

Compilation of Responses to Open Questions

A Compilation of Specific Suggestions of Survey Respondents

1. Question #9—Could you suggest ways the Federal Government might make (R&D) information more accessible?

Operators

- MarAd could screen this information on behalf of U.S.-flag operators and distribute free abstracts of applicable material very much as many trade association libraries make industry information available to their members.
- Regular publications issued to the Federation of American Controlled Shipping Organization.
- The Federal Government could make information regarding USN and foreign R&D activities into a single source, single catalog, available to U.S. liner companies through a single agency such as MarAd.
- Allow government contractors greater freedom to use their government work in civilian applications.
- The Freedom of Information Act has been very helpful in accruing information. The response time or turnaround time needs to be greatly reduced if information is to be utilized properly.
- There is no need for Federal Government involvement in this area.
- It could be summarized for publication through an industry trade association.
- Microfiche Titles. Supply to our national organization in Washington-American Waterways Association (AWA). Run articles in our publications, such as, Waterways Journal, Work Boat, etc.
- They should be presented (including translation) in a form that is understandable to the merchant fleet and shipbuilders in general.
- Provide an industry-related catalog listing and describing R&D programs in progress or completed for the past 2 or 3 years.
- Greater information exchange between U.S. Navy and organizations such as MarAd, SNAME, and Naval Architectural schools in areas which affect cost savings and shipbuilding techniques. For example, MarAd could periodically update commercial S.B. specifications, say, yearly reflecting current state of the art. Also, R&D should be targeted at the practical aspects of S.B. and operations.

- The National Technical Information Service periodically makes available lists of technical publications collected from various sources, which may be ordered. The number of items included in this listing could be expanded to make more technical information available.

Shipyards

- Establish a government/industry sponsored maritime research facility as described in question #11 with the provision that overall management control be exercised by industry.
- A how-to-help access catalog might help. Seminars have been successful, such as IREAPS-SPC show and tell programs, such as have been held at University of Michigan. Education training programs could be improved with more funds. They have a good start on library information but need to be advertised more and put on technology updates.
- Conduct annual symposiums. Distribute via GPO both domestic and foreign R&D updates.
- Navy R&D should be shared on a periodic basis with all shipyards. Meetings should be convened to present and update the results of MarAd R&D projects with particular emphasis on ship system and productivity developments. Item 9 addresses a significant shortfall in Navy R&D, specifically the timely accessibility of Navy generated R&D data. It is recommended that the Navy sponsor periodic reviews during the year organized by NRL or DTNSRDC to present to invited shipyards the results of recent projects. Emphasis should be placed on those projects which enhance shipyard productivity or describe ship system developments. These meetings would not only encourage a dialog between the Navy R&D community and the shipbuilding industry, but also better enable the shipyards to plan their own R&D programs.
- Assuming R&D activity results in hardware designs, and those designs are utilized to produce hardware, "technological advances" could be accessible via design information included with Federal bid requests for the hardware involved. The point is that the firm conducting the R&D work should not necessarily have control of the R&D output.
- Publish through the Society of Naval Architects and Marine Engineers.

- Publish a catalog of U.S. Navy R&D reports and available R&D reports of foreign governments.
 - Offer seminars where shipyards are invited. Send out information indicating the scope and objectives of ongoing R&D.
 - Use industry technical groups.
 - Establishment of maritime industry equivalent to NASA with responsibility for collection and industry-wide dissemination of maritime-related basic research, design, and construction technology.
 - Accessibility appears adequate in the Shipbuilding Industry. However, direct access to a U.S. Government controlled technical library would enhance and broaden the application of advanced techniques. Publication on a quarterly basis of the documents registered at the library would also assist.
 - Acquisition and distribution: cost of printing only.
 - Seminars, meetings, publications, etc.
 - It is suggested that a recommendation be made to establish a joint Navy/industry study group to address this issue. The group should be tasked to identify the specific problems, identify and evaluate alternative solutions, and develop specific recommendations. Specific possibilities include establishment of a formal technology transfer program similar to NASA's with its many and varied mechanisms.
 - Publish a quarterly compendium of R&D efforts with progress reports on each project.
2. **Question #12—Could you suggest other organizational or institutional changes within the Federal Government that might improve the effectiveness of government-sponsored research?**

Operators

- **Adopt** the Peter Grace Commission Report.
- As a passenger operator, it is not understood that we are more in the vacation business than in the steamship industry. Accordingly, the organizational institutional changes within the Federal Government that would most improve effectiveness, would be proper funding and market research conducted by the office of tourism. Where we could most use the help would be in development of international markets for our operations in the State of Hawaii. This is an area where it is very difficult for a company of our size to develop an adequate international presence, and the continuing cutbacks in funds for the office of tourism has significantly hampered our ability to attract foreign passengers. This, of course, affects the balance of payments of the United States, as well as putting us at the mercy of our foreign com-

petitors in the cruise industry who generally have easy access of foreign markets because of their ownership structures.

- Those areas chosen for government-sponsored research should be established with strong participation and input from the end users of any expected R&D results.
- In general, it is important for the government to encourage improved industry contact (shipyards-owners-consultants-operators-navy-education institutes). The feeling of unity through the marine industry gives an enormous boost, which both are required in the U.S. Research should be done within all the marine groups and preferably with the participation of more than one group in each program. The government can help to coordinate and pay for this or leave the coordination to someone else.
- Under present arrangements, results of research tend to be too narrow and too late. Administration of research should be directed more to the timeliness and practical applicability of the results.
- The U.S. Department of Transportation should take direct responsibility for government-sponsored research, and also the direct responsibility for the communication of this information to shipowners.
- Rather than making payments to secondary contractors, payments if made to U.S. liner companies would ensure better control over R&D activity performed by the subcontractors.
- We recommend that the Federal Government shift its support of marine R&D to a role of primarily being a source of funding. The marine industry should participate to a greater extent in the selection of R&D projects and their administration. This would help to make the funded work relevant to real industry problems, thereby providing the most efficient use of government R&D funds. Under this scenario an industry-wide research information facility would be most desirable.
- Government-sponsored research has been ineffective in the commercial marine area. It makes little sense to spend \$4 million in one day on commercial shipbuilding research when no ships are being built or contemplated.
- Focus on things we'd all use—such as better barge fastening systems, better navigation aides for Mississippi River, river pilot simulator/trainer development, shorter range radar enhancement, etc.

Shipyards

- Establish a fund for unspecified R&D projects administered by an agency such as the Maritime Administration's Office of Advanced Ship Develop-

ment and Technology for funding those “target of opportunity” projects meeting predefined criteria and limits. Change contract approval procedures (F. A. R.) to decrease proposal lead time for R&D projects by eliminating “red tape” delays that, while necessary for normal procurement items, are an impediment to R&D projects (e.g., source approval, advertising). Coordinate all R&D specialized areas (e.g., Computer Integrated Manufacturing Systems) through one government agency (e.g., National Bureau of Standards). Designate and fund a central control agency to administer all major R&D projects with authority to mandate implementation of the results of those projects as a condition of continuing/obtaining government contracts (e.g., ship acquisition and repair organizations implement the advances made by some of the industry in the use of group technology).

- Make the results more readily available to private industry.
- The effectiveness of government-sponsored maritime research could be improved by centralizing the administration of research projects in one agency, specifically the U.S. Navy.
- Research is only effective when it can be applied. Without U.S. commercial ship and offshore construction U.S. maritime research will always be ineffective. The Federal Government must establish a positive maritime policy to decrease dependence on foreign vessels. Establish a positive maritime policy which will cause vessels to be built in the United States. Commit to build and maintain an adequate military sealift capability with an adequate sustaining domestic industrial shipbuilding base.
- Strengthen integration of common elements of U.S. Navy, MarAd, and U.S. Coast Guard research programs. Suggest detailed investigation of role and effectiveness of the British Shipbuilders Research Association (BSRA).
- Streamline contracting procedures to make R&D efforts time effective. Broaden the concept of IR&D such as to create greater acceptance of cost allowability for efforts undertaken independent of government sponsorship.
- Force existing agencies (i.e., Coast Guard, MarAd) to be more sensitive to industry needs and requirements and become more aggressive in pursuing programs to benefit the marine industry (inland and offshore).
- At the present time, three government organizations are directly involved in maritime research: the Navy, the Coast Guard, and the Maritime Administration. While the focus of these research efforts is not the same it would appear that there should

be more extensive use of joint efforts in higher cost technology developments and in technology demonstrations. The research activities accomplished by the Navy are not centralized under a single command as illustrated in the following:

Assistant Secretary of Navy Research,
Engineering and Systems:

- Director RDT&E
- Director of Navy Laboratories
- Chief of Naval Research
- Chief of Naval Development
- Deputy Chief of Staff Marine Corps RD&S

Chief of Naval Operations:

- Director RDT&E

Chief of Naval Material:

- Deputy Chief of Naval Material (Laboratories)
- Deputy Chief of Naval Material (Technology)

This highly fragmented R&D organizational structure when coupled with the R&D activities accomplished under the Under Secretary of Defense Research and Engineering would not appear to result in effective and efficient utilization of the R&D dollars. Some effort may be made to simplify the organization and consolidate the R&D program. A major detriment to R&D effectiveness is the slow pace at which new technology is introduced. A major reason for this is the absence of R&D platforms (ships, submarines) on which to demonstrate this technology in an operational environment as is done in aerospace programs.

- Clarify Jones Act to include icebreaking and ice management in the OCS as an absolute requirement of the U.S.-flag built and manned vessels.
3. **Question #13—Would you advocate increasing direct Federal expenditures on maritime R&D? If so, please indicate through which Federal agency or program.**

Operators

- No, I would recommend curtailing such programs, particularly those of the Maritime Administration.
- Through universities—we have best interface there.
- No, if this means an all government-controlled activity. Yes, if it means channeled through government agencies and including nongovernment participants.
- Yes. Maritime Administration.
- Yes, through Maritime Administration support of educational and pure research institutions, not through industry.

- All expenditures on maritime R&D should be beneficial and should be administered through the U.S. Department of Transportation.
- Yes. MarAd.
- Yes, increasing Federal expenditures on maritime R&D would be helpful. Again, selection of the proper agency could be based on experience of R&D administration such as MarAd.
- Yes—The Maritime Administration Fleet Management Technology Research and Development Program.
- Increased Federal support might be useful if industry participated in selection and administration of projects.
- As presently constituted now. Again we can only comment with respect to the American flag passenger industry. The most important Federal policy or incentive change which could affect the passenger ship industry, would be a recognition that the present body of law governing passenger vessels was written and devised at the time when the purpose of passenger vessels was to transport somebody from point A to point B. People don't do that anymore, with the exception of small ferries. People get on passenger ships to take a vacation, not to travel from point A to point B. The laws as presently constituted place a great handicap on American operators. A proper body of law recognizing that the passenger business has changed from transportation to vacation industry could perhaps promote the American industry more than any other single change. As you can see, the classification questions indicate that the survey is designed for other than a passenger operation and we again caution you against using the results incorporating our percentage results and our responses into your main survey.
- Yes. Navy and MarAd.
- Yes—through a program of funding research by academic institutions.

Shipyards

Yes, but with some modifications: a) **The current Manufacturing Technology program is an excellent vehicle if modified to reduce funding time from proposal to contract award and to expand its definition to include total manufacturing systems** in addition to production machinery and supporting systems. b) Recognize the National Shipbuilding Research Program, which has momentum and is successful (described in a 1976 Rand Corporation report as being one of the five most effective government-funded research programs in terms of development and implementation achieved), as a de

facto research consortium that should be continued and supported with increased funding.

- Yes, Maritime Administration and U.S. Navy via the National Shipbuilding Research Programs which have done a lot to educate all levels of shipyard people. Keep them talking as to how to be more competitive. This program has sharpened up. A lot of shipbuilders and I believe the Navy has benefited most as they are currently the ones having ships built in U.S. shipyards.
- Yes, by increasing Navy, MSC, and USCG design/construction programs; fund through MarAd for conversion of steam turbine vessels to diesel.
- Yes, MarAd.
- Yes, U.S. Navy.
- Current funding levels are adequate but should be used and appropriated in a more timely efficient manner.
- Yes: 1) Navy ManTech Program; 2) MarAd NSRP; 3) Combine the above.
- Yes—MarAd ship production committee panels.
- Only as necessary to recover/maintain parity with competing modes of transportation.
- The Federal funding of maritime R&D should be increased at least to the extent necessary to permit the funding of demonstration projects to expedite the introduction of new technology. This could best be done through a Navy program.
- MarAd.
- Yes, MarAd.
- Yes, through the U.S. Navy. With regard to items 12 and 13, we believe Federal expenditures on maritime R&D should be increased, and more importantly, this funding of private industry should be administered through one agency, specifically an agency of the U.S. Navy. This would have the effect of eliminating redundancy and improving the overall effectiveness of the Federal research dollar.
- Yes. Through a Maritime Administration, firmly instructed and dedicated to a new maritime policy to maintain a viable shipbuilding industry. Present policies are leading to the rapid demise of commercial shipbuilding and no research can be effective or stem that tide without a change in policy.
- Not particularly, all published R&D in the United States is readily available to foreign competitors. There is very little way of the U.S. maritime industry taking exclusive advantage of this R&D.
- Strongly advocate Government financial support of existing industry-wide R&D efforts conducted by SNAME ship production committee.
- No, use tax incentives for privately funded R&D programs.
- Focus entire research budget on labor productivi-

ty—skills assessment and training, production planning and organization, productivity measurement and control.

4. **Question #14—In addition to the R&D options suggested on questions 10-13, and in light of the recent phase-out of Federal construction and operating subsidies, can you suggest other Federal maritime incentives that might help revitalize the industry? Which of these, if any, would be significantly more beneficial than R&D incentives?**

Operators

- Stop changing laws and regulations. Apply cargo preference. Prevent CDS payback. Halt the export and re-import of petroleum products.
- Cargo preference.
- Significant tax incentives for investment in vessels. Greater freedom to purchase abroad where U.S. suppliers are not competitive. Particularly critical in making slow-speed diesel equipment available.
- Let's form a real export selling team for our bulk commodities (grain and coal in particular, but also timber products, finished steel, containers, etc.) with a focus on barter and exchanges.
- Avocation of foreign technological advances to be incorporated in U.S. hull construction.
- In my opinion, the U.S. Government needs some good basic *Maritime Shipper* input for the entire business. Most input today comes from the Maritime Unions and ship operators. How about doing a study of shippers (those who pay the bills)? Some research on what shippers really want and need could be worthwhile. Most people in the business today know what can and cannot be accomplished in ship construction and overhaul areas. The limitations and restraints are the laws and regulations limiting the flexibility of using foreign equipment and facilities. U.S. shippers cannot continue to compete in the world market place using U.S. equipment and U.S. crews.
- Permit "Jones Act" Coastwise shipowners to build abroad without restriction.
- Consider U.S. Government review of the current impact on operating costs of U.S. union pension fund cost/unfunded liability. Union membership crew significantly as a result of U.S. Government requirements for supply capability connected with the Korean/Viet Nam conflicts result being that today and in foreseeable future a "declining" industry is saddled with an excess of manpower.

- Greater proportion of U.S. generated cargoes reserved for U.S. flag (cargo preference) with competition *among* carriers for the cargo, and subsidy if necessary to the shipper so that he does not suffer competitive disadvantage.
- No. Federal maritime incentives would currently "revitalize" the tanker industry which is experiencing a long sustained recession.
- An increase of monies for wharfage improvement and less trade route regulations would be areas that could be looked into. The areas that reduce port time would be more beneficial than R&D incentives, at least for the near outlook.
- Development of a positive Federal Maritime Policy.
- Income tax exemptions for the merchant marine while abroad.
- Non-union labor. MarAd—increase their budget.
- Improve direct tax credit(s) deductions to encourage expansion.
- Direct orders, under Defense appropriations, for ships designed to meet Defense requirements. Development of joint effort by shipyards and shipowners and U.S. Government of realistic national program (based only on need) to support and maintain required national shipbuilding ban. (Both would be more beneficial than R&D incentives.)
- Elimination of Federal Duty (50 percent) on foreign replacement and repairs on vessels. Also, provide greater operational flexibility for deployment of fleet.

Shipyards

- a) **Recognition of the U.S. commercial fleet as the "Merchant Navy" with formal integration into the defense plan.** b) **Identify the required geographically dispersed mobilization base needed to support the combatant and merchant navies and devise an effective allocation system for construction and repair of both merchant and combatant ships.** c) **Establish a cargo preference act with modernization incentive similar to the DOD Industrial Modernization Incentives Program (IMIP) as an integral part of those shipyards identified and allocated in part b).** d) **Establish a program of Government aid for U.S. shipyards to secure construction work of any kind, contingent upon their being part of the mobilization base and which are demonstrably adopting analytical means for constantly improving their manufacturing systems.** e) **A modified version of the DOD Industrial Modernization Incentives Program (IMIP) which would permit shipyards without significant**

- major *Navy* ship construction contracts to participate (e.g., average annual *Navy* ship overhauls, etc.).
- We build ships usually too small to get involved in subsidies. The tuna vessels had no help. Tuna people did well up until the market fell apart two years ago. The Naval vessels and tugs and ferries also get no outside help so we can't really comment.
 - Reinstate ODS/CDS. Limit small business set aside. Preference Act percentage of American cargoes carried by American bottoms. Ad Valorem Tax.
 - There are two areas where the Federal Government might have an appropriate role in revitalizing the maritime industry: 1) adopting a Federal policy which implements a contingency strategy to be followed in case of conventional war, i.e., guaranteed maintenance of shipbuilding facilities; and 2) incentives, laws, etc., which increase the volume and profits of U.S. ship and barge owners (effectively creating an investment "fund").
 - Enact cargo preference legislation. Reserve to U.S. built, U.S. flag all temporary and permanent marine construction, including vessels, rigs, stationary and underwater construction, involved in the exploration, development, and production of nonliving resources with the U.S. 200-mile Exclusive Economic Zone. Preserve the Jones Act. These three measures involve no direct Federal expenditures and would have a far greater benefit than any R&D incentives in revitalizing the industry and preserving a viable industrial base for national defense.
 - The largest help would be in low-cost, long-term credit facilities. the two major ship costs are interest and fuel; interest is the greater of the two.
 - A Federal assurance of adequate cargoes for U. S.-flag and U.S.-built ship owners is the only means of ensuring a large, stable, and continuing demand for new building from the U.S. shipbuilding industry. Sufficient demand and stability of demand will itself enable private industry to invest sufficient funds in R&D or new capital equipment to significantly improve efficiency and match foreign shipbuilder's productivity levels.
 - Tax incentives for shipping U.S. goods on U.S. bottoms. Tax incentives for foreign imports shipped on U.S. bottoms.
 - Bring more ships under U.S. flag by making it an economic advantage to do so.
 - No, R&D incentives outlined should be adequate.
 - A shipbuilding subsidy which provides incentives for increases in productivity.
- 1) A Title VII shipbuilding program. 2) Shift of emphasis in naval shipbuilding from combatant to auxiliaries and sealift. 3) Bulk and neobulk cargo preference. 4) Tax credits for shipbuilders, shipowners, ship operators, and shippers. 5) Extension of Jones Act and closing of loopholes. 6) 100 percent cargo preference for government-impelled cargoes. 7) Etc., etc.
 - Maintenance of inland waterways, removing obstructions to navigation. Funding for facilities and equipment to maintain minimum mobilization capability.
 - The greatest incentive for revitalizing the U.S. Merchant Marine is a program which makes oceangoing cargoes available to U.S.-flag ships. Because of the prevalence of foreign government supports for the national maritime fleets, a "free trade" environment has not existed for many years, and U.S.-flag carriage of U.S. export and import cargoes has decreased to less than 4 percent. Because of this unhealthy market environment, many ship owning/operating and shipbuilding companies are unprofitable. This lack of profit, together with the low level of cargo carried, results in virtually no tax revenues derived by the Federal Government from this industry. The U.S. is in danger of being held hostage for the carriage of cargoes not only to support the national economy, but also to support one or several major military contingents involved in sustained operations in overseas trouble spots. The realistic solution to this potentially dangerous situation is to develop and implement a national program which reserves a reasonable amount of U.S. import and export cargo for carriage in U.S.-built, U.S.-crewed, U.S.-flag merchant vessels having defense utility. Without government support, the freight rates required to be charged by the owners/operators of these vessels will be much higher than rates charged by foreign ships. This will make U.S. exporters less competitive in world markets, and will increase the consumer cost of imports. To offset the higher costs of suing U.S. ships, tax credits should be allowed. These tax credits should not go to the shipbuilder or the ship operator, but to the companies that use the U.S. ships to haul their cargoes. The Competitive Shipping and Shipbuilding Act, as redrafted by Congressman Herb Bateman of Virginia, does all of the above. The passage of this bill would result in the construction of an overage of 20 ships a year for 1.5 years. The bill requires that shipbuilding and ship operating costs for a 10-ship series in any single

yard to be reduced by 20 percent from the current level for a one-ship project. If the bill is passed and signed into law, and if the 20 percent cost reduction is achieved, the resulting long-term program would establish a stable market for the commercial part of the maritime industry. Such a stable market environment invariably creates a strong incentive for R&D as more efficient building and operating methods are sought. Program costs to the Federal

Government would be nil, and the total tax credits would be about \$800 million per year. This \$800 million in tax credits would not be a revenue reduction to the Federal Treasury. For, without the tax credits there will be no market.

- Clarify Jones Act to include icebreaking and ice management in the OCS as an absolute requirement of U.S.-flag built and manned vehicles.
- Accelerate the decisionmaking process at MarAd.

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