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UNITED STATES GENERAL ACCOUNTING OFFICE  
WASHINGTON, D.C. 20548

RESOURCES, COMMUNITY,  
AND ECONOMIC DEVELOPMENT  
DIVISION

November 21, 1983

B-210816



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The Honorable William Roth, Jr.  
Chairman, Permanent Subcommittee  
on Investigations  
Committee on Governmental Affairs  
United States Senate

Dear Mr. Chairman:

Subject: Information on Maritime Illness and Injury  
Statistics (GAO/RCED-84-73)

This letter is in response to your May 4, 1983, letter, and further discussions with your office requesting specific information on Marine Index Bureau statistics on illnesses and injuries of maritime seafarers. The committee's concerns and our answers follow. The details are provided in enclosure I.

1. The accuracy of Marine Index Bureau reports on illnesses and injuries of maritime seafarers and the extent to which individual seafarers are reporting a high number of them.

Although we did not verify the accuracy of the Marine Index Bureau statistical data because of its proprietary nature, we found that several factors should be considered when reviewing the Bureau's statistical reports on illnesses and injuries.

- The incidents of illnesses and injuries are presented by job, which is not equivalent to the number of seafarers working.
- The data includes illnesses and injuries sustained both on and off duty while at sea or in foreign ports.
- The average age of merchant marine seafarers was 52 years old in 1982 and there appears to be more likelihood of incidents of illnesses and injuries among seafarers as age increases.

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2. The extent to which seafarers are repeaters, i.e., those who have a high frequency of reported illnesses or injuries.

The Marine Index Bureau does not keep track of repeaters. But a 1979 Maritime Administration study concluded that repeaters account for only 2 percent of illnesses and injuries recorded.

3. The availability of other Maritime health statistics.

Health statistics from other maritime nations are not available.

4. The existence of processes to verify illness and injury claims.

Four maritime shipping companies we contacted had procedures to report and verify seafarers' illness and injury claims.

5. The effect of claims on maritime subsidies.

The subsidy covers 50 percent of the personal liability insurance premiums and 80 percent of the related deductible requirements.

In our review, we contacted officials from the Department of Transportation, Maritime Administration, Military Sealift Command, Marine Index Bureau, four shipping companies, and three maritime unions. Our review of the Marine Index Bureau reports focused on how the data is collected from shipping companies and the statistical analysis performed by the Bureau. We contacted the shipping companies and maritime unions for the purpose of ascertaining the process by which those shipping companies verify seafarers' claims of illnesses or injuries. The shipping companies and maritime unions contacted do not represent a statistical sample of the maritime industry.

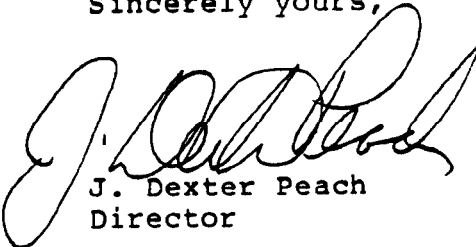
We discussed the material in this report with officials from the Maritime Administration and Marine Index Bureau. However, since the data is primarily informational, we did not request their comments in writing. The work was performed in accordance with generally accepted government auditing standards.

As arranged with your office, we are sending copies of this letter to the Maritime Administration, Marine Index Bureau, and

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the Military Sealift Command. We will make copies available to others upon request.

Sincerely yours,



J. Dexter Peach  
Director

Enclosure

BACKGROUND

The Marine Index Bureau is a private, non-government organization with a membership that includes every U.S. flag steamship owner and operator of ocean-going vessels, a majority of the barge and towing industry, all Great Lakes steamship operators, and others, including the Offshore Marine Service industry and the U.S. Navy's Military Sealift Command. The purpose of the Bureau is to assist the maritime industry in its efforts to promote industry safety, health, and accident prevention programs and to reduce losses due to personnel claims for illnesses and injuries. Member shipping companies provide the Bureau with data on seafarer illnesses, injuries, claims, and settlements. The Bureau compiles the data from member companies and publishes periodic statistical reports.

Another service the Bureau provides its member companies is pre-employment reports on an individual seafarer's fitness for maritime duty. The reports contain a history of an individual seafarer's prior injuries, illnesses, claims, and settlements.

MARINE INDEX BUREAU  
STATISTICAL REPORTS

Although we did not verify the accuracy of the Marine Index Bureau's statistical data because of its proprietary nature, Bureau officials pointed out that member companies want current and accurate information on developing industry trends, as well as complete data on an individual seafarer's illness and injury claims. This they feel is the incentive to each shipping company to provide the Bureau with complete and accurate information.

The officials also pointed out that the following factors must be considered when reviewing the Bureau's statistical reports on illnesses and injuries of seafarers on active ocean-going U.S. flag ships.

The incidents of illnesses and injuries are reported by job, which is not equivalent to the number of seafarers working. For example, the Bureau's 1982 report, covering the period January 1, 1982, to December 31, 1982, shows 17,170 jobs and 8,910 reported illnesses and injuries. A simple comparison would indicate that 51.9 percent of the jobs resulted in a reported illness or injury. However, the officials point out that the 17,170 jobs were filled by a total workforce of 43,672 seafarers. Using these figures, the average number of seafarers per job in 1982 was about 2.55. Comparing the number of seafarers in the workforce to the number of illnesses and injuries reported shows 20.4 percent. This indicates that less than 20.4 percent of the seafarers, allowing for seafarers who reported more than one incident, had illnesses or injuries which were reported to the Marine Index Bureau.

The number of available seafaring jobs has declined in the last several years. Thus, the seafaring workforce also changes. The workforce in 1981 was 50,872 seafarers, filling 18,870 jobs with an average number of seafarers per job of about 2.7. The

percentage of seafarers to reported illnesses and injuries in 1981 was 24.0 percent.

The Marine Index Bureau data also covers all illnesses and injuries from the time the seafarer signs on for a voyage at the home port until he/she returns and signs off at the home port. Consequently, the data includes illnesses and injuries sustained during both on and off-duty time while at sea or in foreign ports.

Marine Index Bureau officials also pointed out that the seafarers' age impacts on the number of injuries and illnesses reported. The officials noted that the average age of the merchant marine seafarer was 52 years old in 1982 and there appears to be more likelihood of incidents of illnesses or injuries among the seafarers as age increases. The number of reported illnesses and injuries for 1982 was more than twice as much in the age group of "over 40 years" as in the group "under 40 years." Not only do these seafarers account for more incidents of injuries and illnesses but also higher numbers of them being sent back to their home port prior to the end of the voyage due to their degree of illness or injury--called repatriation in the maritime trade.

#### REPEATERS

The Marine Index Bureau does not maintain detailed analyses of data on repeaters, but it does have general data which can be used for limited research purposes. Individual records are maintained for each seafarer and such data is reported to a shipping company that requests pre-employment data. The seafarer's record shows the frequency and types of illness or injury claimed. The shipping company would use such data in deciding whether to hire the individual. In 1979, the Maritime Administration's National Maritime Research Center prepared a report<sup>1</sup> on repeaters based on Marine Index Bureau data. The report was based on the number of seamen employed during the years 1972-1976. The analysis showed that repeaters ". . . account for only 0.3 percent of seagoing personnel but report as much as 2 percent of illness/injuries recorded." The report concluded that ". . . the repeater is a nuisance factor reporting a disproportionately high number of difficult-to-verify aches and pains such as 'headache' and 'general symptoms' but scoring high points in terms of the number of days of off-duty time with pay."

#### DATA FROM OTHER NATIONS IS NOT AVAILABLE

Officials of the Maritime Administration, Marine Index Bureau, and Military Sealift Command told us that statistical information from other nations on the types and frequency of seafarers' illnesses and injuries comparable to those produced by the Marine Index Bureau is not available. However, the Marine Index Bureau

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<sup>1</sup>"Characteristics of the Chronic Repeater of Illnesses and Injuries Onboard U.S. Ships and a Survey of Operator Claims Costs" (July 1979).

was able to produce, at our request, the following comparison of injury data reported by the government-owned and contractor-operated vessels in the Military Sealift Command with the commercial maritime industry. Illness data was not available.

Percentage of Injuries to Jobs:  
Commercial Maritime Industry  
Versus Military Sealift Command<sup>a</sup>

	1980		1981	
	<u>Commercial Maritime Industry</u>	<u>Military Sealift Command</u>	<u>Commercial Maritime Industry</u>	<u>Military Sealift Command</u>
Number of injuries reported	7,387	417	6,415	631
Number of seafarer jobs	19,720	3,482	18,870	3,143
Percentage of injuries to jobs	37%	12%	34%	20%

<sup>a</sup>Military Sealift Command data includes civil service seafarers only.

Some seafarers in the Military Sealift Command are civil servants and are compensated for work related illnesses and injuries through the federal workmens compensation program. Commercial seafarers, on the other hand, are not covered by the federal workmens compensation program, and according to the Merchant Marine Act of 1920, can sue their employers or make settlements out of court for illness and injury claims.

Marine Index Bureau officials believe that member companies need to use the Bureau's pre-employment medical reports to take a stronger stand on not hiring seafarers who are non-productive. They also believe that member companies are making too many out-of-court settlements for nuisance claims rather than going to court.

#### THE CLAIMS REPORTING PROCESS

We contacted four shipping companies to determine the procedures they used to report and verify seafarers illness and injury claims. They had similar claims reporting and verification procedures.

A shipping company is required by maritime law to warrant the "seaworthiness" of not only its vessels but also each member of the crew. A seafarer reporting for duty is required to have a physician's statement that he/she is fit for duty. The maritime unions normally either provide the pre-employment medical examination through the union's own health clinics or allow seafarers to use a physician of their own choice.

When a seafarer incurs an injury or becomes ill while employed on a voyage, he/she must report to a ship's designated officer. The seafarer will visit a doctor in the nearest foreign port, or upon return to the home port, depending on the need. The ship's officer must write up the incident in a medical log; take statements from the individual and any witnesses on how, when, and where the incident occurred; and prepare a report. The incident is then investigated by the seafarer's supervisor and photographs of the area are taken if the incident is likely to result in a court claim.

Upon the seafarers return to the home port, the shipping company may again investigate the incident depending on the severity of the injury or the likelihood that a claim may be filed. The shipping company also receives a copy of the doctor's report which is cross-checked with the description of the injury or illness as written in the reports originally submitted when the incident occurred. If the claim looks questionable, in the opinion of the shipping company, they will ask for a second opinion by a doctor from a designated physician's list, approved by both the union and the shipping company.

#### THE EFFECT OF CLAIMS ON MARITIME SUBSIDIES

The Maritime Administration has an interest in the claims reporting process because, as of July 1983, nearly one-third of the privately owned U.S. vessels in the maritime industry receive a government operating-differential subsidy. The operating-differential subsidy is based on the difference in operating cost between a U.S. flag ship and a foreign flag ship. The subsidy pays

- about 70-72 percent of a seaman's wages and benefits,
- about 50 percent of a shipping company's protection and indemnity insurance premium, which covers personal liabilities against the company, and
- about 80 percent of the company's insurance deductible.

Based on Marine Index Bureau estimates the maritime industry's illness and injury claims settlement, for both subsidized and non-subsidized vessels, in 1981 was \$90 million and in 1982 was \$80 million. However, a number of the 1982 claims are still pending and will add to the total claims costs for that year. In addition, the number of seafarers decreased from 50,872 in 1981 to 43,762 in 1982. This information is presented in the following table.

Estimate of Commercial Maritime Industry  
Casualty Claims Costs for  
U.S. Flag Ocean-going Operations

	<u>1981</u>	<u>1982</u>
<u>Illnesses and injuries</u>		
Number of claims	12,058 <sup>a</sup>	8,910
Estimated average claim settlement	\$ 6,456	\$ 6,543
Estimated total claim settlement cost	\$77,846,448	\$58,298,130
<u>Deaths due to illness</u>		
Number of deaths reported	30	36
Estimated average claim settlement	\$250,000	\$250,000
Estimated total claim settlement cost	7,500,000	9,000,000
<u>Deaths due to injury</u>		
Number of deaths reported	10	26
Estimated average claim settlement	\$500,000	\$500,000
Estimated total claim settlement cost	<u>5,000,000</u>	<u>13,000,000</u>
<u>Total claim settlement</u>	<u>\$90,346,448</u>	<u>\$80,298,130</u>

<sup>a</sup>Adjusted to eliminate double counting.

The Marine Index Bureau estimated that approximately one-half of the yearly totals were below the insurance deductible limit and paid by the shipping companies rather than insurance companies. The subsidy program would pay about 80 percent of the amount paid by the subsidized shipping companies, which represents nearly one-third of the vessels.