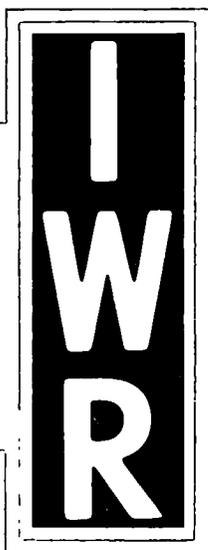


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FOR CRUDE OIL IMPORTS

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**INSTITUTIONAL IMPLICATIONS OF U.S.
DEEPWATER PORT DEVELOPMENT
FOR CRUDE OIL IMPORTS**

**A report submitted to the
U.S. Army Engineer Institute for Water Resources
Kingman Building
Fort Belvoir, Virginia 22060**

by

**Robert R. Nathan Associates, Inc.
Washington, D.C.**

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FOREWORD

Federal responsibility for planning, constructing, and maintaining harbor and channel depths, and responsibility for reviewing and issuing permits for non-Federal developments in navigable waters of the United States resides primarily with the Army Corps of Engineers. As a result, the Corps of Engineers is concerned with the recent and rapid increases in ship size and water depth requirements. The Institute for Water Resources has sponsored several studies pertaining to deepwater ports, two of which were FOREIGN DEEP WATER PORT DEVELOPMENTS, by Arthur D. Little Inc., and U. S. DEEPWATER PORT STUDY, by Robert R. Nathan Associates, completed in 1971 and 1972, respectively. Three additional studies are being completed in 1973. The Corps of Engineers has also completed detailed studies of the need for deepwater ports in three major coastal regions--the North Atlantic, Gulf, and Pacific.

The present report on INSTITUTIONAL IMPLICATIONS OF U. S. DEEPWATER PORT DEVELOPMENT FOR CRUDE OIL IMPORTS was an outgrowth of the U. S. DEEPWATER PORT STUDY. The earlier report identified the need for further research in several areas, including "...institutional and legal aspects of deepwater ports, including such matters as ownership and control, regulation, conditions of access or use, and user charges."

The Institute for Water Resources contracted with Robert R. Nathan Associates for a study of "...the institutional implications of planning, constructing and operating U. S. deep harbors..." in August 1972.

The study outline specified the following major components:

1. Research in the background of the deepwater port problem in order to define the types of institutional problems involved in the planning, design, construction, operation and maintenance of U. S. harbor facilities for very large bulk cargo carriers;
2. Identification and analysis of existing institutions, including the legal, political, financial and business institutions involved, the roles of these institutions, and the environment in which they operate;

3. Evaluation of the institutional responses required to deal with the secondary effects induced by the planning, design, construction, operation and maintenance of a U. S. harbor facility for very large bulk cargo carriers;

4. Identification of policy issues, including required changes in existing institutional arrangements for (a) continued participation in the planning, construction and operation by all interested parties; (b) regulation of facility planning, construction, operation and maintenance; (c) pollution control; (d) financial responsibility for polluting incidents; (e) facility financing; (f) facility management; (g) labor relations; (h) local sea and land area zoning; (i) regional transportation development; (j) anti-trust regulations; (k) taxing arrangements; and (l) distribution and sharing of all costs and benefits, including those of a secondary nature.

5. Summaries and conclusions on (a) the identity of existing institutions which would be affected by U. S. harbor development for very large bulk cargo carriers; (b) the laws and regulations governing port development; (c) the policy issues raised by the involvement of institutions; (d) the extent to which existing laws, regulations and institutions are capable or incapable of coping with the issues; (e) a review of precedents which exist for resolving issues through additional investigations; (f) proposals for institutional changes or creation of new institutions; and (g) developing deep port management structures best suited to operate in the current and potentially modified institutional environments.

This report is not to be construed as necessarily representing the views of the Federal Government or of the Corps of Engineers.

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PREFACE

The final draft of this report was completed almost simultaneously with the President's energy message to the Congress and his proposed legislation for Federal licensing of offshore deepwater ports on April 18, 1973. Both bear directly on many of the questions treated here. Since several sets of congressional hearings are scheduled in the coming weeks to consider a range of deepwater port questions, it seemed more appropriate to make the report available quickly than to revise it to reflect most recent developments.

This report has benefited from the generous assistance of many individuals and agencies of Federal and state governments, universities, port authorities, private firms and associations. To all of them we express our gratitude. Special acknowledgment is due the Army Corps of Engineers, its district offices and the Institute for Water Resources for the constructive help that they provided throughout the study.

This study was conducted under the overall direction of Jerome Jacobson. The final product represents an unusually integrated blending of the contributions made by all participants. Study principals by major areas of responsibility were as follows:

Marvin R. Brant - Political and legal
jurisdictional issues

Bernard L. Gladieux (Director, Knight,
Gladieux & Smith, Inc., Management

Consultants) - Public administration matters, including organizational and decision processes

H. Gary Knight (Campanile Charities Professor of Marine Resources Law, Louisiana State University) - International and Federal-state legal questions (appendix A)

Jeremy C. Ulin - Public interest, economic, financial, and environmental issues

Other contributors to the study included Robert E. Brown, Marcella Czarnecki, Donald E. Nicoll (consultant on state-local, energy and environmental problems), and Stephen M. Schwebel (Professor of International Law, School of Advanced International Studies, The Johns Hopkins University).

I. SUMMARY OF MAJOR FINDINGS AND CONCLUSIONS

1. THE NEED FOR DEEPWATER CRUDE PETROLEUM PORTS IN U.S. COASTAL AREAS POSES MAJOR LEGAL AND INSTITUTIONAL ISSUES WHICH MUST BE RESOLVED BEFORE SUCH PORTS ARE BUILT AND OPERATED IN THE PUBLIC INTEREST. AMONG SUCH ISSUES ARE THE FOLLOWING:

- The nature of the public interest in the construction and operation of deepwater ports;
- The role of Federal, state, and local governments, the private sector, and the general public in planning and decision-making;
- The role of governments and the private sector in ownership, financing, construction, operation, and regulation of deepwater ports and related facilities;
- The legal jurisdiction and authority of the United States to license and regulate port facilities beyond U.S. territorial waters.

2. THE IMPORTANCE AND COMPLEXITY OF THESE ISSUES DERIVE FROM INHERENT CHARACTERISTICS OF DEEPWATER PORTS WHICH DISTINGUISH THEM FROM CONVENTIONAL PORTS

- The port is part of an integrated system composed of supertankers, terminal, pipelines, tanks, refineries, and possibly transshipment vessels;

2.

- The construction and operation of various parts of the system are subject to a combination of local, state, Federal, and international legal jurisdictions;
- There is no explicit provision in Federal law or international agreements for the construction, operation, and regulation of an offshore transfer terminal located beyond territorial waters, where most such facilities under serious consideration are located;
- Terminals will service supertankers with capacities up to 500,000 tons, compared with maximums of about 100,000 tons for tankers now delivering petroleum to U.S. ports;
- The volumes of crude petroleum to be transferred at these facilities in only a few years may be in the hundreds of millions of tons annually, and represent a substantial share of U.S. crude petroleum needs;
- Because substantial investments will be required, and scale economies are significant, and because favorable locations for offshore terminals are limited, only one or two such facilities are likely to be built in any major coastal areas in the foreseeable future;
- Deepwater ports will generate substantial economic benefits in the form of ocean transport cost savings, and may influence regional economic growth related principally to petroleum refining and processing, storage, and transportation;

- The operation of deepwater ports and supertankers, coupled with growth in imports of crude petroleum and expansion of petroleum refining, storage, and transport facilities pose serious threats to our ecology and environment -- marine, estuarine, and land;
- This enhances the importance of limiting ecological and environmental damage, and the risk of such damage, through the use of environmentally sensitive design of vessels and other system components, through formulation of safe operating standards and practices, and through efficient oil spill containment procedures.

3. THE PUBLIC INTEREST IN DEEPWATER PORTS WOULD BE SERVED BY FULFILLMENT OF ALL THE FOLLOWING CONDITIONS OR GOALS:

- Establishment of the most efficient crude oil delivery system feasible; in light of present and desired future locations of refineries to be served and of associated economic activities; and subject to constraints imposed for meeting public environmental protection objectives;
- Equitable distribution of the economic benefits and costs of deepwater ports, including those pertaining to secondary effects, among public and private sectors, user, producer, and consumer groups and geographic regions, as compatible with the preceding economic efficiency goal;
- Reduction of environmental risks associated with deepwater port development to minimum acceptable levels: at each stage of evolution, including facility siting and design, construction, and operation; for every component of the oil delivery system, including the very large crude carrier, terminal and storage facilities,

feeder vessels and pipelines, refineries and associated activities; and especially in relation to dangers of massive oil spill, of intrusions on competing uses of the shoreline, seabed, or waters, and of undesired land use or other impacts from secondary development;

- Equitable sharing of any environmental risks that cannot be prevented as among public and private sectors, geographic areas, or relevant parties, to the degree such allocation is compatible with economic development and efficiency objectives;
- Timeliness of decisions relating to all aspects of deepwater port construction and operation, so that they will become available when needed, and so that petroleum refiners will not be forced to resort to alternatives that are less advantageous to the United States in economic and environmental terms.

4. PRIVATE OWNERSHIP, FINANCING, AND OPERATION OF DEEPWATER CRUDE OIL PORT FACILITIES ARE COMPATIBLE WITH THE PUBLIC INTEREST, IF ACCOMPANIED BY ADEQUATE AND EFFECTIVE GOVERNMENTAL CONTROL AND REGULATION

- The American petroleum industry is in the private sector, and is highly integrated, tending to own its production, transport, and marketing facilities, including bulk terminals, storage, and pipelines;
- It normally has ample capital resources available for its needs;
- It has shown a preference to own, construct, and operate proposed deepwater port facilities through consortia of petroleum companies whose needs they would serve;

- Such facilities are expected to be single purpose, designed to handle crude petroleum exclusively, rather than a variety of commodities;
- The petroleum industry has the required technical and managerial resources to plan, construct, and operate deepwater terminal facilities;
- This industry expertise must be subject to firm governmental design, engineering, and environmental criteria.

5. A NEED FOR ECONOMIC REGULATION MAY ARISE FROM THE QUASI-MONOPOLY NATURE OF DEEPWATER PORT FACILITIES

- There are likely to be few, perhaps only one or two, in a major coastal area;
- They are expected to serve a number of refineries owned by different companies;
- They would in practice be joint-use or common-carrier facilities;
- If these conditions are present, regulation would be needed to assure equitable sharing of port benefits and costs among facility owners, users, and the general public, as well as non-discriminatory access on reasonable terms and conditions by parties not members of the initial group of owners and users.

6. A HIGH DEGREE OF COORDINATION AND COOPERATION AMONG FEDERAL, STATE, LOCAL, AND PRIVATE INTERESTS IS REQUIRED FOR DECISIONS ON DEEPWATER PORTS

- There is an extremely complex structure of overlapping and interrelated interests, legal powers, authorities, and responsibilities;

6.

- Deepwater port decisions will consequently have to be made jointly among these interests;
- There is no existing institutional mechanism suitable to the accomplishment of the required coordination and cooperation among all involved elements.

7. WITHIN THE PUBLIC SECTOR THE FEDERAL GOVERNMENT MUST PLAY A LEADING ROLE AS GENERAL MANAGER AND OVERSEER OF PRIVATE DEEPWATER PORT DEVELOPMENT, MAINTAINING A POSTURE OF SCRUPULOUS REGULATION AND CONTROL

- Its legal jurisdiction and authority are broader than those of the states;
- National public interests are at stake beyond those at the local and state level, or those of any single industry, group, or sector;
- Issues of interstate, and interregional equity can best be resolved at the Federal level;
- A Federal lead role is needed to provide positive assurance of the national and regional economic benefits, and of the environmental integrity of proposed port and related facility development.

8. NEW FEDERAL LEGISLATION SHOULD ESTABLISH BASIC INSTITUTIONAL MECHANISMS AND DECISIONAL PROCESSES, AND ACCOMPLISH THE FOLLOWING SPECIFIC PURPOSES:

- To establish basic deepwater port policies and goals, including the relationship of deepwater port development to national energy, economic, environmental, and security policies and goals;
- To establish a basis for, and to assert, U.S. legal jurisdiction over facilities in international waters beyond the territorial sea;

- To authorize the President to license construction and operation of deepwater ports;
- To reconcile ambiguities and conflicts of jurisdiction among Federal agencies, and between Federal, state, and local governments;
- To establish policy concerning Federal service and financial obligations, including those which may arise from oil spills or other unforeseen contingencies in port or vessel operation;
- To provide for state, local and public involvement in decisional processes and to stipulate the nature of public hearings and other public participation;
- To establish policy on needs for Federal economic regulation of deepwater port facilities and the general administrative approach considered most suitable to such needs;
- To provide specific authority and fiscal support for research and development of technology applicable to deepwater port design, construction, and operation.

9. THE LEGAL BASIS FOR AND THE NATURE OF U.S. AUTHORITY TO ASSERT ITS JURISDICTION OVER DEEPWATER PORT FACILITIES AND OPERATIONS BEYOND THE TERRITORIAL WATERS NEEDS EXPLICIT STATEMENT

- Authority to construct and regulate may be claimed under the Convention on the Continental Shelf, the Territorial Sea Convention, and the Convention on the High Seas, none of which provide specifically for deepwater port structures and operations;

8.

- The most appropriate legal rationale for establishing U.S. jurisdiction to construct such facilities may be the residual rights extended by the Convention on the High Seas;
- The most suitable international legal basis for establishing the application of U.S. laws to deepwater operation beyond its territorial waters may be in the Roadstead Provision of the Territorial Sea Convention;
- A provision of the Outer Continental Shelf Lands Act extending the authority of the Secretary of the Army to prevent obstruction to navigation in the navigable waters of the United States to artificial islands and fixed structures located on the Outer Continental Shelf, may be interpreted as applying to offshore port facilities not related to development of seabed resources;
- Given the nature of these authorities, new legislation explicitly addressed to deepwater port structures and operations is necessary.

10. TO THE MAXIMUM DEGREE POSSIBLE, THE NEW LEGISLATION SHOULD PROVIDE A COMPREHENSIVE AND UNIFORM LEGAL FRAMEWORK FOR PROVISION AND OPERATION OF DEEPWATER PORTS BY:

- Extending relevant existing Federal and state laws to deepwater port development beyond the territorial sea;
- By calling for their modification as necessary to avoid inconsistent treatment or ambiguous application to deepwater port circumstances;
- By clarifying any overlapping responsibilities among Federal agencies and between Federal and state jurisdictions which can be expected.

11. THERE IS NEED FOR THE ESTABLISHMENT OF A CENTER IN THE FEDERAL GOVERNMENT TO PROVIDE LEADERSHIP AND COORDINATION FOR THE TOTAL UNDERTAKING OF A DEEPWATER PORT SYSTEM. THE FUNCTIONS TO BE PERFORMED BY SUCH A LEAD AGENCY TOGETHER WITH OTHER AGENCIES HAVING RELEVANT AUTHORITY SHOULD INCLUDE THE FOLLOWING:

- Assemble and analyze varied data affecting the useful number, general location, and capacity characteristics of deepwater ports, including projected crude oil import needs, costs of port and related facilities for different throughput levels, and geographic location of processing facilities and markets;
- Formulate economic and environmental policy rationales for alternative patterns of industrial and land use development and associated deepwater port installations;
- Integrate data and concepts to formulate long-range strategies governing industrial, land use, and related deepwater port developments, and establish general locational priorities for port sites accordingly;
- Formulate environmentally protective policies and standards consistent with the enabling legislation on such subjects as: selection of sites for terminals and storage facilities and of pipeline rights-of-way; major design features to be incorporated in vessel, terminal, storage and pipeline facilities; and all aspects of system operation (e.g., ship-to-shore communications, fairway arrangements for supertankers and other traffic, terminal procedures for docking and discharging cargo, certification and testing of key operating personnel, surveillance of all system components);

10.

- Coordinate and direct the evaluation of all applications and proposals for superports, including site selection, port design, pipeline configuration, landside facilities, and other aspects in terms of socioeconomic and environmental factors and against predetermined standards and criteria;
- Assure that the prior evaluation fully satisfies requirements for environmental impact statements for each project under the NEPA Act and otherwise complies with all applicable Federal, state and local laws;
- Support deepwater port research and development of technology applicable to deepwater port design, construction, and operation;
- Maintain continuing surveillance of deepwater port construction and operation for compliance with regulatory standards.

12. OF THE SEVERAL ADMINISTRATIVE AND ORGANIZATIONAL ALTERNATIVES AVAILABLE, THE LEAD AGENCY COULD USEFULLY BE CHOSEN FROM EXISTING AGENCIES ON THE BASIS OF THE FOLLOWING CRITERIA:

- Has broad responsibilities for evaluating alternative means of meeting the nation's energy needs in relation to economic, environmental, and security objectives;
- Is familiar with the oil and gas industry, has regulatory powers incident thereto, and will exercise independence of judgment in matters relating to industry;
- Administers functions dealing with both offshore and landside effects of deepwater port facilities;

- Has a balanced concern for economic growth and for environmental consequences;
- Has expertise in coastal zone management

Among existing agencies, none fully satisfies all the above criteria, but the Department of the Interior appears most closely to satisfy them.

13. THERE SHOULD BE A COMPLETE FACTUAL STUDY OF EACH PROPOSED SUPERPORT, AND OBJECTIVE EVALUATION OF ITS SUITABILITY AND NEED

- Federal and state governments should provide guidance to industry on all requirements for protection of the public interest, including criteria and supporting data;
- Both Federal and state governments must develop their own data, research, and evaluations in order to reach independent judgment of industry data and estimates;
- If necessary, competent independent engineering, design, and consulting firms should be employed by the Federal Government to assist in this process;
- There should be wide dissemination and exchange of studies and information.

14. THE LEAD AGENCY SHOULD ESTABLISH FEDERAL INTER-AGENCY TASK FORCES TO FORMULATE POLICY AND DEVELOP DATA ON SUCH SUBJECTS AS:

- Site selection criteria and standards embracing both economic and environmental factors;

12.

- Design characteristics and operational standards of vessels, terminals, offshore pipelines and storage facilities;
- Equipment, procedures and personnel required for avoidance and cleanup of oil spillage;
- Compensation of adversely affected private parties for any economic losses resulting from oil spills not recoverable by other legal processes;
- Financial-accounting-pricing standards and criteria for economic regulation of deepwater port operation, including rates of return, depreciation, and cost-price relationships for specific services provided and facilities used (to the degree authorized by legislation or otherwise as an input to possible new legislation);
- Amelioration of income and employment losses in any communities where existing refineries or other industries are abandoned or relocated as a direct result of deepwater port development.

15. FORMAL PROVISION SHOULD BE MADE FOR ACTIVE PUBLIC PARTICIPATION IN DECISION-MAKING BEYOND THE CONVENTIONAL HEARING PROCESS. TOWARD THIS END JOINT CONSULTATION AND EVALUATION BOARDS SHOULD BE ESTABLISHED IN AREAS OR REGIONS WHERE DEEPWATER PORTS ARE BEING CONSIDERED

- Membership should include respected citizens knowledgeable about social and economic aspirations of the area, who would be broadly representative of the diverse interests affected;
- Members could be appointed by the lead agency and the appropriate state governor, and include representatives of economic development organizations, labor unions, local and regional planning associations, and civic organizations.

16. THE STATE AND LOCAL GOVERNMENTS ARE CONFRONTED BY SUBSTANTIALLY THE SAME RANGE OF ISSUES AS THE FEDERAL GOVERNMENT, AND HAVE A CRUCIAL ROLE TO PLAY IN THE PLANNING AND DECISION-MAKING PROCESS. IN ORDER TO PLAY THAT ROLE EFFECTIVELY, INTERESTED STATES SHOULD TAKE THE FOLLOWING STEPS:

- Provide for appropriate consultation with affected regional agencies;
- Provide for appropriate local government participation;
- Make legislative and administrative provision as necessary to grant licensing authority for facilities within their jurisdictions;
- Expedite the development of coastal zone management programs pursuant to the Coastal Zone Management Act of 1972, looking towards both short- and long-term land and water use plans which can usefully be related to possible deepwater port development and its secondary impacts;
- Consider the designation of a lead agency or authority to coordinate and evaluate proposals for deepwater port development at the state or regional level;
- Participate in cooperative port and land use study efforts with Federal agencies, universities and relevant private groups, and coordinate similar activities among interested local public bodies. These efforts should be directed toward a comprehensive and systematic review of proposed offshore and related onshore facilities from the standpoint of their compatibility with other existing or planned water and land uses, their possible pressures on the resource base, and their economic or financial implications for the state or region;

II. INTRODUCTION

Background

The United States now faces a series of issues of unparalleled magnitude and complexity that spring from a common source: continuing long-term pressures for ever-increasing supplies of energy and fuel to support a growing industrial economy. Those pressures in turn make increasing demands on air, water, and land resources, particularly in coastal zones where competing demands are already intensive and also growing. The resulting competitive struggle for limited resources has escalated in the past few years to a level of major national and international significance, for two main reasons.

The first reason is that a major change has occurred in the social and political setting within which industrial development decision-making transpires. Until recently, that setting was very strongly weighted toward economic growth, with negligible formal or legal concern for environmental and other noneconomic implications. Electric utilities, oil refiners, petrochemical producers and other industrial enterprises were generally able to expand at existing or new sites as necessary to serve growing demand. That situation has changed entirely with the rapid increase in general public awareness of and concern about threats to the environment posed by economic growth in general, and by heavy industrial development in particular. These concerns have found expression in a number of new laws requiring various accommodations to environmental protection, as well as in the evolution of effectively organized political opposition by environmentally sensitive groups and

individuals to perceived dangers from almost any potential encroachment.

The second reason for heightened resource competition in coastal zones is that a major change has recently occurred in the U.S. supply of relatively low cost energy and fuel resources, including petroleum, and a progressively worsening trend is strongly indicated. Historically the United States was largely self-sufficient in those resources. In the last few years, severe shortages of liquid fuel have occurred, promise to worsen, and imply rapidly growing dependence on waterborne imports, especially of crude oil.

It is in this context that the question of deepwater ports for the United States arises. In this study, a deepwater port includes terminal facilities at least 70 feet deep for the reception of crude oil carried by vessels of at least 250,000 tons. Serious interest in such facilities has recently been evidenced by proposals and plans -- in various stages of development -- of petroleum companies and others for sites along the Atlantic and gulf coasts. Industry efforts have been supplemented by deepwater port studies of Federal and state government agencies and of private consultants which appraise the economic, technical, and environmental aspects of selected facilities. The latter include major investigations undertaken or sponsored by the Army Corps of Engineers, the Council on Environmental Quality, and the Maritime Administration.

Almost all of those studies indicate that crude oil deepwater ports are likely to be highly advantageous from the economic point of view and technically feasible. They also suggest that environmentally provocative aspects of deepwater port development can be substantially controlled through careful siting and design of all systems components and through effective operational safeguards. Finally, the studies indicate that other means of delivering crude oil imports in large volumes to the United States, such as further channel dredging, restricted-draft tanker design, or lightering from large to small vessels outside shallow harbors, are significantly less advantageous than deepwater port facilities in economic terms, and perhaps in environmental terms as well.

Virtually all proposals for deepwater ports to serve U.S. oil imports presume that:

1. U.S. oil imports will inevitably increase very rapidly, at least over the next 10 to 15 years, with projections extending upwards of several hundred million tons annually, for two major reasons:

- a. Continuing rapid growth in domestic demand for fuel and energy resources, including petroleum products
- b. The practical impossibility of significantly offsetting the domestic supply/demand imbalance, other than by oil imports.

2. Those imports will be mostly in the form of crude rather than refined products, because:

- a. Political and economic considerations dictate that U.S. refining capacity be expanded, rather than exported, at rates more or less commensurate with market growth
- b. Crude oil can be transported much more efficiently than petroleum products.

3. Most of the crude oil will be transported over relatively long distances, a vital consideration to the economic merits of very large crude carriers and deepwater ports serving them, because:

- a. Oil reserves of major traditional U.S. supply sources in the Western Hemisphere (especially Canada and Venezuela) are rapidly being depleted
- b. The Mideast, and to a lesser degree North and West Africa, are the only oil-producing areas known to have sufficiently large reserves to support most expected needs.

The validity of these assumptions is presently under intensive review by top levels of the administration, the Congress, and by nongovernmental study groups. For balance of payments, national security, and other reasons, new public policies and programs may emerge

which seek to reduce U.S. dependence on imported oil from commonly projected levels by fostering development of domestic oil and gas, coal, shale, geothermal, and other resources, and/or by restraining the rate of growth in the demand for energy.

However, effective resolution of these matters along lines that would effectively limit growth in crude oil imports is highly problematic, especially over the next 10 to 12 years. This study accordingly assumes that U.S. imports of crude oil will increase substantially in the foreseeable future.

Deepwater ports to accommodate growing volumes of crude oil imports do not necessarily have to be provided in the United States. Prior studies and industry behavior both suggest the availability of viable choices, especially through the provision of deepwater ports in Canada and/or the Caribbean. Resort to those options would, however, virtually require transshipment in relatively small vessels to appropriate U.S. refinery destinations after prior movement in very large crude carriers to the deepwater transshipment terminals. Those studies have also suggested that foreign deepwater port alternatives would be less advantageous to the United States from the standpoint of transport costs, national security, balance of payments (although the quantitative significance of the latter two elements is very much less than for basic reliance on oil imports), and possibly from the environmental standpoint. For these reasons, this study also presumes the basic desirability of U.S. deepwater ports over foreign transshipment terminals.

Study Purpose and Approach

The general purpose of this study is to identify and appraise broadly the major institutional implications of potential deepwater port development in the United States to serve its growing needs for crude oil imports. The term "institutional" is so general that some explanation of its meaning for study purposes seems essential. In many reports, "institutional" is commonly used more or less as a synonym for "organizational,"

especially in relation to public bodies. This definition is likely to be far too limited in scope. Resulting analyses may fail to consider the much broader social and political context in which the "organizational" body is expected to function, and which will influence, if not determine, its manner of operation and effectiveness.

For purposes of this study the concept of organization is certainly relevant, and indeed essential. For example, one theme of the study is the identification of existing institutions which would or should be involved in the planning, construction, or operation of deepwater ports. This theme includes a description of the major relevant governmental bodies (at Federal, state, and local levels), as well as of the important private business, financial, and other groups which appear to have an important stake in the matters at hand. But the analysis extends to further consider how these groups might be involved in deepwater port development, with important attention to the laws and political traditions that must necessarily affect that involvement.

Though there is no single definition of "institutional," in this study it applies fully to the process by which decisions and actions concerning deepwater port development and operation would be taken. "Institutional" thus includes questions of roles and functions -- formal or informal -- of any private or public groups that may be involved in that process, and the dynamic interplay of differing values among them in their resolution or outcome in whatever organizational setting may be imagined or hypothesized.

A useful way further to illuminate our institutional concepts is to review the contents of the report. Chapter III identifies and briefly discusses the major issues of public significance implied by deepwater port development. It goes on to establish basic policy goals or objectives toward which U.S. deepwater port development might usefully be directed if it is to serve the general public welfare. These goals are intended as fully as possible to reflect a wide range of underlying social values, some of them in conflict, which will inevitably shape any institutions dealing with deepwater port questions.

Chapters IV and V are predominantly empirical. Chapter IV reviews the present complex distribution of public jurisdiction and authority for the many and varied aspects of deepwater port development by level of government (international, Federal, state and local), and within the Federal Government, and it also identifies major gaps, conflicts, overlaps, and uncertainties in existing legal or organizational arrangements as they might apply to deepwater port development. Finally it provides an overview of the basic distribution of legal power among private and public sectors which must either be accommodated or modified in the development of improved institutional processes for deepwater port development.

Chapter V identifies major public and private actors now involved in efforts to study, plan, promote or prevent deepwater ports, and it illustrates their behavior and interaction. The presentation also reveals some unresolved conflicts which may affect the attainment of public interest goals formulated in chapter III, and some results of the divided jurisdictional circumstances revealed in chapter IV.

Chapter VI focuses on varied financial aspects of deepwater port development. It identifies some policy issues of major public significance, and it indicates how different institutional arrangements for sharing port benefits and costs may influence the attainment of public goals for port development. Separate treatment is given to the allocation of basic port costs, costs of oil spill and other secondary costs, as well as to approaches for financing capital investment in port facilities and pricing their use.

Chapter VII establishes some parameters for institutional development of deepwater ports in the public interest. It first indicates three prerequisites to any reasonable institutional approach. It then considers possible roles of the major public and private parties-at-interest in the control of deepwater port development and operation. After establishing the preferred patterns of port ownership and operation, the chapter examines the additional and more varied roles which must be played by both public and private sectors

to satisfy goals within the legal and political framework.

Chapter VIII attempts to chart a course toward constructive evolution of new instruments for deepwater port development which builds upon the foundations laid in earlier chapters. Significant attention is given to analogies from other governmental activities which appear relevant to the issues at hand. The chapter includes numerous suggestions or indications of specific needs for new legislation, policy-making, organizational and decisional processes at and among all levels of government and between private and public sectors. It emphasizes the particularly crucial and challenging position of leadership necessarily thrust upon the Federal Government if public interest goals are to be effectively realized. It also identifies several major institutional problems whose proper resolution requires additional investigation.

III. THE PUBLIC INTEREST IN DEEPWATER PORTS

Introduction

The circumstances which give rise to needs for deepwater ports, and which are associated with their development, have no close historic parallel in the United States. They accordingly present a combination of entirely new issues and of old ones which are now cast in a different light.

U.S. port facilities serving petroleum refineries (among other heavy industries) have traditionally been planned and controlled by local private interests. Governmental influence has generally been minor. The role of public port authorities at the state or local level in relation to petroleum terminal facilities has been greatly limited by the fact that, with rare exceptions, the port authorities have no direct stake in the petroleum facilities' provision or operation -- a situation which sharply distinguishes petroleum from many other bulk and most nonbulk commodities. However, because a strong economic base is indirectly beneficial to a port service area, those authorities have often aggressively promoted or supported port improvements designed to serve petroleum and related shipping interests, even though they are in no way directly involved.

The role of the Federal Government has historically been limited, for the most part, to responsibility for providing and paying for improved harbors and channels -- mostly through dredging and sometimes including breakwaters. Other types of port improvements have sometimes been fully financed privately and paid

for by users (typical of most oil terminal facilities), but more commonly they have been partially subsidized by local or state public bodies.

This traditional institutional pattern may have been acceptable at times when the volumes of oil carried by ship, including crude oil imports, were modest; when vessel sizes were compatible with modest depths of numerous harbors and channels; when the relative attractiveness of various industrial refinery locations was essentially neutralized from the water transport point of view; and when there was no overriding concern with environmental degradation of air, water or land resources associated with oil transport and related industrial activities, and the secondary development induced by port improvements.

The dominant factor which now challenges the adequacy of the above traditional pattern of port development is the assumed rapid growth of U.S. crude oil import requirements to unprecedented levels. Even if the United States were not to provide its own deepwater ports to accommodate those oil imports, the tremendous increase in vessel traffic in already congested waterways, as well as the need for substantial additions to U.S. refinery capacity and for related industrial development, would present a formidable challenge. Deepwater ports offer significant opportunities to overcome some of these problems.

At the same time, they introduce controversial new issues, reflecting the enormous scale of deepwater port facilities as compared with conventional ones; the huge size of very large crude carriers as compared with conventional tankers; and the provocative implications of deepwater ports for more concentrated landside impacts in coastal zones of influence than would otherwise result. These factors, among others, raise issues of port planning and development to a level of complexity that transcends the ability of traditional institutional arrangements to cope with them.

Salient Characteristics of
Deepwater Ports

A deepwater port serving crude oil is only one element in an overall oil delivery system whose parts are closely interrelated. The system has these major components:

1. A very large ocean vessel bearing crude oil from distant overseas origins
2. A terminal and associated storage facilities
3. A transshipment link, which could be a pipeline, a smaller feeder vessel, or some combination of the two
4. A refinery (or group of refineries).

The ocean vessel would carry at least 250,000 tons -- and possibly 400,000 to 500,000 tons -- of cargo in a single journey. Vessels would be predominantly of foreign-flag registry, unless there were major changes in Federal maritime policy. A mixed pattern of ownership could be expected, with the independent, international tanker and bulk shipping industry and its financiers owning much of the tonnage (a fair proportion of it U.S. controlled), and individual petroleum companies the balance.

Deepwater terminals serving very large crude carriers require minimum water depths of around 70 feet, and the largest ones need 100 feet of water or more. These requirements contrast with prevailing depths of 45 feet or less in channels serving all existing refinery terminals on the east and gulf coasts. Similar constraints of channel depth apply to west coast refineries in northern California, and to a much lesser degree in southern California.

Terminals might be sited anywhere from onshore to 25 miles or more offshore, depending upon specific physical circumstances which would also influence terminal design characteristics. Terminals could be simple

unprotected monobuoys linked by pipeline to landside storage tanks; artificial or manmade islands with berths, storage facilities, and breakwaters; or conventional shoreside facilities. However, most potential deepwater terminal sites on the east and gulf coasts are offshore, because environmental and economic costs of dredging channels to desired depths would probably be prohibitive.

The number and location of deepwater port terminals can greatly affect the long-term location pattern of refineries. Conversely, refinery locations will have a strong influence on port siting. U.S. petroleum refineries are now heavily concentrated within each major coastal region. On the gulf coast, most capacity is located in the Beaumont-Port Arthur and Galveston-Houston, Texas, area, and in the lower Mississippi area. On the east coast, refineries are concentrated along the Delaware Bay and River and on the New Jersey side of New York Harbor. On the west coast the refineries are mostly sited in the Greater Los Angeles and San Francisco Bay areas.

Because of the substantial scale economies involved, only one or two deepwater terminals would probably be needed in the foreseeable future on each major coast to serve existing refineries or any others which were provided in the same general locations. The appropriate number will depend partly on future volumes of imported crude, but to a much greater degree on future locations of additional petroleum refining capacity. Substantially greater refining capacity will probably be needed over time, but capacities and locations of the new plants to be built are presently quite uncertain. Decisions may be importantly affected both by the timing and siting of U.S. deepwater port facilities. Thus, alternative locations are available in Canada and the Caribbean for new oil refineries serving the United States. They have naturally deep water; and economic and political circumstances for plant, as well as for deepwater port, investment are often favorable.

Major Issues of Public Significance

As already implied by the preceding summary of salient characteristics, deepwater port development raises important questions of general public interest.

Economic

Two principal kinds of economic benefits will be generated by U.S. deepwater ports: net savings in transport costs (reflecting both reduced ocean shipping costs and avoidance of improvements at refinery terminals which would usually be necessary for any alternative oil delivery system, after allowing for port costs); and possibly increased income and employment in the local zones of influence. The latter would arise primarily from port-induced expansion of refineries and of related economic activities, and to a lesser degree from construction and operation of the deepwater port facility proper.

Effective choices will be hard to make. There are many possible concepts of locational distribution for future U.S. refining capacity, as well as of sites and design characteristics for deepwater ports serving future refineries. Private industry can generally be expected to propose those choices which would produce the greatest benefit relative to costs from its point of view. However, there are likely to be social benefit-cost considerations, not reflected in the price mechanism, of major public significance. Those considerations will be especially important in assessing "costs" of environmental risks and secondary development (discussed further below), and in determining "costs" of alternative foreign deepwater port options used to measure economic benefits of U.S. facilities. Optimization of total social benefits relative to total social costs therefore requires significant public participation in the evaluation and selection of alternative port investments.

Implicit in the bestowing of economic benefits is an additional publicly significant question of their equitable distribution among various groups. The problem of economic equity can be illuminated by reference to existing circumstances. For the most part, each individual refinery has its own water terminal. Since all are served by water bodies of comparable depth throughout the east and gulf coasts, and to which all vessels have free access, water transport now exercises an essentially neutral force in their competitive relationships. But if only one or two deepwater port facilities were available per coastal region or market area, a

near-monopoly situation might be created. The degree to which all legitimate users have access, the terms and conditions of that access, and the degree to which savings benefits would be passed on to refiners and consumers, are all properly matters of public concern.

Considerations of economic equity also arise in connection with secondary impacts. For example, the introduction of one or more deepwater ports may alter competitive relationships among existing refineries, and hence the economic base of those areas in which they are situated. Some refineries which happened to be relatively inaccessible to the deepwater port might lose competitive position and be shifted elsewhere. As with other aspects of social dislocation arising from technological change, there is likely to be a decided public interest in such a development.

Environmental

On the environmental side, several sets of issues appear to have major public significance. Of greatest importance is the risk of oil spills from any component of the delivery system into the water and along the shoreline, and the potentially great damage which could result. It should be noted that the risk is related partly to the absolute volume of oil which is imported and partly to the nature of the delivery system, including the size and design characteristics of ocean vessels used and their routing patterns.

The probability of oil spill frequency is substantially decreased where supertankers, and offshore deepwater port terminals having pipeline links to refineries, in effect replace larger numbers of smaller vessels which must proceed to refinery destinations through congested waterways. On the other hand, the possible magnitude of a single spill generally increases with vessel size. The severity of potential pollution damage which could result is otherwise extremely sensitive to specific conditions at individual sites. However, technology and experience are available to greatly limit the risks involved through environmentally sensitive design of vessels and other systems components, through formulation of safe operating standards and practices,

and through efficient oil spill containment procedures. Nevertheless, minimization of oil pollution risks for any oil delivery system imposes additional costs. This suggests a need to determine appropriate standards of environmental protection from oil spills which will most closely approximate the evident public interest.

A second major environmental issue associated with deepwater port development pertains to its potentially negative physical impacts, direct and indirect, on shore. They may originate from the port facility itself, the refineries initially served, or -- of greatest potential importance -- from the additional industrial, commercial, residential, or other activity induced by the port in its zone of influence. At least three kinds of impacts may arise in these areas, particularly in coastal zones where competing claims on resources are typically intense and in varying degrees mutually exclusive. They include: impacts on land and possible conflicts in its use, potential additional pollution of the air or water from expanded industrial activity, and possible aesthetic intrusions (visual pollution, unpleasant odors, etc.). As is true more generally for limited or scarce natural resources whose external or social costs cannot be effectively incorporated in the price mechanism, the issues raised are of inherent public interest, concern, and responsibility.

Beyond questions of environmental protection, there are also issues of environmental equity. Those groups, areas, and individuals most prominently exposed to environmental risks -- especially from oil pollution -- are not likely to receive commensurate benefits, since the benefits would be more widely distributed geographically. It is thus all the more important that the burdens imposed upon them be minimized to the degree possible. Such matters would appear to be of major public significance.

Political and Social

Prevailing attitudes of local communities, states, and regions toward deepwater port development vary widely. In general, feelings in key states of the North Atlantic coast are decidedly negative, while most states in the

gulf coast region have revealed a decidedly positive disposition toward deepwater port development. The west coast is expected to reveal a pattern similar to that of the east coast at such time as the deepwater port question assumes importance there.

These imbalances in prevailing regional perceptions of deepwater port pros and cons largely reflect major differences in basic values inherent in making the difficult trade-off between economic growth and environmental protection. They also appear to have exceedingly strong emotional roots.

Negative reactions are most pronounced for proposed sites close to heavily populated coastal zones, which occasionally include large metropolitan areas, and most commonly where water-based recreation, commercial fishing, and associated residential and commercial developments are dominant. In those communities, deepwater ports are considered incompatible with the established land-use pattern and provocative in their implication of major oil spills along invaluable coastlines. Of equal or greater concern in those communities is the fear of unwanted secondary impacts -- additional refineries, tank farms, petrochemical plants and related infrastructure -- which would impose further demands on scarce coastal resources and adversely affect the amenity values and life styles of residents and visitors.

Such negative attitudes at the local or state level are very much less in evidence for sites near coastal areas which are sparsely populated or developed. Where those sites are also located in or near states whose petroleum industry is a major source of public tax revenues, income and employment, fears of industrial stagnation because of depleted oil resources have stimulated strong positive feelings about port development as a means of arresting potential economic loss. Furthermore, in those states and in some others which do not now have any significant oil refining or petrochemical industries, there is a strong desire for industrial development to increase the income, employment, and tax base, which could be strongly induced by a deepwater port.

Where economic growth is strongly desired, intense competition among states and subregions can reasonably be expected, which presents a danger of excessive port development. In those areas where communities and states fiercely oppose port development on environmental grounds, facilities might be forced to sites inside or outside the United States which are objectively less desirable on both environmental and economic grounds. These circumstances are clearly of major public significance and must be addressed in the design of new institutional arrangements.

Legal and Jurisdictional

Effective treatment of the preceding group of economic and environmental issues is greatly complicated by a jumbled pattern of legal jurisdiction and authority. For, as is implied above and more fully discussed in the following chapter, the scope of existing law does not fully address the wide range of port-related issues for which a strong legal foundation is necessary. Furthermore, the present allocation of relevant legal jurisdiction and authority within the public sector (at international, Federal, state, and local levels), and between the public and private sectors, for many of those issues is highly fragmented and often unclear or confusing. These circumstances present problems of inherent public significance and of fundamental importance. To the degree prevailing jurisdictional patterns cannot conveniently be modified, they constitute constraints which any realistic new mechanisms must reflect and find means of offsetting.

Major Goals for Deepwater Port Development

The preceding review of salient characteristics of deepwater ports, and the identification of major questions of public significance which they present, were designed to provide a sound basis for formulating a broadly focused set of goals or targets whose attainment would best serve the public interest. Any such hypothesized objectives are necessarily subjective or arbitrary, and some readers might opt for modification. But some set of goals are essential, and we have tried

to frame them in sufficiently general terms to leave ample scope for individual or regional preferences.

In general terms, deepwater port development in the public interest can probably be achieved by effectively satisfying the goals which follow.

Economic Development

1. To obtain the most efficient crude oil delivery system feasible, including the appropriate number and time-phasing of deepwater ports and related facilities, as well as their optimal design, location, and capacity characteristics; in light of present and desired future locations of refineries to be served and of associated economic activities; and subject to constraints imposed for meeting public environmental protection objectives (see below).

2. To assure equitable distribution of the economic benefits and costs of deepwater ports, including those pertaining to secondary effects, among: public and private sectors, user, producer, and consumer groups, and geographic regions; as compatible with the preceding economic efficiency goal.

Environmental Protection

1. To reduce environmental risks associated with deepwater port development to minimum acceptable levels: at each stage of evolution, including facility siting and design, construction, and operation; for every component of the oil delivery system, including the very large crude carrier, terminal and storage facilities, feeder vessels and pipelines, refineries and associated activities; and especially in relation to dangers of massive oil spill, of intrusions on competing uses of the shoreline, seabed, or waters, and of undesired land use or other impacts from secondary development.

2. To foster an equitable sharing of any environmental risks or costs that cannot be prevented as among public and private sectors, geographic areas, or relevant parties; to the degree such allocation is compatible with economic development and efficiency objectives.

Timeliness

Realization of the preceding economic and environmental objectives will certainly be difficult. Unfortunately, the time available for their realization is decidedly limited. The demand for deepwater ports serving the east and gulf coasts appears to be escalating rapidly, and foreign deepwater port options in Canada and the Caribbean are available to private industry. Those options are virtually certain to be exercised in the absence of favorable and timely decisions on U.S. deepwater ports incrementally over the years. Such a result would at least partially foreclose opportunities for U.S. deepwater port development, and it would also be less likely to serve economic or environmental goals in the public interest. Timeliness appears to be crucially important on both the east and gulf coasts and much less significant on the west coast.

Other

The above concepts of major public interest objectives to be served by deepwater ports are quite general in nature. Some amplification may, therefore, be useful.

First, and of overwhelming importance, the public interest can be well served only to the degree that all goals are realized in combination and in balance. Thus, for example, excessive emphasis on the economic efficiency goal would compromise major public concern for environmental protection. Similarly, obsessive devotion to environmental protection -- inherent, for example, in the unattainable concept of "zero risk" -- would virtually preclude deepwater port development.

Second, the broad scope and complexity of the issues involved in balancing economic development and environmental protection objectives, together with the need for timely decisions about them, impose extraordinary demands on any institutional machinery which might evolve to cope with them. Those demands are further strained by:

1. The division of legal and political power over those matters among varied governmental and private organizations

2. The number and variety of public and private groups having a stake in one or more of the questions raised

3. At levels of state and local government, by a frequently powerful political and emotional tilt either toward development or toward protection.

These factors are more fully treated in chapters IV and V.

Third, the hypothesized public interest goals are stated in a form which leaves as open as possible questions of institutional means for their achievement. The presumption of major public interests in economic development and in environmental protection is in no way intended to suggest a priori particular roles for any level of government or for the private sector. Thus, for example, issues as to public vs. private ownership of facilities or as to appropriate public and private roles are encompassed by our evaluation of the basic parameters of institutional development for deepwater ports in chapter VII, and of further institutional requirements in chapter VIII.

IV. PROBLEMS OF LEGAL JURISDICTION AND AUTHORITY

Introduction

Deepwater port development must evolve within legal regimes of several levels of government. Although these ports constitute an innovation for which there is no exact precedent in the United States, a substantial legal structure already exists which pertains to their development or operation. This chapter provides an overview of that structure. It serves four inter-related purposes:

1. To identify the differing political or territorial jurisdictions to which deepwater port development is likely to be subject (territorial jurisdiction)
2. To illuminate the recent or traditional legal roles of each level of government by functional areas of concern (functional authority)
3. To reveal major gaps and conflicts in the existing legal structure which may have to be addressed
4. To indicate the basic distribution of legal power among public and private sectors which must be reflected in any emerging institutional arrangements for deepwater port development.

The legal questions raised are greatly complicated by:

1. The variety of public interest considerations involved in deepwater port development
2. The varying geographic locations of system components
3. The number of distinct but closely related components of a deepwater port facility.

Applicable legal regimes tend to differ significantly for ocean vessels, for fixed facilities located in the water, and for landside facilities. But they may -- and in fact do -- overlap those three broad classes for certain purposes.

Territorial Jurisdiction

Ocean Vessels

Questions of political or territorial jurisdiction governing all aspects of ocean vessel design, construction, and operation are influenced by three major facts which distinguish them from all other systems components. The vessels:

1. Are constantly moving between countries engaged in trade and have no fixed geographic locations
2. Would be predominantly vessels of foreign-flag registry, built in, owned and operated by nationals of many different countries
3. Would operate mostly in international waters, and possibly within U.S. territorial waters as well.

Within the United States, legal authority over an ocean vessel operating in foreign commerce is generally reserved to the Federal Government. It could lawfully impose any design, operating or other standards on ships moving within its territorial waters. Although legal leverage would perhaps be greatest in relation to U.S.-registered or U.S.-owned vessels,

foreign-owned and foreign-operated ships are now and prospectively of dominant importance in the oil trade. Thus, as in all matters of international trade, the United States generally tries to make acceptable arrangements with its trading partners to avoid unnecessary conflicts and possible retaliatory actions. In practice, therefore, the most important institutional arrangements for establishing rules governing the design and operation of ocean vessels bearing goods in U.S. foreign trade are international in character.

The forum of greatest significance in these matters is the Intergovernmental Maritime Consultative Organization (IMCO). As a vehicle for accommodation among major maritime nations on numerous issues, IMCO "conventions" initially are proposals which do not become effective until they are formally approved by all relevant national governments, usually a time-consuming process. Such approval typically includes parallel legislation at the Federal level. Its administration within or beyond U.S. territorial waters is for the most part reserved to the Federal Government. Within the United States the Federal Government is also legally charged with the exclusive role of providing various navigational aids and traffic control systems in territorial waters.

Waterside Fixed Facilities

Location and design characteristics of alternative deepwater port proposals vary considerably. However, most facilities would include offshore terminals from 2 to 25 or more miles offshore, with pipeline links across the seabed to shoreside storage tanks. The pertinent political jurisdiction to whose basic laws such waterside facilities would be subject depends importantly on the distance of the facilities from shore.

That issue is highly problematic for any facility beyond the 3-mile limit. The Territorial Sea Convention establishes the breadth of the territorial sea as extending from the low water line along the coast to a distance of 3 nautical miles into the sea. The

United States has full sovereignty over waters along its coast within these limits. In the 1953 Submerged Lands Act, the Federal Government granted to the states its full legal jurisdiction over the seabed up to the 3-mile limit, reserving only its traditional functional responsibilities for commerce and navigation.

In most instances federally delegated jurisdiction remains at the state level. However, circumstances in some areas may raise special problems. In Louisiana, for example, a coastal parish (equivalent to a county) claims that it has constitutional authority to provide or permit a deepwater port in its adjacent waters. But in 1972 the state enacted a law placing all authority for deepwater port development within its territorial jurisdiction in the hands of a newly created state agency. Enacted without constitutional amendment, the law has been challenged by the parish and is awaiting adjudication in the courts.

Two further legal uncertainties arise as to the territorial jurisdiction of the respective states in coastal waters. The first uncertainty pertains to the dividing line between Federal and state jurisdiction off the shores of Texas and Florida (gulf coast only). On the basis of judicial interpretations of the Submerged Lands Act, those two states alone were given some jurisdictional rights out to 9 nautical miles. But application of those rights to deepwater port facilities is unclear. The issue is likely to be resolved in a proceeding presently before the Supreme Court (the case pertains to fishing rights, but the legal questions are comparable).

Furthermore, determination of the territorial sea's outer limit (whether 3 or 9 miles) depends on where the base line is taken. This seemingly minor technical question is sometimes complicated by changing physical conditions along the shore. It has also resulted in litigation between the United States and several states, including Louisiana, which remains to be resolved.

However the courts resolve these boundary line issues, primary state jurisdiction in its territorial waters is substantially overlapped by Federal functional responsibilities, as indicated more fully below.

The only relevant U.S. legal jurisdiction beyond its present territorial sea limit of 3 miles relates to exploration and exploitation of natural resources in the seabed and subsoil to a depth of 200 meters (well beyond any potential deepwater port terminal), which it obtained under the Continental Shelf Convention and its national equivalent (the Outer Continental Shelf Act of 1953, as amended). All known deepwater ports in the world located beyond a nation's territorial sea are directly related to exploitation of petroleum or natural gas from the Continental Shelf and clearly fall within the permissible activities of the convention. But U.S. deepwater port development is presently contemplated entirely for crude oil imports, unrelated to resource extraction from its Continental Shelf. Since no other international conventions or laws treat deepwater ports, apparently no legal regime at any level of government now applies to facilities beyond the U.S. territorial sea limit of 3 nautical miles.

Landside Facilities

All deepwater port proposals include substantial facilities along the shore and inland, especially storage facilities and connecting pipelines to the refineries served. Most secondary activities, new refineries, petrochemical plants, and related support facilities stimulated by port development would be located there as well. Generally such facilities would be subject to the basic legal regimes of relevant state and local governments, but with significant overlapping of Federal authority in specific functional areas as noted below.

Functional Jurisdiction and Authority

The jurisdictional problem is complicated further by gaps in existing authority, and by overlapping

authority, of relevant governmental jurisdictions. For example, even if U.S. territorial jurisdiction could be asserted beyond the existing 3-mile limit of its territorial sea, it is very unclear whether or to what degree any Federal agency is now authorized to make a decision on any deepwater port component located there.

As of this writing, one state -- Louisiana -- had passed legislation authorizing a newly created agency to decide upon and provide deepwater ports. But its clear legislative mandate is handicapped by a lack of territorial jurisdiction beyond the 3-mile limit. Furthermore, it would apparently need to obtain clearance of different Federal agencies whose functional authority substantially overlaps it no matter where the facility were located inside or outside the 3-mile limit. But the lack of well-defined statutory authority for any Federal agency to approve construction of any component of a port facility desired by others, or even to establish conditions for their provision, presents a situation of paralysis.

Louisiana's attempt to centralize authority for deepwater port matters at the state level is as yet unparalleled. In other states, problems of unclear or overlapping functional jurisdiction among different agencies may present difficulties similar to those at the Federal level. For example, any deepwater port facilities located in Delaware Bay and inside the territorial limits of the State of Delaware would probably be subject to review or approval by at least the following bodies: at the regional level, the Delaware River Basin Commission with respect to water quality aspects of port construction and operation, and possibly the Delaware River and Bay Authority, whose responsibility for marine transport facilities in the Bay may or may not extend to deepwater port facilities; at the state level, the Department of Natural Resources and Environmental Control, from whom a permit would be necessary for any construction of fixed facilities, and the State Planning Office, for consistency with statewide development plans, including the Coastal Zone Act which presently prohibits deepwater ports; and at the local or county level, zoning boards whose ordinances may vary considerably as to the accommodation of port-related facilities.

If the traditional roles of the Federal Government in major relevant functional areas and corresponding legislative mandates were made applicable to deepwater port development, its participation in decision-making on any facility would seem to require involvement by a number of separate administrative bodies, including some which are concerned broadly with environmental impacts; others having narrower missions for protection of navigation, fish and wildlife in the coastal zone; and those involved in resource extraction or exploration in the Outer Continental Shelf.

Perhaps the single most important instrument of potential Federal influence in the deepwater port decision process derives from the 1969 National Environmental Policy Act (NEPA). That act requires that environmental impact statements be incorporated into proposals for legislation and for other major Federal actions significantly affecting the quality of the human environment. In a recent series of cases the courts have interpreted NEPA language in the broadest possible manner. Thus an "impact statement" must really take the form of a comprehensive study of the full range of environmental implications of any proposed new project, of all reasonable or conceivable alternatives to it, and often of numerous nonenvironmental factors as well. Those environmental factors are supposed to be built into project analysis and design from the beginning and not left for attention until after some of the initial options have been discarded.

Responsibility for preparation of environmental impact statements is generally entrusted to a so-called lead agency. It is not now clear which agency within the Federal Government would appropriately play that role, although the law authorizes the Council on Environmental Quality (in the Executive Office of the President) to designate one. In any event all Federal agencies that have "jurisdiction by law or special expertise with respect to any environmental impact involved" are required to make comments. Furthermore, state and local public agencies as well as private interests are generally invited to submit comments, often in writing as well as in public hearings.

While NEPA thus requires careful and comprehensive attention to environmental considerations, it is silent on how they are to be integrated in overall project appraisal and decision. It therefore does not provide meaningful standards or criteria for balancing environmental and other values inherent in almost any project choices, such as those available for the number, location, or design characteristics of deepwater ports. The implicit presumption of the act, therefore, is that properly developed information and analysis, together with ample opportunity for all interested parties to comment publicly, will assure effective accommodation to environmental considerations in the decision process.

Authority To Regulate

A dominant Federal role and a secondary role for states and local communities seem indicated in matters of economic and environmental regulation of deepwater port facilities.

Economic regulation would establish the various terms and conditions of facility use, including fair rates of return to investors, price schedules for different classes of service performed, and rules governing access (e.g., minimum shipment size). Under most likely circumstances of private deepwater ownership or operation, a legal need for such regulation would arise because of their quasimonopoly nature (see chapter III). With only a few deepwater ports, perhaps one or two per coastline, serving a number of refineries owned by different companies in each port service area, they would in practice be joint-use or common-carrier facilities. These are precisely the conditions which have given rise to legislation requiring public regulation in many sectors of the transport industry over the years.

If a need for public economic regulation is established, the Federal or state role will depend largely upon how broadly legal authorities interpret the nature of port operation. If the movement of crude oil from an ocean vessel discharging at a terminal, transshipped by pipeline or water to storage facilities and subsequently to refineries were

construed as an integrated flow, as seems likely, then the entire operation would clearly be in foreign and interstate commerce. This is an area traditionally and logically reserved to exclusive Federal jurisdiction.

Promulgation of various standards or controls for environmental protection and for safety of vessels, terminals, pipelines and associated storage facilities would by analogy appear also to be a major Federal responsibility. Numerous statutes enacted in recent years assign major regulatory authority for most comparable facilities to such Federal agencies as the Coast Guard and the Office of Pipeline Safety in the Department of Transportation, the Environmental Protection Agency, the Corps of Engineers, and, in the Outer Continental Shelf, to the Department of Interior. However, by terms of most relevant statutes, states can provide additional laws and standards for environmental protection and safety to the extent not preempted by Federal legislation. This introduces possibilities of overlapping and conflicting standards which could cause difficulty.

A provocative example of this problem is provided by Federal and state legislation pertaining to financial responsibility for oil pollution incident to the operation of terminal facilities or of vessels bearing crude oil in U.S. territorial waters. A combination of traditional maritime law and of recent Federal legislation explicitly establishes that responsibility. However, it is decidedly limited to certain circumstances, locations, and types of damage, and in absolute amount. The State of Florida, however, passed legislation in 1970 which imposes virtually unlimited financial responsibility on both terminal facilities and vessels. Although a unanimous Supreme Court decision in April 1973 appears to uphold the Florida statute, implications of varying Federal and state standards for prospective owners and users of deepwater ports, as well as the court's failure to decide upon several specific questions presented in the case, leave the basic issue still unresolved.

Another illustration is provided by the State of Maine. Several years ago it began collecting a modest throughput charge on oil movements in foreign trade at its ports under a state law providing an environmental protection fund for use in oil pollution cleanup operations. The action has no parallel in Federal legislation. However, it has been challenged in the courts as an illegal interference on goods moving in foreign and interstate commerce.

Basic authority over development and siting of deepwater port facilities on land and of induced secondary activities lies with the states. However, historically most of them have more or less fully delegated their authority to local governments. Thus, decision-making power for land use has in most states been centered at the local level. Real estate and other business interests often exercise effective control of local authorities, and the range and power of other local interests tends to be limited. Thus resulting land use patterns do not often give significant weight either to noncommercial or to general public interests.

In recognition of these problems, the Federal Coastal-Zone Management Act was passed in 1972 to provide financial inducements to states for establishing statewide programs to plan and manage development in coastal zones within the states. Although states have full legal rights to recentralize zoning and planning authority previously delegated, many local communities have strongly resisted giving up their traditional prerogatives. In some instances, as in Maryland in 1973, that resistance has been sufficiently strong politically to stop proposed new state legislation designed to reassert its influence in land use planning. However, to a limited degree, Federal and state laws are available to support efforts at improved control of industrial land uses through the application of various air and water quality standards to refineries, petrochemical plants, or other industries in various areas.

Basic Distribution of Decision-Making
Power and Authority

Although varied legal jurisdictions and authorities of the public sector in deepwater port matters are clearly extensive, the power which they convey in relation to port decision-making is not exclusive. That power must be shared with the private sector, for prospective (private or public) builders, owners, or operators of any new deepwater port facility would have to assure themselves of a market. Assuming private ownership and operation of refineries and ocean vessels, effective power to decide whether or not to use any new U.S. deepwater port facility would lie with the importers of crude oil and the owners and operators of ocean vessels. They both have choices, which include reliance on deepwater port transshipment facilities in Canada and the Caribbean. Thus private industry has an effective veto power over the use of any deepwater port facility which might be provided. By the same token, a combination of Federal and state governments has an effective veto power over any such U.S. facilities which private industry may choose to develop. From the point of view of the decision-making process, the distribution of basic authority may be summarized as follows:

1. Any U.S. deepwater port would be subject to Federal jurisdiction and authority, the nature of which varies somewhat with the specific location characteristics of the facility. Federal control is perhaps strongest in those instances where a portion of the facility would lie beyond the 3-mile limit from shore. In that geographic zone its legal authority would probably be exclusive if presently unclear questions of national territorial jurisdiction were resolved. If not, no other party would seemingly be able legally to assert the right to provide a facility in those waters.

2. At any point from the shoreline to the 3-mile limit, Federal control would still be present in the form of its functional responsibility for interstate commerce, navigation, fish and wildlife protection, and especially for the preparation of environmental impact

statements. The latter would also apply fully to landside facilities. Taken together, these and other legal coathangers would give the Federal Government considerable discretion in determining whether or not to authorize a facility in light of such issues as impediments to navigation, conflicts with nearby land or water uses, or adverse environmental impacts. Thus, the Federal Government could veto any deepwater port investment, and its approval would be necessary to provide one.

3. Primary jurisdiction over the territorial seabed and dominant control of land use gives the states major power in deepwater port decision-making. Any fixed facility which must cross or be placed upon either the seabed from the shoreline to the 3-mile limit, or upon state-owned land along the shore, must obtain state approval. Furthermore, any privately owned land is subject to whatever planning and zoning controls may be applied by state governments or their instrumentalities. Any portion of a deepwater port facility (e.g., tank farm storage, pipelines, refineries, etc.) on private land would therefore have to be compatible with permissible uses. In practice these points of control at the state or local level would generally and normally give the state or local government an effective veto power over most facilities that could be provided.^{1/}

The preceding circumstances clearly indicate that a combination of positive Federal and private action would always be necessary to provide a basis for a favorable port investment decision, and that an agreeable disposition of the state government is almost certain to be required. If pending legislation requiring formal state approval of any deepwater port located more than 3 miles off its shore is passed, then its legal willingness to go along would be virtually absolute.

^{1/} There is, however, one situation in which the state's ability to exercise a legally grounded veto may be ineffective. If the terminal facility were provided beyond the 3-mile limit, with transshipment movements to existing refinery terminals entirely by vessel, the

However, the Federal Government has one instrument to eliminate the veto power of a state, but not that of private industry. If the former decided that a deepwater port were essential to serve national public interest objectives, it could call upon its power under the commerce clause of the Constitution to override any state objections. Although it has such ultimate authority, the Federal Government would clearly choose to exercise it only as a very last resort, if at all. Indeed, so far as is known, it would be unprecedented other than in circumstances of war or national emergency.

It follows that a high degree of coordination and cooperation among Federal, state, and private interests is prerequisite to any favorable decisions on deepwater ports, since in almost all conceivable circumstances each has an effective veto power.

state might be without formal legal recourse. However, it would not be without political influence.

V. THE RECENT POLITICAL SETTING

Principal actors in the deepwater port problem include the petroleum and shipping industries, the Federal Government (numerous administrative agencies as well as many congressional committees), governmental bodies at state and local levels along the North Atlantic and gulf coasts (especially Delaware, New Jersey, Maine, Texas, Louisiana, Alabama and Mississippi), residential or commercial interests in the coastal zone of influence for any particular port site, and organized environmental protection groups. Other actors are also involved, such as port authorities, coal producers, labor unions for shipyards, shipping, and related workers, and numerous university professionals in a number of disciplines related to deepwater port marine, land use, and other matters.

Differences of approach and of viewpoint among these actors, and even within particular groups of actors, are strikingly evident in what has developed into both a national debate and a series of local and regional debates, often acrimonious. Each asserts its own version of basic national or regional goals or needs in the absence of any consensus. The postures taken also reflect varying degrees of comprehension and awareness -- often quite limited -- of the complex, interrelated questions posed and of the many facts which would be useful in resolving them.

Federal Participants

The wide scope and diversity of interest in matters related to U.S. deepwater port development is

suggested by the number and variety of congressional committees having a stake in them. The Public Works Committees of both the Senate and House have jurisdiction over the Army Corps of Engineers, its rivers and harbors projects, oil spills, and water pollution control. One bill now before the Senate Public Works Committee would require approval of adjacent coastal states before any deepwater ports were approved.

Senate and House Interior Committees oversee the Department of the Interior, including public lands, Outer Continental Shelf resource management programs, and -- increasingly -- land use and general energy policy. The Senate Interior and Insular Affairs Committee^{1/} held the first broad congressional hearings on deepwater port issues in 1972. It has also been the major congressional sponsor of proposed new legislation on state land use planning.

The Senate Commerce Committee and two House Committees -- Interstate and Foreign Commerce and Merchant Marine and Fisheries -- are involved in interstate and foreign commerce, including Coast Guard and merchant marine affairs. The Senate Commerce Committee held hearings in March 1973 on a bill requiring certification of the environmental soundness of any deepwater port facility by the National Oceanographic and Atmospheric Administration (NOAA). On the House side, several bills before the Merchant Marine and Fisheries Committee would give the Secretary of Commerce authority to approve off-shore deepwater port facilities.

The Senate Foreign Relations Committee, and to a lesser degree its House counterpart, play an important role in the consideration of international agreements on shipping and pollution questions and in domestic legislation designed to implement them for the United States. Vessel design standards and financial responsibility of ship owners and operators

^{1/} With ex-officio members of the Committees on Commerce, Public Works, and the Joint Committee on Atomic Energy under Senate Resolution 45.

are among the issues addressed. A subcommittee of the Senate Foreign Relations Committee is currently considering important new legislation in the latter area.

In addition, questions of major reorganization of the Executive Branch often fall within the purview of Senate and House Government Operation Committees. They might be involved in the administration's previously announced desire to create a new Department of Energy and Natural Resources.

Within the Executive Branch, a great many agencies have a stake in the diverse issues implied by deepwater port development. Among them, three appear to have played major research roles: the Army Corps of Engineers, the Commerce Department, and the Council on Environmental Quality. All three have sponsored major studies by outside contractors on economic, environmental, engineering, and other aspects of deepwater ports, supplemented by in-house study efforts, some of them published and others still in process.

In addition, under congressional mandates to study regional deepwater port needs and alternatives in detail, the Corps of Engineers has held a series of open hearings on each of the three major coastal regions to provide a forum of public information, discussion, and opinion.

The Commerce Department has financed, especially through the Sea Grant Program of NOAA, numerous investigations by university researchers on technical, legal, and other aspects of marine-related problems in coastal zones, including those posed by deepwater ports and tankers. Through the Maritime Administration it has also undertaken studies of the economics of deepwater terminals and of offshore terminal concepts.

The Council on Environmental Quality has played a leading role in focusing research attention on varied environmental impacts of deepwater port facilities and on the design and costs of environmentally protective

features which could be incorporated in system components. Its efforts have been supported by outside studies, as well as by cooperative activities of the Coast Guard, the Environmental Protection Agency, the Corps of Engineers, and the Maritime Administration.

To coordinate these efforts and to help forge an overall administration policy approach to deepwater port development, in mid-1972 several ad hoc working groups were established under the direction of the Domestic Council to broadly appraise all circumstances. Efforts of these working groups, which consisted of representatives from many agencies, were reflected in the President's energy message and proposed new legislation for licensing offshore port facilities in April 1973.

The roles of the major parties at interest, their interaction, and the pronounced differences in overall political stances taken vary greatly by coastal region and to some degree within each region. These circumstances can be illuminated by reference to recent developments in several states along the east and gulf coasts.

East Coast

On the east coast, the political spotlight on deepwater ports has essentially followed specific industry site proposals, and to a lesser degree publicized port location studies or concepts of public bodies. Proposed offshore facilities designed largely to serve existing refineries have for the most part involved the states of Delaware and New Jersey. However, several proposals have also been advanced in recent years to locate one or more refineries on the northern Maine coast, associated with deepwater port facilities to serve them. In addition, the Massachusetts Port Authority recently indicated that it is exploring the feasibility of a deepwater petroleum port off the north shore of the Boston area (which presently lacks refineries).

Delaware and New Jersey

By 1970, several different companies had indicated interest in deepwater port and related industrial development in the lower Delaware Bay and coastline. Most important among them was a proposal by the Delaware Bay Transportation Company, a group of petroleum companies which includes all existing major refiners on the east coast. After years of study, it announced joint plans for a deepwater terminal at a naturally deep site inside Delaware Bay, and associated shore facilities on the Delaware coast, including a tank farm and connecting pipelines to existing refineries, as well as a proposed large new refinery on the Delaware coast.

In a state as traditionally hospitable to industrial development as Delaware, one might not have anticipated the intensity of negative reaction to the proposal -- not only from nearby residents and environmental groups, but from the state government as well. In 1970 Governor Peterson, a former industry official, called for a moratorium on industrial expansion in the state's coastal zone, and he created a special task force to develop a comprehensive planning strategy for development of state coastal and bay areas. Its preliminary report in early 1971 recommended that deepwater port facilities not then be allowed in the Lower Delaware Bay. With the Governor's active encouragement, the legislature passed a bill barring any new industrial development, including port facilities, in the state's coastal zone.

But recognizing the complexity of the issues at hand and the need to consider them more deeply, the legislature requested that the issues be further studied. The Governor accordingly created a Delaware Bay Oil Transport Committee, consisting of 14 members having varied public and private backgrounds, chaired by the Dean of the College of Marine Studies at the University of Delaware. An outside consulting firm was engaged to evaluate a number of systems alternatives to accommodate oil imports throughout the east coast, on the basis of which the Committee issued a report in early 1973.

Four features of the report are especially noteworthy. First, it sharply distinguished the issue of new refinery and related industrial development from that of port facilities designed to serve existing refineries. Second, it recognized that any particular port concept must be considered in relation to all realistic alternatives, with or without a deepwater port. Third, among those alternatives, the report strongly favored on environmental grounds those which provide pipeline transfer from offshore terminals to refineries, thereby eliminating oil-bearing vessels in congested waterways. And fourth, it found that a rational solution to the accommodation of oil import needs on the northeast coast requires a regional approach, leaving open the possibility of a facility within Delaware jurisdiction should no adequate alternative become available. Thus, while its first recommendation was to maintain strong prohibitions against any new refineries within the state, it also recommended that top state officials explore with their New York and New Jersey counterparts the feasibility of providing deepwater port facilities off their coastlines with pipeline connections to all regional refineries; and that, if not feasible, and subject to a few other conditions, a Delaware State Authority be established to plan, finance, develop, and operate a deepwater port facility in Delaware Bay or its coastal waters.

Among the deepwater port concepts on the east coast considered relatively unattractive in the Delaware Bay Oil Transport Committee report is an island facility in the open sea beyond state jurisdiction which provides for vessel rather than pipeline transshipment to shore. However, some others disagree, as suggested by one variation of the North Atlantic Deepwater Oil Terminal (NADOT) plan advanced in a 1972 report for the Maritime Administration, which was prepared by a different outside consultant. Both the consultant and MARAD considered these vessel transshipment and port siting features advantageous, largely because they appeared to circumvent Delaware's 1971 legal prohibition on port or related pipeline construction in state-controlled territorial waters or shorelines.

During this same period, the Army Corps of Engineers and its consultants have been studying alternative deepwater port facilities to serve major existing east coast refineries under specific congressional mandate. As part of its public hearings process, in early 1973 the Corps' North Atlantic Division indicated its tentative findings that provision of a deepwater port, with environmentally protective features, to serve northeast refineries would be in the public interest, and that Atlantic Ocean sites near Long Branch or Cape May, New Jersey, or a site at Big Stone Beach inside Delaware Bay, all with pipeline transfers to shore, appeared relatively most attractive among the alternatives. This declaration was received with considerable hostility by many of those present at the hearings. In addition, the Governor of New Jersey strongly protested the Corps' position. But at the same time he asked the legislature to prepare a study of energy and related port matters as they affect New Jersey.

Maine

Since 1968 at least 10 private proposals to build Maine's first oil refinery at various sites in its coastal zone north of Portland have been announced, most of them associated with deep-draft terminal facilities for very large crude carriers. Most have been abandoned or rejected, but one is currently under active review.

Maine's posture in regard to industrial development has in recent years seemed ambivalent. On the one hand, it has taken strong measures to assert state influence in land use planning and plant siting and to protect its invaluable scenic and recreational resources from environmental encroachment. On the other hand, it recognizes the beneficial aspects of industrial development, which has particularly strong appeal in some economically depressed communities on its northeast coast. To provide guidance in the resolution of this dilemma, in November 1971 the Governor created a Task Force to study the issues and to recommend policies and actions. Its September 1972 report suggested limiting

future heavy industry locations on the Maine coast to two zones, the Portland-Casco Bay region, and the Machias Bay region, the latter recently more attractive to petroleum interests.

However, the report also recommended against any oil refinery or related port development in the presently nonindustrialized Machias Bay zone, until it could be demonstrated that water quality and other environmental hazards of such developments would be tolerable.

Private Initiatives on the Gulf Coast

On the gulf coast, private enterprise largely initiated interest in deepwater port development along the Texas and Louisiana coast. In 1970 and 1971 several firms, whose ownership or relationship to the major petroleum companies was unknown, unsuccessfully tried to obtain lease rights to state-owned water bottoms near the mouth of the Mississippi for a terminal site, with the active support of Plaquemines Parish (County).

In that same period, most of the companies having large refineries in the gulf coast area and some others had separately determined the potential value of deepwater ports to serve their future needs. Recognizing the importance of joint facilities serving a common need, in 1972 they formally created two separate planning groups. One is the Louisiana Offshore Oil Port (LOOP), a consortium presently consisting of 14 companies for developing a deepwater port complex serving refineries from east Texas to Mississippi, as well as some refineries in the Midwest linked by an existing interregional pipeline (Capline). The other is known as Seadock, a consortium of nine companies (some of them also members of LOOP) oriented to major Texas and southwest Louisiana refineries. The two groups have recently been concentrating on site selection and design of terminal facilities far offshore, linked by pipelines to landside storage

facilities, each serving a different group of refineries. They intend to incorporate environmentally protective features into all aspects of facility design and operation. But they cannot be certain that those features will be generally acceptable until Federal and state standards are developed.

Although membership in both consortia is open to others, several independent refiners, including all those in the Corpus Christi area, have not yet joined. The latter would apparently prefer an approach put forward by its port authority, which calls for substantial deepening of the outer harbor up to 72 feet, with the provision of an island terminal connected to area refineries by pipeline, and also designed to serve large dry bulk carriers.

The general political atmosphere within which deepwater port planning and discussion takes place on the gulf coast is markedly more harmonious than on the east coast. In Texas and Louisiana, as well as in Alabama and Mississippi, there is a predominantly positive attitude towards such development and a sense of competitive rivalry. Environmental concerns are recognized, but are considered compatible with port facilities designed with appropriate safeguards. Above all else, this attitude reflects the great present economic importance of the petroleum industry to the States of Texas and Louisiana, and its potential importance to desired industrial growth in the other states.

Public Responses

Louisiana

The events of 1970-71 in Louisiana described above caused considerable apprehension among existing Louisiana ports, some environmental groups, and the State of Louisiana. The State accordingly created an advisory committee in May 1971 to review and make recommendations on deepwater port possibilities off the Louisiana coast. In the following months, the State's

desire to move ahead was spurred by the active interest shown by the State of Texas in a like facility, and by an impression that the Federal Government would probably sanction only a single facility in the gulf. Furthermore, the Delaware repudiation of a proposed deepwater terminal in its coastal waters on environmental grounds in June 1971 further suggested a need to respond responsibly to such concerns at the earliest possible stage.

The Governor therefore established an ad hoc Louisiana Superport Task Force in February 1972 to develop a sound legislative and policy approach to deepwater port development in the State which would best serve its collective interests, including those of environmental protection. Toward that end, he appointed 46 citizens having widely varied public and private backgrounds to serve on it.

The Center for Wetland Resources at Louisiana State University, financed by grants from both the Superport Task Force and the NOAA Sea Grant Program, played an essential staff role by making studies of the legal, economic, environmental, and engineering aspects of deepwater ports. It also prepared a complete draft of proposed legislation to implement task force desires. The recommended bill was passed with only minor changes by the legislature in June 1972. Louisiana thus became the first state in the nation to provide a comprehensive, positive legal framework for deepwater port development. In many ways it may serve as a model.

Among its many features, four seem particularly noteworthy:

1. A leadership role for the State government in all aspects of port development and operation, rather than passive response to private initiatives.

2. Highly centralized organization and decision-making in all port matters through the creation of a new Deep-Draft Harbor and Terminal District Authority,

with full power to "promote, plan, finance, develop, construct, control, operate, manage, maintain and modify" facilities (but with discretion to pass on much of this authority to private enterprise).

3. A basic goal of economic self-sufficiency. All financial costs are expected to be fully recovered from charges imposed on users. In addition, they are required to pay the social costs of any environmental losses which arise in the coastal zone.

4. Strong environmentally protective arrangements at all stages of port planning, development and operation. The Authority is required to prepared and continuously maintain an environmental protection plan under the direction of two leading state environmentalists and the port's Executive Director. The plan is to include the following elements:

- a. identification of all expected adverse impacts on natural and human environments
- b. estimated damage from unavoidable accidents to the coastal environment after full precautions have been taken
- c. methods, criteria, and data used to select a site which minimizes environmental impacts and/or which most effectively balances economic and ecological considerations
- d. means to foster orderly growth of port facilities over time which minimize environmental hazards
- e. operating procedures designed to minimize environmental problems, including monitoring, construction and operating standards, enforcement provisions, and oil spill cleanup procedures.

Texas

The State of Texas has been thinking about deep-water port issues for some time, and since 1970 these issues have been considered in relation to its new Coastal Resources Management Program. In 1971 a work plan for a feasibility study of an offshore terminal in the Texas gulf coast was prepared by the Industrial Economics Research Division of Texas A&M University with partial support of the Sea Grant Program. It subsequently completed a favorable study, which included attention to engineering, environmental, economic and other aspects of port development, under sponsorship of the Texas Superport Study Corporation.

The introduction and passage of superport legislation in Louisiana caused concern in Texas that Louisiana might move ahead in their competitive fight. A state bill modeled on the Louisiana law was drafted in 1972. However, as finally enacted in December 1972, the legislation was considerably modified. It created a Texas Offshore Terminal Commission of nine members having varied backgrounds, one of whom is to be a recognized environmental authority. But its mandate is limited to the formulation of a deepwater port development plan, including all legislative, administrative, financial, legal and other means necessary or desirable to achieve goals. After the Commission has developed the plan, it is to be submitted to the legislature with suggested legislation for its further action.

Alabama-Mississippi

Anxious to participate with Texas and Louisiana in the economic benefits of deepwater port development in the gulf coast, the States of Alabama and Mississippi in 1972 created Ameraport, a nonprofit corporation, to focus their efforts. It is exploring the technical feasibility of a terminal site 25 miles or more out in the gulf from Mobile.

Ameraport conceives of the port as a necessary element in a broader strategy to encourage large new

refineries and related industries to locate in their states, which they presently lack (with the exception of a major refinery at Pascagoula, which is, however, to be served by LOOP because of existing pipeline connections). Accordingly, Ameraport thinks of itself as supplementary to new deepwater port facilities under investigation in Texas and Louisiana so far as existing refineries go. However, it will clearly have to compete with the other states in respect to new refineries, which it is aggressively seeking.

VI. FINANCIAL ISSUES

Several financial aspects of deepwater port development are of major public significance, especially from the economic and environmental equity standpoint. Perhaps most important is the question of how costs should be allocated among public and private sectors, or among port users and other beneficiaries on the one hand and the general public on the other. These matters must necessarily be addressed and resolved in the context of port planning and investment decision-making.

Since costs of port development include several very different elements for which existing and possible future institutional arrangements differ markedly, each is treated separately in the following paragraphs. They include:

1. The direct, basic and measurable costs of the deepwater port terminal, storage and transshipment facility
2. Extraordinary costs of oil spill and of any damages which may result from pollution
3. Costs imposed on communities where port facilities, refineries, and related activities are located, including those induced by port development.

The chapter then addresses questions of cost allocation and of economic equity which arise in port investment financing, and in accounting and pricing of its services.

Allocation of Basic
Port Costs

Basic, direct and measurable (investment, operating and maintenance) costs of U.S. port and harbor development have traditionally been shared by public and private sectors. For many years the Federal Government has generally borne all or most of the waterside cost elements. A combination of private industry and local or state public bodies have borne the costs of shoreside facilities.

Historically, Federal financial involvement has been greatest for such capital-intensive improvements as dredging and breakwaters (typically carried out by the Army Corps of Engineers). It has also covered the more modest costs for navigational controls and safety aids, including the provision of buoys, channel markers, fairways, and policing (mostly undertaken by the Coast Guard). Private and local public interests have generally paid for all marine terminal facilities, including piers and berths, handling and storage equipment, and related infrastructure for utility, connecting transport and other services required in port operation. However, public sharing of oil terminal facility costs has usually been minor.

The dominant Federal role in dredging of waterways initially reflects its exclusive legal authority for most navigational improvements. The costs involved have traditionally been borne freely by the Federal Government rather than recaptured through user charges.

The rationale for this approach reflects the fact that beneficiaries are numerous and geographically dispersed: harbor improvements generally result in lower shipping costs, which enhance the economic health of regions and the nation as a whole in the form of increased trade and lower prices. However, to assure basic soundness, federally financed harbor improvements have traditionally required a favorable showing of economic feasibility for each project. The basis for state or local public costs and subsidies in port development

has to some degree paralleled the Federal rationale, but with far greater emphasis on promotion of new or protection of existing secondary development in the particular port service areas involved.

These traditional cost-sharing arrangements may be quite unsuited to crude oil deepwater ports, for two major reasons. First, the users and direct beneficiaries of deepwater ports would be few as compared with those for traditional harbor dredging projects. In the latter case, many kinds of commodities and ships are generally served and aided by the improvements involved, and all vessels have equal access to the (waterside) facilities improved with Federal (and sometimes state or local) funds. But crude oil deepwater ports will directly serve only a few refineries and very large crude carriers. The ports could not be used by any other vessels or cargoes. These circumstances constitute a marked departure from prior conditions. However, there may be new grounds for maintaining public, especially Federal, sharing of deepwater port costs, as noted in chapter VIII.

Second, significantly different location, design and cost characteristics of deepwater ports may seriously restrict the usefulness of the traditional approach to cost sharing. Most existing terminal facilities are located along shorelines of protected harbors or waterways having naturally limited depths. As ship sizes have increased over the years, needed improvements have consisted mostly of dredging to accommodate larger vessels. Application of the traditional cost-sharing formula has usually resulted in the Federal Government's paying for a substantial, and often the dominant, part of total port improvement costs.

Some potential deepwater port sites would also involve dredging of existing channels. However, most sites are offshore and imply very limited or negligible needs for dredging and perhaps for breakwaters. To that degree, continuation of traditional cost-sharing arrangements would suggest a possibly significant distortion in private choice among alternative deepwater sites. They might tend to favor investments having low private but high total costs (e.g., those requiring substantial

dredging or breakwaters) over others with lower total public but higher private costs (which might be preferable from the public standpoint). These factors seem to have important implications for modified institutional arrangements better suited to public interest goals.

The importance of the preceding matter is underscored by the scale of investments required for deepwater port development, which is very much greater than for typical improvements of existing port facilities. Basic costs of a deepwater port vary considerably depending upon volumes of cargo handled, location and design characteristics. However, prior studies suggest that investments of at least \$150 million could be expected for single, low capacity, and unprotected monobuoys not far offshore with associated pipeline links to tank farms and refineries, and as much as \$1.5 billion or more for much larger terminal facilities and related storage tanks and pipelines serving an entire coastal region's substantial refining capacity.

Allocation of Oil Pollution Costs

Until recent years, costs of oil pollution associated with shipping and port operation went largely unnoticed and unpaid for in the monetary or economic sense. Spills tended to occur as a series of small incidents, often unobserved, and the public was generally uninformed and indifferent. The "costs" were in effect passed on to the public in the form of damages to our oceans, rivers, shorelines, and marine life.

The rapid rise of public environmental awareness, and a host of new laws designed to arrest water pollution caused by oil and other substances, have substantially overcome historic neglect of the frequent minor polluting incidents which to some extent are inevitable in water transport and handling of oil cargoes. But the advent of deepwater ports and very large crude carriers bearing a quarter of a million tons or more of oil in a single shipment, together with expected rapid growth in the volume of oil to be shipped, gives rise to a new and deeply felt concern in coastal areas

serving other activities: the possibility of massive oil spills in the event of a major accident. That concern would undoubtedly be greatest in relation to the operation of the ocean vessel, and perhaps importantly in relation to deepwater port facilities. Full costs of such catastrophes, including temporary or permanent degradation of the physical environment, losses of jobs and income dependent upon its use, as well as cleanup, could be enormous. From the economic and environmental equity viewpoint, it seems largely inarguable that those responsible should be made to fully bear the various costs involved. Unfortunately, legal constraints on financial responsibility for pollution incidents attributable either to vessel operation or to port operation are inconsistent with that position, reflecting varied institutional lags. Means of attaining more equitable arrangements for financial responsibility are explored in chapter VIII.

Whatever the potential solutions may be to place more of the cost burden of oil spill on those who are responsible, anything less than full recovery by those who are innocent victims of oil pollution would violate the basic goal of environmental equity. It therefore seems essential that the public sector -- undoubtedly the Federal Government -- consider appropriate means to assure full and prompt restitution to all parties who may be adversely affected. Since substantial time may often be needed to establish liability and to obtain recovery to the degree legally possible, attention must be given to mechanisms for effectively establishing the value of losses to those incurring them and for prompt payment prior to final resolution of legal liabilities of suspected parties.

Other Social Costs

A deepwater port will impose two basic kinds of social costs in its zone of influence: the traditional types of social overhead required to serve port-induced industrial, commercial, and residential development (more roads, schools, etc.); and hard-to-measure intrusions on the marine or coastal environment (loss of wetlands or open space, negative aesthetic impacts, possibly reduced land values of some properties, etc.).

Since these burdens are mostly imposed on local and state governments, means for compensating them must be considered. Assuming private ownership of the deep-water port, states or their instrumentalities generally can avail themselves of several revenue mechanisms to compensate for the costs involved and otherwise to participate financially in the benefits conveyed. Their traditional revenue-producing instruments include franchise, use, and ad valorem taxes, and taxes on real property and income. Such taxes could of course be levied only on those facilities located within a particular state or local tax jurisdiction. In some instances this would require geographic allocation of physical property, revenues, or profits. Thus, for example, a deepwater port facility might extend from a point beyond the 3-mile limit (the offshore terminal) and hence fall outside state tax jurisdiction, traverse the seabed within the 3-mile limit (the pipeline) to a tank farm on shore, and extend across several counties (pipelines) to refinery terminals having different locations within and without a given state.

Several issues arise in connection with these traditional state-local revenue sources. First, while state authority to impose taxes on businesses considered to be in interstate commerce has generally been accepted over the years, the extent to which available taxing powers are applicable is not always clear. States are constitutionally prohibited from imposing import or export duties, tonnage duties or levies on ships for the privilege of entering or leaving ports. Nor may they place any direct restrictions or impositions on interstate commerce. On the other hand, there is a commonly held doctrine that states may tax businesses in interstate commerce to compensate for resulting social costs imposed upon them. Such tax usually must not discriminate against interstate commerce or be imposed directly on interstate sales as such. Questions of discrimination, and especially of allocation among differing political jurisdictions, are often troublesome. They frequently give rise to litigation, which usually resolves them on the basis of specific circumstances in each case.

A second major issue for state and local governments directly affected by deepwater port development

is whether prospective revenues from traditional taxing powers will be more than, or less than, fully compensatory. Whatever the relation may be between total state and local tax revenues and social costs of deepwater ports, they may be unevenly distributed geographically among the various units of state and local government involved. These circumstances are further aggravated by exceedingly variant patterns of tax structure and incidence among different state and local jurisdictions.

State and local governments, as well as the Federal Government, have another potential source of revenue from deepwater port development which could be highly significant, either to recover any costs exceeding revenues from traditional tax sources, or to share in any net benefits remaining after fully covering those costs. It is a virtual certainty that any offshore deepwater port facility having pipeline links to shore will require the use of seabed, and possibly land, under state jurisdiction or control. Presumably a lease or permit for whatever facilities were to be placed on that land or seabed would be required. Similar considerations would apply to any land or seabed under Federal jurisdiction, including the grant of a permit outside the 3-mile limit.

Presumably each relevant governmental jurisdiction would be able to charge a price for granting the lease or permit. Such pricing could reflect any number of criteria: for example, value of the land or right-of-way for alternative use, interference with other current or prospective activities in the zone of influence, cost burdens to the state or local communities not covered by traditional tax revenues, or the open market value to potential port facility owners of the lease rights.

The last approach has often been employed in Federal and state programs for the extraction of minerals, including oil and gas, from publicly owned lands or subsurface rights and from the Continental Shelf. Public revenues derived in this manner have often been very substantial.

However, the potential value of lease rights for deepwater port facilities is much more problematic and can only be assessed in relation to the total sets of costs confronting a prospective terminal facility operator and its users relative to such other choices as may be available. It should be stressed that potential private savings benefits of a U.S. deepwater port may be modest in relation to choices of transshipment facilities in Canada or the Caribbean. If terminal operators and users were expected fully to bear substantial costs of environmental accommodation as well as all normal Federal, state and local taxes, they might not consider lease rights of much value.

For these and other reasons, it appears that the goal of equitable allocation of costs and benefits of deepwater port development can only be achieved through a systematic process of coordinated and integrated planning and decision-making by Federal, state and local governmental bodies involved, as well as by major private interests.

Financing of Costs

However cost-sharing arrangements evolve, the methods used to finance capital costs of deepwater port development are of public concern. Alternatives present themselves which have varying implications for subsidy or income transfer. Since economic equity is presumed to be a major goal of deepwater port development (see chapter III), alternative financing methods must be evaluated to determine their implications for serving the public interest.

All capital costs of the facility to be recovered by user charges could be financed entirely by private capital (debt and equity), entirely by public funds, or by some combination of the two. Assuming private ownership, all facilities would be subject to applicable state and local taxes unless superseded by a specific revenue-sharing arrangement provided by Federal legislation. However, under certain conditions described below, public financial support for a private facility could provide subsidies to owners and users.

If the facility were to be federally owned, financing could either be in the form of direct appropriations or -- particularly if the facility were organized as a public corporation or authority -- by public debt. The same choices would essentially be present in the event of ownership by state governments or their instrumentalities.

Three major financial issues present themselves in the event of public ownership. First, the facility would not normally be taxable, as in the case of private ownership. Unless payments in lieu of taxes were made as if the facility were privately owned, part of the total cost burden would in effect be shifted from users to Federal, state and local taxpayers.

Second, if regular appropriations were used to finance the facility, any imputed interest rate charged for those funds less than the opportunity cost of capital would constitute a public subsidy.

Third, a deepwater port organized as a public authority or corporation could raise its own capital by issuing bonds with tax-exempt features, thereby significantly reducing its money costs. The same approach could also be applied to a privately owned port facility financed by local public means. Such a practice would constitute an indirect Federal (and, possibly, state) subsidy to the facilities and its users. However desirable such a subsidy may be, some would argue that it could more equitably and efficiently be granted directly to the deepwater port in the form of an interest cost differential (e.g., as in the case of the recently issued Washington Metropolitan Area Transit Authority revenue bonds, which are fully taxable to holders; the Federal Government will reimburse WMATA for 25 percent of its interest costs to offset the higher interest rate it must pay). Gains in Federal (and, to a lesser degree, state) income taxes will more than offset the higher interest costs.

The principal advantage of the tax-exempt revenue bond over a direct Federal subsidy is its political and administrative convenience. It eliminates the need for

explicit legislative decisions to grant a subsidy which would otherwise be necessary.

Port Accounting and Pricing

Accounting treatment of total costs to be borne by a deepwater port will influence the pattern of real cost allocation among port users and consumers on the one hand, and facility owners on the other. For example, judgments will have to be made on such matters as amortization and depreciation and rates of return in light of considerable uncertainties and risks of doing business. In the absence of competitive conditions or public price regulation, the opportunity for excess or monopoly profit presents itself. Such a development would shift much or all of the economic benefit to facility owners at the expense of users and consumers. This would violate the goal of economic equity.

Pricing policies or strategies are also of great significance to goals of both economic efficiency and economic equity. Given total estimated costs to be recovered and throughput volumes, innumerable options are available for establishing tariff schedules which yield total required revenues.

From the resource allocation point of view, tariffs should ideally be designed to reflect such cost differences as may result from varying conditions of use of each component or service (e.g., distances or volumes of movement, length of time required to discharge, store, etc.), that is, incremental costs.

However, there could be social reasons for considering user charges based on other criteria. For example, distances of pipeline or vessel transshipment from the deepwater port to individual refineries in its service area will often vary considerably. At present, any differences that may exist in ocean shipping distances from given overseas origins to those refineries are negligible. If transshipment charges were strictly based on incremental costs, competitive relationships of the various refineries would be affected, perhaps

significantly. Some would be relatively better off, and others worse off, than previously. If these circumstances threatened undesired removal of industries from one area to another, pricing strategy could be modified to mitigate the effects. There is ample -- some would say excessive -- precedent for this approach in the pricing of rail, shipping, and port services today.

By the same token, pricing strategies could conceivably be developed to discriminate against certain present or potential users or refiners under conditions of uncontrolled monopoly. Institutional arrangements for deepwater port development in the public interest would seemingly have to respond sensitively to such questions.

VII. PARAMETERS FOR INSTITUTIONAL DEVELOPMENT: PUBLIC AND PRIVATE ROLES

General

The creation and operation of U.S. deepwater ports will require an unprecedented pattern of collaboration and jurisdictional coordination across a wide spectrum of public and private interests. The preceding chapters make clear that new or modified institutions are needed. They will have to assure incisive formulation and articulation of deepwater port policy objectives; they will need to integrate the interests of agencies at Federal, state, and local levels, and of major private interests, including especially the petroleum industry and the shipping industry, and environmentally oriented groups.

These institutions will also have to coordinate decisions on port facilities, including their design and operation, with like questions pertaining to vessels using those facilities, and to refineries and other industries served by them. Furthermore, they will have to be able to cope with the international aspects of the issues raised.

Prerequisites

A prerequisite to institutional development is a declaration of national policy by the administration, presumably also embodied in legislation, which substantially crystallizes and confirms the underlying premises of this study (more fully articulated in chapters II and III):

1. The inevitability of large volume crude oil imports from distant origins in the foreseeable future, and the consistency of that assumption with national energy and economic policy

2. The general advantage of U.S. deepwater port sites to accommodate those imports, as compared with alternative sites in the Western Hemisphere, from political, economic, and environmental standpoints

3. The formulation of general objectives or goals for deepwater port development in the public interest, which here emphasize judicious blending of economic development and environmental protection objectives with equity for diverse interests.

It is expected that such a policy declaration will lay the foundation for enabling legislation directed to the creation of a deepwater port system in coastal zones of the continental United States. This affirmation will also help focus and energize the various forces which are now rather hesitantly moving toward actualization of offshore ports.

With that policy affirmation, deepwater port development in the public interest will clearly require significant governmental influence in facility planning, design, and operation. But that control can be achieved in two different ways: directly through public ownership and operation, or indirectly through regulation of private owners or operators -- the matters which are next discussed.

Port Ownership and Operation

To clarify the issue of ownership and operation, it is useful to recall the different elements of crude oil delivery system components. They include the land or seabed on which the facilities are to be placed, and the manmade facilities themselves. The latter include very large ocean vessels, the deepwater terminal and associated oil storage, pumps and pipelines, any transshipment vessels, and oil refineries.

The present discussion is limited to the manmade facilities. As noted in chapter IV, existing ownership or control of needed land surface is likely to be divided among many public and private parties. But that land ownership pattern can be adapted to whatever type of ownership or operation of the manmade facilities is desired. However, it is worth noting that where publicly owned land is at stake, its use for deepwater port purposes can be made subject to conditions, thus providing one means for establishing some measure of control.

Dominant Private Ownership

Oil delivery system facilities are now entirely owned by private industry. Individual oil companies possess their own refineries and tank farms; private companies (usually a group of oil companies) own all major trunk pipelines -- either for crude or product movement; and existing oil terminal facilities near the refineries are almost entirely owned and operated by individual companies. Ocean vessels are sometimes owned by the oil companies for their own use, but are more commonly chartered by them from an independent, international, and highly competitive bulk shipping industry.

Government ownership of such facilities has generally been insignificant. The exceptions relate mostly to military requirements. Thus, for example, the Navy owns and operates tankers, ports, and other related facilities around the world to serve its military needs. Similarly, during World War II the Federal Government built, financed, and owned major new petroleum product pipelines linking the Southwest oil-producing region with Northeast markets to provide a strategically desirable substitute for coastal movements by product-carrying tankers vulnerable to German submarine attack. But these facilities were sold to private industry after the war.

The pattern of dominant private ownership of virtually all components of the existing oil delivery system, including terminal facilities, reflects several interrelated circumstances: the essentially free enterprise nature of the international petroleum and (bulk) shipping industries; their profitability; and their very

large scale. Thus large quantities of private capital have generally been available on reasonable conditions to satisfy investment needs in all of the transport facilities required over time. In addition, the bulk liquid and inflammable nature of oil as a commodity largely requires specialized facilities which are exclusively devoted to its movement, handling, and storage and which are physically distinct from like facilities for other commodities. These circumstances minimize potential values of joint facilities to serve oil and other commodities, values which often give rise to public (common use) terminal, storage, and handling facilities for other cargoes. They also help to explain why private industry interest in development of new deepwater ports generally includes a desire to own and operate them.

The rationale for private ownership of deepwater port facilities serving the petroleum industry is thus very strong. Private industry has tended to own all like facilities in the past; it has ample capital resources upon which to draw; and it prefers to own the new deepwater port facilities, which it would also like to build and operate. This rationale would probably be compelling if it were not for the fundamental change from largely competitive to quasi-monopolistic transport conditions expected to result from deepwater port development.

The Basis for Public Ownership

The potential value of public ownership is certainly weakest for the extremities of the total oil delivery system -- the refineries and the ocean vessels. International oil shipping is highly competitive and would not be expected to change as a result of U.S. deepwater port development. Similarly, the competitiveness of refineries would not be compromised by deepwater ports, provided that they were all served on an equitable basis.

It is the circumstances of the deepwater port itself (the terminal, storage facilities and connecting pipelines) which present a stronger case for public

ownership. As noted in chapter III, there are not likely to be many deepwater ports -- perhaps no more than one or two for an entire coastal region in the foreseeable future. This outlook reflects the economies of scale inherent in their operation (including terminal, pipeline, and storage facilities), as well as the probable desirability of limiting their number for environmental reasons. These circumstances contrast sharply with existing competitive conditions. Thus, the issue inevitably arises as to whether government should own deepwater ports to assure maximum possible attainment of public interest goals in economic and environmental equity and in environmental protection.

Some might contend that those goals could be more sensitively served by direct public ownership than by indirect control through formulation of rules and standards. But the validity of that position is unclear, and certainly not preordained. Furthermore, in practical terms, proposed Federal or state-owned superports could project legislative bodies into a lengthy debate concerning financing, ownership and operation, which would serve further to delay and complicate such projects.

Nevertheless, there may be some interest in public rather than private ownership. For example, as explained in chapter V, the Louisiana legislature in 1972 created a new State agency with exclusive authority to develop, construct, own and operate deepwater ports in that State. However, the legislative mandate given the agency is so broad that it seemingly has complete discretion to lease land or seabed to private parties for provision, ownership and operation of port facilities, subject to whatever controls it might impose. These circumstances suggest that the State of Louisiana considered public control of deepwater port development essential, but not public ownership itself.

Private Ownership and Public Control

Private ownership and operation appear to be the preferred and optimal patterns under foreseeable circumstances. Still, whatever the means for blending

private and government planning actions to bring about deepwater ports, the public interest demands that these installations be designed, constructed, and operated under the most scrupulous regulation and control by Federal, state, and local governments. Such regulation is mandated to assure that national, regional, and local interests are protected, that environmental risks are minimized, and that economic benefits and costs are allocated in a socially desirable and equitable manner. It is our conviction that this role of government as guardian of the public interest and as regulator of private industry can be performed without blunting the thrust of private initiative or erecting impossible barriers to profitable management.

The Federal Role

Within the public sector, the Federal Government must inevitably play a leading role as general manager and overseer of private deepwater port development. This reflects the fact that its legal jurisdiction and authority are broader than those of the states, and that varied national public interests are crucially at stake beyond those at local and regional levels or those of any single industry, group or sector. It is therefore our conviction that the Federal Government must assume a positive stance of leadership, planning and facilitation, while maintaining a posture of scrupulous regulation and control, as part of any institutional arrangements that may be provided.

The opposite philosophy of merely passive reaction to private initiatives is insufficient for the proper protection of the public interest because it would be incompatible with preserving public interest goals for port development. Furthermore it is not enough to assure that there are not likely to be adverse economic or environmental consequences to a deepwater port system conceived by the energy industry. Similarly, it is not enough simply to establish a Federal presence which operates as an umpire between disparate interests. To the contrary, effective satisfaction of those goals suggests that there must be positive affirmation that such proposals will enhance the national and regional economy and that environmental plans are

designed to give optimal assurance of environmental integrity.

Our concept of the Federal role would include the following major elements:

1. Enactment of new legislation to establish or confirm the above-stated premises on U.S. energy and deepwater port policy, to fill in gaps and to clarify ambiguities in Federal and state jurisdiction or authority, to define regulatory processes specifically applied to deepwater ports, and to delineate the power of final approval

2. Formulation of basic policies consistent with enabling legislation

3. Conduct of basic national and regional planning for optimal deepwater port and related industrial development

4. Adoption of criteria governing the design and operation of ports, as well as provision for monitoring of the facilities through all stages of construction and operation

5. Support for a research and development program to reduce risks of collisions, accidents and oil spills in connection with deepwater port operations.

Most important is our conviction that the Federal Government must exercise a weighty and positive influence on site selection and investment decisions by private interests prepared to sponsor such ports. In line with this concept of the leadership role of the Federal Government in fulfilling national responsibility for deepwater port development, the following requirements should be met in designing the Federal organizational structure best suited to the purpose. Thus, whatever Federal institutional arrangements are provided vis-a-vis deepwater ports, they must:

1. Make provision for multijurisdictional cooperation in planning and evaluating the economic, environmental and social consequences of the proposed deepwater port system

2. Establish processes in which the salient intergovernmental-private relationships can best be rationalized

3. Accommodate short-range needs without compromising longer term objectives and possible alternatives

4. Attempt, to the fullest extent possible, to reconcile the locations of deepwater ports with other competitive uses of the coastal zone

5. Assure a continuum of plans, regulations and surveillance from the inception of the planning process through operations

6. Rely to the maximum on the resources, powers and expertise of existing agencies with functions applying to deepwater ports

7. Formulate, to the extent possible, a uniform pattern of regulation and control for all developments on land, and within or beyond the territorial sea

8. Be oriented to balance the sometimes divergent objectives of economic growth and environmental conservation with equity to both interests.

Critical Role of State and Local Government

The deep-seated value conflicts inherent in super-port development are most apparent at the state and local level. The location of such ports will affect levels and kinds of economic activity in adjacent areas; they will impact the environment; they will influence population concentrations and distribution; and they will affect revenues of the political jurisdictions concerned. These effects will lead to conflicts between those who would reject deepwater ports on environmental grounds and those who would promote port development because of the prospective economic benefits.

There is no guarantee that a state can insure the location of a deepwater port within its boundaries;

but any locality, given strong voter sentiment, forceful voices in opposition and ingenious legal talent, can stall and probably kill a port proposal, unless those backing the proposal are sufficiently strong to overcome local antagonisms.

Affected state governments will be particularly strategic in negotiations and plans incident to site selection and installation design, both with respect to their jurisdiction and political influence. This will be true even if the proposed terminal is located beyond the 3-mile limit. Thus pipes crossing the territorial sea will require state approval and right-of-way easements from state and local jurisdictions. On-shore facilities essential to the operation of a deep-water port will also be subject to state jurisdiction.

The governor of an affected state, with his legislative supporters and administrative associates, can serve as a powerful advocate for or opponent of a deepwater port development. The governor can open doors of influence and authority in Washington; on the other hand, a state administration firmly opposed to a deep-water port proposal can almost certainly erect barriers that in the practical world of politics and the law are almost impregnable.

While the Federal Government has much more regulatory authority and while its final approval of a deep-water port proposal will likely be decisive, the political initiatives and power dynamics will frequently be on the side of the governor. It is his state that is immediately affected, beneficially or harmfully, and his claim of great economic advantage or intolerable environmental damage will weigh heavily in the final judgment on a prospective port. In other words, as in so many questions of public policy, the political pressures arising out of current public value systems and conflicting interests can be more important than objective analysis.

If the objective of Federal policy is to make possible rational consideration and timely and intelligent action on deepwater port proposals, it will be

necessary to insure orderly consideration of the various state, regional, and local issues that must be examined.

Some of those issues involve interrelated Federal and state jurisdictions. This is true of both environmental legislation and coastal zone management. It is also true, to a lesser degree, of navigation and vessel safety. There are also issues of more direct state and local concern, including employment, urban growth, public facilities and services, and the indirect impacts of deepwater port development on land use and related matters.

From the perspective of sound public policy, affected governments should insure full-scale examination of the social and economic benefits and costs of deepwater ports and related developments. Local and regional agencies would also do well to engage in long-range economic and environmental planning that considers economic goals, the life styles toward which a community may aspire, the tax base, and the balance between economic gains and protection of environmental quality.

There are several ways in which regional concerns may be considered in connection with deepwater port proposals. Where there are regional planning agencies, such as the Federal-State River Basin Commissions or regional planning commissions, their expertise and coordinating functions could be employed in evaluating potential sites and the potential impacts of the proposed facilities. Where there are interstate compact organizations with line responsibilities, such as the Delaware River Basin Commission, they could be utilized at the planning, construction, and operational stages. In the absence of such mechanisms, governors should be encouraged to pool their resources in cases where ports may affect more than one state.

Councils of government should also be involved in planning studies designed to catalogue the impacts of deepwater port development and local community reactions. These cooperative planning organizations are ideally suited to serve as a focus for evaluation of

these kinds of developments. Their recommendations should be particularly useful to both state and Federal authorities.

One of the principal preparatory measures states could take would be to prepare land use plans adequate to support industrial plans for development of storage facilities and pipeline distribution systems, as well as to regulate the location, expansion, or relocation of processing facilities.

The Private Role

It is expected that the petroleum companies and related interests will supply the motivating force for deepwater port development with their expertise, capital, producing facilities and profit drives. Associated with them are a congeries of ancillary industries and services which are essential to energy production and which share a direct interest in the establishment and management of deepwater ports. They include ocean, coastal and inland shipping interests, engineering and construction firms, financial and investment institutions and large industrial users of petroleum products. Most are indispensable elements in the development of superports.

Firms seeking authorization to provide a deepwater port on the east and gulf coasts have already taken the initiative in forming coalitions among all or most significant oil refiners in a particular area for joint planning purposes. As prospective owners, operators and/or users of a facility, their major role will be to determine what combination of port site, design, and operating circumstances will most effectively minimize costs to each for delivery of projected crude oil imports over time to existing, expanded, or entirely new refineries.

They will certainly have to modify initial plans to reflect whatever public standards and controls take shape, reevaluate their costs accordingly, and finally decide whether or not to accept a port facility under the conditions presented -- or to negotiate for changes.

The focus of private enterprise on keeping its costs to the minimum may conflict with a broader public viewpoint -- the integration of other social values with those of economic efficiency. The needed blending of private and public considerations could theoretically be achieved best under a joint planning arrangement of public and private professionals working together as a team. Unfortunately, that approach is problematic. Many petroleum companies are extremely reluctant to entertain such an arrangement. They look with disfavor upon further governmental intrusion into their affairs, and strongly prefer that the public sector maintain its traditional role of umpire and rule maker.

However, effective communications between public and private sectors can be established by other means. Federal and state authorities could try to establish at the earliest possible stages in the private planning process whatever tentative concepts of site, design, operational and other standards or policies they have in mind. This approach would permit accommodation of some public values in private port development plans, which might reduce the range of subsequent conflict.

Beyond those directly related private industries, there is an array of voluntary not-for-profit organizations and other private groups with varying interests in the deepwater port question. Some are national, others represent state or local interests. Most purport to represent the public interest as they see it, and all are advocates or opponents of a particular course of action. Some promote economic development goals, others stress environmental concerns. While their influence may not be decisive in affirmative action terms, they may prove to be powerful in a negative sense by obstructing favorable public policy decisions on such vital matters as local zoning and environmental protection, working through legislative or judicial processes. They must, therefore, be reckoned with in planning and decision-making procedures.

A useful approach might well include direct and informal communications between private port planners and major responsible environmentally oriented groups in the earliest possible stages of the planning process,

similar to the interface indicated above between public and private planners. Successful experience of several electric utilities in the siting and design of facilities on the Chesapeake Bay may offer instructive lessons.

VIII. THE EVOLUTION OF INSTITUTIONAL ARRANGEMENTS

New Legislation

Our appraisal of the present situation leads us to the conclusion that new Federal legislation is required as a basis for establishing suitable institutional mechanisms and decisional processes which can operate effectively and in a reasonable time frame. Specifically, the new legislation should be drafted to achieve the following purposes:

1. To establish a basis for, and to assert U.S. legal jurisdiction over, facilities in international waters beyond the territorial sea

2. To authorize the executive branch to license private construction and operation of deepwater ports under appropriate conditions and standards

3. To establish a uniform regulatory framework for the construction and operation of deepwater ports, including extension of existing relevant Federal laws to installations within and beyond the territorial sea and of U.S. and state laws affecting civil and criminal offenses

4. To reconcile ambiguities and conflicts of jurisdiction among Federal agencies, i.e., responsibility for containment of oil spills as between several Federal bodies and those of state and local governments

5. To establish policy concerning Federal service and financial obligations, including those which may arise from oil spills or other unforeseen contingencies in port or vessel operation

6. To reconcile overlapping or inconsistency in Federal and state jurisdictions within U.S. territorial waters by providing that state and local laws operate concurrently only to the extent that they are not inconsistent with Federal law (for example, the respective authority of Federal and state jurisdictions concerning pipeline safety)

7. To require state and local involvement in decisional processes and to stipulate the nature of public hearings under the Administrative Procedures Act

8. To provide specific authority and fiscal support for research and development of technology applicable to deepwater port design, construction and operation.

Assertion of National
Jurisdiction Over
Deepwater Ports Beyond
3-Mile Limit

As noted in chapter IV, the United States does not now appear to have the necessary legal jurisdiction to provide deepwater ports beyond its territorial sea, which extends only 3 miles from shore. The distance of 12 miles is emerging internationally as a rule of customary law for the breadth of the territorial sea, and the United States has publicly advocated international agreement on that breadth, with some conditions. Despite difficulties, it seems likely that by 1980 or earlier, the 12-mile standard will become an established international norm.

However, since some deepwater port terminals under active consideration lie well beyond the 12-mile limit, and since provision of facilities between 3 and 12 miles probably cannot wait for uncertain international accord, other actions are indicated. As noted in chapter IV, the Continental Shelf Convention does not appear to support the provision of deepwater ports unrelated to exploitation of underlying seabed resources. However, three other options are available:

1. To take unprecedented unilateral action
2. To find residual authority in the Convention on the High Seas
3. To reach international agreement on the subject, not now covered by any international accord.

Among the above options, the last seems preferable in principle. Several proposals have recently been made for a new convention on this subject. However, slow processes of international lawmaking suggest that at least several years will be necessary before accords can be reached and become effective. Since unilateral action is politically provocative as well as contrary to recent U.S. foreign policy, the most practical, short-term option is resort to the Convention on the High Seas. While its language does not specifically sanction deepwater ports, they could be interpreted to fall within the general residual rights contemplated by the Convention, because they are an incident to navigation, itself a recognized right.

An acceptable international legal foundation must also be established for the application of laws to deepwater port operation. Article 9 of the Territorial Sea Convention extends jurisdiction of coastal nations to "roadsteads" (sheltered, offshore anchorage areas for ships) located beyond the territorial sea. Since deepwater ports can logically be considered analogous to roadsteads, the United States could apparently apply its laws to port operations however far offshore they may be located.

Statutory Power To License Deepwater Ports

Most important, the enabling legislation should grant authority to the President, with full power to delegate or reassign such authority, to issue permits to public or private entities for the construction and operation of deepwater ports, wherever located, provided the sponsors have complied with all other

Federal and state regulations, including the formal granting of any state permits required for facilities subject to their ultimate legal authority. The President should also be authorized to establish regulations governing the construction and operation of such facilities consistent with the basic law.

Empowering the President to exercise the decisive licensing power is an appropriate delegation of authority from the Congress to the Chief Executive, who in turn may delegate or assign such to a suitable officer or agency of the executive branch. The President and his subordinates will be governed by the statutory policies and criteria established by the Congress, which adequately protects the legislative prerogative.

Under these circumstances we see no need for the Congress to require ad hoc approval of each and every proposed port plan as would be required by some pending legislation. Such a requirement would likely introduce extraneous sectional considerations into the decisional process and could result in unfortunate delays in a situation calling for expeditious action.

Likewise we see no reason to mandate approval by the governor or legislature of the state adjacent to the proposed superport. In the absence of a national emergency requiring overriding Federal action, it is axiomatic under our constitutional system of government that a governor or state legislature strongly opposing the proposed deepwater port development can frustrate the desire, not only of the private interest concerned, but of the Federal Government itself. Furthermore, in most cases state approval of critical port system components will be legally necessary. Therefore, in practical terms and again in the absence of a national emergency, no deepwater port will in fact be constructed without the concurrence of the relevant state and local authorities. Legislation requiring such approval is therefore unnecessary, and if enacted might operate simply to attenuate the whole decision process.

It is possible that some time in the future a national emergency threatening to jeopardize the national security and welfare might occur which could justify the exercise by the President of constitutional powers over interstate and foreign commerce for the purpose of countering state or other objections. Under these circumstances a sober finding of fact concerning such an emergency by the President would lead to the submission of legislation to the Congress authorizing the construction and financing of a deepwater port by the Federal Government or by private interests at a particular site contrary to the will of the affected state. The Congress could then exercise its legislative powers to approve or disapprove the particular project. Such action would be a proper exercise of legislative powers and assures that no state government will be arbitrarily overruled except upon a showing of national emergency with congressional approval.

Provision of a Uniform Regulatory Framework

A difficult but highly important goal for new legislation is to extend relevant existing Federal and state laws to deepwater port development beyond the territorial sea, and to clarify any ambiguities which can reasonably be anticipated in their specific application to issues at hand. To the degree possible, such legislation could usefully address overlapping responsibilities among Federal agencies and between Federal and state jurisdictions.

To facilitate consideration and regulation of any specific port projects which are advanced or developed, the legislation should encompass facilities located inside or beyond U.S. territorial waters, and insofar as possible provide uniform treatment.

More detailed analysis of the above factors is beyond the scope of this study, and will require a substantial legal effort. But comments on some of the specific questions, including problems of applying Federal and state civil and criminal laws to deepwater ports, are included in appendix A.

The Special Problem of Economic Regulation

The appropriate legislative approach to Federal regulation of port facility use and charges presents several major economic policy and administrative issues requiring further appraisal.

First, although not now considered likely, specific port projects could materialize which do not present monopoly-like conditions for which public regulation is desirable (e.g., a harbor-deepening project serving a number of refineries whose individual terminal facilities have free and equal water access; a small-scale offshore facility with a connecting pipeline to a single refinery, of no potential value to other users).

Second, where joint-use facilities serving a number of refineries are to be provided, the presence of monopoly-like circumstances may depend on specific facts which cannot be predetermined and which will probably change over time (e.g., the number of such facilities actually available to potential users in each market area, not only in the United States but in nearby countries). These circumstances suggest that public needs for economic regulation of any single facility be determined on a case-by-case basis and perhaps reviewed later for changed conditions.

Where the above appraisal suggested the desirability of regulation in the public interest, further difficulties arise in establishing the soundest administrative approach. The initial choice lies between reliance on an existing regulatory commission with relevant authority and experience, or the creation of an entirely new regulatory instrument.

Neither of the two existing regulatory commissions which might be considered most appropriate for the task (the Interstate Commerce Commission and the Federal Maritime Commission) have the requisite scope of needed authority nor the breadth of experience with the relevant facilities (pipelines, ports, and

transshipment vessels). The ICC regulates common carrier oil pipelines in interstate commerce and associated storage facilities, including tariffs, rates of return, and user access conditions. But its authority and experience in relation to oil or other bulk commodity shipping and terminal facilities are decidedly limited.

The FMC's authority has been confined largely to rate and related regulation of common carrier vessels in interstate commerce, which rarely encompasses oil or other bulk commodities. Furthermore, its concern with marine terminals is essentially focused on questions of discrimination in charges or access rather than on direct regulation of tariffs or rates of return.

Furthermore, the novelty and dynamics of some of the regulatory issues presented (e.g., risks) may raise doubts in the minds of many as to the ability of those traditional bodies to respond effectively to the challenge if authorized to do so. This concern is accentuated by the fact that the independent, quasi-judicial character of those agencies substantially insulates them from direct legislative or executive influence.

On the other hand, the alternative of creating an entirely new regulatory apparatus in so complex an area is problematic. Considerable time and effort to establish it legally and to get it functioning would be required, and there can be no assurance that it would perform in a more satisfactory manner than existing regulatory instruments.

Federal Financial Obligations

New legislation should reflect policy judgments about financial responsibility which is to be, or might inadvertently be, borne by port owners, by the Federal Government, or by other parties incident to the provision or operation of deepwater ports. There appear to be three major questions at issue:

1. Whether, and to what degree, the Federal Government should participate in direct financing of port construction or operation

2. Whether it will charge a fee, and if so in what amount or on what basis, for the rights to be conveyed

3. Who will bear the costs arising from oil spills or from any other unanticipated adverse effects which may arise from the construction or operation of the port facilities or of the vessels using them.

If desired Federal policy is to place the fullest possible financial burden on facility owners or users, consideration should be given to the following kinds of provisions:

1. With respect to direct Federal financial participation in the port facility:

- a. An explicit prohibition of Federal support, except as to its traditional and limited service functions of providing navigational aids, policing and regulation (with the possible exception of any case where the absence of public subsidy would result in choice of foreign transshipment facilities).
- b. A required showing of considerable financial strength by any potential port owner or lessee, including possible bonded responsibility to the Federal Government in large amounts to protect it from any unsatisfied claims which may arise through default of the owners.

2. With respect to the granting of any permit, consideration of an auction system analogous to the approach taken to offshore drilling rights; or of a substantial rental fee related to the volume of business handled. Possible rationales for this approach have been mentioned in chapter VI.

3. With respect to financial responsibility for oil spills or accidents:

- a. Ratification of the international conventions on Civil Liabilities for Oil Pollution Damage (the Liability Convention) and on the Fund for Compensation for Oil Pollution Damage (the Fund Convention), and passage of the corresponding acts to implement the conventions. In combination they will substantially overcome gross inadequacies in existing international and domestic laws for making vessels causing oil pollution more fully responsible financially, and greatly alleviate cost burdens on innocent victims or taxpayers. Presently under consideration in the Senate Foreign Relations Committee, they would probably become effective in 1974 if approved this year.
- b. A requirement of much greater financial responsibility by a deepwater port owner or operator for any oil pollution attributable to its operation (rather than to vessel operation) than is presently required generally of terminal facilities under existing Federal laws. As noted in chapter VI, they provide very limited coverage, scope, and liability, as well as cumbersome processes for third-party recovery even where that is possible.
- c. Authorization of Federal compensation for losses of any kind sustained by private parties incident to port or related vessel operation which are not fully recoverable by other legal means, possibly financed by a terminal throughput charge (as presently imposed by Canada for similar purposes). Together with the preceding legislative

steps, such action could virtually eliminate the awkward problem of different Federal and state standards, and it would also effectively serve economic and environmental equity goals.

Federal Organization

Relevance of Institutional Analogies

Deepwater ports represent a unique innovation in the history of large-scale transportation. There is no exact parallel or precedent in either physical or institutional terms for these facilities. Broad analogies with institutional arrangements or administrative organizations established for other functions are of limited help. Thus, no Federal ownership or operation is contemplated which would warrant creation of an agency like the Tennessee Valley Authority; the private initiative character of deepwater ports and the absence of a major financial stake on the part of the Federal Government makes the partnership pattern of a Comsat organization inappropriate; the pervasive scope of Federal and state regulatory powers embracing all facets of deepwater ports, their likely location in international waters and the absence of joint operating responsibility with the state render the River Basin Planning Commission model unsuited to the subject purpose.

On the other hand, analogies for specific elements of the widely ranging deepwater port issue abound. They include Federal programs for establishing water and air quality standards, for regulating tariffs of pipeline and vessel operators, and for managing multiple-use resource development on public lands or mineral extraction on the Outer Continental Shelf. Similarly, many urban areas have organized metropolitan-wide planning programs to establish economic development and land use priorities and plans for their spatial distribution. But these examples tend to be limited in scope and sometimes less than fully effective in achieving presumed objectives.

An existing model which may have the broadest application for deepwater port planning and regulatory arrangements is the civilian nuclear power plant program of the Atomic Energy Commission. Nuclear power plants parallel deepwater ports in that both involve facility developments that have energetic promoters and strong detractors; both reflect geographically broad economic benefits and locally concentrated environmental and social costs; both involve complicated problems of design, planning, construction and operation, all closely connected with the issue of site selection; and both encounter difficulties in Federal, state and local jurisdictions with respect to agencies and levels of government.

But there are also differences between the civilian nuclear power plant program and the proposed deepwater ports program. A much broader range of operational problems is involved in deepwater ports. Furthermore, the greater range of Federal agencies concerned with deepwater ports than with the AEC program makes administration more complex. But these are differences of degree rather than kind, and the experience of the AEC with respect to the interfacing of diverse interests can be instructive.

One of the fundamental lessons of the AEC experience has been that there are inherent limitations to the regulatory effectiveness of an agency that is partially promotional. This experience indicates that it would be unwise to put all of the authority related to external impacts into one superagency responsible for port location, development, design, construction and operation unless its authority is conditioned on certifications by other bodies.

It is not the series of hearings by separate bodies that is likely to cause delays in basic deepwater port decisions. The experience of AEC in the civilian nuclear power plant program indicates that the biggest problems have been the imprecise consideration of the broader public concerns that need to be factored into the decision process, and the attempt to avoid public confrontation over potentially controversial issues, particularly in the environmental area.

Focusing Federal Leadership in a Catalytic Center

At present there is in the Federal establishment no institutional mechanism with authority for comprehensive resolution of the profound and complex issues of deepwater port development. What is manifestly needed is the establishment or designation of some center for catalyzing, coordinating, energizing and providing leadership for the total undertaking of a deepwater port system.

We conceive this need as being immediate even in advance of the enactment of enabling legislation previously discussed. While energy strategy and policy is now appropriately centered in the White House, this does not embrace discrete planning for deepwater ports, nor does it embrace the function of coalescing the multiplicity of interests and functions concerned with activating a superport system. Furthermore, the creation of a coordinating center does not preclude a possible future stage of organizational development which, under the stress of potentially mounting urgency, could require a more direct and operational type of Federal organization.

A planning, policy, and coordinating center is required now to bring focus and unity to the diverse and sometimes disparate Federal entities whose functions and authorities impact the siting, design, construction and operation of these facilities. The alternative to the coordinating mode would be to establish a large new administrative agency and transfer all functions applying to deepwater ports thereto. However, deepwater port issues are too complex, too pervasive in their impact and regulation, and too interrelated with other broad government activities to warrant a grand merger of related functions except under conditions of extreme emergency.

Many programs with major implications for energy and deepwater ports must be managed to achieve other objectives of government, such as transportation, economic development, foreign policy and common-carrier

rate structures. The disruption which would be involved in tearing out pieces of jurisdiction from a multiplicity of agencies with resultant impairment of program integrity renders this course of action out of the question. The several regulatory and monitoring organizations are best left as they are for the foreseeable future, with provision to assure their proper application, sequencing, and coordination through a central lead agency. Another argument for this course of action is that the legislative obstacles to a major restructuring of Federal agencies would be formidable.

A lead agency is also desirable from the viewpoint of state and local authorities. The decision-making process, particularly on siting, will involve extensive negotiations with and participation by state and local authorities. These will be most effective if there is a designated center for bringing all of these agencies together.

Likewise we can assume that industry and financial interests will also welcome a single point in the Federal complex for guidance as to procedures, requirements and policies and for the acquisition of final permit authority. Designation of such a focus would facilitate the establishment of a mechanism whereby all Federal permits required for deepwater port construction would be handled through a single application filed with the lead agency.

The proposed lead agency or entity has a number of functions to perform:

1. Assemble and analyze varied economic and physical data affecting the useful number, general location, and capacity characteristics of deepwater ports, including projected crude oil import needs, costs of port and related facilities for different throughput levels, and spatial distributions of processing facilities and markets

2. Formulate economic and environmental policy rationales for alternative patterns of industrial

and land use development and associated deepwater port installations

3. Develop from the preceding steps long-range strategies governing industrial, land use and related deepwater port developments, and establish general locational priorities for port sites accordingly

4. Formulate environmentally protective policies and standards consistent with the enabling legislation on such subjects as: selection of sites for terminals and storage facilities and of pipeline rights-of-way; major design features to be incorporated in vessel, terminal, storage and pipeline facilities; and all aspects of system operation (e.g., ship-to-shore communications, fairway arrangements for supertankers and other traffic, terminal operation for docking and discharging cargo, certification and testing of key operating personnel, surveillance of all system components)

5. Coordinate and direct the evaluation of all applications and proposals for superports including site selection, port design, pipeline configuration, landside facilities, and other aspects in terms of socioeconomic and environmental factors and against predetermined standards and criteria

6. Assure that the prior evaluation fully satisfies requirements for environmental impact statements for each project under the NEPA Act and otherwise complies with all applicable Federal, state, and local laws

7. Support deepwater port research and development of technology applicable to deepwater port design, construction, and operation

8. As provided by the enabling legislation and delegated powers of the President, make a final decision on the issuance of a requested permit, or submit recommendations on some to higher authority

9. Maintain continuing surveillance of deepwater port operation for compliance with regulatory standards.

Location and Operation of the Lead Agency

In evaluating the most suitable setting for the lead agency which is to exercise overall leadership responsibility for deepwater ports, we are confronted with another classic problem of government organization in the contemporary period of complex interacting functions. It is often frustrating to try to match the jurisdiction of conventional functional agencies with increasingly complex problems that cut across programs, geography, and intergovernmental lines and that defy categorization in traditional administrative structures.

Conventionally two strategies have been adopted in Federal administration for meeting new problems. One solution has been to establish within the Executive Office of the President a coordinating and monitoring center which provides leadership and oversight of the entire Federal establishment with respect to the particular function. A second option is to create a new discrete independent agency as an umbrella organization to encompass all elements of the particular program or problem area.

Both of these options have disadvantages. The Executive Office of the President is already overloaded with discrete program, policy and coordinating functions. This practice has the effect of diluting the scope and strength of the great operating departments of the government. The current administration is appropriately trying to decentralize operations and to vest program functions in established departments and agencies.

Similarly, the creation of a new independent agency has the effect of proliferating and complicating the Federal structure for activities which can best be assigned to an existing department or agency.

There is no perfect answer for managing Federal responsibility of the scope and ramifications applying to deepwater ports. Nevertheless, in selecting a suitable location for the lead agency, the President

and the Congress will likely be guided by a desire to place the strategic responsibility in a departmental setting which:

1. Has broad responsibilities for identifying alternative means of meeting the nation's energy needs and evaluating them against our economic, environmental, and security objectives
2. Is familiar with the oil and gas industry and already has regulatory powers incident thereto
3. Administers functions dealing with both offshore and landside effects of deepwater port facilities
4. Has a balanced concern both for economic growth through the wise use of natural resources and for environmental consequences
5. Has expertise in coastal zone management.

These criteria rule out most departments and agencies which exercise powers or perform functions germane to proposed deepwater ports:

The Corps of Engineers has a vital but limited responsibility for the maintenance and protection of navigable waters and technical engineering competence for evaluating designs of offshore structures. It has no broad economic planning or regulatory functions and no particular relationship to the petroleum industry.

The Environmental Protection Agency likewise has a crucial role to play in the decisional and oversight process, but it represents a discrete function which does not encompass economic development or regulation or transportation engineering.

The Department of Transportation, through the Coast Guard and Office of Pipeline Safety, has responsibility for vessel and navigational safety, for spill

prevention and cleanup, and for pipeline configuration and operation. But it has little to do with the petroleum business as an industry and is on the periphery of coastal zone management.

The Department of Commerce includes the Maritime Administration, with responsibility for administering subsidies incident to the development of the U.S. merchant marine; the National Oceanic and Atmospheric Administration, which administers the Coastal Zone Management Act and which has expertise in the marine environment; and the National Marine Fishery Service, which performs research and manages commercial and estuarine fisheries. But again, none of these functions deals with the economics of the petroleum industry, or with most of the primary and secondary onshore effects of deepwater ports.

The Department of the Interior includes:

1. The Bureau of Land Management, which manages and disposes of public land, administers mineral resources of the Outer Continental Shelf, and approves leases for exploitation of offshore resources
2. The Geological Survey, which supervises operation of private industry on the Outer Continental Shelf and monitors environmental protection measures related thereto
3. The Bureau of Sport Fisheries and Wildlife, which is concerned with research and management of wildlife resources, including protection of wetlands in the coastal zone
4. The Office of Oil and Gas, which issues import licenses for and allocates imports of crude oil and serves as the information center and liaison for the entire industry within the Federal Government
5. The Bureau of Outdoor Recreation, which has a special concern for water-based recreational opportunities and thus for any environmental impacts on them.

Beyond these traditional responsibilities, the Department of the Interior may gain additional ones related to energy and land use, although the eventual outcome is uncertain. For example, it recently created an Assistant Secretary for Energy with broad new responsibilities in that field. This appeared to anticipate plans for converting the Department of the Interior to a Department of Natural Resources under the President's reorganization proposals (expected to be under congressional consideration this year). In addition, the pending Land Use Planning Act with its wide implications for coastal zone management seems likely to be vested in Interior.

Although none of the agencies mentioned fully satisfies the demanding criteria, the Department of the Interior appears to come closest to meeting them. A major reservation which may be offered concerning the suitability of Interior as the locus for the superport management responsibility is the claim that historically it has been overly responsive to the interests of the fossil fuels industries. If it were to be chosen, the Secretary of the Interior should be designated as the cabinet officer to whom the President delegates his statutory responsibilities.

The Secretary (of Interior or of whatever other department is designated) will presumably be granted discretion as to how he organizes for those new responsibilities. While he could opt to retain all functions within his own office with a small support staff, it is likely that he will subdelegate to an Assistant Secretary those functions involving planning, project evaluation, coordination and surveillance, while reserving policy and final permit authority to himself.

In the interest of interagency and interbureau relationships we recommend that the Assistant Secretary (or Under Secretary) establish a small coordinating center within his own office rather than assigning the coordinative functions to one of the existing operating agencies (such as Interior's Bureau of Land Management or Geological Survey). It is important that departmental leadership be acceptable to other responsible

government agencies vested with critical functions affecting deepwater ports. This is more likely to occur if the coordinating center is retained at a superior policy and organizational level rather than being submerged within an operating agency whose status is no higher than that of the bureaus and agencies of other participating departments.

Even in advance of comprehensive deepwater port legislation, we urge that the President formally designate the appropriate departmental Secretary as the responsible cabinet member for leadership and coordination affecting deepwater ports. There is much that can usefully be done prior to the receipt of prospective applications in terms of planning, development of criteria and the establishment of interagency and intergovernmental working arrangements.

State Participation

The critical role of state and local governments has been broadly described in chapter VII. As noted there, states have essential responsibilities for planning and for regulation of any facilities within their territorial and functional jurisdiction. They also have the power of final approval or rejection of any port system components which must be constructed within their territorial jurisdiction. It therefore follows that the range of issues relevant to state and local governments and to their residents is substantially equivalent to that which must be addressed also at the Federal level. These circumstances alone suggest that states develop or improve processes of coordination with relevant Federal bodies, utilizing to the fullest their research and data resources, but at the same time undertaking independent studies and analyses where Federal efforts are considered inadequate.

By the same token, but to a degree which varies widely by individual state, there is likely to be a need for new laws, organizations, and decision processes to coordinate and integrate state efforts. In some cases, a state may already have mobilized its

institutional resources for effective action, notably in the case of Louisiana. Some states with positive attitudes are moving in that direction, notably several other gulf coast states. On the east coast, where attitudes toward port development are generally negative, few states have taken positive action beyond the creation of informal study or advisory groups.

Planning of Potential Deepwater Port Locations

If the state government is to assume a positive role in the location of deepwater ports, and if it is to be an active partner in the actual design, construction, and operation of such ports, it must take steps to identify and critically appraise those sites where such ports might be suitably located. This should be a cooperative Federal-state activity with participation of appropriate regional agencies.

A useful analogue is provided by the State of Maryland with respect to power plant siting (1971 Power Plant Siting Law). The Maryland law goes beyond the evaluation and planning functions to a "land bank" program that may provide a useful model for deepwater port area designation and reservation. Under the Maryland law the State is required to obtain four to eight potential sites for large thermal electric-generating plants (fossil fuel or nuclear) that must pass the test of an environmental impact assessment. Those sites are available for sale or lease to utility companies which must then obtain approval for specific design, construction, and operational plans. The Maryland law has the advantage of guiding and, to a lesser degree, limiting the number of potential power plant sites, insuring an orderly and rational process for consideration of long-range plans and specific projects, and reducing the potential for unnecessary delays between project application and construction. The siting law enhances rather than interferes with existing planning and environmental protection legislation.

The problem of planning deepwater port areas on a national scale is potentially more complicated

because of Federal, state, area, and local involvements. But, as noted earlier, the Coastal Zone Management Act of 1972 has already laid the groundwork for such an approach by establishing requirements for coordination between Federal, interstate, regional, state, area, and local agencies.

While the act applies only to developments in state waters and on land, several provisions are of direct relevance to deepwater ports, portions of which may be beyond the state's territorial limits. Thus one provision requires that state management programs provide "for adequate consideration of the national interest in the siting of facilities necessary to meet requirements that are other than local in nature" (sec. 306 [c] [8]). Furthermore, the act encourages the states to:

1. Administer land and water use regulations, control development in order to ensure compliance with the management program, and resolve conflicts among competing uses

2. Acquire interests in lands, waters, and other property through condemnation or other means when necessary to achieve conformance with the management program (sec. 306 [d]).

It is clear that major concepts of the Coastal Zone Management Act may prove to be of considerable importance in joint Federal-state cooperative efforts incident to selecting deepwater port sites, particularly as they affect other land and water uses within state territory.

Another technique in the Maryland Power Plant Siting Law could have useful application to deepwater ports. Under the Maryland law the Department of Natural Resources is required to keep a running check (and to file biennial reports) on the environmental impact of utility company power plant developments and plans. This would be a very useful device in monitoring deepwater port operations over time to pinpoint problems and suggest needs for improvement.

It would appear from the foregoing that an area selection process for deepwater ports could be implemented on the basis of existing Federal legislation (Coastal Zone Management Act of 1972) and prospective state legislation enacted in compliance with that law.

Consideration of Actual Deepwater Port Proposals

Since the number of deepwater port proposals will be limited, and since they are likely to involve competing state interests, the lead role in considering and acting on specific projects will often, but not necessarily, be taken by the Federal Government. The state role will be incorporated in environmental protection programs and through the certification of compliance with appropriate state plans, including those developed under the Coastal Zone Management Act. Federal laws and regulations dealing with this part of the process should require review and comment by the governor of an affected state with respect to economic and social implications of the proposed project.

Supervision of Construction

Supervision of construction should be carried out by a Federal agency with appropriate qualifications. However, some consideration must be given to the applicability of state laws and standards on such matters as occupational safety, particularly where they are tighter than Federal standards.

Supervision or Monitoring of Operations

While the Federal Government is preeminent on questions of vessel safety and oil discharges in open waters, there is a web of overlying Federal and state jurisdictions on other matters relevant to port operations and environmental protection. It will be important to ensure continuing Federal jurisdiction over deepwater port operations and to make provision for coordinated state action on environmental protection in connection with related shore facilities.

In summary, we recommend that state governments and regional agencies in strategic coastal areas take the following steps to improve prospects for rational and constructive consideration of deepwater port proposals:

1. Make legislative and administrative provision as necessary to grant state licensing authority for facilities within its jurisdiction
2. Expedite the development of coastal zone management programs pursuant to the Coastal Zone Management Act of 1972, looking towards both short- and long-term land and water use plans which can usefully be related to possible deepwater port development and its secondary impacts
3. Consider the designation of a lead agency or authority to coordinate and evaluate proposals for deepwater port development at the state or regional level
4. Participate in cooperative port and land use study efforts with Federal agencies, universities, and relevant private groups, and coordinate similar activities among interested local public bodies. These efforts should be directed toward a comprehensive and systematic state review of proposed offshore and related onshore facilities from the standpoint of their compatibility with other existing or planned water and land uses, their possible pressures on the resource, and their economic or financial implications for the state
5. Decide which among various alternative approaches to deepwater port and related facility development is most advantageous and least disruptive from the state's standpoint, and specify any design, operational, siting, financial, or other conditions considered desirable or necessary to provide a sound basis for state approval.

Decisional Processes

Much more in the way of institutional arrangements and decisional processes will be required than the establishment of a coordinating center in a Federal department and a planning center in a state office. As emphasized repeatedly in this report, the engagement and involvement of all parties at interest will be essential for mature decision-making on the creation of deepwater ports; such involvement will also be necessary for the voluntary and positive acceptance of such decisions as being in the best interest of everyone. Only on the basis of consensus and concurrence can decisive, prompt and confident action be taken to bring deepwater ports into operation as needed.

This requirement in turn underlines the need for a factual foundation supporting each prospective superport, and objective evaluation of its need and suitability. Reliance on industry-supplied estimates and judgments will not suffice to protect the public interest. Governments, both Federal and state, must develop their own data, research, and evaluations in order to reach independent judgments both at an overall planning level and with respect to particular permit applications. Wide dissemination of studies and information among interested parties, as well as joint study sponsorship and participation, are other important elements in a planning process looking towards consensus for decision.

Basic Policy

At the Federal level, it is anticipated that legislative policy mandates governing the exercise of deepwater port functions will be developed in further detail by an oil policy committee, a cabinet-level group on which the Secretary of the lead agency would sit. It would probably be useful also to create a clearing-house and forum at a more subordinate policy level, such as the Energy Subcommittee of the Domestic Council, chaired by the Secretary of the lead agency. He would thus be a direct participant in the top councils of government which will establish the policy context in

which deepwater ports may be encouraged and regulated.

Federal Interagency
Task Forces

For the formulation of operating policies and standards subordinate to but consistent with strategy development on the White House level (and with fundamental policies incorporated in enabling legislation), the Secretary will need to organize an interrelated network of committees or task forces consisting of representatives of Federal agencies directly concerned with superports. While the pressure of events in the form of one or more concrete applications for authority to proceed with design and construction may force early evaluations in the absence of settled policies and procedures, it will be in everyone's interest and will facilitate the evaluation process if guiding standards and procedures are crystallized in advance of site selection.

To this end the Secretary or his delegated representative should establish task forces to formulate policy on such subjects as:

1. Site selection criteria and standards embracing both economic and environmental factors
2. Design characteristics and operational standards of vessels, terminals, offshore pipelines and storage facilities
3. Equipment, procedures and personnel required for avoidance and cleanup of oil spillage
4. Compensation of adversely affected private parties for any economic losses resulting from oil spills not recoverable by other legal processes
5. Financial-accounting-pricing standards and criteria for regulation of deepwater port operation, including rates of return, depreciation, and cost-price relationships for specific services provided and

facilities used (to the degree authorized by legislation or otherwise as an input to possible new legislation)

6. Public responsibilities for losses of income and employment in those communities where existing refineries or other industries are abandoned or relocated as a direct result of deepwater port development.

It is anticipated that the Secretary will continue to use appropriate agencies and task forces during subsequent phases of planning and project review. Thus the Secretary may designate lead agencies for supervision and inspection of facility design, construction, financial management, etc., bringing to bear the best combination of talents and judgment on the particular sector of port development at issue. The terms of the Presidential delegation to the Secretary should give him explicit authority to call on other agencies and personnel for such cooperation. In addition, the Secretary will need staff support and resources for policy review and research on technological and institutional problems connected with the provision of deepwater ports.

Final Permit Authority

The criteria, standards and requirements generated through this task force process should clarify and synthesize those conditions which the applicant companies will be expected to fulfill in presenting applications for a final permit to proceed. The resultant regulations and standards should be the subject of review and comment by interested parties before final adoption. Coastal state governments, environmental organizations, business promotion agencies and others, including the National Petroleum Council, should be offered the opportunity to express their views. Finally it is assumed that any formal standards will be established in the context of rule-making procedures pursuant to the Administrative Procedures Act.

Under the proposed decisional concept, Certificates of Approval or Compliance from each of the

several Federal agencies exercising authority with respect to deepwater ports would be required by the Secretary as a prerequisite for a final permit. Other agencies without regulatory powers but with legitimate interest or functional inputs would be requested to comment and advise on the application. The governor and other state and local authorities would also be requested to express judgment and recommendation in summation of all their previous planning and evaluation, and, where favorable, to grant formal authorization for any port facilities subject to state territorial jurisdiction.

Joint Consultation and Evaluation Board

To formalize active public participation in decision-making, going beyond the conventional hearing process, it is recommended that an ad hoc Joint Consultation and Evaluation Board be established for each proposed deepwater port site under active consideration. Initiative for its creation could be taken by either the appropriate departmental secretary or the governor of an affected state. But the Board should be conceived as a single advisory forum for both state and Federal purposes. Membership should consist of respected citizens who are knowledgeable about the social and economic aspirations of the area concerned, who are of balanced judgment and who would be broadly representative of the diverse interests affected. Their views, whether positive or negative in terms of the feasibility and public acceptability of the proposed site, should be expected to bear heavily on the balance of public opinion.

For a body of, say, 20 members, the Secretary and governor could each appoint 10 members with joint appointment of the chairman. Alternatively each member, plus a chairman, could be designated by both the Secretary and the governor. In any case, membership of the board should encompass representatives of:

1. Economic development organizations, such as state and local Chambers of Commerce

2. Environmental organizations
3. Labor unions
4. Local and regional planning associations
5. Civic organizations.

The role of the board would be to serve as an advisory council to Federal, state and local authorities in considering the socioeconomic and environmental impacts of any proposed superports, in light of specific site, design and operating features or standards. The Board should be assembled periodically to be informed of the status of the project; to hear representatives of the applicant corporations; to hear the views of Federal and state officials; to discuss regional, state and community issues; and to offer counsel concerning the desirability and feasibility of the project.

The Board should not be expected to advise on technical, engineering or financial concerns, but should focus on public policy aspects. This would include the accommodation of economic and environmental values and the prospective consequences of a favorable or unfavorable decision on the application. Board members should also be invited to attend and participate in formal public hearings. Members would not be compensated for their services, but travel and other expenses might be reimbursed by Federal and state governments, perhaps on a 50/50 basis.

Properly structured and exploited, a consultative body such as is proposed here could serve both as a valuable source of advice to decisional authorities and as a forum where conflicts and objectives could be ventilated, thereby contributing to an informed final judgment.

Public Hearings

Many of the Federal and state agencies engaged in the evaluation of deepwater ports concerning special aspects of a project will be required to hold public hearings incident to their recommendation or decision. Because the holding of a series of hearings may turn out to be a lengthy process and because all aspects of deepwater ports are inherently interacting, it has been suggested in some quarters that the designated lead agency be authorized to convene a single final hearing which subsumes all others.

We endorse the concept of a final omnibus public hearing by the Secretary or his designee following the conclusion of all other review procedures, both Federal and state. This would give an opportunity for all parties of interest to present their views on all aspects of the site development.

However, we doubt the wisdom of eliminating by statutory amendment the requirement for public hearings by other regulatory bodies. Each of these agencies, both Federal and state, has a distinct responsibility for the protection of the public interest in a particular program area. We believe that these agencies should be allowed to exercise that authority discretely without the inhibition of concerns extraneous to their function. This may result in a negative decision by a particular agency or the stipulation of deficiencies in project design calling for further safeguards or provisions.

Such impediments may not operate to expedite overall decisions. However, the potential community impacts of deepwater ports are so pervasive, and feelings about them in many areas are so powerful, that the additional procedural requirements pertaining to discrete functions appear to warrant the special hearings. Furthermore, elimination or weakening of procedural safeguards would give opponents of port development additional reason and opportunity to engage in litigation and other obstructive tactics.

The history of the civilian nuclear power plant program suggests that delays attributable to the public hearing process are negligible, and that procedural obstacles have arisen where adequate opportunities have not been provided for public examination of environmental and public safety issues. If separable issues, such as pollution control, coastal zone management, and navigation are subjected to hearings before the appropriate public agencies within reasonable time constraints, there is no reason to expect unreasonable burdens or delays on applicants in the final consideration of a proposed project.

Difficulties of the Coordinating Role--Future Alternatives

The role proposed for assignment to the Department of Interior, or such other agency as may be designated, is admittedly a difficult one which calls for a variety of leadership approaches tailored to different situations and for a combination of the persuasive arts with the exercise of regulatory authority. Some situations will involve no more than a deepwater port to service existing refineries with little change in onshore facilities and infrastructure needs. In other circumstances a new deepwater port will trigger a whole complex of onshore establishments with profound regional and local repercussions. The whole subject of deepwater ports is fraught with the imponderables of policy consequences and the efficacy of particular patterns of interjurisdictional planning and administration.

In the North Atlantic states the Secretary of Interior, or his counterpart, will be confronted with state and local authorities who are highly sensitive to public antipathy concerning possible oil spills and other environmental damage along the coast. In some cases they are also opposed to new or expanded refineries and other industries with concomitant and sometimes undesirable infrastructure demands, which may be induced by port development. At the same time the rapid rise in energy requirements for this area and its hinterland makes the North Atlantic coast a prime prospect for one or more deepwater ports.

Separation of essentially distinct short-run and long-run issues raised by deepwater ports may help to mitigate local and state hostilities, and to foster a more cooperative posture. To an important but uncertain degree, initial deepwater port investments might be justified strictly as adjuncts to existing refineries, particularly in those cases (notably on the east coast) where they already depend heavily on imported crude. Assurances that such facilities would not induce unwanted industrial expansion could be given in the form of strict limitations on delivery points or volumes, as appropriate. This approach would also have the merit of offering more time to appraise longer range refinery expansion needs and location choices, which could then be reserved for subsequent decision.

In environmentally sensitive areas the Secretary and other Federal officials will find it necessary to engage in a process of negotiation and public education while serving also as a broker or balance wheel in trying to reach some accommodation between private enterprise, state and local interests and national requirements. The objective will be to achieve agreement on the part of all parties without sacrificing Federal, state or local safeguards and without imposing such extreme cost-escalating conditions on the applicant companies as to cause them to seek port alternatives in the Maritime Provinces or Caribbean area or large Federal subsidies to accept a U.S. port facility.

On the contrary, on the gulf coast the task will be to exercise judgment as between competing states, sites and company groups. Here public authorities and presumably general public opinion are favorable to the construction of deepwater ports and are vying for the economic advantages to be obtained. Basic questions are raised of establishing new industries in some locales while rendering obsolete the older refinery facilities in other communities. Broad questions of regional economic equity are therefore implicit and highly controversial.

With all these volatile issues of public policy and complex interfacing jurisdictions, the Secretary

and his subordinates are expected to cope effectively and with reasonable expedition as the center of a major coordinated effort without overriding authority. This represents a formidable task and responsibility, but we believe the coordination mode is the one most feasible for the period immediately ahead. It avoids the establishment of a new independent organization and also avoids the disruption of functional transfers under a reorganization plan. It can also be argued that better decisions will result from full-scale application of all available planning and regulatory processes.

Nevertheless, the prospect must always be recognized that much more direct and centralized administration of the Federal planning and regulatory process may prove necessary to meet the timetable for deepwater ports. The critical consideration is the degree of urgency that the nation's energy policy assigns to these structures. If other measures to alleviate energy shortages are effective and if the construction of deepwater ports can be paced over several years, then the coordination, public hearing and decisional processes suggested herein will likely prove adequate. If, on the other hand, the situation becomes increasingly acute and it becomes imperative to cut through the jurisdictional knot on an emergency basis, then institutional arrangements more suited to decisive and expeditious action may have to be adopted.

The crucial consideration is to be sure that choices of sites and plans for deepwater ports are based on optimal satisfaction of national and regional requirements and are not merely adopted where political support is insistent or where political resistance can be most easily overcome.

APPENDIX A. INTERNATIONAL AND STATE-FEDERAL
LEGAL IMPLICATIONS OF DEEP-DRAFT
HARBOR FACILITIES

I. Introduction

Because the legal rules applicable to the conduct of activities in ocean space^{1/} change as one moves seaward from the coastline, it is relevant to a discussion of international legal issues concerning deep-draft port siting whether its distance from the coastline is (1) less than 3 nautical miles, (2) between 3 and 12 nautical miles, or (3) beyond 12 nautical miles. This will in turn depend upon the location of the baseline from which the breadth of the territorial sea is measured.^{2/}

If a deep-draft port were to be located entirely within 3 miles of the coast (the present breadth of the territorial sea claimed by the United States), then there are few international legal issues which arise -- certainly none concerning the competence of the coastal nation to make whatever use of its territorial waters and underlying seabed it sees fit. However, if any part of the port facility were located beyond the 3-mile limit, the seabed corresponding to that part would today be classified as Continental Shelf and the corresponding waters as high seas. Many of the potential deepwater port sites under consideration are located beyond the present 3-mile limit of the territorial sea, some of them beyond 12 miles. It is thus necessary to examine the legal regime applicable to both the Continental Shelf and the high seas with respect to deep-draft port siting. As is later discussed in more detail, the United States has proposed an international agreement fixing the breadth of the territorial sea at 12 miles.

Even if that limit were in effect when any new deep-draft port were in place, the area beyond 12 miles would still be subject to the regimes of the Continental Shelf and the high seas.

II. Alternatives

The major issues are: (1) whether the construction of a deep-draft port facility in ocean space is consistent with the rights of the coastal nation either under customary international law or through international agreements to use the Continental Shelf and the high seas; and, (2) if so, the extent to which a coastal nation would be empowered to enforce its civil and criminal laws and to exercise regulatory jurisdiction over activities conducted on such facilities.

A. Site Within Three Miles of the Coastline

Within the limit of the territorial sea, the jurisdiction of the coastal nation is virtually absolute. The Convention on the Territorial Sea and the Contiguous Zone provides:

The sovereignty of a [nation] State extends, beyond its land territory and its internal waters, to a belt of sea adjacent to its coast, described as the territorial sea.
[Art. 1 (1)]

The sovereignty of a coastal State extends to the air space over the territorial sea as well as to its bed and subsoil. [Art. 2]^{3/}

Thus, within the limits of the territorial sea, the coastal nation may make any use of the seabed or water column it desires, subject only to the right of innocent passage and entry in distress.^{4/} Thus, the construction of a deep-draft port facility would clearly fall within the scope of a coastal nation's competence. Most of the world's existing offshore port facilities are situated within territorial sea limits. One offshore oil terminal near Kuwait, for instance, is situated some 10 miles offshore, within the claimed 12-mile

territorial sea breadth of that nation. Thus, even if the Kuwait facility were either an import terminal or unrelated to Continental Shelf exploitation, it nonetheless would fall within Kuwait's competence in international law to construct and operate.

Jurisdiction to construct a deepwater port located entirely within the 3-mile limit of the United States presents no significant state-Federal legal problems. Under the Submerged Lands Act^{5/} coastal states possess title to submerged lands and the resources thereof lying within 3 nautical miles of the coastline.^{6/} However, the Federal Government retains in the Submerged Lands Act a navigational servitude over waters within 3 miles of the coast,^{7/} and thus, even though the deep-draft port might be situated entirely within that limit, compliance with navigational rules and procedures of the Federal Government, including the duty to obtain a permit from the U.S. Army Corps of Engineers to erect a structure in the navigable waters of the United States, would be required.^{8/}

The circumstances are somewhat different, however, in the operation of a deep-draft port facility. This reflects the likelihood that movement of an ocean vessel in foreign commerce, discharge of its cargo at a terminal, cargo transshipment by pipeline or ship to onshore storage facilities and subsequently to refineries, would be considered an integrated flow. In matters of foreign or interstate commerce, constitutional or statutory authority may impart to the Federal Government jurisdiction which significantly overlaps the territorial competence of the states. For example, movement of oil or gas through pipelines is subject to the regulatory authority of either the Interstate Commerce Commission or the Federal Power Commission.^{9/} Further, both Federal and international laws and regulations concerning protection of the marine environment are applicable even in waters within the 3-mile jurisdictional limit of the states. In addition, because national energy needs and problems are a major Federal concern, and because deep-draft port facilities serving crude petroleum imports are directly related, careful Federal scrutiny on that account alone is inevitable.

Direct Federal jurisdictional impacts in state territory are paralleled by indirect impacts. For example, consider Federal programs for resource management on and above the Outer Continental Shelf. Conflicts could arise between a state which zoned its coastal area pursuant to planning sponsored by the Federal Coastal Zone Management Act of 1972, and the Federal Government, which proposed a deepwater port facility located beyond the limit of state jurisdiction, whose operation was inconsistent with state zoning. This problem has been addressed elsewhere^{10/} and need not here be elaborated. However, Senate Bill 180 (93rd Congress, 1st Session, 1973) would give any coastal state the right to veto a proposed port facility adjacent to but beyond the limit of that state's jurisdiction. As suggested elsewhere^{11/} that approach seems inferior to development of a system for cooperative review of state and Federal projects affecting the coastal area, rather than giving one party or the other a veto power. Nonetheless, this issue points up another of the many problems which will arise in state-Federal relations concerning deep-draft port construction.

It is beyond the scope of this report to analyze in any detail the complications which might arise from the overlapping state-Federal jurisdiction with respect to various aspects of deep-draft port operation. The issue is noted here primarily to point out that, although questions of legal jurisdiction to construct a deep-draft port may be relatively clear, the operational and regulatory aspects of such a facility are much more complex. Additional state-Federal problems are discussed below.

B. Site Between Three and Twelve Miles From the Coastline

The question of the breadth of the territorial sea is not subject to an agreed international norm at present. In the traditional Western European and U.S. view a breadth of 3 miles was regarded as the maximum permissible under customary rules of international law, but in light of the large number of claims over the past two decades to 6, 12, and even 200 miles, it can no

longer be said that any particular breadth has universal acceptance sufficient to consider it a rule of customary international law. Such customary international law rules arise from well-established practices of nations of such a character and duration as to be considered obligatory by the community of nations.^{12/} Evidence suggests, however, that the distance of 12 miles is emerging as a rule of customary law for the breadth of the territorial sea,^{13/} and the United States has publicly (albeit conditionally) advocated international agreement on that breadth. In a speech delivered in February 1970, John R. Stevenson, Legal Adviser to the Department of State and Chairman of the U.S. Government's Inter-Agency Task Force on the Law of the Sea, noted:

[W]e believe the time is right for the conclusion of a new international treaty fixing the limitation of the territorial sea at 12 miles, and providing for freedom of transit through and over international straits and carefully defined preferential fishing rights for coastal States on the high seas.^{14/}

At the July-August 1971 meeting of the United Nations Seabed Committee,^{15/} the U.S. Government submitted draft articles on the breadth of the territorial sea, straits, and fisheries which provide for a 12-mile maximum for breadth of the territorial sea, free transit (vis-a-vis the present regime of innocent passage) through international straits less than 24 miles in width, and a system of preferential fishing rights for coastal states.^{16/} Comments made by delegations of other nations at Seabed Committee meetings in July-August 1971 and subsequently show overwhelming support (far above the two-thirds majority needed for adoption of treaty articles at the Third United Nations Conference on the Law of the Sea) for the 12-mile limit.^{17/} However, the U.S. offer of acquiescence in a 12-mile limit is, as noted, coupled to controversial proposals concerning free transit through straits and preferential fishing rights which may endanger the prospects for agreement on the maximum breadth for the territorial sea. In spite of these present difficulties, it seems highly probable that by 1980 the 12-mile maximum will be an established norm, either through development of a customary international law rule on the subject or through international agreement.

Even if such an international law standard establishing 12 miles as a maximum breadth should exist, however, the U.S. Government would still have to take formal action before it applied to this nation. The implementing mechanism would very likely be an Act of Congress, although this objective could also be accomplished by issuance of a Presidential Executive Order. There has never been a statutorily enacted territorial sea breadth law in the United States, and it seems highly probable that Congress would seize the opportunity presented by a change in national policy to act in this area.

Thus, if a deep-draft port facility were to be located between the 3- and 12-mile limits, two possibilities exist:

1. If the territorial sea of the United States is extended to 12 miles, then the same analysis given in Section II-A is applicable. In short, no significant international legal problems will arise. This is not the case, as noted, with respect to state-Federal problems.

2. If the territorial sea of the United States remains at 3 miles, then the analysis given in Section II-C will be applicable. As will be noted, substantial international and Federal-state legal questions arise in this situation.

C. Site Beyond the Limit
of the Territorial Sea
(Whether Three or Twelve
Miles)

If the deep-draft port facility must utilize the water column (high seas) or the seabed (Continental Shelf) beyond the seaward limit of the territorial sea, then it is necessary to examine the legal regime of these two areas of ocean space to determine legal feasibility.^{18/} Further, it is necessary to analyze each of these two regimes in terms of (1) whether the coastal nation has the jurisdiction to construct such a facility in that location, and (2) if so, and if it should construct such a facility, whether the coastal nation has jurisdiction to regulate activities thereon (i.e., to apply its civil and criminal laws or special regulations).

1. Jurisdiction To Construct

a. The High Seas. The use of the high seas is governed, for parties thereto, by the Convention of the High Seas^{19/} which provides that although "no State may validly purport to subject any part of [the high seas] to its sovereignty,"^{20/} nonetheless the concept of freedom of the high seas embodied in the Convention contemplates use of the area for such undertakings as navigation, fishing, the laying of submarine cables and pipelines, overflight, and "others which are recognized by the general principles of international law."^{21/} Further, all such uses are conditioned on the principle that they shall "be exercised by all States with reasonable regard to the interests of other States in their exercise of the freedom of the high seas."^{22/}

Two areas of inquiry are thus presented: (1) Is the construction of a deep-draft port facility a permitted use within the existing concept of freedom of the high seas? (2) If so, can such a facility exist consistent with the interests of other nations in their exercise of the freedom of the high seas?

There is an almost complete lack of precedent on the first question. Certainly uses of the high seas other than the four enumerated in the Convention on the High Seas have been made, including scientific research, ocean dumping, and the construction of offshore oil platforms. However, the first two probably meet the standard of other uses "recognized by the general principles of international law"^{23/} and the last is specifically authorized by the Convention on the Continental Shelf (such structures being limited to those necessary for resource exploitation activities).^{24/} No solace can be derived from the existence of petroleum storage tanks and offshore petroleum export terminals located beyond the limit of the territorial sea, for they are related directly to the exploitation of petroleum resources from the Continental Shelf on which they are located and thus fall within the class of structures permitted under the Continental Shelf Convention as "necessary for [Continental Shelf] exploration and the exploitation of its natural resources."^{25/} Several such oil terminal facilities exist in the Persian Gulf, but

a review of their operation indicates that all are used for the purpose of transferring petroleum taken from beneath the seabed to waiting vessels. There is also under construction in the North Sea, beyond the territorial water limits of Norway, a terminal complex known as Ecofisk. However, it appears that the function of this terminal, too, is related exclusively to the exploitation of North Sea oil and gas and thus would be a permitted use of the seabed and high seas pursuant to Article 5 of the Convention on the Continental Shelf. All deep-draft port facilities presently under serious consideration in the United States are believed to be designed for crude oil imports and not for processing or exporting products exploited from the underlying Continental Shelf.

At this stage of the analysis there are two directions in which the argument might proceed: (1) Although constituting a new use of the high seas, and one not contemplated in any existing international agreement or customary international law norms, nonetheless such a use is not inconsistent with other uses of the high seas and the unilateral action initiating such a use would not likely meet with protest; or (2) the deep-draft port concept falls within the residual rights contemplated by the Convention on the High Seas, and although a new use in the sense that there are few if any specific precedents for it, it is nonetheless permitted under existing international law.

International law has always consisted of an evolving set of norms. As new technological advances are made, new norms emerge and are often subsequently codified. Many acts initiating new legal regimes have been unilateral, and this is clearly a recognized form of initiation of a customary rule of international law.^{26/} The doctrine of the Continental Shelf itself stemmed in large part from a unilateral declaration by the United States -- the Truman Proclamation of 1945.^{27/} Thus, it is arguable that, given justifications as compelling as those outlined in the Truman Proclamation,^{28/} the United States would be as justified today as it was in 1945 in unilaterally declaring that deep-draft port facility construction is a reasonable use of the high seas. This approach would be equally valid for the Continental Shelf if the superport were deemed

to be a use of the seabed or of the high seas. If no protests were forthcoming from other nations, the rule would be on its way to international acceptance. Ultimately the practice might ripen into a rule of customary international law.

If, as required by Article 9 of the Territorial Sea Convention for roadsteads^{29/} and by Article 5 of the Continental Shelf Convention^{30/} for mineral resource exploitation structures, appropriate notice is given, safety regulations adopted and enforced, and operations conducted with due regard to navigation in the area, there would seem to be little likelihood of objection by other nations.

Implementation of this unilateral action approach by the United States could occur in a number of ways. First, and most crudely, the structure could simply be authorized by domestic law and constructed without formal notice to other members of the international community. As a unilateral act, this approach would then be subjected to acquiescence (affirmative or by silence) or protest. The weakness of this approach is that it does not provide for reactions by other nations, or for the necessary time to modify the activity to conform to legitimate objections. Second, the U.S. Government could issue a statement couched in terms of an interpretation of the Convention on the High Seas, pointing out that it is taking the action pursuant to the "other freedoms" clause of Article 2 in its belief that either (1) such structures are residually permitted under Article 2, or (2) such structures constitute a reasonable use of the high seas consistent with the overall objectives of the Convention. Finally, the United States could issue an executive proclamation, similar to the Truman Proclamation of 1945, in which it justifies the specific use proposed on grounds of utility or necessity. In the latter two cases, the official statement would, of course, be communicated through diplomatic channels to the governments of other members of the community of nations. The Government statements (whether interpretative of the Convention or in proclamation form) would most likely emanate from the President, although the Secretary of State or another cabinet officer could issue such a statement in a form other than a Presidential Proclamation.

The only drawback to this approach is its potential effect on international relations and specifically on the current international law of the sea negotiations being conducted prior to the Third Conference. The idea of taking unilateral action of an unprecedented nature, without sanction in existing law, would likely be regarded as anathema by the U.S. law of the sea negotiating team, particularly by representatives of the Department of Defense. This issue is discussed in more detail in Section III-A below.

To pursue the second alternative, one could take the position that a deep-draft port facility falls within presently permitted uses of the high seas because it is an incident to navigation. The basis for such a position might be that, since navigation is one of the recognized freedoms of the high seas,^{31/} since technological development in ship construction now requires drafts generally found in deeper offshore waters beyond the limit of the territorial sea, and since port facilities are a necessary condition to the exercise of the freedom of navigation,^{32/} therefore deep-draft port facilities constructed on the high seas are a presently accepted use of that area (or at least a residual right to such use). Article 2 of the Convention on the High Seas, following the specification of enumerated freedoms of the high seas, provides:

These freedoms, and others which are recognized by the general principles of international law, shall be exercised by all States with reasonable regard to the interests of other States in their exercise of the freedom of the high seas.

The general reference to other freedoms might be construed to include deep-draft port construction and operation. The difficulty in this position, however, is that such freedoms must be recognized "by the general principles of international law." To assert that a high seas use which has not previously been exercised (or exercised in one or two isolated instances) could possibly be recognized by international law is to stretch the fabric of Article 2 very thin. Nonetheless, a deep-draft port could be considered an incident of navigation, itself an authorized use, without constituting

a unilateral act. Article 2 also offers a standard for judging the legal acceptability of the port. If port use is considered "reasonable" with regard to other uses of the same environment, then it might well be a permissible freedom.

One negative consideration affecting the latter argument is the commentary of the International Law Commission, the preparatory body for the 1958 United Nations Conference on the Law of the Sea, on the draft article permitting structures for exploiting the natural resources of the Continental Shelf:

To lay down...that the exploration and exploitation of the continental shelf must never result in any interference whatsoever with navigation and fishing might result in many cases in rendering somewhat nominal both the sovereign rights of exploration and exploitation and the very purpose of the articles as adopted. The case is clearly one of assessment of relative importance of the interests involved. Interference, even if substantial, with navigation and fishing might, in some cases, be justified. On the other hand, interference even on an insignificant scale would be unjustified if unrelated to reasonably conceived requirements of exploration and exploitation of the continental shelf.^{33/} (Emphasis added.)

Of course, if one views the deep-draft port solely as a use of the high seas, unrelated to the seabed beneath and therefore not involving the legal concept of the Continental Shelf, then the International Law Commission's commentary loses much of its weight, for that commission clearly was considering the potential impact of structures on use of the Continental Shelf for other purposes. If the deep-draft port were considered only as an incident of navigation, this issue does not arise, or it arises in a completely different context. The only question then is whether the use is compatible with other nations' use of the area.

To conclude, a deep-draft port may or may not now be a legally permissible use of the high seas. But if it is not, the process of emerging norms of customary international law provides a mechanism for undertaking the construction of such facilities pending international agreement on the subject.

b. Continental Shelf. It should first be noted that some experts believe that jurisdictional questions of deep-draft ports are entirely related to the high seas, that use of the seabed by such facilities is extremely incidental to their operation, and that therefore no Continental Shelf jurisdictional questions arise. Were a port facility simply a floating structure, temporarily anchored to the ocean floor, that position would be relatively strong. If one accepts the "high seas only" argument, the fixing of the port facility to the seabed could be made analogous to anchoring at sea (itself a recognized incident of the freedom of navigation) and thus also brought within the high seas concept (and thereby kept completely out of the realm of the Continental Shelf). However, since a deep-draft port would probably be permanently affixed to the seabed, the area of submerged land would then be permanently excluded from other possible uses.^{34/} Those circumstances do suggest a "use" of the Continental Shelf. If one takes the latter position, then the legal status of these submerged lands must be examined.

Internationally, the use of the Continental Shelf^{35/} is governed by the customary international law doctrine of the Continental Shelf and, for nations party thereto, by the Continental Shelf Convention. Uses of the seabed covered in the convention are quite explicit. Articles 2 and 5 confer on the parties exclusive sovereign rights "for the purpose of exploring it and exploiting its natural resources," including the right "to construct and maintain or operate on the continental shelf installations and other devices necessary for its exploration and the exploitation of its natural resources."^{36/} A logical interpretation of these provisions, utilizing the maxim inclusio unius est exclusio alterius,^{37/} would suggest that only natural resource extractive activities are within the purview of the coastal nation, since they are the only rights conferred by the drafters of that Convention. Certainly the

drafters of that Convention, as well as of such unilateral documents as the Truman Proclamation, went to great lengths to ensure that rights of the coastal nation in adjacent submerged lands did not constitute title, sovereignty or outright territorial claims but were limited to resource extractive activities.^{38/} In a letter to the Secretary General of the United Nations raising this very issue before the United Nations Seabed Committee, the representative of Belgium observed:

It follows clearly from these provisions [Arts. 2 and 5] that an installation which is not used for the exploration or exploitation of the natural resources of the continental shelf does not come under the jurisdiction of the coastal State. This would apply to an artificial structure the only purpose of which is to serve as a port....

In the event that structures of this kind were to be built, they could not be included within any jurisdiction under the existing international law.^{39/}

Since the question dealt with in the Belgian situation is more pertinent to the issue of jurisdiction to regulate than to the issue of jurisdiction to construct, it is further discussed in Section II-C-2 below.

The interpretation of the customary international law rules relating to the Continental Shelf presents a somewhat more difficult problem of analysis, for those rules are less well defined than the rights conferred by the Convention. The most precise formulation of relevant doctrine was given by the International Court of Justice in 1969 in its decision in the North Sea Continental Shelf Cases^{40/} as follows:

The most fundamental of all the rules of law relating to the continental shelf, enshrined in Article 2 of the 1958 Geneva Convention, though quite independent of it, [is]...that the rights of the coastal State in respect of the area of continental shelf that constitutes a natural prolongation of its land

territory into and under the sea exists ipso facto and ab initio, by virtue of its sovereignty over the land, and as an extension of it in an exercise of sovereign rights for the purpose of exploring the seabed and exploiting its natural resources...[This right] is "exclusive" in the sense that if the coastal State does not choose to explore or exploit the areas of shelf appertaining to it, that is its own affair, but no one else may do so without its express consent.41/

If the Court's pronouncement is authoritative (and it must be remembered that the issue before the Court was neither the seaward extent of the Continental Shelf nor the nature of coastal states' rights therein, but rather the delimitation of lateral shelf boundaries between adjacent countries), then one can also logically conclude that the rights of the coastal nation apply only to the exploration for and exploitation of the natural resources of the area.

One may argue that the term "natural resources" be liberally interpreted to include virtually any use of the seabed and subsoil, for the seabed itself is an economic resource if any enterprise depends upon its use, either permanently or temporarily. But this view is inconsistent with the intent of the framers of the Continental Shelf Convention (as well as with the practice of nations with respect to the Continental Shelf, which evolved into the rules of customary international law concerning it), for nations until very recently -- and most particularly in 1958 when the Convention was drafted -- had been concerned exclusively with the extraction of petroleum, natural gas, sulfur, some hard minerals, and certain species of sedentary fishes, and not with any of the newer uses of the seabed which are now gaining public attention. Further, the Continental Shelf Convention specifically defines "natural resources" as consisting of:

[T]he mineral and other non-living resources of the seabed and subsoil together with living organisms belonging to sedentary species....42/

It is unknown at present whether the Belgian delegate's suggestion for international resolution of the issue will be acted upon favorably. However, at least one formal proposal submitted to the United Nations Seabed Committee envisions giving coastal nations the authority needed to make such "other" uses of their Continental Shelves. In his "Draft Ocean Space Treaty" submitted to the United Nations Seabed Committee meeting on 23 August 1971, Dr. Arvid Pardo proposed the following provision:

Art. 62. Subject to the provisions of this Convention, the coastal state may construct, and maintain or operate on or under the seabed of national ocean space [from the coastline to 200 miles seaward thereof, ed.] habitats, installations, equipment and devices for peaceful purposes provided that....

Art. 63. The coastal state may construct, and maintain or operate in national ocean space artificial islands, floating harbours or other installations for peaceful purposes, anchored to the seabed, provided that....

The provisos relate to the establishment of safety zones and the like. Should a provision such as Dr. Pardo's be adopted at the Third Conference, the matter would be clear.

Domestically, a number of factors bear on the question of jurisdiction to construct, all turning more or less on the feasibility and basis for unilateral action. In its decision in United States v. Ray,^{44/} the U.S. Court of Appeals upheld an injunction requested by the U.S. Government to prevent certain entrepreneurs from constructing an artificial island attached to coral reefs on the Continental Shelf off the coast of Florida and outside the limits of territorial waters. Although the Government had framed its request for injunctive relief in the form of a trespass allegation, the Court suggested that the allegation was inaccurately framed, and that what was in fact sought was "restraint from interference with rights to an area which appertains

to the United States and which under national and international law is subject not only to its jurisdiction but its control as well."^{45/} The Court coupled these "rights" and the "vital interests" of the United States in preventing infringement of those rights and found the result sufficient to warrant injunctive relief. However, that case is not definitive on the issue of non-extractive uses of the seabed since the affected seabed area was coral, a living resource within the definition in the Convention on the Continental Shelf.^{46/} It thus did not hold that the coastal nation had exclusive rights to nonextractive uses.^{47/} But the case's designation of the coastal nation's interest as "rights," and its doctrine of "vital interests," suggests that executive and legislative, as well as judicial, organs of government may wish to apply those concepts further. Nevertheless, in view of the adversary litigative process which accompanied it, and the request of the Department of Justice for revision of the original slip opinion (which, in the opinion of Justice, overstated the nature of U.S. rights in its Continental Shelf area), Ray can hardly be taken as a definitive view of the U.S. Government on nonextractive uses of the Continental Shelf.

Only one other decision is known to discuss the issue, viz., Ministre d'Etat charge de la Defense nationale et Ministre de l'Equipement et du Longement v. Starr et British Commonwealth Insurance Co., 1970, Revue Generale de Droit International Public 1114 (Conseil D'Etat, December 4, 1970), an analysis of which quotes the French court as holding that:

[T]he littoral state enjoys rights over the continental shelf which are exclusive and independent of any occupation, but these rights are limited to the aims fixed by the [Continental Shelf] Convention and defined in France by the Law of December 30, 1968. The continental shelf thus does not form part of the national territory. This ends at the limit of the territorial waters.^{48/}

If the above view is accurate, there is now another national court decision to support the Ray analysis, although Ray has implicit value for asserting jurisdiction for nonextractive purposes.

One basis for a unilateral declaration or act of the Truman Proclamation variety might be found in Section 3(a) of the Outer Continental Shelf Lands Act, the vehicle by which the United States administers its Outer Continental Shelf lands. That section provides:

It is hereby declared to be the policy of the United States that the subsoil and seabed of the outer Continental Shelf appertain to the United States and are subject to its jurisdiction, control, and power of disposition as provided in this act.^{49/}

Elsewhere in the act, as in the Truman Proclamation and the Continental Shelf Convention, jurisdiction is stated in terms of the natural resources of the seabed and subsoil. In the quoted provision, however, it is the seabed and subsoil itself which is said to come under U.S. "jurisdiction, control, and power of disposition." Although the act speaks only of oil, gas, sulfur, and other minerals in its "disposition" provisions, one could argue that there is more jurisdiction here than simply control over resource extractive activities, and that in the absence of protest to such a legislative enactment, the United States possesses rights to make nonextractive uses of the seabed.

In the last analysis, however, and barring adoption of a Pardo-type proposal as mentioned above, the United States would be taking unilateral action (or perhaps action in concert with other nations equally situated) if the deep-draft port were considered a Continental Shelf use.

2. Jurisdiction To Regulate

Assuming that issues of territorial jurisdiction to provide a deep-draft port facility beyond the territorial sea are favorably resolved, a further issue remains: whether and to what degree the adjacent coastal nation has authority to apply and enforce its civil and criminal laws and otherwise to regulate activities undertaken at or in the vicinity of the port facilities, both during and after their construction. Although the United States retains some limited forms of jurisdiction over

its nationals wherever situated, some special basis of jurisdiction would have to be found for non-U.S. nationals working at the facility or aboard vessels calling there. The Belgian Government has apparently taken a closer look at this issue than other nations. Speaking at the July-August 1971 meeting of the United Nations Seabed Committee, Alfred van der Essen, the Belgian delegate, emphasized the difficulties involved in using a portion of the Continental Shelf for construction of a deep-draft port:

In Belgium, bills introduced into parliament were first submitted to the Conseil d'Etat for a legal opinion on their content. The bill, which had become the law of 13 June 1969 on the Belgian continental shelf, had therefore been studied by that authority. The opinion of the Conseil d'Etat was that an installation which was not used for the exploration or exploitation of the natural resources of the continental shelf did not come under Belgian jurisdiction. Belgium could take legal action against its own nationals, who could always be brought before the court of their place of domicile for an offense committed outside the territory. That, however, was not the case for foreigners who might well be numerous among the staff of an artificial port.^{50/}
(Emphasis added.)

The Belgian Council of State recommended modifying an earlier version of the Belgian law of 13 June 1969 on the basis that it asserted more jurisdiction than was permissible under international law. The earlier draft, embodying many of the principles of the Continental Shelf Convention (to which Belgium is not a party), was modified to make clear that Belgium was only asserting jurisdiction over structures on the Continental Shelf designed for the exploration or exploitation of its natural resources and not for any broader purpose. This change was in accord with what the government stated to be the law's purpose, and also with the preliminary article of the law setting forth this purpose. It deleted language which would have literally given Belgium jurisdiction over all permanent installations situated on the high seas on the Belgian Continental Shelf.

This approach seems unnecessarily narrow in view of the provisions of Article 9 of the Territorial Sea Convention dealing with roadsteads. There one finds not only inferential authority for the use of areas of the high seas for port-like activities, but express authority for regulating activities thereon:

Roadsteads which are normally used for the loading, unloading and anchoring of ships, and which would otherwise be situated wholly or partly outside the outer limit of the territorial sea, are included in the territorial sea.^{51/}

By giving territorial sea status to such areas,^{52/} Article 9 seemingly grants authority to coastal states to regulate activities undertaken there. The only difficulty is the leap from roadsteads to deep-draft ports. The legislative history of the Territorial Sea Convention contains a statement by the United States representative that "[t]he purpose of [Article 9] was to ensure that the coastal state could exercise police powers and general jurisdiction in its roadsteads...."^{53/} If deep-draft ports are, in function, similar to roadsteads, one can contend that the coastal state has territorial sea jurisdiction following construction of the facility, because the purpose of the framers of Article 9 was to provide coastal state jurisdiction over offshore port areas, whatever they are called or however designed.^{54/} Roadsteads have been designated in the Gulf of Mexico, and the newest development, the deep-draft port, is simply an extension of the roadstead concept. This line of reasoning requires, of course, the dual assumptions that (1) the functions of the two facilities are essentially the same; and (2) the intent of the framers of Article 9 was as suggested. It also requires imposition of a rule of reasonableness concerning the distance of such jurisdiction from shore. If these burdens are met, however, little further would seem necessary to authorize regulatory jurisdiction by the coastal state over deep-draft port facilities.

In a personal communication, Alfred van der Essen disputes this contention, arguing that the French word "rade" as used in Article 9 has a definite and precise meaning of an extent of sea enclosed in part by land, more or less elevated, which offers to cargo vessels

shelter and other port facilities.^{55/} M. van der Essen may be correct in the strict sense of the dictionary definition. In addition to the definition quoted in note 51, the Webster's New World Dictionary defines roadstead as "a protected place near shore,"^{56/} and the Oxford Dictionary of English Etymology refers to "sheltered water where ships may ride."^{57/}

On the other hand, the entire purpose of Article 9 is to provide territorial sea status for areas beyond the limit of the territorial sea, for if the area were close enough to land to derive shelter therefrom, it would probably be within the territorial sea anyway. Clearly, in an age when protection could not be afforded on the open seas, roadsteads may have had a meaning more closely identified with land areas. But in view of the purpose of Article 9, and the advance of technology to the point where a secure port could be constructed many miles from land in the open sea, it seems unduly strict to interpret the definition of the word "rade" in a 19th century sense.

In light of the legislative history of the Territorial Sea Convention and recent technological advances in port construction, a deep-draft port facility could probably be considered analogous to a roadstead. In that event, territorial sea jurisdiction would be applicable under Article 9.

In conclusion, it can be argued that regulatory jurisdiction over a deep-draft port facility attaches to the coastal nation by virtue of Article 9 of the Territorial Sea Convention, provided there is jurisdiction to construct in the first place. Even if this analysis is invalid, however, the coastal nation could simply take unilateral action (on one of the same theories outlined above for construction of the facility) by enacting domestic legislation giving it the requisite civil, criminal, and regulatory jurisdiction. This issue is discussed in the following section.

3. Domestic Authority To Construct and Regulate

Given appropriate international legal structure, there still remains the issue of whether or not the Federal Government, or the government of a state, has statutory authority (and of what character) to authorize the construction of a deep-draft port facility beyond the 3-mile limit and to regulate activities conducted thereon. At present, no such Federal vehicle exists, although at this writing one state, Louisiana, has enacted legislation to authorize such a venture.^{58/}

The Outer Continental Shelf Lands Act authorizes leases of seabed areas only for purposes of exploring for and exploiting oil, gas, sulfur, and other minerals. There is no authority in that act authorizing the lease of Outer Continental Shelf lands for purposes of constructing a deep-draft port facility. The only language which might be applicable here is that of Section 1333 (f) which provides:

The authority of the Secretary of the Army to prevent obstruction to navigation in the navigable waters of the United States is hereby extended to artificial islands and fixed structures located on the outer Continental Shelf.

Because Section 1333(f) does not specifically restrict the jurisdiction of the Corps to artificial islands and fixed structures located on the Outer Continental Shelf for purposes of exploration and exploitation of natural resources, it might be construed as giving the Corps jurisdiction over any such structures, including deep-draft port facilities. However, that section can also be interpreted in the broader context of the Outer Continental Shelf Lands Act and the companion Convention on the Continental Shelf, which limit structures to those necessary for exploration and exploitation of natural resources. This approach would more narrowly construe Section 1333(f) as merely extending existing Corps authority to prevent impairment of navigation which might result from the erection of

structures used to exploit seabed resources in the area beyond the 3-mile limit.

There is thus a need for enactment of Federal legislation to govern leasing (or other form of disposition) of seabed and high seas areas for the purpose of constructing such facilities and designating the applicable laws to govern activities conducted there.

Some conceptual problems may be encountered in attempting to reconcile the "residual rights" theory of high seas use (with its connection to freedom of navigation) and the concept of a lease (a property interest) which would unquestionably be required by any private financial institution supporting construction of such a facility. If in fact the United States wishes to avoid any claim of territorial jurisdiction in connection with the construction of a deep-draft port facility, then the Federal legislation would probably have to be couched in terms of protection of investment rather than in terms of land tenure. However, this is essentially a drafting problem.

Without analyzing the matter in great detail, such legislation would need to include, for example, appropriate regulations concerning safety features made applicable to such structures. There would also have to be provisions for the applicability of designated state or Federal civil and criminal laws to activities taking place on such structures. The latter should be carefully studied and drafted in view of the difficulties with the applicable provisions of the Outer Continental Shelf Lands Act.^{59/}

There are two compelling reasons why new legislation would be preferable to amendment of the Outer Continental Shelf Lands Act.^{60/} First, as noted, the existing provisions of that act with respect to applicable state and Federal law have given rise to substantial uncertainty and diversity of judicial interpretation. It would seem more appropriate to adopt a law specifically governing deep-draft port operations which could be directed exclusively to that specific purpose, rather than trying to make a law designed for offshore resource

exploitation fit the new circumstances. There would in any case probably be substantial opposition from the domestic petroleum and natural gas industry to "tinkering" with the Outer Continental Shelf Lands Act in view of their relative satisfaction with its present form.

Second, if the position noted above of "residual high seas rights" is the position ultimately adopted by the U.S. Government as the international law justification for its activities in this matter, then use of the Outer Continental Shelf Lands Act would be inconsistent with the corollary theory that the construction of the deep-draft port facility is not a seabed use. In that situation, new legislation is mandatory to maintain a consistent position since that act is devoted exclusively to lease of submerged lands.

Finally, it should be noted that Senate Bill 80 (93rd Congress, 1st Session, 1973) would require an environmental clearance statement from the National Oceanic and Atmospheric Administration (in addition to the usual environmental impact statement to be cleared through the Environmental Protection Agency) concerning the potential impact of deep-draft port facilities, among other things, on the environment. Although not dealing with the jurisdictional question, it does evidence the need for comprehensive Federal legislation to govern these new uses of the ocean.

III. Related Issues

There remain for consideration a number of ancillary, but important, issues.

A. Foreign Policy Interests of the United States

The options of the U.S. Government with respect to the construction of deep-draft port facilities beyond the territorial sea, which must be considered in light of our present foreign policy interests in the law of the sea, include: (1) engaging in an essentially unprecedented unilateral action, (2) finding residual

authority in the Convention on the High Seas for the action, or (3) reaching international agreement on the subject at or prior to the Third United Nations Conference on the Law of the Sea.

The possible effects of a unilateral use of the sea on negotiations cannot be overlooked by the U.S. Government. One of the chief objectives of the United States in the current negotiations is to place meaningful legal restrictions on the power of coastal states to unilaterally extend their maritime boundaries. Obviously defense interests are in the forefront of this policy, since the Navy wishes to maximize the area of high seas in which it operates and specifically desires a system of free transit through international straits which might otherwise become territorial seas with the expansion of the breadth of the territorial sea from 3 to 12 miles. Thus, while the negotiations are progressing, the United States will object to other nations' unilateral extensions of jurisdiction in ocean space, and cannot therefore at the same time make such claims on its own behalf. For example, the Federal Government has adamantly opposed the construction of straight baselines along areas of the U.S. coast which are entirely suitable for such treatment,^{61/} ostensibly on the grounds that to do so might prejudice our international negotiating position on certain questions relating to the delimitation of straight baselines by outlying archipelago nations. Further, the Department of Defense is quite concerned with a loosely defined phenomenon called "creeping jurisdiction," through which a coastal nation purportedly acquires steadily increasing jurisdiction or competence over adjacent ocean space areas until such time as that jurisdiction approaches or reaches the level of a territorial sea claim.

The construction of a facility using the seabed and high seas in a manner heretofore not contemplated would unquestionably constitute a unilateral act. But if such an act can be brought within an existing general right, then no damage would occur to our international negotiating position. This fortunate situation results if one accepts the argument that deep-draft ports are an incident to navigation and thus are permitted within the scope of the freedom of navigation on the high seas as set forth in the Convention on the High Seas.

However, if the port facility were also classified as a use of the Continental Shelf, the language of the Continental Shelf Convention conveys no residual right to such use. Provision of the port would then constitute a unilateral act without legal authority, thus constituting the kind of action which might have a deleterious effect on this nation's international law of the sea positions.

As noted above, there does not now appear to be any instance in which a nation has constructed a port facility which is both beyond the limit of the territorial sea and unrelated to Continental Shelf resource exploitation.^{62/} If such were to occur, it would constitute a limited precedent for action by other nations. Should several nations proceed in like manner, then in accordance with the general rules concerning the ripening of a practice into a rule of customary international law,^{63/} the United States would be, at least in terms of international law, in a position requiring less restraint than if it initiated the activity in question. In brief, there can be little doubt that the existence of such precedents would place the United States on enhanced legal grounds to construct a deep-draft port facility beyond the limit of the territorial sea.

However, there are policy considerations which must be dealt with as well as legal aspects. In the first place, if the reason for U.S. reticence to act in this field now is, as noted above, its desire to maintain consistency between its own acts and the policies it is urging others to follow, then one, two, or even three precedents will not diminish the insistence of the U.S. ocean policy-makers that our record be kept clean, as it were. Obviously, our effort in this regard is focused at limiting expansive territorial sea claims (which is directed primarily at Latin American and some Asian and African nations) and to ensuring free transit through international straits (which is directed primarily at a small number of nations, principally Spain, Indonesia, and Malaysia). What Persian Gulf nations, for example, do with respect to offshore terminals, then, is not likely to have much effect on our position vis-a-vis the nations involved in threats to the navigational range of our naval forces.

It is unlikely that any protests would arise in response to a unilateral declaration by the United States on its right to provide deep-draft port facilities. However, the lack of protest would not diminish the negative effect on the international law of the sea position of the United States that engaging in unilateral acts would unquestionably have.

Finally, one must consider the possibility of agreement at the Third United Nations Conference on the Law of the Sea. It seems more than likely that approval would be given to convention articles authorizing the construction of such facilities provided certain safety regulations were imposed and protection of the marine environment was assured. At least two specific proposals for convention language to this effect have been proposed.^{64/} The problem here, however, is one of timing. If the Third Conference were to be held in 1974, as scheduled, agreement on a treaty text is unlikely before the end of 1974 or early 1975. Several years might then be required for the treaty to enter into force. If deep-draft port facilities must be developed very soon in the United States, it might be infeasible to wait until the latter part of this decade to insure jurisdictional authority to develop such facilities. Thus the routes of (1) unilateral action, or (2) residual authority arguments, seem more likely outcomes of the decision process.

In conclusion, if the United States determines that construction of deep-draft port facilities beyond the limit of the territorial sea is essential to serve national energy needs, then a way will be found to permit the desired activity given the malleability of international law in this area. Further, such port facilities cannot be built overnight. Some engineering estimates suggest a 4- to 5-year time lag between site selection and the completion of the facility. If so, it seems exceedingly likely that the international legal problems will have worked themselves out, either through agreement or change of U.S. negotiating positions, by the time facilities are constructed.

B. State-Federal Submerged Lands Litigation Issues

The determination of the seaward limit of the territorial sea depends on the location of the "baseline." The provisions for delimiting the baseline are contained, for international purposes, in the Territorial Sea Convention.^{65/} In United States v. California^{66/} the U.S. Supreme Court adopted the standards in the Territorial Sea Convention for purposes of delimiting the boundary between the Federal Government and the several coastal states in the submerged lands controversy. Pursuant to the Court's "single boundary" doctrine with respect to the international and state-Federal boundaries, the final delimitation of the territorial sea cannot take place until the Court has determined where the baseline is located in the state-Federal litigation. The Department of State has published a series of baseline maps for the United States, but a question remains whether these could be considered definitive in light of the Court's statements on the "single boundary" concept and the inconclusiveness of the present litigation between, e.g., Louisiana and the Federal Government.

It should also be noted that extension of the territorial sea of the United States to a 12-mile breadth will not automatically affect the location of the state-Federal boundary since the Submerged Lands Act generally specifies 3 nautical miles (9 nautical miles in two cases) as the area under state jurisdiction and makes no reference to "the breadth of the territorial sea." However, the possibility should not be overlooked that the states, exercising political power once a 12-mile territorial sea breadth was adopted by this nation, could prevail upon Congress to amend the Submerged Lands Act to extend the grant to coastal states to 12 nautical miles. At present this seems unlikely, but coastal states are continuing in their dual effort to gain additional submerged lands jurisdiction and to acquire a share of revenues generated from federally owned and administered Outer Continental Shelf lands.

Finally, a comment on the positions of Texas and Florida (gulf coast) concerning limits of offshore jurisdiction is appropriate. As a result of litigation following enactment of the Submerged Lands Act, Florida

(gulf coast only) and Texas were granted 3 marine leagues (9 nautical miles) of submerged lands, other states receiving only 3 nautical miles.^{67/} Do Texas and Florida (gulf coast) have rights to construct a deep-draft port facility in the lands granted to them beyond the 3-nautical-mile limit? They seemingly do not, for the following reasons:

1. The United States, through the Submerged Lands Act, could only grant to the several states in 1953 what title or jurisdiction it then possessed. In 1953, the United States had full sovereignty within 3 nautical miles of the coastline, but beyond that had only the right, under the customary international law doctrine of the Continental Shelf (the Continental Shelf Convention did not enter into force until 1964), to explore for and exploit the natural resources of the seabed and subsoil. In the area between 3 nautical miles and 3 marine leagues, the United States possessed no other rights vis-a-vis other nations.

2. Thus, although the Submerged Lands Act purported to grant full title (including title to fish and for any other purpose), nothing additional (to Continental Shelf rights) was granted to Texas and Florida (gulf coast) in the 3-mile-to-3-league area because the United States did not have it to grant.

3. Accordingly, jurisdiction to construct a deep-draft port in the area between 3 miles and 3 leagues off the coast of Texas and Florida (gulf coast) lies with the Federal Government, not with those states.

This is, of course, only one opinion. The question is currently being litigated before the U.S. Supreme Court on the issue of fishing rights in the 3-mile-to-3-league area.^{68/} Determination on that issue should apply to the port facility issue, since the legal basis of the arguments is the same.

C. Withdrawal of Areas Adjacent to Deep-Draft Port

The Continental Shelf resources off the coasts of this nation are administered under the Outer

Continental Shelf Lands Act. It is possible that an internal conflict could arise between the desire to utilize a given area for the production of petroleum and natural gas and the need to use the same area for a deep-draft port. The administration of Outer Continental Shelf lands is rife with such conflicts.^{69/} Certainly the future plans of the Department of the Interior for leasing Outer Continental Shelf lands for the extraction of oil, gas, sulfur, and other minerals should be carefully checked in siting a deep-draft port. Although considering that the relatively small area required for such a port facility could permit directional drilling to recover petroleum or natural gas resources beneath it, the desirability of having the fewest possible offshore structures within several miles of the facility would indicate the desirability also of withdrawing the immediate surrounding area of the site selected from leasing. The Outer Continental Shelf Lands Act provides:

The President of the United States may, from time to time, withdraw from disposition any of the unleased lands of the outer Continental Shelf. [Sec. 1341(a)]

One such withdrawal, for purposes of creating a national park, has already been effected.^{70/}

Of course, if the port facility is located within 3 miles of the baseline, jurisdiction over the seabed lies with the adjacent coastal state, and appropriate arrangements for withdrawal would have to be made through the leasing agencies of that state.

D. International and Federal Pollution Laws

The United States is party to several international agreements concerning pollution at sea. Federal statutes on this subject would also be applicable to U.S. citizens operating a deep-draft port, even if situated outside the territorial sea. The activities conducted at any such facility would, therefore, need to be performed in compliance with all international agreements and national laws governing pollution prevention.

E. Navigation Interests

The creation of a deep-draft port will probably result in increased shipping activity in the port zone of influence. This will magnify the importance of existing or potential conflicts in use among navigation and other activities in offshore waters, such as fishing or production of oil and gas.^{71/} The existing system of shipping safety fairways has not proven particularly effective in preventing accidental collisions.^{72/} It may, therefore, be necessary to assert some proprietary rights in areas of high seas in order to protect the international community's interest in safe navigation by designating certain corridors as mandatory routes for shipping. The present system does not require navigation in the fairways, but simply uses the technique of advising mariners that the designated lanes do not contain structures. If traffic density increases substantially, this system will probably have to be abandoned in favor of a mandatory routing system. This, of course, runs counter to traditional concepts of freedom of the high seas, but there is substantial support for the creation of "property" rights on the seas where the variety and density of the uses of ocean space present conflict situations.^{73/}

The Intergovernmental Maritime Consultative Organization (IMCO) has established traffic separation lanes in certain congested ocean areas, and it appears that this practice will be expanded. Suggestions have been made before the United Nations Seabed Committee, for instance, that IMCO separation lanes be the basis for ensuring safety of passage under a free transit regime for international straits.^{74/} Thus, it is altogether possible that the same approach could be applied to deep-draft port facilities where potential conflicts of use warrant it.

FOOTNOTES

1/ "Ocean space" consists of the following five horizontal strata (principal present resources or uses of each strata in parentheses): subsoil (petroleum, natural gas, sulfur); seabed (manganese nodules, submarine cables and pipelines, sedentary species of living resources); water column (pelagic and demersal fisheries, submarine navigation); surface (navigation); atmosphere (overflight, weather effects through interaction with surface). These physical features are cut by zones of legal jurisdiction affecting different strata -- moving seaward from the land, the principal legal zones are: inland waters, the territorial sea, exclusive fisheries zones, other special contiguous zones, the Continental Shelf, the high seas, and the seabed and subsoil beyond the limits of national jurisdiction. See generally Griffin, "The Emerging Law of Ocean Space," 1 The International Lawyer 548 (1967), and Knight, "The Draft United Nations Convention on the International Seabed Area: Background, Description and Some Preliminary Thoughts," 8 San Diego Law Review 459, 462-477 (1971).

2/ See Section III-B for discussion of the effect of the state-Federal submerged lands dispute on the location of the baseline in the United States.

3/ Convention on the Territorial Sea and the Contiguous Zone (done April 29, 1958, 15 U.S.T. 1601 (1964), T.I.A.S. No. 5639, 516 U.N.T.S. 205, in force September 10, 1964) ["Territorial Sea Convention" hereinafter]. The United States is a party to the Territorial Sea Convention.

4/ The right of innocent passage (see Arts. 14-17 of the Territorial Sea Convention) should, of course, be subject to any mandatory shipping lanes or prohibited

areas duly established for safety purposes in connection with a deep-draft port facility (see Section III-E for a discussion of this aspect of the problem).

5/ 43 U.S.C. 1301-15 (1964) (originally enacted as Act of May 22, 1953, ch. 65, 67 Stat. 29).

6/ Pursuant to the Submerged Lands Act and subsequent litigation, Florida (gulf coast) and Texas acquired 3 marine leagues of submerged lands. All other states were limited to 3 nautical miles. On the potentially different status to be accorded Texas and Florida (gulf coast) in siting a deep-draft port off their coasts, see Section III-B.

7/ Section 1314 provides that "[t]he United States retains all its navigational servitude and rights in and powers of regulation and control of said lands and navigable waters for the constitutional purposes of commerce, navigation, national defense, and international affairs...."

8/ The Corps' authority with respect to structures in navigable waters is found in the Rivers and Harbors Act of 1899 [33 U.S.C. 401 et seq.] where it is provided, in part, that no "bridge, dam, dike or causeway over or in any port, roadstead, haven, harbor, canal, navigable river, or other navigable water of the United States" may be constructed without the consent of Congress and approval of plans therefor by the Chief of Engineers of the Corps and by the Secretary of the Army. 33 U.S.C. 401. Further, in the absence of affirmative authorization by Congress, no "wharf, pier, dolphin, boom, weir, breakwater, bulkhead, jetty or other structure" may be constructed in waters of the United States without prior approval of plans therefor by the Chief of Engineers and authorization by the Secretary of the Army. 33 U.S.C. 403.

9/ The Interstate Commerce Commission (ICC) possesses regulatory jurisdiction over oil when its transportation is by pipeline, or partly by water and partly by pipeline. See 49 U.S.C. 1. Ocean carriers engaged in transportation between foreign ports and U.S. ports of entry are not subject to ICC jurisdiction, however. For additional materials on the regulatory authority of the ICC, see 49 U.S.C. 1 et seq. and 49 C.F.R., Ch. X 1000.1 et seq. The jurisdiction of the Federal Power Commission

(FPC) extends to the transportation of natural gas in interstate commerce and to the importation of natural gas from a foreign country. See 15 U.S.C. 717b. For additional materials on the regulatory authority of the FPC, see 15 U.S.C. 717 et seq. and 18 C.F.R., Ch. I, Sec. 1.1 et seq.

10/ Knight, "The Effect of OCS Activities on Adjacent Coastal Areas," in Hite and Stepp, eds., Coastal Zone Resource Management (1971), at 70.

11/ Ibid.

12/ For an expanded comment on the rules governing the development of customary rules of international law, see Section II-C-1-a and the annex to this appendix.

13/ For example, the latest State Department tabulation shows that, for 112 jurisdictions from which information is available, 32 percent of coastal states claim 3 or 4 miles, 55 percent claim 6 to 12 miles (45 percent claim exactly 12 miles), and 13 percent claim in excess of 12 miles. Office of the Geographer, Department of State, International Boundary Study, Limits in the Seas, National Claims to Maritime Jurisdiction (Ser. A, No. 36, rev. Mar. 31, 1972). By comparison, an absolute majority of coastal states still claimed 3 miles prior to 1958. See Heinzen, "The Three-Mile Limit: Preserving the Freedom of the Seas," 11 Stanford Law Rev. 597, 641 et seq. (1959).

14/ Stevenson, "International Law and the Oceans," 62 Dep't State Bull. 339, 342 (1970); see also, "U.S. Outlines Position on Limit of Territorial Sea," 62 Dep't State Bull. 343 (1970).

15/ The United Nations Committee on the Peaceful Uses of the Sea-Bed and the Ocean Floor Beyond the Limits of National Jurisdiction ["Seabed Committee" hereinafter] was established by U.N. General Assembly Resolution 2467A (XXIII) (1968). The Seabed Committee consisted originally of 42 members, but membership was expanded to 86 in December 1970 [G.A. Res. 2750C (XXV) (1970), operative para. 5] and to 91 members in December 1971 [G. A. Res. 2881 (XXVI) (1970), operative para. 3]. The Seabed Committee is acting as a preparatory body for the Third United Nations Conference on the Law of the Sea, scheduled for 1973-74 (see note 17 below).

16/ "Draft Articles on the Breadth of the Territorial Sea, Straits, and Fisheries," U.N. Doc. A/AC.138/SC.II/L.4 (30 July 1971).

17/ In December 1970, the United Nations General Assembly adopted Resolution 2750C (XXV) calling for a Third United Nations Conference on the Law of the Sea ("Third Conference" hereinafter) to be held sometime during 1973 unless postponed by the 27th session of the General Assembly in 1972 on ground of insufficient progress of preparatory work. The issues to be dealt with at the Third Conference include "the regimes of...the territorial sea (including the question of its breadth and the question of international straits) and the contiguous zone." As a result of action taken at the 1972 Meeting of the General Assembly, the Seabed Committee will meet twice more during 1973 with a procedural meeting of the Third Conference taking place late in that year, the substantive conference meetings to begin in April 1974.

18/ A prior but inadequate examination of these issues is contained in a pair of articles written in 1934 concerning the possibility of constructing a chain of floating airports across the Atlantic Ocean for the purpose of facilitating transatlantic flight. See Sandiford, "Legal Questions Concerning Aerodromes on the Open Sea, Usually Referred to as Floating Islands," 5 Air Law Review 11 (1934) and Scott, "The International Seadrome," 5 Air Law Review 20 (1934). A more recent and useful analysis of the offshore structure problem can be found in Krueger, "Legal Aspects of the Construction of Coastal and Offshore Structures," paper presented at the annual meeting of the American Society of Civil Engineers (Chicago, Illinois, October 17, 1969).

19/ Convention on the High Seas (done April 29, 1958, 13 U.S.T. 2312 (1962) T.I.A.S. No. 5200, 450 U.N.T.S. 82, in force September 30, 1962). The United States is a party to the Convention on the High Seas. Because the provisions of Articles 1 and 2 of the Convention on the High Seas reflect customary international law, all states are bound by the rules set forth there.

20/ Ibid., Art. 2.

21/ Ibid.

22/ Ibid.

23/ Ocean dumping is clearly not such a permitted use today in view of the concerted national and international efforts to reduce or eliminate this activity.

24/ Convention on the Continental Shelf (done April 29, 1958, 15 U.S.T. 461 (1964), T.I.A.S. No. 5578, 499 U.N.T.S. 311, in force June 10, 1964 ["Continental Shelf Convention" hereinafter]). The United States is a party to the Continental Shelf Convention. Article 5 provides that subject to certain conditions "the coastal State is entitled to construct and maintain or operate on the continental shelf installations and other devices necessary for its exploration and the exploitation of its natural resources." (Emphasis added.)

25/ See note 24.

26/ See the annex to this appendix for a brief explanation of the method by which state practice may develop rules of customary international law, with particular reference to the Continental Shelf doctrine.

There is a "chicken/egg" implication to the "practice into law" position, however, since it is virtually impossible to determine the legality vel non of a particular unprecedented unilateral act until sufficient time has passed for it to be protested and rejected (in which case it could be considered illegal ab initio) or acquiesced in (in which case it could be considered legal ab initio). Thus, the Canadians (100-mile pollution zone) and some Latin American nations (200-mile fisheries zones) have argued that their actions are essentially no different from that of the United States in issuing the Truman Proclamation (see note 27 below) relating to the resources of the Continental Shelf, the latter being the genesis of the presently accepted (and codified) doctrine of the Continental Shelf.

27/ Pres. Proc. No. 2667, 3 C.F.R. 1943-1948 Comp., at 67 (1945); 13 Dep't State Bull. 485 (September 30, 1945):

[T]he Government of the United States regards the natural resources of the subsoil and seabed of the continental shelf beneath the high seas but contiguous to the coasts of the United States as appertaining to the United States, subject to its jurisdiction and control.

28/ The justifications for the Proclamation are contained in perambulatory paragraphs as follows:

WHEREAS the Government of the United States of America, aware of the long range world-wide need for new sources of petroleum and other minerals, holds the view that efforts to discover and make available new supplies of these resources should be encouraged; and

WHEREAS its competent experts are of the opinion that such resources underlie many parts of the continental shelf off the coasts of the United States of America, and that with modern technological progress their utilization is already practicable or will become so at an early date; and

WHEREAS recognized jurisdiction over these resources is required in the interest of their conservation and prudent utilization when and as development is undertaken; and

WHEREAS it is the view of the Government of the United States that the exercise of jurisdiction over the natural resources of the subsoil and sea bed of the continental shelf by the contiguous nation is reasonable and just, since the effectiveness of measures to utilize or conserve these resources would be contingent upon cooperation and protection from the shore, since the continental shelf may be regarded as an extension of the land-mass of the coastal nation and thus naturally appurtenant to it, since these resources frequently form a seaward extension of a pool or deposit lying within the territory, and since self-protection compels the coastal nation to keep close watch over activities off its shores which are of the nature necessary for utilization of these resources;...

29/ Article 9 of the Territorial Sea Convention provides that "[t]he coastal State must clearly demarcate such roadsteads and indicate them on charts together with their boundaries, to which due publicity must be given."

30/ Article 5 of the Continental Shelf Convention provides that the coastal state is entitled to "establish safety zones around such installations and devices and to take in those zones measures necessary for their protection." The article also provides that ships of all nationalities must respect such safety zones. Further, "[d]ue notice must be given of the construction of any such installations, and permanent means of giving warning of their presence must be maintained." Any installations which are abandoned or in disuse must be entirely removed. Finally, "[n]either the installations or devices, nor the safety zones around them, may be established where interference may be caused to the use of recognized sea lanes essential to international navigation."

31/ Article 2 of the Convention on the High Seas provides that "[f]reedom of the high seas...comprises, inter alia, both for coastal and non-coastal States: (1) Freedom of navigation..."

32/ There is no direct legal authority for this proposition, but common sense and logic dictate that the freedom of navigation would constitute no right at all were there not available ports of entry for the loading and unloading of cargo. Article 3 of the Convention on the High Seas recognizes this relationship between exercise of the freedom of the high seas and the use of port facilities in providing that landlocked states should have free access to the sea. Coastal states are supposed, pursuant to Convention provisions, to provide their landlocked neighbors "treatment equal to that accorded to their own ships...as regards access to sea ports and the use of such ports." (Emphasis added.)

33/ "Report on the International Law Commission to the General Assembly," Yearbook of the International Law Commission, Vol. II (1956), at 299 (U.N. Doc. A/3159).

34/ The use of directional drilling techniques could possibly permit the extraction of petroleum and natural gas from beneath the port site by utilizing platforms

outside the range of operation of the port. However, if a safety zone of sufficient size were created around the port (see Section III-C), then directional drilling might well become infeasible due to the surface distances involved.

35/ According to the Convention on the Continental Shelf, the shelf includes "the sea-bed and subsoil of the submarine areas adjacent to the coast but outside the area of the territorial sea, to a depth of 200 metres or, beyond that limit, to where the depth of the superjacent waters admits of the exploitation of the natural resources of the said areas." [Art. 1.]

36/ Continental Shelf Convention (see note 24), Arts. 2 (1,2) and 5 (2).

37/ "The inclusion of one is the exclusion of another." In statutory and treaty interpretation any enumeration of items is presumed to have been intended by its drafters to be exclusive unless a contrary intent is manifested. Thus, by using the phrase "and others which are recognized by the general principles of international law" following the enumeration of four high seas freedoms in Article 2 of the Convention on the High Seas, the drafters evidenced an intent that the list not be considered exclusive. However, no such contrary intent appears in the Convention on the Continental Shelf with respect to the "rights" granted to coastal states in their Continental Shelves, and one is thus forced to conclude that the "rights" so granted are exclusive.

38/ The Truman Proclamation (see note 27) asserted that "the United States regards the natural resources of the subsoil and seabed of the continental shelf beneath the high seas but contiguous to the coasts of the United States as appertaining to the United States, subject to its jurisdiction and control." (Emphasis added.) A clear effort was made in the Proclamation to avoid any claim of sovereignty or title to the area: "The character as high seas of the waters above the continental shelf and the right to their free and unimpeded navigation are in no way thus affected."

39/ U.N. Doc. A/AC.138/35 (3 May 1971). The letter requested inclusion on the agenda of the United Nations Seabed Committee of an item concerning the question of "jurisdiction over artificial islands, or artificial

installations on the high seas." The letter stated:
 The Belgian Government received a proposal from a private source for the offshore construction, more than twenty-seven kilometers from the Belgian coast, of an artificial port for the unloading of heavy tankers. The proposed site is on the Belgian continental shelf.

Subcommittee II of the United Nations Seabed Committee included the topic of "artificial islands and installations" as item 18 on its list of 25 agenda items which was completed at the July-August 1972 meeting of the Seabed Committee.

40/ North Sea Continental Shelf Cases, [1969] I.C.J. 3.

41/ Ibid., para. 19 of the majority opinion.

42/ Convention on the Continental Shelf (see note 24), Art. 2(4).

43/ "Draft Ocean Space Treaty: Working Paper Submitted by Malta," U.N. Doc. A/AC.138/53 (23 August 1971).

44/ United States v. Ray, 423 F. 2d 16 (5 Cir. 1970); lower court opinion 294 F. Supp. 532 (S.D. Fla. 1969).

45/ United States v. Ray, 423 F. 2d 16, 22 (5 Cir. 1970).

46/ Article 2(4) of the Continental Shelf Convention provides:

The natural resources referred to in these articles consist of the mineral and other non-living resources of the seabed and subsoil together with living organisms belonging to sedentary species, that is to say, organisms which, at the harvestable stage, either are immobile on or under the sea-bed or are unable to move except in constant physical contact with the sea-bed or the subsoil.

47/ In fact, the Court specifically states:
 [The evidence] fully establishes that the structures herein involved interfere

with the exclusive rights of the United States under the Convention to explore the Continental Shelf and exploit its natural resources. Under the circumstances we do not decide what the result would be if the structures did not interfere with the rights of the United States as recognized by the Convention, our decision being limited to the particular facts of this case.

(Emphasis added.)

This language was modified from that of the slip opinion at the specific request of the Department of Justice in order that United States' rights in its Continental Shelf not be overstated.

48/ See 3 Journal of Maritime Law and Commerce 189 (1971).

49/ 43 U.S.C. 1331-43 (1964) (originally enacted as Act of August 7, 1953, ch. 345, 67 Stat. 462).

50/ U.N. Doc. A/AC.138/SC.II/SR.4-23 at 66 et seq.

51/ A roadstead is "[a] sheltered, offshore anchorage area for ships." American Heritage Dictionary of the English Language (1969) at 1122.

52/ Note that although the area of the roadstead or port facility itself is assimilated to the territorial sea, such installations or designated areas do not generate territorial seas of their own beyond their physical limits. Thus, although new national territory would be created through such a process, its sole purpose is to confer on the coastal state the necessary regulatory jurisdiction and not to expand state territory beyond the facility itself.

53/ III Official Records, United Nations Conference on the Law of the Sea 143 (1958), U.N. Doc. A/CONF.13/39.

54/ See Knight, "Shipping Safety Fairways: Conflict Amelioration in the Gulf of Mexico," 1 Journal of Maritime Law & Commerce 1 (1969).

55/ Letter from Alfred van der Essen to H. Gary Knight dated March 30, 1972.

56/ Webster's New World Dictionary of the American Language (1964) at 1259.

57/ The Oxford Dictionary of English Etymology (1966) at 770.

58/ Louisiana Revised Statutes, Title 34, Chapter 35 (1972).

59/ The specific problems of tort liability and insurance coverage, for example, have given rise to grave difficulties. See Comment, "Recovery for Injuries or Death on Offshore Drilling Platforms: A Problem of Applicable Law Under the Lands Act," 51 Oregon Law Review 813 (1972), and R.W. Woolsey, "Legal Aspects Associated with Insurance on the Coastal Margin," 19 Fed. Ins. Counsel 103 (1969).

60/ Legislation to amend the Outer Continental Shelf Lands Act to provide authority for the construction and operation of deep-draft port facilities has been introduced in the 93rd Congress. See Senate Bill 568 (93d Cong., 1st Sess., 1973).

61/ See, e.g., United States v. California, 381 U.S. 139, 167-169 (1965) and United States v. Louisiana, 394 U.S. 11, 72-73.

62/ This statement is predicated upon a review of general maps and charts, as well as nautical charts, supplemented by consultation and advice of the Department of State Geographer, Dr. Robert Hodgson.

63/ For a discussion of the rules governing development of customary rules of international law, see the annex to this appendix.

64/ The proposal by Arvid Pardo is given in the text following footnote 43. The other proposal is by H. Gary Knight, which appears in the April 1973 issue of the Journal of Maritime Law and Commerce.

65/ Article 3 of the Territorial Sea Convention provides that:

Except where otherwise provided in these articles, the normal baseline for measuring the breadth of the territorial sea is the low-water line along the coast as

marked on large-scale charts officially recognized by the coastal State.

Articles 4 and 7 through 11 contain exceptions to the location of the normal baseline for irregular coastlines, bays, harbor works, roadsteads, islands, and low-tide elevations.

66/ 381 U.S. 139 (1965).

67/ United States v. Louisiana, 363 U.S. 1 (1960); United States v. Florida, 363 U.S. 121 (1960).

68/ United States v. Florida and Texas, No. 54 Original; U.S.S.Ct., (October Term, 1971).

69/ See, e.g., Study of the Outer Continental Shelf Lands of the United States, Sections 4.74-4.78.

70/ Pres. Proc. No. 3339, 3 C.F.R., 1959-1963 Comp., p. 71 (1960); 25 Fed. Reg. 2352. The proclamation withdrew from disposition under the Outer Continental Shelf Lands Act certain submerged lands off the Florida coast in order to create the Key Largo Coral Reef Preserve. It is worthy of note in considering the likelihood of international protest to the construction of a deep-draft port that this withdrawal by President Eisenhower came prior to the date upon which the Continental Shelf Convention came into force. Since the customary uses of the shelf were exclusively theretofore for the extraction of oil and gas, a "new use" was clearly being made. No protests were received to the action.

71/ See Knight, note 54.

72/ Ibid. at 18-19.

73/ See e.g., Christy, "Fishery Problems and the U.S. Draft Article," paper presented to the Fourth Annual Sea Grant Conference, October 13, 1971, 1-9 (mimeographed); Christy, "The Ownership of Ocean Resources," paper presented to the Annual Convention of the Izaak Walton League of America, July 8, 1971 (mimeographed).

74/ Statement of John R. Stevenson, representative of the United States to the Seabed Committee, U.N. Doc. A/AC.138/SC. II/SR.37 (28 July 1972).

ANNEX: NOTE ON THE DEVELOPMENT OF RULES OF CUSTOMARY
INTERNATIONAL LAW, WITH SPECIAL EMPHASIS ON THE DOC-
TRINE OF THE CONTINENTAL SHELF

Rules of international law, in order to be binding on the community of nations, do not necessarily have to be contained in written international agreements. By common acceptance, certain practices of and between states may ripen into rules which, over a period of time, achieve such wide recognition that they are viewed as obligatory. Such rules are commonly referred to as rules of customary international law. Fenwick has defined customary international law as consisting of "established usages which have come to be regarded as having an obligatory character," and which may be characterized as the "recognition of an obligation as manifested in repeated acts and professions."^{1/} Similarly, Oppenheim states:

International jurists speak of a custom when a clear and continuous habit of doing certain actions has grown up under the aegis of the conviction that these actions are, according to International Law, obligatory or right....

Wherever and as soon as a line of international conduct frequently adopted by States is considered legally obligatory or legally right, the rule which may be abstracted from such conduct is a rule of customary International Law.^{2/}

Among the elements commonly relied upon to determine whether a given practice has or has not ripened into a principle of customary international law are:
(1) the nature and evidence of the practice; (2) the

number of states involved in the practice; (3) the status of the states involved in the practice, especially those inaugurating it; (4) the absence of protest to the practice; (5) the duration of the practice; and (6) the existence or nonexistence of a competing practice.

Quite often a practice is initiated by the unilateral act of one state, closely followed by similar unilateral acts of the other states. That this approach may result in the creation of a rule of customary international law is suggested in the following comment:

Unilateral declarations by traditionally law-abiding states, within a province which is particularly their own, when partaking of a pronounced degree of uniformity and frequency and when not followed by protests of other states, may properly be regarded as providing such proof of conformity with law as is both creative of custom and constituting evidence of it.^{3/}

Specifically with respect to the doctrine of the Continental Shelf, and the possibility of a rule of customary international law with respect thereto, note the following comments (and the dates thereof):

[W]hile the unilateral declaration of the United States [the Truman Proclamation] cannot in itself create any new rights or any new rules of international law, it may be regarded as providing the seed from which such rights and rules may grow. It is submitted that general recognition and acceptance by states may perfect the rights claimed by the United States and establish new rules of international law based on the doctrine of the continental shelf.^{4/} [1946]

[U]nder international law the unilateral act has a wider significance. It is one of the means by which international custom is formed.... In point of fact, declarations like those of the President

of the United States or later declarations are such as can have force of law in the international sphere since they do not come under the head of declarations of purely domestic application.... Declarations of this kind should also possess an intrinsic value enabling the will they express to fit into the rules of international law, even if this entails a modification of those rules.^{5/}
[1950]

[C]ertain unilateral acts on the part of sovereign States, far from being inconsistent with International Law, tend often to develop into rules of customary International Law through gradual acceptance by other members of the family of Nations.

...there exists no reason to exclude the Continental Shelf declaration and proclamation from that type of State activity, which produces effects in the international sphere and is regarded as creative of Customary International Law.^{6/}
[1953]

Probably the most comprehensive brief for the existence of a rule of customary international law with respect to the doctrine of the Continental Shelf was developed by Lauterpacht.^{7/} Professor Lauterpacht analyzed the various unilateral claims, the concept of the Continental Shelf doctrine, the relevance of the absence of protest to the creation of a rule of customary international law, and the necessity for "occupation" of and contiguity to submarine areas. He concluded that "there is no existing principle or rule of international law which is opposed to what, for the sake of brevity, may be called here the doctrine and the practice of the continental shelf and that the latter has now, in any case, become part of international law by unequivocal positive acts of some states, including the leading maritime powers, and general acquiescence on the part of others."^{8/}

By 1961 one commentator was able to conclude that:

Although it is a matter of opinion as to exactly when the parade of proclamations on the continental shelf developed a path which was not only discernible, but well-defined and acknowledged, it seems clear and indisputable that the path has now been established; the practice of states in regard to the continental shelf has become a part of customary international law.^{9/}

FOOTNOTES

- 1/ Fenwick, International Law (4th ed., 1965) at 89-90.
- 2/ Oppenheim, International Law: A Treatise (8th ed., 1955) at 26-27. See also Bishop, International Law: Cases and Materials (2d ed., 1962) at 30; Brierly, The Law of Nations (6th ed., 1962) at 59; O'Connell, International Law (1965) at 6; Cobbett, Cases and Opinions on International Law (2d ed., 1966) at 440; and Schwarzenberger, A Manual of International Law (4th ed., 1960) at 27.
- 3/ Lauterpacht, "Sovereignty Over Submarine Areas," 27 Brit. Y. B. Int'l L. 376, 395 (1950).
- 4/ Vallet, "The Continental Shelf," 23 Brit. Y. B. Int'l L. 333, 337 (L46).
- 5/ Memorandum on the Regime of the High Seas, prepared by the Secretariat of the United Nations for the International Law Commission (U.N. Doc. A/CN.4/32) (1950).
- 6/ Anninos, The Continental Shelf and Public International Law (1953) at 140, 143.
- 7/ See Lauterpacht, note 3 above.
- 8/ Ibid. at 376-377.
- 9/ Franklin, The Law of the Sea: Some Recent Developments (1961) at 62. See also Grunawalt, "The Acquisition of the Resources of the Bottom of the Sea -- A New Frontier of International Law," 34 Mil. L. Rev. 101, 114-116 (1966). For an expression of opposition to the existence of a rule of customary international law with

respect to the Continental Shelf as late as 1953, see Kunz, "The Nature of Customary International Law," 47 Am. J. Int'l L. 662 (1953). [By 1956 Kunz had admitted that a rule of customary international law on the topic was emerging, but still denied its existence; see Kunz, "Continental Shelf and International Law: Confusion and Abuse," 50 Am. J. Int'l L. 826 (1956).]

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Major Laws Relevant to Development or Operation of Deepwater Port Facilities

International

Convention on the Territorial Sea and the Contiguous Zone (1958), especially Article 24.

Convention on the High Seas (1958), especially Articles 1 and 2.

Convention on the Continental Shelf (1958), especially Article 5.

Convention for the Prevention of Pollution of the Sea by Oil (1954 as amended), especially the proposed new Article 6 in the 1971 amendments to the Convention.

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(P.L. 87-88)
Water Quality Act of 1965 (P.L. 89-234)
Clean Water Restoration Act of 1966 (P.L.
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in regard to rates (46 U.S.C. 817).

Regulatory authority of the Department of Transporta-
tion in regard to pipeline safety (18 U.S.C. chapter
39, 49 U.S.C. 1655).

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13. ABSTRACT
 This report provides an overall appraisal of the institutional problems associated with the planning, construction, and operation of deep draft port facilities in the U. S. and adjacent waters for the reception and transshipment of imported crude petroleum. It defines the public interest in such ports; the characteristics which distinguish such ports from conventional ports; problems of legal jurisdiction as among international, Federal, State, and local levels; the political setting within which deepwater crude petroleum ports is being considered, including public attitudes and policies at the State and local level; it analyzes problems of finance, ownership, and economic regulation; functional characteristics and relationships of Federal departments and agencies, and State and local governments, pertaining to planning, permitting, and regulation of deepwater ports and related land-side developments; it makes recommendations with respect to required Federal legislation and organization, and institutional arrangements for public participation and inter-governmental relations.

KEY WORDS

LINK A

LINK B

LINK C

ROLE

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ROLE

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ROLE

WT

Public interest
Jurisdiction
Legal
Institutional
Regulation and control
Ownership
Finance
Goals
Functions
Economic
Environmental