Director, American Radio Association, AFL-CIO, expressed similar concern over this apparent ambiguity in the proposed legislation:

"Let me state plainly and unequivocally, that the passage of a bill requiring radiotelephone equipment aboard the bridges of vessels for exchanges of navigational information on a specified common, single channel, for the sole purpose of the safe navigation of ships, does not, has not, and we would hope would not create jurisdictional problems, if the ambiguities that we are calling attention to are clarified in line with the state purpose of the Bill, to provide for exchanges of navigational information on a single channel.

"As we stated, we assume that it is not the intention of this Bill to transfer the various communications functions of the ship Radio Officers, whether for commercial purposes, for providing navigational information to the vessel, or for distress communications, from the Radio Officers, who are now performing them, to any other person or persons aboard the ship.

"This assumption is supported by the testimony, that all of the vessels in a *single vicinity* should be on a *single frequency*, somewhat similar to the party line of home telephones, that they should all be listening on that navigation frequency, so that all can be aware of the statements made by other ships in their own immediate vicinity as to their maneuvers and intentions.

"Section 4 of the Bill would "permit the use of the radio-telephone on other authorized frequencies within the maritime mobile band when there is no immediate risk of collision". I think there has been sufficient discussion before this Committee on the question of the *immediate risk*, or the remote risk, or any risk of collision.

I would like to address myself to another aspect of the matter: While providing a system exclusively for navigational exchanges, the Bill seems to leave open the possibility that this radio-telephone, which would be placed at the control of the Captain and Deck Officers or Pilot for navigational exchanges might also be used to perform other services, for purposes other than navigation.

"The VHF mode radiotelephone was selected, among other reasons, because of its very short range, that is to say, because its signals would not go beyond the immediate vicinity of the vessel and interfere with other vessels outside its area, and create other problems. With this concept of a single channel for *scene-of-action navigational exchanges* we heartily concur. It is the ambiguities in the Bill that would possibly create the impression that this is not a single channel system, but that ships can be on and off the system at will, that we wish to clarify." (Hearings—Page 154)

## QUOTE 5

The Commission's position in this matter was clearly stated by Mr. Daniel K. Child, Chief, Aviation and Marine Division, Safety and Special Radio Services Bureau in response to a question from Congresswoman Leonor K. Sullivan:

Mrs. SULLIVAN. What really is needed so that we know what to write into legislation to make it mandatory that every vessel have radiotelephone equipment to insure safe navigation, be it AM or VHF? Can you help me?

Mr. CHILD. The ideal situation would be that the man in charge of the vessel while on the bridge would be able to communicate with the person in charge on the bridge of every other vessel in the area. To do this it should be mandatory for every vessel to have VHF transmitter and receiving equipment on the vessel so installed that the microphone and speaker is under the direct control of the person in charge of the operation of the vessel on the bridge. It would be necessary, also that vessels be required to monitor the designated frequency channel at all times while the vessel is underway to avoid the possibility of the responsible officer on the bridge missing a message from another vessel in the area. Provisions should be made for standardization of equipment and operating procedures.

"If the "bridge" radio is a multichannel set physically located on the bridge it will be necessary to monitor the "bridge-to-bridge" channel plus the distress channel 156.8 mc./s." (Hearings—Pages 93-94)

FEDERAL COMMUNICATIONS COMMISSION,  
Washington, D.C., November 24, 1970.

HON. WARREN G. MAGNUSON,  
Chairman, Committee on Commerce,  
U.S. Senate,  
Washington, D.C.

DEAR MR. CHAIRMAN: This is in further explanation of Commissioner Robert E. Lee's letter of November 17 concerning H.R. 6971, an Act to require a radiotelephone on certain vessels while navigating upon specified waters of the United States.

Members of the Commission's staff have discussed the matter at some length with representatives of the Coast Guard. Our position, as expressed in Commissioner Lee's letter, was basically that the last sentence of Section 5 was ambiguous and raised regulatory problems of enforcement, especially in the light of testimony taken in the House hearings, and that it should be deleted. However, if such a change to the bill would preclude its enactment in this session, the Commission, in the interest of avoiding delay in achieving some benefits to navigational safety, would find it possible to refrain from objecting to the bill's present language provided certain observations are included in the Committee Report.

It would be helpful if the Report on the bill were to make clear that a continuous watch should at all times be maintained on the navigation frequency designated, i.e., a receiver should at all times be tuned to the required frequency. Further, because the overriding thrust of the legislation is safety of navigation, the master or pilot of a vessel should exercise extreme caution in making a determination that no risk of collision exists. In congested waters, for example, it may be that a "risk of collision" is always present.

A definition of "exchange of navigational information," mentioned in the November 17 letter, can be handled through agency regulations. It may well be that some modification of the bill may become necessary but this can await some experience under the legislation and further evaluation in the light of the technology then existing.

Sincerely,

DEAN BURCH, *Chairman.*

NOVEMBER 4, 1970.

HON. RUSSELL B. LONG,  
Chairman, Merchant Marine Subcommittee, Committee on Commerce, U.S. Senate,  
Washington, D.C.

DEAR SENATOR LONG: This letter is in reply to your request for the views of the National Transportation Safety Board with respect to S. 1240 (H.R. 6971), a bill to require a radiotelephone on certain vessels while navigating upon specified waters of the United States.

The factor of incompatible communication has arisen, since the Board's formation in 1967, in four major accidents, involving 97 fatalities and the loss of three

seagoing vessels. The Safety Board has expressed support for bridge-to-bridge radiotelephone legislation on two occasions. In our study, Collisions of Radar Equipped Merchant Ships, bridge-to-bridge radio telephone was cited as an important part of a collision avoidance system. Also, in our special study on Towing Vessel Safety, we recommended the Corps of Engineers and Coast Guard jointly study the operational control of vessels in the congested inland waterways, including the need for radio communications capability.

In reviewing Coast Guard reports of investigations we consider all known causal factors. In several major collision cases the lack of bridge-to-bridge radiotelephonic capability was a major causal factor. The collision between the British tank vessel, ALVA CAPE and SS TEXACO MASSACHUSETTS, was a case where two experienced pilots were controlling the operation of these vessels and failed to reach an agreement in a crossing situation. Each vessel had radiotelephone equipment but not covering the same frequency. Had they been able to communicate by bridge radiotelephone the accident might have been avoided. Instead thirty-three lives and the ALVA CAPE were lost.

We presently have under review three collision cases which occurred on the Mississippi River. In each of these cases the facts show the absence of a common and uniform operational safety frequency for radiotelephone communications. The Coast Guard cutter WHITE ALDER was sunk in a collision with the Chinese Nationalist cargo vessel, HELENA, and 17 Coast Guardsmen were lost. The pilot of the HELENA unsuccessfully tried to call the Coast Guard vessel on Channel 13.

The collision of the SS AFRICAN STAR with a tank barge being pushed by the MIDWEST CITIES resulted in the loss of 21 lives and millions of dollars in property damage. Again, these two vessels were operating on different radio frequencies. The third collision involved the Chinese freighter, UNION FAITH and a tank barge being pushed by the W. J. DOUCET. The collision resulted in the loss of 26 members of the Chinese vessel and the resulting fire damaged the greater New Orleans bridge. The freighter and barge sank, becoming an obstruction to navigation in the New Orleans River area. Again, lack of common radiotelephone frequency prevented timely communication.

We have reviewed several other Coast Guard reports of investigation which indicate the urgent need for bridge-to-bridge radiotelephone capability. The Liberian cargo vessel, CHRISTIANE collided with tank barges being pushed by the towing vessel, BARBARA WAXLER in the narrow Houston ship channel. Extensive damage to the freighter and two tank barges resulted, the busy channel was closed to traffic for two days and the potential for a major fire along the shore was very serious. Fortunately, the fire was extinguished. These vessels were unable to communicate on a radio frequency.

Another collision involved the British freight vessel, HALIFAK STAR, and tank barge being pushed by JOHN M. WARREN. In the collision hazardous propylene from the tank barge spewed to a height of 200 feet, blasting off paint from the bow of the freighter and the gas enveloped both vessels in a dense cloud that fortunately was not ignited. This could have resulted in a terrific explosion and fire. Again no common radio frequency was available to the pilots for communication.

In contrast, on the Great Lakes where vessels have been using bridge-to-bridge to shore radiotelephones, very few collisions have occurred in this heavily trafficked water.

Another voluntary radiotelephone system was adopted on the Delaware River and Delaware Bay in 1960. Since then the number of collisions in this area has been cut to a quarter of its former annual rate. The reduction in the rate of collisions is considered to be too substantial to be due to fluctuations in the amount of traffic. This drop in collisions, extending over a ten year period, is considered a definite measure of the effectiveness of bridge-to-bridge radiotelephone capability.

The near future need for bridge-to-bridge radio telephone capability for safety will become increasingly vital with the increase in the size and speed of new super-tankers and cargo vessels, and when ground effect vessels, and hydrofoils become more numerous.

The Board has reported in two cases that the whistle signals and navigation lights required by present law and regulation were not effective in preventing collisions. On diesel vessels, whistle signals are often not heard due to the high noise level. Even when whistle signals are heard and understood, a time lag is involved in hearing and responding to the proposed passing signal. This lag is dangerous when vessels are approaching each other at high speeds. Radio telephone conversation would immediately clarify any doubts concerning the other vessel's intentions, and can quickly insure that the other vessel has received the same message

For these reasons the Safety Board recommends early enactment of S. 1240. The Bureau of the Budget advises that from the standpoint of the Administration's program there is no objection to the submission of this report for the consideration of the Committee.

Sincerely yours,

JOHN H. REED, *Chairman.*

Senator INOUE. Our first witness on H.R. 6971 this morning is Rear Adm. William F. Rea, Office of Merchant Marine Safety, U.S. Coast Guard. Welcome to the committee, sir.

**STATEMENT OF REAR ADM. WILLIAM F. REA, OFFICE OF MERCHANT MARINE SAFETY, U.S. COAST GUARD; ACCOMPANIED BY CMDR. CLIFFORD DeWOLF, OFFICE OF CHIEF COUNSEL**

Rear Admiral REA. Good morning, sir. I am Rear Adm. William F. Rea III, Chief, Office of Merchant Marine Safety, of the U.S. Coast Guard. I have on my left at the table with me Comdr. Clifford DeWolf, Office of our Chief Counsel. Also with me, but not sitting up here at the table, are Comdr. John M. Duke, Merchant Vessel Inspection Division, and Mr. J. L. Stewart, of our Telecommunications Liaison Division.

I appreciate the opportunity to be here to speak to you about S. 1240 and H.R. 6971.

S. 1240 and H.R. 6971 were originally companion bills. As passed by the House, H.R. 6971 contains certain amendments which, in our view, significantly improve it. For this reason, I will comment primarily upon H.R. 6971, as amended, and will point out those areas where S. 1240 differs.

This bill would amend the navigation laws of the United States by requiring all power-driven vessels of 300 or more gross tons, all passenger vessels of 100 or more gross tons, every towing vessel of 26 feet or over in length at the waterline while navigating, and all dredges or similar vessels which are obstructing navigable waters, to be able to transmit and receive navigational information on the maritime mobile VHF-FM frequency or frequencies designated by the Federal Communications Commission in consultation with appropriate Government agencies. S. 1240 does not include towing vessels which were specifically added to H.R. 6971. The bill would require that radiotelephone equipment be for the exclusive use of the master or person in charge of the vessel or the person designated by him to pilot or direct the movement of the vessel, and that a listening watch be maintained while underway. It would allow a relaxation of this watch when there is no danger of collision and the radiotelephone is being used on other authorized frequencies.

Further, reasonable action on the part of the master of a vessel is all that would be required in the event radiotelephone equipment aboard his vessel became inoperative while underway. It would empower the Secretary, with the concurrence of the Federal Communications Commission, to prescribe regulations for its enforcement and would permit the assessment of penalties against persons or vessels in violation. Whereas S. 1240 exempts certain areas, namely the Great Lakes and the Upper Mississippi River system, H.R. 6971 has deleted specific exemptions, amended the section dealing with exemptions, and added a preamble section of intent. The thrust of these modifica-

tions is to guide the Secretary with the intent of legislation and leave the matter of exemptions in his hands.

VHF radiotelephones have been successfully used in the maneuvering of vessels for over 25 years. This type of radio was installed on U.S. Navy vessels during World War II as the TBS, or "talk-between-ships" systems. It was invaluable in assisting zigzagging vessels in convoy and their escorts to avoid collision by permitting deck officers to tell one another what they intended to do. It has been demonstrated to be similarly useful in peacetime in the avoidance of collisions. Although the capability has been available for more than 25 years, and there has been significant voluntary use of the concept, legislation is needed to attain the universal compliance which is necessary for full effectiveness. The bill would assure that all major vessels on U.S. waters have this communication link for navigational safety purposes.

In 1964, a joint Coast Guard-Federal Communications Commission Committee was appointed to determine the desirability of legislation to require radio-telephones on the bridges of vessels for navigational safety and, if so, to submit a preliminary draft. Discussions were held with interested groups, including the shipping industry, labor, and the American Pilots' Association to develop the statutory action. A preliminary proposal for navigational safety radiotelephone on the bridges of vessels was released to the public in July 1965.

The original proposal covered all U.S. waters inside the International-Inland demarcation line, except those subject to the Great Lakes Rules of the Road; it included power-driven vessels of 300 or more gross tons, towing vessels 26 feet and over in length and passenger vessels 65 feet and over in length. After assessing public comment on the proposal, additional provisions were inserted in the draft, excluding towing vessels on the Mississippi River above Baton Rouge and all towing vessels of less than 300 gross tons regardless of route of operation.

The Coast Guard feels that these additional provisions concerning the Mississippi River and towing vessels under 300 gross tons are not in the best interests of safety. Representative of our concern are two recent collisions in the lower Mississippi River, each involving a general cargo vessel and a tug of less than 300 gross tons pushing crude oil barges. Each of the cargo vessel pilots had VHF-FM navigational radiotelephone capability and each of the tugs did not. In one case, the pilot on the cargo vessel had a portable VHF radio tuned to channel 13, the bridge-to-bridge frequency, and had communicated with other upbound vessels establishing passing agreements. Since the tug did not have this capability, and neither vessel admits having heard the passing whistle signals of the other, a collision ensued and many lives were needlessly lost. The 26 feet and over cutoff for towing vessels and removal of the area exclusions as now reflected in H.R. 6971 to enable bridge-to-bridge radiotelephone communication between these types of vessels.

It is probable that the U.S. action in our own territorial waters will promote the use of radiotelephones between approaching vessels on the high seas; this usage was strongly recommended by the congressional committee investigating the *Andrea Doria-Stockholm* collision which

occurred in the spring of 1956. Additionally, overtures to this effect have recently been made at Inter-Governmental Maritime Consultative Organization meetings discussing possible revision of International Collision Regulations.

This bill requiring a radiotelephone for exchange of navigational information is considered by the Coast Guard to be a necessary addition to our navigation laws. Such a radiotelephone is viewed as a limited use device when operated on the safety of navigation frequency, and as an electronic extension of the ship's whistle. It would be used only by pilots or masters to tell one another whether they are turning, on what side they intend to pass, whether they intend to anchor, that they are getting underway, that they are approaching a certain bend, or similar maneuvering information.

The bill would require vessels to have transmitting capability on the safety of navigation frequency or frequencies, but would not require them to have radiotelephone equipment permanently installed. It is intended thereby to permit the use of portable radiotelephone equipment on any vessel, especially on a foreign flag vessel that does not have the equipment installed. While VHF equipment is not required for world merchant vessels, it is coming into common use. Within our waters, portable equipment provided by the pilot will meet the requirements of this bill for all vessels not yet equipped with VHF equipment.

The size and speed of vessels are continually becoming greater, increasing the danger of collisions. Masters and pilots on vessels should be provided with all practical means to help them maneuver their vessels safely past one another. The navigation laws, or Rules of the Road, prescribe what action vessels should take to pass without incident; these rules are good operational guides, but they have certain inherent shortcomings. The Rules of the Road do not—and cannot—comprehensively prescribe for maneuvering of vessels in fog; they do not speak to the problem of three or more vessels converging; they depend on whistle signals and lights that often are unheard or unseen. To resolve doubts often created between approaching vessels, it would be very helpful if pilots could talk to one another directly over radiotelephones carried on the ships' bridges. The Coast Guard considers this bill an essential step in prevention of collisions and finds that it has been strongly endorsed by the maritime community in general. We urge its passage.

My statement includes four minor amendments, two of an editorial nature, one clarifying the method of measuring a vessel's length, and one permitting more flexibility in penalty assessment. Taken in the order in which they occur in H.R. 6971, they are as follows:

Page 2, line 9—“6” should read “7”—this error resulted from re-write of proposal by House committee. The Secretary's power of exemption is contained in section 7.

Page 2, line 17—“at the waterline” should be deleted or changed to read, “measured from end to end over the deck, excluding sheer.” The reason for this is that it is very difficult to measure a vessel at the waterline rather over the deck, a method currently used in other regulations.

Page 3, line 7—“this” should read “the” to be grammatically correct.

Page 5, line 1 and line 4—insert the words “not more than” immediately preceding “\$500”.

This concludes my statement and I am prepared to answer any questions you might have.

Senator INOUE. Thank you very much for the statement. I have here a list of written questions which I will submit to you, and I hope that you will be able to provide the answers to them, and considering that this session may be a very short one, may I respectfully request that your answers be returned to us as soon as possible.

Rear Admiral REA. We will do it immediately.

(The questions and answers follow:)

*Question. What is the rationale for imposing the requirement of H.R. 6971 on the basis of tonnage as opposed to length?*

Answer. Requirements based on either tonnage or length are to some extent arbitrary. However, each of the limitations of H.R. 6971 were chosen with the underlying intent to provide maximum coverage of vessels likely to create safety problems.

Three hundred gross tons was chosen as the lower general limit because it will encompass freight and general vessels which are of a size where maneuverability is more difficult than small work boats and other craft of less than 300 gross tons.

One hundred gross tons was chosen for passenger vessels as an added safety measure for this class and because small passenger vessels of less than 100 gross tons do not have a history of collisions.

Both of these categories also dovetail with limits contained in existing laws and regulations.

Twenty-six feet was chosen for towing vessels to include all such vessels which are likely to be encountered in a pushing or towing mode upon the navigable waters of the United States.

*Question. Does the Coast Guard have draft regulations under H.R. 6971 prepared? If so, please provide them.*

Answer. Yes, they are forwarded as an enclosure.

*Question. Please outline your views on the relative merits of a single channel system versus a multi-channel system with a single calling frequency and separate working frequencies.*

Answer. It is desired to maintain the party line concept whereby vessels can glean intentions of nearby vessels by merely listening. To call on one frequency and shift to a working frequency not only breaks the party line concept, but also introduces time delay and possible error that can be critical in close situations. In fact, experience in busy European ports where the separate calling and working frequency concept is used, indicates that when the navigational situation is critical, vessels revert to the single channel concept and do not shift frequencies. While H. R. 6971 is designed to accommodate for multi-channel operation should it become necessary, we are strongly in favor of the single channel concept emphasized in the Bill.

*Question. Approximately how many existing vessels would be subject to the radiotelephone requirement of H. R. 6971? What is your estimate of the percentage of such vessels currently equipped with the system?*

Answer. Approximately 9600. This includes about 2500 vessels over 300 gross tons, 5400 towing vessels, 160 passenger vessels and 1500 Government vessels.

It is estimated that about 50% of these vessels are currently equipped with the system. Another 20% have VHF-FM radios which could be modified to permit operation in the system; for example by the addition of a guard receiver on 156.65 MHz.

*Question. With respect to each of calendar years 1965 to 1969, please list in columnar form, (a) number of collisions involving two or more vessels that would be subject to the provisions of H. R. 6971, (b) the number of such collisions in which both vessels were equipped with VHF radiotelephone equipment, (c) the annual loss of life resulting from such collisions, (d) the estimated annual property damage resulting from such collisions.*

Question. Please furnish the same information as requested in question 5 with respect to power driven vessels of between 100 and 300 gross tons, and vessels of between 50 and 100 gross tons carrying passengers for hire.

Answer.

[Dollar amounts in thousands]

Calendar year:	5. Both vessels covered by H.R. 6971			6. If the 300 gross tons criterion for power driven vessels were reduced to 100 gross tons the following additional collisions would have been covered			6. If the 100 gross tons criterion for passenger vessels were reduced to 50 gross tons the following additional collisions would have been covered		
	Collisions	Deaths	Property damage	Collisions	Deaths	Property damage	Collisions	Deaths	Property damage
	(a)	(c)	(d)	(a)	(c)	(d)	(a)	(c)	(d)
1965-----	65	10	\$6,428	2	0	\$27	0	0	0
1966-----	52	37	4,967	3	0	14	0	0	0
1967-----	55	0	2,916	5	0	46	0	0	0
1968-----	63	40	4,151	9	0	35	1	0	\$237
1969-----	91	28	3,718	11	0	139	1	0	24

5(b) and 6(b):

From Coast Guard records, we are unable to determine whether bridge-to-bridge radio communication was possible in most cases. Failure to make a passing agreement, the situation to which bridge-to-bridge radio communications is primarily addressed, contributed to all of the following collisions. In these, and we believe an overwhelming majority of the remaining cases, the ability to understand intentions between approaching vessels would have prevented the collisions.

1965—Cedarville/Topdalsfjord, 10 dead, 15 injured.

1966—Alva Cape/Texaco Massachusetts, 33 dead, 14 injured.

1968—African Star/Midwest Cities, 21 dead, 40 injured.

1968—White Alder/Helena, 17 dead, 1 injured.

1969—Union Faith/Warren J. Doucet, 25 dead, 3 injured.

Question. How many existing passenger vessels between 100 and 1600 gross tons would be subject to H.R. 6971?

Answer. 100.

Question. Approximately how many American manufacturers make equipment that would meet the requirements of H.R. 6971?

Answer. Approximately twenty (20).

Question. What is estimated additional cost to the Government which will result from enactment of H.R. 6971?

Answer. Actual enforcement, as indicated in House testimony, would be at little or no cost. Compliance by Government vessels will vary with the type of installation ultimately planned. For instance, most Coast Guard cutters can comply at this time with no additional cost, but long range plans include consideration of a separate receiver for this purpose. Such a receiver will average \$300 per vessel. Assuming similar costs for all Government vessels (about 1500), the maximum cost should be under a half million dollars.

Question. Will enactment of H.R. 6971 have any effect on the Rules of the Road?

Answer. No. As indicated in RADM Rea's statement, the radiotelephone will only be considered as an electronic extension of the ship's whistle. Vessels must, of course, comply with the Rules of the Road at all times, including the proper sounding of all whistle signals.

Question. Do you foresee technical and safety difficulties resulting from the overcrowding of the bridge-to-bridge frequency in congested waters?

Answer. No. By dedicating (limiting) a specific frequency to only navigational conversations, we do not believe it will become overworked. We intend to monitor this frequency to assess the possibility of congested or problem areas and to insure circuit discipline. We will ask the FCC to assist us in this task.

Question. Specifically, what type of information will the use of the bridge-to-bridge channel be limited to?

Answer. Strictly navigational information such as reaching passing agreements, advising another vessel of the intention to turn, slow down, anchor, raise anchor, advising another vessel of dangers ahead, obtaining clearance for passage through locks or bridges, advising other vessels of entry to or departure from a confined waterway, and taking on or discharging a pilot.

*Question. In practical terms, how burdensome do you believe it will be for vessel operators to monitor 158.6, the distress channel, and the bridge-to-bridge channel and their normal business channel at the same time?*

Answer. The monitoring of three channels simultaneously on a vessel should not be a serious problem. In some areas (i.e., New York Harbor) vessels are already monitoring these three frequencies. Two points materially reduce the burden of the operator:

(1) the line of sight nature of VHF propagation eliminates long range interference on these channels,

(2) the type of communications permitted on the distress and navigational channels is strictly limited.

*Question. You indicated in your testimony that the bridge to bridge capability could have possibly prevented the collision between a deepsea ship and a river boat on the lower Miss. Is it not possible that passage of other river safety legislation could have also contributed to the prevention of this and other catastrophies on the river?*

Answer. Yes. As a matter of fact in each of the cases to which RADM Rea's statement referred both the Coast Guard Board of Investigation and the National Transportation Safety Board recommended passage of licensing requirement legislation for tow boat operators as a method of reducing such collisions.

Proposed regulations for Bridge-to-Bridge Radio, contingent upon the enactment of enabling legislation.

### 33 CFR—CHAPTER I

#### SUBCHAPTER Q—NAVIGATIONAL SAFETY RADIO

##### PART 158—Bridge-to-Bridge for Navigable Waters of the United States

Sec. 158.01—Purpose.

Sec. 158.05—Geographical scope.

Sec. 158.10—Application to vessels.

Sec. 158.15—Equipment and location.

Sec. 158.20—Frequency.

Sec. 158.25—Maintenance of equipment.

Sec. 158.30—Listening watch.

Sec. 158.35—Availability and persons using.

Sec. 158.40—General usage limitations.

Sec. 158.45—Exemptions.

Sec. 158.50—Penalties.

##### 158.01 *Purpose*

The purpose of this part is to implement the provisions of the 'Vessel Bridge-to-Bridge Radiotelephone Act' (hereafter referred to as the 'Act'). The regulations prescribe requirements to provide a means for the exchange of navigational information among certain vessels and shore stations, in the interest of preventing collisions. Nothing herein shall limit or preclude the compliance with any signals or maneuvers required by the applicable Rules of the Road.

##### 158.05 *Geographical Scope*

Unless exempted by Subpart 158.45, the regulations in this part apply to all navigable waters of the United States inside the line (as defined in Part 82 of this title) dividing the high seas from inland waters.

##### 158.10 *Application to Vessels*

Unless exempted by Subpart 158.45, the regulations of this part shall apply to:

(a) every power-driven vessel of 300 gross tons and upward while navigating the waters specified in Subpart 158.05.

(b) every vessel of 100 gross tons and upward carrying one or more passengers for hire while navigating the waters specified in Subpart 158.05.

(c) every towing vessel of twenty-six feet or over in length at the waterline while navigating the waters specified in Subpart 158.05.

(d) every dredge and floating plant while navigating or located in or near a channel or fairway within the waters specified in Subpart 158.05.

##### 158.15 *Equipment and Location*

The vessels specified in Subpart 158.10 shall have a portable or installed radiotelephone capable of being operated from the navigational bridge or, in the case of a dredge, from the main central station.

## 158.20 *Frequency and Technical Requirements*

### 158.20-1 *Frequency*

The radiotelephone required by Subpart 158.15 shall be capable of transmitting and receiving on frequencies in the radio frequency band 156–162 MHz using the classes of emissions, power, and such other parameters as may be designated by the proper authority. The specific navigational frequency or frequencies are authorized by the Federal Communications Commission with respect to non-Government stations and by the Director of Telecommunications Management with respect to Government stations.

### 158.25 *Maintenance of Equipment*

Whenever radiotelephone capability is required by Subpart 158.30 of this part, the equipment shall be maintained in effective operating condition. If the radiotelephone equipment carried aboard a vessel ceases to operate, the master shall exercise due diligence to restore it to effective operating condition at the earliest practicable time. The failure of a vessel's radiotelephone equipment shall not, in itself, constitute a violation of these regulations, nor shall it obligate the master of any vessel to moor or anchor his vessel; however, the loss of radiotelephone capability shall be given consideration in the navigation of the vessel. Similarly, the operator of a dredge or floating plant shall maintain the radiotelephone in effective operating condition.

### 158.30 *Listening Watch*

At all times while navigating, or, in the case of a dredge or floating plant operating, on the waters prescribed in Section 158.05 of this part, a continuous listening watch of the prescribed frequency shall be maintained by the master or person in charge of the vessel, or the person who is piloting or directing the movement of the vessel, except when there is no risk of collision and the radiotelephone equipment is being used for authorized traffic. The person maintaining the listening watch shall be able to send correctly and to receive correctly by radiotelephone using the English language. The duties of the person maintaining the listening watch need not be restricted to duties in connection with the radiotelephone, but may include other duties assigned by the master; however, such other duties shall not interfere with the effectiveness of the listening watch.

### 158.35 *Availability and Persons Using*

The radiotelephone equipment required by the Act to be provided for the exchange of navigational information shall be available for immediate use by, and limited to the use of, the master or person designated by him who may be engaged in piloting and directing the movement of the vessel. When there is no risk of collision, this reservation may be relaxed in accordance with Subpart 15i.30.

### 158.40 *General Usage Limitations*

The radiotelephone equipment required by the Act to be provided for the exchange of navigational information is authorized for the following purposes:

(a) To enable persons directing the movement of vessels to communicate with one another and with dredges or floating plants that physically restrict or affect vessel movement. Additionally, it is in the interest of safe navigation of vessels, and therefore permissible, that certain shore stations, such as locks or bridges, be capable of communication on the navigational frequency authorized by the Act. In addition to assisting vessels in the negotiation of specific locks or bridges, such shore stations could, through vantage point or other cause, be in a position to apprise approaching vessels of navigational hazards. Being clearly in the interest of navigational safety, such communication is permissible.

(b) Only transmissions having to do with the safe navigation of vessels, and no others, are permitted on the navigational frequency authorized by this Act. Although not exhaustive, the following types of transmissions are examples of information necessary for safety of navigation—

1. Exchange of maneuvering intentions between vessels;
2. Departure from a mooring or anchorage;
3. Estimated time of arrival at a mooring or anchorage;
4. Entry into a confined waterway;
5. Taking on or discharging a pilot;
6. Approaching environmental or other hazards.

158.45 *Exemptions*

158.50 *Penalties*

Section ----- of the Act of ----- 1970, 33 USC ----- provided as follows:

Senator INOUE. In addition, I have a few questions I would like to ask you at this time. Admiral, in your view, is there anything in this bill that would prohibit the Coast Guard initiating a multi-channel system, employing a calling channel and a working channel, if that were necessary?

Rear Admiral REA. I do not believe it is prohibited. The intent of the bill was that there was to be one single channel dedicated to the safety of navigation frequency, but there is a section, under section 7, which provides an exemption procedure, and this could be utilized if it became necessary to do so. At some point in time there will just be a single frequency and everybody on that.

Senator INOUE. You have mentioned in your testimony that there is already significant voluntary use of VHF systems. Can you estimate what percentage of those vessels to be covered by this bill already have the necessary equipment aboard?

Rear Admiral REA. I could only give you a general statement. A great percentage. On the Great Lakes they are in the process of shifting to VHF. That will take a little longer than some of the other areas because of the international agreement between Canada and the United States, but in time they will be on VHF. We could perhaps furnish the committee more specific data for the record, if you wish.

Senator INOUE. This bill would apply to passenger vessels only if they exceeded 100 gross tons, but vessels of less than 100 tons carry 300 or 400 people. Why did you limit this to under 100 gross tons?

Rear Admiral REA. This cutoff is where the standards and requirements jump up very sharply at 100 tons. We recognize that by cutting off at 100 tons, there are some of lesser tonnage which carry a fair number of passengers, but it was one that seemed to be a reasonable cut, as reasonable a cutoff as any, and we would get the majority of vessels that would carry a large number of passengers.

Senator INOUE. Admiral, you mentioned that with respect to foreign vessels a pilot can bring the VHF equipment aboard. However, the equipment is required on the navigable waters of the United States inside the international-inland demarcation line. Is a foreign vessel likely to have a pilot aboard as soon as it gets into these waters?

Rear Admiral REA. There is perhaps a very technical problem here, like in Ambrose, up in New York. He may not be exactly on the boundary line when he picks them up. I think we can deal with this situation in the regulations.

Senator INOUE. Approximately what is the range of the cost of this type of VHF equipment?

Rear Admiral REA. I do not have that. Perhaps Mr. Stewart has that. Come down here. This is Joe L. Stewart, of our Telecommunications Liaison Division.

Mr. STEWART. In the case of a single-channel equipment that might be carried on board, the prices range from around \$300 to \$600. I am speaking now of a very good grade commercial equipment. I understand that equipment having somewhat less cost is available, but we would not recommend its use. If we are thinking in terms of

the use of a channel in a multichannel equipment, there the cost ranges in the order of \$300 to \$2,500 or \$2,600 for the very deluxe multichannel, 54-channel equipment.

Senator INOUE. The radio required by this bill is not intended to supplant existing radios or to disturb existing collective bargaining agreements; is that correct?

Mr. STEWART. That is correct.

Senator INOUE. Our counsel, Mr. Rouvelas, has some questions.

Mr. ROUVELAS. Thank you, Senator. Admiral Rea, this morning we received from the Federal Communications Commission a letter which suggested an amendment to section 5 of the bill that would eliminate the authority of the master to leave the designated frequency when there is not a risk of collision. Can you tell me what the views of the Coast Guard are?

Rear Admiral REA. I have just learned of this. This was considered at considerable length, and we would consider it more restrictive than necessary. We see nothing wrong with the master or the pilot being able to shift over when there is no risk of collision at the particular time. I think it would be more restrictive than we would like to see enacted in this legislation.

Mr. ROUVELAS. You would prefer that this amendment to the legislation not be made?

Rear Admiral REA. No. I would not want to see this amendment accepted.

Senator INOUE. Our next witness will be Mr. James J. Reynolds, the president of the American Institute of Merchant Shipping.

**STATEMENT OF JAMES J. REYNOLDS, PRESIDENT, AMERICAN INSTITUTE OF MERCHANT SHIPPING; ACCOMPANIED BY ALBERT MAY, VICE PRESIDENT; AND ODELL KOMINERS, COUNSEL**

Mr. REYNOLDS. Mr. Chairman, I have a very brief statement that I would like to read with your permission, and then have a more detailed statement that I would suggest be inserted into the record.

Mr. Chairman, I am pleased to appear before you today on behalf of the American Institute of Merchant Shipping (AIMS) in support of H.R. 6971, as amended by the House prior to its passage of the bill. AIMS member companies own approximately 70 percent of all U.S.-flag ships and are engaged in subsidized and unsubsidized dry cargo liner operations and tanker, dry bulk cargo and barge ship operations in both our foreign and domestic trades.

The bridge-to-bridge telephone communication bill pending before you today is safety legislation of the highest order and we urge its enactment. Its objective is to insure that each vessel have a short distance radiotelephone capability available on the bridge so that the navigator of one vessel can readily exchange navigational movement information with the navigator of another. This navigational telephone is complementary to the use of radar in the avoidance of collision. At the international level, radar is being made mandatory for vessels over 1,600 gross tons.

During hearings by the House Merchant Marine and Fisheries Committee testimony was developed on all aspects of this proposed legislation. Witnesses from all interested Government and non-

Government agencies were heard and a number of amendments were made. Insofar as AIMS is concerned, our views have been fully covered in the House record, and we support the bill as passed by the House of Representatives.

It is our understanding that this legislation as reported by the House is noncontroversial and, in fact, has the support of all segments of maritime industry and labor. Accordingly, we do not believe that it is necessary to take up the committee's time by presenting detailed oral testimony. However, in order that your record may be complete, I do wish to submit herewith as exhibit No. 1 a more complete statement on behalf of AIMS, which I request be included in the record.

There is another technical but highly important subject to the merchant marine, which I would like to propose to the committee as an amendment to H.R. 6971. The recently enacted Merchant Marine Act of 1970, Public Law 91-469, authorizes the lease financing of ships by any citizen of the United States who enters into an agreement with the Secretary of Commerce for a capital construction fund established under section 607 of that act. It was only after hearings on this landmark legislation were completed that we and others realized that by an unfortunate omission authority was not included for persons with operating differential subsidy or with construction differential subsidy to acquire their ships by lease financing rather than by outright purchase. Thus, the statute, as enacted, has the unfortunate and unintended result of allowing lease financing under section 607 only for ships built without construction or operating subsidy. The amendments we propose here today would correct this unintended result and have, I understand, the support of the administration.

It is unfortunate that this oversight was not recognized earlier, but we believe it is of sufficient importance to the success of the new merchant marine program to warrant immediate correction by amendment to H.R. 6971. If the 300 ships called for by the new merchant marine program are to be constructed, U.S. shipping companies will have to raise between \$4 and \$5 billion in new capital during the next decade to pay for the vessels and their related equipment. Our proposal would simply permit subsidized operators and operators of vessels built with construction differential subsidy to use a method of financing which has been so successful in other industries such as the airlines, but subject, of course, to all existing statutory controls and only with the express approval of the Secretary of Commerce.

Attached to my statement as exhibits 2 and 3 are statutory language to amend the 1936 act to authorize lease financing, along with a detailed statement of justification and explanation. I would, of course, be happy to read these exhibits, but in recognition of the very heavy demands on your time during this special session of Congress, I will now present them for the record unless you wish otherwise.

Senator INOUE. They will be included at the end of your oral testimony.

Mr. REYNOLDS. Mr. Chairman, this amendment is one which simply takes care of an unfortunate omission in the perfectly splendid program which the Senate passed not long ago and which President Nixon signed into law a few weeks ago. The practice of lease financing is a well-established, proper, and prudent method of financing in many

industries which require very significant funds for capital outlays. It is used, as I mentioned in my statement, by airlines; it has been used by railroads for the purchase of high-cost diesel locomotives, costing as much as \$300,000 and \$400,000 a unit. There seems no reason why the same practice should not be available to the merchant marine industry, and, indeed, the fact that section 607 specifically refers to lease financing arrangements under that section indicates that there was a deficiency in not spelling it out more clearly in the other sections of the statute. That is what we are proposing to do here—it is as simple as that.

Senator INOUE. Thank you very much, sir. I would like to ask a question on the bill itself, if I may. Can you tell me approximately what percentage of the vessels owned by your members are presently equipped with radio equipment that would meet the requirements of this bill?

Mr. REYNOLDS. Mr. Chairman, unfortunately I cannot answer that with any degree of accuracy. I would like to submit an answer in writing. I am told, for instance, that all our vessels which enter the port of San Francisco are so equipped because there has been, on a voluntary basis, such a practice out there. I am of the general opinion that we would find that most of our vessels, if not already equipped, could readily be equipped with this type of equipment.

Senator INOUE. With respect to your proposed amendment, is there agreement within the industry?

Mr. REYNOLDS. There is general agreement within the industry. If there are any differences, they are on what I would regard as relatively minor technical matters. I would like to doublecheck with counsel and Mr. May.

Mr. MAY. That is correct. We have, at the request of both the administration and your own staff, discussed this proposal over a period of some time with all segments of the industry, the American Maritime Association, the Transportation Institute, the Labor Management-Maritime Committee. All have enthusiastically endorsed the concept of lease financing. All but one, as I understand it, have endorsed the specific language we have proposed.

Senator INOUE. Who was that one?

Mr. MAY. The American Maritime Association has some concern with some of the phrases, and I believe they will express that to you if they feel strongly about it. We have advised them of what we are proposing, and I think they are considering writing you a letter.

Senator INOUE. Why do you propose to insert a statutory requirement of 12.5 percent net worth, rather than continue the present flexibility vested in the Secretary of Commerce?

Mr. REYNOLDS. We assume the flexibility would be there. The Secretary requires 25 percent as a general practice, but there is no statutory requirement. We feel it a prudent thing to spell out in the statute that he must require at least 12.5 percent of the net worth on the part of the operator. We have no anticipation that he would, in practice, do anything other than what he is doing at the present time. It would spell out the fact that he has latitude to put an absolute floor of 12.5 percent.

Senator INOUE. By imposing this floor, don't you think you will take away the flexibility?

Mr. REYNOLDS. It is hard for me to imagine, Mr. Chairman, that the Secretary would agree to any arrangement, such as is contemplated by the statute, for a contract for operating and construction subsidy with any owner who did not have at least 12.5 percent net worth of the value, the cost, of his vessels. Possibly it could restrain him slightly, but I do not think it is anything other than a prudent restraint, quite frankly.

Senator INOUE. Is this the area of disagreement you have within the industry?

Mr. REYNOLDS. Yes, it is.

Senator INOUE. Your proposed amendment goes further than merely dealing with lease financing of new construction and would permit cross-chartering. Do you not think that involves different issues and policy questions?

Mr. REYNOLDS. Well, really lease financing is nothing much more than chartering—if one can think of a hypothetical situation, where a large financial institution with resources that they are interested in investing in the construction of a vessel, would contract to have a vessel constructed, with the understanding that it would be operated by an operator whose capability, qualifications, experience, and financial rectitude bear the scrutiny of the Secretary, in a sense they charter that vessel to that operator. It seems that to be able to charter is only consistent with an arrangement one operator has a need for vessels at a particular time—other than a national emergency—that operator should have the right to cross-charter from another subsidized operator a vessel which is not necessarily needed at that time in another trade area, and always with a careful investigation and approval by the Secretary of Commerce, and with the recommendation of the Assistant Secretary for Maritime Affairs.

Senator INOUE. Is time of the essence on this amendment? Is there some emergency?

Mr. REYNOLDS. Yes, there is. The program envisions outlay of vast sums of money. Unless we have available to the operators this method of financing, I am afraid the implementation of this bill is going to be seriously slowed down.

Senator INOUE. By time, I am speaking of the remainder of this session and the following. We have approximately 30 days remaining.

Mr. REYNOLDS. There are some operators who say that if this became law it would put them in a position to proceed at once to build ships.

Senator INOUE. Thank you.

(The statement and attachments follow:)

#### STATEMENT OF AMERICAN INSTITUTE OF MERCHANT SHIPPING

The American Institute of Merchant Shipping is a national trade association of the steamship industry, composed of 37 United States companies which own and operate 535 U.S.-flag oceangoing passenger and cargo vessels, tankers and dry bulk carriers in the foreign and domestic trades of the United States. These vessels represent 70% of all active privately owned tonnage registered under the U.S. flag and aggregate about 8,800,000 deadweight tons.

This bill would amend the navigation laws of the United States to require a VHF-FM radiotelephone on the bridges of vessels while navigating upon United States waters. The purpose of this short distance radiotelephone is to exchange information from the bridge of one vessel to the bridge of another to insure safe navigation. This objective has our wholehearted support.

Under present day capabilities, when we can talk to a man on the moon, and even when trucks and taxicabs on our city streets use the radiotelephone as a normal instrument of their day-to-day operations, it is almost ridiculous for ships worth tens of millions of dollars, with thousands of dollars worth of radio equipment aboard, not to be able to talk to each other on a routine basis for navigational communication.

In order for navigational communication to be successful a system is required, composed of three essential elements:

1. Each ship within the area must have radiotelephone equipment capable of operating on a common specified frequency or frequencies.
2. Each ship within the area must be listening on the common frequency designated for the area, and
3. The equipment must be constantly available for use by the person in charge of the vessel's movement.

This bill would establish a system encompassing these elements. We support it as a valuable aid to the safety of navigation.

The concept of bridge-to-bridge radiotelephone usage for navigational exchanges as contemplated under this legislation originated within our industry some years ago.

On June 4, 1957 a Special Committee (called together by the Joint Executive Committee for the Improvement and Development of the Philadelphia Port Area) met to explore the feasibility of adopting a simple bridge-to-bridge radiotelephone system as an aid to navigation, with the particular objective of reducing the number of serious accidents that were then common in the Delaware River and Bay area.

Various possibilities were discussed and eventually a program was recommended which, through the cooperation of the Delaware River Pilots, could be made effective on a voluntary basis without the compulsion of law.

The program envisioned inexpensive, simple to operate, single channel voice radio equipment which would be carried by all commercial craft (including government vessels). It would be used solely for navigational exchanges and for scene-of-action communications involving any maritime emergency.

The equipment would either be fitted on the vessel, or brought aboard by the pilot. It would be monitored continuously, and be instantly available for use. Each vessel would be able to hear navigational exchanges between other vessels in the vicinity. For these reasons the navigational exchanges would be conducted on a single-channel restricted to such navigational exchanges, and completely independent of any other communication services of the vessel.

As a result of petitions received from the industry the Federal Communications Commission subsequently designated a VHF-FM radio frequency from within the maritime bands for this specific navigational use.

The Delaware River program became fully operational on November 1, 1960. In later years this bridge-to-bridge radiotelephone concept took hold in other major harbor areas throughout the country. In each case the programs were worked out in cooperation with the pilots and local port authorities. The following listing may not be complete, but to date we know such programs exist in the following ports or waterways: Delaware River, Hudson River, Cape Cod Canal, Chesapeake and Delaware Canal, Mobile Bay and River, Lower Mississippi River, Houston Ship Channel, Sabine-Neches Waterway, Galveston-Texas City Channel, Newark Bay, Tampa Bay and Harbor, and New York Harbor. In most cases the shipowners have financed these programs by payment of a surcharge added to the pilots' bill for the purpose of reimbursing the pilots for rental and maintenance costs or, if equipment is owned by the pilots, for the cost of its maintenance and amortization. In other cases, the shipowners have installed their own equipment.

There are also port radiotelephone systems in existence in the Baltimore Chesapeake Bay area and in Port areas on the West Coast, including San Francisco, Los Angeles, San Diego, Puget Sound, the Oregon Coast and Columbia River Basin. These systems evolved on a somewhat different basis, and include limited coast stations located at points ashore as part of the safety system. For this reason, the frequency of frequencies used are not the same frequency which is used in the single-channel systems.

Experience gained by these voluntary programs has demonstrated that the use of bridge-to-bridge radiotelephone does in fact make a valuable contribution to safety. Statistics supplied by the United States Coast Guard indicate that over a six-year period (1/1/55-11/1/60) prior to the implementation of the bridge-to-bridge radiotelephone program in the Delaware River and Bay there were 1.27

collisions per month. During the four years and eight months (11/1/60-6/30/65) since the institution of the Delaware program, the rate dropped gradually to an *average* of .91 per month. However, during 1964 the rate was only .5 per month; during the first six months of 1965 the rate decreased further to .3 per month—live statistical evidence of the safety value of the continuously monitored, single-channel bridge-to-bridge radio-telephone system. We do not have any statistical data more recent than this. However, we do understand that since this program became operational there has not been a single severe collision in the Delaware area under circumstances when both vessels were in communication with each other.

Many major foreign harbors have installed port radar systems to monitor vessel movement. Ship to shore communication is handled over the VHF radiotelephone and its installation has become an operational requirement for ships using these foreign harbors. Therefore a large percentage of foreign vessels entering U.S. ports are fitted with VHF equipment as are U.S. flag liner vessels that are engaged in operations to foreign ports where VHF port information and radar guidance systems exist. Most tank vessels, operating primarily in the domestic trade, are also fitted with VHF radio.

Radar has long since become an instrument of almost universal usage in the maritime service. It will in the near future become a mandatory equipment for all vessels over 1600 grt by IMCO Regulation. The navigational telephone is a complementary tool which is used with radar in the avoidance of collision.

Many towboats have been fitted with and use the VHF radio in their business operations. Also, they have cooperated in many cases in the voluntary industry programs. However, their cooperation is not necessarily consistent because of their heavy use of the radiotelephone for business purposes. The only real assurance of ability to intercommunicate has been between the larger vessels. This assurance has been accomplished with portable equipment brought abroad by the pilots for use when the ship is not fitted, but this, in itself, is not enough.

An example of the need for a bridge-to-bridge radiotelephone requirement is being created by the construction of the new rapid transit tunnel under the East River in New York Harbor. During the installation of the subway tubes from December 7, 1970 to about June 16, 1971, the West Channel of the East River off 63rd Street, Manhattan in the vicinity of the subway construction site will be closed to navigation for a total of 15 days and its navigable width reduced to 300 feet for a total of 20 days, 320 feet for 46 days, 325 feet for 16 days and 370 feet for 50 days. Only one-way vessel traffic will be permitted while the navigable width of the channel is so restricted. During this critical period great reliance will be placed by navigators and pilots on the use of VHF bridge-to-bridge radiotelephone communication equipment in the interest of avoiding collisions in the area of restricted channel width. Unfortunately, not all vessels navigating this area will have on board VHF bridge-to-bridge radiotelephone equipment, and the Coast Guard presently lacks legislative authority to impose such requirement. It is therefore most important that H.R. 6971 be enacted as soon as possible so that the Commandant of the Coast Guard may have the authority to require the use of VHF radiotelephone equipment on all vessels navigating the East River in the vicinity of the subway tunnel construction.

For reasons such as the foregoing, we believe the time has now come to make the use of VHF radiotelephone an overall requirement. We endorse this bill and commend the Coast Guard and FCC for their cooperative and constructive actions in developing this legislative proposal and submitting it as an Administration bill.

#### EXHIBIT 1

##### TEXT OF PROPOSED AMENDMENTS TO H.R. 6971 TO AUTHORIZE LEASE FINANCING

1. Section 601(a)(2) of the Merchant Marine Act, 1936 (46 U.S.C. 1171(a)(2)) is amended as follows:

By inserting in subdivision (2) following the word "owns" the words "or leases," and by inserting in such subdivision following the word "purchase" the words "or lease."

2. Section 601(a)(3) of the Merchant Marine Act, 1936, (46 U.S.C. 1171(a)(3)) is amended as follows:

Insert at the end of the Section immediately after the words "foreign commerce," the following:

"provided, however, that an applicant shall not be deemed to possess the necessary financial resources unless at the time any application is approved

applicant's net worth, as determined by the Secretary of Commerce, equals not less than 12½% of the purchase price, to the owner, of the vessel or vessels with which applicant qualifies for financial aid, whether such vessel or vessels are owned by the applicant or leased by the applicant from the owner".

3. Section 501(a) of the Merchant Marine Act, 1936, (46 U.S.C. 1151(a)(2)) is amended as follows:

By deleting in subdivision (2) the words "to enable it to operate and maintain" and substituting in lieu thereof the words "for the operation and maintenance of".

4. Section 502(a) of the Merchant Marine Act, 1936, (46 U.S.C. 1152(a)), is amended as follows:

By deleting in the last sentence the words "to enable it to operate and maintain" and substituting in lieu thereof the words "for the operation and maintenance of".

5. Section 805(d) of the Merchant Marine Act, 1936, (46 U.S.C. 1223(d)) is amended as follows:

By striking the last sentence.

## EXHIBIT 2

### EXPLANATORY STATEMENT AND TECHNICAL EXPLANATION OF AMENDMENTS TO AUTHORIZE LEASE FINANCING

Exhibit No. 2 of this testimony sets out the text of proposed amendments to the Merchant Marine Act, 1936, which would permit lease financing in connection with ships having operating and construction differential subsidy.

The recently enacted Merchant Marine Act of 1970, P. L. 91-469, authorizes the use of lease financing by any citizen of the United States who enters into an agreement with the Secretary of Commerce for a capital construction fund established under Section 607 of that Act. It was only after hearings on this landmark legislation were completed that we and others realized that by an unfortunate omission authority was not included for persons with operating or construction differential subsidy to also utilize lease financing. The amendments we propose here today which would correct these omissions have, I understand, the support of the Administration.

Lease financing is a flexible and advantageous financing method which in recent years has been used with great success in financing construction of jet airplanes and other tangible property. Our merchant marine should be permitted to make use of the same financing advantages. Indeed, availability of lease financing is an essential step in achieving our merchant marine goal of constructing 30 new vessels per year in U.S. yards during the next ten years.

Use of lease financing will in no way detract from existing controls over subsidized liner operators, which are contained in present law or in operating differential subsidy contracts. Thus, subsidized operators of leased vessels will continue to be required to meet the Secretary of Commerce's test for ability, experience, financial resources, and other necessary qualifications. In addition, subsidy hearings will still be required under Section 506(c) and subsidized liner operations will also continue to be restricted to essential services.

#### TECHNICAL EXPLANATION

##### *Amendments of Section 601(a)(2) and Section 601(a)(3)*

In its present form Section 601(a)(2) requires that an applicant for operating differential subsidy own, or build or purchase, a suitable vessel or vessels. The amendment would also permit the applicant to lease a suitable vessel or vessels, providing the applicant meets all other requirements of Section 601, including the requirement in Section 601(a)(3) that the applicant possesses the ability, experience, financial resources, and other qualifications necessary to enable him to conduct the proposed operations. It is expected that the Secretary of Commerce will be evenhanded in the application of such requirements to both owners and lessees of vessels. It is also expected that the vessel leasing requirements of the Secretary of Commerce will be equally applicable and available to new applicants for operating subsidy and existing subsidized operators.

In the past, it has been the practice of the Maritime Subsidy Board and its predecessors to require that any applicant for operating differential subsidy qualify financially with a net worth in the operating company equal to not less than 25% of the purchase price of its vessels. The purchase price, of course, does not include construction-differential subsidy payments and payments for national defense features, since these payments are made by the government to the ship-

yard. In order to assure that any applicants for operating differential subsidy will be required to meet at least one-half of the same minimum net worth requirements, the amendment provides that at the time any application is approved the applicant's net worth, as determined by the Secretary, will be not less than 12½% of the purchase price of the vessels to the owners, irrespective of whether such vessels are purchased by the owner-operator or leased by the operator from the owner. In cases where vessels are leased, the purchase price of the vessels to the lessor would be used to determine the lessee's minimum net worth requirement. The 12½% minimum specified in the amendment is not intended to restrict the Secretary's discretion in continuing with a 25% net worth requirement or in imposing other financial requirements.

*Amendments of Sections 501(a) and 502(a)*

Sections 501(a), 502(a) and 504 of the Merchant Marine Act, 1936, permit an application for construction differential subsidy to be made by any shipyard of the United States or by any "qualified" ship purchaser who is a citizen of the United States. If the applicant is the proposed ship purchaser, it must possess the ability, experience, financial resources, and other qualifications necessary to enable it to operate and maintain the vessels. In the case of lease financing of new vessel construction, the operation and maintenance of the vessel would be handled by a qualified operator-lessee, rather than by the purchaser-lessor directly. The proposed amendment would make it clear that the newly constructed vessel may be leased to a qualified operator, providing the lease as well as the other elements of the transaction have been approved by the Secretary of Commerce as meeting the purposes and requirements of Section 501(a). It should be noted that the proposed amendments of Sections 501(a), 502(a) will conform their language to that of Section 1104(a)(1), under which Title XI mortgage guarantees have in the past been granted by the U.S. Maritime Administration for vessel mortgages entered in connection with approved lease financings.

*Amendment to Section 805(d)*

As noted above, under present Section 601(a)(2), an applicant for operating differential subsidy is required to be the owner of the vessel or vessels to be subsidized. The second sentence of present Section 805(d) contains a similar requirement, namely that no operating differential subsidy shall be paid for the operation of any chartered vessel except during a period of actual emergency or except for vessels chartered from the government. In view of the proposed amendment to Section 601(a)(2) which would permit an applicant for operating differential subsidy to acquire its vessels by lease, it is proposed that the second sentence of Section 805(d) be deleted. Continuation of the prohibition against chartering would make lease financing by subsidized operators impossible, since a lease is a charter. With that prohibition eliminated, the Secretary of Commerce will still have full authority and control over all chartered vessels operated by subsidized operators, both by virtue of the statute and the terms of the operating differential subsidy contracts, so as fully to protect the interests of the United States.

Senator INOUYE. Our next witness is Mr. Francis J. Barry, of Circle Lines, New York City. Mr. Barry, welcome to the committee, sir.

**STATEMENT OF FRANCIS J. BARRY, PRESIDENT, CIRCLE LINE-SIGHTSEEING YACHTS, INC., CIRCLE LINE-STATUE OF LIBERTY FERRY, INC., AND HUDSON RIVER DAY LINE, INC.**

Mr. BARRY. Mr. Chairman, my name is Francis J. Barry. I am president of the Circle Lines, which consists of Circle Line-Sightseeing Yachts, Inc., Circle Line-Statue of Liberty Ferry, Inc., and Hudson River Day Line, Inc. We own 14 passenger vessels of over 100 gross tons, which operate in the New York Harbor area.

I sincerely appreciate the opportunity of appearing before you in respect to H.R. 6971, which legislation we are vitally concerned with, as it would require each of our 14 passenger vessels to have a radio-telephone capable of operation from the vessels' pilot house.

Gentlemen, this legislation can, under certain conditions, be of help to pilots of large ships in limited single channels when the number of ships in the immediate area does not exceed two or three at the maximum, and the pilots of these ships are known to each other and the ships are readily identifiable. However, it could possibly create chaos in the New York Bay and Harbor area where many channels cross at varying angles and large areas of the bay have deep water so that medium draft vessels are not confined to the limited marked channels, but proceed across the areas at the angle which serve the purpose of the pilot. The number of vessels traveling in the New York Harbor area at the totally varying angles and in the majority of cases without the necessity or the advantage of marked channels will certainly lead to a disastrous situation due to the number of craft involved using one radio channel, which will result in transmission being cut off and total chaos created where none existed before.

We have been operating passenger vessels in the New York Harbor area for a lifetime, and have never experienced or become aware of one instance where radiotelephone communication between small passenger vessels could improve safety. The most overriding reason why we consider the contents of the bill as a menace to the safety of our relatively small passenger vessels is the permissiveness to compromise the rules of the road, and should two pilots of vessels in a crowded area decide on such a course and because of transmission cutoff or any other radio difficulty, the probably six or eight other vessels in the immediate area would be unaware of the compromise of the rules of the road, and chaos referred to in my opening statement would be a reality.

We therefore respectfully suggest that passenger ships of over 2,500 gross tons be required to comply with the proposed legislation, as these ships are limited to the deeper marked channels, are easily recognized, comparatively few in number, and in command of fully licensed Sandy Hook pilots, who are personally acquainted and can advantageously use this type of communication.

Circle Line companies must particularly object to this proposed legislation where it applies to passenger vessels of over 100 gross tons, as it owns and operates 14 of the 20 inland passenger vessels of over 100 gross tons that are inspected and certificated by the U.S. Coast Guard here in the United States, and must therefore consider the proposed legislation as discriminatory and must emphasize again that we have spent a lifetime in the operation of inland passenger vessels and have been, and will continue to be keenly interested in any legislation that could possibly add to our enviable safety record, and have more experience in the operation of inland passenger vessels than any other owner or operator or regulating body in the United States. We therefore wish to be on record as stating that this proposed legislation, where it applies to inland passenger vessels of over 100 gross tons, as being ill conceived and not in the best interests of those on whom it is planned to impose it, and is, in fact, a most serious threat to the safety of our operations.

Mr. Chairman, this is the end of my statement. I have a few comments, if you wish.

Senator INOUE. Please proceed.

Mr. BARRY. I now note that in the revised H.R. 6971 there is an exception—a towing vessel of any size or horsepower, if such towing

vessel does not have a vessel in tow, alongside or pushing, but Circle Line single vessels are included. Also, there would be 1,000 or more passenger vessels under 100 tons that carry anywhere from 1 passenger to 1,100 passengers—that are not included. I passed this word on to the head of our local in New York yesterday and he said: "Frank, this is going to bring on another man in the pilothouse or increases in the wages of the masters."

Mr. Chairman, it does not make sense in our type of operation. It does not make sense; there is no reason for it. This is good for a single channel where there are two or three vessels and the pilots are known to each other. They know each others language; they know what they are talking about. You have steamlighters, small diesel lighters and other craft under 300 tons, also yachts in New York Harbor, the masters will stay to the Rules of the Road, and those vessels operating by radiotelephone, with everybody crisscrossing there would be problems.

Senator INOUE. Would you mind if I asked the admiral for comments on that?

Mr. BARRY. No objection.

Senator INOUE. Admiral, I would like to hear your views on the statement.

Rear Admiral REA. Mr. Chairman, I would like very much to make a few comments. I should have made a few notes of what Mr. Barry was talking about. I will try to respond to some of the comments. There is no intent of this legislation in any way affecting the Rules of the Road, and the radio is just an extension of the whistle signals. The vessel will still have to give the whistle signals and comply with the Rules of the Road. They have to have the right whistle signals and so on.

Mr. Barry's vessels are radio equipped. I do not know what frequency they are on right now. They go anticlockwise around Manhattan Island. I do not think there will have to be any manning requirements, as apparently somebody suggested at city hall. I think the statement about the number of vessels—and he very specifically used the word "passenger"—I think he is in the ball park on that, but there are a number of other vessels in New York which are carrying Staten Island traffic as well. There are a handful of vessels which carry 300 or 400, something like that, owned by the Blount Corp.

Mr. Barry's boats have an excellent safety record up there. I have no doubt that they are a very well run operation, but I do believe it would be in our interest to include them in.

Senator INOUE. Is there any objection from the Coast Guard to exempting this type of operation from the law?

Rear Admiral REA. You mean the Circle Line boats or that class?

Senator INOUE. Yes; the type that Mr. Barry is involved with.

Rear Admiral REA. We would much prefer to see it in. He is carrying several hundred passengers on these vessels, and I think it is in the interests of safety. If we are going in any direction, we should go the other way. We picked this as a fairly logic law to include most of the vessels.

Senator INOUE. Mr. Barry, how many passengers does one of your boats carry?

Mr. BARRY. Fifty percent carry 500; the others, 600. One vessel carries 3,200. That goes up the Hudson. We would pass a boat on the way up, perhaps from the end of 42d Street to Bear Mountain, every 15 minutes.

Rear Admiral REA. When I was in New York, at that time I was commanding officer of the vessel tied up at Staten Island, and quite frequently coming in and out of there and going up into the Upper Bay, we would go right through other traffic, and we became accustomed to picking up a lot of local customs talking to each other. I do not believe the chaos that Mr. Barry described in here would come about. I think that if there is a serious problem, it is one we could probably deal with within the regulations. In other words, the regulations which would implement this could perhaps deal with this particular matter if the one channel situation just will not handle it.

Mr. BARRY. Admiral Rea has been very specific. What he says, he means; he knows what he is talking about. However, why saddle our type of vessels with this requirement when we have never had an incident? I thought it was all tow boats or oil barges or grain barges or tankers that are involved. There are many vessels carrying 500 passengers under 100 tons. It just does not add up.

Rear Admiral REA. I am reminded of one additional comment. Mr. Barry is speaking to the fact that towing vessels are only required to have this while towing. From a practical point, most of the time they are going to be engaged in towing operations. I do not think that when running without barges you are necessarily going to turn the radio off.

Senator INOUE. Our next witness is Mr. Scott Elder, general counsel for the Lake Carriers Association.

#### STATEMENT OF SCOTT H. ELDER, GENERAL COUNSEL FOR LAKE CARRIERS ASSOCIATION

Mr. ELDER. I have submitted a prepared statement, but in the interests of saving time, I will try to summarize it for you.

Senator INOUE. Without objection, your statement will be submitted in total after your oral testimony.

Mr. ELDER. I want to make four basic points: No. 1, the Lake Carriers are not opposed to this legislation. We feel that every vessels of any size at all, any appreciable size, should have a communications capability. We have found through experience that any radio communication system has to be based on the principle of universality of contact, which means that every vessel out there in the system has to be able to talk to every other vessel.

The second point I want to make is that we are not asking that the Great Lakes be exempted from this legislation. We have no apprehension at all of your making VHF compulsory on the Great Lakes. The fact that we already have VHF on every one of our vessels on a voluntary basis makes no difference. You can make it a compulsory requirement of law, if you want to.

The third point is we recognize that when you are just starting out in the communications business, the appeal of a single channel communication system, a single communication channel has some desirability. It is relatively inexpensive and simple. We find, from our

experience, that you are just not going to be able to survive with a single channel where you communicate; it is going to have to be multichannel. We are sure that you are going to find this out as you progress. Therefore our recommendation is that you broaden this legislation, so that after you have found this single channel will not work, the legislation will be sufficiently broad that you can go to a multichannel system without going back to Congress for additional legislation.

I think there is a basic misconception about bridge-to-bridge communication. Everbody is talking about one ship meeting and passing and talking to the next ship down the line. This is a part of it, but a very small part of it. You have got to see how the radiotelephone is used. The real importance is not necessarily one ship being able to talk; the important thing is the security. This is when a ship backs out of a slip. When a ship reaches a certain point in a crossing situation, he announces his position and he tells the whole world where he is, what his intentions are, what he is going to do. Actually, these ships do not talk to each other that much, but they announce heir position; they announce what they are going to do. This man hears this. He knows, for example, that if he is going up the Detroit River, a ship is backing out of the Great Lakes steel dock or a ship is coming out of the Rouge River. You cannot do this on a single channel system.

What has developed on the lakes, through experience, is a distress safety calling channel. You give your position reports, so that everybody knows where you are, but when you talk to someone you switch to a second channel, and then you clear the safety channel so it is available for other people. If you start cluttering up this one channel, exchanging your passing information, you are going to block it and nobody else is going to be able to use it and it is going to completely bog down. We think it is essential to go to a multichannel system, such as we have on the Great Lakes.

In diverting from my prepared statement, I cannot help commenting on some of the prior testimony that was given. They said that this system would result in chaos. It will not. We have used it for years and it is good and it works. If you go to the multichannel system, your system is not cluttered; everybody can work. We have foreign ships, Canadian ships, United States ships; they all talk to each other. They can announce their positions, where they are going. There is no problem whatsoever—it is a good system. We are just apprehensive that if you go single channel, it is not adequate. If you want to do it, go ahead and find out for yourselves, but at the same time make the legislation broad enough that when you find you have to go to a multichannel system, you can.

To give you a few facts here on the Great Lakes, I can quote from an opinion of the Court of Appeals for the Sixth Circuit. Lake Carriers had a little controversy with the FCC a few years ago over the question of the deviation on the channels. We brought a suit for injunction against the FCC. We lost, but I would like to include the opinion of the court in the record. I do not want to read it, but I think you will find it invaluable as a description of the radiotelephone system, how it is used, what its purpose is, and what its benefits are.

Senator INOUYE. Without objection, it will appear with your prepared statement.

Thank you very much, Mr. Elder. Section 3 requires a radiotelephone capable of transmitting and receiving on a "frequency of frequencies", and I believe the admiral, in his testimony, suggested that the bill is broad enough to permit a multichannel system. Would you agree?

Mr. ELDER. Senator, I believe that if you broaden section 2, that will make it consistent with subparagraph 4 of section 3, and it probably would be adequate. I think probably you should also take a closer look at section 5, where it relates to the listening watch on the designated frequency. There, I think that should be the safety calling frequency that is specified in international regulations, 156.8, whatever it is.

Mr. ROUVELAS. In section 2, could not that language be a reference to just the calling frequency if establishing a single calling frequency and separate working frequency is what is needed?

Mr. ELDER. That is a possibility, but I think you could clean the language up a little bit by saying "frequency or frequencies."

Rear Admiral REA. Section 2 is the intent section, and we would prefer to leave it just as it is. The intent is that there be specific frequencies dedicated to this exchange of information. Further back, we use "frequency or frequencies" because possibly under some situations you may have to have more than one. We could deal with this under the exemption cases, but the intention remains as it is, the intent being a single dedicated frequency.

Senator INOUE. Language in the committee report setting forth legislative intent to indicate that if necessary multichannel systems may be included, would that be sufficient to meet your concerns?

Mr. ELDER. Yes, Senator, I believe it would, and we would also appreciate some indication in the legislative history that the existing Great Lakes system is acceptable as being within the intent of this legislation.

Rear Admiral REA. I think that is a little more than we would like to see at this time. I would rather we leave the machinery to accept the system, certainly for the time being. When they consummate a new Canadian-American agreement, if it proves that we are wrong and the single channel will not work, we will have the machinery for this legislation, but I think that is a little too broad.

Senator INOUE. I believe the bill, as it presently stands, would permit you, administratively, to accept the system.

Mr. ELDER. May I ask Admiral Rea a question? Admiral Rea, is it your feeling that the Great Lakes system would not be acceptable under this legislation?

Rear Admiral REA. We are not going to approach it that way right from the start. We want to carry out the intent in our approach, but we would also, in the meantime, provide you with the provisions of going ahead and operating under section 7 of the exemption, which says: "The Secretary may \* \* \* the conditions he considers appropriate." We hope we are going to continue discussions with you and the Canadians, looking toward the intent of this.

Mr. ROUVELAS. I am disturbed by one thing, Admiral, and that is your emphasis on the exemption for a multichannel system being contained only in section 7 of the act. It seems to me that that is unnecessarily restricting your flexibility. It seems to me that under the

rest of the act, for example, sections 2 and 3, if you find at a later date that you want separate calling and working frequencies, you have the flexibility to require that.

Rear Admiral REA. I think, sir, it is broad enough, the language already there.

Mr. ROUVELAS. The legislative history should show, however, that you are not limited to one frequency, to one channel. You can go the single calling frequency and separate working frequencies.

Rear Admiral REA. I do not think we are barred from accepting that.

Senator INOUE. Thank you very much, gentlemen.

(The information referred to earlier follows:)

#### STATEMENT OF LAKE CARRIERS' ASSOCIATION CLEVELAND, OHIO

My name is Scott H. Elder and I am General Counsel for Lake Carriers' Association of Cleveland, Ohio. The membership of Lake Carriers' Association consists of some 18 separate companies owning and operating an aggregate of 196 bulk cargo vessels enrolled and licensed under the laws of the United States and authorized to be employed either in the coasting trade or foreign trade on the Great Lakes (46 U.S.C. § 258). These vessels have a total trip-carrying capacity in excess of 2,650,000 gross tons and represent virtually the entire American flag Great Lakes bulk cargo fleet.

One of the primary purposes of Lake Carriers' Association is the promotion and preservation of navigational safety. In its endeavor to promote and preserve navigational safety, Lake Carriers' Association has been directly concerned, for many years, in radiotelephone matters affecting the Great Lakes, and, on behalf of its member companies, has frequently appeared before the Federal Communications Commission in rulemaking proceedings involving the development and utilization of radiotelephone communications.

#### CONCERN OF GREAT LAKES VESSEL INDUSTRY

Our concern with H.R. 6971 is twofold. First, it is deficient in that it makes mandatory only a single frequency for the exchange of navigational information. Secondly, where, as on the Great Lakes, there is already in existence a multi-channel, bridge-to-bridge, safety/distress/navigational VHF radiotelephone system, it is unrealistic to maintain a continuous listening watch on an additional frequency which is actually a ship-to-ship working frequency when we are already maintaining a continuous listening watch on the distress/safety/calling frequency.

In essence, based on our experience, we believe that if this legislation is enacted soon it will be found that a single frequency for the exchange of navigational information simply is not adequate and that ultimately, because of the amount of navigational traffic involved, it will be necessary to go to a multichannel system employing the calling channel, working channel technique whereby initial contact is established on the calling channel and then for all non-distress traffic a quick switch is made to one of the working frequencies or channels of the system.

Such being our prediction, we would urge that the legislation be sufficiently broadened so as to permit the Secretary of Transportation to prescribe a multi-channel system, should the need arise, without the necessity for coming back to the Congress for further legislative authorization. In any event, in the interest of effective navigational safety, we would urge that every vessel equipped with a VHF radiotelephone installation be required to monitor the international distress/safety/calling channel, 156.8 mc/s.

In adopting this position the Great Lakes are not asking for an exception, but rather recognition of the fact that there already exists on the Great Lakes a viable working international VHF system, far superior to that proposed by this legislation. An examination of the Great Lakes radiotelephone system will readily explain why the Great Lakes vessel industry has taken this view with respect to H.R. 6971.

#### THE GREAT LAKES RADIOTELEPHONE SYSTEM

When the Communications Act of 1934 was amended in 1937 to require United States vessels to comply with the international maritime radiotelegraph

safety distress system, vessels navigating solely on the Great Lakes were exempted (47 U.S.C. § 352). The reason for the exemption was that, on the basis of experience already had with some radiotelephone equipped vessels, it was concluded that a radiotelephone system could be developed for the Great Lakes which would satisfy basic distress needs and handle as well various types of non-distress communications.

In 1936 there existed on the Great Lakes a number of uncoordinated marine telephone systems, including two unrelated United States public correspondence systems, a Canadian system and a United States Coast Guard system for handling Coast Guard traffic. Among these systems universality of contact did not exist. Subsequently, these systems were coordinated into a common system having universality of contact by designating 2182 kc/s as the safety/distress/calling channel. Thereafter, 2182 kc/s continued as an exclusive Great Lakes safety/distress/calling channel until the International Telecommunications Union (ITU), Atlantic City Radio Conference in 1947, when 2182 kc/s was designated as the world-wide international safety/distress/calling channel.

On November 13, 1954, an agreement between the United States and Canada known as the "Agreement for the Promotion of Safety on the Great Lakes by Means of Radio" became effective, (1952) 3 U.S.T. 4926, T.I.A.S. 2666. This agreement requires that every vessel of 500 tons and over, plus vessels in certain other categories navigating the Great Lakes, be equipped for operation on 2182 kc/s, and that this channel be monitored at all times while under way by a loud-speaker on the bridge of the vessel. In addition, it is compulsory that every vessel be equipped for operation on 2003 kc/s, the intership working channel. In fact, however, the Great Lakes MF radiotelephone system has incorporated in it a number of additional working channels for intership communication and communication with the Coast Guard, as is indicated by the following table:

Function	Channel designation	Frequency
Distress/safety/calling .....	51	2182
Intership—Lakes only .....	52	2003
Intership .....	54	2638
Intership—East Montreal only .....	55	2738
Coast Guard .....	56	2670

The utilization of additional channels, of course, has been made possible because of the principle of making initial contact on the safety calling channel 2182 kc/s, commonly designated channel 51, and then, once contact is made, switching to a designated working channel leaving the safety calling channel free for other traffic.

Even before the Great Lakes agreement came into effect, it was becoming increasingly evident that the MF radiotelephone system alone, although multi-channel, could not handle the growing volume of navigational traffic. Since a very large percentage of navigational traffic is short range, less than 25 miles, the possibility of using VHF was explored. Based on the favorable results of experimental operational studies made in 1946 using forty VHF sets loaned by the United States Coast Guard, Lake Carriers' Association petitioned the FCC for the establishment of a VHF system embodying the principle of universality of contact, found so essential in the MF radiotelephone system.

In the early 1950's the FCC authorized a multi-channel VHF maritime radiotelephone system built around the use of 156.8 mc/s (channel 16) as the safety calling channel. Ultimately, this Great Lakes VHF radiotelephone system furnished the pattern for the present international maritime VHF system specified in the International Telecommunications Union (ITU) radio regulations.

At the Baltic North-Sea Radio Conference (BNRC) held in Gothenburg, Sweden, in September 1955, it first became evident that international standardization of VHF was possible. In January 1957 the conference of European nations at the Hague, Netherlands, resulted in the creation of a 28-channel VHF system using 156.8 mc/s (channel 16) as the safety calling channel. The 1959 Geneva Radio Conference of the International Telecommunications Union (ITU) produced world-wide standardization of the present VHF radiotelephone system.

Since the Great Lakes VHF system antedated both the one adopted at The Hague in 1957 and the international system specified in the International Tele-

communications Union (ITU) 1959 Geneva Radio Regulations, there existed certain differences with respect to channel designations and uses. Consequently, with the cooperation of appropriate United States and Canadian government agencies, the changes in channel designators and the modification of channel functions necessary to bring VHF operations on the Great Lakes into complete accord with those set forth in the 1959 Geneva Radio Regulations were made. Thus, today on the Great Lakes we have a completely integrated international VHF radiotelephone system.

The Great Lakes maritime mobile channels in use in the VHF(FM) bands 156-162 mc/s are listed in the following table:

Function	Channel	Frequency
Intership (primary).....	6	156.3
Intership and limited coast.....	7A	156.35
Intership (secondary).....	8	156.4
Coast Guard and U.S. locks.....	12	156.6
Port operations.....	13	156.65
Coast Guard and canal locks.....	14	156.7
Distress/safety/calling.....	16	156.8

While under existing law VHF is not required on American flag Great Lakes vessels, the system has been so effective that today every Great Lakes bulk cargo vessel and all harbor tugs are equipped with VHF. The regulations of the St. Lawrence Seaway Development Corporation require that all commercial vessels transiting the Seaway be equipped with VHF (33 C.F.R. § 401.102-10), with the result that all Canadian vessels and all foreign flag vessels entering the Great Lakes through the St. Lawrence Seaway are similarly equipped.

#### HOW VHF (FM) IS UTILIZED ON THE GREAT LAKES

Great Lakes vessels continuously monitor through open speakers, both 2182 kc/s (channel 51) and 156.8 mc/s (channel 16) the distress/safety/calling channels in the MF and VHF bands, respectively. As a practical matter, however, VHF now serves as the primary means of intership communications on the Great Lakes, MF(AM) being a dual backup system to VHF(FM). VHF is used to make safety calls between vessels and from ship to shore; it is utilized to contact docks, locks and lift bridges; it receives periodic and special weather and hydrographic information.

Security calls on the distress/safety/calling channels announce a vessel's approach to a harbor, or to a blind river turn and at designated course crossings in the open lakes. Security calls permit vessels to announce their respective positions and intended directions before a contemplated meeting or passing. Thus, much more than simple bridge-to-bridge communications are involved.

It should be apparent from the very volume of VHF radiotelephone traffic existing on the Great Lakes, and the diversified nature of that traffic, and no single-channel system could serve. There are already in existence on the Great Lakes three VHF intership channels for the exchange of bridge-to-bridge navigational information, and, even more channels are needed. Obviously, all these channels cannot be monitored simultaneously on open speakers. Thus, a multi-channel system is made possible only through the use of a single distress/safety/calling channel such as 156.8 mc/s (channel 16).

Through experience a sophisticated distress/safety/navigational VHF radiotelephone system has been developed on the Great Lakes, which system is now in world-wide international use. To now revert to a single-channel VHF radiotelephone system as contemplated by H.R. 6971 and impose a requirement for maintaining a continuous listening watch on an additional channel which is actually a ship-to-ship working channel, will only burden the existing system and serve no useful purpose.

We urge that H.R. 6971 be modified so as to permit a multi-channel VHF radiotelephone system utilizing 156.8 mc/s (channel 16) as the common distress/safety/calling channel.

UNITED STATES DISTRICT COURT, NORTHERN DISTRICT OF OHIO, EASTERN  
DIVISION

LAKE CARRIERS' ASSOCIATION, ET AL, PETITIONERS v. UNITED STATES AND FEDERAL  
COMMUNICATIONS COMMISSION, RESPONDENTS

(Case No. 19,488 in the United States Court of Appeals for the Sixth Circuit)

FINDINGS OF FACT AND COURT'S CONCLUSIONS

THOMAS, J.

Pursuant to its Report and Order in Docket No. 17295, released July 25, 1968, the Federal Communications Commission (FCC) has amended Parts 2, 81, and 83 of its rules pertaining to the maritime mobile service bands 156-162 Mc/s, VHF(FM) radiotelephony to provide principally for reduction of channel spacing from 50 kc/s to 25 kc/s. A concomitant of the channel spacing is new rule, 47 CFR § 83.137, that, in its footnote, specifies that in transmitters "after March 1, 1969, a deviation of  $\pm 5$  kc/s shall be employed." This replaces the pre-existing deviation of  $\pm 15$  kc/s. Docket No. 17295 was commenced on March 20, 1967, when the FCC issued its notice of proposed rule making.

Whenever frequency deviation is expressed,  $\pm$  signs before the kc/s will be understood even though not inserted. To save endless repetition they will not always be given in the text of these findings. Also, it should be understood that kc/s stands for kilocycles (1,000 cycles) per second and Mc/s stands for Megacycles (1 million cycles) per second. Should the /s be omitted following kc or Mc, nevertheless, these wave cycle initials always mean per second.

The FCC allocates portions of the radio spectrum for numerous uses which contribute to the safety of navigation on the Great Lakes. Among these are (a) radar, (b) radio direction finder, (c) two-way voice communication on frequencies in the 2 Mc band (medium frequency), in the maritime service, (d) two-way voice communication on the 4 and 8 Mc bands (high frequency) in the maritime service, and (e) two-way voice communication on frequencies in the VHF (156-162 Mc bands) in the maritime mobile services.

Lake Carriers' Association (sometimes LCA) and its 22 member companies own or operate 206 vessels that account for more than 98% of the total trip carrying capacity of the United States Great Lakes commercial fleet. LCA and 12 of these companies sue the FCC in the United States Court of Appeals for the Sixth Circuit for a review and determination of the validity of the order of March 12, 1969 wherein the Federal Communications Commission, in effect, refused to stay its order of July 25, 1968.

LCA filed its court action following FCC's denial on March 12, 1969, of the LCA's request of February 10, 1969, for a waiver of those Rules which would require operation of VHF transmitters which a 5 kc deviation rather than a 1 kc carrier deviation.

Pending review petitioners ask that the Court of Appeals enter an interlocutory injunction staying the Federal Communications Commission from requiring, with respect to American flag vessels operating on the Great Lakes, that the frequency deviation on VHF radiotelephone channels be reduced from  $\pm 15$  kc/s to  $\pm 5$  kc/s after March 1, 1969\*\*.

Petitioners allege that they will suffer irreparable loss and damage as a result of being denied effective, efficient communications with Canada and other foreign flag vessels; that the safety of navigation on the Great Lakes will be seriously jeopardized through degradation of radio communications; that the vessels of petitioners and their crews will be unnecessarily exposed to increased hazards of collision and injury; that unless the carrier deviation reduction from  $\pm 15$  kc/s to  $\pm 5$  kc/s is coordinated with Canada and other foreign nations whose vessels utilize the Great Lakes, as contemplated by the World Administrative Radio Conference, Geneva, 1967, navigational safety on the Great Lakes will be seriously impaired, exposing persons and property to unnecessary risks, hazards and dangers\*\*\*.

On April 15, 1969, during oral arguments upon petitioners' request for an interlocutory injunction the Court of Appeals transferred the proceedings to the District Court of the United States for the Northern District of Ohio, Eastern Division for hearing as to the issues of material fact presented. The transfer was made pursuant to paragraph (b) of Section 2347 of Title 28 U.S.C.

The Court of Appeals has directed this court to hear evidence and make "findings of fact as to the averments of the petition concerning public safety." Upon completion of the hearing this court is directed to transmit to the Court

of Appeals "a transcript of the evidence, his findings of fact thereon and the entire record of the proceedings before him."

Petitioners' averments "concerning public safety" have marked the outer boundaries of this court's inquiry. The complaint and its attached exhibits and the FCC opposition have been treated as part of the record. Oral testimony of witnesses and physical exhibits have been received. Counsel and the court have listened to test tape recordings and a tape of vessel transmissions received at U.S. Coast Guard Soo Control. Counsel and the court have examined the wheelhouse and radio telephone equipment of the SS Georgian Bay, a Canadian vessel, and the radio telephone equipment of the U.S. Coast Guard Cutter Kaw. Counsel and court also heard transmissions and observed the taping of a tape recording by Coast Guard personnel involving the Kaw and the Steamer Henry G. Dalton. All tapes are in evidence. Finally, proposed findings of fact and closing oral arguments of counsel have been considered.

In view of the extent of the factual inquiry, the parties agree that the hearing held by this court may constitute and be treated by the court of appeals as a hearing on the merits, as to the facts and issues involved, even though the transfer of the proceedings to this court arises out of the petitioners' request for an interlocutory injunction.

Out of the factual inquiry certain controlling questions emerge. These are progressively listed and facts are found in connection with each question. The first question that will be considered may be stated:

I. *What is the meaning and import of the reduced frequency deviation?*

Since March 1, 1969, with respect to VHF (FM) transmitters in the 156-62 Mc bands on American vessels (both merchant and government) and in American coast radio stations (commercial and government) the frequency deviation (modulation limit) of the carrier waves has been reduced from  $\pm 15$  kc/s (wide band) to  $\pm 5$  kc/s (narrow band). In contrast, the existing wide band frequency deviation of the carrier waves of VHF (FM) transmitters on vessels of Canadian and foreign registry and in Canadian coast stations have not been modified.

Very high frequency (VHF) is the frequency range of radio waves from 30 to 300 Megacycles (Mc/s). VHF modulates the frequency of the radio carrier waves (FM).

FM radio is a method of transmission by which the instantaneous frequency of the radio carrier wave is caused to vary in accordance with the modulating signal. This modulating signal may be music or speech or other sounds. The degree of variation, or the amount of variation, if the instantaneous frequency from the initial or carrier wave frequency is called frequency deviation.

By way of contrast medium frequency (MF) designates the frequency bands from 300 kc to 3 Mc, and high frequency (HF) designates frequencies from 3 Mc to 30 Mc. NF and HF employ amplitude modulation (AM). In AM radio transmission the amplitude of the radio carrier wave is caused to vary in accordance with the modulating signal (sound).

The difference in deviation between 15 kc (wide band) transmitters and 5 kc (narrow band) transmitters causes a power ratio between the former and the latter that is computed to be 9.13 to 1. By definition a decibel is a unit for expressing a power ratio that is equal to 10 times the common logarithm of the power ratio. The common logarithm of 9.13 is .96047. Ten times this common logarithm produces 9.6 as the decibel difference between the two signals.

However, this 9.6 decibel difference does not mean that the voice signal received from the wide band transmitter is 9.6 or 9.13 times as loud as the voice signal received from the narrow band transmitter.

Rather, it means that if a VHF receiver is set for 15 kc and receives a voice signal from a transmitter set at 15 kc, that voice signal will be 9.6 decibels louder than an identical voice signal received under identical conditions transmitted under identical conditions by a transmitter set for 5 kc frequency deviation.

Julian T. Dixon, Assistant Chief Engineer of FCC, explained decibels as follows. The peak volume of loudness of the sound of a trombone is 10 decibels louder than the peak volume of loudness of a piano. But this does not mean that a trombone is 10 times louder than a piano. Several other facts about decibels help to explain this measuring unit. One decibel is the amount by which the pressure of a pure sine wave of sound change must be varied in order for the change to be detected by the average human ear. The 1 to 3 decibel step is generally regarded as the smallest change in volume of ordinary speech or music type transmissions which can be noticed by the human ear. Thus, 9 decibels represent three fairly discernible steps in speech level.

A quiet whisper heard from a distance of about 5 feet is about 17 decibels above the threshold of audibility. Zero decibels is the threshold of audibility and 110 decibels is the threshold of pain above which sound is felt as a painful sensation and not really heard. The comfortable level of volume would fall somewhere in this wide range, depending on the individual listener and the ambient noise that the listener is exposed to in addition to the signal. Another source (World Book Encyclopedia) suggests that "Ordinary speech level is about 65 decibels."

This leads to the next question:

II. *In the main, what is the purpose and point of the FCC Report and Order?*

In 1959 International Telecommunications Union (ITU) gave attention to the world wide need for relieving growing congestion in the use of the 2182 kc safety and distress frequency. Recognizing the necessity to provide, among other things, for an increase in channels in the 156-174 Mc/s maritime mobile services band, the ITU's World Administrative Radio Conference (WARC) in 1967 adopted Multilateral Partial Revision of Radio Regulations (Geneva, 1959) and Final Protocol: Maritime Mobile Service. Treaties and Other International Act Series (T.I.A.S.) 6590. This treaty, with the advice and consent of the United States Senate, was ratified by the President on October 17, 1968. Excerpts from the 1959 and 1967 treaties have been made court exhibits and are received in evidence.

In the United States the same need to provide better radio communication for noncommercial pleasure craft caused the FCC to issue its notice of rule making on March 20, 1967, in Docket #17295. The notice recognized an excess of four million registered craft for noncommercial or pleasure purposes. It was estimated that over 400,000 of these craft may wish to use radio. At that time approximately 125,000 vessels of all classes were licensed by FCC to operate on VHF and/or frequencies at 2 Mc. Approximately 90,000 of these vessels are recreational or pleasure craft involved in noncommercial activities.

Yachts and other power driven pleasure craft ply each of the Great Lakes, and connecting and tributary rivers and waterways. No exact figures for the Great Lakes were made available at the trial. Some estimate can be derived from the 1967 Michigan boat registration that included 25,000 boats exceeding 26 feet and probably the greater percentage are equipped with radio. Of course, this total covers yachts operated on Michigan's many inland lakes as well as on adjacent waters of the Great Lakes.

In the notice of rule making the FCC found that: "The current number of frequencies at VHF and at 2 Mc/s will not accommodate an increase in the number of vessels of this magnitude [400,000]."

The notice of rule making proposed the reduction of transmitter frequency deviation from 15 kc to 5 kc.

Conforming to its 1967 notice of rule making the 1968 FCC Report and Order concluded that: "the number of frequencies at 2 Mc/s, even after conversion to a single sideband, are and will be insufficient to handle the quantity of communication generated by vessels presently equipped with radio." [par. 5] [Single band as here used relates to AM, not FM transmissions.]

It pointed out that: "Further deterioration of this situation is inevitable due to the rapid growth in number of recreational vessels; the number of licensed vessels is increasing at the rate of 1,000 per month." [par. 5]

It added that: "Many of these vessels confine their operations to within VHF range of shore and do not require communications over distances as great as that obtainable from 2 Mc/s, under conditions where interference and congestion are not controlling." [par. 5]

The Report and Order establishes 156.80 Mc/s as the VHF calling and safety channel; and this provision is now Section 83.233, effective September 3, 1968.

Following the presidential signature on the Partial Revision are attached several resolutions, including No. MAR 14 that prescribes for channel spacing of 50 kc to 25 kc, and for a maximum deviation of  $\pm 5$  kc/s. The FCC Report and Order spaces new channels 25 kc apart within the 156-162 Mc band. Amended Section 83.359 (47 CFR § 83.359) specifies the frequencies available for assignment as result of the channel splitting. The previously designated channels run from channel 6 to channel 38. The new channels run from channel 65 to channel 87. In all, the total available channels in the 156 to 162 Mc/s bands have been increased from 24 to 48.

New rule 83.137 (47 CFR § 83.137), effective September 3, 1968, incorporates the modulation requirements of the FCC Report and Order. Paragraph (b) provides that: "Transmitters using F3 emission in the band 156-162 Mc/s shall be

capable of proper technical operation with a frequency deviation of  $\pm 5$  kc/s,<sup>1</sup> which is defined as 100 percent modulation. In general, transmitters shall be adjusted so that transmission of speech normally produces peak modulation percentages between 75 and 100 percent."

A footnote to this section provides, in part, "After Mar. 1, 1969, a deviation of  $\pm 5$  kc/s shall be employed; . . ."

Other parts of the Report and Order which have become amendments to Parts 81 and 83 prescribe radio components and procedures to facilitate channel splitting and frequency deviation modulation. However, these provisions need not be described since they do not directly affect the issues under consideration. The pressing and predictable need to open additional VHF(FM) channels, justifies channel splitting from 50 kc to 25 kc, to double the present 24 VHF(FM) available channels in the 156-162 Mc bands.

An activation of channels of 25 kc width may result in interference in adjacent channels should the existing frequency modulation deviation of 15 kc be continued. Hence, an essential element in activating channels of 25 kc width must be a sufficient reduction in the deviation or variation of the modulation of carrier frequency to contain the radiation of signals within the narrow channel width. It is evident that the frequency modulation deviation of  $\pm 5$  kc has a maximum swing of 10 kc which falls well within the width of the split channels, each 25 kc in width. At  $\pm 15$  kc deviation would extend beyond, because of its maximum swing of 30 kc/s.

Since it is a legal question, not to be settled here, this court does not undertake to determine whether Resolution No. MAR 14, attached to the Geneva Final Protocol, providing for completion of the transition to a maximum deviation of 5 kc between January 1, 1972 and January 1, 1973, was ratified, as part of the Treaty, by the Senate and the President. Pertinent portions of the U.S. Treaties (1961 and 1968) have been copied and are forwarded with the record.

Counsel for LCA states that "petitioners do not challenge the sincerity or the motive or objectives of the FCC." He emphasizes that petitioners "believe that yachts and small craft are equally entitled to effective communications and . . . there should be a totally integrated system where the maximum security is provided through radio."

From these references to the small craft noncommercial use of the Great Lakes, principally coast traffic, the interdependent question concerns:

### III. *The extent of Great Lakes commerce.*

In the year 1967, the latest year for which figures are available, the Great Lakes commercial fleet of vessels over 1,000 gross tons, included 259 vessels of U.S. registry, having a combined gross tonnage of 2,915,400 tons, and 192 vessels of Canadian registry having a combined gross tonnage of 2,193,800 tons. These ships may be generally classified as bulk freighters, package freighters, and oil tankers. Associated with Great Lakes commerce are car and railroad ferries, dredges, tugs, barges, scows, and some other related vessels.

The Great Lakes commercial fleet is annually augmented by salt water cargo vessels which enter the Great Lakes via the St. Lawrence Seaway bound for ports on the Great Lakes. It is estimated that more than 500 commercial vessels in excess of 1,000 gross tons navigate the Great Lakes at any one time.

The U.S. Coast Guard and the U.S. Army Corps of Engineers, and equivalent Canadian government administrations support and facilitate Great Lakes navigation in various ways. Among its Great Lakes functions, specially built U.S. Coast Guard vessels break ice in the spring; and the Coast Guard carries on search and rescue (SAR) operations. In 1967 there were 7,964 such assistance cases. The Coast Guard broadcasts U.S. Weather Bureau reports, operates beacons, buoys, and other aids to navigation, enforces maritime regulations, and conducts inquiries into the causes of marine disasters. The U.S. Army Corps of Engineers maintains and operates locks, and operates dredges that clear harbors, river channels, and waterways connecting the Great Lakes.

The activity of the Great Lakes commercial fleet is revealed in the 1967 statistics. In a period of 266 days there were 28,462 vessel passages through the canals at Sault Ste. Marie, Michigan and Sault Ste. Marie, Ontario (both upbound and downbound). In 1967 there were a total of 14,815 vessel passages, exclusive of passenger and sand carriers engaged in local trade, through the Detroit River. Of this total 5,935 were Great Lakes vessels, American and Canadian, and 1,109 were ocean vessels, upbound; while 6,032 were Great Lakes vessels, American and Canadian, and 1,109 were ocean vessels, downbound. During the 1967 navigation season there were 7,290 vessel transits of the St. Lawrence Seaway and 7,457 transits of the Welland Canal.

IV. *What is the utility of VHF(FM) radiotelephony to the Great Lakes Commercial Fleet?*

A treaty between the United States and Canada, known as the Great Lakes Agreement, February 21, 1952, [1952] 3 U.S.T. 4926, T.I.A.S. 2666, effective in 1954, requires every vessel of 500 tons and over and certain other categories of vessels to be equipped with AM radio telephones that will operate from the bridge of the ship on 2182 kc, the calling and safety frequency, and on an intership channel, 2003 kc. Each contracting government is also required to ensure listening watches by coast stations on the 2182 kc distress frequency.

A radio speaker must be located in the wheelhouse and kept open to guard the 2182 kc frequency, designated channel 51. Channel 51 permits receipt of calling, safety and distress messages. Frequency 2003 kc, designated channel 52, is used for intership communication after initial contact on channel 51.

In addition, other channels in the 2 Mc band (2003 through 2582 kc) are available for intership communication, Coast Guard communications, and public correspondence (ship to ship and ship to shore). Channels in the 4 and 8 Mc band, though devoted to public correspondence in the maritime mobile services, are not presently involved.

Beginning about 1951 commercial vessels on the Great Lakes introduced VHF (FM) radio telephones, developed for the armed services in World War II and improved in the postwar years. The LCA and Great Lakes commercial vessel owners petitioned FCC and secured approval for the establishment of VHF (FM) channels. Channel 16 (156.8 Mc) has evolved as the calling and safety channel. Recently, the 1967 WARC Revised Radio Regulations make 156.8 Mc an international calling and safety frequency.

The Great Lakes maritime mobile channels in use in the VHF(FM) bands 156-162 Mc, spaced not closer than 50 kc apart, are listed in the following table:

Function	Channel	Ship	Shore
Intership (primary).....	6	156.3	156.3
Intership and limited coast.....	7A	156.35	156.35
Intership (secondary).....	8	156.4	156.4
Business and operational.....	10	156.5	156.5
Coast Guard and U.S. locks.....	12	156.6	156.6
Port-operations.....	13	156.65	156.65
Coast Guard and canal locks.....	14	156.7	156.7
Distress/safety/calling.....	16	156.8	156.8
Business and operational.....	18A	156.9	156.9
Public correspondence.....	26	157.3	157.3
Do.....	28	157.4	162.0

Under American law (VHF) (FM) radiotelephony is not required on American vessels, except for ships using the St. Lawrence Seaway. St. Lawrence Seaway Regulations, applicable in both Canada and the United States (33 CFR § 401.102-10) require vessels "other than pleasure craft less than 65 feet long" to be equipped with VHF radio telephone equipment in addition to MF equipment. VHF equipment must enable communications of 25 miles. In practice VHF (FM) telephony is now operational on all vessels of the Great Lakes commercial fleet. Foreign vessels entering the Great Lakes are similarly equipped by virtue of the Seaway regulations.

Radio telephones in MF/HF have much greater transmission capabilities than VHF (FM). Radio waves in these frequencies are longer; they can bend and follow the earth's curvature, and they can be deflected by the ionosphere back to the earth. In effect a huge party line, 2182 kc (channel 51), the safety and calling channel, is less effective for short range communications. Moreover, as one ship master put it, "AM is not dependable, and FM is. You can have a severe electric storm and FM can still come through." [R 639] (AM picks up the amplitude modulation of atmospheric static.) However, very high frequency waves, relatively shorter in length, travel substantially in line of sight. Hence, assuming open water and that a ship's antenna is 50' above water, VHF (FM) is reliably readable up to 20 to 30 miles, but can be heard up to 40 or 50 miles. In areas where land obstructions would restrict line of sight wave motion VHF (FM)'s effective distance is correspondingly limited.

VHF (FM) and AM wall phones are mounted, usually, on the right and left sides of the front window of the wheelhouse (also called the pilot house or bridge). These remote control subsets and separate AM and FM speakers are installed in the wheelhouse and in the chart room. Each wall phone is equipped with a hand-

set like an ordinary telephone. Voice communication is activated by depressing a "push to talk" switch. Push buttons on the VHF (FM) wall phone permit selection of channels 16, 6, 8, 12, 14, 10, 26, or 28. Additional speakers and handsets are usually installed in the captain's quarters and in the chart room, if one exists.

VHF (FM) makes security calls between ships (bridge to bridge) and from ship to shore; it contacts docks, locks, and lift bridges; it receives periodic and special weather and hydrographic information; and it permits public correspondence between ships, and between ships and their company offices.

Security calls announce a ship's approach to a harbor, anticipate vessel passings at the confluence of rivers, or at a blind river turn, and at course crossings in the open lakes. Security calls permit ships to indicate their respective positions and intended directions in ample time before the event. As one witness characterized VHF (FM) radio telephone, "normally with the radio telephone we have managed up here in the lakes of talking ourselves out of these situations."

Observance of the Rules of the Road still requires the mate on watch, the captain when on the bridge, and the wheelsman to look and listen at all times. Whistle signals may still announce the ship's movements. Yet, it is evident that close intership communication by signal flag and by flashing light has now been superseded in the Great Lakes commercial fleet by radiotelephonic communication. When visual communication is not possible, at night or in fog, radio telephones are the only means of communication. It is also clear that for short range communication (up to 25 miles) VHF(FM) radio telephones, rather than AM radio telephone, serves as the primary means of intership and ship to shore communication on the Great Lakes. MF(AM) is a dual back-up system to VHF(FM). However, during electrical storms, or in the presence of atmospheric static, VHF(FM) may be the only reliable radiotelephone. Like radar, VHF(FM) has become standard navigating equipment on Great Lakes commercial vessels. VHF(FM) is "a tremendous helpmate to safe navigation," to quote John Manning, superintendent of vessel operations of the Hanna Mining Co.

*V. What has been the effect on VHF(FM) radiotelephonic communications in the 156-162 Mc band produced by narrow banding the American transmitters?*

In accordance with the FCC Report and Order, as incorporated in 7 CFR § 83.137 (previously quoted), on or about March 1, 1969, all VHF(FM) transmitters in the 156-162 Mc band on vessels of U.S. registry and in American shore stations altered the frequency modulation deviation from  $\pm 15$  kc/s to  $\pm 5$  kc/s.

Effective the same date the Interdepartmental Radio Advisory Commission (IRAC) ordered all radio transmitters under its jurisdiction to likewise alter their frequency modulation deviation. IRAC consists of all government agencies having radio transmitting stations. Among the agencies are U.S. Navy, U.S. Army, U.S. Coast Guard, Maritime Commission, the Department of Interior. These government agencies are not subject to the jurisdiction of the FCC. However, FCC and IRAC coordinate their activities; and agreed on the frequency deviation reduction that was ordered.

On the Great Lakes the IRAC order has narrow-banded the transmitters of all Coast Guard vessels and coast stations. Coast Guard Soo Control narrow banded its FM transmitter on April 1, 1969; and its FM receiver was narrow-banded on April 25. The U.S. Army Corps of Engineers is affected by the IRAC order and, though the record is silent, presumably the VHF(FM) transmitter at the American Soo locks, operated by the Corps of Engineers, has been narrow banded.

Two ships' masters testified concerning the operation of their VHF (FM) radiotelephonic equipment. One was Capt. Victor H. Anderson, master of the Steamer Henry G. Dalton. Explaining the purpose to which he puts his VHF telephone, he stated: "Anything pertaining to the safety of navigation of the ship and other vessels concerned; tugs, bridges, just about practically anything." [R 244]

Concerning the reduction of the frequency deviation from  $\pm 15$  kc/s to  $\pm 5$  kc/s, he said he "didn't know [this] at the time [he] left the dock in Lorain, which was approximately 10 days ago." [R 245]

Asked about the quality of communication during these 10 days he answered, "\* \* \* on a couple of different occasions . . . American fleet vessels do not seem to have the power \* \* \*"

As to Canadian vessels, he stated that: "coming down the Soo this past trip \* \* \* One was ahead of us, and one was astern; and of course we have our VHF on, and they were blaring in so loud—they were close, but they were blaring

in so loud we had to turn it down, and after leaving the Soo locks downbound I inquired [of] the Mate, and I said, "Our FM isn't working."

The master added: "Our speaker was still down, and one of our company boats, the Edward S. Kendrick, which was 15 miles astern of us, and he was very, very faint, and we turned up the speaker, and through the course of the river we did hear other Canadians blaring."

He further stated that in the Detroit River "on different occasions from Port Huron down to Detroit we had the same instances." [R. 246, 247]

John Manning, superintendent of vessel operations of the Hanna Mining Co., told of reports he had received from Capt. Duncan C. Schubert, master of the Steamer Joseph H. Thompson of the Hanna fleet. The report was that: "the Canadian shore stations particularly seem to override the American stations, both ship and shore stations, and that also the Canadian vessels came in louder than the American vessels; and he was concerned about the volume control on the set." [R 41]

Capt. Schubert testified later in the hearing. At the Soo he referred to broadcasts coming from VBB, the Canadian Soo station. He indicated that this station blared out on the FM, "because we have one in the chart room going, and we have one in the front room going, and it is too loud, and you are trying to call the quarter-master and the mate, and it doesn't work." [R 633]

This question was put to him by the court: "Well, to go into this; prior to the changeover, as you described it, to narrow side band, what do you say was the comparative volume of the Soo Control, U.S. Coast Guard, and VBB, previous to the changeover?" [R 685]

He answered: "I would say they were compatible and harmonious. They were in harmony with each other. There wasn't any change or adjustment necessary."

Then, speaking of the last trip, he said: "this trip here was unbearable. I ordered the pilothouse to shut the damn thing off because you can't navigate a ship and relay messages and give orders to the wheelsman or the pilot to change the engine speed and have somebody in the background trying to blast everything out of the pilothouse. I can't work that way, so I ordered the thing shut off. We took a chance on AM radio."

On cross-examination he was asked about a portion of his written report to Mr. Manning, received in evidence. This stated: "VBX [VBB], the Soo locks, Canadian, clobbers Soo U.S. Coast Guard Control, and we listen to Soo Control for weather, congestion hazards, and so forth in the St. Mary's River." [R 687]

He indicated that this condition was not really noticed earlier than trip 4. Trip 4 began and ended at Huron, Ohio, April 21 through April 26, 1969.

Capt. Shubert was asked the "effect of the station at Sarnia when you are trying to listen to Belle Island Coast Guard [at the head of the Detroit River just below Lake St. Clair]." He answered:

"Well, most of the time it clobbers them and it just puts them out. In fact, if the VBE station [Sarnia, Ontario, where Lake Huron empties into the St. Clair River] is on at the same time that Port Huron, Michigan, is on, and the man at the St. Clair River is trying to make an announcement, or if the two come on together, the VBE station will drown out the Port Huron Coast Guard station."

He explained these announcements are on the open channel 16.

Lorain Electronics Corporation services the radio telephone equipment (including packaging of equipment made by primary electronic manufacturers) of a majority of the Great Lakes vessels companies. It also operates maritime commercial stations. One of these is Station WAD at Port Washington, Wisconsin (20 miles north of Milwaukee). This station monitors 10 open radio telephone channels. These include "an efficient watch on Channel 16 and on Channel 51 in order to hear any distress traffic or urgent or safety broadcasts." [R 171] The total message traffic in 1968 amounted to 18,327 of which approximately 5,277 were FM calls either sent or received on VHF channels 16, 26, and 28.

In accordance with the FCC Order in Docket #17295 the VHF(FM) transmitting equipment of Station WAD was narrow banded on March 1, 1969. Chief Operator Elmer Ash was asked what effect, if any, this change had on his operations. He answered:

"Well, the first thing we noticed the Americans didn't have the pep or volume, and the Canadians and the Seaway's, the Seaway boats, as they started drifting into our area, they had the normal volume that we experienced over the previous years." [R 174]

He stated that in monitoring these channels it was noticed that they had to turn up the "gain controls on the receivers . . . our volume controls, so we could hear the American ships particularly, without sticking our ears in the speaker." [R 175]

He was then asked, having turned up the audio gain, what results were experienced when talking to Canadian or foreign ships. He answered:

"Well, the Canadian ship called us on 16, or we move it over to 26. Say he called on 16. He would be loud, so he was practically shouting; so we turn down the gain control to understand what he is talking about. You can't understand a signal that is loud." [R 176]

As for the station's transmissions he estimated that "about 50 percent of the time" the captains will ask the station to repeat. [R 183]

Within the body of evidence are various tape recordings. Some of these relate to test communications. The first tape received in evidence was made by technicians in the factory and laboratory of Lorain Electronics. Eight tests were made and tape recorded on April 22, 1969. Test #3 was made with the receiver wide banded (13 kc) and the transmitter narrow banded (4.5 kc). The receiver volume was set to a comfortable quiet room level. In Test #4 the receiver was wide banded and the transmitter was wide banded, with a deviation of 13 kc. The receiver volume was set as in Test #3.

The tape recording was played several times in the court room and the communication on Test #3 was clear and readable. Test #4, on the other hand, transmitted a message that was readable but louder than the Test #3 message.

A second tape recording in evidence was prepared under the direction of John Renner, a practicing consulting electronics engineer since 1947. In this capacity he is employed by LCA. His tape records four test communications received by the Tug Missouri, docked at the tug office dock in the Cuyahoga River in Cleveland, from the Steamer Robert Hobson, moored at the C. & P. Dock, less than  $\frac{1}{2}$  mile away. In Test A, the Hobson transmitter was set at a frequency deviation of 5 kc and in Test B, it was set at a frequency deviation at 15 kc.

The signal received in Test A was normal and readable. The signal received in Test B was readable but definitely louder.

During the hearing, at the request of the court and with the consent of the parties, a tape recording was made by the U.S. Coast Guard. Pursuant to authority of Admiral Ray, Commandant of the Ninth Coast Guard District, Cleveland, Commander Paul T. Anderson, in charge of District Communications, arranged and supervised the Coast Guard personnel making the test. Pre-agreed communications were transmitted first by the U.S. Coast Guard Cutter Kaw and then by the Steamer Henry G. Dalton at 15 kc and at 5 kc frequency deviations. All transmissions were received at the Coast Guard electronic repair shop at the foot of East Ninth Street in Cleveland. The Kaw was at the Coast Guard mooring 75 yards away, while the Dalton was approximately  $2\frac{1}{2}$  miles away docked on the Cuyahoga River.

With reference to each boat the communications transmitted at the wide band (15 kc) deviation were only slightly louder than those transmitted at the narrow band (5 kc) deviation. All signals were readable.

The final test exchanged messages between the two vessels with the transmitter of each set at a frequency modulation deviation first at 5 kc and then at 15 kc. Noticeably to all when the deviation was set at 5 kc the voice signal from the Dalton,  $2\frac{1}{2}$  miles away, came in strong and readable, while the voice signal received from the Kaw, moored 75 yards from the point of reception, was weak.

During a preliminary visit to the radio room of the Kaw, the adjusting screw on the back of the transmitter which alters the frequency modulation deviation was observed. It was stated that approximately a 30-degree turn of the screw makes the adjustment from 15 kc to 5 kc deviation. Also, in the electronic repair shop the use of a modulation meter in actually calibrating or verifying the deviation change on the Kaw transmitter was observed. The entire process took no longer than five minutes.

Capt. Gordon F. Hempton of the U.S. Coast Guard on the staff of the Commandant, is presently assigned at the Chief of Communications Staff, in the Office of Operations at Headquarters, Washington, D.C. Asked whether the Coast Guard had looked into the matter of narrow banding prior to final preparation of the United States' position at the WARC, Capt. Hempton replied:

"As I just testified, the Coast Guard, in our country, is responsible for safety in distress, and in this connection we wanted to be assured that such actions would not interfere or handicap us in this, and my predecessor, Captain Dorian, had certain tests made at our Coast Guard Electronic Engineering laboratory in Washington approximately two years ago, and to his satisfaction, and to my satisfaction, these tests showed there was nothing to be concerned about, that this didn't interfere with our distress operations." [R 701]

On April 24, 1969, the annual meeting of the Coast Guard communications officers was held in Cleveland. The meeting was attended by Capt. Hempton and 25 communications officers, some from as far away as Hawaii and Alaska. The meeting was held in conjunction with the meeting of the Radio Technical Commission for Maritime Services, a government-industry organization to which the LCA belongs. Capt. Hempton stated that:

"At the Coast Guard portion of this meeting the first item which I brought up for discussion was the very question of the narrow banding and were we sure there would be no degradation or difficulty in the maritime safety and distress system as a result of this \* \* \*" [R 703]

He pointed out that after March 1, 1969, the Coast Guard radio stations have been converted "and we had actual live experience working with the narrow banding, and there has been utterly no problems or difficulties known to any of my communications officers anywhere in the Coast Guard, and this included the Great Lakes, of course." [R 703, 704]

Commander Paul T. Anderson was asked whether he had "ever received any complaints regarding change to the new deviation." He answered, "None." [R 512] He was asked:

"You have received no inquiries to the effect of, 'Has something changed in VHF,' or that the VHF, 'isn't as good as it was last year.' You have received no complaints or inquiries along that line?" [R 513]

He answered, "No; I have not."

Capt. John M. Austin, Commander of the Coast Guard base at Sault Ste. Marie, Michigan and Commander of Group Soo, supervises the Soo Control VHF(FM) and AM radio station. He stated he asked: "my controllers, my enlisted controllers as to how this narrow banding has affected their control of traffic. Has it been better or worse, or just the same, and the reply from all was that they could detect no difference in the transmissions received."

Capt. Austin, in speaking of his enlisted controllers, was referring to the enlisted Coast Guard personnel who guard VHF(FM) channels 16 and 12; and MF(AM) channels 51 and 52 in Soo Control, the Coast Guard radio telephone station in Sault Ste. Marie, Michigan. Soo Control regulates and directs, in time of emergency, vessel traffic from Pt. DeTour (the easternmost tip of the Michigan Upper Peninsula) on Lake Huron to Ile Parisienne in White Fish Bay at the east end of Lake Superior. The buoy marked maritime highways wind through a labyrinth of waterways and islands that are loosely called St. Mary's River, varying from the narrow Rock Cut downbound channel and upbound channel on the west and east sides of Neebish Island to great bulges in the river like Munuscong Lake and Lake Nicolet.

On the Lake Survey Charts in evidence Capt. Austin marked the checkpoints at which Soo Control requires each vessel, by radio telephone, to report its draft and its arrival time. Accompanied by its airline distance from Soo Control (the line of sight travel of short radio waves) each point on the upbound and downbound voyages will be designated. Upbound there are three checkpoints: Pt. DeTour, 44 miles; Everens Point (Lookout Pt. 1), 21 miles; Mission Point (Lookout Pt. 3), 2 miles. Downbound there are five checkpoints: Ile Parisienne, 22 miles; Brush Point (the right angled turn east into the Brush Point Ranges), 10.4 miles; Lookout No. 6 (Old Coast Guard Station), 6.1 miles; Mission Point (Lookout Pt. 3), 2 miles; and Rock Cut (Lookout Pt. 4), 16 miles.

Commander Anderson, on his own initiative, requested the taping of operational traffic communications at Soo Control for a 24-hour period covering portions of April 24 and 25, 1969. The tape does not record Soo Control's side of the messages nor was the tape recorder run continuously. As the procedure was explained, the controller switched on the tape recorder whenever a vessel called Soo Control on VHF(FM) open channel 16. No communications on VHF(FM) channel 12 or on AM channels 51 and 52 are recorded. To prevent a pickup of any voice or noise from the controller room, the lead to the tape recorder was connected directly to the audio input into the control receiver speaker. Thus, the message heard on the open channel 16 speaker was simultaneously recorded on the tape recorder. Apparently throughout the recording the original volume setting of the receiver speaker was not changed.

During Commander Anderson's appearance he brought a tape recorder to court and played about half of the Soo tape. Subsequently on May 12, 1969, in the operations office of the Coast Guard, using the same tape recorder, the entire tape was played in the presence of counsel for all parties. The court attended the first three hours of this session and returned for its conclusion three hours later, but his law clerk remained throughout. All of the readable messages received on

April 24, the first at 1541 hours and the last at 2359, some 47 in all, were individually played and repeated until counsel agreed on the identity of the calling vessel and ascribed a readability rating to the message. The QRK, 5 to 1, scale was employed in which primarily in terms of intelligibility, 5 is excellent, 4 is good, 3 is fair, 2 is poor, and 1 is bad. The pertinent data concerning these 47 messages are logged in a court's exhibit.

Of assistance in dissecting the contents of the Soo tape were Soo Control's radio log, its upbound vessel log and downbound vessel log, requested and received after the appearance of Capt. Austin, Commanding Officer in charge of Soo control. These logs list all vessels passing Soo Control (through either the American or Canadian locks). The omission of any checkpoint message on VHF(FM) could thereby be reliably verified.

The critical characteristics of these 47 individually analyzed vessel transmissions have been collated for each of the checkpoints. The evaluation of the balance of the tape is in evidence but does not modify the analysis of the 47 messages that were examined.

At checkpoint DeTour, four messages were received and five were missed on VHF(FM). The presence of these messages on the Soo upbound vessel log, means that Soo probably received them on the simultaneous channel 51 (AM) transmissions from these vessels.

DeTour is 44 airline miles from Soo Control beyond the reliable range of VHF(FM). Hence, it is not surprising that some DeTour VHF(FM) vessel transmissions were not heard by Soo. However, it is significant that all five missed messages involved American vessels. In contrast, three of the four DeTour messages received came from Canadian vessels. The fourth was from an American vessel.

This evidence reflects the greater carrying strength of the wide band Canadian transmissions; and it permits a finding that the narrow banded American transmitters are less effective in the fringe or marginal areas of VHF(FM). It also shows the necessity for AM radio telephone as a backup FM radio telephone. The reverse is true too.

At Everens Pt. (Lookout Pt. 1), 21 miles away on the upbound course, four American transmissions were heard, all rated 4 to 5. Similarly, one of those American transmissions, though here included, came from Lime Island, 30 miles from the Soo. Two Lookout #1 transmissions from a Canadian and a French vessel were each rated 4 to 5.

Going to Ile Parisienne, first checkpoint for downbound vessels, its distance of 22 miles from the Soo is comparable to Everens Point 21 miles from the Soo. All five Ile Parisienne transmissions were received from American vessels. Four of the five were rated 5 and the fifth was rated 4.

Thus it appears, and it is found, that within the maximum reliable range of VHF(FM), i.e., 20 to 30 miles, the narrow banded American transmitters are readable. Moreover, no VHF(FM) transmissions were missed at these distances.

The checkpoint with the next longest distance is Rock Cut (Lookout #4) on the downbound course. It is 16 miles away and southeast of Soo Control. Of the nine transmissions, four were American and five were Canadian. No VHF(FM) transmissions were missed. One American was rated 4 to 5, one started at 4 and dropped to 1, and two were rated only 2. One Canadian was rated 5, two were 4 to 5, and one was rated 4.

The comparison of American and Canadian ratings indicates that the Canadian transmissions were generally more readable. Probably this difference is primarily due to the stronger Canadian wide band transmissions. However, despite this difference generally the American transmissions were found to be readable. The American transmission that dropped from 4 to 1 during its broadcast illustrates a recurring condition noted in the various voice signals. A large factor in making a transmission intelligible and readable is the sender's voice articulation and separation of his words. Moreover, the maintenance of uniform volume (decibels) in his speaking voice can be the difference between intelligibility and unintelligibility of a message. Whether the bridge personnel of Great Lakes vessels receive needed training and refresher instruction in radio telephone communications is not disclosed in the evidence.

The next lower distance is Brush Point Ranges, 10.4 miles from Soo Control. Of the five transmissions (none were missed) four American signals were rated 4 or 5; and the only Canadian vessel was rated 3.

Lookout #6 is 6.1 miles away. Five transmissions were received from this checkpoint and none were missed. Four of the five were American and were rated 4 or 5. The single Canadian vessel was rated 4.

Lookout #3 is only 2 miles from Soo Control. Of the eight transmissions four American were rated 4 to 5; one American was rated 3; and three Canadian vessels were rated 4 or 5. At this short distance one might expect that all transmissions might be 5. Whether the existence of some geographical obstruction might explain the inexplicable does not appear in the record. The mystery is magnified by omission from the VHF(FM) tape of a call from a Canadian vessel and a call from an American vessel, both of which calls are logged at Lookout #3 on the Soo vessel logs. Once more the indispensability of dual VHF(FM) and MF(AM) transmissions, each radio telephone transmitter backing up the other, is demonstrated. Equally established is the necessity of dual guarding of both safety and calling channels, channel 16 (FM) and channel 51 (AM).

After both counsel had completed their oral arguments on May 5, the court initiated a discussion that culminated in an agreement of the parties to have the FCC assign inspectors attached to its Field Engineering Bureau, to go aboard certain vessels to observe and to report conditions as to VHF(FM) communications. The court summarized the agreement in these general terms:

"It was agreed that the FCC investigator is to carry out his normal duties in terms of an inspection, and certainly to hear any and all complaints that the skipper or his mates may have with reference to the VHF communications, and to make observations and make notes, and to be prepared to report on just what conditions he finds.

"In addition to these vessels, it is hoped that these inspectors might also check out conditions with reference to the shore station at Port Washington, WAD, and any other shore stations that may have—that it may be possible to check; that may have figured in the testimony." [R 827]

John W. Reiser and Roy E. Kolly, FCC electrical engineers, were selected by the Field Engineering Bureau to ride the vessels, make the observations, and also to visit and observe conditions at certain shore stations. Each inspector received a copy of the foregoing general instructions of the court. Also, each inspector received a set of more specific written instructions from his bureau, received in evidence.

Each engineer was issued, took aboard, and operated several pieces of equipment on the two vessels ridden by each inspector.

The first was a CEI-VHF(FM) portable receiver and a clip-on antenna, to be attached, where possible, to the roof of the pilot house. The second was a Motorola Gertsch Model FM 7 Frequency Meter to be used to calibrate the receiver. The third piece of equipment was an oscilloscope to measure the frequency modulation deviation of any transmissions received on the CEI portable receiver. To make such a measurement the oscilloscope is connected to the CEI receiver as it receives the transmission under surveillance.

On May 15 and 16, 1969, John W. Reiser and Roy E. Kolly appeared as court's witnesses. In addition to questioning by the court, counsel exercised full cross-examination. Logs made by each witness are in evidence.

Mr. Reiser testified first. He holds a B.Sc. in Electrical Engineering from the University of Michigan, but he also attended Purdue University. He is a licensed radio amateur and operates on AM and VHF(FM) frequencies. His other qualifications in the field of radio electronics were described. He was appointed as an electrical engineer by the FCC in 1961. Since December 1, 1965, he has been Assistant Engineer in Charge, Buffalo office of the Field Engineering Bureau.

At Huron, Ohio on May 9, Reiser boarded the Steamer Joseph H. Thompson, the testimony of those matter, Capt. Schubert, has previously been quoted. While aboard the Thompson, Reiser set up his equipment in the chart room at the rear of the wheelhouse. Both the chart room and the wheelhouse are equipped with radio telephones and speakers that monitor channels 16 and 51.

The Thompson operated upbound to the Soo. Reiser was on watch while it traveled through congested traffic areas. He stood watch through the Detroit River, Lake St. Clair, and the St. Clair River; and through the St. Mary's River to the Soo. He secured his watch at Port Huron and resumed watch in upper Lake Huron. He disembarked at the Soo on May 10 in the late afternoon.

On the afternoon of May 11, Reiser boarded the Steamer Walter A. Sterling at the Soo and rode it downbound. He stood watch through the St. Mary's River and upper Lake Huron. He resumed watch just north of Port Huron at 0825 and remained on watch until it was secured at 1445 where the Detroit River enters Lake Erie. On the Sterling he set up his equipment in the rear of the pilot house and conducted his observations as he did on the Thompson.

After disembarking from the Sterling at Buffalo he traveled to Port Washington, Wisconsin. There on May 13 and 14, he observed operations at Station WAD, previously described in these proceedings by Chief Radio Operator Elmer Ash.

Reiser explained that:

"Because of the lower location of the FCC monitoring antenna on the roof of the ship pilothouse, it was not possible to make measurements on many of the signals heard on the ship's permanent receiver equipment." (R 842)

Nevertheless, as he testified and his log corroborates, Reiser, with his oscilloscope, was still able to make frequency modulation deviation readings of the transmissions of various vessels, Belle Island Coast Guard, Soo Coast Guard, and Canadian shore stations VBE at Sarnia, Ontario and VBB at Canadian Soo. His primary observation on both voyages was that these two Canadian shore stations repeatedly measured excessive modulation. He recorded deviation readings from these Canadian shore transmitters as high as 40 kc/s.

He reported that operators on both vessels complained that these Canadian shore stations would broadcast on channel 16 and interrupt messages then in progress.

It is evident that Reiser found, as Capt. Schubert here emphatically testified, that the Canadian shore stations "clobber" the American stations also transmitting on channel 16. Thus an entry in his log on May 12 at 0178 registered VBE (Sarnia) frequency deviation at 35-40 kc. It noted that the Steamer George Steinbrenner could not be heard.

Reiser's oscilloscope visualized the reason. VBE and VBB have been excessively modulating in the 30 kc to 40 kc range, far in excess of the 15 kc frequency deviation presently required of Canadian VHF (FM) transmitters in the 156-174 Mc/s band.

The FCC, on learning of Reiser's startling findings, notified Canadian authorities. The Canadian authorities have since reported to the FCC that corrective action has been taken. Canadian Teltex confirmation of this report is entered in this record. The pertinent portion reads:

"We confirm that frequency deviation on VHF/FM transmissions from our Sault Ste. Marie/VBB and Sarnia/VBE stations was checked on the evening of May 15 1969 and does not now exceed plus/minus 15 KHZ.

(KHZ, symbols for kilohertz. HZ is a new international abbreviation for cycles per second, to commemorate Heinrich Hertz, the discoverer of electromagnetic waves.)

Reiser heard more foreign vessels than Canadian. This is probably explained by a current strike in the Canadian ore mines. His log entries and his oral testimony confirm that he heard no foreign volume rated "low," and that both Canadian and foreign VHF(FM) volume is louder than American VHF(FM). Nevertheless, he did not observe any ship operator having difficulty in receiving FM messages. His Thompson log notes "Did not observe operators adjusting FM volume controls on speakers." He noted, too, that "Mates usually use handphne set to listen to advisory or weather messages not speaker." Moreover, he stated that he did not observe any "gross differences in loudness on FM channels except VBB and VBE."

Reiser discovered that U.S. Coast Guard Stations, particularly at Belle Island in the Detroit River, are modulating below the prescribed 5 kc. In part, this may be due to a condition noted: "Considerable difference in Detroit Coast Guard operator's speaking of messages." This finding corroborates an earlier reported observation that the manner and uniformity of the speaking voice of the communicator clearly affects message intelligibility; and likewise, whether a message is readable. Whatever the cause the Coast Guard should make needed corrections. Less than  $\pm 5$  kc/s frequency deviation accentuates any contrast in volume of VHF(FM) transmission.

At Port Washington, WAD, a single operator is required to monitor seven AM speakers and three FM channels 16, 26, and 28. Reiser detailed teletypes and other equipment this operator must operate; and listed the sources and volume of traffic. He saw the operators "raise and lower their volume controls" on the receivers "many times." However, he did not hear any repeat requests by these operators except "in the spelling of names of foreign vessels." No missed messages were observed.

Roy E. Kolly followed John W. Reiser to the witness stand, arriving in Cleveland just before he testified. He is a 1965 graduate of the University of Detroit where he received his B.Sc. in Electrical Engineering. Since graduation he has been employed as an engineer in the Detroit office of the Field Engineering Bureau.

Mr. Kolly shipped out from Cleveland on May 10, aboard the Steamer Henry G. Dalton, whose master, Capt. Victor H. Anderson, testified about operation of the Dalton's VHF(FM). On the Dalton he made his observations in the rear of the wheelhouse. His upbound voyage ended at the Soo early on the morning of May 12. On May 13, he boarded the Cason J. Callaway, a U.S. Steel vessel and one of the newest on the Great Lakes. He disembarked at Gary, Indiana. On May 15, he visited and observed conditions at Detroit Marine-Michigan Bell which operates MF(AM) and VHF(FM) stations, which he designated as WFS. His log notes in part:

"Mich. Bell's receivers not narrow banded. Only transmitters \* \* \* Bell has no trouble with receiving ships."

Only on one occasion did the Dalton master complain of the loudness of a Canadian transmission. As to this transmission Kolly noted only a slight difference. Mr. Kolly stated he was able to hear FM transmissions on the Dalton except in three instances. His log reflects 86 transmissions in all.

One missed message involved a transmission between the U.S. Coast Guard and the Westcott (mail boat). The distance of the Westcott was estimated at 20 miles. Mr. Kolly attributed this miss to the Westcott's frequency deviation being about 2.5 kc, producing very little audio signal. He noted the Westcott consistently had less deviation than 5 kc. It should be corrected.

A second missed call occurred when the Dalton's captain switched to channel 6 from open channel 16 in order to hear a conversation between two other ships on channel 6. Kolly continued to hear the call on channel 16.

The third missed call was in the St. Mary's River. Kolly reported that the captain turned down the volume of the open speaker because he could not hear the wheelsman.

On the Cason J. Callaway, Mr. Kolly logged 146 transmissions. One, from the American Vessel Armeo, had a QRK of 2 (poor). The explanation noted was "Carrier [wave] dropping out." Except for this one message he had no difficulty in hearing any of the radio transmissions. Nor did he receive any complaint from the Callaway personnel about any transmission.

Sincere apprehension was expressed by several witnesses called by ECA that if the receiver volume was turned down due to loudness of a transmission from a wide banded transmitter, that thereafter a transmission from a narrow banded transmitter might not be heard at a time of need.

Engineers Reiser and Kolly both reported that the ships rely heavily on FM, using it much more than AM. Neither reported any serious difficulties with reception of American transmissions, except that caused by excessive modulation of the Canadian shore stations. The discovery of this excessive modulation by skilled and objective FCC engineers has already initiated prompt corrective action. It is urged that FCC, without future legal prodding, should adequately monitor these Canadian shore stations, and any other Great Lakes coast or mobile station, whenever complaints are received of over or undermodulation, in order to correct interference with effective VHF (FM) communications on the Great Lakes.

The record discloses that for one reason or another, a receiver (FM or AM) volume control may be turned down; or a message may be missed by bridge personnel. With a cutback to 15 kc/s in modulation of the Canadian shore stations the fingered cause of interference with VHF (FM) communication in the Detroit and Soo areas should now be eliminated. Except for the evidence as to VBB and VBE, the evidence does not establish, as petitioners claim, that the intermixture of 15 kc frequency deviation and 5 kc frequency deviation on the Great Lakes has caused missed messages or is likely to lead to unsafe pilot error in the operation of receiver volume controls.

Nevertheless, it is found that the wide banded transmissions of Canadian and foreign vessels are in fact 9.6 decibels louder than American narrow banded transmissions due to the present intermixture of 15 kc and 5 kc frequency deviation, all transmission and reception conditions otherwise being the same. However, it is found, as Engineer Kolly stated, that the resulting difference in volume "wasn't enough to make the American stations unreliable or anything." [R 1053]

It is further found that the 9.6 decibel difference in loudness experienced by American vessels, as evidenced in this record, can be minimized, if not eliminated, by alterations in the VHF (FM) receivers.

In its letter of March 12, 1969, denying LCA's request for a waiver, FCC stated: "With respect to receiver, audio differences, unpleasantness and overload can be corrected by an audio automatic gain control (AGC) amplifier."

Quizzed as to why there had not been exploration of techniques to alter the situation, Mr. Manning of Hanna Mining Co. answered:

"I knew that this case was coming up very soon, and under the circumstances I would say that if there is a necessity for altering equipment or having additional equipment, it depends on the outcome of this case." [R 90]

Based on a somewhat earlier experience with the Lorain Telephone Company, Mr. Herrick, a consulting engineer and operating vice president of Lorain Electronics, questioned the value of an audio automatic volume control. On the other hand, Julian T. Dixon, FCC Assistant Chief Engineer, persuasive in his qualifications and convincing in his testimony, made it clear that if one chose to eliminate the 9.6 decibel difference with a type of automatic volume control he described, "You can approximate to any desired degree of accuracy." Asked about the cost, he stated that in the simplest configuration the components "would consist typically of two diodes, and two or three resistors, and two or three capacitors, and the cost would only be a few dollars \* \* \*." [R 590]

He added:

"If desired, the limiter to be added could also include an amplifier stage which would help more precisely to equalize the levels." [R 590]  
The cost of this amplifier would be "another few dollars."

Another alteration to reduce or eliminate the 9.6 decibel difference is to narrow band the VHF (FM) receiver.

He itemized the components that would be replaced in the intermediate frequency stage of the receiver to narrow band it. As to cost and time he stated, "these components would represent a small portion of the total receiver components.

"As to time, I believe this could be done rather quickly by service technicians who were equipped for this type of work." [R 607]

Actually the record reveals that narrow banding the VHF (FM) receiver at Soo Control on April 25, took three hours.

Mr. Dixon stated that he "would prefer the narrow band receiver to a wide band receiver with automatic audio volume control, because of other advantage of going to narrow band." He explained:

"The receiver will be less susceptible to interference, and it would be prepared to operate with adjacent split channels in use, and this has to be done anyway; so this it seems to me preferable to make the receivers narrow band as soon as possible and get ready for the future." [R 607]

The FCC letter of March 12, 1969, denying the LCA request for a general waiver concludes:

"Should individual licensees have specific difficulties in making the change we would, of course, consider requests for short term waivers."

Mr. Child conceded that although requests for individual waivers would be considered, he didn't say "they would be granted." Nevertheless, the FCC letter permits the reasonable inference that if in undertaking to make any of the corrective alterations to equipment previously enumerated a vessel owner or operator should encounter "special difficulties," it is likely that short term waivers would be granted until the alterations are completed.

It was conceded by FCC witnesses that unless Canadian and foreign vessels similarly alter their receivers the vessels would experience the 9.6 decibel difference in loudness between transmissions caused by an intermixture of frequency deviations. Significantly, however, no Canadian or foreign vessel personnel testified and no evidence was offered to indicate that those vessels are having any difficulty in receiving American transmissions.

On this subject the LCA electronic consultant, John Renner, stated:

"By far the better way would be—at this point it would have been better to allow the U.S. vessels, the existing users, to continue to use the 15 KC deviation so long as Canada is continuing in that mode of operation, and foreign vessels coming in through Canada also have been, and we feel that this is essential to maintain our system in the efficiency that it has been, and that it could be continued, at least until such time as some coordinated program to change over with Canada could be arrived at." [R. 288]

He went on to say:

"And since the newly derived splits are not going to be assigned in such a way as to not permit continued operation on the existing 50 KC channels on a wide band basis by Canada, and it could be also by us, at least until 1971; we see that nothing is gained at the present time by causing us to reduce our deviation and therefore cause our communications with those whom we have been communicating, and must, the Canadians and the foreign vessels, to be on a degraded basis." [R. 288, 289]

Mr. Dan Child, Chief of the Aviation and Marine Division of the Safety and Special Radio Services Bureau of the FCC, testified about eliminating the 50 kc channels.

He was asked: "You can't really do it entirely in the Great Lakes, can you, until such time as the Canadian and foreign vessels reduce their deviation?" [R. 436] He answered: "I can get something immediately . . . maybe only one channel. Perhaps I can't get the second channel until three months from now, depending on how the new equipment comes."

Child stated that the first new split channel will be "the state control channel \* \* \* for the state boating law administrator." He said that "We also hope to break out a new channel for use of small docks and marinas."

CA counsel then asked him:

"Isn't it a matter of balancing the desirability of getting one more channel, or the desirability \* \* \* of limiting this side interference to a degree, against the inconvenience or any problem that might be created insofar as the American flag vessels of communicating with Canadians or foreign vessels?" [R 438]

He answered, "You might limit this to inconvenience. I believe I can agree with you if you limited that to inconvenience caused to your vessels."

He went on to say that the more people he gets "to 5 kc the less will be the difficulty." He stated that:

"We are getting approximately everyone in the United States. Perhaps as we go to VHF they will come in at 5 KC. This is going rapidly. It could double each year for a while, so we are building quite a system of 5 KC deviation, even in the lakes. The percentage which may not be great today, within a year, by this forceful going ahead, will be considerable number of ships that will be on 5 KC, and this will also cause the Canadians—well, they already are reviewing the situation, but they may wish to come along at a much earlier date, you see." [R 439]

He stressed, too, the factor of not stopping the industry. He testified:

"We know that we must move quickly once we decided to make a change as great as this. That is why you found the rules making in the steps we have. We must not stop the industry, for example, which is what we nearly did. You tell them we are going to a new system and having a new system, and all at once people stop buying the old equipment. \* \* \*." [R 398]

LCA's position, testified to by Mr. Renner and manifested in the searching questioning of Mr. Child by LCA's counsel, Mr. Elder, has a plausible quality. However, the evidence in this record does not warrant a finding that the FCC position, as epitomized in the testimony of Mr. Child, in mandating a 5 kc/s frequency deviation for all American VHF(FM) transmissions is implausible or arbitrary.

By action of IRAC all government radio stations have narrow banded their VHF(FM) transmitters. Judging by the narrow banding of Soo Control's VHF (FM) receiver on April 25, after its transmitter was narrow banded on April 1, 1969, it may be assumed that other government stations are already undertaking the narrow banding of their receivers. Hence, it is manifest that a decreed rollback of the FCC mandated frequency deviation to the prior 15 kc/s will not eliminate intermixture. All government vessels and shore stations operating in the 156-162 Mc/s bands would still be using narrow banded transmitters. This was made clear by Capt. Hempton, USCG. He was asked:

"If FCC rules are rescinded and FCC licensed stations go back to a plus or minus 15 kilocycles per second deviation for transmitters, would that have any effect or requirement on the Coast Guard to take similar action?" [R 713]

Capt. Hempton answered:

"Not unless the IRAC order was also rescinded, and I think this is quite unlikely. The government does not share any concern with this . . . We have spent a great deal of money and time narrow banding, and unless the IRAC order is rescinded, it will not affect us."

#### THE COURT'S CONCLUSIONS

In view of, and in accordance with, the facts found by this court, it is concluded:

1. The reduction of the frequency deviation from  $\pm 15$  kc/s to  $\pm 5$  kc/s of VHF (FM) transmitters in the 156-162 Mc/s band has produced a 9.6 decibel difference in loudness of transmissions received from such transmitters, all pertinent conditions being the same; and this decibel difference to some extent has affected VHF(FM) radio communications within the Great Lakes commercial fleet between American flag vessels and Canadian and other foreign flag vessels. However,

this decibel difference in transmissions has not caused, or is it likely to cause, messages to be missed in the course of said radio communications.

2. In the course of these proceedings a source of serious interference with reception of VHF(FM) communications by American vessels has been detected and identified; namely, the excessive modulation, i.e., frequency deviation of 30 to 40 kc/s, by Canadian shore stations VBE (Sarnia, Ontario) and VBB (Sault Ste. Marie, Ontario). An official Canadian teltex received by this court, via FCC, reports that the frequency deviation of these stations on May 15, 1969, "does not now exceed plus/minus 15 KHZ [15 kc/s]."

3. The 9.6 decibel difference in loudness of transmissions received from VHF (FM) wide band transmissions, as compared with transmissions from narrow band transmissions to the extent that it is affecting VHF(FM) radio communications within the Great Lakes commercial fleet probably be eliminated by feasible alterations that may be made to VHF(FM) receivers. At the very least alterations will diminish any listening difficulty.

4. In view of conclusions 1, 2, and 3 and based upon all of the court's actual findings, the safety of navigation on the Great Lakes has not been "seriously jeopardized" by the effectuation of the FCC frequency deviation reduction on March 1, 1969; nor are the vessels of petitioners and their crews thereby "exposed to increased hazards of collision and injury."

U.S. District Judge.

Senator INOUE. Senator Cotton expresses regrets that he cannot be here and he has requested that an exchange of correspondence between him and the Commandant of the Coast Guard concerning H.R. 6971 be inserted into the record. Without objection, it will be so ordered.

(The correspondence follows.)

MAY 20, 1970.

ADM. WILLARD J. SMITH,  
Commandant, U.S. Coast Guard,  
Washington, D.C.

DEAR ADMIRAL SMITH: There presently is pending before our Committee on Commerce the bill, H.R. 6971, which passed the House on December 16, 1969. As you are aware, this measure proposes to require a radiotelephone on certain vessels while navigating upon specified waters of the United States.

It is my understanding that enactment of such legislation is one of several recommendations included in the President's Message to the Congress on this date dealing with oil spills. In view of this, I would appreciate receiving from you additional information with respect to H.R. 6971 concerning the need, if any, for an affirmative requirement in the measure concerning the use of radiotelephones for the safe navigation of vessels.

Most particularly, I would appreciate being advised as to your opinion concerning the following:

1. Is there a demonstrable need for an affirmative requirement of use of radiotelephones for the safe navigation of vessels subject to the provisions of H.R. 6971 and, if so, should this be specified within the provisions of the bill; or
2. Alternatively, would you suggest an annex to the rules of navigation comparable to that concerning recommendations on the use of radar information as an aid to avoiding collisions at sea; or
3. Is it your opinion that the provisions of the existing rules of navigation (e.g., rule 27, the general prudential rule, and rule 29, the general precautionary rule (good seamanship)) could be so interpreted and applied as to result in such an affirmative requirement concerning the use of radiotelephones and the safe navigation of vessels.

Your timely response to this inquiry will be appreciated.

With best wishes,

Sincerely,

NORRIS COTTON,  
U.S. Senator.

DEPARTMENT OF TRANSPORTATION,  
U.S. COAST GUARD,  
*Washington, D.C., June 9, 1970.*

HON. NORRIS COTTON,  
*U.S. Senate,  
Washington, D.C.*

DEAR SENATOR COTTON: This is in answer to your letter of 20 May 1970 concerning the Bridge-to-Bridge Radio telephone Bill, H.R. 6971. You have raised three very pertinent questions: is there a need for an affirmative requirement to use radiotelephones, would an Annex to the Rules of the Road, similar to the Radar Annex, be worthwhile, and do Rules 27 (General Prudential Rule) and 29 (Good Seamanship Rule) sufficiently apply in the absence of an affirmative requirement?

H.R. 6971 was designed to have all vessels listen on the same frequency. It is intended that when 2 or more vessels approach so as to involve risk of collision, there will be no doubt but that one can contact the other and relay intentions. We believe that this positive ability of one vessel to contact an approaching vessel is a vital step toward collision reduction. The inability to establish such contact, either because vessels were not equipped with, or listening to, the same frequency is a factor common to most serious collisions.

By requiring all vessels to guard the same single frequency, not only are 2 vessels able to relay their intentions without loss of communication contact, but other vessels in the vicinity may also listen and be apprised without the need for additional communication.

The majority of meeting situations are negotiated without incident. With the assurance that all vessels are listening to a common frequency, pilots of approaching vessels, if they have doubts or apprehension, will not hesitate to communicate with one another. To require all vessels to communicate, would not improve the safety of such an arrangement, and would foster a significant amount of excess transmission. This could be particularly undesirable in those situations when several vessels are in the same vicinity. Accordingly, the Coast Guard opposes any affirmative requirement to transmit. It is in the interest of safety that vessels be required to listen, only, upon a specified frequency. Because transmissions relate so closely to the exigencies of prevailing circumstances, they must be left to the discretion of the pilot which, of course, is within the purview of Rules 27 and 29.

The Radar Annex to the International Regulations for Preventing Collisions at Sea, is an excellent set of seamanship Rules which can be likened unto a history of Radar's impact upon the Rules as interpreted by the Courts.

An Annex addressed to Bridge-to-Bridge Radiotelephone used in execution of the Rules will be a valuable addition. We do not, at this time, have the operational experience upon which to base such an Annex. If Bridge-to-Bridge Radiotelephone legislation is passed, we would envision a need for two or more years of operational experience. At that time, through a committee of actual users, we would draft such an Annex for subsequent public approval and ultimate adoption. It is our view that success in such a course of action would not only enhance operations in U.S. waters, but would also give impetus for international acceptance.

It is hoped the above material has been responsive to your letter. Should you wish additional information, please do not hesitate to ask.

Sincerely,

C. R. BENDER,  
*Admiral, U.S. Coast Guard Commandant.*

Senator INOUE. I have here another memorandum that Senator Griffin regrets that he cannot be at this hearing.

We will now proceed to the bill relating to the United Seamen's Service, and our first witness will be Admiral Gano, United States Navy (Retired).

Welcome to the Committee, sir.

**STATEMENT OF VICE ADM. ROY A. GANO, U.S. NAVY (RETIRED)  
PRESIDENT, UNITED SEAMEN'S SERVICE; ACCOMPANIED BY  
EDWARD J. SETTE, EXECUTIVE DIRECTOR; AND JOHN I. DUGAN,  
GENERAL COUNSEL**

Vice Admiral GANO. Mr. Chairman, I have a brief statement. I would like to read it.

Senator INOUE. Please proceed, sir.

Vice Admiral GANO. I am Vice Admiral Roy A. Gano, U.S. Navy (Retired). It is a great privilege to come before your Committee as President of United Seamen's Service, a position I have held without financial compensation since July 1961. While on active duty as Commander of the Military Sea Transportation Service, I became aware of the important work of this organization.

In my capacity as President, I ask passage of S. 2497. The bill involves no appropriative action and is in no sense a money bill. The bill will provide the recognition that United Seamen's Service requires in carrying out its mission, namely, "to provide for the health and welfare of seamen of the United States and the United Nations."

United Seamen' Service was organized in 1942 upon the request of the War Shipping Administration and with the approval of President Roosevelt, as a non-profit agency to promote and foster the welfare of the seamen and other personnel of the merchant marine of the United States, and to provide and maintain club-houses and other facilities for their use and in recreational, medical, educational, religious, personal and other services for their benefit. The Certificate of Incorporation was signed by Admiral Emory S. Land and Captain Edward MacCauley on August 18, 1942. These services have continued from World War II to the Korean war and now through the Vietnam conflict.

The original authorization and channels for cooperation with the various governmental departments was obtained through the executive branch to which the War Shipping Administration reported directly. In the intervening years, changes in governmental structures and procedures, as well as in personnel, have resulted in a lack of knowledge of United Seamen's Service and have made cooperation with the various governmental departments more difficult and has increased the cost to United Seamen's Service for providing these necessary programs. This bill will redefine for all governmental departments the nature and purposes of United Seamen's Service and will establish an identifiable legal basis for providing the required cooperation.

As you have seen from the testimony before the House committee on an identically introduced bill, H.R. 15549, the availability of these services has saved the U.S. Government and the American taxpayer many millions of dollars in payments that would have been obligated by maritime contacts if services had not been available in the ports of Vietnam.

I would like now to direct myself to some questions that have been raised regarding possible cost to the Government. I would like to repeat that this is not a money bill and requires no appropriation of funds. In military ports where certain services such as water, power, fire protection, and sanitary services are provided without charge to the

agency, they are part of and included in the funding of the total port operation and are only provided on an "as available" basis.

I would like to cite our experience in Vietnam to show how the voluntary dollar which the United Seamen's Service spends, cooperates with the available services with the Department of Defense to save tax dollars, and increases the effectiveness of our shipment of goods and supplies. In Cam Rahn Bay, our main support center in Vietnam, land was made available to our organization late in 1965. A prefabricated building was constructed in Okinawa, shipped to Vietnam by an MSTs controlled vessel on a "space available" basis, erected and equipped in Cam Rahn Bay at a cost to United Seamen's Service of \$197,431.35. In Qui Nhon, another important supply base for our men in Vietnam, a building was erected and equipped at a cost to United Seamen's Service of \$89,648.82. When these buildings are no longer required for services to our seamen on the Vietnam sealift, they will be assigned to whatever Government agency may have need for them. It is important to know that these sums we expended did not come from appropriated funds of the United States, but from funds contributed voluntarily through the United Community Funds and Councils of America, the Combined Overseas Fund Campaign and the Maritime Industry, including both management and labor.

All supplies made available to our organization are done so on a reimbursable basis and are at no cost to the Government. In instances where the Government may sustain handling or other charges on behalf of United Seamen's Service, they are transmitted to and reimbursed by the organization. In this manner, the original intent of President Roosevelt and Admiral Land that United Seamen's Service should be Government sponsored but not Government funded has been realized.

The passage of Senate bill S. 2497 or H.R. 15549 which already passed the House, will confirm this sponsorship and will assure that maximum benefits will be derived for the Government and our maritime personnel now and in the future with the contributions from the American people.

That completes my statement, Mr. Chairman. I am happy to answer any questions that you may have.

Senator INOUYE. Admiral Gano. I wish to commend you for your service to the United Seamen's Service. It is most laudable. I note that in the House of Representatives you provided a rather detailed summary of the activities of your organization.

Vice Admiral GANO. Yes, I did.

Senator INOUYE. Would you make that available to us also?

Vice Admiral GANO. I will, sir.

Senator INOUYE. I know that this is not a money bill, but do you have any idea as to what it might cost the Government?

Vice Admiral GANO. We did make a detailed report on this, on the House side. I would say that the cost to the Government is minimal, really minimal. It is on a space available basis primarily. Passage, for instance, to Vietnam by our personnel employed out there is on a space available basis. When you are out there, these are generally made available, as I stated in my statement, on a space available basis, but if they are substantial they are on a reimbursable basis, and we pay for them just the same as any other person.

Senator INOUE. What sort of a relationship have you had with the Department of Defense in the last few years?

Vice Admiral GANO. Very good, particularly through the Military Sea Transportation Service, now called Military Sealift Command, because they have 12,000 men who are really one of the largest users of our centers. They are civilian personnel, who are really merchant seamen with a civil service derivation. I would say that they are the largest group we served in the Pacific perhaps, but we have our doors open for almost any seamen that comes in.

Senator INOUE. I thank you very much, Admiral, for your assistance in this matter. I am certain this bill will be very expeditiously handled.

Vice Admiral GANO. We are hopeful that it will be because we feel that our difficulties in foreign countries arise mainly from the lack of recognition that our U.S. Government has not given to us. We feel that this recognition should be given, and with it given we could now go to them and get continued support and good support.

(The statement of Mr. Sette follows:)

STATEMENT OF EDWARD J. SETTE, EXECUTIVE DIRECTOR UNITED SEAMEN'S SERVICE

Mr. Chairman, my name is Edward J. Sette. I am Executive Director of United Seamen's Service, a position I have held since October 1, 1967. I was Assistant Director at Headquarters from June 1958 to October 1967.

Prior to that I was a Port Director overseas serving in South America, Belgium, Japan and Italy. In addition, I was on special assignments in Turkey, France, Spain, Korea, Vietnam, and Central America.

My first field assignment with United Seamen's Service began on June 22, 1946 in a tanker port in South America with an American seaman hacked to death with a machete in an unprovoked incident. It was a brutal introduction which demonstrated the dangers seamen face ashore as well as afloat.

Our representatives overseas have many difficulties in carrying out their responsibilities. These difficulties spring from the differences that exist in laws and social customs. In many countries maritime welfare services are limited to official government agencies; to government assisted church agencies, or to utilizing and financially assisting the two, as in Scandinavian countries.

However, some of the difficulties also spring from our American representatives overseas whether in the State Department or in the Department of Defense who have no prior knowledge of the purposes and history of the organization or the fact that it was sponsored by the United States Government and that it continues to carry out services requested by Agencies of the United States Government and by the maritime industry.

I would like to say some few words regarding service programs of other maritime nations.

In carrying out their programs for seamen the Scandinavian countries expend considerable sums—50% from tax sources, 25% from the maritime owners and 25% from seamen. A large sum is also allocated from government funds to air mail home-town newspapers from Scandinavian countries to overseas ports to maintain essential communications links between home communities and their men at sea. Our centers receive these newspapers and we find they are a tremendous boost to the morale of the Scandinavian seamen. This is an excellent program the Scandinavian countries carry out for their seamen, and they do it in terms of their national laws and social practice. It is the purpose and function of United Seamen's Service to carry out a welfare and service program for our seamen in accordance with our national custom of voluntary effort sponsored by, but without expense to the Government.

Recently the Congress of the United States recognized the overriding importance of re-vitalizing the American Merchant Marine and maintaining an American Flag presence on the high seas.

The Bill before you states "to further the effectiveness of shipment of goods and supplies in foreign commerce by providing for the welfare of United States

Merchant Seamen". An important element of our maritime capability is the skill and morale of the American Merchant Seamen. The history of United Seamen's Service from World War II to the present proves its effectiveness in providing for the welfare and morale of our merchant seamen throughout the world.

Passage of the bill now before you will underscore the continuing role voluntary efforts must play in finding solutions to the many problems we face today. It will also provide the recognition the organization requires to respond more effectively and more economically to the needs of our maritime industry and personnel in world commerce and in our military support areas.

## I. AGENCY STATEMENT OF NEEDS, PROGRAM AND ORGANIZATION

### HUMAN NEEDS SERVED

USS is the sole agency providing services overseas for American seamen, in accordance with the Seamen's-Welfare-In-Ports Recommendations adopted in Geneva in 1936. The approximately 100,000 men of the American Merchant Marine come from all parts of the United States. Their ties and responsibilities are those of other men but affected by long separations from families and communities. In foreign ports where cultural, national and political rivalries create critical conditions, USS extends community services.

### WHAT THE AGENCY DOES

Services are of two types: building-centered—providing places of safe congregation in troubled and desolate ports; lodging, recreation, communications, counseling, food, beverages and gift shop; and ship-centered—where there is a heavy concentration of U.S. shipping. In Vietnam, a shipboard film program for men confined to vessels is in operation as well as center operations in Cam Ranh Bay and Qui Nhon. Evidence of need for the program is shown by: (a) large numbers of men using services—they support 89% of total costs by their patronage; (b) requests for services and support given by the Maritime Administration and Department of Defense; (c) cooperation of foreign governments in granting floor space, land and other easements.

#### A. Welfare, recreation and related services

1. *Repatriation.*—In the first ten months of 1969 USS workers arranged repatriation for 1,291 men separated from their vessels because of sickness, accident or misfortune.

2. *Hospital and convalescent services.*—Through October, 2,312 hospitalized seamen were visited. Bridging the language barrier between patient and hospital staff contributes to early return to duty status.

3. *Detention services.*—USS brings comfort items, performs needed services for men in detention centers, and assists in early repatriation.

4. *Legal assistance.*—USS cooperates with foreign authorities to resolve difficulties for detained seamen, frequently enabling them to return to their vessels before sailing time. As a result, pay and family allotments are not interrupted. Through October, 614 such cases were handled.

5. *Lodging.*—7,112 seamen released from hospitals and detention were provided lodging while awaiting re-employment in 14 overseas centers.

6. *Communication services.*—USS in 14 foreign ports handled 695,245 pieces of mail, international money orders, cable, and overseas phone calls, keeping seamen and families in touch.

7. *Ships and library services.*—USS workers boarded 6,793 ships to provide information on local port conditions, fresh reading material and other required assistance.

8. *Recreation and entertainment.*—807,482 men participated in USS center programs including films, music, sports and special holiday events.

9. *Worldwide services.*—For home communities, USS is an indispensable resource in locating seamen in times of trouble at home. USS replies to queries from the world over and the U.S., and cooperates with agencies on family problems, aggravated by seamen's absence from home.

#### B. Food beverages and gift services

USS Centers provide a necessary and welcome change from shipboard confinement. 591, 272 seamen registered at Centers through October; 151,234 meals were served. Gift shops provide souvenir items for families at fair prices.

## ORGANIZATION

*History.*—Incorporated in 1942.

*Board and executive committee.*—Governing body is Council of Trustees: 120 members elected for overlapping 3-year terms. At annual meetings the Council elects 22-member Board of Directors. Executive Committee of 9 appointed by President from Board of Directors. In 1969, Board of Directors met 3 times, average attendance 11; Executive Committee met twice, average attendance 8. Finance Committee of 9, appointed by President from Board of Directors and Council of Trustees met 3 times, average attendance 6.

*Officers.*—Honorary Chairman, Andrew E. Gibson; President and Chairman, Vice Admiral Roy A. Gano, USN (ret.); Chairman, Executive Committee, Philip Klein; Vice Presidents: J. M. Calhoun, Joseph E. Curran, John M. Franklin, H. R. Logan, Thomas F. O'Callaghan, Stanley Powell, Jr.; Treasurer, Manuel Diaz; Secretary, Ellen Newell Tiemer.

*Staff.*—Edward J. Sette, Executive Director. At headquarters: 2 more full-time-administrative and 1 public relations staff members; 5 full-time secretarial and accounting workers. Overseas: 27 full-time professional and administrative staff members and 279 other employees who are foreign nationals.

*Relations with communities.*—Through Propeller Clubs and community committees, USS enlists public understanding and support.

## II. ACTION OF NATIONAL BUDGET AND CONSULTATION COMMITTEE

*Program*

United Seamen's Service, Inc., is the sole agency providing services overseas for more than 100,000 American Merchant Seamen, in accordance with the Seamen's Welfare-in-Ports Recommendations adopted in Geneva in 1936. Seamen away from home for long periods require specialized services which link them with their home communities, 15 central locations overseas serving 33 foreign ports make available a wide range of welfare, recreation, health and legal services.

*Budget*

A budget of \$3,100,000 is approved by the Committee for 1971. Over 90% of the budget will be self-generated through sales of supplies and services to seamen.

*Agency support plan authorized by committee*

NBCC commends USS and recommends it to all United Funds, and approves the amount of \$125,000 it is seeking in 1971 from 174 supporting communities, with special efforts to be made in 12 other communities. By use of proportionate community quotas the agency asks an adjustment factor of 1.20 to offset lack of full proportionate support. The Committee feels the agency is deserving of full support as the U.S. Merchant Seaman is a vital part of the United States Merchant Marine with seamen coming from all states of our Nation. The Merchant Marine is our "Fourth Arm of Defense" maintaining transportation and trade upon which our industry depends.

## PANEL 6 ASSIGNMENTS

*Chairman.*—Alan N. Ducommun, Los Angeles, Calif.

*Members.*—Robert A. Duffy, Milwaukee, Wis.; Jake Froelich, Jr., High Point, N.C.; Marcus Ginsburg, Fort Worth, Tex.; A. J. Gracia, Akron, Ohio; William A. Gregory, Jr., Pittsburgh, Pa.; Charles P. McDonald, Detroit, Mich.; Alvie A. Moore, Miami, Fla.; Mrs. Milton J. Schloss, Cincinnati, Ohio; Horace K. Sowles, Jr., Portland, Maine; J. William Stewart, Jr., Charlotte, N.C.

*Professionals.*—Everett Aultman, New Orleans, La.; John Garber, UCFA, New York, N.Y.

UNITED SEAMEN'S SERVICE, INC.  
SUMMARY OF FINANCIAL ACTIVITIES  
[dollars in thousands]

	1968 actual, 14 units	1969 actual and estimate, 15 units	1970 operating, 17 units	1971 requested, 19 units
<b>SUPPORT AND REVENUE</b>				
Contributions received directly (schedule A) .....	\$137	\$127	\$140	\$150
Indirect public support (schedule B) .....	96	99	102	145
Total public support .....	233	226	242	295
Other revenue (schedule C) .....	2,008	2,333	2,558	2,805
Total public support and revenue .....	2,241	2,559	2,800	3,100
Support and revenue available to finance current general activities .....	2,241	2,559	2,800	3,100
<b>EXPENDITURES</b>				
Program services:				
(a) Welfare, recreation, and related services .....	674	747	792	910
(b) Food, beverage, and gift shop service .....	1,384	1,589	1,788	1,960
Total .....	2,058	2,336	2,580	2,870
Management and general .....	162	193	200	210
Fund raising .....	18	15	20	20
Total supporting services .....	180	208	220	230
Total expenditures .....	2,238	2,544	2,800	3,100
Expenditures financed by current general revenue .....	2,238	2,544	2,800	3,100
Excess of expenditures over current general revenue .....	(3)	(15)		
Decrease in unappropriated current general fund .....	(3)	(15)		
<b>SCHEDULE A—CONTRIBUTIONS RECEIVED</b>				
<b>DIRECTLY</b>				
Individuals .....	7	3	5	5
Foundations, labor, shipping, and allied industry .....	33	30	40	50
Port service fee:				
Cam Ranh Bay and Qui Nhon .....	37	34	30	30
Punta Cardon, Venezuela .....	12	12	15	15
Reimbursement—Port services: Bandar Mah Shahr and Kharg Island .....	48	48	50	50
Total .....	137	127	140	150
<b>SCHEDULE B—INDIRECT PUBLIC SUPPORT</b>				
Allocated by United Funds and Chests—direct payments (after deducting fund-raising expenses estimated at 4.1 percent of total raised) .....	74	77	80	125
Allocated by unassociated and nonfederated fund-raising organizations .....				
Overseas Combined Federal Campaign .....	19	20	20	20
American flag ships visitors .....	3	2	2	
Total received indirectly .....	96	99	102	145
<b>SCHEDULE C—OTHER REVENUE</b>				
Sales of supplies and services, (food, beverage and gift shop items) .....	2,005	2,330	2,555	2,802
Investment income .....	3	3	3	3
Total .....	2,008	2,333	2,558	2,805

### III. HIGHLIGHTS

#### HISTORIC ROLE OF MARITIME

In a country which owes its discovery to a seaman, a nation whose struggle for independence was sparked by a revolt against restrictive navigation laws, a people who came by ship from all parts of the world, and a republic which achieved greatness in the long struggle for freedom of the seas and whose commerce now spans the world, the vital role of the American seaman and his abiding importance to the well-being of the American community requires special recognition. Shipping remains an imperative necessity to ensure the quick reaching of markets throughout the world for our products and the continuous supply of raw materials on which our industry depends in time of peace. It is vital for troop transport and military supply lines in time of war.

#### INTERNATIONAL BACKGROUND

The long history of victimization of seamen on the waterfronts of the world led to the first efforts to provide special programs in recognition of the unique character of the industry and its toll on seafarers. In 1789, The United States Public Health Service was begun with recognition of their special health needs. The inadequacy of international programs led to the First International Conference on Seamen's Welfare convened in Genoa in 1920. Subsequent conferences finally culminated in Geneva in 1936 in the adoption by all major maritime nations of the Seamen's-Welfare-In-Ports Recommendations. The preamble reads:

"By the nature of their calling seamen are frequently deprived for long periods of the advantages of family life, and may be exposed while in ports, particularly in foreign countries, to special dangers and difficulties, and . . . it is not always possible for them to have the benefit of arrangements made to organize spare time, promote the welfare and safeguard the health of the general body of the workers. . . ."

#### UNIQUE OCCUPATIONAL HAZARDS

Today's deepening rivalries and the world population explosion underscore the growing role of seaports as areas of economic, cultural and ideological conflict. Prolonged isolation from home communities, families and friends, long periods of confinement aboard ship, and brief liberty in foreign ports make men vulnerable to unscrupulous elements preying on waterfronts. For these reasons, the World Health Organization reported that "health and port authorities have gradually come to recognize welfare work for seafarers as an important contributing factor towards 'clean up' the waterfront." Studies reveal that seamen have a higher rate of accidents and illness than shoreside workers; than loneliness on board aggravates mental and physical strain. USS programs offer relief from tensions and stresses, thereby aiding in preventing breakdowns.

#### VARYING NATIONAL APPROACHES

While most maritime nations have provided programs for their seamen through government bureaus, United Seamen's Service is a unique effort to meet American commitments in the country's tradition of voluntary societies. The World Health Organization has singled out USS for its ability to meet and adapt to changing patterns of maritime needs. The program of USS is unique in another sense. Of all American agencies in overseas areas, USS alone works directly with foreign governments to provide programs for Americans when duty brings them to foreign ports. An important by-product of this program has been the scheduling of co-operative events between seamen and community groups abroad, contributing greatly to international goodwill. Such programs play a valuable part in reducing shoreside incidents which adversely affect impressions and attitudes held about Americans abroad. In new ports developed in barren and desolate areas of the Far East, only USS provides needed services in the men's brief time ashore.

#### INTERNATIONAL COOPERATION

The participation of foreign governments in this program reflects a significant development. The ability of the agency to enlist their cooperation is in fact remarkable. In most areas in which USS operates there is no tradition of social services. No laws foster self-help. But there is, in fact, a long history of restrictive legislation which reserves such activities either to the state or to established state religions. Despite this, in Italy, USS occupies part of the former Royal Palace of the

Bourbon Kings of Naples and in Genoa, descendants of the Prince Andrea Doria, have made available rooms of his 16th century palace. In Germany, a USS Center was built on land made available through the burgemeister of Bremerhaven. In Japan and Morocco, land concessions were made to assist in providing USS Centers. Further evidence of foreign cooperation was shown in the XIVth International Conference on Social Welfare in Helsinki, Finland, in August, 1968, when 10 maritime nations participated in a session sponsored by USS to update Seamen's Welfare in Ports Recommendations.

#### AUTOMATION AND INDUSTRY CHANGES

Program changes are geared to the quick turn-around time of the new automated cargo ships, and the rapid discharge of super tankers. On-shore programs will be correlated to ship-board leisure time activities.

#### NATIONWIDE DISTRIBUTION OF AMERICAN SEAMEN

A study made by the Federal Maritime Administration shows the extent to which seamen come from inland communities. New York and California lead in maritime manpower, Michigan is third, Ohio seventh and Illinois ninth in providing men who go down to the sea in ships. Even land-locked Wyoming and Colorado contribute men to the extent of .1% and .3% of total maritime manpower. A survey conducted in the single port of Manila, P.I. during 10 months in 1969 showed 331 American seamen assisted in hospital and detention from 37 states including Alabama, Alaska, Arizona, California, Colorado, Connecticut, Washington, D.C., Florida, Hawaii, Idaho, Louisiana, Maryland, Massachusetts, Michigan, New York, New Jersey, North Carolina, Ohio, Pennsylvania, South Dakota, Texas, Washington, and Wisconsin.

USS ports of call in 1969:

Apra, Island of Guam.

Bremerhaven, Germany; also serving Bracke, Bremen, Hamburg and Nordenham.

Cam Ranh Bay, Vietnam; also serving Saigon, Da Nang and Vung Tau.

Casablanca, Morocco; also serving Safi and Kenitra.

Genoa, Italy; also serving Savona.

Kharg Island, Iran.

Manila, Philippine Islands; also serving Subic Bay.

Mah Shahr, Iran; serving Abadan and Khorramshahr.

Naha, Island of Okinawa; also serving Chimu Wang and White Beach.

Naples, Italy; also serving Castellamare and Pozzuoli.

Punta Cardon, Venezuela; also serving Punto Fijo.

Pusan, Korea; also serving Inchon.

Qui Nhon, Vietnam.

Yokohama, Japan; also serving Kawasaki, Tokyo and Yokosuka.

Surveys of ports where services are requested:

Keelung, Taiwan.

Kaoshiung, Taiwan.

Sattahip, Thailand.

Tunis (Hope), Tunisia.

Inchon, Korea.

Subic Bay, Manila.

#### NBCC STANDARD #3 GOVERNING ARRANGEMENTS

The Bylaws of United Seamen's Service stipulate a Council of Trustees numbering 120. These are elected on a rotating basis at an Annual Meeting for a 3-year term. Vacancies may be filled by the Board of Directors. A quorum is stipulated in the Bylaws. The Board of Directors is fixed at between 3 and 20 members and elected by the Council of Trustees at each Annual Meeting.

There are 5 active Standing Committees which meet regularly, establish policy and provide supervision and consultation. Ad Hoc Committees are appointed by the President, as emergency situations arise. Standing Committees include Executive, Finance, Personnel, Awards, Foreign Relations and a women's group called the Betty Land Committee.

Because USS operates world-wide, an International Council of not more than 100 members is also operative. It consists of persons important to the organization because of their geographical whereabouts as well as their international interest.

United Seamen's Service has been particularly fortunate because its Board and Council are extremely active in supervision. The professional staff is in constant consultation with the Officers, and all major decisions are cleared before action is taken. Members of the Council actively supervise overseas centers and negotiate with representatives of foreign governments on USS installations. The Finance Committee, as well as Trustees and Board of Directors, have monthly Balance Sheets and Operating Statements available to them, as well as all other publications of the agency.

Membership on the Councils is determined by representation in the Shipping Industry, Maritime Trade Unions, Government Agencies and Social Service Agencies. The Honorary Chairman of the Board is the Maritime Administrator, top maritime officer in the nation. Members are leaders in their respective fields and geographic distribution has been taken into account to provide national coverage.

No members of the Council or Board are salaried.

#### DOCUMENTATION

The pages immediately following carry the financial data:

#### IV. FINANCIAL EXHIBITS

#### V. SUPPORT PLAN

The pages at the end of this report carry the structural exhibits:

Exhibit 1, members of governing body.

Exhibit 2, salary ranges (for professional, administrative and secretarial staff).

Exhibit 3, staff organization chart.

#### IV. FINANCIAL EXHIBITS

Exhibit A.—Summary of financial activities:

Schedule A.—Contributions received directly.

Schedule B.—Indirect public support.

Schedule C.—Other revenue.

Exhibit B.—Functional expenditures.

Exhibit D.—Statement of changes in restricted fund balances.

Exhibit E.—Statement of changes in land, building, equipment funds.

Exhibit H.—Balance sheet.

Exhibit J.—Summary of community contributions.

#### EXHIBIT B.—UNITED SEAMEN'S SERVICE, INC.—ANALYSIS OF FUNCTIONAL EXPENDITURES

	Total	Program services		Supporting services	
		A. Welfare recreation and related services	B. Food, beverage and gift shop	Management and general	Fund raising
Salaries: Administrative and professional.....	\$301,477	\$164,729	\$78,241	\$47,369	\$11,138
Local staff.....	491,832	177,310	255,647	58,875	-----
Employee health and retirement benefits.....	39,412	15,720	7,659	14,721	1,312
Payroll taxes, etc.....	33,279	13,241	13,453	6,035	550
Total employee compensation.....	866,000	371,000	355,000	127,000	13,000
Professional fees and contract service payments.....	14,800	534	1,354	12,912	-----
Supplies: Food, beverage, gift shop and other items for sale.....	1,312,787	-----	1,312,787	-----	-----
Selling supplies.....	55,423	-----	55,432	-----	-----
Telephone and telegraph.....	17,379	5,870	6,675	4,423	411
Postage and shipping.....	14,134	2,814	5,491	4,914	915
Occupancy.....	102,413	46,450	44,838	9,820	1,305
Outside printing, art work, etc.....	38,748	14,369	5,320	18,019	1,040
Travel.....	54,398	29,879	10,881	11,321	2,317
Maintenance overseas field staff.....	115,275	80,475	34,800	-----	-----
Conferences, conventions, meetings.....	7,412	1,466	-----	4,934	1,012
Specific assistance to individuals.....	31,747	31,747	-----	-----	-----
Membership dues and support payments.....	6,038	2,038	-----	4,000	-----
Equipment and other fixed assets.....	205,641	100,381	99,020	6,240	-----
Program: Overseas centers.....	204,155	204,155	-----	-----	-----
Taxes, insurance and other miscellaneous, etc.....	53,641	18,822	28,402	6,417	-----
Total.....	3,100,000	910,000	1,960,000	210,00	20,000

## EXHIBIT D.—STATEMENT OF CHANGES IN RESTRICTED FUND BALANCES YEAR ENDED DEC. 31, 1969

	Balance as of Jan. 1, 1969	Additions	Depreciation and obsoles- cence	Balance as of Dec. 31, 1969
<b>Betty Land Memorial Fund:</b>				
Cash.....	\$6,614.07	<sup>1</sup> \$1,332.33	-----	\$7,946.40
Investments at fair market value at dates of acquisition.....	18,575.00	( <sup>2</sup> )	-----	18,575.00
Total restricted fund balance.....	25,189.07	1,332.33	-----	26,521.40

<sup>1</sup> Interest and dividends.<sup>2</sup> No change.

## EXHIBIT E.—STATEMENT OF CHANGES IN LAND, BUILDING, AND EQUIPMENT FUNDS, YEAR ENDED DEC. 31, 1969

	Balance as of Jan. 1, 1969	Additions	Depreciation and obsoles- cence	Balance as of Dec. 31, 1969
Buildings.....	\$371,634	\$6,000	\$16,034	\$361,600
Land.....	37,969	( <sup>1</sup> )	( <sup>1</sup> )	37,969
Equipment.....	137,132	42,288	34,283	145,137
Total.....	546,735	48,288	50,317	544,706

<sup>1</sup> No change

## EXHIBIT H.—UNITED SEAMEN'S SERVICE, INC.—Balance Sheet Dec. 31, 1969

## CURRENT FUNDS

## General:

## Assets:

Cash on hand and in banks:				
United States.....				\$60,426.39
Overseas ports.....				252,864.38
Total cash.....				313,290.77
Accounts receivable.....				46,223.20
Pledges receivable.....				26,288.00
Merchandise held for sale, at lower of cost or market.....				161,002.39
Total general.....				546,804.36
Liabilities and fund balances:				
Accounts payable and accrued expense.....				177,623.82
Vacation, repatriation and severance accruals.....				171,605.05
Deferred revenue—contributions received or pledged for future years operation.....				26,534.00
Total cash.....				375,762.87
Fund balance:				
Unappropriated—beginning of year.....				124,303.19
Increase during year.....				14,738.30
End of year.....				139,041.49
Appropriated.....				32,000.00
Total fund balance.....				171,041.49
Total general.....				546,804.36

## RESTRICTED

Cash.....		7,946.40
Investments at fair market value at dates of acquisition.....		18,575.00
Total restricted.....		26,521.40
Fund balance.....		26,521.40
Total restricted.....		26,521.40

## LAND, BUILDING AND EQUIPMENT FUNDS

## Equity in land, building and equipment:

Buildings.....		361,600.00
Land.....		37,969.00
Equipment.....		145,137.00
Total equity in land, building and equipment.....		544,706.00
Fund balance.....		544,706.00
Total equity in land, building and equipment.....		544,706.00

## EXHIBIT J.—UNITED SEAMEN'S SERVICE—SUMMARY OF COMMUNITY CONTRIBUTIONS

	1968 actual, 14 units	Year to Dec. 31, 1969		Year to Dec. 31, 1970		1971 requested, 19 units
		Actual, 15 units	Approved, 19 units	Operating 17 units	Approved, 18 units	
United fund and chests alone.....	74,000	77,000	200,000	80,000	125,000	125,000
TOTAL community contribu- tions allocable to United Fund and Chest areas for calculat- ing quotas of supporting communities.....	74,000	77,000	200,000	80,000	125,000	125,000

## V. SUPPORT PLAN

Last year, USS received approval to seek \$125,000 from 175 supporting communities with an adjustment factor of 1.2%. There has been a 5% increase of funds received, and for 1970 new support has been pledged by two large coast communities. For 1971, USS again requests approval to seek \$125,000 from 174 supporting communities using the same adjustment factor of 1.2%. It will concentrate on 12 important large cities as target areas for new inclusions.

Shipping firms are now studying plans to contribute to USS on a formula basis, i.e., a fee for ships in USS-serviced ports. This project is still in its initial stages but shows promise.

USS has some 300 volunteers throughout the country. In addition, Propeller Club chapters and Women's Propeller Clubs assist in general support for the agency in the local communities, as well as in developing wider program services for our men overseas.

Income in certain Far East ports has improved and some of the initial building expenses are being recovered. These funds are now required to build important new centers in Guam and Inchon, Korea.

Closer supervision and introduction of better management principles in the centers have resulted in lower operating deficits, and have made possible more effective services.

The program of USS has obtained much wider coverage. There is close cooperation with the Maritime Administration of the Department of Commerce and the Military Sea Transportation Service of the Department of Navy. A Department of Defense Memorandum recognizes USS in a manner similar to that of USO and the Red Cross. A Bill has been introduced into Congress "to further the effectiveness of shipment of goods and supplies in foreign commerce by promoting the welfare of United States merchant seamen through cooperation with the United Seamen's Service, and for other purposes."

## EXHIBIT 1—GOVERNING BODY

## COUNCIL OF TRUSTEES AND BOARD OF DIRECTORS

- Paul A. Amundsen (Industrialist), Executive Director, The American Association of Port Authorities, Washington, D.C.  
 Bruno J. Augenti (Industrialist), President, Marien Index Bureau, Inc., New York, N.Y.  
 Mary R. Baker (Social Service), Administrator, Family Service Association of America, New York, N.Y.  
 Helen Delich Bently (Government), Chairman, Federal Maritime Commission, Washington, D.C.  
 Richard W. Berry (Industrialist), Senior Vice President, United Fruit Co., Boston, Mass.  
 Dr. Ruth Y. Bescherer (Civic Leader), Greensboro, N.C.  
 Myron L. Black, Washington, D.C.  
 John N. Boughman (Industrialist), Pittsburgh Steamship Division (U.S. Steel), Cleveland, Ohio  
 \*John Bowers (Labor Leader), Executive Vice President, International Longshoremen's Association, AFL-CIO, New York, N.Y.  
 John Burnell (Labor Leader), New York City Central Labor Council, AFL-CIO, New York, N.Y.

\*Board of Directors.

- \*Laurence J. Buser (Industrialist), Executive Vice President, Moore-McCormack Lines, Inc., New York, N.Y.
- J. M. Calhoun (Labor Leader), President, National Marine Engineers' Beneficial Association, New York, N.Y.
- Vice Admiral W. M. Callaghan, USN (ret.), Washington, D.C.
- Ralph E. Casey (Industrialist), Executive Vice President, American Institute of Merchant Shipping, Washington, D.C.
- \*Earl W. Clark (Industrialist), Co-Director, Labor-Management Maritime Committee, Washington, D.C.
- John A. Creedy (Industrialist), Water Transport Association, New York, N.Y.
- Joseph E. Curran (Labor Leader), President, National Maritime Union of America, AFL-CIO, New York, N.Y.
- Rebekah T. Dallas (Industrialist), Vice President, Gibbs & Cox, Inc., New York, N.Y.
- F. Briggs Dalzell (Industrialist), President, Dalzell Towing Co., New York, N.Y.
- \*J. M. Dempsey, Jr. (Industrialist), Vice President, States Marine Lines, Inc., New York, N.Y.
- Capt. Jones F. Devlin, Jr., New York, N.Y.
- Ralph B. Dewey (Industrialist), Vice President, American Institute of Merchant Shipping, San Francisco, Cal.
- Manuel Diaz (Industrialist), President, American Export Isbrandtsen Lines, Inc., New York, N.Y.
- John I. Dugan (Attorney), New York, N.Y.
- Capt. Robert E. Durkin (Labor Leader), President, Local #90, International Organization of Masters, Mates, & Pilots, AFL-CIO, San Francisco, Cal.
- Charles E. Eason (Social Service), Associate Director, Eastern Region, National Urban League, Inc., New York, N.Y.
- Edward J. Farr (Labor Leader), Executive Vice President, Brotherhood of Marine Officers, AFL-CIO, Hoboken, N.J.
- Cdr. A. C. Filiatrault, Jr., USN (ret.) (Industrialist), National Secretary-Treasurer, The Propeller Club of the U.S., New York, N.Y.
- Gen. John M. Franklin (Industrialist), Director, United States Lines Co., New York, N.Y.
- T. J. Fuson (Industrialist), Humble Oil & Refining Co., Houston, Texas
- Rt. Rev. Msgr. Raymond J. Gallagher (Clergyman), Secretary, National Conference of Catholic Charities, Washington, D.C.
- Vice Admiral Roy A. Gano, USN (ret.) (Industrialist), Falls Church, Va.
- Edward A. Garmatz (Congressman), U.S. House of Representatives, Maryland
- Albert W. Gatov (Industrialist), Commissioner, Public Utilities Commission, San Francisco, Cal.
- Andrew E. Gibson (Government), Maritime Administrator, Maritime Administration, Washington, D.C.
- J. T. Gilbride (Industrialist), President, Todd Shipyards Corp., New York, N.Y.
- James F. Goodrich (Industrialist), President, Bath Iron Works, Bath, Maine
- George Griswold (Industrialist), Executive Vice President, Gulf & South American Steamship Co., Inc., New Orleans, La.
- \*Hoyt S. Haddock (Labor Leader), Executive Secretary, AFL-CIO Maritime Committee, Washington, D.C.
- \*Milton C. Hagen (Industrialist), Industrial Relations Counselors, Inc., New York, N.Y.
- Richard L. Harris (Industrialist), Management Consultant, Thomas Deegan & Co., New York, N.Y.
- \*E. J. Heine, Jr. (Industrialist), Executive Vice President, United States Lines Co., New York, N.Y.
- Otho J. Hicks (Executive Director, Emeritus), United Seamen's Service, New York, N.Y.
- Wayne L. Horvitz (Industrialist), Vice President, Matson Lines, Washington, D.C.
- \*Nelson C. Jackson (Social Service), Executive Director, National Association of Social Workers, Inc., New York, N.Y.
- Einar Johansen (Labor Leader), Norwegian Seamen's Union, Brooklyn, N.Y.
- E. F. Johnsen (Industrialist), Central Gulf Steamship Corp., New Orleans, La.
- N. W. Johnsen (Industrialist), Vice President, Central Gulf Steamship Corp., New York, N.Y.
- \*Madison S. Jones (Industrialist), Executive Asst. for Urban Affairs, Metropolitan Life Insurance Co., New York, N.Y.

- Harry Jorgensen (Labor Leader), President, Marine Firemen's Union, AFL-CIO, San Francisco, Cal.
- Joseph Kahn (Industrialist), President, Trans Eastern Associates, Inc., New York, N.Y.
- A. E. King (Industrialist), President, Isthmian Lines, Inc., New York, N.Y.
- \*Captain Thomas A. King (Government), Atlantic Coast Director, Maritime Administration, New York, N.Y.
- Michael Klebanoff (Industrialist), Chairman, American Tramp Shipowners Association, New York, N.Y.
- \*Philip Klein (Educator), Philadelphia Marina Inc.
- Odell Kominers (Attorney), Kominers & Fort, Washington, D.C.
- \*Daniel Kornblum (Attorney & Labor Consultant), New York, N.Y.
- Karl R. Kurz (Industrialist), Keystone Shipping Co., Philadelphia, Pa.
- Vice Admiral Emory Scott Land, USN (ret.) (Industrialist), General Dynamics Corporation, Washington, D.C.
- \*Captain Warren G. Leback (Industrialist), Vice President, Marine Operations, Sea-Land Service, Inc., Elizabeth, N.J.
- Alton Lennon (Congressman), U.S. House of Representatives, No. Carolina
- Harold R. Logan (Industrialist), Chairman of the Board, Grace Line, Inc., New York, N.Y.
- Boyce H. Luckett (Industrialist), Vice President, American President Lines, San Francisco, Cal.
- Andrew MacDonald (Labor Leader), General Chairman, The Radio Officers' Union, AFL-CIO, Baltimore, Md.
- John W. McCormack (Congressman), U.S. House of Representatives, Mass.
- \*Richard C. McCurdy (Industrialist), President, Shell Oil Co., New York, N.Y.
- Arthur McKenzie (Industrialist), Standard Oil Co. (N.J.), New York, N.Y.
- Rear Admiral Gordon McLintock, Superintendent, U.S. Merchant Marine Academy, Kings Point, N.Y.
- Warren G. Magnuson (Senator), United States Senate, Washington.
- \*James J. Martin (Labor Leader), Vice President, National Maritime Union of America, AFL-CIO, New York, N.Y.
- Robert E. Mayer (Industrialist), Pacific Coast Sales Manager, Todd Shipyards Corp., San Francisco, Cal.
- \*F. N. Melius, Jr. (Industrialist), Vice President & Secretary, United States Freight Co., New York, N.Y.
- Rev. John O. Mellin, D.D. (Clergyman), The First Presbyterian Church, New York, N.Y.
- A. T. Meschter (Government), Administrator, Great Lakes Pilotage Administration, Washington, D.C.
- George P. Miller (Congressman), U.S. House of Representatives, California
- Joseph P. Molony (Labor Leader), Vice President, United Steelworkers of America, Pittsburgh, Pa.
- William T. Moore (Industrialist), President, Moore-McCormack Lines, Inc., New York, N.Y.
- Captain Philip Neal (Industrialist), Safety Coordinator, Mobil Oil Corporation, New York, N.Y.
- Captain Thomas F. O'Callaghan (Labor Leader), International President, International Organization of Masters, Mates & Pilots, AFL-CIO, New York
- Rear Adm. Edward J. O'Donnell, USN (Educator), President, New York Maritime College, Fort Schuyler, N.Y.
- James G. Patton (Labor Leader), President, United World Federalists, Washington, D.C.
- Stanley Powell, Jr. (Industrialist), President, Alexander & Baldwin, Honolulu, Hawaii
- Alexander Purdon (Industrialist), President, United States Lines Company, New York, N.Y.
- Vice Adm. L. P. Ramage, USN, Commander, Military Sea Transportation Service, Washington, D.C.
- Walter P. Reuther (Labor Leader), President, United Auto Workers, AFL-CIO, Detroit, Michigan
- L. Mendel Rivers (Congressman), U.S. House of Representatives, So. Carolina
- \*Rear Adm. Walter F. Schleich, Jr., USN (Commander), Military Sea Transportation Service, Atlantic Area, Brooklyn, N.Y.
- John E. Schmeltzer, Jr. (Industrialist), Vice President & Director, U.S. Navigation Co., New York, N.Y.
- Hugh Scott (Senator), United States Senate, Pennsylvania.

\*Board of Directors.

Approved by the Board

- \*Leon Shapiro (Labor Leader), Secretary-Treasurer, Marine Engineers' Beneficial Association, AFL-CIO, New York, N. Y.  
 Alvin Shapiro (Labor Leader), Pension & Welfare Plan, National Maritime Union of America, AFL-CIO, New York, N. Y.  
 Capt. Lloyd W. Sheldon (Labor Leader), International President, International Organization of Masters, Mates & Pilots, AFL-CIO, New York, N. Y.  
 D. E. Skinner (Industrialist), President, Alaska Steamship Co., Seattle, Wash.  
 Spyros S. Skouras (Industrialist), Prudential Steamship Corp., New York, N. Y.  
 \*Thomas J. Smith (Industrialist), President, Farrell Lines, Inc., New York, N. Y.  
 Admiral W. J. Smith (Commandant), U.S. Coast Guard, Washington, D.C.  
 \*Capt. Adrian P. Spidle (Industrialist), Vice President, Operations, Prudential Lines, Inc., New York, N. Y.  
 Thomas E. Stakem, Jr. (Industrialist), Senior Vice President, Delta Steamship Lines, Inc., Washington, D.C.  
 Henry Steeger (Industrialist) President, Popular Publications, Inc., New York, N.Y.  
 William R. Steinberg (Labor Leader), President, American Radio Association, AFL-CIO, New York, N.Y.  
 A. C. Stewart (Industrialist), Assistant Director, Development, Union Carbide Corporation, New York, N.Y.  
 R. G. Stone, Jr. (Industrialist), President, States Marine Lines, Inc., New York, N.Y.  
 M. Harvey Strichartz (Labor Leader), American Radio Association, AFL-CIO, New York, N.Y.  
 William S. Stuhr (Industrialist), Chairman of Board, American Seamen's Friends Society, New York, N.Y.  
 Col. Arthur G. Syran, USA (ret.), Utica Mutual Insurance Co., Utica, N.Y.  
 Rabbi Marc H. Tanenbaum (Clergyman), Director, American Jewish Committee, New York, N.Y.  
 Howard T. Tellepsen (Industrialist), Tellepsen Construction Co., Houston, Tex.  
 John N. Thurman (Industrialist), Vice President, Grace Line, Inc., Washington, D.C.  
 Ellen Newell Tiemer (Civic Leader), Cundy's Harbor, Maine.  
 Franklin E. Vilas, Southport, Conn.  
 Shannon J. Wall (Labor Leaders), Secretary-Treasurer, National Maritime Union of America, AFL-CIO, New York, N.Y.  
 Berkeley F. Watterson (Labor Leader), Community Services Assistant, United Auto Workers, Detroit, Mich.  
 Vice Adm. George M. Wauchope, USNR (Industrialist), Farrell Lines, New York, N.Y.  
 John J. Waybright (Industrialist), Manager, Esso Standard Eastern, Inc., New York, N.Y.  
 George L. P. Weaver (Government), Asst. Secretary of Labor, U.S. Department of Labor, Washington, D.C.  
 \*Kenneth P. Wenthen (Labor Relations Lawyer), Vice President & Executive Director, Maritime Service Committee, Inc., New York, N.Y.  
 \*Rear Adm. Mark A. Whelan, USCG (Commander), Eastern Area & Third Coast Guard District, New York, N.Y.  
 Admiral John M. Will, USN (ret.) (Industrialist), Chairman of the Board, American Export Isbrandtsen Lines, Inc., New York, N.Y.  
 Vice Adm. Ralph E. Wilson, USN (ret.), (Industrialist), Vice President, J. J. Henry Company, Inc., Washington, D.C.  
 Ralph Wright (Labor Leader), Director, International Labor Office, Washington, D.C.

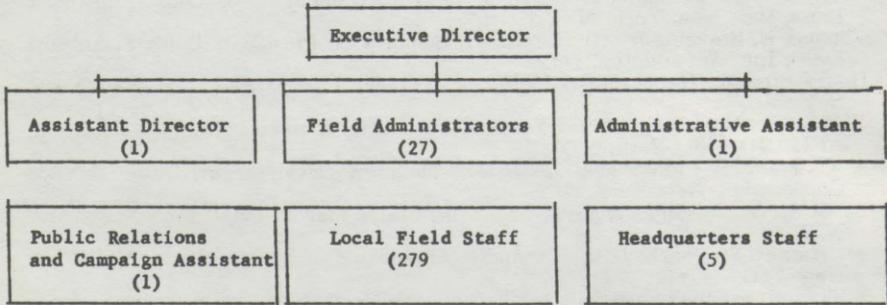
## EXHIBIT 2—SALARY RANGES

Classification:	Salary range
Headquarters administrative.....	\$8,100 to \$24,400.
Headquarters secretarial accounting and shipping.....	\$5,200 to \$10,868.
Overseas professional and/or administrative (plus maintenance).....	\$5,200 to \$12,200.

Local staff, varied, depending on country.

\*Board of Directors.

## UNITED SEAMEN'S SERVICE, INC.

EXHIBIT 3Staff Organization Chart

Senator INOUE. Our last witness this morning will be Mr. Earl Clark, of the Labor Management-Maritime Committee.

**STATEMENT OF EARL CLARK, CODIRECTOR, LABOR MANAGEMENT-MARITIME COMMITTEE; ACCOMPANIED BY HOYT S. HADDOCK, CODIRECTOR**

Mr. CLARK. Mr. Hoyt Haddock, who is the codirector with me of the Labor Management-Maritime Committee, is also at the table.

Mr. Chairman, we should be happy to file our brief statement and simply speak directly to the testimony, if it is your desire.

Senator INOUE. Without objection, your statement will be included in the record.

Mr. CLARK. The Labor Management-Maritime Committee, which is composed of major seagoing unions and steamship lines, supports this legislation wholeheartedly. I might add here that in the whole industry, including both the labor segment of our industry and the management segment of our industry, there is unanimous support of this legislation. In our review of it, we have not heard one single voice against it anywhere in the United States in the maritime industry.

I want to record here also the position of the Propeller Club of the United States. I am chairman of their resolutions committee and their positions committee. At their Portland convention in October of this year, they went on record as wholeheartedly supporting this type of legislation. When the Propeller Club takes such a position that includes seagoing and shoreside labor and management, shipyards and shipyard labor, in fact all major segments of maritime labor, and management, I know of no bill over the years in which there has been such unanimity. I came to the table to make that point to you. I think Mr. Haddock may have some other comments.

Mr. HADDOCK. No.

Senator INOUE. In an age of controversy, it is refreshing to see unanimity on a bill. You may be assured that the committee will handle this matter expeditiously.

If there are no further witnesses we will stand adjourned.  
(The statement follows:)

STATEMENT OF THE LABOR-MANAGEMENT MARITIME COMMITTEE

The Labor-Management Maritime Committee, composed of major steamship companies and seagoing unions, supports the concept of Lease Financing in connection with ship construction in the maritime industry and favors appropriate legislative changes to make such a practice widely applicable in existing and future shipbuilding programs.

The recent maritime enactment (Public Law 91-469) known as the Merchant Marine Act of 1970 basically authorizes lease financing by citizens of the United States who enter into an agreement with the Secretary of Commerce for a capital construction fund established under Section 607 but omits permission for lease financing in connection with operating differential subsidy or construction differential subsidy.

No real or valid reasons appear for such a distinction nor does lease finance adversely affect any of the rights or responsibilities that devolve upon either the government or the industry contractor under the respective types of subsidy contracts. Existing statutory controls relating to subsidized liner operations, as they exist under the Merchant Marine Act of 1936, either before or after passage of Public Law 91-469, would continue without detraction. In the case of subsidized operation of lease-financed vessels, there would be a continuation of the required tests for ability, experience, financial resources and all the other qualifications required by the Secretary of Commerce in the exercise of his responsibilities under appropriate maritime law. Subsidy hearings would still be required under Section 605 (c) of the 1936 Act with subsidized services still restricted to essential services as provided in the new legislation (P.L. 91-469).

In recent years lease financing has become a widely accepted practice in financing the construction of certain capital assets and other tangible property. It is rather broadly used in some areas of transportation, particularly for jet aircraft construction in the airplane industry. The U.S. Merchant Marine can also greatly benefit by the practice.

Section 607 of H.R. 15424 authorizes its use for companies with tax-deferred reserve funds. We can see no reason for not extending the authority for lease financing to CDS and ODS contractors as well. Since the lease method of financing is wholly in the private sector and involves no additional expenditures by the government, we believe legislation should be enacted to permit it, with the necessary conforming language under the 1936 Merchant Marine Act to insure the application of and adherence to all existing government requirements.

We submit below proposed statutory language to achieve such a purpose. It is our understanding that maritime leaders in the Congress have been previously approached on this matter with full interpretation of both the need for and purpose of the amendments we seek. We further understand that language to provide Lease Financing as described herein may be embodied in legislation now before the Congress and that the administration interposes no objection to the following recommended amendments which also cover certain related chartering provisions. They are as follows:

1. Section 601(a) of the Merchant Marine, 1936 (46 U.S.C. 1171(a)(2)), is amended as follows:

By inserting in subdivision (2) following the word "owns" the words "or leases" and by inserting in such subdivision following the word "purchase" the words "or lease".

2. Section 601(a)(3) of the Merchant Marine Act, 1936 (46 USC 1171(a)(3)), is amended as follows:

Insert at the end of the Section immediately after the words "foreign commerce", the following: "provided, however, that an applicant shall not be deemed to possess the necessary financial resources unless at the time any application is approved applicant's net worth, as determined by the Secretary of Commerce, equals not less than 12½% of the purchase price to the owner, of the vessel or vessels with which applicant qualifies for financial aid, whether such vessel or vessels are owned by the applicant or leased by the applicant from the owner";

3. Section 501(a) of the Merchant Marine Act, 1936, (46 USC 1151(a)(2) is amended as follows:

By deleting in subdivision (2) the words "to enable it to operate and maintain" and substituting in lieu thereof the words "for the operation and maintenance of".

4. Section 502(a) of the Merchant Marine Act, 1936, (46 USC 1152(a)), as amended by Public Law 91-469, is amended as follows:

By deleting in the last sentence the words "to enable it to operate and maintain" and substituting in lieu thereof the words "for the operation and maintenance of".

5. Section 805(d) of the Merchant Marine Act, 1936, (46 USC 1223(d), is amended as follows:

By striking the last sentence.

We respectfully urge the Committee to enact legislation to accomplish the above purposes.

We are pleased to state that, to our knowledge, there is no objection to the principle of lease financing within the industry, including both labor and management. The Labor-Management Maritime Committee heartily endorses such principle and commends the above legislative changes to the Committee on Commerce for adoption. We thank the Committee for the privilege of submitting this statement.

(Whereupon, at 11:10 a.m., the subcommittee was adjourned.)

## ADDITIONAL ARTICLES, LETTERS AND STATEMENTS

Re H.R. 6971

December 14, 1970.

Senator Daniel K. Inouye,  
Senate Commerce Committee, U.S. Senate,  
Washington, D.C.

Dear Senator Inouye: Many thanks for your patience and consideration with reference to my prepared statement and remarks on November 18th on subject bill:

Our principal objection to the proposed legislation is the assumption that all navigable areas in the United States have identical problems which could be alleviated or cured by one set of rules or procedures. The New York bay and harbor areas are entirely different to those areas which could possibly benefit from the proposed legislation in that it is only necessary for ocean-going vessels to limit themselves to the marked dredged channels, as there is ample water depth for smaller craft to navigate in 95% of the total area. This freedom of movement results in no pattern of traffic and the resulting confusion caused by trying to coordinate and identify vessels moving within a visible traffic area could only result in disastrous results.

A most important point for consideration is the Federal Communication Commission's requirement for all Masters of passenger vessels to monitor the 2182 Channel in this area and the monitoring of another channel or channels would create an unreasonable distracting influence in the small confined pilothouse of inland passenger vessels.

I stated, in addition to my prepared statement, that I was advised that if this legislation was passed it would possibly mean we would be required to carry additional crew members to handle the bridge-to-bridge radiotelephone communication as this additional requirement could only be properly handled and coordinated by the Master, keeping in mind he is already sufficiently burdened by the normal duties of piloting his vessel.

This proposed legislation, it seems to us, should apply only to large ocean-going ships and large intergrated tows using narrow channels, as apparently the difficulty in the control of these units and the need for voice communication in congested channels resulted in collisions which influenced certain governmental agencies to propose this legislation.

I wish to again state that it is simply ridiculous to have legislation that will require a total of 20 inland passenger vessels—14 of which are owned and operated by Circle Lines—here in the United States that are *over* 100 gross tons to have bridge-to-bridge radiotelephones aboard, and exempt *thousands* of inland passenger vessels that are *under* 100 gross tons which carry anywhere from 6 to 1100 passengers for hire. I am sure you will agree that the hundreds of thousands of passengers that are carried on the thousands of inland passenger vessels that are *under* 100 gross tons, and are inspected and certificated by the United States Coast Guard, are just as important as those passengers aboard the 20 inland passenger vessels of *over* 100 gross tons.

In view of the above, I respectfully request that the 20 inland passenger vessels mentioned above that are *over 100 gross tons* also be exempted from the proposed legislation as are the thousands of inland passenger vessels *under 100 gross tons* that are inspected and certificated by the United States Coast Guard to carry from 6 to 1100 pasengers for hire, as we sincerely feel that not only is the proposed legislation ill-conceived and not in the best interests of those on whom it is planned to impose it, it is, in fact, a most serious threat to the safety of our operations and would be discriminating against the owners of 20 inland passenger vessels, 14 of which are owned and operated by Circle Lines.

Respectfully,

FRANCIS J. BARRY, *President.*

AMERICAN PILOTS' ASSOCIATION, INC.,  
Washington, D.C., November 12, 1970.

Hon. RUSSELL B. LONG,  
Subcommittee on Merchant Marine and Fisheries,  
Committee on Commerce, U.S. Senate, Washington, D. C.

MY DEAR MR. CHAIRMAN: We have been advised that on November 18, 1970, your subcommittee will hold hearings on H.R. 6971, a bill to require a radiotelephone on certain vessels while navigating on specified waters of the United States, which passed the House of Representatives on December 16, 1969. On behalf of our membership, I submit the following statement for inclusion in the record of the hearings before your subcommittee.

The American Pilots' Association is composed of fifty-eight pilot associations, the members of which pilot all types of vessels on virtually all of the navigable waters of the United States. In addition, we have two associate member groups (Districts No. 1 and No. 2) covering the designated waters of the Great Lakes from St. Regis, New York to Port Huron, Michigan.

Our associate member groups have been using radiotelephone communications for years with tremendous success. I have had an opportunity to personally observe the use of this equipment and, in my opinion, the amount of information made available, through its use, to the pilots and navigators operating on these waters greatly enhances the safety of their vessels.

Our members are now voluntarily using radiotelephone communications. They all agree that its use has contributed immensely to the safety of navigation on their waterways. We strongly believe that this system should be made mandatory to encompass power driven vessels of 300 gross tons and over; passenger vessels of 100 gross tons and over, navigating our congested waterways; and dredges or other floating plants in or near channels or fairways, while engaged in operations which physically restrict or affect another vessel's movement. The inclusion of as many vessels of all types, navigating over inland waters, under this proposed legislation would provide additional information to pilots and navigators, promoting greater safety of navigation on these waters.

Your Committee has traditionally acted favorably on any legislation proven to aid safety of navigation on our territorial waters. In view of the success of radiotelephone communications on the Great Lakes and on the inland waters of the Atlantic, Gulf and Pacific Coasts of the United States, we strongly urge favorable action on H.R. 6971.

Respectfully yours,

ERNEST A. CLOTHIER, *President.*

U.S. SENATE,  
COMMITTEE ON FINANCE,  
Washington, D.C., November 17, 1970.

HON. WARREN G. MAGNUSON,  
Chairman,  
Senate Commerce Committee,  
Washington, D.C.

DEAR MR. CHAIRMAN: I would appreciate it if you could include the enclosed letter in the hearing record on H.R. 6971.

With best wishes, I am

Sincerely yours,

LEN B. JORDAN,  
*U.S. Senator.*

LAFFERTY TRANSPORTATION COMPANY,  
Coeur d'Alene, Idaho, November 13, 1970.

HON. L. B. JORDAN,  
*U.S. Senate, Washington, D.C.*

DEAR SENATOR JORDAN: The Subcommittee on Merchant Marine of the Senate Commerce Committee is scheduled to hold a one day hearing November 18, 1970 on H.R. 6971, a "bill to require a radiotelephone on certain vessels while navigating upon specified waters of the United States."

This bill was passed by the House of Representatives on December 16, 1969. It would require VHF radiotelephone *specifically* for bridge to bridge communications on the following vessels while navigating on U.S. waters: (1) Every towing vessel of 26 feet or over in length at the waterline, (2) Every power driven vessel of 300 gross tons and upward, (3) Every vessel of 100 gross tons and up-

ward carrying one or more passengers for hire, and (4) every dredge and floating plant engaged in or near a channel or fairway in operations likely to restrict or affect the navigation of other vessels.

The purpose of this bill is to contribute to safe operating conditions in the towing and barging industry. While I support this premise, I believe modification of this bill in two areas is in order. First, the bill should be broadened to include commercial fishing vessels. Secondly, the bill should apply to towing vessels of 45 feet or over rather than 26 feet. I believe that 45 feet is a more realistic limit and one which will cover all of the towing vessels which are engaged in towing where radiotelephone is a safety factor. In the Northwest there are many small vessels under 45 feet in length which work in remote areas where there is very little, if any, marine traffic. These vessels are generally engaged in the shifting of log rafts and dredge tending and do not perform towing in the traditional sense. Some of these vessels have a single channel VHF radiotelephone for internal fleet communications only. In the case of the smallest vessels and the most remote areas there is usually no radio aboard the vessel.

I believe that the requirement for a multichannel VHF radio system on vessels of this type will do nothing to cause safer operations and that the resulting cost of such a system will only make these operations less efficient. I ask that you consider modification of this bill to include towing vessels of 45 feet and over rather than 26 feet or in the alternative, to provide a special exemption for vessels under 45 feet which are engaged in log moving and dredge tending operations.

If I can supply any additional information, please let me know.

Very truly yours,

PETER J. BRIX, *President.*

---

STATEMENT ON BEHALF OF THE AMERICAN WATERWAYS  
OPERATORS, INC.

My name is William C. McNeal. This statement is offered in support of H.R. 6971 on behalf of The American Waterways Operators, Inc. (AWO), a trade association representing the national interests of operators of towboats, tugboats and barges who provide transport services and ship berthing and other harbor work on the navigable waters of the United States, including the inland waterways and over coastal and seagoing routes. In addition to such vessel operators, AWO also represents shipyards who build and repair the type of equipment operated by AWO's carrier members, terminal operators who serve water carriers, and certain service companies.

As to my qualifications, I am the chairman of AWO's Coast Guard Liaison Committee which maintains a constant working relationship with that agency in connection with its various responsibilities which affect our industry. My position with AWO is voluntary as a member of the Association. I am vice president of Oil Transport Company, Incorporated of New Orleans, Louisiana, which is a company operating towing vessels and barges over inland waterways.

AWO has its principal offices at 1250 Connecticut Avenue, Washington, D.C., with field offices in New Orleans and New York.

In the interest of improving the safety of marine operations, AWO endorses and urges enactment by the Congress of legislation to require VHF radiotelephone for bridge-to-bridge communications. We are pleased that this Committee is considering H.R. 6971. We desire to see legislation for this purpose passed as expeditiously as possible. H.R. 6971 is one of three bills in a so-called "safety package" of legislative proposals designed to promote safety in the marine transportation industry, the other two being a proposal to require the licensing of the persons in charge of navigating towing vessels and a proposal to standardize the Rules of the Road for navigation on all U.S. waters. As this Committee is undoubtedly aware, there are numerous other pending legislative proposals aimed at regulating operations for one purpose or another. Of all such pending legislation AWO believe the most effective step to improve safety of marine operations will be accomplished by enactment of the requirement for bridge-to-bridge radiotelephone communications. The accomplishment of this requirement may, in fact, have such effect on marine operations as to preclude the necessity of several of the other regulatory proposals which have been offered in the name of safety.

We have some suggestions which AWO believes will improve H.R. 6971. We hope they will make a constructive contribution to the Committee's consideration of the legislation. They are offered in that context; and we shall appreciate their consideration.

Members of AWO have long recognized the value of radio communications for many purposes. Such communications between company offices and their vessels are used as an indispensable part of operations by most companies. Such communications are needed as a part of day-to-day operations to communicate orders from company offices to vessels for pickup and delivery of barges and to transmit other operational information which enhances the efficiency of transportation provided and thus enables the company to render better services to customers.

A part of this need and reliance upon radio communications is the need to communicate for operational purposes with other vessels using the waters and with structures along the waterways such as locks and dams and movable bridges. Radio communications are especially valuable assets for vessel operational purposes along the inland waterways and in harbor areas where vessels are operating in close quarters at all times.

Long before any thought was ever given to making radiotelephone equipment a requirement for bridge-to-bridge communications, a large part of the barge and towing industry had already recognized the need and value of such facilities for safety and was using it for this purpose. For example, by the mid-1950's almost every towing vessel on the Mississippi River System had a radio capable of bridge-to-bridge communication with other vessels similarly equipped. Of course this was AM radio since no better equipment was available generally at that time.

In 1963 in New Orleans, AWO, together with the Radio Technical Commission for Marine Services (a cooperative government-industry group based in the Federal Communications Commission) took the lead in advocating expanded use of VHF radios on towboats operating on the Mississippi River System. By 1965, very high frequency, or VHF, radios had become generally available. Late that year AWO conducted a survey to determine, among other things, how many towing vessels were equipped with VHF radio sets at that time and what the plans were of the various companies for equipping additional vessels with such radios. The Army Corps of Engineers showed that at that time 3,934 towing vessels were in operation in the United States for transportation purposes. The AWO survey showed that 2,175 vessels were equipped with VHF radio sets at that time—1,773 with multichannel sets and 402 with single-channel sets. A total of 84.5 percent of those vessels equipped with multi-channel sets in late 1965 had the capability of bridge-to-bridge communications. On the basis of information gathered with respect to company plans to equip towing vessels with VHF radios, AWO estimated that within 12 months after the survey was completed in early 1966 a total of 2,872 towing vessels, 73 percent of all towing vessels in operation, would be equipped with VHF radio sets, all of which would have the capability of bridge-to-bridge communications.

I point this out to the Committee to demonstrate that the industry itself is fully aware of the value of voice communications by radio from the bridge of one vessel to the bridge of another vessel as an aid to safe operations.

AWO has not always supported the concept of a mandatory requirement for radio equipment for bridge-to-bridge communications because the Association and its members felt that the desirable objectives could be achieved on a voluntary basis rather than on a compulsory basis. However, sometime ago we accepted the Coast Guard's position that effective use of VHF radio for bridge-to-bridge communications could be achieved only under requirements such as are proposed in H.R. 6971.

AWO's initial reluctance to support compulsory bridge-to-bridge radiotelephone was based on the question of the effect such requirements would have on the seaworthiness of vessels from a legal standpoint in certain circumstances. Circumstances, for example, such as the radio becoming inoperative in the course of a voyage when there is no opportunity to make immediate repairs, or failure of the person having the responsibility to maintain a listening watch for some unavoidable reason.

The Coast Guard in conferences with the industry recognized this problem as a valid area of concern and in cooperation with the industry certain safeguards have been incorporated into the legislation which is under consideration. How effective these safeguards will be neither we nor our counsel can say with certainty. But we do appreciate the Coast Guard's interest in this problem area and the action it has taken in cooperation with the industry to try to overcome the problem insofar as possible.

In connection with the radio equipment requirements creating hazards affecting the seaworthiness of a vessel, we have set forth Sections 5 and 6 of the bill under consideration below and underscored the safeguards which have been worked out.

"SEC. 5. The radiotelephone required by this Act is for the exclusive use of the master or person in charge of the vessel, or the person designated by the master or person in charge to pilot or direct the movement of the vessel, who shall maintain or cause to be maintained a listening watch on the designated frequency. The master or person in charge may permit the use of the radiotelephone on other authorized frequencies within the maritime mobile band whenever there is no risk of collision.

"SEC. 6. Whenever radiotelephone capability is required by this Act, a vessel's radiotelephone equipment shall be maintained in effective operating condition. If the radiotelephone equipment carried aboard a vessel ceases to operate, the master shall exercise due diligence to restore it to effective operating condition at the earliest practicable time. The failure of a vessel's radiotelephone equipment shall not, in itself, constitute a violation of this Act, nor shall it obligate the master of any vessel to moor or anchor his vessel; however, the loss of radiotelephone capability shall be given consideration in the navigation of the vessel."

AWO believes the Committee in its consideration of this legislation should be aware of this.

AWO recommends that the Committee consider deleting the last phrase in Section 6 as it appears on lines 1 through 3 of page 4 of the bill. Section 6 is set forth below with the language which we recommend be considered for deletion struck through:

"SEC. 6. Whenever radiotelephone capability is required by this Act, a vessel's radiotelephone equipment shall be maintained in effective operating condition. If the radiotelephone equipment carried aboard a vessel ceases to operate, the master shall exercise due diligence to restore it to effective operating condition at the earliest practicable time. The failure of a vessel's radiotelephone equipment shall not, in itself, constitute a violation of this Act, nor shall it obligate the master of any vessel to moor or anchor his vessel; ~~however, the loss of radiotelephone capability shall be given consideration in the navigation of the vessel.~~"

Section 6 is designed to set up certain safeguards to protect vessel owners and operators in cases where the radiotelephone equipment becomes inoperative through no fault on the part of the owner or operator. However, the phraseology which we are suggesting be deleted from the bill could be interpreted as negating those safeguards under certain circumstances.

Further, with respect to the legal liability imposed, H.R. 6971 creates confusion and conflict with Chapter 3 of Title 33 of the United States Code. Section 2 is a purpose clause. That clause implies that radiotelephone may be the only positive means whereby operators of approaching vessels can communicate their intentions to one another. Yet, Title 33 of the United States Code contains elaborately detailed navigational rules, including provisions requiring approaching vessels to exchange whistle signals. These provisions of statutory law have given rise to a sizeable number of liability cases in which the question of intentions conveyed by whistle signals has been important, and sometimes conclusive.

H.R. 6971 certainly does not repeal the whistle signal requirements of Title 33, but to what extent voice communications will supersede whistle signals or what solution will result when voice communications and whistle signals contradict one another are problems left unresolved by this legislation. The letter of January 17, 1969 from the Secretary of Transportation to the Speaker of the House, included in the House Committee report (House Report No. 91-730), describes radiotelephone communications as a "supplement" to required whistle signals of intent "in times of good visibility" and as an "improved means" of communication when wind or heavy traffic conditions prevent whistle signals from being heard or properly sorted out. This legislative history might easily support an argument that Congress showed an intent for radiotelephone communication to receive greater weight than whistle signals as a manifestation of navigational intent.

In this connection, having in mind the probable effects of the proposed statute upon the legal liability imposed which could result in a vessel's being rendered unseaworthy, we offer the following amendment for the Committee's consideration to be added as Paragraph (d) of Section 9:

"(d) The navigation of vessels subject to this Act shall continue to be governed by the regulations for preventing collisions stated in Chapter 3 of Title 33, United States Code. Nothing herein contained shall affect the civil liability of a vessel, her owners or master or person in charge of the vessel for the consequences of a collision."

Under the bill, as originally introduced, a listening watch was required only when the radiotelephone was not being used for other authorized communica-

tions. Section 4 of the original bill contemplated use of the radiotelephone on other authorized frequencies within the maritime mobile band whenever there was "no immediate risk of collision." The bill now apparently requires a listening watch on the designated frequency at all times, inasmuch as the phrase "no immediate risk of collision" has been changed to "no risk of collision." The last sentence in Section 5 of the bill now seems to have very little, if any, practical significance, because situations in which there is no risk of collision may be virtually non-existent, except perhaps when the vessel is docked.

AWO recommends reinsertion of the word "immediate" as the third word on line 17 of page 3 of the bill.

There are other areas of concern to the industry. I am sure that in some cases the Coast Guard itself shares this concern.

With respect to the applicability to vessels as set forth in Section 4, paragraph (a), subparagraphs (1), (2), and (3), AWO recommends that the Committee consider having the requirement for VHF radiotelephone for bridge-to-bridge communications apply to all power-driven vessels of 45 feet or over in length. The Coast Guard's original proposal which was advanced in 1965 would have required bridge-to-bridge VHF radiotelephone capability for "every power-driven vessel of 300 gross tons or over, every towing vessel of 26 feet or over in length, and every power-driven vessel of 65 feet or over in length carrying persons for hire." The Coast Guard's suggestion in testimony to the Subcommittee on Coast Guard, Coast and Geodetic Survey, and Navigation of the House Merchant Marine and Fisheries Committee on July 14, 1969, as we understood it, was that the Committee consider that applicability requirement with respect to vessels. By making the requirement applicable to all towing vessels of 26 feet or over in length, every vessel in the United States which performs towing in any fashion, insofar as we know, would have to have bridge-to-bridge VHF radiotelephone capability.

By making this proposed statute applicable to all power-driven vessels of 45 feet or over in length, the requirement still would apply to over 95 percent of all towing vessels. A few which are used to shift barges or other equipment in shipyard operations or fleeting operations would be relieved of the requirement. Such vessels operate in areas isolated from the general movement of other vessels and radiotelephone capability for bridge-to-bridge communications would not contribute to the safety of their operations or overall safety. On the other hand, by making the proposed statute applicable to all power-driven vessels of 45 feet or over in length, certain vessels other than towing vessels, such as large pleasure craft, commercial fishing boats, and off-shore drilling supply boats, which operate on the same waters in many cases with towing vessels and ships would be required to have bridge-to-bridge radiotelephone capability and in the estimation of AWO should be required to do so in the interest of safety. AWO recommends consideration of this.

The requirement to maintain a listening watch on the channel specifically allocated for bridge-to-bridge communications is a problem. This is so because, in addition to maintaining the listening watch as required under this proposed act, Federal Communications Commission regulations require that a listening watch also be maintained on the channel allocated for safety and calling purposes, 156.8 megacycles. This FCC requirement for a listening watch on 156.8 is in the interest of safety, the same as the listening watch requirement under the proposed act for bridge-to-bridge communications is a safety requirement. In order to comply with these statutory requirements for monitoring two channels, it will be necessary to have two radio sets or one radio set equipped with dual speakers. In any event, two speakers are going to be in operation at the same time in the pilothouse of a towing vessel in order to meet these requirements. When taking into consideration the fact that radio communications have become an integral part of the business operations of the companies operating towing vessels, we find that the man responsible for handling radio communications is going to be working the safety and calling frequency under Federal Communications Commission regulations, the frequency allocated for bridge-to-bridge communications under the act now under consideration, and his company house channel for communications with his office all at the same time.

In harbor areas such as New York, San Francisco and New Orleans, communications between tugs and their offices are at times literally being carried on constantly. The in-house working frequency of a tugboat company in a harbor area is essential to its operations. We are sure you recognize the physical problems involved in multi-channel monitoring as well as the problems created for operating personnel handling the vessels.

A second problem arises because of the two-channel monitoring requirement. This is identification of the channel used by a caller. Since both safety channels are to be simultaneously monitored on bridge speakers it can be most difficult to tell which speaker "Spoke." This can create confusion, especially in an emergency situation. And anyone who has observed the large number of vessels moving, for example, in New York Harbor can readily appreciate the potential volume of bridge-to-bridge communications.

AWO recommends and urges that the Committee in its report on the proposed legislation request the United States Coast Guard to give consideration and recognition to certain specialized conditions in the promulgation of regulations for the operation and use of VHF radiotelephone for bridge-to-bridge communications. The Secretary of the Department under which the Coast Guard is operating is given authority to do so under Section 7 of the bill. Specialized conditions which we believe should be given consideration in the regulations include the following: (1) the New York Harbor area where the density of vessel traffic is such as to make identification of the vessel speaking on the bridge-to-bridge radiotelephone channel difficult; and where the requirement for maintaining a listening watch on two radiotelephone channels (the one designated for bridge-to-bridge communications and the one designated by the Federal Communications Commission for safety and calling purposes), plus a business requirement for almost constant use of the vessel's channel for communicating with its home office to receive dispatching orders; (2) the San Francisco Harbor area where a highly developed and efficiently operating system of radio communications has already been set up using a different channel from the channel proposed for bridge-to-bridge radiotelephone communications; and (3) the Pacific Northwest area where certain towing vessels are engaged regularly in waters outside those used for main stream traffic, such as logging operations. There are perhaps other specialized conditions which should be taken into account in writing the regulations, but the foregoing will serve as examples of the kind of problems we think should be considered.

We appreciate your consideration of AWO's position on this legislation. We support enactment of H.R. 6971.

AWO believes its enactment will greatly aid the safety of vessel operations.

---

AMERICAN MARITIME ASSOCIATION,  
Washington, D.C., November 16, 1970.

HON. WARREN G. MAGNUSON,  
*Chairman, Committee on Commerce, U.S. Senate, Washington, D.C.*

DEAR MR. CHAIRMAN: The subsidized liner companies, represented by the American Institute of Merchant Shipping, have informed us that they wish to have the Merchant Marine Act of 1936 amended, and that an amendment proposed by them may be considered by the Committee in conjunction with the hearings which the Committee has scheduled for November 18th on H.R. 6971 and H.R. 15549.

This amendment, of which we have been given a copy, would alter existing law in three ways:

First, it would make vessels built under lease financing arrangements eligible for construction and operating subsidies.

Second, it would require an applicant for operating subsidy to have a net worth of at least 12½% of the purchase price of the vessel to him, whether he owns or leases the vessel.

Third, it would eliminate provisions of present law which prohibit the payment of operating subsidy on chartered vessels.

The American Maritime Association, representing the operators of 230 unsubsidized American-flag merchant ships, endorses the first proposal, which would make ships built under lease financing eligible for construction and operating subsidies, since this is an alternate financing method for encouraging new construction, and thus would be consistent with the purpose of the federal maritime program which has recently been enacted.

We do, however, object to the second proposal, as it has been worded in the AIMS amendment, since this would destroy the parity between the financial resources now needed to build ships on subsidized and unsubsidized bases.

At present, as you know, there is no statutory requirement regarding the net worth of an applicant for ODS, but as a matter of administrative practice, the Maritime Administration has been requiring an applicant for ODS to have a net worth of 25% of the purchase price to him of the vessel on which the ODS would be paid.

Assuming CDS of 50%, an applicant for ODS would thus be required to have a net worth of at least 12½% of the total cost of the vessel, or an amount equal to that which would be required of an operator who wished to build a vessel, under Title XI, and operate it without subsidy.

Since the AIMS amendment, as now worded, would apply the 12½% statutory requirement to the purchase price of a vessel to the owner, whose purchase price would be reduced by the amount of CDS, an applicant for ODS could qualify under this amendment with a net worth of possibly 6¼%.

To the extent that some operators continue to build on an unsubsidized basis, and to the extent that unsubsidized ships continue to vie with subsidized ones, destruction of the parity which now exists would serve only to increase the competitive advantage which the subsidized fleet already enjoys over the unsubsidized one.

We therefore urge that this provision of the AIMS amendment be stricken, and the present law be permitted to continue unchanged, or that the 12½% requirement be applied to the full construction cost of the vessel before subsidy, in order to maintain the present parity.

Alternatively, the amendment should provide that the financial requirements for qualification under Title XI shall not exceed those fixed pursuant to Section 601.

The third proposal, which would amend Section 805(d) to eliminate present prohibitions of law against the payment of ODS on chartered vessels, and which could make existing vessels eligible for subsidy, we believe is extraneous to the fundamental issue with which we are concerned here—*i.e.*, the use of lease financing as a method of stimulating new construction.

Moreover, this proposal raises a number of questions, pro and con, with which we feel the Committee would not want to burden the record of the current hearings, and we would therefore urge that this proposal be separated from the AIMS amendment and perhaps considered on its own merits at some future date.

We would note, however, that if the proposal regarding the eligibility of leased vessels for subsidy, as called for in the proposed amendment of Section 601(a)(2) of the Merchant Marine Act, is approved, it would be necessary to amend Section 805(d) to make it clear that the leased vessels which would be built under Section 601 are not to be considered as chartered vessels within the meaning of Section 805, and thus are not to be precluded from subsidy.

To implement and clarify the suggestions we have set forth in this letter, we are attaching a copy of the AIMS amendment as revised by us. The material which we would like to see deleted from the AIMS amendment is crossed out, and the material which we would like to see added is underscored.

We hope that this letter will be made a part of the record of these proceedings, and that the Committee will give due consideration of our views in reaching a decision on this matter.

Sincerely,

ALFRED MASKIN,  
*Executive Director, AMA-Washington.*

[Enclosure]

#### TEXT OF PROPOSED ADMMENDMENTS TO AUTHORIZE LEASE FINANCING

1. Section 601(a)(2) of the Merchant Marine Act, 1936, (46 U.S.C. 1171(a)(2)) is amended as follows:

By inserting in subdivision (2) following the word "owns" the words "or leases", and by inserting in such subdivision following the word "purchase" the words "or lease".

2. Section 601(a)(3) of the Merchant Marine Act, 1936, (46 U.S.C. 1171(a)(3)) is amended as follows:

Insert at the end of the Section immediately after the words "foreign commerce", the following:

"provided, however, that an applicant shall not be deemed to possess the necessary financial resources unless at the time any application is approved applicant's net worth, as determined by the Secretary of Commerce, equals not less than 12½% of the [purchase price, to the owner,] *construction cost, computed before construction differential subsidy*, of the vessel or vessels with which applicant qualifies for financial aid, whether such vessel or vessels are owned by the applicant or leased by the applicant from the owner";

(Alternatively: "Provided further that the financial requirements prescribed under Title XI of this Act shall not exceed those fixed pursuant hereto.")

3. Section 501(a) of the Merchant Marine Act, 1936, (46 U.S.C. 1151(a)(2)) is amended as follows:

By deleting in subdivision (2) the words "to enable it to operate and maintain" and substituting in lieu thereby the words "for the operation and maintenance of".

4. Section 502(a) of the Merchant Marine Act, 1936, (46 U.S.C. 1152(a)) is amended as follows:

By deleting in the last sentence the words "to enable it to operate and maintain" and substituting in lieu thereof the words "for the operation and maintenance of".

5. Section 805(d) of the Merchant Marine Act, 1936, (46 U.S.C. 1223(d)) is amended as follows:

By striking the last sentence and inserting in lieu thereof the following: "No contractor shall receive an operating-differential subsidy for the operation of any chartered vessel save and except during a period of actual emergency, determined by the Secretary, or except as provided in Section 708, or except for leased vessels as provided in Section 601(a)."

---

MATSON NAVIGATION CO.,  
Washington, D.C., November 19, 1970.

HON. WARREN G. MAGNUSON,  
Chairman, Senate Commerce Committee,  
Washington, D.C.

DEAR MR. CHAIRMAN: This relates to the proposed amendment to H.R. 6971 which would authorize persons holding operating-differential subsidy contracts to acquire ships by lease financing in place of outright purchase. As you know, Section 607 of the 1936 Act presently permits lease financing only for those vessels built without construction-subsidy or operated without benefit of subsidy.

As a result of discontinuing its Far East service, Matson has two container vessels available for sale or lease. These are standard C-3's formerly operated in the Hawaiian trade which were elongated and converted to full container vessels, and in making disposition of these units it would be highly desirable to have an opportunity to lease them to a lessee who could operate them with operating-differential subsidy.

We therefore urge that the Subcommittee report out H.R. 6971 with an amendment that would authorize operating of leased vessels with subsidy.

Yours truly,

J. R. KUYKENDALL,  
Director, Government Relations.

---

STATEMENT OF HARVEY STRICHARTZ, TECHNICAL DIRECTOR, AMERICAN RADIO ASSOCIATION, AFL-CIO

Mr. Chairman, Distinguished Members of the Committee. My name is Harvey Strichartz. I am a member of the National Council of the American Radio Association, AFL-CIO, and its Technical Director.

I appear today on behalf of the American Radio Association, AFL-CIO, which is one of the two labor organizations representing ship Radio Officers. Mr. Joseph Glynn, President of the Radio Officers Union, will appear later today.

Between them, the ARA and ROU represent the Radio Officers on 90% of the deepsea U.S. Flag Ships, operating out of the seaports on the Atlantic, Gulf of Mexico, and Pacific Coasts of the United States, in the coastwise, intercoastal and foreign trade.

The position ARA and ROU take towards these identical Bills is the same.

At the outset, let me state plainly and unequivocally, that we support the stated objective of the Bill, to effect the safety of navigation through exchange of navigational information between the bridges of various vessels. There are difficulties we anticipate might result from what we consider vague and ambiguous formulations in the Bill, and I would like to explain what they are, and present our proposals to correct them.

Let me also state, without equivocation or qualification, that the exchange of navigational information between the navigating bridges of vessels, whether by

the Captain, any of the Deck Officers, or the Pilots who come aboard to maneuver vessels in or out of ports, by means of single channel radiotelephone, such as is contemplated in the Bill, presents, has presented and should present no jurisdictional problem if the matter is handled correctly. We hope that the suggestions we make with respect to the ambiguities of the Bill will be adopted, so that this entire matter may be approached without creating new, and possibly major problems in the process.

Historically, ship Radio Officers have provided communications for merchant ships not only for their commercial needs, not even primarily for commercial needs, but mainly for the safety of the vessel. For the 71 years that radio has been aboard ships, the Radio Operators—as we were known at first—and later, since 1947, the Radio Officers, as we were designated by Act of Congress in that year—have provided ships with more than the means to alert other vessels to distress situations aboard our own ships, or to go to the assistance of other vessels in distress.

Beyond curative procedures, we have provided communications for the safe navigation of the vessel in a preventative sense; that is to say, it has been the ship Radio Officer who has been supplying the vessel with detailed weather reports, with the synoptic information sent by radiotelegraph to enable navigators to prepare weather charts, and, more recently, with the radio facsimile weather maps, which are received by Radio Officers aboard vessels and provided to the Bridge.

Down through the years, it has been the Radio Officers who have been responsible for reception of notices to navigators of various menaces to navigation, such as floating derelicts, storms, cyclones, hurricanes, and warnings of buoys or lights out of position, or other navigational aids operating inaccurately.

We feel certain that it is not the intention of this Bill to remove from the vessels existing radio facilities or personnel, or to diminish these aids to safe navigation through radio, or to shift the reception of this material, the provision of these communication services for safety of navigation, from the Radio Officers who have provided them so well down through the years, and whose special skills are still necessary to perform them. However, there are ambiguities in the Bill that could present serious problems.

Let me first address myself to what we consider a prime flaw in the Bill: The Agency given primacy in its administration and enforcement. U.S. Law has many existing provisions for the safety of life at sea through radio, established most recently in the 1937 Amendments to the Communications Act of 1934; prior to that through the Federal Radio Act. Down through the years these provisions have been administered and enforced by the Federal Communications Commission and its predecessor organizations, such as the Federal Radio Commission. In 1937, Congress amended the Communications Act, providing in Section 1, that the Federal Communications Act would have as one of its objectives, "the purpose of promoting safety of life and property through the use of wire and radio communications."

A serious flaw we find in this Bill is that it legislates a radio safety requirement administered and enforced primarily, not by the FCC, an arm of Congress, which has done so well the work of providing safety of life at sea through radio, but by the U.S. Coast Guard.

We recognize that the U.S. Coast Guard performs well its legitimate functions. We have no quarrel with the Coast Guard. To the contrary, we are admirers of some of the very fine work they have been doing, such as the establishment of the AMVER vessel reporting system. Our Collective Bargaining Agreements require that our members participate in it at no cost to the Companies whatsoever. We recognize that the Coast Guard's role in search and rescue is a brilliant contribution to the safety of all of our lives at sea, so we are not in the least interested in downgrading the Coast Guard or demeaning it, by any means. However, we feel that the specific provisions for safety of life at sea through radio required in this Bill, should not be placed under the Coast Guard, but should be kept, with all other radio safety provisions, under the FCC. The Commission should have control of this system, and should implement it in all respects, in consultation with the U.S. Coast Guard on such matters as Navigational Rules of the Road.

Unfortunately, this Bill does the thing in the opposite way: it provides that control of the new radio provisions shall be lodged with the Coast Guard, through the Secretary of the Department of Transportation, in which the U.S. Coast Guard is now lodged, and that the Coast Guard shall operate this system with the FCC in a consultative role, rather than in the "driver's seat".

We do not believe that the authority over sea safety radio provisions should be split among different Federal Agencies in this manner. We have a sea safety radio system now being implemented by the FCC, quite often in consultation with the U.S. Coast Guard. We think that any new requirements for radio safety should continue to be enforced by the FCC, and the Coast Guard should continue in its consultative role. The division of authority that is proposed in this Bill could be harmful to sea safety through radio. We are therefore opposed to it, and have prepared a suggested change in the language of the Bill which you will find in our Attachment A, as Item 1.

It would provide administration and enforcement, not by the Secretary of Transportation, an instrument of the Executive Branch of the Government, but rather, by the FCC, an arm of the Congress.

Second, we note that this Bill, which purports to set up safety arrangements to prevent collisions in certain waters, does not, as originally drafted, include various types of craft, such as fishing vessels under 300 gross tons or vessels carrying passengers for hire under 100 gross tons. On both of these types there is a great stake in human life; both encounter the same hazards as the Bill sets out to remedy, both present similar hazards to other vessels, and we strongly feel that both these classes of ships should be covered in its provisions. Our suggested changes in this respect will be found as Item 2 in our Attachment A.

Third, we wish to ensure that the purpose of the Bill, to provide single channel radiotelephone for exchange of navigational information, will be effected. In Admiral Murphy's opening statement in support of the Bill, he said quite clearly:

This Bill requiring a *radiotelephone for exchange of navigational information* is considered by the Coast Guard to be a necessary addition to our navigation laws. Such a radiotelephone is *viewed as a limited use device* when operated on the safety of navigation frequency, and as an electronic extension of the ship's whistle. It would be *used only by pilots or masters to tell one another* whether they are turning, on what side they intend to pass, whether they intend to anchor, that they are getting underway, that they are approaching a certain band, or similar *maneuvering information*.

Further, under questioning by Congressman Lennon and Congresswoman Sullivan, at Page 40 of the transcript, he stated "It would be a single frequency limited to this purpose of exchanging navigational information".

We note, also, that Mr. Patrick King, speaking for the Masters, Mates and Pilots, makes perfectly plain that this proposal "is not proposed as a means of communicating for any other purpose" than the exchange of navigational information.

It has been bruited about that jurisdictional conflicts may result from the passage of the Bill. Let me state plainly and unequivocally, that the passage of a bill requiring radiotelephone equipment aboard the bridges of vessels for exchanges of navigational information on a specified common, single channel, for the sole purpose of the safe navigation of ships, does not, has not, and we would hope would not create jurisdictional problems, if the ambiguities that we are calling attention to are clarified in line with the stated purpose of the Bill, to provide for exchanges of navigational information on a single channel.

As we stated, we assume that it is not the intention of this Bill to transfer the various communications functions of the ship Radio Officers, whether for commercial purposes, for providing navigational information to the vessel, or for distress communications, from the Radio Officers, who are now performing them, to any other person or persons aboard the ship.

This assumption is supported by the testimony, that all of the vessels in a single vicinity should be on a single frequency, somewhat similar to the party line of home telephones, that they should all be listening on that navigation frequency, so that all can be aware of the statements made by other ships in their own immediate vicinity as to their maneuvers and intentions.

The VHF mode radiotelephone was selected, among other reasons, because of its very short range, that is to say, because its signals would not go beyond the immediate vicinity of the vessel and interfere with other vessels outside its area, and create other problems. With this concept of a single channel for scene-of-action navigational exchanges we heartily concur. It is the ambiguities in the Bill that would possibly create the impression that this is not a single channel system, but that ships can be on and off the system at will, that we wish to clarify.

Section 4 of the Bill would "permit the use of the radiotelephone on other authorized frequencies within the maritime mobile band when there is no immediate risk of collision". I think there has been sufficient discussion before this Committee on the question of the immediate risk, or the remote risk, or any risk

of collision. I would like to address myself to another aspect of the matter: While providing a system exclusively for navigational exchanges, the Bill seems to leave open the possibility that this radiotelephone, which would be placed at the control of the Captain and Deck Officers or Pilot for navigational exchanges might also be used to perform other services, for purposes other than navigation.

We understand that this provision permitting the use of the VHF other than on the navigational exchange frequency, was intended for smaller craft which have multi-channel devices and do not have Radio Officers, and that it was designed to enable them to fit this bridge-to-bridge navigational frequency on their device for use when maneuvering in congested waters, and then to permit them to go off this frequency to perform in-house business for commercial traffic and other uses on other channels. We do not believe that that represents a problem, if the rules promulgated by the organization in control of enforcement of the Bill make clear that the judgment of whether there is any risk of collision must be made so as not to endanger the safety of other craft.

However, in the larger vessels having Radio Officers, specifically the ships of 1600 gross tons and over, which are already required by Law and Treaty to carry radio equipment and Radio Officers, the objectives of this Bill may best be implemented, and the possibility avoided that there might be a diminution of attention to the navigational exchanges, by requiring the provision of a single channel device on the bridge, independent of any other device.

This would then permit the use on other channel, of the multi-channel VHF that is now in the radio room where it is now installed, while the listening for navigational exchanges would go forward uninterrupted in any manner or for any reason. It would be absolutely no economic hardship to the oceangoing vessels, which have operating costs in the hundreds of thousands of dollars per year, to fit a separate single-channel device, which, Commander Fiegleson estimates would cost from Two to Six Hundred Dollars. And it is precisely these larger vessels, to whom the fitting of a separate device would be no hardship, that this system would be the maximum benefit, for a number of reasons:

First of all, the stake in human life is greater on these ships;

Secondly, the stake in property is greater; some of these vessels cost in the tens of millions of dollars, and may carry a cargo valued in the tens of millions.

Third, in this manner, the possibility of jurisdictional problems arising would not be diminished; they would be removed, completely. Let me tell you why:

The ARA and the ROU, as Mr Glynn will point out, have in the past provided in their Collective Bargaining Agreements, for the use of single-channel VHF radiotelephone on the bridges of vessels for bridge-to-bridge exchanges of navigational information by ships' Captain, Pilot or Mates. This has been clearly set forth in our previous Collective Bargaining Agreement, and in the last few months, when our Agreements were open and we had an opportunity to press for changes, we made no effort to effect any changes in these provisions.

Our Agreements clearly state that these navigational exchanges may be performed by Captains, by Deck Officers and by Pilots, on a single-channel, bridge-to-bridge frequency designated for safety of navigation. A serious problem could arise, however, and it would result from ambiguity that might lead to the mistaken belief that when there is a situation permitting the bridge installation to be diverted from the safety channel, this equipment might be used by anyone other than the Radio Officer for commercial purposes or for any purposes other than the physical maneuvering of the vessel. If this mistaken notion were permitted to arise, this could provide a problem.

I think you gentlemen could readily see that if another body, let us say, the Executive Branch or the Judiciary, or let us say even another House of Congress, the Senate, were to undertake the functions that are assigned to the House of Representatives, you might wonder what they were doing, and might object quite strenuously. We, likewise, having spent in many instances a lifetime in this work, having risked our lives in war and peace to provide these services, lost many of our shipmates and friends, we likewise want to continue practicing our profession, perfecting it and improving it, to keep abreast of the times. We would very strongly urge that your Committee adopt the clarifying changes that we have set forth in our Attachment A, as Item III.

Another ambiguity that might very well create serious problems appears in Section 5 of the Bill, the second sentence of which reads:

If the radiotelephone equipment carried aboard a vessel ceases to operate, the Master shall exercise due diligence to restore it to effective operating condition at the earliest practicable time.

This language might encourage persons other than the technically trained Radio Officer to believe that they have been given a green light to tinker with the equipment in question, rather than call the specialist Radio Officer who now provides technical maintenance and who presently performs such repairs and adjustments as may be needed. Aboard vessels carrying Radio Officers, the purpose of the Bill may best be effected by the present practice required by the Collective Bargaining Agreements, pursuant to which the Master orders the Radio Officer, who has the training and technical competence to make repairs, to go ahead and restore it to operating condition. However, if anybody got the notion, by misreading the intent of this legislation due to ambiguities in its language, that the Congress is telling the Master to become a technician Radio Officer and to undertake these repairs, it would be most unfortunate. First of all, because the man already has a large number of exacting duties of his own to perform; second, because it takes a considerable amount of time and training to perform this work effectively, and third because the Collective Bargaining Agreement rights of Radio Officers would be impinged upon, with all the problems that would certainly be involved.

We are not asking the Congress to enter our contractual relationships with our employers. We are simply asking that the Congress, in the passage of legislation, avoid ambiguity that might create awkward situations, might create problems which might snowball into great difficulties in the maritime industry. We would say that the simple changes we have proposed in Attachment A, as Item IV, that "the Masters shall exercise due diligence in seeing that it be restored to effective operating condition at the earliest practical moment," instead of "to restore it," would implement the intent of this Bill without creating new difficulties.

The ARA is an affiliate of the AFL-CIO Maritime Committee. Its Executive Secretary, Mr. Hoyt Haddock, who will appear next on behalf of the Committee in support of the position the ARA has taken on the Bill, will address himself to another aspect of the Bill. Mr. Haddock has had considerable experience in the area of sea safety through radio, having participated in the hearings and conferences that resulted in the 1937 amendments to the Communications Act, the basic U.S. Law on Safety of Life at Sea through Radio. He was a Member of the United States Delegation to the International Conference on Safety of Life at Sea in 1948, the basic international treaty on Safety at Sea, and has remained close to the field since.

More recently, and to the subject at hand, Mr. Haddock has been attending, during the past two weeks, the Wood's Hole Conference on Maritime Research and Development, conducted by the Maritime Administration, at which the question of improved ship control and navigation in congested and confined waters was considered. The change Mr. Haddock will propose in his testimony is included in our Attachment A, as Item V.

In summing up my statement, I would urge the Committee to shift the primary responsibility for this legislation's implementation to the FCC, broaden its coverage to include fishing craft and vessels of under 100 gross tons carrying six or more passengers for hire, remove the two major ambiguities that might set one group aboard the ships against another on the question of jurisdiction and work duties.

Thank you for the opportunity to present our views and suggestions on this legislation.

#### ATTACHMENT A.—PROPOSED CHANGES IN H.R. 6971

I. To provide that administration and enforcement of the Act shall be by the Federal Communications Commission, it is recommended that the following changes be made:

A. Add a new paragraph (3) to Section 2, reading:

"(3) "Commission" means the Federal Communications Commission."

B. In Section 6, delete "Secretary" and substitute "Commission."

C. Change Section 7(b) to read:

"(b) The Commission shall in, consultation with the U.S. Coast Guard, prescribe regulations for the enforcement of this Act."

D. Delete "Secretary" and substitute "Commission" at the three places where "Secretary" appears in Section 8.

II. To permit the broadest possible coverage of the Act, specifically include fishing vessels in Section 3, and insert an additional paragraph (3) reading:

"(3) Every vessel of less than 100 gross tons carrying six or more passengers or fishermen for hire while navigating;"

Renumber present subparagraph (3) accordingly.

III. To avoid ambiguity that might lead to conflicts, and to effect the purpose of the Act to provide for the exchange of navigational information between the bridges of vessels, it is recommended that the following changes be made:

A. Insert an additional definition in Section 2, reading:

"(4) 'Exchange of navigational information' means the transmission or reception of information relating directly to the process of moving a craft from one point to another in the waters specified in Section 3(b), with a view to the safety of all crafts involved."

B. Change Section 4 to read:

Section 4. The radiotelephone required by Section 3 of this Act, during such periods of time when it is being used for the purpose of this Act, i.e., the exchange of navigational information, is for the exclusive use of the Master or person in charge of the vessel, or the person designated by the Master or person in charge to pilot or direct the movement of the vessel, who shall maintain or cause to be maintained a listening watch on the designated frequency at all times when the vessel is being navigated in the aforesaid waters; *provided, however*, that on vessels of less than 1600 gross tons other than passenger vessels specified in Section 3 of this Act, the requirement of this Act may be fulfilled by equipping a multi-channel radiotelephone device with the designated frequency as an additional channel, on which the listening watch shall be maintained at all times when there is any risk of collision or other navigational hazard; such multi-channel radiotelephone may be used on other authorized frequencies within the maritime mobile band by vessels under 1600 gross tons other than passenger ships specified in Section 3, only when there is no such risk or hazard."

Thus, the larger vessels, which pose the greater risk to others and experience the greater risk themselves, would be required to equip with a separate, and independent, single-channel device, and to maintain the listening watch at all times by the use of such separate, single-channel radiotelephone, while the smaller craft could fulfill the requirements of the Act by fitting existing multi-channel devices with an additional channel, and under positively safe circumstances be able to use other frequencies for in-house business purposes. The larger craft would continue to conduct such commercial communications as they have in the past, through the facilities of the ship radio station, which includes low, intermediate and high frequency radio devices as well as multi-channel VHF radiotelephone, and which have extension hand telephones connecting all these devices to the bridge, for the Master or other navigating officers to talk on.

IV. To avoid ambiguity that might lead to conflict in the area of equipment maintenance and repair, and to effect the purposes of the Act, it is recommended that the second sentence of Section 5 be changed to read:

"If the radiotelephone equipment carried aboard a vessel ceases to operate, or operates improperly, the Master shall exercise due diligence to *have it restored to effective operating condition* at the earliest practical time."

This would make it clear that on vessels carrying a specialist Radio Officer such maintenance and repair to the equipment would continue to be performed, as in the past, by such technically trained and competent Radio Officers.

V. To ensure that any legislation adopted shall not have the effect of providing an inadequate system which does not provide for affirmative traffic control in confined and congested areas, the Committee should request the Federal Communications Commission along with the U.S. Coast Guard and other interested parties to develop the means of providing precision navigational systems and/or traffic control systems to safely expedite ship movement in confined and congested areas, and to develop an agreed proposal to effect this end, for inclusion in this Act, and report back to this Committee the agreed recommendations of the FCC, Coast Guard and other interested parties.

---

STATEMENT OF HOYT S. HADDOCK, EXECUTIVE DIRECTOR, AFL-CIO MARITIME COMMITTEE

My name is Hoyt S. Haddock. I am the Executive Director of the AFL-CIO Maritime Committee which consists of approximately 80 percent of American maritime labor. The Unions affiliated with the Committee are: The National Maritime Union; International Longshoremen's Association; American Radio Association; Industrial Union of Marine and Shipbuilding Workers of America; National Marine Engineers' Beneficial Association; International Organization

of Masters, Mates and Pilots; and the Great Lakes Seamen, Local 5000, of the United Steelworkers of America.

We are pleased with the opportunity to appear before your Committee and comment on H.R. 6971 to require radiotelephones for exchange of navigational information in certain waters.

All of our seagoing affiliates are vitally concerned with any legislation that would improve the safety of life at sea, and increase their chances of returning from their voyages to the safety of their homes and families. We therefore support the position taken on this Bill by our affiliate, the American Radio Association, on broadening the coverage of the Bill and making its objective realizable by clarifying ambiguities in the original draft of the legislation.

Mr. Strichartz, in his testimony has treated with these problems. I would like to address myself to another phase of the problem.

In the approach to this problem of inter-bridge exchanges, there is quite often an unrealistic conception, in that it is believed that all that is necessary to avoid collisions is to provide the bridges of ships with the means to talk to each other.

This notion is reminiscent of the belief that once existed some years ago, that all that was necessary was to equip vessels with radar. They would then, it was assumed, see each other on the scope of the radars and stay out of each other's way. After a number of years, a phenomenon was recognized, known as the "radar-assisted collision." That is to say, both vessels involved in a collision were quite often equipped with radar. Apparently, through poor use or misinterpretation of the data received, they would somehow or other find their way into each other's hull, and quite serious collisions have occurred in this manner, including the *Andrea Dorea* collision with the *Stockholm*. It was then understood, after bitter experience, that radar, in and of itself was no panacea.

We submit that bridge-to-bridge radiotelephone communication, in and of itself, is no panacea. We would call attention to the fact that when radiotelephone is installed on vessels, this simply provides the pilot with the capability to try to talk to any number of vessels in the vicinity of a vessel, that might be sighted visually or on radar, but does not identify the ship you hear.

Let me compare this situation to the problems that might be involved in landing a plane. If all that were involved in landing a plane, were approaching a very small field where possibly only one other plane used the field, then the pilots of the two planes might be able to talk to each other about their navigational intentions, and thus be enabled to avoid each other in landing.

However, which of you gentlemen would care to be aboard one of ten, fifteen or twenty planes approaching National Airport or Kennedy Airport, with each of the pilots acting as his own traffic control man, in contact with ten, fifteen or twenty other planes in the same vicinity moving towards the runways.

Admittedly, you are not faced with this problem, because there has been developed a system known as Air Traffic Control used by planes in taking off or landing at these airports. We submit that the same type of traffic control is necessary and will have to be implemented in the major areas of marine traffic congestion. The maritime industry consists of craft that move toward the same channels, sometimes quite narrow and constricted. They have to maneuver past certain buoys, avoid certain ledges, rocks and shoals, and a large number of craft are quite often in the same vicinity.

When this occurs, it would be best for each vessel to be advised what other vessels are doing, and how he should act with respect to other vessels with which he might collide. This is not a two-ship problem, but a multi-ship situation. In many port approaches and channels you quite often can see two, three, five or more vessels in your own vicinity, all moving at a pretty fast clip. The state pilot is the indispensable port traffic control for congested areas. He comes aboard the ship with all the information necessary to safely navigate the vessel. Additionally he brings the ability to communicate in English. This is essential to the use of any radiotelephone system.

When I started going to sea, the average size of freighters was in the vicinity of 6,000 to 10,000 gross tons, their average speed was 8 to 12 knots, a relatively slow pace. Consider these facts: The average freighter has now moved up to 12,000 to 30,000 gross tons, a 100 to 350% increase in size; their average speed has increased from 8 to 12 knots to an average of 17 to 24 knots, a comparable increase.

What you have are large projectiles moving at great speed and with relatively diminished maneuverability, in the same congested and constricted areas. We submit, in these congested areas the only realistic solution is to be found in the development of traffic control centered around the pilot as it currently is, and and such as has been proposed by the recent Wood's Hole Conference on Maritime

Research and Development, which I have attached as Appendix I to this statement.

For this reason, I have suggested to Mr. Strichartz that he include in the ARA proposals for changes in this Bill, Item V, reading as follows:

"V. To ensure that any legislation adopted shall not have the effect of providing an inadequate system which does not provide for affirmative traffic control in confined and congested areas, the Committee should request the Federal Communications Commission along with the U.S. Coast Guard and other interested parties such as the American Pilots Association to develop the means of providing precision navigational systems and/or traffic control systems to more safely expedite ship movement in confined and congested areas, and to develop an agreed proposal to effect this end for inclusion in the Act, and report back to this Committee the agreed recommendations of the FCC, Coast Guard, Marad, APA, and other interested parties."

This would allow the technology of the Twentieth Century to come to grips with this problem in the maritime industry and solve it in a manner which will implement the service provided by the pilot.

I urge this Committee to ask that this proposed study go forward and direct the parties involved to return to this Committee with an agreed recommendation for implementing its findings.

Thank you for allowing us to present our views and recommendations on this legislation.

#### ATTACHMENT I.—PROGRAM ELEMENT

#### 4.2 Shipboard Operations.

#### 4.2.3 Program Element Title: Improved Ship Control and Navigation in Congested and Confined Waters.

##### OBJECTIVES

Maritime Administration participation with the Coast Guard and other interested parties in the development of precision navigational systems and/or traffic control systems to safely expedite ship movements.

##### PROBLEM

Ship movement in congested and confined waters is becoming increasingly hazardous. This results in direct costs to the ship operators in delays, collisions, strandings, and increased insurance premiums.

##### PLAN OF ACTION

1. Participate with the Coast Guard in mathematical modeling of harbor traffic control and provide inputs related to operator response and existing ship maneuvering capabilities.
2. As a result of and in conjunction with the mathematical model, investigate the system or combination of systems which may best provide for an orderly and safe movement of vessels in confined or congested waters under all reasonably expected weather and traffic conditions.
3. Devise a rational means to increase the dissemination of information to an operator on his position, location of fixed obstructions, and the location, movement and intentions of other vessels.
4. Develop and install test systems and conduct an operational evaluation in cooperation with the Coast Guard.
5. Participate in world navigation societies development of ship traffic control systems.

##### END PRODUCT

Improved ship control and navigational capabilities.

BOURNS/CAI, INC.,  
SYSTEMS DIVISION,  
Barrington, Ill., February 11, 1970.

Mr. E. ROUVELLAS,  
Senate Committee on Commerce,  
Senate Office Building,  
Washington, D.C.

DEAR Mr. ROUVELLAS: Relative to the Vessel Bridge-to-Bridge Radiotelephone Act (H. R. 6971 and SR 1040), I have been in close contact with the Rules of the Road Division, Coast Guard, in Washington, D.C. The reasoning behind the requirement for sole mention of the radiotelephone in the subject act is that many vessels both foreign and domestic are currently equipped. These radiotelephones are operational within the 156-162 Mega-Hertz band.

Since the Coast Guard stated that the transmission system must penetrate a very heavy fog, this aspect reduces the effectiveness of our current I. R. communicator in that the penetration of heavy fog beyond one-eighth of a mile is doubtful. However, closely examining the state of the art, it is definitely indicated that such items as the CO<sub>2</sub> laser as well as differential wave IR can shortly be in the position where penetration of heavy fog will not present a problem.

I would suggest, therefore, that possibly you may want to consider an amendment to the subject act which would include such a phrase as "or any other comparable or equally as effective communication system." Industry is making every effort to find a communication system that does not require a radio frequency.

If I can be of any further assistance to you please advise. Your cooperation and understanding has been sincerely appreciated.

Respectfully yours,

OSCAR G. JOHNSON,  
Special Assistant to the  
Vice President-General Manager.

U.S. GOVERNMENT MEMORANDUM

NOVEMBER 10, 1970.

To: Chief, Legislative Affairs Division.

From: Chief, Merchant Vessel Inspection Division.

Subject: Bridge-to-Bridge Radiotelephone Act; suggested amendment.

Ref: (a) ALA memo dtd 26 October 1970 w/enclosure.

1. Reference (a) requests our views on an amendment to H.R. 6971 which would allow use of other equipment to satisfy the intent of one vessel contacting another within the meaning of the bill. As we understand, this amendment would allow use of special purpose equipment such as CO<sub>2</sub> Laser or differential wave IR.

2. Although VHF-FM has been available for many years, its attractiveness to vessels (economic availability and general acceptance by mariners) is relatively new. For an effective bill, it is necessary that we make this equipment mandatory and further that we even specify the frequency. In no other way can we assure each vessel that an approaching vessel will have compatible communication capability.

3. While our VHF-FM, single channel, concept can tolerate other systems (the bill does not preclude any others), it cannot be substituted for by other systems.

4. Clearly, CO<sub>2</sub> Laser or other advanced systems may ultimately prove very useful in ship-to-ship communication or may in fact, become primary sources of communication. Such an eventuality is a good many years in the future and until it is a fait accompli, it has no place in this bill.

5. Accordingly, we are opposed to any such amendment.

S. S. BECKWITH, Acting.

AMERICAN RADIO ASSOCIATION,  
New York, N.Y., November 25, 1970.

Re H.R. 6971.

Hon. WARREN G. MAGNUSON,  
Chairman, Senate Commerce Committee,  
Washington, D.C.

Dr. MR. CHAIRMAN: In connection with the Committee's consideration of this legislation the American Radio Association, AFL-CIO respectfully submits the following two requests:

1. We ask that the Statements and Answers to Questions given by Harvey Strichartz, ARA Technical Director, at the July 1969 Hearings on H.R. 6971 before the House Merchant Marine Committee (Pages 148-152, Hearings, Serial No. 95-15) be made a part of the record, for due consideration by the Committee.

2. Having studied the latter filed on November 17, 1970 for the Federal Communications Commission by Robert E. Lee, its Acting Chairman, we wish to go on record concurring with the FCC's two recommendations, to wit:

"A. Insert an additional definition in Section 3, reading

"(4) 'Exchange of navigational information' means the transmission or reception of information relating directly to the process of moving a vessel from one point to another on navigable waters of the United States specified in Section 4(b), with a view to the safety of all vessels involved."

We agree with the FCC that insertion of this definition is necessary to avoid ambiguity as to the "exchange of navigational information," which constitutes the purpose of the Act; this definition would insure that the purpose of the Act would be effected, and avoid its possible frustration with tragic results.

"B. Delete the second sentence of Section 5, Page 3, lines 14-17."

This is the sentence that would permit the Master of a vessel to abandon listening on the radio frequency provided for the exchange of navigational information (the "safety frequency"), when in his judgment "there is no risk of collision." Since his judgment as to whether there is such risk of collision might well be faulty, albeit made in the best of faith, there is no certainty that the vessel would be listening on the navigational exchange frequency in a collision situation.

In addition, Joseph Glynn, President of the Radio Officers Union, warned that, if inadvertently left on a non-safety channel after such abandonment of the safety channel, "in such a situation, multi-channel equipment would cease to be an aid to navigation and would become a menace to navigation." (Hearings, HMM & FC, Page 147).

We believe that the above two recommendations of the Commission might well be incorporated into the Bill by the Committee without further Hearings, but, if the judgment of the Committee is that further Hearings are necessary prior to making these necessary improvements in the Bill, we recognize that this decision of the Committee would be made in the interest of producing a safer Bill. Under such circumstances, we would participate in those Hearings, and we are confident, given the positions expressed by the various parties on the Bill, that the results would be legislation that would better serve the purpose of safeguarding life at sea.

Very truly yours,

W. R. STEINBERG,  
President, American Radio Association, AFL-CIO.



