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TO GUARANTEE AFFECTED STATES AN EQUAL VOICE IN THE CONSTRUCTION OF DEEPWATER PORTS

(93-15)

HEARINGS

BEFORE THE

SUBCOMMITTEE ON ENERGY

OF THE

COMMITTEE ON PUBLIC WORKS

HOUSE OF REPRESENTATIVES

NINETY-THIRD CONGRESS

FIRST SESSION

ON

H.R. 2020 and H.R. 3003

JUNE 19, 20, 21, 1973

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TO GUARANTEE AFFECTED STATES AN EQUAL VOICE IN THE CONSTRUCTION OF DEEPWATER PORTS

TUESDAY, JUNE 19, 1973

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON ENERGY
OF THE COMMITTEE ON PUBLIC WORKS,
Washington, D.C.

The Subcommittee on Energy convened at 10:10 a.m. in room 2167 of the Rayburn House Office Building, Hon. James J. Howard (chairman of the subcommittee) presiding.

Mr. HOWARD. The Subcommittee on Energy of the Committee on Public Works will please come to order. I thank all of you who are in attendance this morning.

The hearings this morning and for the remainder of the week are on H.R. 2020 and H.R. 3003 and related bills.

Chairman Blatnik, chairman of the full Committee on Public Works, has referred H.R. 2020 and H.R. 3003 to this subcommittee for its consideration and report.

These are identical bills. A copy of each is before you. The intent and purpose of these bills is to prohibit, under certain conditions, Federal activities in connection with the construction of offshore bulk cargo transshipment facilities; that is, deepwater ports. I will have placed in the record at this point a copy of the bill H.R. 2020.

[The bill referred to follows:]

93D CONGRESS
1ST SESSION

H. R. 2020

IN THE HOUSE OF REPRESENTATIVES

JANUARY 15, 1973

Mr. HOWARD introduced the following bill; which was referred to the Committee on Public Works

A BILL

To prohibit under certain conditions Federal activities in connection with the construction of offshore bulk cargo transshipment facilities.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That notwithstanding any other provision of law, neither the Secretary of the Army nor any other officer or employee of the United States shall issue any license, permit, or other authorization, or take any other action which would result, directly or indirectly, in the construction of any offshore bulk cargo transshipment facility in those waters of the territorial seas, the contiguous zone, or the ocean, which are within the boundaries of any State, or within the indefinite extension of such boundaries seaward, if such State has by law

prohibited the construction of such a facility in the territorial seas within its boundaries.

SEC. 2. (a) In any case where a State has not by law prohibited the construction of any offshore bulk cargo transshipment facility in those waters of the territorial seas which are within its boundaries, neither the Secretary of the Army nor any other officer or employee of the United States shall issue any license, permit, or other authorization, or take any other action which would result, directly or indirectly, in the construction of any such facility in such waters, the waters of the contiguous zone, or the waters of the ocean which are within its boundaries or the indefinite extension of such boundaries seaward, unless such Secretary, officer, or employee shall have notified the Administrator in writing of his intention to issue such license, permit, or other authorization or to take such action, and a period of not less than one hundred and eighty days shall have elapsed, and no objection has been raised to such issuance or action, as provided in subsection (b) of this section.

(b) Whenever the issuance of any license, permit, or other authorization, or the taking of any other action by the Secretary of the Army or any other officer or employee of the United States would result, directly or indirectly, in the construction of any offshore bulk cargo transshipment facility which may affect, as determined by the Administra-

tor, the waters of the territorial sea, contiguous zone, or ocean, within the boundaries, or within the indefinite extension of such boundaries seaward, of a State which has by law prohibited such facilities within the territorial seas within its boundaries, then within sixty days of the date of his notification under subsection (a), the Administrator shall so notify such State, and if such State within one hundred and twenty days of the date of its notification, files with the Administrator in writing, its objections to the issuance of such license, permit, or authorization or the taking of such action, such license, permit, or authorization shall not be issued and such action shall not be taken except upon such conditions or in such manner as the Administrator, the objecting State, and the head of the department, agency, or instrumentality of the United States proposing to issue such license, permit, or authorization or to take such action shall jointly require.

SEC. 3. As used in this Act—

(1) The term "territorial seas" means the belt of the seas measured from the line of ordinary low water along that portion of the coast which is in direct contact with the open sea and the line marking the seaward limit of inland waters, and extending seaward a distance of three miles.

(2) The term "contiguous zone" means the entire zone established or to be established by the United States under

article 24 of the Convention of the Territorial Sea and the Contiguous Zone.

(3) The term "ocean" means any portion of the high seas beyond the contiguous zone.

(4) The term "State" means a State, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, the Trust Territory of the Pacific Islands.

(5) The term "Administrator" means the Administrator of the Environmental Protection Agency.

Mr. HOWARD. Consequently, the issue raised by these bills is a very narrow one. The only issue is whether any State that may be affected by the location of a deepwater port—either because such location is within an extension of its boundaries or because, despite its location within the boundaries of another State, it will be seriously affected nevertheless—shall have the right to prohibit that deepwater port.

I emphasize the demonstrative pronoun "that" because there seems to be some misunderstanding as to the impact of these bills. There are some who think the bills would prohibit any deepwater ports anywhere off the shores of our Nation. The language of the bills is crystal clear. It would prohibit such ports only off the shores of those States in whose good judgment the ports are undesired.

The bills are not in the least bit concerned with the construction or nonconstruction of deepwater ports; for that matter, neither are they concerned with the wisdom or folly of such construction. The plain fact is that passage of these bills would in no way impede the construction of a plethora of deepwater ports. The only limitation resulting from the bills is that the ports will be where they are wanted. And there already are States that do want them.

All that the bills do, in effect, is recognize there is still some vestige of sovereignty remaining with the States—at least enough for each State to have the right of self-determination on a matter that can so profoundly affect its lifestyle as deepwater ports.

In view of the administration's efforts to expedite the construction of deepwater ports, consideration of these bills is very timely. Had we delayed considering them, we might very well have been faced with having to lock the barn door after the horse bolted.

Also of pressing concern is the ever-increasing gasoline and diesel oil shortage confronting our Nation. This shortage has a direct relation to the supply of fuel oil this winter. Consequently, we are equally

concerned with what some experts predict will be a serious fuel oil shortage.

Our staff has been gathering information on these problems for weeks now. After consulting with our esteemed colleague, Mr. Snyder, I also spoke with Chairman Blatnik. We are all in agreement that hearings should be held on this crucial subject at the earliest possible date. And they shall.

Accordingly I want to take advantage of this meeting of my colleagues on the subcommittee to announce that shortly after we conclude consideration of H.R. 2020, we will begin hearings on the shortages.

The Chair would like at this time to recognize our very able ranking minority member, who has been very cooperative in the organization of this subcommittee in this Congress, for any statement he cares to make.

The Chair recognizes the gentleman from Kentucky, Mr. Snyder.

Mr. SNYDER. I would like to make a brief statement in support of legislation to authorize construction of deepwater ports. It is clear to me that in the years ahead we are going to be importing more and more crude oil to meet our demands for energy. We are told that the tankers that are going to move this oil will be bigger and bigger—too big to enter any U.S. ports without extensive and, in most cases, prohibitive dredging to deepen the existing channels.

The choice therefore is between building offshore terminals to accommodate these supertankers or having them unload at transshipment points either in Canadian waters or the Caribbean and bring the oil to this country in increasing numbers of small tankers.

Offshore terminals are being used in many parts of the world today to load and unload oil tankers. I am convinced that there are significant environmental and economic reasons why they should be used in this country. Most of the marine casualties which result in oil spills occur in and around harbors. Spills which occur in coastal waters are more damaging to the biological productivity of the marine ecosystem than spills which occur in the deep ocean.

On the Atlantic and gulf coasts of our country, where the bulk of the increase in imported oil will be received, water depth sufficient to accommodate deep-draft tankers occurs generally outside of U.S. territorial waters. This requires special diligence on our part because most, if not all, of the over 100 already existing deepwater ports are within the territorial limits of their respective countries. Terminal facilities constructed in international waters require careful regulation to assure that their operation does not interfere with the reasonable use of the high seas by others. The regulatory scheme that would apply in these waters is at present unclear and inadequate. We therefore need legislation to authorize the construction and operation of these facilities and to carefully regulate their activities.

The bills under consideration here, H.R. 2020 and H.R. 3003 raise significant questions in this regard. By giving the States a veto power over construction of deepwater ports off their shores, but in international waters, we are running the risk at present of creating a problem in international law. Item No. 18 on the agenda of the upcoming Law of the Sea Conference in May of 1974, deals specifically with the question of deepwater ports. This is so because the deepwater port issue involves the following international conventions:

(1) Convention on the Territorial Sea and Contiguous Zone.
(2) Convention on the Continental Shelf.
(3) Convention on the High Seas.
(4) Convention on the Fishing and Conservation of the Living Resources of the High Seas.
(5) International Convention for the Safety of Life at Sea, as amended.

To proceed hastily with this legislation could enormously complicate dealings in international law by giving the individual States the right to treat directly with foreign countries. It could conceivably be in direct violation of the Constitution of the United States.

Additionally, such legislation on deepwater ports must take into account the following Federal laws: Outer Continental Shelf Lands Act; anchorage grounds for vessels, USCG; Safety of Life at Sea; Rivers and Harbors Act of 1899; Ports and Waterways Safety Act of 1972; Federal Water Pollution Control Act; Act to Establish Load Lines for Vessels, 1929; Federal Boat Safety Act of 1971; Vessel Bridge-to-Bridge Radiotelephone Act of 1971; Marine Protection, Research, Sanctuaries Act of 1972; 18 U.S.C. 831, 49 U.S.C. 1671 (regarding pipeline safety); Merchant Marine Act of 1936 and 1970; National Environmental Policy Act of 1969; Coastal Zone Management Act of 1972; general customs and navigation laws of the United States; numerous laws pertaining to admiralty; Federal Tort Claims Act; numerous laws establishing the scope and authority of respective Federal agency jurisdiction and responsibility.

Numerous laws impacting on, and regulating the location, construction, and operation of landward dockside reception, processing, and transmission facilities.

In light of all these complex considerations, it appears to me that any unilateral action such as is contained in H.R. 2020 could be premature. Moreover, hearings are already under way on comprehensive deepwater port legislation in the House Merchant Marine and Fisheries Committee. These hearings, and the legislation being considered therein, are sufficiently broad in scope to take into account all the complexities of the situation.

The bill which the administration has proposed, though far from perfect, deserves the careful consideration of the Congress. It was drafted after study by a task force of administration experts from all the concerned agencies, and is presently pending before the House Committee of the Interior. It does not attempt to create a new regulatory structure but relies completely on existing regulatory mechanisms. It does not give the States an absolute veto but requires the Federal licensing authority, which it designates as the Department of the Interior, to work with the States to insure that the facility and its related land structures are consistent with State land use programs. It also requires strict environmental safeguards.

Frankly, the question of jurisdiction is complicated not only with regard to congressional committees, but even more on the level of which Federal agency or agencies ought to have regulatory jurisdiction. The Department of the Interior, in my view, is simply not equipped with the expertise to handle this type of licensing and regulation by itself. The Commerce Department, with the Maritime Administration's oceangoing vessel expertise, and the National Oceanic and Atmospheric

Administration's competence in the environment of the sea, is better able to deal with the issue. However, Commerce cannot cope with the problems by itself either. The Department of Transportation gets into the picture with the Coast Guard playing an obvious role, in addition to all the other related transportation considerations.

I think we are probably going to have to move toward some sort of an Interagency Deepwater Port Authority. Any legislation which does not take account of all of these various factors and perspectives is not only simplistic, but stands to be confusing and detrimental as well.

Thank you, Mr. Chairman.

Mr. HOWARD. Thank you very much. Do any of my colleagues on my right care to make a statement? Mr. Johnson? Mr. Studds? On the left?

We will proceed with the witnesses for this morning. The first witnesses we have this morning are Mr. Jack O. Horton, Assistant Secretary for Land and Water Resources of the Department of the Interior; accompanied by Dr. Kenneth L. Lay, Deputy Under Secretary for Energy; Mr. Jared Carter, Deputy Under Secretary; and Mr. Jack Allen, Assistant Legislative Counsel.

I wish to welcome you gentlemen to the subcommitee. We are very sorry that we did not receive your testimony until this morning. And so the subcommittee may find it a little awkward in gathering more information concerning your testimony, but we will do the best that we can.

We are very happy to have you with us. Mr. Horton, if you will care to, for the record, introduce yourself and the gentlemen with you and state your positions, you may proceed with your testimony in any order that you wish.

STATEMENTS OF JACK O. HORTON, ASSISTANT SECRETARY FOR LAND AND WATER RESOURCES, DEPARTMENT OF THE INTERIOR; AND KENNETH LAY, DEPUTY UNDER SECRETARY FOR ENERGY, DEPARTMENT OF THE INTERIOR; ACCOMPANIED BY JARED CARTER, DEPUTY UNDER SECRETARY, DEPARTMENT OF THE INTERIOR; AND JACK ALLEN, ASSISTANT LEGISLATIVE COUNSEL, DEPARTMENT OF THE INTERIOR

Mr. HORTON. Mr. Chairman and members of the committee, thank you very much on behalf of the Department for the opportunity for the four of us, supported by others, to appear before you on the subject of deepwater ports.

I have three others with me at the table. Mr. Jack Allen, the Assistant Legislative Counsel for the Department; Mr. Jared Carter, Deputy Under Secretary; and Dr. Kenneth Lay, Deputy Under Secretary for Energy.

The failing in the delivery of our testimony was certainly only the fault of the Department and I apologize fully to the committee and assure you it will not happen again.

With the permission of the Chair, Mr. Chairman, we would ask Dr. Kenneth Lay to present the energy framework in which our testimony on deepwater ports is made to you today.

Mr. HOWARD. We do have before us a statement by Dr. Lay and a statement by you, Mr. Horton, and without objection these two statements will be made a part of the record at this point.

[Statements referred to follow:]

STATEMENT OF DR. KENNETH LAY, DEPUTY UNDER SECRETARY, DEPARTMENT OF THE INTERIOR

It is a pleasure to appear before this Committee to present the Department's views on the current status of our national energy situation for your consideration in the development of public policy on deepwater ports.

I shall confine my remarks to a very brief summary review of the energy situation. Secretary Horton will specifically address the deepwater ports issue.

The President's Energy Message of April 18 covers in some detail most of the energy problems confronting the Nation and provides a convenient focus for viewing the major energy issues. A major theme of that Message is that this country has a large and diverse energy resource base but that base is not being developed at adequate rates to meet our large and accelerating demands for clean energy. The present well-known shortages of natural gas and petroleum products, especially gasoline, can be attributed to many years of inadequate attention to the decline of our domestic fuels and energy producing capabilities. New initiatives are being taken to correct the neglect of the past two decades of our domestic energy resource base, but it takes time to correct this situation. It takes 3 to 5 years to develop a new coal mine or build a new refinery; 7 to 10 years to construct a powerplant; 4 to 5 years to develop a new gas or oil field; and some 5 years to build port facilities and place a new marine terminal in operation. Very simply, this means that the present fuel shortages and dislocations will continue to be of critical significance and our dependence on foreign sources for a very large share of our oil and gas will deepen before it gets better.

The Message reflects the unfortunate fact that we will have to rely more and more on oil imports in the years ahead. Table 2 in the appendix to this testimony shows that current oil import levels of about 6 million barrels per day are expected to more than double to some 15 million barrels daily by 1985. This also means that we must greatly improve the ports and related facilities needed to accommodate these imports in the most economical and environmentally acceptable ways. The elimination of the oil import quota program and the new license-fee program will improve the ability of oil importers to obtain supplies on a more favorable basis and will encourage an expansion of badly needed domestic oil refining capacity. The legislative proposal to permit the Department of the Interior to license deepwater ports beyond the 3-mile limit is a key element of the President's ambitious program to receive the rising volumes of these necessary imports. Of necessity, we must resort to the import expedient until we can change the domestic energy supply picture.

Much of the Message was specifically addressed to stepped up measures to stimulate an early restoration of domestic energy supply improvement. He called for an end to FPC regulation of wellhead natural gas prices on all new gas supplies and old gas under expired contracts. The Department is now implementing a greatly accelerated leasing program on public lands, particularly in the Outer Continental Shelf areas. We are now making plans to begin leasing these highly prospective oil and gas resource areas in 1974 and beyond at three times the present rate of about 1 million acres per year. Legislation to permit the construction on the long-delayed Alaskan pipeline and allow this enormous resource to contribute 2 million barrels of oil and 2 billion cubic feet of gas per day to our domestic supply is an urgent necessity. The Department is proceeding with coal, oil shale, and geothermal leasing programs and the necessary reviews to see that environmental impacts are acceptable before leasing proceeds.

The measures outlined above are all directed toward a more realistic accommodation to the unavoidable reliance on foreign energy sources for the next few years while the corrective actions to restore our domestic supply capabilities are being implemented. In the longer view, we will be the beneficiary of the energy R. & D. programs now being greatly expanded and accelerated. These include the development of commercial technologies for converting coal and oil shale to clean gaseous and liquid fuels; efficient sulfur dioxide stack gas cleaning methods; the fast breeder nuclear reactor; development of geothermal and oil

shale resources; and eventually developing such exotic and near infinite sources as solar, tidal, and fusion energy.

In summary, the Administration seeks to resolve the current energy situation through programs that provide the appropriate climate and incentives for our private energy industries to invest their demonstrated resources in a better restoration of domestic supply capabilities while the technologies to make new domestic clean energy supplies are being developed.

Mr. Chairman, this concludes my formal statement and I will be pleased to answer any questions that you or the other Committee Members may have, following Secretary Horton's statement. Thank you for your attention.

STATEMENT OF JACK HORTON, ASSISTANT SECRETARY FOR LAND AND WATER RESOURCES, DEPARTMENT OF THE INTERIOR

Mr. Chairman: We appreciate this opportunity to testify before you on the subject of deepwater ports. Ken Lay has outlined the measures which we in the Department of the Interior are developing to bridge the gap which is growing between the Nation's supply of and demand for energy. Regardless of how successful we are in these efforts it is clear to us and to most observers that we are going to have to rely on increased imports of petroleum to meet the demand for energy in the coming few decades.

Projections always vary, but it seems safe to say that by 1985 we will be importing at least one half of our total domestic demand for oil. Most of that imported oil will come from the Middle East and Africa and will be brought into east coast and gulf coast ports.

A second, interrelated trend we are facing is the increase in tanker size. As table 9 of the appendix shows in 1956 the largest tanker then afloat was 56,000 deadweight tons. Recently the "Globtic Tokyo" came into service at 477,000 dwt. Tankers of 530,000 dwt have been ordered by Shell Oil Co. and a letter of intent has been signed for a 706,000 dwt tanker.

We are deeply concerned about the impact these trends will have on existing port facilities and on the environment. In 1970 2.5 million barrels of oil a day were brought into east coast ports by a tanker fleet averaging 30,000 dwt. By 1980 the east coast could be importing as much as 6.6 million barrels crude oil per day. Of the principal tanker ports on the east coast only Portland, Maine, can accommodate fully loaded tankers exceeding 55,000 deadweight tons. Even if average tanker size went to 50,000 dwt, tanker calls to east coast ports in 1980 would be double the 1970 level.

This magnitude of small tanker traffic would necessarily result in a substantial increase in oil pollution from groundings and collisions. The prospect of ever increasing numbers of small tankers plying coastal waters and crowding into existing harbors is highly disturbing.

The alternative spelled out in the legislation which the Department has proposed as well as in other bills before this Committee is to license the construction of deepwater terminals off our coasts. Tankers would tie up to them and off load their oil into a pipeline connected to the mainland.

This has two principle advantages. First it would reduce port congestion and the attendant risk of oil spill from collision or grounding. Also, if a spill does occur at a deepwater port there is more time to clean it up before it reaches the beaches and sensitive estuarine areas.

The second obvious advantage of deepwater ports is that they can accommodate deepdraft tankers. These tankers, known as VLCC's for "very large crude carriers", and generally classified as 200,000 dwt and upward. Figure 2 shows the depth requirements for tankers of various capacities. VLCC's require from 60 feet of water for the smallest to over 100 feet of water for the largest. The Atlantic and Gulf coast ports have relatively shallow water and the surrounding sealed slopes off rather gradually. The Port of Houston, for example, is 100 miles away from water 100 feet deep.

VLCC's are unquestionably here to stay for the very simple reason that they can move oil for significantly less cost, particularly on the long haul from the Persian Gulf. I refer you to table 10 for a comparison of freight rates and to Figure 3 for an estimate of cost savings per year. I think you will agree with me from the savings that will be possible that these tankers will be used. The question is simply whether these large tankers will unload in the Caribbean or Canada

for transshipment to the United States or whether they will bring their cargoes directly to this country via deepwater ports off our own coasts.

In addition to economic advantages, these large newer tankers could offer environmental advantages in the form of advanced pollution control devices such as segregated ballast systems, and improved navigation and fire control systems. The Administration's proposal authorizes the Secretary to include as a condition of the deepwater port license measures to minimize or prevent pollution of the surrounding waters. Such measures would relate to the design and operation of vessels using the structure as well as the structures themselves. Notwithstanding such requirements there are economic incentives to vessel owners to incorporate these devices. A barrel of oil spilled is a barrel that cannot be sold. Moreover, The Federal Water Quality Improvement Act of 1970 assigns legal liability to vessel owners up to $14 million for oil spills. That law is specifically extended to facilities licensed under the Administration's proposal.

The technology for unloading large tankers in deepwater and piping the oil ashore is well established. The technique of unloading tankers into submerged pipelines has been in successful use since 1959 and presently there are more than 100 buoy systems in use around the world. Seven of them are in operation off our own Pacific coast. One at Estero Bay, California has been in use since World War II. Since these facilities are within the 3-mile limit, the Administration's proposal would not affect them.

The U.S. Military forces have been using buoy unloading systems around the world for many years in such places as Japan, the Philippines, Taiwan, Okinawa and South Vietnam. Some of these military installations can handle tankers of 100,000 deadweight tons. In general the experience with these systems has been excellent.

Deepwater port facilities can vary in design from an artificial island complete with storage facilities to a simple mooring buoy. Figures in the appendix show these various designs. The mooring buoy concept can involve multiple buoys which hold the tanker in a fixed position or a single buoy which allows the tanker to swing around in the direction of the wind and waves change. These single point buoys are generally placed in clusters of three to five, all connected to a central pumping station on a fixed platform which also houses the crew. Each buoy needs about 1,200 feet of maneuvering room around them which means that the entire cluster occupies an area about 3 miles in diameter.

Two specific locations for deepwater ports have been given extensive study by industry: The "Loop" project off the coast of Louisiana and "Seadock" off of Freeport, Tex. The Seadock project is estimated by its sponsors to cost a total of about $575 million: $310 million for the marine portion including buoys, pipelines, pumping platforms, etc., and $235 for the land portion, terminal, tank farm and related facilities.

A major portion of the cost are the underwater pipelines connecting the pumping platform to the mainland. There are normally three or more of these pipelines each 48 to 56 inches in diameter and buried in concrete under the seabed. It costs roughly $1 million per mile per pipeline.

An alternative means of accommodating deepdraft tankers would be to deepen existing channels. We do not in general favor this alternative. While it might replace several small tankers with one large one, that large tanker would be exposed to a greater risk of grounding, because of its greater draft, and it would have higher collision risk because of greater exposure to other vessels. In most cases, particularly the gulf coast where the shelf slopes off very gradually, dredging deeper channels would be more costly economically and would be prohibitive in terms of environmental cost.

There are basically two reasons why the administration considers legislation to be necessary. First, there is enough uncertainty about existing Federal law that we do not believe we have a clear mandate to grant a license to authorize the construction and operation of deepwater ports off U.S. coasts. The second reason is to assure that deepwater ports built off our coasts meet specific environmental and navigational safeguards. One important purpose of the bill is to prohibit transporting any cargo to the United States from a deepwater port off our coast unless the port is licensed under the act.

I should note at this point that we believe the proper basis for this Federal jurisdiction beyond the 3-mile limit is the principle in international law that all nations can make reasonable uses of the high seas. We consider deepwater ports to be a reasonable use and one of the conditions of the license would be to ensure that the operation of the facility does not violate that principle.

A principal difference between the administration's bill and H.R. 2020 pending before this committee is that H.R. 2020 does not create any new licensing or regulatory authority. Its effect is to give coastal states a veto over the exercise of existing Federal authority to license deepwater facilities off their coasts. As I stated above we do not believe that existing authority is adequate beyond the 3-mile territorial sea. As to the state veto, we agree in concept that the state should participate in the licensing decision and we therefore require that the Secretary consult with the Governor quote "to ensure" unquote and I emphasize that word, that the offshore structure and its related land based facilities are consistent with the State Land Use Planning Program. We do not intend to preempt the States authority to plan and regulate land and water resources within their jurisdiction. We do not favor language which would tend to force a State to deal with the many legitimate and complex questions presented by the location of a deepwater port off their coast by an up or down political decision in the State on the entire project. We prefer to encourage the States to attempt to resolve these questions within the context of a land use planning program. If the proposed development is not compatible with the State's land use planning program it will not be licensed.

A second difference between the two bills is that the administration's proposal gives Federal jurisdiction to the Department of Interior while H.R. 2020 gives it to the Environmental Protection Agency. Three factors led to the administration's decision: First, Interior has the fundamental federal responsibility for assuring the Nation an adequate supply of energy. This entails supervising the oil import program, administering all emergency fuel supply programs and providing analytical support for the President's Oil Policy Committee. We also lease all energy resources on public lands and the Outer Continental Shelf. At the President's direction we have recently created an Office of Energy Conservation.

The second factor is the expertise we have developed in supervising the construction and operation of oil drilling platforms on the Outer Continental Shelf. These platforms, connected to the mainland by pipeline, are very similar to the type of facility we expect to license under this new legislation. The processing of license applications for both types of facilities would require virtually the same analytical or technical abilities, drawing on the capabilities of our Bureau of Land Management, Geological Survey, Office of Oil and Gas and our Marine Research Programs.

The regulatory mechanism which would govern deepwater port facilities is basically the same as gaseous offshore platforms. The role of the Department would not be to duplicate that mechanism but to work with all of the Federal agencies involved to assure that this requirements are met. These same agencies, the Corps of Engineers, Environmental Protection Agency, the Coast Guard, the Interstate Commerce Commission, and Federal Power Commission presently regulate various aspects of offshore drilling platforms.

The third factor which points to Interior as the lead agency is the requirement in our proposal which I already mentioned, that the proposed facility be consistent with the State land use program. Since the administration's land use planning proposal gives Interior federal responsibility for approving State land use programs, it was felt that Interior was in the best position to coordinate deepwater port licensing with the State land use plans.

We would not usurp the role of the states in land use planning. Nor would we usurp industry's planning role in locating and determining size and design of these facilities except from an environmental or safety standpoint.

CONCLUSION

It is not often we get an opportunity to propose legislation which will provide for environmental protection, economic savings and energy and transportation needs. I think deepwater port legislation can do all four. I have discussed how deepwater ports will (1) reduce port congestion and groundings, (2) allow more time to clean up what spills do occur, and (3) accommodate, without dredging existing channels, deep draft tankers; and thereby realize the cost savings and advanced pollution control benefits they offer.

We will be happy to answer questions you might have.

Thank you.

APPENDIX

TABLE 1.—U.S. PETROLEUM DEMAND BY PAD DISTRICTS

[In thousands of barrels per day]

	1970	1975	1980	1985
District I	5,894	7,535	9,240	10,812
District II	4,110	4,890	6,087	7,037
District III	2,369	2,910	3,628	4,364
District IV	397	470	610	720
District V	1,952	2,595	3,225	3,952
Total	14,722	18,400	22,790	26,885

TABLE 2.—U.S. PETROLEUM SUPPLY-DEMAND BALANCE

[In millions of barrels per day]

	1960	1965	1970	1975	1980	1985
Domestic demand	9.8	11.5	14.7	18.4	22.8	26.9
U.S. production of petroleum liquids (excluding North Slope)	8.0	9.0	11.3	10.5	9.9	9.6
North Slope Crude and condensate					2.0	2.0
Syncrude from oil shale						.1
Imports	1.8	2.5	3.4	7.9	10.9	15.2
Imports as percent of domestic demand	18	22	23	43	48	57

Source: Department of the Interior, Office of Oil and Gas.

TABLE 3.—SOURCES OF WATERBORNE IMPORTS OF CRUDE OIL TO UNITED STATES

[Million barrels per day]

	1970	1975	1980	1985
Canada	0.002	0.002	0.002	0.002
Latin America-Caribbean	.821	.975	.975	.975
Europe	.017	.017	.017	.017
Africa-Mideast	.418	2.349	2.914	5.658
Far East-Southeast Asia	.065	.077	.092	.108
Total	1.324	3.420	4.000	6.760

TABLE 4—NUMBER OF SHIP CALLS PER DAY

	1970	1975	1980	1985	Projected crude imports (millions of barrels per day)
Average VLCC size	50,000	200,000	250,000	300,000	
1970	9.7				3.4
1975	21.6	5.40	4.32	3.60	7.9
1980	29.9	7.46	5.97	4.98	10.9
1985	41.6	10.4	8.32	6.94	15.2

TABLE 5—TOTAL SHIP CALLS PER YEAR

	1970	1975	1980	1985	Projected crude imports (millions of barrels per day)
1970	3,541				3.4
1975	7,884	1,471	1,575	1,314	7.9
1980	10,914	2,723	2,179	1,819	10.9
1985	15,184	3,796	3,037	3,533	15.2

TABLE 6.—U.S. TANKER PORTS

Port	Maximum vessel size (deadweight tons)	Port	Maximum vessel size (deadweight tons)
Alaska: Nisiki	60,000	Maryland: Baltimore	55,000
California:		Massachusetts: Boston	50,000
Long Beach	100,000	New Jersey: Newark	25,000
Los Angeles	100,000	New York	55,000
Port San Luis Obispo	20,000	Pennsylvania: Philadelphia	55,000
San Diego	35,000	Texas:	
San Francisco	35,000	Baytown	30,000
Flordia:		Beaumont	80,000
Jacksonville	30,000	Brownsville	35,000
Miami	20,000	Corpus Christi	50,000
Port Everglades	35,000	Freeport	30,000
Hawaii: Honolulu	35,000	Houston	55,000
Louisiana:		Port Arthur	55,000
Baton Rouge	45,000	Texas City	45,000
New Orleans	45,000	Virginia: Hampton Roads	50,000
Maine: Portland	80,000	Washington: Seattle	45,000

Source: International Petroleum Encyclopedia, 1972 editon. Reproduced from (NPC, 1972b, Ch. 13, p. 19).

TABLE 7.—ESTIMATED COST OF DREDGING 90-FOOT CHANNEL TO EXISTING PORTS

Port	Approximate distance to be dredged (statute miles)	Volume to be dredged (million cubic yards)	Cost (millions[1])
Boston	12	150	[2]
New York	22	220	[3] $520
Philadelphia	100	1,660	[4]
Baltimore	230	2,900	[5] 3,200
Norfolk	55	650	[6] 900
Charleston	43	560	750
Tampa	65	1,280	[6]
Mobile	51	470	970
Galveston	55	500	500
Corpus Christi	39	710	710
Los Angeles	5	40	60
San Francisco	13	130	150

[1] Costs are to dredge 1,300 ft wide channel 90 ft. deep and does not include docks, slips, turning basins, etc.
[2] Bedrock below 60 ft. Estimate $80,000,000 to dredge to 60 ft (60,000,000 yd[3]).
[3] Bedrock below 38 ft in part costing $15 per cubic yard to remove.
[4] Rock bottom in river and relocation of New Jersey Turnpike bridge would cost billions of dollars.
[5] Relocation of tunnel and bridge not considered but probable.
[6] Hard limestone below 30 ft also bridge interference.

Source: Reference for all data except that for Galveston: Offshore Terminal Systems Concepts, U.S. Department of Commerce, prepared by Soros Associates.

TABLE 8.—WORLD TANKER FLEET

Year	Vessel size in thousands of deadweight tons							Total	
	10–60	60–80	80–100	100–150	150–200	200–250	Over 250	Number of vessels	Deadweight tons (millions)
1963	2,608	23	15	4				2,650	75.0
1964	2,588	38	26	4				2,656	81.6
1965	2,574	77	48	5				2,704	90.1
1966	2,567	136	65	14				2,792	99.4
1967	2,544	198	86	34	1	1		2,864	107.9
1968	2,510	229	110	59	8	2		2,918	119.5
1969	2,479	244	142	83	16	16	2	2,982	135.2
1970	2,426	243	157	96	31	54	9	3,016	155.7
1971	2,406	245	163	112	35	113	18	3,092	175.3

TABLE 9.—WORLD RECORD TANKER

Name	Deadweight	Built	Launched
Sinclair Petrolore	56,089	Japan	1956
Universe Leader	85,515	do	1957
Universe Apollo	104,520	do	1959
Nissho Maru	130,250	do	1962
Tokyo Maru	157,290	do	1966
Idemitsu Maru	206,000	do	1966
Universe Ireland	326,000	do	1968
Nisseki Maru	372,700	do	1971
Globtik Tokyo	477,000	do	1973

TABLE 10.—FREIGHT COST IN DOLLARS PER TON

Ship size in deadweight tons	Round-trip distances in miles		
	Venezuela 4,000	North Africa 8,000	Middle East 24,000
65,000	$1.90	$3.50	$9.05
250,000	1.40	2.50	6.55
326,000	1.25	2.30	6.15
500,000	1.00	1.90	5.45

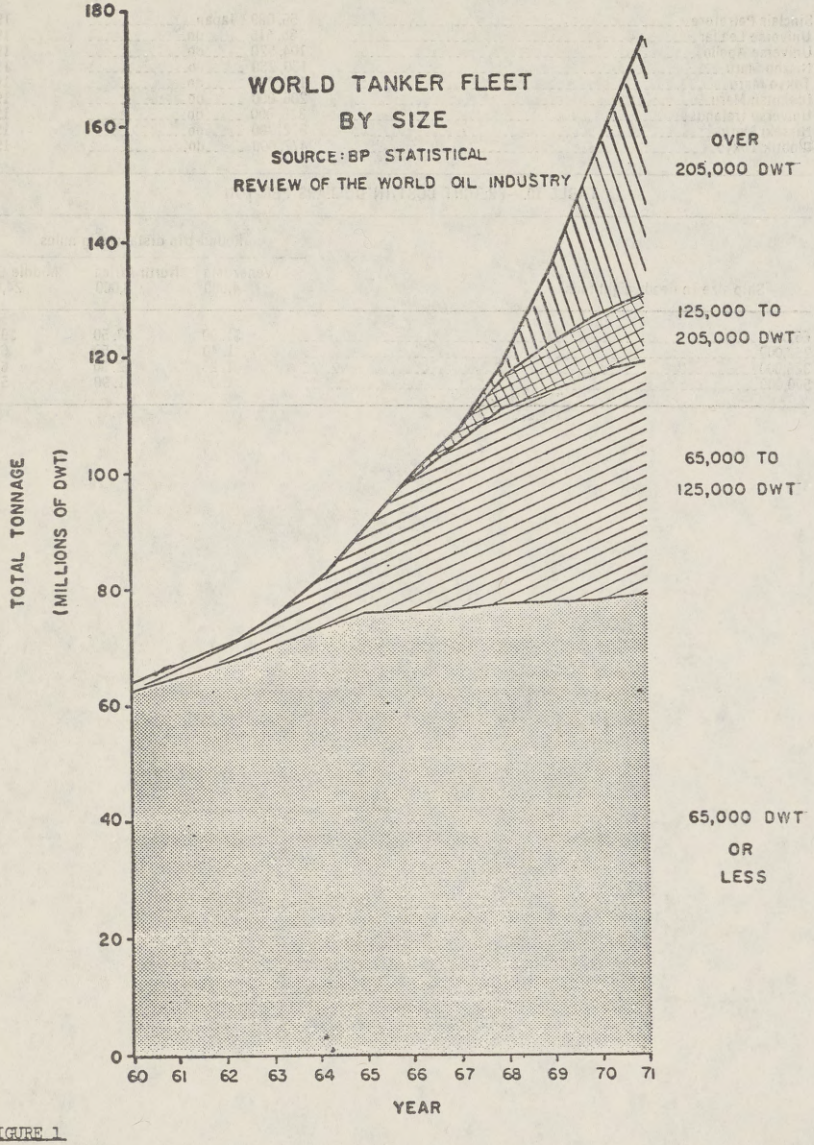
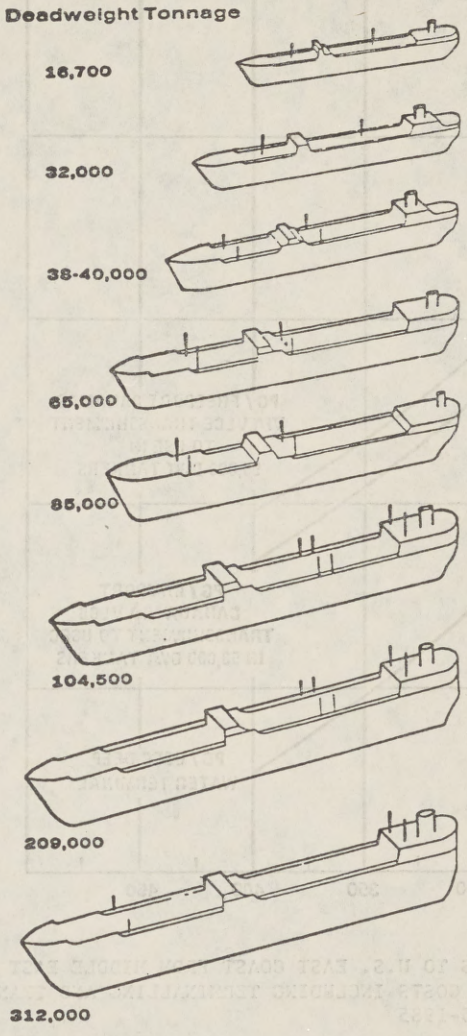

WORLD TANKER FLEET
BY SIZE
SOURCE: BP STATISTICAL
REVIEW OF THE WORLD OIL INDUSTRY
OVER
205,000 DWT
125,000 TO
205,000 DWT
65,000 TO
125,000 DWT
65,000 DWT
OR
LESS
TOTAL TONNAGE
(MILLIONS OF DWT)
180
160
140
120
100
80
60
40
20
0
60
61
62
63
64
65
66
67
68
69
70
71
YEAR

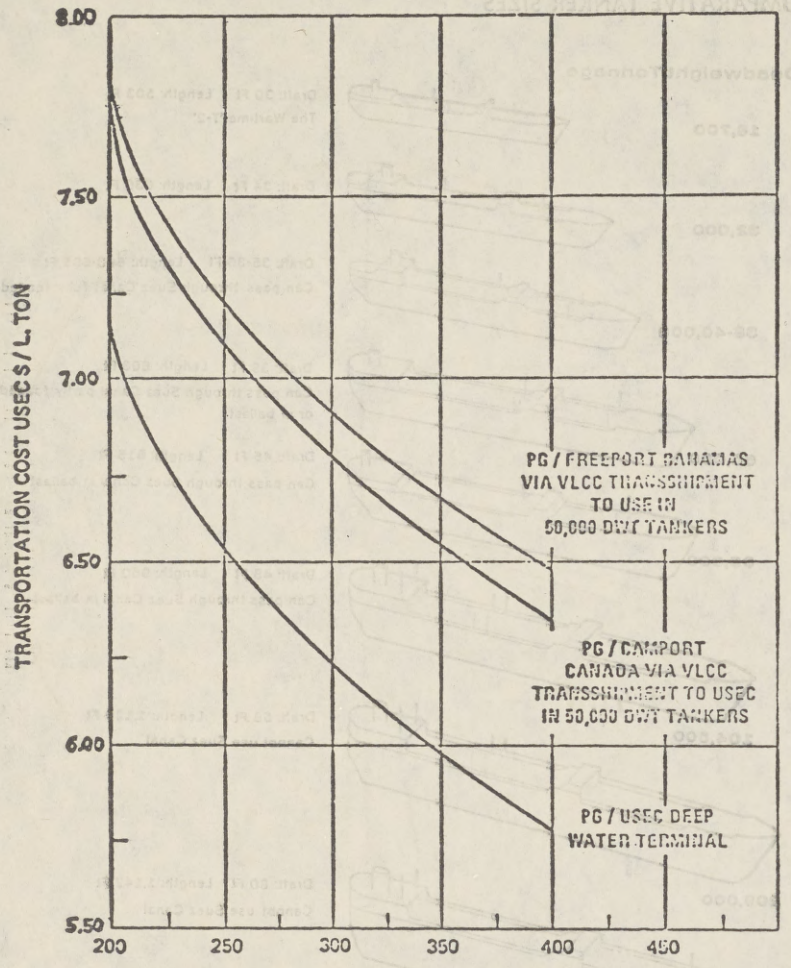
FIGURE 1

COMPARATIVE TANKER SIZES



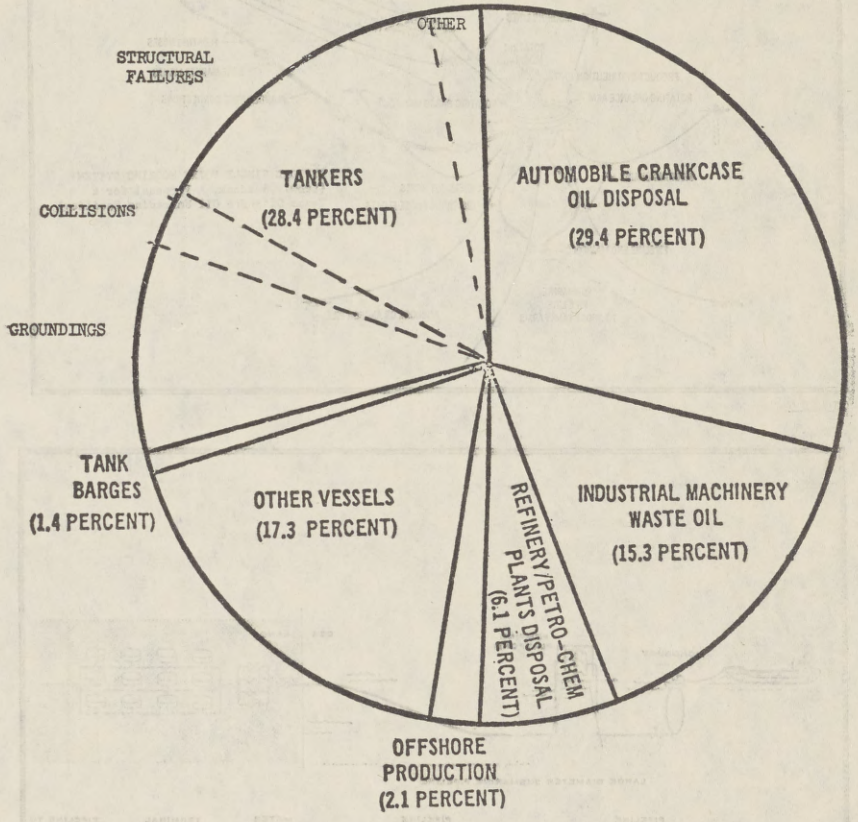
Source: Department of the Interior, Office of Oil and Gas

FIGURE 2



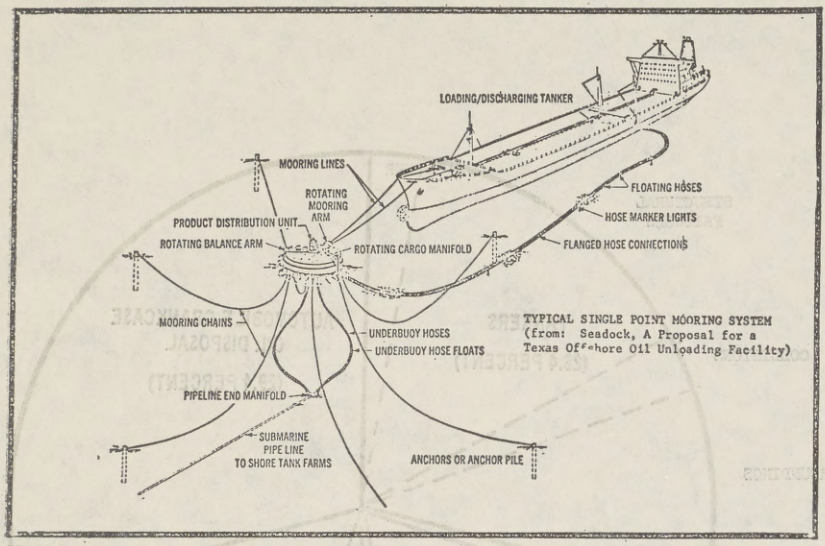
TRANSPORTATION COSTS TO U.S. EAST COAST FROM MIDDLE EAST VLCC TRANSPORTATION COSTS INCLUDING TERMINALLING AND TRANSSHIPMENT COSTS, 1975-1985

FIGURE 3



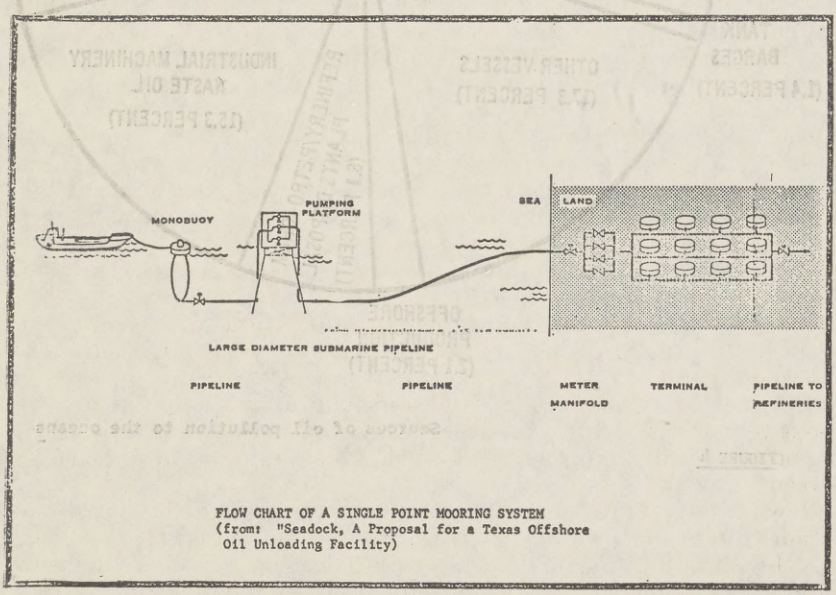
Sources of oil pollution to the oceans

FIGURE 4



TYPICAL SINGLE POINT MOORING SYSTEM
(from: Seadock, A Proposal for a Texas Offshore Oil Unloading Facility)

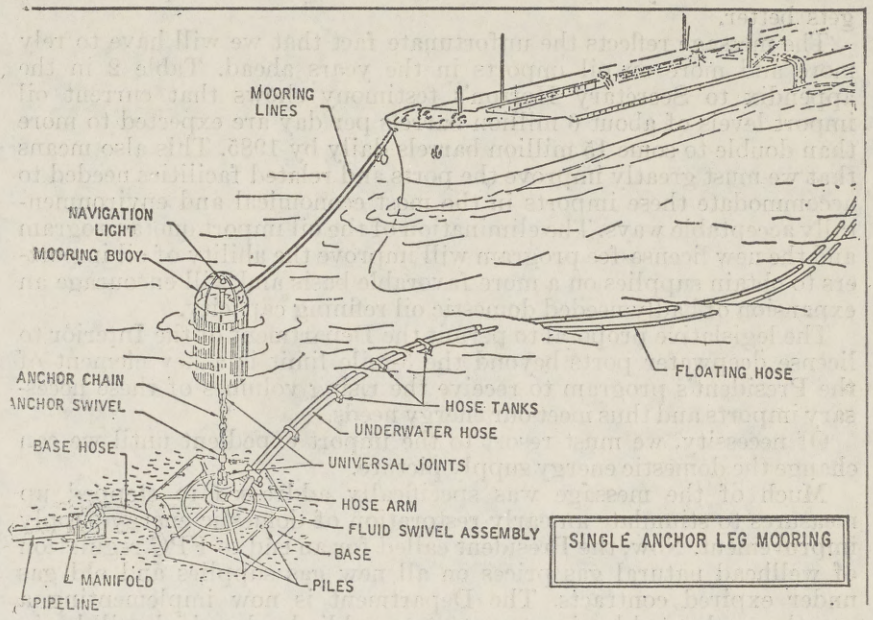
FIGURE 5



FLOW CHART OF A SINGLE POINT MOORING SYSTEM
(from: "Seadock, A Proposal for a Texas Offshore Oil Unloading Facility)

FIGURE 6

FIGURE 7



Mr. LAY. Thank you, Mr. Chairman. It is a pleasure to appear before the committee this morning to present our Department's views on the current status of our national energy situation.

I shall confine my remarks to a brief summary review of the energy situation. Secretary Horton will specifically address the deepwater ports issue.

The President's Energy Message of April 18 covers in some detail most of the energy problems confronting the Nation and provides a convenient focus for viewing the major energy issues. A major theme of that message is that this country has a large and diverse energy resource base but that base it not being developed at adequate rates to meet our large and accelerating demands for clean energy. The present well-known shortages of natural gas and petroleum products, especially gasoline, can be attributed to many years of inadequate attention to the decline of our domestic fuels and energy-producing capabilities.

I would point out, Mr. Chairman, that during the decade of the sixties, while our consumption of oil and natural gas, which make up about four-fifths of our total energy consumption, increased by about 58 percent, the drilling required to find new supplies dropped about 38 percent.

New initiatives are being taken to correct the neglect of the past two decades of our domestic energy resource base, but it takes time to correct this situation. It takes 3 to 5 years to develop a new coal mine or build a new refinery; 7 to 10 years to construct a powerplant; 4 to 5 years to develop a new gas or oil field; and some 5 years to build port facilities and place a new marine terminal in operation. Very simply, this means that the present fuel shortages and dislocations will continue to be of critical significance and our dependence on foreign

sources for a very large share of our oil and gas will deepen before it gets better.

The message reflects the unfortunate fact that we will have to rely more and more on oil imports in the years ahead. Table 2 in the appendix to Secretary Horton's testimony shows that current oil import levels of about 6 million barrels per day are expected to more than double to some 15 million barrels daily by 1985. This also means that we must greatly improve the ports and related facilities needed to accommodate these imports in the most economical and environmentally acceptable ways. The elimination of the oil import quota program and the new license-fee program will improve the ability of oil importers to obtain supplies on a more favorable basis and will encourage an expansion of badly needed domestic oil refining capacity.

The legislative proposal to permit the Department of the Interior to license deepwater ports beyond the 3-mile limit is a key element of the President's program to receive the rising volumes of these necessary imports and thus meet our energy needs.

Of necessity, we must resort to the import expedient until we can change the domestic energy supply picture.

Much of the message was specifically addressed to stepped up measures to stimulate an early restoration of domestic energy supply improvement. Now, the President called for an end to FPC regulation of wellhead natural gas prices on all new gas supplies and old gas under expired contracts. The Department is now implementing a greatly accelerated leasing program on public lands, which will begin leasing about 3 million acres per year starting the next calendar year.

Legislation to permit the construction on the long-delayed Alaskan pipeline and allow this enormous resource to contribute 2 million barrels of oil and 2 billion cubic feet of gas per day to our domestic supply is an urgent necessity. The Department is proceeding with coal, oil shale, and geothermal leasing programs and the necessary reviews to see that environmental impacts are acceptable before leasing proceeds.

The measures outlined above are all directed toward a more realistic accommodation to the unavoidable reliance on foreign energy sources for the next few years while the corrective actions to restore our domestic supply capabilities are being implemented. In the longer term, we will be the beneficiary of the energy research and development programs now being greatly expanded and accelerated. These include the development of commercial technologies for converting coal and oil shale to clean gaseous and liquid fuels; efficient sulfur dioxide stack gas cleaning methods; the fast breeder nuclear reactor; development of geothermal and oil shale resources; and eventually developing such exotic and near infinite sources as solar, tidal, and fusion energy.

In summary, the administration seeks to resolve the current energy situation through programs that provide the appropriate climate and incentives for our private energy industries to invest their resources in a better restoration of domestic supply capabilities while the technologies to make new domestic clean energy supplies are being developed.

Mr. Chairman, this concludes my formal statement and I will be pleased to answer any questions that you or the other committee members may have following Secretary Horton's statement.

Thank you for your attention.

Mr. HOWARD. Thank you very much for your fine statement, Dr. Lay. The subcommittee appreciates your coming here with it this morning.

We may very well have some questions for you following Mr. Horton's statement.

Mr. LAY. Fine, I will be happy to entertain those, sir.

Mr. HORTON. Mr. Chairman, members of the committee, Dr. Lay has outlined the measures which the Department is developing now to bridge the gap growing between the Nation's supply of, and demand for, energy.

Regardless of how successful we are in these efforts, it is clear to us and to most observers that we are going to have to rely on increased imports of petroleum to meet the demand for energy in the coming few decades.

Projections always vary, but it seems pretty safe to say that by 1985 we will be importing at least one-half of our total domestic demand for oil. Most of that imported oil will come from the Middle East and Africa and will be brought into east coast and gulf coast ports.

A second interrelated trend we are facing is the increase in tanker size. As table 9 in the attachments to my testimony indicates, the largest tanker afloat in 1956 was 56,000 deadweight tons. Recently, the *Globtic Tokyo* came into service at 477,000 deadweight tons. Tankers of 530,000 deadweight tons have been ordered by the Shell Oil Co., and a letter of intent has been signed for a 706,000 deadweight-ton tanker.

We are deeply concerned about the impact these trends will have on existing port facilities and on the environment. In 1970, 2.5 million barrels of oil a day were brought into east coast ports by a tanker fleet averaging 30,000 deadweight tons. By 1980, the east coast could be importing as much as 6.6 million barrels of crude per day. Of the principal tanker ports on the east coast only Portland, Maine, can accommodate fully loaded tankers exceeding 55,000 deadweight tons. Even if average tanker size went to 50,000 deadweight tons, tanker calls to east coast ports in 1980 would be double the 1970 level.

This magnitude of small tanker traffic would necessarily result in a substantial increase in oil pollution from groundings and collisions. The prospect of ever-increasing numbers of small tankers plying coastal waters and crowding them into existing harbors is highly disturbing.

The alternative spelled out in the legislation which the Department has proposed as well as in other bills before this committee is to license the construction of deepwater terminals off our coasts. Tankers would tie up to them and offload their oil into a pipeline connected to the mainland.

This has two principle advantages. First, it would reduce port congestion and the attendant risk of oil spills from collisions or groundings. Also, if a spill did occur at a deepwater port, there is more time to clean it up before it reaches the beaches and sensitive estuarine areas.

The second obvious advantage of deepwater ports is that they can accommodate deep-draft tankers. These tankers, known as VLCC's for "very large crude carriers." are generally classified as 200,000 deadweight tons and upward. Figure 2 shows the depth requirements for tankers of various capacities.

VLCC's require from 60 feet of water for the smallest to over 100

feet of water for the largest. The Atlantic and gulf coast ports have relatively shallow waters, and the surrounding seabed slopes off gradually. The Port of Houston, for example, is 110 miles away from water 100 feet in depth.

VLCC's are unquestionably here to stay for the very simple reason that they can move oil for significantly less cost, particularly on the long haul from the Persian Gulf. I refer you to table 10 of the attachments for a comparison of freight rates. I think you will agree with me that considering the savings, it will be possible that these tankers will be used.

The question is simply whether these large tankers will unload in the Caribbean or Canada for transshipment to the United States, or whether they will bring their cargoes directly to this country via deepwater ports off our own coasts.

In addition to economic advantages, these large newer tankers could offer environmental advantages in the form of advanced pollution control devices such as segregated ballast systems, and improved navigation and fire control systems. The administration's proposal authorizes the Secretary to include, as a condition of the deepwater port license, measures to minimize or prevent pollution of the surrounding waters. Such measures would relate to the design and operation of vessels using the structure. Notwithstanding such requirements, there are economic incentives to vessel owners to incorporate these devices. A barrel of oil spilled is a barrel that cannot be sold. Moreover, the Federal Water Quality Control Act of 1970 assigns legal liability to vessel owners up to $14 million for oil spills. That law is specifically extended to facilities licensed under the administration's proposal.

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There are basically two reasons why the administration considers legislation to be necessary. First, there is enough uncertainty about existing Federal law that we do not believe we have a clear mandate to grant a license to authorize the construction and operation of deepwater ports off U.S. coasts. The second reason is to assure that deepwater ports built off our coasts meet specific environmental and navigational safeguards. One important purpose of the bill is to prohibit transporting any cargo to the United States from a deepwater port off our coast unless the port is licensed under the act.

I should note at this point that we believe the proper basis for this Federal jurisdiction beyond the 3-mile limit is the principle in international law that all nations can make reasonable uses of the high seas. We consider deepwater ports to be a reasonable use, and one of the conditions of the license would be to insure that the operation of the facility does not violate that principle.

A principal difference between the administration's bill and H.R. 2020 pending before this committee is that H.R. 2020 does not create any new licensing or regulatory authority. Its effect is to give coastal States a veto over the exercise of existing Federal authority to license deepwater facilities off their coasts. As I stated above, we do not believe that existing authority is adequate beyond the 3-mile territorial sea.

As to the State veto, we agree in concept that the State should participate in the licensing decision, and we therefore require that the Secretary consult with the Governor to insure—and I emphasize that word—that the offshore structure and its related land-based facilities are consistent with the State land use planning program. We do not intend to preempt the State's authority to plan and regulate land and water resources within their jurisdiction.

We do not favor language which would tend to force a State to deal with the many legitimate and complex questions presented by the location of a deepwater port off their coast by an up or down political decision in the State on the entire project. We prefer rather to encourage the States to attempt to resolve these questions within the context of a land use planning program. If the proposed development is

not compatible with the State's land use planning program, it will not be licensed.

A second difference between the two bills is that the administration's proposal gives Federal jurisdiction to the Department of Interior, while H.R. 2020 gives it to the Environmental Protection Agency. Three factors have led to the administration's decision: First, Interior has the fundamental Federal responsibility for assuring the Nation an adequate supply of energy. This entails supervising the oil import program, administering all emergency fuel supply programs, and providing analytical support for the President's Oil Policy Committee. We also lease all the energy resources on public lands and the Outer Continental Shelf. At the President's direction, we have recently created an Office of Energy Conservation.

The second factor is the expertise we have developed in supervising the construction and operation of oil drilling platforms on the Outer Continental Shelf. These platforms, connected to the mainland by pipelines, are very similar to the type of facilities we expect to license under this new legislation. The processing of license applications for both types of facilities would require virtually the same analytical or technical abilities, drawing on the capabilities of the Bureau of Land Management, Geological Survey, the Office of Oil and Gas, and our marine research program.

The regulatory mechanism which would govern deepwater port facilities is basically the same as offshore drilling platforms. The role of the Department would not be to duplicate that mechanism but to work with all of the Federal agencies involved to assure that these requirements are met. These same agencies—the Corps of Engineers, Environmental Protection Agency, the Coast Guard, the Interstate Commerce Commission, and Federal Power Commission—presently regulate various aspects of offshore drilling platforms.

The third factor which points to Interior as the lead agency is the requirement in our proposal which I already mentioned, that the proposed facility be consistent with the State land use program. Since the administration's land use planning proposal gives Interior Federal responsibility for approving State land use programs, it was felt that Interior was in the best position to coordinate deepwater port licensing with the State land use plans.

We would not usurp the role of the States in land use planning. Nor would we usurp industry's planning role in locating and determining size and design of these facilities except from an environmental or safety standpoint.

Mr. Chairman, it is not often we get an opportunity to propose legislation which will provide for environmental protection, economic savings, and energy and transportation needs. I think deepwater port legislation can do all of the four. I have discussed how deepwater ports will: (1) Reduce port congestion and groundings, (2) allow more time to clean up those spills if they do occur, and (3) accommodate, without dredging existing channels, deep-draft tankers, and thereby realize the cost savings and advanced pollution control benefits they offer.

Mr. Chairman and members of the committee, this completes the formal statement of the Department, and we are happy to answer whatever questions you may have at this time.

Mr. HOWARD. Thank you very much, Mr. Horton. We wish to congratulate you for your statement and for the information you have provided to the subcommittee concerning the overall administration and proposed legislation of deepwater ports.

I understand there have been hearings in the other body on legislation similar to H.R. 2020, and that there will be joint hearings concerning the administration's deepwater port overall legislation.

And for the information of the subcommittee there have been meetings of the chairmen of Interior, Merchant Marine and Fisheries, and Public Works Committees concerning prospective energy legislation.

It has been agreed that all three committees will be holding hearings on overall deepwater port legislation.

Mr. Horton, you stated that the Federal Government does not intend to preempt the States' authority to plan and regulate land and water resources within their jurisdiction.

And I would like to ask you, in the areas being considered now for possible construction of deepwater ports, are any of them being planned within the 3-mile territorial limit, where it is obvious the States do have jurisdictional rights?

Mr. HORTON. Mr. Chairman, I think there is no question that the States have full jurisdiction within the 3-mile limit. We know of no deepwater ports that are being planned within that 3-mile limit, primarily because the waters are simply too shallow in almost every instance.

Mr. HOWARD. So that if they were to place a deepwater port, for instance, along the east coast, which is the area being talked of primarily at this time, I believe, along with the gulf, there is no area where the States would have a legal jurisdiction at the present time, is that correct?

Mr. HORTON. I think we don't doubt, Mr. Chairman, that there are legal jurisdictions within the 3-mile limit.

We do understand that there are possibilities, however remote, within the 3-mile limit, but they are certainly not probable locations for these port facilities.

Mr. HOWARD. You have stated that the Federal Government plans to cooperate with the States and discuss with the Governors of the States their desires and the compatibility of deepwater ports or other facilities off the coasts of the States, and indicate that the Federal Government would not intend to place facilities off the coasts of States where Governors have strong objections.

I note that recently the Corps of Engineers has stated that in representing the Federal Government, the Corps of Engineers does not place projects in a State or affecting a State where there is serious local opposition or where the Governor opposes it, is that correct?

Mr. HORTON. Mr. Chairman, that is the entire thrust both of our national land use policy legislation and of our deepwater port legislation.

Mr. HOWARD. Well, H.R. 2020 toughens that a little bit. It would assure the State that the law protects it, instead of its having to rely on the intent of the Federal Government—and, if the Federal Government really means what it says, I would presume there would be no objection to legislation which says that very same thing—and there has been in the other body legislation introduced where the

Governor at his personal whim, if you like, may have an effective veto over the construction of these.

This legislation goes much farther than that. It requires that a State actually pass legislation which must have the majority support of both houses of the legislature, where it has two houses, as well as the signature of the Governor, to prohibit such activity.

Would you agree that that could probably put more of a burden on the States, and demands more opposing action than merely the statement of a Governor?

Mr. HORTON. Mr. Chairman, let me make two backup comments. First, our legislation is focused not so much on the individual opinion or action of the Governor, but rather on a professional process or program of land planning.

We have indicated that approval of a port facility beyond the 3-mile limit would not be granted unless it were consistent with land use planning in the States.

Now, it is our judgment that this land use planning program or office would be established through the national land use policy legislation which would in general require the establishment of an office perhaps in the office of the Governor.

But we were thinking less of the individual posture of the Governor of the State and more of an orderly process of land planning which we hope will result by legislation to be passed by the Congress this session.

Mr. HOWARD. Is it the administration's policy also to consider affected States, rather than the legal offshore boundaries, beyond the 3-mile limit of the State itself, because it is possible certainly that a facility could be constructed off a State which would perhaps adversely affect an adjoining State, because of tides and winds.

Mr. HORTON. I believe the principle raised by the chairman is an excellent one. The answer is yes, and in fact it would be guaranteed automatically in any event, because of the process of the environmental impact statement, which requires comments and review by affected State and local agencies.

Mr. HOWARD. Do you understand that interstate pollution drift could be a very real possibility?

Mr. HORTON. It could be a real possibility in some locations in the East.

Mr. HOWARD. Now, placing a deepwater port off a coast would also involve pipelines, as you stated, and that would then certainly involve an effect, not only on the waters, possibly the beaches, the marine life, and what not, but it could considerably change the character of the land area adjacent to it, because it is assumed that there would have to be storage tanks constructed on the land; is that correct?

Mr. HORTON. That is absolutely correct. But let me point out to the committee once again, Mr. Chairman, that these decisions on location of facilities onshore would be under the jurisdiction of the Governor and his land planning office.

Also, for another observation, looking at the Seadock proposal and others, it seems likely, or at least a good possibility, that a number of shore facilities would be located not simply on the coast, but as much as 6 to 8 miles back from the coast, so that contingent upon the legislation is not the necessity that they are located right on the beach.

Mr. HOWARD. But they would certainly be within the immediate area of where the pipelines come onto the land?

Mr. HORTON. Of the marine environment, yes.

Mr. HOWARD. And refineries? How close?

Mr. HORTON. Well, it would be impossible to say until a specific proposal was actually submitted and it was examined by State and Federal agencies.

Mr. HOWARD. Some areas along all the coasts of our country, I believe, are areas that have at the present time no industralized section at all. Establishing superports in such areas, with subsequent increased population, construction, and pollution could affect the whole character of these areas, is that not correct?

Mr. HORTON. Mr. Chairman, nothing would preclude a State or its Governor or its land planning office from requiring that these land-based facilities be located as much as 20 miles inshore.

This is a prerogative and an authority which we recognize should belong to the State and we strongly encourage, through other pieces of legislation, that the State adopt these new types of planning authority.

These decisions would not be made by the Federal Government.

Mr. HOWARD. In your statement, you state that the legislation that is before us gives some licensing authority to the Administrator of the Environmental Protection Agency whereas the President's Energy Message gives that licensing authority to the Department of the Interior.

In reading H.R. 2020, I cannot see where the Environmental Protection Agency has any licensing authority. I believe that in the sections concerning affected States, in section 2, it states that if the Environmental Protection Agency Administrator finds that when State adjacent to the location being considered by the Federal Government is determined to be adversely affected, then the Administrator of EPA notifies such State that it may be so affected.

If that State has passed legislation prohibiting deepwater ports off its own coast, then it has a certain time that it may object to the granting of a license and the license shall not be granted until an agreement is reached by both States and the Administrator of the Environmental Protection Agency that the situation is such that the affected State no longer objects to it.

But in no way and no place does it say that the Administrator of EPA grants any license.

This legislation talks about the Corps of Engineers—that: "* * * neither the Secretary of the Army nor any other officer or employee of the United States shall issue any license, permit, or other authorization * * *" et cetera.

So this legislation states that it would not affect or be affected by any kind of long-range deepwater port facility act which may be passed by the Congress, and in no way states that EPA shall in any way be a licensor.

This act would come into play for negotiation and discussion should an adversely affected State, which has to qualify by having passed legislation itself against building such facilities off its own shores, act to prevent his neighbors from building such facilities "at his fenceline." This procedure would preclude dilatory tactics being employed by a State which was competing with his neighbor State for a superport site it desired, located on its own shores.

During these procedures the Administrator of EPA would have some activity in there, but he would have nothing to do with actually granting the license, nor would this legislation affect any kind of international agreement or any lists of legislation or anything that may proceed in the future between our Nation and other nations internationally.

It merely says that no matter what they do there, no matter what permits are available, no matter who has the power to grant a permit, they may not grant that permit if the local State has actually passed legislation prohibiting it within its jurisdiction.

To finish this section up, besides not having the Administrator of EPA grant the authority, it says the legislation wants the Department of Interior, under the President's energy message, to be the one who grants the permit on this.

That appeared to be the administration's intent, perhaps, a month ago, but 1½weeks ago—we haven't received official notice yet, I read in the newspapers where the President intends to abolish the Department of Interior, apparently, and create a Department of Energy, and operations of the Department of Interior and many other people will be transferred into it.

So the present intent of the administration in designating the Department of the Interior as the licensor may be outdated by the time we get to it. If a Department of Energy is created, then I presume it would be the President's intention, the administration's intention, to have the Department of Energy be the one who grants the permit. This action may require us to change some legislation relative to offshore structures, as many people believe that the Army Corps of Engineers has the legal right to grant permits in such areas.

But wouldn't you agree that, No. 1, this legislation does not place in the hands of the Administrator the right to grant a permit?

Mr. HORTON. Mr. Chairman, I think we recognized that in our opening remarks. I would like to call upon Jared Carter to respond more fully.

But let me say, with respect to our own legislative proposal, that nothing would preclude—indeed, it would encourage and require—the Environmental Protection Agency to comment and to examine any proposal for a deepwater port location.

Mr. HOWARD. Thank you. Just before you do, one other thought. In the 1972 amendments to the Federal Water Quality Control Act, that act, that law, gives EPA the authority to monitor all of the Nation's navigable waters.

Mr. HORTON. That authority would be extended to include deepwater port facilities under our bill.

Mr. HOWARD. For EPA to do that?

Mr. HORTON. Yes.

Mr. CARTER. Mr. Chairman, just a couple of comments. As Secretary Horton pointed out, our statement merely said that H.R. 2020 would extend Federal jurisdiction of this problem to the Administrator of EPA rather than to the Department of the Interior.

We quite agree with you that that would not be necessarily inconsistent with creating a licensing authority in some other agency.

But consider a moment the kinds of issues that could arise, as suggested by Congressman Snyder in his opening remarks.

If a deepwater port facility were to be located offshore from one State and that State were agreeable, under the terms of its land use planning arrangement, and indeed the EPA, the Corps of Engineers, and all other Federal agencies who would have their regulatory responsibilities intact under our bill, were agreeable to it—under section 2(b) of H.R. 2020, if the Administrator of EPA determined that there could be some adverse effect on a State, possibly 500 miles away downstream from the ocean current, then the offshore facility could not be built unless and until that second State was also agreeable, and it could not be built except on terms and conditions agreeable to that second State.

Now, this could give rise not only to obvious problems of facilitating interstate and international traffic, but it also could give rise perhaps to the kinds of legal issues that Congressman Snyder referred to if the subsequent international negotiation dealing with these kinds of problems required certain conduct by the United States in responding and imposing a certain category of conditions on these kinds of facilities.

If the State and Federal agencies impose one set of conditions, and this second State 500 miles away insists on imposing others, then you get into the range of problems that Congressman Snyder talked about.

And it was in that regard that we were suggesting that there would be these problems.

Mr. HOWARD. Would you agree that the State 500 miles away—it is quite improbable, but let's consider the situation you suggest—for the State 500 miles away to qualify as a legitimate objector, first it would have to be a State which has passed legislation prohibiting the construction of deepwater ports within its own jurisdiction; that would be one requirement, right?

Now, you said also, then, if the Administrator of EPA finds that that State would be adversely affected by the construction of the deepwater port, then the provisions of section 2 would come into play.

Suppose the Administrator of EPA is correct that that other State would be adversely affected by it. Do you mean that you would object to the considerations of section 2 coming into play, or would you agree with me that that is what protection of the States is all about?

And I would be willing to assume that the Administrator of EPA will have the information correct and that if a State, no matter how far away, is going to be adversely affected environmentally, that that ought to be a prime consideration in any consideration of whether or not such a superport should be built.

I got from your statement that we wouldn't want to be bothered about whether we affect a State, particularly if it is 500 miles away. I would think that no matter where it was to be located, we ought to be protecting not only the coast and the shore and the lifestyle of the State off whose official boundaries it is to be located, but also any other States, no matter how far away.

Wouldn't you agree?

Mr. CARTER. Well, sir, the 102, the NEPA process, would certainly call into play the factfinding mechanism to determine the degree of effect, and to create an atmosphere for trying to control that effect, in the best possible manner.

But if the adverse effect of the second State 500 miles away is extremely small, but that State nevertheless objects and insists on abso-

lutely no adverse effect, then all of the beneficial effects that might result from the deepwater port facility for the environment in and around the first State, and for the economic well-being of that whole section of the country, could be lost by the decision of that second State 500 miles away.

I guess our thrust on this is that that may be too much authority to allow that second State to exercise when it has the possibility of getting in its oar, so to speak, during the NEPA process and having reasonable conditions that will protect its interests to the degree consistent with the overall project.

Mr. HOWARD. What this gets down to is whether or not, despite the claims and the statements of past policy and future policy, that the rights of the State shall certainly be considered, and the Federal Government does not intend to adversely affect seriously any State.

Mr. HORTON. That certainly is correct.

Mr. HOWARD. But this legislation gives the State a determination to make it a law if they so desire; yet there seems to be opposition to it here.

Some people say we could have an overriding national security interest in here, and this law could block that and jeopardize the future of the United States.

Do you feel that the States are not of sufficient concern or ability to responsibly legislate in this area, and that they could in some way detrimentally affect the security of the United States?

Mr. HORTON. Mr. Chairman, let's all of us here put this in perspective. Nothing in our bill, nor any of the discussions leading up to the drafting of the bill, has any intent of denying or discouraging the States from passing legislation protecting areas within their jurisdiction.

The thrust of our legislation is rather the opposite, to encourage the State and the Federal Government to undertake enlightened discussions on land planning, to address the energy problem, to address the environmental problem, to work together between the Governor's land use planning offices and the Department of the Interior and other Federal agencies.

What we are encouraging here is cooperation, discussion, review, and comment. We are trying to avoid and to minimize any types of litigation which might prohibit an otherwise satisfactory solution to the States and to the Federal Government.

It is a positive thrust rather than a negative one.

Mr. HOWARD. I agree with you, and with the intent of the administration's bill, but this is not the legislation before us this morning.

H.R. 2020 does, in fact, just what you said. Do you feel that the States would take into consideration the concerns that you have just mentioned?

Mr. HORTON. We hope very much that they would. And if you put this piece of legislation, whether it is the one before the committee today, H.R. 2020, or the administration's, I would think that the overall objective here is to get the two levels of government working together.

And if you put the deepwater port legislation in conjunction with the national land use policy legislation that is now before the Senate—hopefully it will be before the House shortly—I think you will

see two sister or companion bills that would enforce this degree of discussion and cooperation.

Mr. HOWARD. To put it simply, the Federal Government would not place a deepwater port off the coast of a State that is opposed to the construction of a deepwater port off that coast?

Mr. HORTON. That is right.

Mr. HOWARD. That has not been your policy?

Mr. HORTON. In our judgment, it would not require even a law by that State. It would simply have to be inconsistent with the State's land use planning programs to be rejected by the State.

Mr. HOWARD. H.R. 2020 would provide us with a law that would insure the States in this regard. So then you surely should have no objection to this.

Mr. CARTER. Mr. Chairman, let me point out one other possible effect here of section 2(b) of H.R. 2020. As I read that provision, it says that whenever the Administrator of EPA determines that a facility offshore from State 1 that may affect—not will affect, but may affect waters within the indefinite extension of boundaries seaward from State 2—in other words, there may be an effect on waters 150 miles offshore from State 2.

Well, then, under this section, as I read it, State 2 can prohibit the construction of the facility offshore from State 1, unless and until that facility is constructed under such terms and conditions as State 2 requires.

Now, that certainly gives rise to a number of Federal and international problems, I believe, as Congressman Snyder has stated better than I.

And we think that it might produce the kind of uncertainty and difficulty in getting these kinds of programs going that would not be in the overall interest.

Mr. HOWARD. There has been some discussion in this session, this markup session relative to the words "adversely to affect it," but your statement about "waters 150 miles offshore," or something—are you planning on leaving that as a free zone for pollution or something?

Mr. CARTER. If there were a zone in which the Federal Government would have some kind of pollution authority and responsibility internationally——

Mr. HOWARD. Could you tell me how this bill——

Mr. SNYDER. Mr. Chairman, if you will yield for just an observation.

Mr. HOWARD. Yes.

Mr. SNYDER. There are several lawyers around here, but my reading of the bill in that area has caused me concern, because, as I read the bill, the indefinite extension of such boundaries seaward—go all the way to the 3-mile limit off the coast of Europe or Africa or wherever it might be, and it does not say in which direction that line runs. You have an oblique State line running out there. Does that line continue straight or does it go in a longitudinal direction?

And I think this is what the witness is making reference to.

Mr. MILFORD. Would the gentleman yield?

Mr. SNYDER. The chairman has the floor.

Mr. HOWARD. Sure.

Mr. MILFORD. I would agree with you and I have a similar concern about the same thing.

Mr. HOWARD. We will probably have to get some testimony in this regard from a qualified expert. We have been assuming these lines were longitude for the Gulf States and latitude for the East and West Coast State.

Mr. SNYDER. That is the chairman's assumption. It is not in the bill.

Mr. HOWARD. No, it is not in the bill. We will be talking with the Corps of Engineers also concerning this.

Without this legislation, if a State passes prohibitive legislation which extends out to the 3-mile limit against deepwater ports, could the Federal Government place a deepwater port 4 miles off that coast or 5 miles off that coast?

Mr. CARTER. I suppose that theoretically——

Mr. HOWARD. I would rather get something legal on it, if I can.

Mr. CARTER. I am trying to interpret the act. As a practical matter, the answer is "No." As a theoretical-legal matter, I can conceive of a possibility where 4 miles offshore from one State, the facility is going to be located, but all of the pipeline and all of the related shore-based activity would be in another State—I know of no situation where that would present a practical possibility.

And it does not seem to be the kind of theoretical matter we ought to be concerned about. So for all of the practical situations we are aware of, the answer is that the State that prohibits the deepwater facility and its related activities onshore under its land use planning program, could prohibit the facility from going on.

Mr. HOWARD. You don't know of any? If you want to get parochial, are you familiar with the New Jersey coast?

Mr. CARTER. I don't have detailed expert knowledge on it.

Mr. HOWARD. I believe that in the case of New Jersey, the coastal area ends in an area called Sandy Hook, still part of New Jersey soil. Just north and west of Sandy Hook is Staten Island in New York, and immediately north of Sandy Hook is Long Island, so we have an almost right-angle situation here, where the Federal Government could legally place a deepwater port 4 miles off the New Jersey coast, with the entire remainder of the facility terminating in New York—inside New York's 3-mile limit, as a matter of fact.

The Federal Government could legally do that, even if—and this is not the situation now—the State of New Jersey had passed legislation prohibiting deepwater ports off its coast.

Is that correct?

Mr. HORTON. I think, Mr. Chairman, what we are saying is that it may be theoretically possible, however remote, for this to happen, but as a matter of practicality it seems highly unlikely that that condition would come into being, simply because if there were opposition from the State land use planning board or the State Governor, the location of the facility would be removed until it were more directly offshore of the State affected.

Mr. HOWARD. Could you get a legal opinion from your agency as to whether or not the Federal Government may place a deepwater port at the present time legally 3½, 4, or 5 miles off the coast of any State in this Union, no matter what kind of position has been taken by the Governor or no matter what legislation has been passed by the

State? Not whether it is the policy, but whether it can be done legally or not.

Mr. HORTON. With your permission, Mr. Chairman, we will provide that in writing to the committee.

Mr. HOWARD. Thank you very much.

[The information requested follows:]

U.S. DEPARTMENT OF THE INTERIOR,
OFFICE OF THE SECRETARY,
Washington, D.C., July 16, 1973.

HON. JOHN A. BLATNIK,
Chairman,
Committee on Public Works,
House of Representatives,
Washington, D.C.

DEAR MR. CHAIRMAN: Enclosed is the transcript of the hearings held before the Subcommittee on Energy of the Committee on Public Works, Tuesday, June 19, 1973, on "H.R. 2020 and related bills on Construction of Offshore Bulk Cargo Transshipment Facilities".

The Departmental witness agreed to answer the following questions in a supplemental written submission:

Question: Can the Federal Government at the present time place a deepwater port 3½, 4, or 5 miles off the coast of any State in the Union?

Answer: The United States, under international law has the right to place a deepwater port in international waters provided it does not interfere unreasonably with the use by other nations of the high seas. Congress has not established any mechanism to expressly exercise this right or to clearly prescribe the conditions under which it may be exercised. That is the purpose of the pending legislation.

Sincerely yours,

KEN M. BROWN,
Legislative Counsel.

Mr. CARTER. To make sure we understand the question, is that under our proposed bill or under existing authority?

Mr. HOWARD. At the present time, because all we can work with is the present law we have now.

Mr. CARTER. Under, as we said in the opening statement—at the present time, we believe that the authority to grant those licenses for such facilities beyond the 3-mile limit is sufficiently doubtful that we need legislation in any event.

So if the question is under existing authority, I can almost assure you our answer is going to come back no, we can't grant the facility now.

But if we are talking about under our proposed licensing bill, then that will be a different answer.

Mr. HOWARD. Well, the reason that you can't do it now, does that have to do with the fact that the State has opposed it, or due to the fact that you have other considerations internationally?

Mr. CARTER. It means that no agencies of the Federal Government have sufficiently clear licensing authority beyond 3 miles for these kinds of facilities. It does not relate to the State's activities.

Mr. HOWARD. Under the administration's legislation, you do require discussion with the Governor?

Mr. CARTER. Yes, sir.

Mr. HOWARD. After discussion with the Governor, you can do whatever the law will allow?

Mr. CARTER. No, sir. Section 103(e) says that before issuing any license the Secretary shall consult with the Governor of any State off

whose coast the facility is proposed to be located to insure that the operation of the facility and directly related land-based activities would be consistent with the State land use program.

Mr. HOWARD. To insure in whose mind—the Federal Government's or the Governor's?

Mr. CARTER. As we understand that, if it is not consistent with the State land use planning program, we would probably have a cause of action against your license, so that what is required is an assurance of the compatibility.

Mr. HOWARD. Thank you. Mr. Snyder?

Mr. SNYDER. Thank you, Mr. Chairman. What you are saying on that last question, it has to be consistent with the local zoning laws as they exist?

Mr. CARTER. The State land use——

Mr. SNYDER. Land use, zoning, whatever it is. Now, back to the bill itself, page 1, of H.R. 2020. Do you find any reason to disagree with the observation I made that the indefinite extension of such boundaries seaward, speaking of the States, goes all the way to the 3-mile limits across the ocean?

Mr. HORTON. I think, Mr. Snyder, that we share your concerns on that projection, irrespective of what coastline we are looking at.

Mr. SNYDER. Do you share my concern about the wording of the legislation as to what direction it goes beyond the 3-mile limit? Are you assuming that it is an extension of a straight line—if you have an oblique State line going out to the coast, the 3-mile limit, that it is an extension of an oblique line?

Mr. HORTON. I think, Mr. Snyder, we share the same concern, whether the matter were an indefinite extension or an indefinite direction.

Mr. SNYDER. Now, as I understand the testimony here—and I would want to compliment you fellows on it, the upgrading of your testimony since last week before Merchant Marine and Fisheries, which may have something to do with the lateness of its arrival, and for which I think the lateness would be justified. It is a good statement and I appreciate it. Right now you are operating in a legal vacuum beyond the 3-mile limit so far as the ability to issue a license, isn't that correct?

Mr. HORTON. As Mr. Carter has indicated, the indefinite condition of our authority or the authority of any other Federal agency.

Mr. SNYDER. Our indefinite authority, as you have determined, is the same indefinite authority as any other nation would have, isn't it, before reaching a determination at the Law of the Sea Conference?

Mr. HORTON. There are two problems, Congressman. One is what our law says, and we think that consistent with international law today, we can, as a Nation, adopt legislation allowing for the building of these facilities.

Therefore, if some other nation has adopted that legislation and imposed the kinds of careful regulatory framework that will assure their proper utilization, we would not object, as a matter of international law.

So our problem now is merely one of whether we have the correct Federal law on the books.

Mr. SNYDER. Let's assume that some other nation has adopted such a similar law—it may or may not, I don't know, it may be thinking

about it as this country is—what, other than the policy of a foreign country or the wording of their law, would prohibit their licensing a deepwater port beyond the 3-mile limit of the United States, but in what is referred to as the indefinite extension of such boundaries seaward?

In other words, why can't Canada issue a license to build one at Sandy Hook?

Mr. CARTER. An intriguing question. I am not sure that the Canadians would want to incur, in addition to the wrath of the State of New Jersey, the problems with the entire United States if it tried that sort of thing.

Mr. SNYDER. I am sure that as a matter of policy they might not want to incur this wrath, but, on the other hand, the energy crisis in this country and the shortage of oil in this country, particularly the Northeast, might be such that they would not incur the wrath of the majority of the people of the United States, if in fact they decided they wanted to do that and we had some laws of certain States which prohibited it, if H.R. 2020 became the law.

We in Kentucky might be glad to see them build one off of Sandy Hook, and the United States might, too, if we can't do it ourselves, if we have problems with New Jersey and other seaboard States. We need the oil.

Mr. ALLEN. Congressman, if I might address that, the possibility that you suggest is the precise reason why we included in our bill a prohibition of any one shipping cargo from a port off our coast to this country. And that is precisely to prohibit other nations or other nationals from licensing such ports.

H.R. 2020 has no such prohibition against——

Mr. SNYDER. Now, if you have that in your bill and your bill becomes law, and then H.R. 2020 becomes law and the whole Atlantic seaboard, all of those States say no, your law would prohibit distribution in here from Freeport, Grand Bahama Island, won't it?

Mr. ALLEN. Right.

Mr. SNYDER. What are those people up in the Northeast going to do for oil?

Mr. ALLEN. Our bill would prohibit shipment of oil from a facility off our coast unless it is licensed under our act.

Mr. SNYDER. Wouldn't the one at Freeport, Grand Bahama Island, be off our coast?

Mr. CARTER. Not within the contemplation of the bill, Congressman Snyder, because that facility would then undoubtedly be supplying the eastern seaboard by barges or tankers bringing in the crude oil product from the Bahamas.

What we have in mind is dealing with the situation where a vessel comes in and offloads from a facility and then, either by pipeline or by barges, lighters, ships directly to the coastal State.

It is not our intention to prohibit the east coast from getting oil from Canadian facilities or the Bahamas.

We think that the economic costs are not reasonable to incur in the light of the alternatives available, but we would not want to preclude that under our bill.

Mr. SNYDER. Now, so far as you know, are there any deepwater ports in the world in international waters that are solely deepwater ports, not connected with exploration?

Mr. CARTER. I do not know. I believe the Corps of Engineers would have better information on that than we do.

We have got a little map indicating where they all are. But I do not know how far they are from shore. I have asked that question. I have never gotten back an answer. And I am sorry I can't respond.

Mr. SNYDER. Back to my other question again—and I know that other nations probably don't want to incur our wrath, but then there may be some that may not care, may not be quite as concerned as Canada.

Is there any reason why some other nation might be involved in oil and could not legally build a deepwater port in international waters off the coast of the United States, irrespective of what States would want it?

Mr. CARTER. Yes, sir. I apologize for being somewhat detailed. But several years ago this question was surfaced by a litigation involving an effort to build a facility, an artificial island and a gambling casino, several miles offshore from Florida.

And the entrepreneurs argued that since that area was in the high seas, nothing precluded the construction of that facility.

The Justice Department brought suit and successfully precluded the construction.

Mr. SNYDER. Before what forum?

Mr. CARTER. I believe it was finally in the fifth circuit.

Mr. SNYDER. Does the fifth circuit have jurisdiction over Saudi Arabia?

Mr. CARTER. Well, off our coast——

Mr. SNYDER. Beyond 3 miles?

Mr. CARTER. Off our coast, the entrepreneurs were U.S. citizens in that case, and we had a handle on them.

In any event, we would have jurisdiction over the interests of the United States involved. And the interests that were looked to, to support the decision to order the destruction of that artificial island, was that under the Continental Shelf Convention, the U.S. Government has exclusive jurisdiction over the seabed for the purpose of exploring and exploiting the natural resources of the Continental Shelf.

And the judge ruled that since the construction of an artificial island could interfere with the exclusive jurisdiction of the Federal Government to explore or exploit natural resources, we could preclude that building.

Mr. SNYDER. Deepwater ports beyond the Continental Shelf?

Mr. CARTER. We could preclude the construction of a deepwater port on the Continental Shelf—and what the Continental Shelf is, is an issue that international lawyers love to argue about probably more than any other question.

Mr. SNYDER. Doesn't it get down to the fact that we are going to have to resolve this with other nations at the Law of the Sea Conference and we don't know right now?

Mr. CARTER. It is certainly an issue that requires international——

Mr. SNYDER. Now, isn't it also possible that at the Law of the Sea Conference, that we are going to reach some determination that licensing of deepwater ports in international waters might be a joint venture with other nations rather than solely within the jurisdiction of the United States beyond the Continental Shelf?

Mr. CARTER. Perhaps.

Mr. SNYDER. And if that should occur, would H.R. 2020 cause you any concern with a State making a treaty with a foreign nation or being involved in a treaty with a foreign nation?

Mr. CARTER. Again, it is a technical answer, but I would assume that if a treaty at a later date imposed some standards or requirements that are inconsistent with any earlier adopted law, that the subsequent provision would control in the case of any conflict.

But certainly the complication that you referred to earlier of having to deal with some 26 coastal States imposing various kinds of conditions could be a complicating factor making it difficult to reach an easily administered framework.

Mr. SNYDER. Do you know of any Atlantic Coast States that have indicated they want a deepwater port?

Mr. CARTER. I don't know. I know that there are ports being considered now for handling large tankers. I read about it in the paper—off Massachusetts, I believe.

I know there are some thoughts, but I don't have the details on the proposals and the States' attitudes, and I wouldn't want to hazard an answer that would get my boss into trouble, saying we know what such and such a State is going to do.

Mr. SNYDER. There has been some discussion, as the chairman indicated, maybe at Savannah. Of course, we know that some Gulf States do; you made reference to this in your testimony.

I would like to ask you how far offshore are those two proposals.

Mr. ALLEN. I think the Seadock is proposed to be about 25–30 miles offshore, and the LOOP proposal is a little closer in, 21 miles.

Mr. SNYDER. Can we, as a matter of law, legally give a State jurisdiction beyond 3 miles?

Mr. HORTON. I think the answer to that question was in so much doubt, at least considered so by the Department, that we focused our legislation on the practical solution to the problem, as opposed to getting into the legal debate as to whether or not that extension of authority could be granted by legislation.

Mr. SNYDER. Much of your testimony today has been keyed around the fact that you are going to work in conjunction with the National Land Use Policy Act, whatever the proper title is, which has not been enacted into law.

We do have the Coastal Lands Management Act, which is a matter of law, though perhaps unfunded. I would like to know if you could address yourself to what protection that gives the States?

Mr. HORTON. The principle, Congressman Snyder, would be the same, that any land use planning or program instigated by the States under either pieces of legislation, either the authority that exists under coastal zones or the authority that would exist under the National Land Use Policy legislation, would be observed and respected by the Federal Government.

Mr. SNYDER. Of course, I know that is not in your jurisdiction. That is under NOAA, which is under Commerce. But I assume that your Department is anticipating some jurisdiction in this matter in the administration's bill. You can tell us what protection that does give the States.

Mr. HORTON. The point is well taken. Both of these are administration bills.

Mr. SNYDER. I understand that, but I want you to tell us what the Coastal Zone Land Management Act does to protect the States, if anything.

Mr. ALLEN. I will try to answer that, Congressman Snyder. The Coastal Zone Act provides Federal grants to the coastal States to develop management programs for the coastal zone.

Coastal zone is defined in that statute as the State's territorial waters plus the contiguous zone which goes out to 12 miles, plus a margin of dry land, which—I am not quite sure of the precise definition, but I think it has something to do with interaction between water and land in the intertidal area.

The State then sets up an agency to develop this land use program, and the management of the program must meet certain conditions of objectives set forth within the act, which basically involve protecting environmental values.

Mr. SNYDER. And if the State had enacted legislation consistent with the Coastal Zone Land Management Act that didn't permit any pipelines, there wouldn't be any pipelines, would there?

Mr. CARTER. That is correct.

Mr. SNYDER. Can any of you tell us how much money private enterprise has invested looking toward the construction of the Alaskan pipeline, and then had the rug pulled out from under them?

Mr. HORTON. We have expended over a 3-year period approximately $11 million to write the environmental impact statement for the trans-Alaskan pipeline.

Mr. SNYDER. How much has private enterprise spent?

Mr. HORTON. Our information is that, to date, the industry expenditures have been somewhat over $400 million.

Mr. SNYDER. Now, I don't think that anybody wants to see a situation like that develop again.

You have in your testimony some estimates of costs of these facilities. I would assume that there is going to be a substantial investment by private enterprise to build ports, and perhaps a substantial investment by Government.

Looking toward where the actual practical locations can be, so far as the terrain under the water is concerned and also the adjacent oil needs—is there any way that you could give us a ball park figure as to how much money might be invested before a site would be determined that could conceivably have that site jerked up from under them when H.R. 2020, or if H.R. 2020 is the law?

Is there any way you can give a figure? I know it is highly speculative.

Mr. HORTON. Two parts, Mr. Snyder, that we should address in our answer. First, the framework of our legislation gives the initiative, as you well appreciate—we have discussed this before—the initiative to private industry to propose sites.

But it gives to the Government the authority to deny or to grant the site after the industry has applied for it and provided the Government with the details of their examination.

I don't think we have any projection at this stage of the game as to what funds could be expected that an industry might have to invest before they could apply.

In other words, in terms of geophysical oceanic exploration, before they could pin down several sites.

Mr. CARTER. We don't have figures. The Corps—I hate to keep trying to throw the ball to them—but they have done a lot of work in looking at various different possible sites.

And their experience in this question would be greater than ours. I don't know if they would have the figures of what the preinvestment kind of survey costs would be. But we don't.

Mr. SNYDER. Looking at the bottom of page 1 of H.R. 2020, nobody can issue a license or permit or other authorization for the facility that we are talking about:

> Those waters or territorial seas or contiguous zone or the ocean which are within the boundaries of any State, within the indefinite extension of such boundaries seaward, if such State has by law—prohibited the construction of such a facility in the territorial seas within its boundaries.

I read that to say that if a State says you can't build a deepwater port within its boundaries, which is within the 3-mile limit, no permit shall be issued beyond 3 miles by either the United States or any of its agencies or departments.

Now, if the Law of the Sea Convention would arrive at a conclusion that more than one nation had to participate in the issuance of a permit on the high seas, in international waters, would you anticipate that the United States could not participate in the issuance of a license off the coast of France, if that happened to be directly opposite the shores of a State that had prohibited the construction of a facility within its 3-mile limit?

Mr. CARTER. That, again, is a very intriguing question.

Mr. SNYDER. It is not only intriguing. It is rather obvious, isn't it?

Mr. CARTER. Well, I think probably H.R. 2020—I wouldn't want to interpret anybody else's bill until we had the responsibility for doing so. If the facility were designed and built offshore from France for the purpose of serving France and was 2,000 or 3,000 miles from the United States, I think we would probably find a way to conclude that this bill did not apply.

Mr. SNYDER. I would hope so. Mr. Chairman, I thank you.

Mr. HOWARD. Mr. Studds?

Mr. STUDDS. Thank you, Mr. Chairman. I would like to pursue a number of the questions raised by Congressman Snyder, if I may.

First of all, I agree with him that the testimony is a good deal more substantive and detailed than last week before the Merchant Marine Committee.

But it still raises, at least to my mind, an awful lot of serious questions. You will have to forgive anybody from New England having difficulty, when given the opportunity to question those who say they have been in charge of the energy policy of this country for the last 10 years or so, and trying to get straight in his mind the number of questions he would like to ask.

I would like to pursue, for a moment, the question that Congressman Snyder raised regarding international law.

We began to raise this last week. These ports would be, most of them if not all of them, constructed clearly in international waters, beyond not only the 3-mile territorial limit but the further 9-mile contiguous zone, up to 12 miles.

Congressman Snyder's opening testimony indicates quite precisely that this question is on the agenda of the International Conference on the Law of the Sea.

Do you by any chance know what the American negotiating position is with respect to deepwater ports on that agenda item ?

Mr. CARTER. I haven't studied it in precise detail. It will be consistent with the administration's proposal for the type of licensing authority and regulatory framework that we are proposing.

Mr. STUDDS. In other words, what the administration is proposing in this instance is to put into effect, prior to conclusion of ratification of the Law of the Sea, what in effect is our negotiating position ?

Mr. CARTER. We would hope, of course, that the international conference, whether it is agreed to—international rules that are no different from the kinds of regulatory framework that we would impose under this act.

But I don't think, in the international context, we would try to tell any other country what kind of a national mechanism they are to use.

Most of them don't have federal systems. We wouldn't call upon them to adopt one or another method of handling domestic issues.

The international conference would undoubtedly address itself just to the international questions that are involved.

And our bill, section 114 of our bill, has a provision say that the Secretary of State, in consultation with appropriate Federal agencies, shall seek appropriate international measures regarding navigation in the vicinity of deepwater port facilities.

Mr. STUDDS. Is it a correct summary of your position that while, in general, the United States would prefer to wait for international agreement, particularly on matters regarding the Law of the Sea, but because of the urgency of this situation it is necessary to move preliminarily on an interim unilateral basis pending international agreement, which would, of course, eventually, when it occurs, take precedence over any unilateral steps we may have taken with your legislation ?

Mr. CARTER. I think that that is accurate. We don't think that the bill that we have proposed involves any violation or difficulties under international law.

There are a few questions that have to be paid careful attention, in order to insure that we are not guilty of the kind of unilateral action that we object to by others.

Mr. STUDDS. What kind is that, kind of unilateral action you object to as opposed to not objecting to ?

Mr. CARTER. Well, the extension of jurisdiction by coastal States in a manner that adversely affects the long-standing vested interests of the nations. In other words, if some coastal States unilaterally extend their authority out to prohibit the fishing.

Mr. STUDDS. You caught the gist of my question.

Mr. CARTER. That is enough ?

Mr. STUDDS. No, no. But if, indeed, I did adequately summarize your position, you have gone right on to my next question. This is precisely the contention of a great many of us with regard to fisheries jurisdiction, as you know.

We have been told again and again and again by the administration that we cannot under any circumstances contemplate unilateral interim

action on a question which is subject to adjudication by the Law of the Sea Conference.

Mr. CARTER. Well, Congressman, appreciate the different balance of interests involved in these cases.

Mr. STUDDS. Oil versus fish.

Mr. CARTER. Well, in the case we are dealing with here, no other nation's vested interests are going to be adversely affected by our setting up a deepwater port facility off our coast.

The regulatory framework that extends out there assures that questions of environmental protection are adequately cared for. It assures that navigational issues are adequately cared for. And it assures that safety problems are adequately cared for.

So the interests of other nations are protected. We don't preclude other nations from fishing in the general area except as it may interfere with the operation of the facility.

When you deal with the unilateral extension of coastal state jurisdiction that precludes fishing, you affect the economic livelihood of other nations' citizens, and that gives rise to a different problem.

Mr. STUDDS. No one is suggesting such an extension that would preclude fishing, merely one which will regulate fishing.

Mr. CARTER. Well, I have——

Mr. STUDDS. I don't mean to draw you unfairly into an area that is not your own, but it did seem to me that it was important to point out the analogous arguments being made contrariwise, depending on which particular interest was involved.

I attempted to pursue some of the questions raised by Congressman McCloskey last week.

You stated again in your testimony that Interior has the fundamental Federal responsibility for assuring the Nation an adequate supply of energy.

Now, his question was obvious—what happened? Those of us in New England who for over a decade have been pleading and begging and beseeching the Department of the Interior in successive administrations, for example, to do away with the blinkety-blank oil import quota system.

Suddenly, you now come to us and say, my goodness, we are going to have to import all kinds of oil.

Well, heaven help us all, if the expertise to which you refer has led you just recently to reach that conclusion. It was in 1970, as I understand it, that this Nation first began not producing enough oil for its own needs.

A great many people, as you know, refer to that policy over the years as the drain-America-first policy.

Now, the Interior Department seems suddenly to have discovered, No. 1, that we have a sudden increase in demand and, No. 2, that our continental oil production has gone down.

Well, that surely should be no surprise, given the policy over the years that insisted that we rely almost exclusively on our domestic production.

And I recall the President's Task Force on Oil Import Quotas, I believe in 1970, which recommended to the President that we abolish the import quota system. Instead, he abolished the task force.

Did you see the story in this Sunday's Washington Post on the global oil crisis, by any chance, any of you gentlemen?

Mr. LAY. Yes, sir.

Mr. STUDDS. It raises some questions. And there are just two of them that I would like to address to you. According to the story, we ignored a Saudi Arabian invitation last fall to establish a special oil relationship. That invitation is no longer open.

And we also failed to respond to a Canadian offer with regard to negotiating the possibility of a trans-Canadian pipeline. Not even to respond to it—we didn't decline it, we didn't answer it, according to this story.

I wonder how one explains lost opportunities like this and then a sudden statement by us that we have the magnitude of the problem that we do.

Mr. HORTON. Mr. Congressman, you have raised two questions. I would like Dr. Lay to answer the first and Mr. Carter to answer the second.

Mr. LAY. Very briefly, and I think it is more than just addressing the question, the Saudi Arabian proposal may, of course, not still be available. I don't think that is known.

But our concern at that time, and still our concern, is that if each consuming country takes it upon itself to lock up specific reserves, you can get the consuming countries bidding against one another for the available oil reserves and we could all be in a much more desperate situation than we are.

Obviously, Japan and Western Europe have a very deep interest where those Middle East reserves are going to end up and at what prices and terms.

As to the drain-America-first argument and why did we suddenly get surprised, I don't think this is a sudden thing, Congressman.

Mr. STUDDS. We have been draining it for a long time.

Mr. LAY. As I indicated, it has been developing for many years, at least a decade or a decade and a half, but the Northeast, the New England States, have been more favorably treated under the oil-import program than any other area.

There is a good possibility that some of the product import provisions relating to the Northeast has helped create part of the problem in that it has failed to make it attractive to develop some of our domestic reserves.

You probably also know, that it has become impossible to site a new refinery in your area, which again contributes to the problem.

Obviously it has become impossible to develop the Atlantic Outer Continental Shelf, or at least that has been delayed for some time.

Policies on natural gas have not encouraged domestic development.

What I am saying is that the problem is a very long-term problem. It has been caused by many factors.

And some of those factors have not been totally within the control of the administration.

Mr. STUDDS. I can appreciate that, but why did it take the administration until the last few months to do away with the import-quota system and suddenly come to us and say, my God, we have to have all kinds of new ways to deal with massive imports?

Mr. LAY. Again, I don't think that is quite accurate. Now, obviously, the quota system—the formal announcement of its death was made on April 18. For all practical purposes, the import quota system has been dead for some time.

We have, in fact, gone to a system of filling the gap between our domestic supply and domestic demand with imports. And that has been true for at least 2 or 3 years.

You cited the earlier task force report. One of the primary arguments of that report was, No. 1, that the foreign oil was cheaper than the domestic oil and would stay cheaper and we should import more of it and save the consumer money.

The second aspect of that report was that even if we removed all quota restrictions, we would not expect to receive more than about 15 percent or 16 percent of our imports from the Middle East, even as late as 1985.

Well, since that time two things have happened. One thing is that the producing countries have gotten much better organized, have done a better job of looking after their best interests, although it has been against our best interests, so that at the current time the price of the foreign product is above the price of the domestic product.

And, second, even now, in 1973, we are receiving 15, 16, 17 percent of our imports from the Middle East—so, although the task force report is often held up as being a good prophet of what was to come, there were many miscalculations made.

And the policy position of the Government was different 2 years ago and had to be different 2 years ago than it has to be today.

Mr. STUDDS. I can appreciate that argument, although one wonders where some of those miscalculations were made, to find ourselves suddenly, relatively suddenly, in a crisis of the magnitude we apparently face.

I don't want to take more than my share of time. I am looking forward to——

Mr. HORTON. In answer to the pipeline question.

Mr. STUDDS. Please.

Mr. CARTER. I am pleased that you raised that question, because the newspaper article, in referring to the question of a pipeline, is simply wrong.

Minister Macdonald at no time made an offer of a joint pipeline through Canada. And it is also wrong that we did not respond to all of the comments, suggestions, that Minister Macdonald made.

The facts are that in the discussion between Secretary Morton and Minister Macdonald, it was quite clear that Canada was not even prepared to receive an application for a pipeline, and Minister Macdonald said that hopefully by the end of the year they would be in a position to consider an application.

He made no assertion that the application would be granted.

The facts since then have borne out our assessment of the probability, namely, Canada is not yet ready to receive an application, and now says they won't be ready until the end of this year.

All of the indications are that even if an application were made, the chances of it being acted upon favorably and a pipeline being built across Canada, would involve at least a 3- to 5-year delay in the delivery of North Slope oil to the United States.

I am sorry that that newspaper article was erroneous on that important point. And I am hopeful that we can at least correct that in the minds of this committee.

Mr. STUDDS. I am glad we asked that, because it is important to get that cleared up in the record.

If I may ask one quick question and make one very brief observation. There is a great deal of concern in New England, as you know, about the possibility of imminent offshore drilling and there is a great deal of confusion about who has the authority to decide whether or not that will proceed.

There is a general impression that Secretary Morton has simply decreed that it will proceed.

Can you tell us with any degree of specificity whether or not that will proceed without the OK of the States of New England?

Mr. LAY. No. 1, Secretary Morton has not decreed that there will be Outer Continental Shelf drilling operations on the Atlantic. In the President's Energy Message on April 18, the President announced that there would be a study undertaken by the Council on Environmental Quality, with the cooperation of EPA and Interior and other interested bodies, to study the environmental and other consequences of development of the Atlantic Outer Continental Shelf and the Gulf of Alaska, and that no drilling would take place until that study was completed.

Now, that study has gotten underway. It is, as I indicated, headed by the CEQ and no decisions concerning development will be made until after that study.

Now, during the study process, there is every intention of having public hearings and other avenues for the States of the Northeast and along the east coast and, of course, Alaska, to participate.

Mr. STUDDS. But not necessarily to have a veto power.

Mr. LAY. We have not said that they could have a veto power. That, again, through the environmental analysis process, through the CEQ study first and through the NEPA procedure secondly, certainly they can have a very strong voice on whether development proceeds.

I understand your concern, but I think the States of the Northeast have many elements to weigh also.

Mr. STUDDS. I appreciate that.

Mr. LAY. And you are talking about the problem of getting energy into that area. Now, certainly, this is one area that has to be considered.

Mr. STUDDS. Those of us in the Northeast and those of us in the Congress are somewhat less happy than we used to be with having a "very strong voice."

My last observation—I apologize for taking so much time—is that the Coastal Zone Management Act to which you referred, as you know, does not provide Federal grants to anyone. The administration refuses to fund it for one single penny.

And it seems to me that if you are going to make proposals that are based on this kind of cooperation between agencies and programs, that you ought to get your heads together in the administration.

It is a source of endless frustration, as you know, on the part of the Congress to go through the trite old process of passing a bill and having the President sign it and assuming thereby it becomes a law. Maybe that is an antiquated old-fashioned notion.

But still some people in the Congress are operating under that view.

Thank you.

Mr. HOWARD. Before I recognize the gentleman from North Carolina, just one quick question.

There was a bit of humor in our previous discussion concerning the location of certain places as described in H.R. 2020. For instance, where it refers to—talking about those waters which are within the boundaries of any State or within the indefinite extension of such boundaries seaward.

And it was asked if maybe 5 miles off the coast of France could be considered as being under that indefinite boundaries seaward category of the bill.

I notice in the President's bill here, H.R. 7501, talking about deepwater port facilities, it states:

> Deepwater port facility means a facility constructed off the coast of the United States and beyond three nautical miles from such coast.

Could not 5 miles off the coast of France be classified as being beyond 3 nautical miles of such coast?

Mr. HORTON. Mr. Chairman, the Outer Continental Shelf drops off rather quickly to the Outer Continental Slope and then to the Abyssal Plains, so I guess geologically speaking the answer would be no.

Mr. CARTER. Let me expand on that a little.

Mr. HOWARD. I would feel that if I were 5 miles off the coast of France, I would be beyond 3 nautical miles from the coast of the United States.

Mr. CARTER. I think you would be, but under section 102(b) part of the definition of "deepwater port facility" in the administration's bill is that, in order to be licensed, the facility must be for the principal purpose of providing for the transshipment of commodities between vessels and the United States, so that there is that limiting factor that makes it a little bit improbable.

Mr. HOWARD. Well, couldn't it be just as limiting in H.R. 2020 as it is in the President's bill?

Mr. CARTER. If that language were in H.R. 2020.

Mr. SNYDER. If the chairman will yield, notwithstanding that language which does limit it in the administration's bill, if that language were not in the administration's bill, as a matter of fact, poor draftsmanship in the administration's bill would not be justification for poor draftsmanship of H.R. 2020.

Mr. HORTON. The point is very well taken, Congressman.

Mr. HOWARD. Just so we are even. The gentleman from North Carolina.

Mr. MIZELL. Thank you, Mr. Chairman. And I will try to confine my questions to some very practical points.

I notice in your statement, Mr. Horton, that you refer to the two projects off the gulf coast at this time.

Based on the assumption of how much oil we are going to need in the future, how many of these ports are we going to need to handle the distribution of this oil?

Mr. LAY. Congressman, I think you can get a wide range of opinion on that question. There are some who think that very small superport facilities could be justified.

I think that most of our analysis would indicate that you would probably end up with something like one or two in the gulf, maybe two or three on the east coast and maybe two or three on the west coast. In other words, around a half a dozen, give or take one or two.

But, again, it kind of depends both how the import situation changes, where the refineries are going to be located, where you have to put these particular facilities—can you put them close to the refinery facility—and other factors of that kind.

Mr. MIZELL. I assume by your answer, then, that there has been no selection as to where are the best locations.

Mr. LAY. We have done quite a bit of an analysis, as has the Corps and as has private industry. We have not tried to select what we would consider the optimum or optimal locations, no, sir, but we have considered some of the likely possibilities and done some environmental and economic analysis in preparation for submitting this legislation.

Mr. MIZELL. Based on those studies and on the areas of the greatest need for this oil, are you in a position to share with us where you think the best locations for them would be?

You mentioned two on the gulf coast. Of course, those are already under planning and construction.

As far as those along the east coast, what areas do you think would be the best for those to be located?

Mr. LAY. Do you want me to continue sticking my neck out?

Mr. HORTON. I would like to say, Congressman, as Dr. Lay has indicated, the Federal Government, despite some rather extensive studies, particularly the Corps of Engineers and others, has not at this point determined what the optimum location should be or would be.

We would, in fact, rely heavily on the proposals made by private industry and use our expertise and our experience and former studies simply to examine the site that had been proposed by the industry.

Mr. MIZELL. But it would be logical to assume that those areas that stand in the greatest need should be the ones, they are willing not only to establish refineries but also to establish deepwater ports; isn't that true?

Mr. LAY. Congressman, quite obviously if all other things were equal, you would like to have your deepwater port facility on the east coast close to the existing large refinery centers. That, of course, is Wilmington, Philadelphia, and Bayonne. That is where the major concentrations are.

Of course, New York is another major concentration. But I say if all other things were equal.

It could be that it would not be possible to have one in that area and it could be that one in Maine or one off of the Carolinas would be very attractive, or Georgia.

Mr. HORTON. The trap, Mr. Congressman, that we do not intend to fall into is for us to premeditate unilaterally where even approximate sites might be until we have the benefit of State land use planning advice.

Mr. MIZELL. Well, if I followed the responses to the questions of the gentleman from Kentucky, these would be negotiable with the States and in conjunction with the States at this point?

Mr. HORTON. Discussed with the States; yes, sir.

Mr. MIZELL. All right. Mr. Horton, you said, in referring to the facilities off the coast of the Philippines and Okinawa and so forth, you said that in general the experience with these systems has been excellent.

I assume this is referring to spills.

Mr. HORTON. That is correct largely. But also in consideration of operational efficiency.

Mr. MIZELL. Now, you make the point that with the deepwater ports, there is less likelihood of danger to—and I assume this means your tidelands and the coastal areas—from a spill in one of your deepwater ports than there is with a tanker that might be in close to shore, even one of the wells on the outer shelf.

Mr. HORTON. I would be happy to elaborate upon that.

Mr. MIZELL. I would appreciate it if you would.

Mr. HORTON. The statistics we have, and we can provide these and amplify them for the record, is that approximately 5 million tons of oil pollute the oceans each year, and for a study conducted by the U.S. Coast Guard, we have a figure of 1,416 tanker casualties. And there was active oil pollution from 269 of these.

Now, most of the casualties, particularly those that result in loss of oil, are due either to collisions—and collisions result in 31 percent of the oil-polluting accidents, groundings result in 26 percent and structural failures only 19 percent.

This, of course, gives rise to the obvious observation that most of these have been in congested and shallow areas.

Mr. MIZELL. All right, sir. I notice that in the background comparing the tanker sizes—really, I can't quite comprehend the real size requiring a draft of 80 feet.

But assuming that we had a tanker of this size using the deepwater port and assuming that we would get the maximum oil spill from one of these, do we have the capability of cleaning up that oil slick before it would reach the shore, considering that we are out 20 to 30 miles offshore?

Mr. HORTON. Of course, the first point would be, it would be further offshore, so we would have more time, given a mean level of current-wind—we would have more time to clean it up before it got to shore.

Mr. MIZELL. This is true, but what I would hope you would be able to share with the committee is how large of an oil spill can you clean up, considering you are 25 miles off the coast before it would reach the tidelands?

Mr. CARTER. It is pretty hard to make any undertakings as to the ability to completely clean up an oil spill that occurs out in the middle of an ocean like that.

It depends a great deal on the wind and wave conditions and other factors. The technology is not perfected to insure that you are going to clean up all of the oil spills of that nature.

What is important about these facilities is that they will encourage the utilization of relatively new vessels.

One key factor in looking at the way oil gets into the ocean, in addition to the groundings and collisions which can be minimized by taking them offshore, is that the structural failures of ships usually occur in ships that are from about 12 to 15 to 20 years old.

The supertankers are not just larger and newer. They contain all of the new technology in the form of radar, communication systems, control and safety systems and so on.

You can also minimize the size of the spill by requirements of compartmentalization, that is, you limit the actual tank size in the vessel, so that you get at least a handle on the size of the spill even if the vessel breaks in two.

More likely, the spills that will occur in a deepwater port facility are going to be the kind that will occur because in your offloading, a hose breaks—or there is human error rather than ships colliding or grounding with subsequent sinking and release of all cargo.

And for those kinds of spills, all of the Coast Guard detailed requirements governing loading and offloading that they will impose and are imposing under legislation recently enacted, will be extended out to these facilities, so that the maximum possible protection both through new construction techniques and the application of Coast Guard regulations will minimize the possibility of and the size of the spill that you are going to get from these offshore deepwater ports.

Mr. HOWARD. Will the gentleman yield for a moment on that? There has been a Corps of Engineers study which dealt with the possibility of supertanker accidents, with the massive spills that would result. The Corps of Engineers study stated that there is no technology for containing spills of that massive size.

You may get more oil spills in a year from a lot of small tankers than you would from one supertanker if you try to average them out. I think this has been said by many of the oil companies.

The fact is they can contain more total oil in many small spills, but cannot contain the large one, which I believe was the thrust of your statement as to what the available technology status is.

And I believe the containerization sectioning of the supertankers—so that the whole thing doesn't go—I think that the size of a container is 190,000 barrels. So it is nonetheless a pretty big section.

Mr. MIZELL. I appreciate the chairman's comments. And this, of course, is the real crux of any opposition that I see in the construction of these deep sea ports. It is important to assure all concerned of the minimization of any spill.

And, of course, all of us are interested in our coastal areas. We all enjoy them.

And so I think that this is an area, that it would certainly be helpful if we can assure the people that we can prohibit any massive destruction from oil spills from these deep sea ports, that we are going to protect those marine lands, we are going to protect those coastal areas, then, of course, we are going to meet the energy crisis that we face.

And this is why I am so interested in this, because this is what I find is the basis for the apprehensions as it relates to these deep sea ports and I certainly thank you for your responses to the questions.

Mr. HORTON. Mr. Chairman, if I might just provide an amplification, another point for the consideration of the committee, provided to us by what is called the—study, the U.S. Coast Guard study. This indicates that tankers of 80,000 deadweight tons and larger can transport a given quantity of oil over the same distance seven times safer than those which are smaller than 80,000 deadweight tons.

So it is the probability of a spill as well as the volume of the possible spill that has to be taken under consideration.

Mr. CARTER. I think that there is an additional point, too. And that is even recognizing that you cannot claim 100 percent certainty that you are never going to have some small, or maybe even a large spill, from a deepwater port facility, servicing these very large tankers—then look at the alternative.

The alternative for supplying fuel for the market in the Northeast particularly is going to involve much more environmental risk.

That is what all of the studies that have been conducted indicate, that the environmental risk from a very large number of smaller ships entering already congested ports is a much greater hazard than the environmental risk associated with the offshore deepwater port facilities.

So you combine both the economic advantage of these operations with the real environmental advantage, to make them a proposal which is kind of nice to be argued for. You are not caught on the same dilemma that you often are in; namely, development versus environment.

Mr. HOWARD. The gentleman from Texas?

Mr. MILFORD. Thank you, Mr. Chairman. I have just a few brief questions that I think are to the point.

In an offshore bulk port, isn't it a fact that we have a tremendous number of on-land complements, storage tanks, pump stations, pipelines, and other facilities?

Mr. HORTON. That is certainly correct.

Mr. MILFORD. Then, as a practical matter, would it ever be possible to construct one of these offshore bulk ports offshore from a State without that State's consent, when the State has jurisdiction and control over the construction of the on-land facilities?

Mr. HORTON. We have said, Mr. Congressman, that as a practical matter it would not be.

Mr. MILFORD. As to our present Environmental Protection Act, does it now protect States from any harm on the structures of these offshore ports?

Mr. HORTON. Well, it would require, certainly, the full consultation with affected States, affected local communities, and affected Federal and State agencies.

Mr. MILFORD. You would have to comply with the Environmental Protection——

Mr. HORTON. Of course. It would not be exempted under the legislation. In fact, it is specifically provided for in our proposal.

Mr. MILFORD. Would that also not protect any State, though——

Mr. HORTON. Yes. It would.

Mr. MILFORD. Under the present act. In view of the urgency of the energy crisis and our known needs for fuel imports, do you think it is wise for the U.S. Government to enact such a law as H.R. 2020?

Mr. HORTON. As we have testified, sir, we don't support H.R. 2020. I think we agree with its objectives. Instead we have provided our own proposal.

Mr. MILFORD. One final question. In the opinion of your own legal people, would H.R. 2020 be a constitutional law?

Mr. HORTON. Well, we have got two of our finest legal people here from the Department sitting to my immediate right. So I will ask either one of them.

Mr. CARTER. I am not prepared. We would want to put that question to our Solicitor before giving an opinion on the constitutionality of the bill. I wouldn't want to express an opinion on it at this time.

Mr. MILFORD. Thank you, Mr. Chairman.

Mr. HOWARD. Thank you.

Mr. SNYDER. Would you mind, Mr. Milford, if he did supply the answer in response to your question?

Mr. MILFORD. I would appreciate that very much.

Mr. HOWARD. If you would supply that, without objection it would be made part of the record.

[The following was received for the record:]

DEPARTMENT OF JUSTICE,
Washington, D.C., September 19, 1973.

Hon. JOHN A. BLATNIK,
Chairman, Committee on Public Works,
U.S. House of Representatives,
Washington, D.C.

DEAR MR. CHAIRMAN: During the hearings held on June 19, 1973, your Committee requested an opinion on the constitutionality of H.R. 2020, a bill dealing with the construction of deepwater ports in offshore areas. This request, which was initially directed to the Solicitor of the Department of Interior, was referred to the Department of Justice by a letter from Secretary of Interior Morton to Attorney General Richardson, dated July 27, 1973. The Attorney General has now referred this matter to this office for our attention.

I am enclosing a memorandum which addresses questions regarding the constitutionality of the above bill. The memorandum represents our informal views on the subjects discussed, but should not be regarded as a legal opinion. I should also stress that in reviewing possible constitutional issues raised by the bill, we did not attempt to deal with the merits of the bill as a policy matter.

If this Department can be of any further assistance to you on this matter, please let us know.

Sincerely,

ROBERT G. DIXON, Jr.,
Assistant Attorney General,
Office of Legal Counsel.

Attachment.

MEMORANDUM

Re: Constitutionality of H.R. 2020.

This memorandum addresses questions involving the constitutionality of H.R. 2020, a bill which would prohibit under certain circumstances activities of the Federal Government in connection with the construction of offshore deepwater port facilities. We make no attempt to deal with the merits of such a proposal as a policy matter aside from the initial observation that H.R. 2020 does not appear to provide a complete regime for Federal regulation of the construction and operation of deepwater port facilities. Thus, enactment of H.R. 2020 would not provide any assurance that the Secretary of the Army or any other Federal official has the authority to authorize the construction of such a facility or to regulate its operation.

While the matter is not entirely free from doubt, it is the view of this Office that Congress does possess the constitutional authority to enact a bill such as H.R. 2020. In particular, the proposed bill would in all likelihood be considered a proper exercise of congressional powers under Article I, section 8, clause 3 of the Constitution (the Commerce Clause). The substantial role granted to a coastal state in determining whether a deepwater port should be built off its coast would appear to be consistent with relevant Supreme Court interpretations of the Commerce Clause.

I. SUMMARY OF THE BILL

Section 1 of the bill bars the Secretary of the Army or any other official or employee of the United States from directly or indirectly authorizing the construction of a deepwater port facility in the territorial seas, contiguous zone, or the high seas, where the facility would be within the territorial boundaries of a state, or the indefinite seaward extension of those boundaries, and the state has prohibited by law the construction of such a facility within its boundaries.

Subsection 2(a) of the bill provides for notification to the Administrator of the Environmental Protection Agency prior to any Federal action authorizing the construction of deepwater port facilities within the boundaries of a state, or the indefinite extension of the boundaries, where the state has not prohibited the construction of a deepwater port facility within its territory. The Administrator could raise an objection within 180 days of such notice, in which case the authorization may proceed only in accordance with the joint action prescribed in subsection 2(b).

Subsection 2(b) provides for notification to the states in all cases where the Administrator determines that construction of a deepwater port would "affect" the waters within the territory of a state, or within the indefinite seaward extension of its boundaries, if the state in question has prohibited the construction of such facilities within its boundaries. If the state files written objections within 120 days after receipt of the notice, then the authorization for construction of the facility can be issued only with the joint concurrence of the agency desiring to issue it, the Administrator, and the state involved.

Section 3 of the bill sets forth definitions of terms which are utilized in the bill.

Before proceeding to consider issues relating to constitutionality, we note that there are several deficiencies in the bill relating to drafting or substance. Section 1 provides that "notwithstanding any other provision of law", no Federal official shall authorize the construction of a deepwater port off the coast of a state which has prohibited the construction of such a facility within its boundaries. This language is inconsistent with the language in subsection 2(b) of the bill, which apparently authorizes the Federal officials to permit the construction of a deepwater port facility with the concurrence of state officials despite the existence of a state law prohibiting construction.

Another problem is caused by the incompleteness and ambiguity of certain language in section 2 of the bill. Subsection 2(a) provides for notification of the Administrator and permits objections to be raised (presumably by the Administrator) within 180 days "as provided in subsection (b) of this section." Subsection 2(b) in turn provides for objections to be filed by the states with the Administrator, but does not indicate the manner in which others might object to a proposed permit. Thus, for example, it is unclear whether a hearing would be required prior to issuance of a permit, and what judicial or administrative remedies might be available to an aggrieved party.

II. THE COMMERCE CLAUSE ISSUE

Article I, section 8, clause 3 of the Constitution, known as the Commerce Clause, provides that the Congress shall have the power "To regulate Commerce with foreign Nations, and among the several States, and with the Indian Tribes."

Because the construction and operation of deepwater port facilities would be in furtherance of foreign commerce objectives, there appears to be little doubt that the Congress may enact legislation authorizing their construction. However, a more difficult question is raised by section 2 of H.R. 2020, which appears to delegate to the states the power to prohibit the construction of deepwater ports. A delegation of veto power to coastal states, it may be argued, is inconsistent with the spirit of the Commerce Clause, pursuant to which the drafters of our Constitution sought to eliminate the internal barriers on the flow of commerce imposed by the states.

It is true that where Congress has not acted to impose Federal regulation on an aspect of interstate or foreign commerce, the Supreme Court has often interpreted congressional silence as a prohibition on any state regulation in the area involved, particularly where such regulation may impede the flow of commerce. See *Southern Pacific Co.* v. *Arizona*, 325 U.S. 761 (1945). However, where the Congress affirmatively acts to delegate regulatory authority to the states, the Supreme Court has held that such a delegation is constitutionally valid. The leading case in this area is *Prudential Insurance Co.* v. *Benjamin*, 328 U.S. 408 (1946).

In *Prudential*, the plaintiff brought a proceeding challenging the validity under the Constitution of a state statute which imposed a tax upon foreign insurance companies. The state cited the McCarran Act in defense, pursuant to which Congress had declared "that the continued regulation and taxation by the several States of the business of insurance is in the public interest, and that silence on the part of the Congress shall not be construed to impose any barrier to the regulation or taxation of such business by the several States." 59 Stat. 33 (1945), 15 U.S.C. 1011.

The position advocated by Prudential in this case was that "the limits of state power to regulate commerce in the absence of affirmative action by Congress are also the limits of Congress' permissible action in this respect, whether taken alone or in coordination with state legislation." 328 U.S. at 422.

Writing for the seven-member majority, Justice Rutledge rejected Prudential's argument:

> The commerce clause is in no sense a limitation upon the power of Congress over interstate and foreign commerce. On the contrary, it is, as Marshall declared in *Gibbons* v. *Ogden*, a grant to Congress of plenary and supreme authority over those subjects. The only limitation it places upon Congress' power is in respect to what constitutes commerce, including whatever rightly may be found to affect it sufficiently to make congressional regulation necessary or appropriate. This limitation, of course, is entirely distinct from the implied prohibition of the commerce clause. . . . The one limitation bounds the power of Congress. The other confines only the powers of the states. And the two areas are not coextensive. . . . [T]o blur them and thereby equate the implied prohibition with the affirmative endowment is altogether fallacious. There is no such equivalence. 328 U.S. at 423.

Justice Rutledge went on the describe the deference which the Court had paid to congressional will in past decisions, either by recognizing a congressional limitation as to what constitutes commerce, or in accepting a congressional enactment that specifically authorized state regulation which the Court had previously declared to be inconsistent with the Commerce Clause, 328 U.S. at 424–425.

In cases decided since *Prudential*, the Court has reiterated its policy of giving maximum effect to the express or implied intent of the Congress as to the permissible extent of local regulation of commerce. In *California* v. *Zook*, 336 U.S. 725 (1949), the defendants had been prosecuted under a California statute which prohibited "sale or arrangement of any transportation over the public highways" without a permit from the Interstate Commerce Commission. The Court upheld the validity of the conviction under the state law, rejecting an argument that it entered "an exclusive congressional domain." 336 U.S. 726–27. The Court stated:

> There is no longer any question that Congress can redefine the areas of local and national predominance, *Prudential Insurance Co.* v. *Benjamin*, 328 U.S. 403; *Southern Pacific Co.* v. *Arizona*, *supra*, at 769, despite theoretical inconsistency with the rationale of the Commerce Clause as a limitation in its own right. The words of the Clause—a grant of power—admit of no other result. When Congress enters the field by legislation, we try to discover to what extent it intended to exercise its power of redefinition; . . ." 336 U.S. at 728.

Ultimately, it would appear that the Commerce Clause does impose some limitation on the ability of Congress to delegate regulatory powers to the states. If Congress were to make a wholesale delegation of the power to regulate commerce to the states, such would clearly be inconsistent with the wording and the spirit of the Clause. Through inclusion of the Commerce Clause, the founding fathers clearly sought to move away from the state and local regulation of commerce which prevailed under the Articles of Confederation, a system which had a choking and chaotic effect on the flow of commerce. However, the lesson of the *Prudential* and *Zook* cases appears to be that Congress can provide for limited federal-state cooperation in the regulation of commerce without violating the Constitution. Subsection 2(b) of H.R. 2020, which provides for a joint federal-state decision on the construction of deepwater ports in cases where the adjacent coastal state has enacted legislation prohibiting such construction, appears to be consistent with the spirit of these decisions.

III. OTHER CONSTITUTIONAL ISSUES

Because the construction of deepwater ports involves shipping between the United States and foreign nations, issues involving admiralty law and the con-

duct of foreign relations are likely to be involved in the regulation of such facilities. For example, since deepwater ports are likely to be constructed on portions of the high seas, the rights of other nations to make use of the high seas will be affected, posing a delicate foreign relations problem for the United States, particularly in view of the pending Law of the Sea Conference at which this country hopes to obtain multilateral agreements relating to the extent of territorial seas and the proper uses of the high seas.

Because H.R. 2020, as noted earlier, does not provide a comprehensive framework for the regulation of the construction and operation of deepwater ports, it does not adequately come to grips with admiralty and international law problems likely to be encountered. However, our primary focus is on the possible constitutional problems created by subsection 2(b) of the bill, providing for state approval of any construction effort undertaken off its coast, even where the facility is to be located on the high seas.

The Constitution has been interpreted to provide for Federal control in matters relating to foreign affairs and admiralty law. In *United States* v. *Curtiss-Wright Corp.*, 299 U.S. 304 (1936), the Supreme Court stressed the dominance of the President in matters relating to foreign affairs. In matters of admiralty law, Congress is given power to legislate by Article III, section 2 (granting admiralty jurisdiction to the Federal courts) and Article I, section 8, paragraph 18 (the necessary and proper clause). See *National Trust Co.* v. *The Barlum*, 293 U.S. 21, 42–43 (1943).

Arguments could be advanced that H.R. 2020, by granting states a veto power over the construction of deepwater ports off their coasts, unconstitutionally delegates to the states powers infringing on Federal control over foreign affairs and admiralty matters.

As noted above in connection with the Commerce Clause discussion, subsection 2(b) of H.R. 2020 basically provides for a cooperative federal-state decision in deciding whether construction of a deepwater port facility should be authorized. Presumably, a state would not be in a position to force upon the Federal Government any action relating to admiralty law or foreign affairs matters. Nonetheless, even a minimum role of the state in these matters could be grounds for a constitutional challenge to H.R. 2020. Thus, in our view, while the legislation probably would survive such a constitutional attack, the outcome would be difficult to predict with certainty, since we are not aware of any court case precisely on point.

IV. CONCLUSIONS

Notwithstanding any deficiencies in H.R. 2020 from a policy point of view, this Office is of the opinion that Congress probably does possess the power under the Constitution to enact legislation of this type. Specifically, although the matter is not entirely free from doubt, we believe that the delegation of a veto power to coastal states could be supported under Supreme Court interpretations of the Commerce Clause. A challenge to H.R. 2020 based on its alleged infringement of exclusive Federal control over admiralty or foreign affairs matters might have a somewhat greater chance of success. However, on balance, we are of the view that the bill would probably survive a constitutional attack based either on this issue or on the Commerce Clause.

Mr. MILFORD. I think it is a very important question.

Mr. HORTON. We will be very happy, sir, to supply that for the record.

Mr. HOWARD. Would your reply make it constitutional or not constitutional?

Mr. CARTER. No, sir.

Mr. HOWARD. For practical purposes, as the gentleman from Texas said, without the State wanting this, by being able within its own jurisdiction to provide pipelines and refineries and the wherewithal that goes with a deepwater port, you could not put it off that State's shores except in some very strange instances where it would be right off the coast of one State and yet have its pipelines running to an adjoining State.

Basically I would agree with that. However, would it not be very possible that in utilizing that port with all of its pipelines and all of its facilities going to the immediate State, that any damage environmentally, pollutionwise, could in most instances avoid that State while adversely affecting an adjoining State, such as a facility which might be located 4 miles south of the coast of Long Island above the latitudinal line off Sandy Hook, N.J., with predominantly northeast winds as they have there which would then drive oil not north, but southwest, and that the damage would be placed upon New Jersey for a facility that would be totally and legally now off the coast of New York?

Would you agree that that is the kind of situation——

Mr. HORTON. It would be unwise and inaccurate for us to deny that possibility. It could be as far away as 30 to 40 to 50 miles, depending upon winds and current.

But I would point out to the committee that this information would be developed in a 102 statement.

Mr. HOWARD. Some persons feel that H.R. 2020 should not be enacted because there are so many international meetings that have to be held and agreements made and the like, that it might not be wise to pass this kind of a bill now or to have this bill now because of all these complications that could arise internationally. Is that true? Wasn't that part of the discussion that we had before?

Mr. CARTER. I think that the kinds of international problems that could arise under a bill of this nature could exist whether or not there were a number of international meetings that were going to take place and are in fact taking place.

I think that the need for some licensing authority, as we said in response to Congressman Studds, is so great that licensing authority is required before there are international agreements on the subject.

But we would not want these kinds of complications that could arise under H.R. 2020.

Mr. HOWARD. Thank you. Would you agree that H.R. 2020, as a bill, deals with what this Nation's Federal Government may not do, not with what other nations may not do?

No matter what other nations do, this bill only talks to what the United States of America may or may not do.

Mr. CARTER. That is certainly my initial reading of it, yes, sir.

Mr. HOWARD. Without H.R. 2020 and with the President's bill, should it become law as it is written now, could legally the Federal Government authorize the construction of a deepwater port off the coast of a State which does not wish it, legally?

Mr. HORTON. I think, Mr. Chairman, that we have agreed to examine the legal issue in greater depth and provide it in writing for the committee.

But as a practical matter I hope we have made it clear to the committee that it would be impossible for the Federal Government to grant a permit or a license if it was inconsistent with the State land use planning program.

Mr. HOWARD. If that situation should be the true situation and the Federal Government may legally put a port off a State that does not want it, without H.R. 2020, then it is your testimony that the administration would like to keep that option?

In other words, they would not want H.R. 2020 passed which could block it?

Mr. HORTON. That is correct, sir, that we are opposing H.R. 2020, but I am not sure we have addressed the option in our legislation or otherwise.

Mr. HOWARD. Your bill, as stated, does not give any legal prohibition to deepwater ports by States.

Mr. HORTON. That is what I am saying.

Mr. HOWARD. It does not give that right to the States.

Mr. HORTON. It does not give that right.

Mr. HOWARD. You would like to keep it that way?

Mr. HORTON. Yes, we would.

Mr. HOWARD. Thank you very much for your testimony. We don't know whether other things may come up during the hearings on this legislation, but we may need some more information from you. We will await the written testimony we talked about before, which will become a part of the record, and we hope that, if need be, we may be able to call you back, should we need some more information.

Mr. HORTON. We would be happy, Mr. Chairman, to appear any time that you deem it appropriate. Thank you for your hearing this morning.

Mr. HOWARD. The subcommittee thanks you very much for your testimony this morning.

The subcommittee will be in recess until 2 p.m. this afternoon.

[Whereupon, at 12:22 o'clock, the subcommittee adjourned to reconvene at 2 p.m. the same day.]

AFTERNOON SESSION

[Whereupon at 2:07, the Subcommittee on Energy reconvened, Hon. James J. Howard, chairman of the subcommittee, presiding.]

Mr. HOWARD. The Subcommittee on Energy will please come to order.

This afternoon we are continuing the hearings on H.R. 2020 and related bills.

For our witness this afternoon, we have as a representative of the Corps of Engineers, from the Office of the Chief of Engineers, Department of the Army, Maj. Gen. J. W. Morris.

General, we are very happy to have you here this afternoon.

STATEMENT OF MAJ. GEN. J. W. MORRIS, DIRECTOR OF CIVIL WORKS, OFFICE OF THE CHIEF OF ENGINEERS, DEPARTMENT OF THE ARMY; ACCOMPANIED BY MESSRS. JOHN HADD, JOHN GRATTAN, AND WILLIAM COUNCE

General MORRIS. Thank you, Mr. Chairman. As you have noted, I am Maj. Gen. J. W. Morris, Director of Civil Works, Office of the Chief of Engineers, Department of the Army.

I have with me on my right Mr. John Hadd—far right. Next to me, Mr. John Grattan. And, on my left, Mr. William Counce.

Sir, I appreciate the opportunity to testify on H.R. 2020, and to also provide the committee with certain of the Corps findings to date resulting from the congressionally directed deepwater port studies

in which we are engaged. Let me note at the outset that the Corps fully recognizes that decisions on deep port development, particularly for supertankers, must be framed in the broad context of national energy policy and the role foreign sources are anticipated to play in satisfying domestic energy requirements. We hope that our studies will prove useful in illuminating some of the critical issues involved and choices available in shaping a viable energy policy.

H.R. 2020 has, it appears, two basic objectives. First, it would assign the principal decision authority for Federal permits or licenses for deep port development to the Administrator of the Environmental Protection Agency. In this regard, the proposal conflicts directly with the administration's legislation—introduced as H.R. 7501—which assigns such responsibility to the Department of the Interior.

The second objective of H.R. 2020 is to grant individual States veto authority over potential deep port development if they have enacted statutory prohibitions against such development in the territorial sea within the States boundaries.

This proposed authority appears both unnecessary and undesirable. Present State jurisdiction within the 3-mile limit and on land is sufficient for State regulation and prevention of shoreside facilities that would be necessary for the successful employment of offshore transshipment facilities. Further, such an extension of jurisdiction would undesirably involve individual States in areas traditionally left to Federal and international control and agreement.

Let me turn to our studies for new or modified navigation-transportation facilities to accommodate deep-draft cargo carriers. We are engaged in such studies for three coastal regions of the continental United States—the North Atlantic, the gulf, and the Pacific.

Deepwater ports are of current concern because the world market for seaborne movement of bulk commodities is very large and growing rapidly. The 1971 shipments of six principal bulk commodities—oil, iron ore, coal, grains, phosphate rock, and bauxite—amounted to 1.7 billion tons. Crude oil accounted for over 60 percent of this trade; petroleum products, an additional 12 percent; iron ore, 14 percent; and coal and grain most of the remainder. The U.S. trade was about 15 percent of total world seaborne trade in these bulk commodities. The U.S. economy is becoming more dependent on foreign sources for raw materials, particularly crude oil and iron ore and at the same time we are increasing our exports of such dry bulks as grains and coal.

The maritime industry, led by Japan and European countries, has responded to the growth in world trade, particularly the movement of crude oil over long distances, by the development of supersize ships, especially tankers, which have capacities up to 477,000 deadweight tons with even larger ships now being built. When these very large crude carriers—commonly called VLCC's—are used, shipping costs on long hauls are reduced by as much as 50 percent, when compared with tankers of 65,000 to 80,000 deadweight tons, the maximum size for most important U.S. crude oil ports at present. Ships for moving iron ore, coal, and other bulk commodities, separately or in multipurpose vessels, are also becoming larger as are ships for carrying liquefied natural gas and even container ships but none of these vessel types is expected to match oil carriers in size growth.

In December 1970, Congress authorized the first study of regional navigation requirements "with particular reference to economies afforded by the use of supersized bulk transport vessels and tankers." The first regional study authorization pertained to the Texas gulf coast. Subsequent study resolutions expanded the study assignment to cover the gulf coast from Brownsville, Tex., to Tampa, Fla., and also authorized regional assessment of navigational facility requirements for the North Atlantic and Pacific coasts.

Despite differing times for study authorizations and appropriation of study funds, the Corps scheduled the three regional studies in concert, with first field-level reports for each region to be completed by about July 1 of this year. The reports must then be processed through the Office, Chief of Engineers, the Office of the Under Secretary of the Army, and the Office of Management and Budget, and we would hope that they could be submitted for consideration of the Congress later in this calendar year. Each of the studies, while addressing unique regional conditions, will try to achieve two common objectives:

(*a*) Demonstrate the net advantages or disadvantages to employment of supership technology, and

(*b*) Assuming adequate net advantage, identify the most likely or most feasible sites or locations for its employment within the respective regions under study or, conversely, identify the most likely transportation system alternatives and associated problems in the absence of deepwater port facilities.

The purpose of our studies is not the promotion of either new navigational facilities or superships as such. We are concerned with a healthy national economy and the best transportation means to sustain a strong economy. We are equally concerned with a transportation system which will afford maximum protection to environmental values, including, but not limited to, the protection of water quality.

One of our most important research efforts in support of the regional studies was to survey foreign experience in use of supership technology. The Arthur D. Little report, titled "Foreign Deepwater Port Development, A Selective Overview of Economic, Engineering and Environmental Factors," conveys crucially important lessons with regard to total environmental impacts of deep port development. Potential "landside" impacts, as well as marine pollution problems, must be given thorough consideration and our reports will make this point.

Let me now turn to our North Atlantic regional study to illustrate some of the economic and environmental issues involved with deep ports, and also illustrate the interrelatedness of these issues.

The North Atlantic region consumes almost one-third of the Nation's energy production and utilizes over one-half the crude oil currently imported into the United States. Shipments of crude oil into the North Atlantic region already exceed 1 million barrels per day, and are projected to increase to 2 million barrels per day by 1980 just to supply existing refinery locations to their maximum processing capacity.

Today, imports are delivered to the refineries either through direct unloading from tankers up to 70,000 dwt or occasionally transshipped via barge or tanker from larger vessels anchored offshore. The cost

of transporting crude oil from the Persian Gulf to the North Atlantic using a 70,000 dwt ship is about $9.40 per ton. This compares to an estimated $5.35 per ton cost using a 326,000 dwt ship. This more than 40 percent savings in transportation costs provides an economic rationale for deep port facilities.

Economic efficiency is only one consideration, however. We also want a transportation system which is environmentally efficient. Marine pollution problems related to crude oil imports are not unique to deep port facilities. They exist today. The question requiring one answer is: For whatever level of imports is anticipated, what system of carriers and facilities will minimize risks of marine pollution?

If any significant rise in imports is expected, the size and number of relatively small vessels maneuvering in our bays will increase considerably, if facilities to handle large tankers are not available. To supply the North Atlantic region (in particular the Philadelphia-New York corridor)——

Mr. HOWARD. General, I hate to break into your testimony, but there is 7 minutes before the end of this vote.

I don't know if I can make it or not, but this would be a good time for me to try.

The subcommittee will stand in recess for approximately 10 minutes.

[Recess from 2:17 to 2:27.]

Mr. HOWARD. The subcommittee will please come to order. Thank you for your patience, General, if you will please continue.

General MORRIS. While you were gone I got two new jobs. To continue, Mr. Chairman.

To supply the North Atlantic region—in particular the Philadelphia-New York corridor—with 2 million barrels of crude per day would require a fleet of about 300, 70,000-dwt vessels but only about 60, 326,000-dwt ships. Simply by decreasing the number of operating ships, the chances of collision and groundings are reduced. The fewer ships will also reduce the number of transfer operations and consequent risk of spills.

There are contrary risks as well, notably the less frequent but potential of a larger spill of a supertanker. The Coast Guard has given intensive study to the "spill probability" problem and our studies are making full use of those efforts. The point I wish to stress, however, is that the matter is not onesided; marine pollution problems cannot be assumed away in the absence of supertanker facilities.

Development of deep port facilities will not in itself create a marine pollution problem, unless considerable dredging is required. Ocean pollution from spills of crude oil is a problem which must be dealt with in any event. This is likewise true of potential adverse "landside" environmental impacts of crude oil importation and processing.

Here we come to the heart of expressed, and fully legitimate, concerns about deep port environmental impacts beyond ocean-water quality. Foreign experience shows that unless carefully regulated, development of deep port facilities is likely to generate substantial expansion of refinery-petrochemical complexes. Such expansion, however, is in no way inevitable. Development of deep port facilities need not entail industrial development in the immediate vicinity of the facilities. Determination as to whether or not industrial expansion

is desirable and where such expansion should take place are issues that can be resolved through proper land use planning.

Just as development of deep port facilities per se need not dictate industrial development, neither would they obviate intelligent land use planning or cause unwanted conversion of presently agricultural or nonindustrialized areas. The issue of future land use should be considered separately from the question of whether or not deep port facilities should be developed to service existing industrial complexes. As I have already noted, present levels of crude import in the North Atlantic region are sufficient to justify, economically, deep port facilities.

The gulf regional navigation study, as accomplished to date, serves well to illustrate the planning methodology being employed by the Corps, and the dramatically changing petroleum supply picture.

Historically, the gulf coast has been a surplus producer of domestic crude oil and refined products. These surpluses have been shipped to other regions in the United States to help those regions meet their demands. Current information indicates that production of crude oil along the gulf coast is peaking and will begin to decline in the foreseeable future. However, current demands by the crude-oil-deficient areas of the Southeast, Northeast, and midcontinent have increased total demand for gulf coast crude oil and finished products to the point where importation of foreign crude oil has become necessary.

If the gulf coast were to continue supplying crude oil and finished products to other regions and meet its own needs, a scenario which is not at all certain, and probably not undesirable, by the year 2000 foreign crude oil imports into the gulf coast region would increase from approximately 3,500,000 barrels per calendar-day in 1980 to about 11,400,000 barrels per calendar-day in 2000. Accordingly, total gulf coast refining capacity would have to increase from the present 4,818,000 barrels per calendar-day to approximately 9 million and perhaps 15 million barrels per calendar-day in 1980 and 2000, respectively.

In locating this increased capacity, we divided the gulf coast from Panama City, Fla., to Corpus Christi, Tex., into 10 coastal refining complexes and assumed that all refinery expansion would occur in the gulf coastal area within these complexes. The growth in refining complexes was correlated to the projected waterborne shipments and to existing and planned growth of pipelines from the gulf coast area to the Southeast, Northeast, and midcontinent. Using this approach, no major shift in refinery location would occur until the demand in the Northeast exceeded the projected growth of pipeline and waterborne shipments. Five alternative cases of future refinery growth were developed and tested.

Crude oil imports are projected to come from the Middle East and North Africa. Without deepwater port facilities along the gulf, small vessels may continue to transport the crude oil direct to the gulf, utilizing existing navigation channels; or, very large crude oil carriers (supertankers—ship sizes up to 500,000 dwt). And these large vessels may transport the crude oil to a deepwater port in the Bahamas and transfer it to smaller vessels for transshipment to the gulf. To continue transporting the crude oil to the gulf in small vessels would require daily callings of seven 70,000-dwt vessels in 1980 and twenty-four 70,000-dwt vessels in 2000, compared to daily callings of two 326,000-dwt vessels in 1980 and five 326,000-dwt vessels in 2000 if deep-

water port facilities were available in the gulf. Reduced ship traffic long-haul distances from the Middle East and North Africa, and the economies of scale in ship construction and operation all favor the use of very large crude oil carriers in the bulk crude oil trade over the continued use of smaller vessels.

The location of a deepwater port in the Bahamas is thus seen to be likely in the absence of deepwater port facilities in the gulf and was used as the base condition in our investigations.

The following deepwater port facility systems were investigated:

(*a*) No action (existing system).

(*b*) A five-dredged-channel system to inland ports with depths ranging from 60 to 100 feet.

(*c*) A system of artificial islands protected by breakwaters for offloading supertankers and storing crude oil located offshore in approximately 100 feet of water with barge or pipeline distribution to the refinery complexes.

(*d*) Monobuoy systems located offshore in approximately 100 feet of water with pipeline distribution to intermediate landside storage and barge or pipeline distribution to the refinery complexes.

The dredged channels, artificial islands, and monobuoy systems were considered as mutually exclusive systems. Therefore, no combinations were investigated.

Studies evaluating the impacts of dredged channels are incomplete at this time, but preliminary analyses indicate that this alternative has the greatest potential for environmental damage. Major environmental disadvantages of this alternative include losses of valuable estuarine and marsh habitat as a result of dredging and increased possibilities of major oil spills reaching highly productive estuarine and marsh ecosystems.

Offshore port development, utilizing either artificial islands or monobuoys, appears to have several environmental advantages over dredged channels. These include fewer adverse construction and maintenance impacts, reduced probability that spilled oil will reach productive coastal areas, and increased probability of weathering and dilution of toxic fractions in the event of a major spill.

The major social and economic impacts would be caused by the changes in the scale of crude petroleum refining activity. Changes are being measured in employment, population, earnings, and income for subareas of the gulf coast region. From these measurements, other social and economic effects are being estimated. The areas that appear most sensitive to change in refining activity are those where the level of refining activity is small today. While the studies are not complete, overall indications are that favorable social and economic impacts would occur in the gulf region.

The results to date of our analyses of alternatives for the gulf region can be summarized as follows:

(*a*) Without deepwater port facilities in the gulf, VLCC's would be employed to transport the crude oil to a deepwater port in the Bahamas and the crude would be transferred to smaller tankers for transshipment to the gulf.

(*b*) Channel dredging as an across-the-board method to accommodate VLCC's is not economically justified when compared to transport by small tankers from the Bahamas.

(*c*) Artificial islands and breakwaters are economically feasible, but do not compare favorably with the monobuoy system.

(*d*) The monobuoy system is the most economically favorable deepwater port system.

I will conclude my statement with a brief listing of the most important, general findings to date resulting from our regional navigation studies. Certain points are repeated but they merit such an emphasis.

Most crude petroleum deepwater port alternatives studied show highly favorable economic benefit-cost ratios. However, hypothesized deepwater transshipment ports for handling dry bulk imports and exports on the east and gulf coasts appear—at least at present—economically unjustified. Benefit-cost ratios for dry bulk facilities are significantly less favorable than those applicable to crude petroleum facilities for three reasons.

(*a*) Total commodity flows are substantially lower.

(*b*) Unit ocean transport savings are less.

(*c*) Transshipment costs to and from deepwater ports are higher than for petroleum.

The prospective justification for deep port facilities to accommodate petroleum supertankers varies considerably between regions. In the North Atlantic region, for example, such facilities could now be economically employed to service existing refining facilities. On the gulf and Pacific coasts new deepwater facilities would be economically justified only if the volume of crude imports increases substantially.

If any significant rise in crude oil imports is to be accommodated, the size and number of relatively small vessels maneuvering in our bays will increase considerably if facilities to handle large tankers are not available. Simply by decreasing the number of operating ships, the chances of collision and groundings are reduced. The fewer ships will also reduce the number of transfer operations and the consequent risk of spills. This conclusion is supported by the Council on Environmental Quality, which has done a major study of the environmental aspects of deep port development in parallel with our regional studies.

Foreign experience shows that unless carefully regulated, development of deep port facilities are likely to generate, in the immediate vicinity on shore, substantial expansion of refinery-petrochemical complexes. Some States seek such economic expansion. Others, especially in the Northeast, do not, since industrial expansion would take place at the expense of increasingly scarce open space and very profitable and needed recreation areas. The significant point is that such expansion is in no way inevitable. Development of deep port facilities need not entail additional industrial development in the immediate vicinity of the facilities. Determination as to whether or not industrial expansion is desirable and where such expansion should take place are separate decisions from the deep port question. These issues can be resolved through coordinated land use planning. The industry must be prepared to work with responsible local and State officials to insure that the development and operation of energy production and industrial facilities respect the need for sustaining a varied, yet complementary, set of land uses within each State.

The traditional method for accommodating large size ships, that is increasing channel depths through dredging, is generally not a viable

alternative. In some cases channels could be deepened only through blasting and removal of rock, a very expensive process. In other places, channels are subject to much sedimentation and maintenance costs would be excessive. In some cases deeper dredging might impair or destroy fresh water aquifers. And in most cases there is a serious environmental question of how to dispose of enormous quantities of dredged material which would result from major deepening of existing channels. Based on present information, only for a certain few locations on the west coast do prospects appear reasonable for channel deepening to accommodiate supertankers.

There is no presently foreseeable need for the Federal Government to undertake the major capital investments which would be required to bring deepwater port facilities, storage facilities and pipelines, into operation. Private or non-Federal public ownership, financing, and operation of deepwater port facilities is seen compatible with the public interest if accomplished under adequate and effective Federal control and regulation.

New Federal legislation is required to insure timely decisions on permit applications by either private or State interests, as well as to insure coordinated review and inclusion of proper permit stipulations to effectively protect environmental as well as economic interests and be responsive to both domestic and international legal obligations. This need is recognized and comprehensively treated in the legislation submitted by the administration on April 18, 1973.

That completes my formal statement. I will be happy to respond to any questions the committee may have.

Mr. HOWARD. Gentlemen, we are sorry. We do have another vote on the floor for a bill. The subcommittee stands in recess for approximately 10 minutes.

[Recess from 2:37 to 2:49.]

Mr. HOWARD. The subcommittee will please come to order.

General, thank you very much for your testimony. And I, for one, appreciate the work that the Corps of Engineers has been doing in studies and other informational activities relating to the possibility of deepwater ports and their effects, economically and environmentally, on the Nation and the coastal areas.

I don't know of any organization that has as much expertise in this field as does the Corps.

We went through it this morning as to who would give the permits for deepwater port development, whether it be the Environmental Protection Agency or the Department of Interior.

I note in your testimony that you stated "it would assign the principal decision authority for Federal permits or licenses * * *," which correctly does not say that EPA would be the licensee but certainly, should there be any adverse effects to adjoining States, that the Environmental Protection Agency would be the active agency in notifying adjacent States, in being the ones to whom objections would be sent, and who would coordinate discussions among the States involved, as well as the agencies of the Government that would grant the permits and the other affected States.

So I agree with you there. However, I think that is probably moot, since the Department of the Interior, which, as you mentioned, would be assigned such responsibility under the administration's bill,

H.R. 7501, may not be any longer operative if we create a new Department of Energy which would then coordinate the whole thing.

But we do agree on this.

Would you feel and state that, in your opinion, H.R. 2020, regardless of who in our Federal Government or with the possibility of needed cooperation with other governments, has responsibility for arranging or issuing permits for deepwater ports, that our Federal Government would not be able to do so if the States affected have passed legislation prohibiting them from constructing these superports within their jurisdictions, and would you agree that such is the entire thrust of this bill?

General MORRIS. Sir, I would agree that if the State which has jurisdiction has passed a law prohibiting these ports, the Federal Government would not issue a permit for such construction.

Mr. HOWARD. Either under present circumstances or any kind of circumstances which may come about later through the Law of the Sea Conference or international agreements, either way?

It just doesn't matter what the Federal Government does now or in the future. If this bill passes, then, in effect, the Federal Government may not issue a permit if the State so affected has legislated against it.

General MORRIS. As I read the bill—any State affected, correct.

Mr. HOWARD. And the State directly onshore, of course, must have passed the bill, and any affected State environmentally may not object, unless they also have passed legislation prohibiting such construction of such facilities off their own shore.

General MORRIS. That is my understanding.

Mr. HOWARD. Section 2 is in this bill merely to prevent the kind of a situation where you may have two States, both of whom want a deepwater port off their shores. If it is decided that a deepwater port will go off the shore of State A, then State B may claim to be an affected State and prohibit the construction of the facility off State A merely as a delaying tactic, hoping that maybe they can get the thing moving to their own State. That is why the provision is in there—to make certain that the State really qualifies as an objector. An affected State must have passed legislation itself prohibiting such facilities in their own waters. So you won't have that kind of a situation which could develop in some areas where we know, for instance, in the gulf, where several States desire it a great deal.

And you do state in your testimony, General, that new Federal legislation is required to assure timely decisions on license applications?

You didn't say it here, but I am sure you feel that there should be, and might very well be, Federal legislation that would insure environmentally unobjectionable decisions to be made by the Federal Government also.

General MORRIS. I think we have that legislation now, sir.

Mr. HOWARD. Or that plus the administration's bill and other things that are being——

General MORRIS. In combination with NEPA, I think we have that now.

Mr. HOWARD. In one of your studies, Deepwater Port Studies, volume 1 for the Institute of Water Resources, dated August 1972, page

13, item 15—it really doesn't have much directly to do with H.R. 2020, but it seems to have quite a bit to do with a lot of the discussion today—you say there that—

> There is a critical lack of knowledge in a number of areas essential to the environmental analysis of deepwater ports.

And it goes on to say:

> There is a lack of adequate knowledge of ways to design and operate a system without spillage, of the technological capability to handle major spills, of the methodology for determining the probability of oil spills and of the impact of oil spills on the ecosystem.

Is that pretty much still in effect, General, that observation?

General MORRIS. Well, Mr. Chairman, there has been a constant effort on the part of many agencies, Federal, State, and local, universities, and everyone else, to close the gap on this particular subject.

And I would have to say that my personal belief is that there is still lots to be known. I guess it could be called critical in certain applications, but I do feel we are much better now than we were a year ago.

Some of the interesting problems that are intriguing—if we accept the fact, and I don't really accept it, that there will be oil spills somehow—what is the impact on the environment if it occurs in estuarine or close-in waters, as opposed to ocean deepwaters?

I certainly don't have the answer as to whether it is better to have a big spill at sea as opposed to a small spill close in. My personal feeling is that I would rather have it out there than close in.

A spill at sea, the distance keeps it from getting on the wildlife, the ecosystem, and the fish, and so forth. By the time it has moved in to shore, it has disintegrated, broken up, we have more time to get to it.

But then, on the other hand, the supertankers are so big, there is so much of it. Those are the kinds of things that aren't especially clear.

Mr. HOWARD. Along that line, I think that in the Corps of Engineers study, at least in relation to plans that they have off the Delaware and New Jersey coasts, and Long Island, they did state that although there might be more total oil spilled in a year from a great number of small tankers, which would be used if we don't have supertankers, we have technology to contain and clean up those small spills, when we do not have the technology at this time to contain the kind of massive spills that could come from supertankers.

The medium-sized tankers, I believe now, if I am correct, hold over 2 million barrels of oil?

General MORRIS. We call it deadweight tons, 300,000 deadweight tons.

Mr. HADD. Roughly 2 to 2¼ million barrels.

Mr. HOWARD. 229,000 deadweight tons.

Mr. HADD. It would be closer to 325,000 deadweight tons.

Mr. HOWARD. I think a 229,000 one is like the *Maru*, a ship that holds 2.2 million barrels, and of course there are ships larger than 300,000. I believe there is one 477,000-ton ship, right?

It is larger than the Empire State Building in length as compared to height? If you tipped it on end, it would be higher than the Empire State Building in New York, which is about 1,100 feet?

General MORRIS. Yes, sir; it would be longer than that.

Mr. HOWARD. It takes maybe 5 to 6 miles in diameter to turn around. I think somebody said on the other side of the Capitol in testimony that it would take 18 miles to come to a stop, if they are fully loaded under their full speed, which is about 16 knots.

General MORRIS. Sir, if I might use an enclosure to the Department of Interior's testimony, the 209,000-deadweight ton vessel is 1,129 feet long.

Mr. HOWARD. 209,000 tons, and we have 477,000 tons in operation in the world now?

General MORRIS. That is the one they have just launched.

Mr. HOWARD. And there is a 540,000-ton one being constructed somewhere?

General MORRIS. I understand that they are talking about them in excess of 500,000 deadweight ton.

Mr. HOWARD. That is being built, and the contract is ready to be signed for a 700,000 deadweight ton tanker.

Mr. HADD. When you get to those really gigantic dimensions, the only orders that I have any familiarity with relate strictly to Persian Gulf-Japanese trade.

You are mentioning dimensions here which I don't think are feasible even for the Middle East-North African-European trade. Just the English Channel and the North Sea.

Mr. HOWARD. Bantry Bay can handle almost 400,000 tons now.

Mr. HADD. They have been taking in 325,000 tons and then transshipping. Now, what the limit is to bring it into Bantry Bay I don't know.

But the really mammoth size ships that we have seen mentioned all have had to do with the Japanese trade.

Mr. HOWARD. How about 229,000 deadweight tons? Do you consider that feasible for the east coast?

Mr. HADD. A major oil company told us in a briefing about 2 years ago that they did a feasibility study on what would be the optimum size tanker for their U.S. domestic requirements. They didn't go anywhere close to the engineering maximum. They felt 200,000, for example, 200,000 deadweight tons would be optimum for their operations.

And for U.S. trade, we haven't heard any oil company in any conversation talk in terms of dimensions exceeding 325,000-deadweight-ton ships.

That is not to say that we might not go bigger, but we haven't heard any talk about it.

Mr. Chairman, I would like to add one other point. Just as the Corps deepwater port research study was completed that you have referred to, the Coast Guard, in conjunction with CEQ, was working extensively on the methodology for determining the probability of oilspills. I think that the knowledge has been advanced considerably in the past 8 or 9 months.

Mr. HOWARD. Of course, they are so massive that I think that many States in the Union could not set aside the probability when they consider the kind of damage that could be done.

One a decade could virtually wipe out the main economy of an entire State, if it happens to be a resort-oriented State or area, and

if we don't have the technology—the probability, it is like the instance of the M–16 rifle. I had a lot of arguments several years ago with the Army as to their jamming and inadequacy under fire. And they were being used by our soldiers over in Vietnam—the Marines, I guess—and one of the replies I got back from them—I don't know whether it was the Army or the Marines, so we will leave it that vague, so we can always assume it was the other one—had stated that when they work they are so tremendous. I then asked whether or not we ought to change our opinion about them. Of course, that would be a very subjective thing, depending on whether or not the one you and I got to use was one of the ones that worked or one of the ones that didn't work.

So the probability, I think, can be put in that same category.

Mr. HADD. It is a very legitimate distinction. Probability is one thing. Environmental impact is something else. It is something that we are having an exceedingly hard time getting a handle on.

The largest single spill experienced anywhere so far is back in 1967, the *Torrey Canyon.* That was roughly only a third of the size ships that we are using here in this investigation.

Mr. HOWARD. The *Torrey Canyon* spill off Land's End in England, was a very tiny spill compared to what we are talking about now.

Mr. HADD. It was 114,000 deadweight tons, if I recall. It wasn't a small ship. It was a massive spill.

Mr. HOWARD. There are many ships operating now which could make it look very small. And that happened in late April or early May, I believe, 1967, and when I was there in mid-May, they had combed up the beaches as far as being able to walk on them without tar being all over them. The rocks still had some on and, of course, the damage to the marine life and fish life was very bad for quite some time.

Land's End, St. Ives, Penzance—areas around there—are summer seashore resort areas for Britain. And the British Government went to great pains to make announcements on television, newspaper, radio, with the coming of the summer season that the beaches were cleared up and it would be perfectly all right to go to the southwest summer beach areas.

In spite of all that assurance, however, I believe that almost 90 percent of the normal summer resort income was missing that year. They were off about 90 percent because the people just weren't going to take a chance on it and went somewhere else for their vacations.

It is a shame that at that time we didn't see enough to really get the Corps involved or the Coast Guard, or some of the other agencies in the cleanup operation.

About a year later, I guess it was, the *Ocean Eagle* broke in half in San Juan Harbor. It did a great deal of devastation in the harbor and along the beaches there.

And still, in our crisis-oriented Nation here, not much was done by the Congress in giving the Corps and others authority to go into it.

And I guess it wasn't until we had something probably less damaging in total, at Santa Barbara, but which happened to be on our own continental shore, that we finally got into the act.

But psychologically the damage can be very, very bad. Even though the shores, the beaches, were cleaned off there, it was a very damaging thing.

As a policy, I have heard the Corps of Engineers, or read where they have stated several times, the Corps of Engineers does not force projects on a State, or which affect a State, where that State does not want it.

Is that pretty much the policy of the Corps, or has that been the policy of the Corps?

General MORRIS. Yes, sir.

Mr. HOWARD. And probably would continue to be the policy of the Corps?

General MORRIS. That is correct.

Mr. HOWARD. This legislation that we are talking about, H.R. 2020, would merely make it official. So that the Corps would not have any kind of decision to make, but their operation would probably be the same with the bill as without the bill, is that not true?

General MORRIS. In terms of the 3-mile limit or close-in areas I think there would be very little distinction between our present operation with or without the bill.

The correlation beings to dim at that point, because we rarely find ourselves in a position where if the Governor of a State wants a project and his people want a project, that then we would become constrained by the Governor of a distant State or another State who may be downstream or affected indirectly. So the further you get from the Governor's immediate area of concern, the less likely the policy will be comparable.

Mr. HOWARD. How about the immediate State, the State off whose shores the superport would be built? Just take section 101, the first section of the bill which doesn't deal with adjoining States.

General MORRIS. We think, incidentally, Mr. Chairman, if we are talking about an environmental problem, the present provisions of NEPA give us, in preparation of the environmental impact statement, give us a full display of the feelings and the effects of these projects regardless of where they are.

And I don't really think that we can get much better than what we will evolve and divulge in the section 102 report.

So, certainly, H.R. 2020, as written, will give a great deal more strength to the indirectly or less directly affected State, physically.

Mr. HOWARD. Without H.R. 2020, the Federal Government could, to use a phrase, ram it down the throat of a State whether they wanted it or not.

With H.R. 2020, legally they could not. Is that pretty much the basic difference of the existing situation and the situation as it would be with the passage into law of H.R. 2020?

General MORRIS. I would like to say a little differently than ram it down their throat.

Mr. HOWARD. I am from New Jersey.

General MORRIS. I understand that. Your bill, H.R. 2020, certainly would give the adjacent State a much stronger position than anything we now have.

Now, the question is, is that what we want?

Mr. HOWARD. I was referring in this part of our conversation not to the adjacent State. We are not talking about an affected State, we are talking about the State directly in front of the deepwater port.

General MORRIS. I am not having any trouble with that one in your bill. I think your bill would have very little effect on that State than

under the present operation, because we feel that within the 3-mile limit the State has strong control and jurisdiction. Beyond that, it is less.

But, on the other hand, if that State were directly affected adversely, we would certainly give that consideration.

Mr. HOWARD. You couldn't put it there anyway without this bill.

General MORRIS. We could if it was a decision to be taken, the Federal Government could overrule the State beyond the 3-mile limit out to the 12-mile limit.

Mr. HOWARD. What do you mean overrule?

General MORRIS. If the State objected.

Mr. HOWARD. I believe that even with the administration's new law, besides environmental considerations, the Federal Government is only required to consult with the Governor.

General MORRIS. That is correct.

Mr. HOWARD. Then you can take and do anything that you want.

General MORRIS. As an interpretation of that bill that would be correct.

Mr. HOWARD. Studies have been made on the east coast as to the location and desirability of deepwater ports.

General MORRIS. I beg your pardon?

Mr. HOWARD. As to the location—where? Is the prime location about 13.8 miles off central New Jersey shore?

General MORRIS. Sir, I would like to answer that question this way. First, the division engineer of the North Atlantic division has not submitted his report to my office, and I don't believe in our studies that we would say that a prime location would be exactly that specific.

I do know that that is a good location. There are others that we have looked at.

The objective, incidentally, of the study was not to fix specific sites for building, but to pick locations where, based upon existing refinery facilities, a deep port structure, not only from physical aspects, but principally from physical aspects, could be built to service those at an economical investment.

Now, there are several locations generally in the New York-Long Island area, down to even the lower Chesapeake Bay, that would serve those kinds of general requirements.

We know there is one off of Delaware and there is one off of New Jersey. Of course, you are very much familiar with that.

But I think to say the primary location is going a little bit further than would be completely proper.

Now, do you want to add to that, Mr. Counce?

Mr. COUNCE. As you put it there, General Morris, it is certainly one of the most favorable sites from an economic point of view and a logical site because it is in proximity to the refineries there.

Mr. HOWARD. You are considering one off Delaware?

General MORRIS. Well, there was a site off of Delaware.

Mr. HADD. That site was evaluated. There were a total of 19 sites evaluated in the North Atlantic region.

Mr. HOWARD. I wondered if you were still considering it. Delaware is the only State that I know of which has a State law against such construction.

General MORRIS. Since they passed the law—again, I am a little concerned about that word "considering"—I would say yes, we are considering, but it is not going to be our choice to build it.

We are not looking at these with the decision to build one. We are looking at them as engineering and economically feasible locations.

If it is built—I don't even know who is going to do it, but it certainly is not going to be our decision. I wouldn't want to mislead anyone either pro or con. I think that the probability of one off of Delaware is practically zero, based on what the State did.

But, on the other hand, it is a consideration.

Mr. HOWARD. Thank you for that statement.

Mr. HADD. Mr. Chairman, could I make a comment here?

Mr. HOWARD. Yes.

Mr. HADD. It is a bothersome thing, the phrase of "Will the Feds shove it down an individual State's throat?" Whoever is going to have to make this decision is going to be faced with a very tough judgment and it will never be in terms of "shove it down an individual State's throat."

It is going to have to be in terms of on balance, all things considered, what is conceived to be best for the region, because it is inherent in the very nature of these facilities that they are going to have impact far beyond any one State, just by definition.

It is inherent in the technology that someone has got to make a decision up or down on the basis of overall net effects on behalf of the concerned region.

And it just can't be conceived of in terms of trying to force a facility. If we are talking here about a Federal action that would affect but one State, we would not be having a hearing.

Mr. HOWARD. Well, we want to make sure the hearing is going to mean something. I was very happy to hear you say that, because of the effects on the region and all. I would think that the people in the region would probably have a great deal of knowledge about it, and I can see the position that you would be in, being pushed and tugged by the various interests, because there are certainly going to be local interests involved. There are national interests involved, too. And then you have the administration involved. You are going to have big oil companies involved.

I would think the passage of this bill could make things a lot easier for you, because at least then you would know which areas are out of bounds.

So I thank you for your testimony. I would like to say that I think that the actions of the Corps have been exemplary—and we have been dealing with it for many years now concerning deepwater ports—some 9 years on this committee's review of highways and flood control projects.

Some people may want to take away from the Corps a lot of its permanent authority. I, for one, would feel quite comfortable having you very deeply involved, but to make it easier for you, I hope the passage of this legislation would clear the air a great deal.

The gentleman from Mississippi.

Mr. COCHRAN. Mr. Chairman, thank you. As I understand it, General Morris, you are making this evaluation in response to legislation

that was actually reported out of this committee and passed by the House and Senate, authorizing this evaluation, is that correct?

General MORRIS. Yes, that is correct.

Mr. COCHRAN. A survey resolution?

General MORRIS. Yes, sir.

Mr. COCHRAN. Do you have any idea now about at what point we could expect a report back to the committee in response to the resolution?

General MORRIS. Yes, sir. Glad to tell you. The best I can do at this time—we should have in our hands in the Office of the Chief Engineer, a report from my three separate field agencies—one on the west coast, one on the gulf, and one on the east coast—by the first of July, which is nearing now.

It is a little bit unfortunate that it is so near, yet so far, in terms of my being here. I really don't know what is in those reports, but as soon as they are received we will give them a very careful quick review, and then we will have to send them through the system and hope to get them to the Congress late this coming year, this calendar year.

It will take several months to process those reports.

Mr. COCHRAN. After you receive these reports from your regional investigators or evaluators, do you then intend to have an overall evaluation of the proposed sites or the sites which were evaluated, in an endeavor to rank them in any manner?

General MORRIS. That is not the objective of what we are trying to do basically. The answer to your question would be, as an objective, no.

If you would like for me to elaborate on that, I will. I think that the analysis would lead a reader to have certain choices as to some sites having better features than others, depending upon what you are looking for.

As an example, I am sure that the west coast sites are going to be much closer to shore than, let's say, the gulf sites, because of the shape of the coastline. If that is what makes it a good project, then that would become higher on the list than the gulf sites.

But the objective of what we are trying to do basically is twofold. First, to find out if there is an economic need for such a facility in the regional areas—east, gulf, and west. And the answers come out basically yes in each of them.

The next question was, going beyond that, if that were true, then, what were the probable locations, based upon existing refinery facilities, where these types of installations could be built?

Now, these types of installations address a variety of choices in themselves. Would they be monobuoys? Would they be islands? Would they be dredged channels? And so forth.

So it is a relatively long answer, and I apologize for that to some extent, but our report will not list throughout the whole United States One, Two, Three, Four.

Mr. COCHRAN. I understood from testimony earlier today from the Interior Department representatives who were here that they singled out two sites, Seadock off the Texas coast and the LOOP off the Louisiana coast, which were being given extensive study or careful attention by industry.

Is the Department of Interior, to your knowledge, making a similar evaluation of sites in these three regions?

General MORRIS. No, sir. The two they mentioned, however, have attracted a lot of attention, because they are either State-supported or local industry interests, which are really taking a lot of initiative in moving forward on their own initiative.

And I think that is why Interior mentions it. I can't be sure, but I am not aware of any study they are making to address sites. We are doing that.

Mr. COCHRAN. Is there any other agency or department of the Federal Government, to your knowledge, that is making a study similar to yours?

General MORRIS. Well, sir, there was a study by the Maritime Administration and there were, early in the game, I think, other agencies, also.

However, once the Corps began a couple of years ago this particular evaluation, based upon the requirement of the Congress, most of the responsibility for the fiscal aspects, and the economic, came to us.

There are a lot of agencies involved, however, and I am sure you are aware of the fact that it is not only an engineering problem, but it includes the whole gamut, as we have spent so much time on today, of law, international law, State's authority, and environmental problems.

And so our area is relatively restricted, in many ways the easiest one.

Mr. COCHRAN. Without comprehensive legislation through the Congress, there is no way to say, now, who will decide where a port of this sort will be constructed, is that correct?

General MORRIS. That is correct. But I have, somehow or another, a feeling that it will be decided based upon the desires of the industry, as opposed to Federal initiative to select the site.

Mr. COCHRAN. By industry, do you mean the major importing oil companies?

General MORRIS. That, plus a conglomeration that deals with such a thing; that is, the refinery business, the pipeline, the dispensing facilities, the whole industry that is related to the energy thing.

Mr. GRATTAN. Congressman?

Mr. COCHRAN. Yes.

Mr. GRATTAN. Just to maybe clear up something, I don't think that statement, as far as site location, should be taken as an admission on the part of the Corps that we don't have any authority presently beyond 3 miles.

We may have authority beyond 3 miles, based on the Outer Continental Shelf Lands Act. This isn't a positive statement that we do, but it is something that we are not going to throw away.

General MORRIS. I appreciate that injection. I was thinking strictly from somebody saying, you are going to put one here. I misunderstood your question. I was addressing who would actually decide when and where one of these things would be built, and I think the initiative is going to come from the industry. They will have to get the Federal permit to do it, of course.

Mr. COCHRAN. There is no provision now in Federal law for the State to be a party to any permit that may be issued for construction of anything on the Outer Continental Shelf, is there?

Mr. GRATTAN. That is not necessarily true, sir. Section 307(c)(3) of

the Coastal Zones Management Act makes some provision for the protection of a State's interest in regard to issuance of Federal permits.

Mr. COCHRAN. Does that permit the State, in effect, to have a veto power?

Mr. GRATTAN. I wouldn't say a veto power.

Mr. COCHRAN. What is the extent of their authority under that legislation, under that provision?

Mr. GRATTAN. No. 1, they would have to have a coastal zone management plan that has been approved by the Secretary of Commerce.

Mr. COCHRAN. The State has to?

Mr. GRATTAN. Yes, sir, in order to get the benefit. And, then, I can read the section for the Congressman now, if you would like.

Final approval by the Secretary—

That is the Secretary of Commerce:

of the state's management program. Any applicant for required Federal license or permit to conduct an activity affecting land or water uses in the coastal zone of that state shall provide in the application to the licensing or permitting, a certification that the proposed activity complies with the state's approved program, and that all activity will be conducted in a manner consistent with the program.

Then it goes on, but basically:

No license or permit shall be granted by the Federal agency until the state or its designated agency has concurred with the applicant's certification.

That is the sum and substance. It is a rather long section.

Mr. COCHRAN. General Morris, it is your understanding, then, that if, for instance, States other than the State of Delaware were to decide to enact legislation prohibiting or vetoing construction of deepwater ports off their shores, outside the regular 3-mile limit, that this might touch off a wave of activity on the part of other States, say, for instance, all up and down the east coast of the United States.

What effect would this have on the Corps' recommendation, if it is a recommendation, that we in fact need deepwater ports somewhere on the east coast of the United States?

General MORRIS. Sir, first off, I am really not a lawyer. My feeling is this, that within the charter that I have been given, that I would still, regardless of the legal constraints, identify the need based upon economics, and within the construction, guidance, of the requirement, I would also go to the second stage and say, excepting the fact that there is an economic justification for these, here are the most likely places where they should be.

Now, we would also have to, in the absence of any laws to the contrary, consider the environmental effects and illustrate those.

Now, if along the way there comes a legal aspect that precludes the final fulfillment of that need, that would have to be the result.

But I still think it would have to be my responsibility to complete the work I have been asked to do, and that is to determine, based upon economic and environmental considerations, the need for such facilities on a regional basis and then, within that, do something to address where it is physically possible to put them, with consideration to existing refineries.

I think I would go ahead and complete that.

Mr. COCHRAN. Based on the Corps' work to date, is it fair to say that it has been established that there is a need for some deepwater ports along the east coast of the United States?

General MORRIS. Without question, from an economic standpoint.

Mr. HOWARD. East coast of the United States? Then you would rule out Canada?

General MORRIS. He didn't ask me that, sir.

Mr. HOWARD. He said east coast of the United States.

General MORRIS. Yes, sir, there is a need on the east coast of the United States. I don't now anything about Canada. I mean by that that I don't know if Canada needs one or not.

Mr. HOWARD. My question had to do with whether or not the needs of the eastern coast of the United States could be met through the existing deepwater ports in Canada?

General MORRIS. I would presume—I am really not qualified to answer that question. I think I would defer that, because it wasn't part of our undertaking, without guessing.

Mr. HADD. At a minimum, though, you would have the transshipment problem, coming from Canada.

Mr. HOWARD. No more than we have around the country now. We have pipelines going to all kinds of——

Mr. HADD. You are talking about transshipment from Canada by pipeline?

Mr. HOWARD. Would it be a big problem?

Mr. HADD. It is just something that we have not investigated.

Mr. HOWARD. Considering that we are contemplating running some all the way from Alaska to Minnesota, or somewhere, running one from say, Nova Scotia would be a much lesser distance.

Gentleman from Illinois?

Mr. HANRAHAN. No questions.

Mr. HOWARD. The minority counsel has one.

Mr. WOOD. General, I have a request. I wonder if you could supply for the record the Corps' analysis of the impact of section 401, Federal Water Pollution Control Act, State certification with regard to facilities that may result in discharges into waters.

We would be interested in the Corps' evaluation of section 401 on the question of deepwater ports.

General MORRIS. All right, sir, fine.

Mr. HOWARD. And when that is provided, that will be made part of the record without objection.

[The following was received for the record:]

OPINION ON THE IMPACT OF SECTION 401 OF THE FEDERAL WATER POLLUTION CONTROL ACT ON DEEP WATER PORTS

Section 401 of the Federal Water Pollution Control Act Amendments of 1972 (P.L. 92-500, hereinafter referred to as "the Act") requires that before obtaining a Federal license for any activity that may result in a discharge into navigable waters, the applicant must obtain certification from the State in which the discharge originates. Such certification must state that any such discharge will comply with Section 301 (effluent limitations), Section 302 (water quality related effluent limitations), Section 306 (new source standards of performance), and Section 307 (toxic and pretreatment standards) of the Act.

The question posed is the applicability of this section to a proposed Federal permittee for a deep water port (i.e., a crude oil receiving and transfer facility located beyond the territorial sea of the United States). In answering this we

must look at two aspects of the facility: (1) the activities surrounding the construction and operation of the facility itself, which would take place beyond the territorial sea; and (2) the transferring pipeline as it would cross the territorial sea in connecting the terminal to the shore based receiving and refining facilities.

Where the construction and operation of the port itself is concerned, it appears that Section 401 is not applicable. Section 401(a)(1) speaks the need for ". . . certification from the State *in which the discharge originates or will originate*. . . ." Since any discharge that may result from the construction and operation of the deep water port itself would originate beyond the territorial sea of the United States, and thus beyond the seaward boundaries of any State, the discharge would not be within the ambit of the certification requirements of Section 401.

In addition the requirements of Section 401 are triggered only when activities ". . . may result in a discharge into the navigable waters. . . ." (Section 401(a)(1)). Section 502(7) of the Act defines *navigable waters* as ". . . waters of the United States, including the territorial seas." It clearly does not extend to waters beyond the territorial sea. Giving "into" its common, ordinary meaning; i.e., directly into; it would seem that a discharge emanating from a source beyond the territorial sea which may eventually find its way into territorial sea (navigable waters) is beyond the contemplation of the certification requirements of Section 401.

This contention is reinforced by the legislative history of the Act. House Report Number 92–111, Public Works Committee, on H.R. 11896, 92d Congress (the House version of this Act) states at page 124 in regard to this section (which was subsequently adopted substantially as drafted by the House):

"It should be clearly noted that certifications required by Section 401 are for activities which may result in any discharge into navigable waters. It is not intended that State certification is or will be required for discharges into the contiguous zone or the oceans beyond the territorial seas."

Even if the actual construction and operation of a deep water port beyond the seaward limits of a State (i.e., beyond the territorial sea) are not within the purview of the certification requirements of Section 401, the discussion of the impact of this section as deep water ports should not end here. Certainly the applicability of Section 401 to the pipelines within navigable waters that would necessarily result from construction and operation of a deep water port must be examined.

Section 401(a)(1) states that:

"Any applicant for a Federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities, which *may result* in any discharge into the navigable waters, shall provide the licensing or permitting agency a certification from the State in which the discharge originates or will originate . . . that any such *discharge* will comply with the provisions of Sections 301, 302, 306, and 307 of this Act."

Section 401(d) expands this requirement a bit, stating that any other appropriate requirement of State law shall be set forth in the certification and shall become a condition of any Federal license or permit subject to the requirements of Section 401.

The focus of the discussion must be whether the words, "may result in any discharge", would bring a closed pipeline within the ambit of Section 401 of the Act. Viewed on its face the expression could encompass, at one extreme, all activities which had the remotest possibility of resulting in a discharge, or at the other, only those which are calculated to result in a discharge.

Section 502, the definitions section of the Act provides some further illumination. Section 502(16) states, "The term 'discharge' when used without qualification includes a discharge of a pollutant, and a discharge of pollutants." Section 502(12) states that either of those terms mean "(A) any addition of any pollutant to navigable waters from any point source." Section 502(14) defines 'point source' as ". . . any discernible, confined and discrete conveyance, including but not limited to any *pipe*, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or *may be* discharged." While the imprecise "may" language is still retained with regard to a discharge, the enumeration of "pipe", which connotates a conduit with an open end, as opposed to "pipeline" which connotates a closed system, may indicate a congressional intent to exclude closed pipeline from coverage under Section 401 of the Act.

Section 401 itself provides a further clue to the meaning of the future subjunctive "may result in a discharge". The certification required by that section re-

lates to whether the *discharge* will comply with the effluent limitation and other requirements of the Act and appropriate requirements of State law. By requiring that the effects of a discharge (as opposed to the activity itself) be certified to, the section implies that any such discharge must be quantifiable, and predictable, in a word—anticipated, at least under certain circumstances. Certainly the intent of the statute was not that a State certify, or for that matter withhold certification, regarding the effects of an unanticipated wholly speculative discharge.

The legislative history of the Act provides support for this position. In the November 2, 1971 discussion of S. 2770, the Senate version of the bill, Senator Muskie, the principal author of the bill, stated his view of what the term "point source" encompassed, as follows:

"If a man-made drainage ditch, flushing system, or other such device is involved, and if *measurable* waste is discharged into the water, it is considered a point source."

As was indicated previously, the definition of point source is inexorably tied to the definition of discharge. Thus a *measurable* discharge is necessary to invoke the certification requirements of Section 401.

The question may arise as to why the phrase "may result in any discharge . . ." is used, if it does not apply to activities or facilities from which discharges are neither intended nor planned. The answer is that there are many types of outfall structures, such as storm sewers, which do not result in a discharge under normal conditions, but are intended to discharge, under certain quantifiable conditions, a certain quantifiable amount of effluent. It is this type of discharge which "may result" which is capable of certification or lack of same under Section 401.

Thus, it is our view that closed pipelines, from which discharges are not anticipated, are not covered by Section 401 of the Federal Water Pollution Control Act. This interpretation is consistent with the administrative application of this provision of the 1972 Water Pollution Control Act and similar provisions of previous Water Pollution Control Acts.

Hence, it is our opinion that the certification requirements of Section 401 of the Federal Water Pollution Control Act Amendments of 1972 will have no impact on the construction and operation of deep water ports.

This is not to say that States will not be able to exercise their powers of regulation in regard to pipelines within the area of shared jurisdiction (the territorial sea), nor does this deny the States the input they may possess in the area beyond the three-mile limit with regard to the planning, construction and operation of deep water ports by virtue of the National Environmental Policy Act of 1969, and the Coastal Zone Management Act of 1972.

General MORRIS. Sir, I would like to return to this problem as part of the State of Delaware and the law. I think what we have said here today raises the question of where does the strength of that law apply, or how strong is that law in the case of the Continental Shelf and beyond this 12-mile point.

My relatively firm comment about the fact that that law would preclude or reduce the probability, or whatever it was, in Delaware, has to be taken in the context of the strength of the law out to the 3-mile limit, to the 12-mile limit and beyond.

And I think that is a variable. So I wanted to be sure that was clear.

Mr. HOWARD. I would assume that if the State of Delaware or the States of New Jersey or New York or any other State makes the legislation to the ultimate of its right to make legislation, that legally it would be only to the 3-mile limit at present. And so I would not even consider it as to 12. I would think that the States can legislate out to 3 miles. Beyond that, the Corps has a great deal of responsibility and power, I believe.

Not being an attorney, either, I am reading from 43 U.S.C.A. 1333F—does that mean anything to the attorneys here?

It states:

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

Could that be taken to mean an artificial island as a deepwater port or a fixed structure which a single mooring buoy might be?

It would be your responsibility and authority to see that there is no obstruction to navigation all the way out to the end of the Continental Shelf, which would be like a hundred miles out?

Mr. GRATTAN. Yes, sir. That is the way some people view that authority. There are others, among them the Department of State, who view this as being tied in within the context of the Outer Continental Shelf Lands Act, which strictly limits itself to structures erected for the purpose of exploiting and exploring the natural resources of the Outer Continental Shelf, the seabed there.

Again, there are also certain international problems with this, basically the Convention on the Continental Shelf, which limits itself to a nation's right to exploit and explore the resources of the adjoining Continental Shelf, and the Convention on the High Seas, speaking of reasonable use of the sea.

Your point is well taken. I guess we all recognize the need for comprehensive legislation, regulating the construction and operation of the deepwater port, pointed specifically to that—but that in the interim period, barring international complications, let's say, we would like to avail ourselves of.

Mr. HOWARD. I would hope you would.

Mr. GRATTAN. I do want to reiterate that the question, legally, I don't think is settled.

Mr. HOWARD. As a final question, the legislation H.R. 2020, I believe, in no one's view either supports or opposes construction of deepwater ports.

Ninety-five percent of the testimony and the discussion we have had today dealt with deepwater ports, which is a subject that this committee and other committees will be taking up again in the near future. The administration's energy program does not in any way conflict with H.R. 2020, would you agree to that?

General MORRIS. I would certainly agree that a great deal of discussion today applies to construction and selection of sites for ports, which is a little obtuse to this legislation.

Mr. HOWARD. As to an opinion, and we are not asking for legal official opinion, someone used the word "zero," stating the fact that the State of Delaware has passed legislation within its jurisdiction, which we can presume is only out to 3 miles, opposing deepwater ports. The chances of establishing the deepwater port which was under consideration off the coast of Delaware is now considered pretty much zero because of that legislation?

General MORRIS. That was my statement.

Mr. HOWARD. That is just an opinion?

General MORRIS. It is an opinion, and it applies within the 3-mile area, but we are still considering it as an option.

Mr. HOWARD. Would you state, in your opinion, that should H.R. 2020 become law, and, for instance, the State of New Jersey should pass legislation opposing the construction of facilities within whatever jurisdiction it has outward, say, 3 miles—that the combination of those two would put the probability of the construction of a deepwater port off its shores close to zero?

General MORRIS. Within the 3-mile limit.

Mr. HOWARD. If the State can now control it within the 3-mile limit, and if H.R. 2020 becomes law in addition to that, that the chances would be zero that there would be one 13.8 miles off New Jersey?

General MORRIS. Yes, I guess the indefinite extension of the boundaries would catch that, as I understand it.

Hr. HOWARD. Thank you very, very much. Mr. D'Amico, majority counsel.

Mr. D'AMICO. General, in view of the Delaware situation as you just described it, could someone consider that it might be a waste of time to continue studying this site, as you have indicated you are still doing?

General MORRIS. Here we are talking in relative terms. I gather from your statement that the continuing study we are talking about is a great amount of work. This report is finished, so we can't spend much more time on it.

The only thing is, I think that even though you throw something out, you have got to at least identify what it is you are throwing out. We have done that.

I believe it was my requirement at the outset, even though I had known that the State of Delaware did not want a deep port, at least to go to the point of determining whether or not it was an engineering and economically feasible location.

We are in the business of looking at the whole coast.

It would seem to me to be an incomplete job and probably a poor job just to isolate a section and say we are not going to look at that.

Fortunately, in this case, the law came along after we finished looking at it, but right now you are posing a question which is really hypothetical, and I am trying to answer it on the basis that if we were going to look at an entire region, even though part of that region may not get a site, I think probably we should look at it.

Mr. D'AMICO. I think what is puzzling me—in view of the Delaware position, I think you said that, "we are still considering"—perhaps I am confused.

General MORRIS. It will be in the report. There is certainly no money being spent, there are no people out looking at the coast.

Mr. D'AMICO. But it is being considered, which suggests that it is still possible that there would be a deepwater port.

General MORRIS. I tried to make that clear. I didn't mean to leave you with that thought. It is being considered by the people who are writing the report. It will appear in the report. It is not being considered as a site for construction. That is another interpretation I did not mean to give.

Mr. D'AMICO. In other words, as long as Delaware maintains its present position, there would be no deepwater port outside Delaware?

General MORRIS. I did not say that either. I said that in my opinion I felt that the prospects off Delaware within the 3-mile limit were practically zero.

I think we ought to put this out for what it is worth. I don't know the answer to this. And certainly I am not going to be the one to decide.

But somewhere along the way, the welfare of the entire United States will have to be given pressing consideration over a single location. I don't know how that is to be decided.

Maybe it doesn't have to be decided. If all the States passed laws there would be no deep ports, there wouldn't be any deep ports, because that would be the will of the people.

But if there is any uncertainty in my mind, the question is, is any one State going to have the authority to preclude the development of a facility which is needed by the other 49 States?

Now, where the decision is drawn between one State on one side or four or five, I don't know, sir. That is really not my bailiwick.

I would like to be able to tell you that there is an economic need, that the environmental problems are real, that there are options to solving them, and that here are the places where it looks like these kinds of facilities would best serve our country.

The decision to put them there we will have to leave to others.

Mr. HOWARD. In response to your statement about the fact of having a State thwart the interests of all the other people in the United States, as sponsor of this legislation I have great confidence that all of the State legislatures and legislators in this country are devoted enough, not only to their State but to the Nation, that they would not pass and hold in power legislation that would be a danger to the people of the United States.

I do feel that they have a right to make a determination about their own lifestyle, rather than permit someone else from Washington who may not have as much concern about the State as they may have from their own State toward the Nation, to be able to make the ultimate decision in this.

And I have no fear that the States will not act in the national interests in this.

I am glad you did bring it up, because I figured it was going to be brought up sometime, at some point. But I am certain that the overriding national interest will prevail, not only in the Congress but also in the various State legislatures throughout the country.

And unless there are some further questions and statements that you wish to make, we look forward to the information you will be sending us. It will become a part of the record.

During the course of these proceedings, we may come up with some other questions, and we hope that we can either have you come back or get in touch with you in writing for additional information, if that should be needed. Without objection, it will be made a part of the record.

I want to thank all of you for coming, and thank my colleagues.

We will meet tomorrow morning at 10 o'clock, at which time the witnesses will be Mr. Russell Train, the Chairman of the Council of Environmental Quality, and Mr. John C. Court, the Deputy Assistant Administrator for Planning and Evaluation of the Environmental Protection Agency.

The Subcommittee on Energy stands adjourned until 10 o'clock tomorrow morning.

[Whereupon, at 3:45 p.m., the Subcommittee on Energy adjourned, to reconvene the following day at 10 a.m.]

TO GUARANTEE AFFECTED STATES AN EQUAL VOICE IN THE CONSTRUCTION OF DEEPWATER PORTS

WEDNESDAY, JUNE 20, 1973

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON ENERGY,
OF THE COMMITTEE ON PUBLIC WORKS,
Washington, D.C.

The Subcommittee on Energy met, pursuant to notice, at 10:42 a.m., in room 2167—Rayburn House Office Building, Hon. James J. Howard, chairman of the subcommittee, presiding.

Mr. HOWARD. The Subcommittee on Energy of the House Public Works Committee will please come to order.

We meet this morning for the further consideration of H.R. 2020 and related bills dealing with conditions for the construction of offshore bulk cargo transshipment facilities.

This morning our first witness will be the Honorable Russell E. Train, Chairman, Council on Environmental Quality.

We wish to apologize for the late start Mr. Train, but sometimes it is unavoidable.

Mr. Train, the subcommittee is very grateful for your appearance this morning. Knowing of your knowledge of the problems confronting the committee, and the Nation, we are very happy to have your testimony.

STATEMENT OF HON. RUSSELL E. TRAIN, CHAIRMAN, COUNCIL ON ENVIRONMENTAL QUALITY; ACCOMPANIED BY TIMOTHY ATKESON, GENERAL COUNSEL

Mr. TRAIN. Thank you, Mr. Chairman and members of the committee.

I have a relatively long statement and I would normally prefer to summarize it. Even though we are starting late, however, Mr. Chairman, I would appreciate the opportunity of presenting the entire statement because I think it is a very good statement, if I may say so, and it is a complex subject and I think it covers a number of points.

Mr. HOWARD. I agree completely.

Mr. TRAIN. Mr. Chairman and members of the committee, I appreciate the opportunity to appear before you on behalf of the Council on Environmental Quality to discuss H.R. 2020, a bill relating to the construction of offshore deepwater port facilities.

Mr. Chairman, the administration supports the need for new legislation providing for the establishment and regulation of deepwater port facilities. Furthermore, we recognize that these facilities must be lo-

cated, constructed, and operated in a manner which would minimize or avoid adverse environmental impacts.

NEED FOR LEGISLATION

The need for such legislation is the result of the recent confluence of two major trends. First, of course, is the trend toward greater oil imports. A second major trend is the shift in oil transportation to very large vessels called supertankers.

The draft of these supertankers can range, for example, from 67 feet for a 250,000 deadweight ton tanker to 94 feet for a 540,000 deadweight ton version. Yet the deepest channel to a conventional port on the east and gulf coast presently is only 45 feet. Deep inshore locations which could handle the deepest draft supertankers, exist naturally at several places in Maine. Elsewhere on the east and gulf coasts inshore deepwater port facilities would have to be created by dredging existing harbors and channels. One west coast port, Seattle, can accommodate very deep drafts but Los Angeles/Long Beach, is only deep enough to handle tankers in the 100,000–500,000-dwt range and San Francisco is even less deep. Thus, at the present time almost no U.S. harbor has the capacity to receive and unload the larger supertankers. The attention of industry, government, and citizen environmentalists has turned therefore, to the question of how to create facilities to bring the needed oil into the United States while, at the same time, protecting against the hazard of oil spills and controlling other environmental impacts of port development.

DEEPWATER PORT FACILITIES ACT OF 1973

The administration's Deepwater Port Facilities Act of 1973, proposed in the President's Energy Message of April 18 addresses this question. It recognizes that today there exists no comprehensive institutional or legal framework for dealing with the many issues and problems involved in deepwater port development. The administration's proposal would provide such a comprehensive system. Mr. Chairman, I would like to devote the remainder of my testimony to a discussion of the Deepwater Port Facilities Act of 1973, H.R. 7501, in relation to H.R. 2020.

The administration bill would authorize the Secretary of the Interior to license and regulate the construction and operation of deepwater port facilities beyond the 3-mile territorial sea. The bill prohibits the construction and operation of such a facility without such a license. Applicants for a deepwater port license must demonstrate that the port will not interfere with international navigation or other reasonable uses of the high seas. The Secretary cannot issue such a license until he determines that the siting and building of the port, and its subsequent operation, will minimize or prevent significant adverse environmental effects.

H.R. 7501 would establish a uniform, coordinated procedure for licensing and regulating deepwater ports. The Secretary of the Interior will have prime responsibility and applicants will have only one place in the Federal Government to go for a decision. As you know, authority for such a decision is currently fragmented among several

Federal agencies. In his coordinating role, the Secretary will consult with every interested agency on specific applications, as well as on the development of regulations for the licensing program.

I want to emphasize that the administration bill does not modify or reverse existing law covering the safety of navigation or the protection of the marine environment. On the contrary, the bill specifically extends important existing U.S. laws, such as the Federal Water Pollution Control Act, as amended in 1972, and the Ports and Waterways Safety Act of 1972, to the deepwater port facility just as if that facility were located in U.S. navigable waters. A NEPA statement would precede any decision on a license application.

The administration bill, H.R. 7501, would provide a comprehensive and coordinated method for licensing and regulating deepwater port facilities. We feel that it deserves this committee's support.

H.R. 2020 focuses solely on the so-called "State veto" issue. In essence it would prevent any Federal action to locate or construct a deepwater port facility off the coasts of a State which has by law prohibited such facilities or otherwise objects to such a facility. H.R. 7501 recognizes the importance of State interests in these matters and provides a mechanism to protect these interests. But deepwater port development deals with many other important environmental, energy, legal, transportation, and economic issues as well, and broader, more comprehensive, more explicit legislation—the administration bill—is necessary.

H.R. 7501, recognizes the impact that deepwater port location would have on shoreside development and requires that the Secretary of the Interior consult with Governors of potentially affected States to insure that land-based activities related to the port facility are consistent with State land use programs. In our view, this approach is preferable to a "State veto" for a number of reasons.

First, the administration approach avoids serious domestic and international legal questions as to State authority over Federal actions outside the State's jurisdictional boundaries, and over Law of the Sea matters, particularly since deepwater ports are very likely to be located on the high seas in international waters.

Second, the consultation provision of H.R. 7501 permits a Governor to explore the issues involved without forcing him into a situation where he must flatly accept or reject a proposed facility. It establishes a dialog between State and Federal authorities in which State interests and concerns will be fully considered.

Furthermore, the licensing and regulatory approach put forth by the administration bill is designed to protect against oil spills and other environmental damage. H.R. 7501 would require the Secretary to prescribe conditions for operating under the license—including conditions to prevent or minimize pollution of the surrounding waters—and establishes stiff civil and criminal penalties for violation of the conditions of the license.

ENVIRONMENTAL IMPACTS

Mr. Chairman, as you may know, the Council has been conducting a major interagency study of the environmental impacts of deepwater ports. Parts of this study are complete and available to the

public. The remainder of our study should be available by summer's end.

I might interject, Mr. Chairman, the comment that we started this study, as I recall, about a year ago this past January, long before any proposals were put forth in the executive branch with respect to deepwater port locations, and I cite this because I like to use this as an opportunity to point out the role of the Council and I think an effective one in identifying problems of this sort with major technological and environmental implications prior to their becoming a problem, and working on them in advance so that we are at this time, I think, very fully informed and apprised of the various implications of deepwater ports.

Mr. HOWARD. Is this the study the Coast Guard had something to do with?

Mr. TRAIN. The Coast Guard has been very closely associated with the study and has provided a good deal of the data to which I will be referring in the course of this testimony.

The environmental effects of deepwater port development can be divided into two broad categories: The primary effects of the construction of the port and of oil spills once the port becomes operational, and the secondary effects of industrialization and development on the shore which would be induced by the location of a deepwater port.

PRIMARY EFFECTS

One of the major environmental risks associated with marine oil transportation is the potential for oil spills resulting from tanker accidents and operations. Other risks stem from the effects of port construction and maintenance, particularly if significant dredging is necessary.

Potential environmental impacts from these activities are a function of several factors: The probability of damage occurring in the first place—for example, the need to dredge or the likelihood of an oil spill; the effectiveness of measures to prevent or control the damage; and the vulnerability of any specific port location to whatever damage may occur. The overall risk of environmental damage will in large measure be related to the type of deepwater port facility and its location with respect to critical coastal environmental features.

EFFECTS FROM CONSTRUCTION

The impacts of port construction on the environment are closely related to the amount of dredging or other disturbance of the sea bottom that takes place. For example, creation of a deepwater port in the Raritan Bay of northern New Jersey, would require dredging 8 miles of channel, 90 feet deep and 1,000 feet wide, and another 2 square miles of berthing and maneuvering area. Dredge spoil would total 321 million cubic yards. The environmental effects of such dredging could include destruction of sea bottom habitat, damage to estuarine marine life caused by increases in turbidity and salinity and intrusion of seawater into freshwater aquifers. Disposal of dredge spoil would present another environmental problem, particularly if the spoils are polluted. Further, once dredged, deep channels must be periodically

cleared of silt and sand by redredging, a process which is likely to repeat many of the environmental damages just described.

The construction of large artificial islands or breakwaters would also require some dredging. By interfering with normal wave and current patterns, these structures could cause shore erosion under certain conditions, particularly in estuarine or other near shore locations. Miles out at sea, however, the force such facilities might impost on ocean movements should not influence shoreline processes significantly, if at all.

The construction effects of far offshore type facilities—such as single point moorings or single anchor leg moorings—are likely to be negligible. Pipelines from such facilities—particularly if buried to protect against breaks—will require some dredging that would disturb the sea bottom and coastal areas where the pipelines come ashore. The amount of this dredging would be insignificant compared with dredging deep channels to existing ports.

OIL SPILL EFFECTS

Oil spills can be caused by casualties such as collisions, groundings, and rammings, by operational mishaps—often due to human failure—during the transfer of oil from tankers to port facilities, and by pipeline breaks or leaks.

Regardless of the source and size of an oil spill, several biological effects can occur: Organisms can be killed outright by toxic components of the oil; they can die or be harmed by direct coating with oil; oil concentrations in the water can inhibit normal feeding or reproductive behavior; certain oil components, especially those suspected of causing cancer, can be incorporated into the food chain; and the coverings of rocks, marshes, and similar areas with oil can destroy habitats.

The actual effect of any particular spill will depend upon a series of other factors, including the chemical composition and amount of oil, winds, and currents in the region of the spill, the type of marine life in the region of the spill; and the season of the year; and previous exposure to oil.

Furthermore, time is an overriding factor in predicting and assessing biological impacts. Over time, spilled oil "weathers" as a result of the dynamic interaction of the wind, currents, and tides, in conjunction with biological and chemical degradation. These same factors determine where the oil will go and what effects it will have en route and when it arrives.

Estuaries and near shore coastal wetlands are the most biologically productive areas of the marine ecosystem and also the most sensitive to damage from either construction or oil spill effects. At shallow near shore sites, such damage would be unavoidable. At far offshore locations, however, the probability that spilled oil will enter sensitive estuarine areas is much reduced. In addition, should a spill occur far offshore, and should wind and current move it toward coastal areas, "weathering" of the oil en route will tend to remove its most immediately toxic and lethal fractions. Not only will it take longer to reach sensitive wetland and estuarine areas and recreational beaches, but, under certain wind and current conditions, the oil could move out to sea and never reach the shore as a slick.

PREVENTIVE MEASURES

There are a number of ways to prevent oil spills or to minimize their damage. I have already mentioned the different characteristics of different types of port facilities.

Ports that must be carved out of shallow estuaries or nearshore areas which require tankers to thread their way through narrow channels—often in waters congested with other ships—present risks of collision or grounding. Mandatory radar-guided vessel traffic controls could reduce those risks. Single point moorings permit the construction of ports far offshore in very deep water without expensive dredging or breakwaters. Such facilities can be located away from congested ports, harbor entranceways, and coastal shipping lanes, thus significantly limiting the probability that collisions will occur. In naturally deep water the probability of groundings is also reduced. If supertankers are constructed with double-bottoms—thus providing a void between the outside hull and cargo tanks—the amount of oil spilled should a grounding occur is significantly reduced. Finally, the use of pipelines—as opposed to barges or smaller tankers—to transship oil to shore, cuts the number of handling operations and the potential for accidents.

The major environmental disadvantage of single point mooring type facilities as opposed to fixed berth facilities is that, with present technology, little can be done to contain spills during unloading operations. In a fixed berth a floating apron can be installed around the stationary tanker to contain any oil that might be spilled. Since tankers are constantly in motion around single point moorings, aprons are not feasible. Further develpment and experience with single point mooring technologies will be necessary to alleviate this problem before these facilities come into general use in the United States.

SECONDARY EFFECTS

In the United States, the location of a superport will tend to induce new industries, particularly refineries and petrochemical complexes in the immediate area serving the port and in the surrounding region.

The creation of new petroleum-related industries would induce associated commercial and economic activities. An overall increase in economic development will cause population concentration and needs for new housing and added public services such as sewage treatment, transportation, schools, electric power, and recreational facilities. Each of the activities in turn will result in a range of environmental impacts beyond what would normally be expected without a deepwater port. The impacts include demands for land and water supply; increased air and water pollution; and a burden on public services. Depending upon the nature of a given area, induced effects could cause it to change from undeveloped to industrialized or from developed to highly industrialized.

A framework of existing Federal legislation can help in planning and controlling superport related development. Under the Federal air and water pollution laws, new industrial development generated by increases in petroleum refining and processing will be subject to stringent standards, reflecting the best available pollution control technology, covering the emission and discharge of pollutants to the air

and water. In addition, these laws require that new facilities be compatible with ambient air and water quality standards. These ambient standards may, in some cases, require more stringent emission and effluent controls than the basic "best available technology" requirements. This framework of controls should assume that deepwater port related industrial development will occur within the limits of environmental acceptability.

The recently enacted Coastal Zone Management Act and the pending National Land Use Policy Act also provide a framework within which States can control the effects of industrial development upon land use. Two basic objectives of the President's National Land Use Policy Act are to encourage State control of large scale development of "more than local significance," and to protect areas of "critical environmental concern," such as coastal wetlands. The Coastal Zone Management Act, which encourages States to plan and control land use in the coastal area, is especially applicable because secondary development associated with superports will affect coastal areas in every case.

CONCLUSION

Given the favorable economics of deepwater ports, continuing to receive oil direct from overseas sources in smaller tankers is economically unrealistic. For example, it costs approximately $9 per ton to bring crude oil direct to the U.S. east coast in a 50,000–70,000-deadweight-ton tanker. That same ton would cost only $6.55 if carried direct in a 250,000-deadweight-ton supertanker.

Therefore, the United States is faced with two basic alternatives. Either it can develop its own deepwater ports or it can transship oil from non-U.S. Western Hemisphere deepwater ports in the Caribbean or in the Canadian Maritime Provinces. From an economic point of view, the choice lies between the cost of $6.55 per ton, for example, if the oil is delivered to the United States by supertankers directly, and from $7.05 to $7.25 per ton if the supertanker delivers its cargo to neighboring foreign points for transshipment to the United States in smaller tankers.

In making this choice, the environmental implications are as important as the economic ones. Based on studies conducted for the Council by the U.S. Coast Guard, it appears that creating superports in the United States carries a lesser risk of oil spill damage than does transshipping oil from foreign ports.

For example, over a 20-year period, at an import level of 2 million barrels per day we can statistically project approximately 37 vessel casualties resulting in spillage of over 20,000 tons of oil, assuming small tankers averaging 50,000 dwt transshipped oil from Canadian or Caribbean terminals to conventional U.S. ports. On the other hand, if the same oil were transported direct to U.S. offshore terminals in supertankers averaging 250,000 dwt, we can project about four casualties totaling only 2,500 tons of oil spilled.

The methodology upon which this statistical knowledge is based is set out in my full statement, the attachments thereto submitted for the record.

The supertanker example assumes that transshipment to shore would be via pipelines. Transshipment via small tankers or barges would, of

course, increase the casualty potential and tend to negate the advantage of the superport over conventional systems.

In sum, then, the United States is going to need increasing amounts of imported oil. This oil will be imported in small ships—at greater risk of oil spills—if deepwater ports are not available to serve supertankers. The environmental impacts associated with port construction and oil spills can be significantly reduced by the development of far offshore deepwater ports which will be served by supertankers at locations distant from congested harbors and coastal areas. The environmental impacts associated with the development of petroleum refining and processing industries would occur to some extent if the same amounts of oil were imported in conventional tankers. To the extent that these impacts might be focused on areas served by deepwater ports, State and local governments can plan for and control them using their traditional powers within a framework of current and pending Federal pollution abatement and land use management laws.

H.R. 7501, the administration's bill, would provide a comprehensive and effective legislative mechanism to assure that both primary and secondary environmental effects are fully considered in the Federal decisionmaking process.

Thank you, Mr. Chairman.

I will be happy to answer your questions.

Mr. HOWARD. The various attachments to your statement will appear in the record at this point.

[The attachments to Mr. Train's statement follow:]

(*Attachment A*)

COMPARATIVE TANKER CASUALTIES OVER 20 YEARS [1]

ASSUMPTIONS

Throughput of 2 million barrels per day in both cases.

Case 1 = Oil transported to conventional ports in tankers averaging 50,000 deadweight tons (DWT).

Case 2 = Oil transported to offshore terminals in supertankers averaging 250,000 DWT; transshipment to shore via pipelines.

Range of spills (in long tons)	Number of incidents		Number of tons of oil spilled	
	Case 1	Case 2	Case 1	Case 2
1 to 150	24.0	3.0	1,680.0	186.0
151 to 500	8.5	.65	3,306.5	250.3
501 to 3,000	3.8	.44	4,674.0	514.8
3,001 to 14,000	1.4	.21	11,144.0	1,577.1
14,000 plus	.17		8,364.0	
Total	37.87	4.3	29,168.5	2,528.2

(*Attachment B*)

TANKER OIL SPILL PROBABILITIES

INTRODUCTION

This paper presents a detailed methodology by which to project the frequency and magnitude of oil spills from tanker casualties. It was prepared for the Council on Environmental Quality by the U.S. Coast Guard.

[1] Derived from Table 3 and Figures 1 and 6 of Attachment B, "Tanker Oil Spill Probabilities."

TANKER CASUALTY SPILLS

Before a tanker casualty was considered in this analysis, the following criteria had to be met:

The oil spill had to be a direct result of a rupture in a tank, and

It had to be known positively that oil escaped into the water.

A list was compiled from various sources that gave details of tanker casualties world-wide during 1969 and 1970.[2] In those instances where the spilled oil could not be quantified, a magnitude equal to the average magnitude for similar spills of less than 500 tons was assigned; i.e., no catastrophic casualties were assumed to have taken place in these cases. Instances where the casualty occurred at sea more than 50 miles from shore were excluded from the list as not being applicable in a study of supertanker facilities, which will be located less than 50 miles from shore.

Spill data for a supertanker facility alternative at a given port location are presented in terms of frequency and magnitude. The magnitudes are not given as discrete values but rather in five ranges; specifically:

To 150 long tons;

151 to 500 long tons;

501 to 3,000 long tons;

3,001 to 14,000 long tons; and,

Greater than 14,000 long tons.

The ranges were selected by plotting the number of incidents within a selected range versus the midpoint outflow magnitude of the range. The ranges were adjusted until their plot yielded a straight line on a log-log graph. (The straight line or hyperbolic function would indicate a fair distribution of the data and a statistically valid selection of ranges.) For presentation purposes the ranges were rounded off to the nearest 50 long tons. The data are presented in Table 1.

TABLE 1

Range	Incidents		Oil outflow	Percent of total oil outflow
	Number	Percent		
To 150 tons	139	63.47	9,695	5.75
151 to 500 tons	49	22.37	19,050	11.29
501 to 3,000 tons	22	10.05	27,120	16.07
3,001 to 14,000 tons	8	3.65	63,690	37.74
Greater than 14,000 tons	1	.46	49,200	29.15
Total	219	100.00	168,755	100.00

The data illustrate that the majority of the incidents (188 or 85.84%) are less than 500 long tons and contribute only 17.04% of the total pollution; whereas in a higher range (3,001—14,000 tons) the 8 incidents constitute 3.65% of the total incidents but 37.74% of the total pollution.

The frequency of occurrence for a spill within one of the ranges is a direct function of the number of such incidents which occurred during the 1969–1970 sampling period. The detailed two-year spill data base was further compared to data compiled by the International Chamber of Shipping (ICS) and the Secretariat General a la Marine Marchande of the Ministere des Transports, France, for the period 1960–1970. While these data were not detailed enough to incorporate in the data base, they clearly reaffirmed the 1969–1970 data; and it therefore can be said that the two-year period is representative of a ten-year period. By extrapolating these figures by statistical inference to a 20-year period, all data are presented as spills of a given range occurring within a number of ship years.

The midpoint of the 1969–1970 sampling period represented 12,206 ship years of tanker traffic.[3] Thus, the expected time for an incident within a given magnitude range to occur can be computed directly from the data.

[2] "An Analysis of Oil Outflows Due to Tanker Accidents—A Note by the U.S.A. to the Intergovernmental Maritime Consultative Organization," November 1972, U.S. Coast Guard; and, "Tankers and the Ecology," Porricelli, et al., *Transactions*, Vol. 79, 1971, The Society of Naval Architects and Marine Engineers.

[3] Source: Lloyd's Register of Shipping, Statistical Tables, 1969 and 1970.

Ship years can be converted to calendar years for any given entry location by knowing: (1) the number of tankers transiting its coastal, entrance way, and harbor (CEH) zones and (2) the average number of days that tankers require to make any CEH zone transit. This also requires the knowledge of the average number of days per year that all tankers spend in CEH zone transits. This number is relatively simple to compute once one knows:

The average number of round trips that tankers make each year; and

The average number of days that a tanker spends in transit upon arrival or exit from a port.

In the 1969–1970 period there were 6,103 tankers, according to Lloyd's Register of Shipping, with 497 of these tankers greater than 80,000 deadweight tons. Assuming that each vessel on the average spends 2 days on each end of a round trip in CEH zone transit, one can equate the following:

A tanker is in the CEH transit mode 39 days per year; or,

Thirty-nine days per year equals one ship year of tanker transits.

The projected spill estimations in terms of magnitude and frequency are plotted for each port facility alternative on a log-log scale as the number of incidents within one of the given outflow ranges versus ship years of operations.

An analysis was conducted comparing polluting incident frequency and attendant oil outflow magnitudes. In conducting this analysis tankers were broken into two general deadweight categories, namely:

Those less than 80,000 deadweight tons; and

Those 80,000 deadweight tons and greater.

The intent here was to show whether a relationship does in fact exist between tanker polluting incidents and tanker size. Table 2 depicts the results of this analysis.

These data say that in consideration of the frequency of all types of casualties, as a function of number of tankers, the larger vessels, as presently operating, have a higher probability of being involved. They also say that oil outflow magnitudes are independent of tanker size. One must point out that the data does not contain a single catastrophic accident with a loaded tanker greater than 80,000 deadweight tons. One such incident would seriously alter that result.

TABLE 2.—TANKERS 80,000 DWT AND GREATER[1]

	Percent of total incidents	Percent of world tank fleet	Percent of world tanker tonnage	Percent of total outflow
	(A)	(B)	(C)	(D)
All polluting incidents	7.89	6.04	30.3	6.38
All polluting incidents less explosions	6.37	6.04	30.3	2.94
	A/B	A/C	D/B	D/C
Tankers 80,000 dwt and greater:				
With explosions	1.30	0.26	1.06	0.21
Without explosions	1.06	.21	.49	.097

TANKERS LESS THAN 80,000 DWT[1]

	Percent of total incidents	Percent of world tank fleet	Percent of world tanker tonnage	Percent of total outflow
	(A)	(B)	(C)	(D)
All polluting incidents	92.11	93.96	69.7	93.62
All polluting incidents less explosions	93.63	93.96	69.7	97.06
	A/B	A/C	D/B	D/C
Tankers less than 80,000 dwt:				
With explosions	0.98	1.32	0.99	1.32
Without explosions	.99	1.34	1.03	1.39

[1] Tankers 80,000 dwt and greater had 21 polluting incidents, including 5 explosions, during the 1969–70 reporting period with an associated oil outflow of 27,465 long tons. Tankers less than 80,000 dwt had 245 polluting incidents, including 10 explosions, during the same reporting period with an associated oil outflow of 403,254 long tons.

It should also be noted that the case with tanker explosions discounted significantly changes the results. Here, frequency probabilities are also independent of tanker size; i.e., the incident rate is the same for both large and small tankers. It is interesting to note the marked drop in oil outflow magnitudes with an increase in size. Again, however, the cautionary remark concerning the effect of one large laden tanker's involvement in a catastrophic incident will apply.

The reason the data have been presented with explosions segregated is to show their effect on the supertanker frequency and magnitude oil spill spectrum and how the case may be made either way for or against supertankers as has been done in the past. It is also noteworthy that primary explosions occur in two modes of tanker operation:

While the tanker is in ballast and probably tank cleaning at sea; and,
While transferring cargo and more often during the unloading phase.

Another approach compared incident frequency and outflow to the total amount of deadweight tons in the two categories above and below 80,000 tons deadweight. Due to the greater proportion of deadweight (30.7%) in the supertanker category as opposed to the actual number of vessels (6.04%) the results are significantly altered; i.e., the supertanker shows smaller oil outflows in proportion to its representative deadweight.

The baseline port facility alternatives can then be modified for:

Improved tanker construction technology, i.e., double bottoms;
Implementation of traffic control; and,
The use of an offshore terminal.

Data showing the effectiveness of any of these three modifications are either sparse or non-existent. However, reasonable estimates can be made for them; the effectiveness of double bottoms in terms of grounding protection was estimated to be 75 percent; the effectiveness of a traffic control system was estimated to reduce all grounding and collision polluting incidents which could occur in harbors and harbor entranceways by 50%; the effectiveness of an offshore terminal has been qualitatively taken to reduce in two cases, 40 and 90 percent of all casualties which would occur within the harbors and entranceways—40 percent for a deep water terminal but not necessarily far offshore or out of the heavy traffic density, 90 percent for a true deep water offshore terminal without the traffic density and proximity of the shoreline.

Double-bottom construction is just what is sounds like. It uses an outer wall for the hull structure of a vessel and an inner wall for the structure of the oil storage tanks. The resulting space between the two provides additional insurance against oil spillage because it permits damage to the outer hull without necessarily affecting the oil storage systems. In this analysis, we assume a double bottom height on the order of 0.08 percent of the tanker's molded beam and a segregated ballast capacity sufficient to attain 45 percent of the tanker's full load displacement.

Various sources have placed the effectiveness of double bottoms in terms of grounding protection between 61 and 92 percent. A grounding study conducted by the International Maritime Consultative Organization (IMCO) Maritime Safety Committee on Ship Design and Equipment stated that effectiveness is on the order of 73 percent.[4] In this study, an effectiveness of 75 percent is used.

Traffic controls in this analysis are defined as mandatory, radar-guided, computer assisted systems for positive control and coordination of shipping movements at superport facility locations. The effectiveness of such a traffic control system is estimated to reduce by 50 percent all groundings and collisions which cause oil spills and which could occur in harbors and harbor entranceways. This figure is considered more qualitative than quantitative because no real data exists on a maritime traffic control system. Some data do exist regarding traffic separation routes, which are strictly advisory and not fully comparable to positive traffic control systems. For example, the average accident rate in the Straits of Dover for the 3 years after traffic routing was established improved by 21 percent over the 4 years prior to routing, despite an increase in traffic and despite the fact that only 75 percent of the vessels transiting the Straits of Dover comply with the routes.[5] Harbor advisory systems such as the one in Teesport,[6] have

[4] D. M. Bovet, "Groundings: A Brief Analysis," U.S. Coast Guard, Office of Research and Development, December 1970.
[5] J. M. Beattie, "Safer, Saner Seaways," U.S. Naval Institution proceedings, December 1970.
[6] "Improving Safety of Navigation in the Oil Ports," Europe and Oil, Ferranti Ltd., May 1970.

also shown considerably lower accident rates. In the port of Rotterdam, where more ship tonnage is handled than in any other port in the world, there has not been a single major accident since a harbor control system was instituted several years ago. Thus, the 50 percent effectiveness value used here for traffic control systems, though unquantified, is considered minimal.

The location of a superport can greatly affect the probability of casualties and consequently the magnitude of oil spills. One of the key variables is distance from shore. As distance increases, traffic congestion and therefore casualties from collision are reduced. Far offshore facilities are also in deeper water—reducing the probabilities of groundings. The effectiveness in terms of reduced vessel casualties is not really quantifiable. However, a detailed casualty analysis by the Coast Guard indicated that approximately 40% of the polluting incidents occur within harbors and entranceways. Of the incidents occurring within harbors and entranceways, approximately 80% are due to collisions and groundings. Two values of effectiveness are used. For offshore locations between 5 and 15 miles from shore, but still exposed to shallow water and to coastal traffic, a 40% reduction of collisions and groundings is assumed. If the site is far offshore, beyond 15 miles, a 90% reduction is estimated.

It is important to realize the limitations of the results; especially when one considers the absence of quantitative data regarding the effectiveness of double bottom, traffic control systems, etc., and perhaps more important the sensitivity of the results to the assigned values of effectiveness. A sensitivity analysis was conducted by varying the value of the effectiveness of the three parameters by 10 percent. The effect of varying this value by 10 percent can change the quantity of oil outflow from 0.1 to a maximum of 10 percent. This same 10 percent variation will alter the frequency of occurrence from 1 to a maximum of 10 percent. These results say that the oil outflow magnitude-frequency spectrum will vary in direct proportion with the effectiveness of the super-imposed parameters.

TABLE 3.—CONVERSION OF SHIP YEARS TO CALENDAR YEARS FOR FIGURES 1 TO 6[1]

A	B	C	A	B	C
Percent of throughput transshipped	Incoming tanker 250,000 deadweight tons ship year/(U.S. superport) 20 calendar years	Incoming tankers 50,000 deadweight tons ship year/(no U.S. superport) 20 calendar years	Percent of throughput transshipped	Incoming tanker 250,000 deadweight tons ship year/(U.S. superport) 20 calendar years	Incoming tankers 50,000 deadweight tons ship year/(no U.S. superport) 20 calendar years
0	208	1,043	55	926	
5	273		60	991	
10	339		65	1,056	
15	404		70	1,121	
20	469		75	1,187	
25	534		80	1,252	
30	600		85	1,317	
35	665		90	1,382	
40	730		95	1,447	
45	795		100	1,513	
50	860				

[1] For throughputs other than 1,000,000 barrels per day, multiply the value in either columns B or C by the ratio of actual throughput to 1,000,000.

Note: Any value in col. B is the number of ship years accumulated in 20 calendar years as a function of 250,000 deadweight tons incoming supertankers, the amount of the incoming throughput which is then transshipped in 40,000 deadweight tons tankers (shown as a percent of the total throughput), and a 1,000,000 barrels per day throughput. Col. C is the number of ship years accumulated in 20 calendar years as a function of 50,000 deadweight tons incoming regular tankers, assuming a 1,000,000 barrels per day throughput and no further transshipment.

EXAMPLES FOR USING TABLE 3 AND FIGURES 1 THROUGH 6

1. Case with transshipment

a. *Given*
: throughput=1,900,000 BBl/day
: incoming tanker=250,000 DWT
: 65 percent transshipped in 40,000 DWT tankers
: double bottom and traffic control

b. From Column B, Table 3—1,056 ship years/20 calendar years
: multiply by 1.9 to adjust for throughput=2,006.4 ship yr/20 cal yr

c. From Figure 4 find 2,006.4 years along horizontal axis and read from various outflow ranges as follows:
—0.6 incidents at 3,001–14,000 tons
—1.7 incidents at 501–3,000 tons
—2.2 incidents at 151–500 tons
—15 incidents at less than 150 tons

d. Compute total outflow by multiplying number of incidents times average spill figures in box:

—0.6×8,260=	4,956
—1.7×1,240=	2,108
— 2.2×374=	823
— 15×69=	1,035

8,922 tons/20 cal yrs.
=66,915 Bbls/20 cal yrs. (7.5 Bbls/ton)
= 3,345 Bbls/cal yr.

2. Same case with no transshipment

a. From column B, Table 3—208 ship yr/20 cal yr
—208×1.9=395 ship yr/20 cal yr

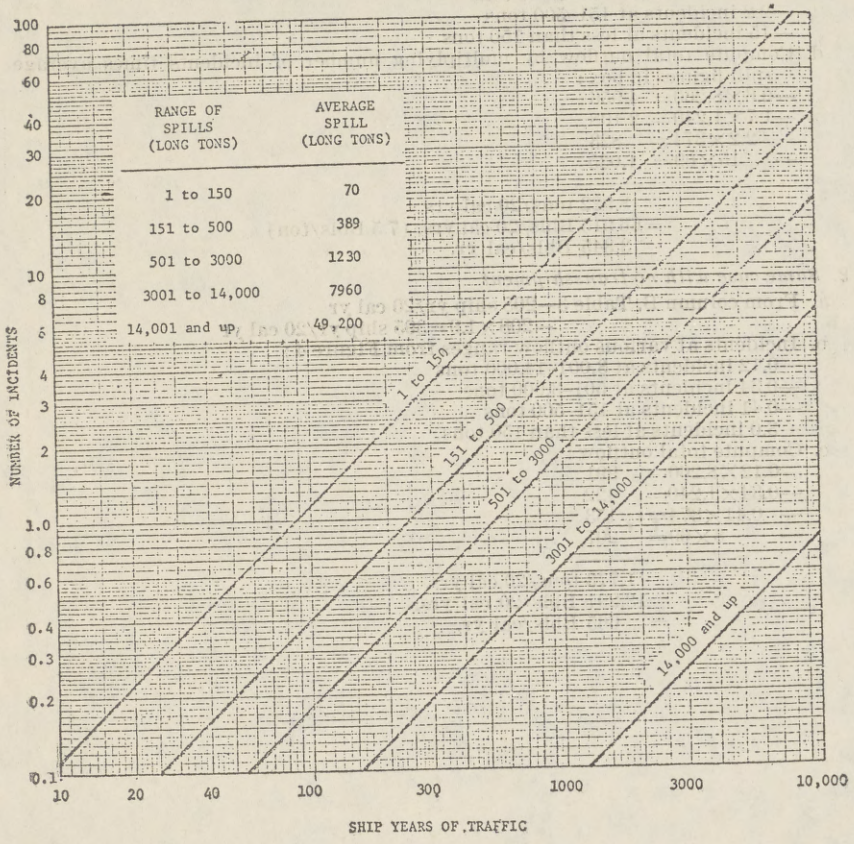
b. Incidents at various outflow ranges from Figure 4:
—0.12 incidents at 3,001–14,000 tons
—0.34 incidents at 501–3,000 tons
—0.41 incidents at 151–500 tons
—3.0 incidents at less than 150 tons

c. Compute total outflow:

—0.12×8,260=	991
—0.34×1,240=	422
— 0.41×374=	153
— 3×69=	207

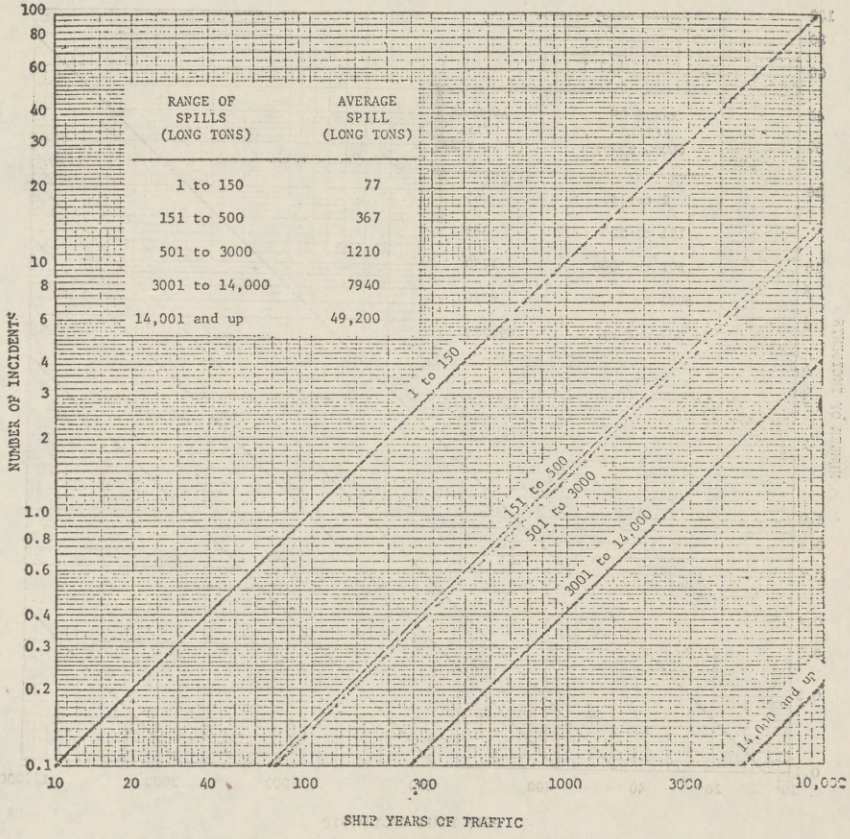
1,773 tons/20 cal yrs.
=13,297 Bbls/20 cal yrs.
= 665 Bbls/cal yr.

Figure 1



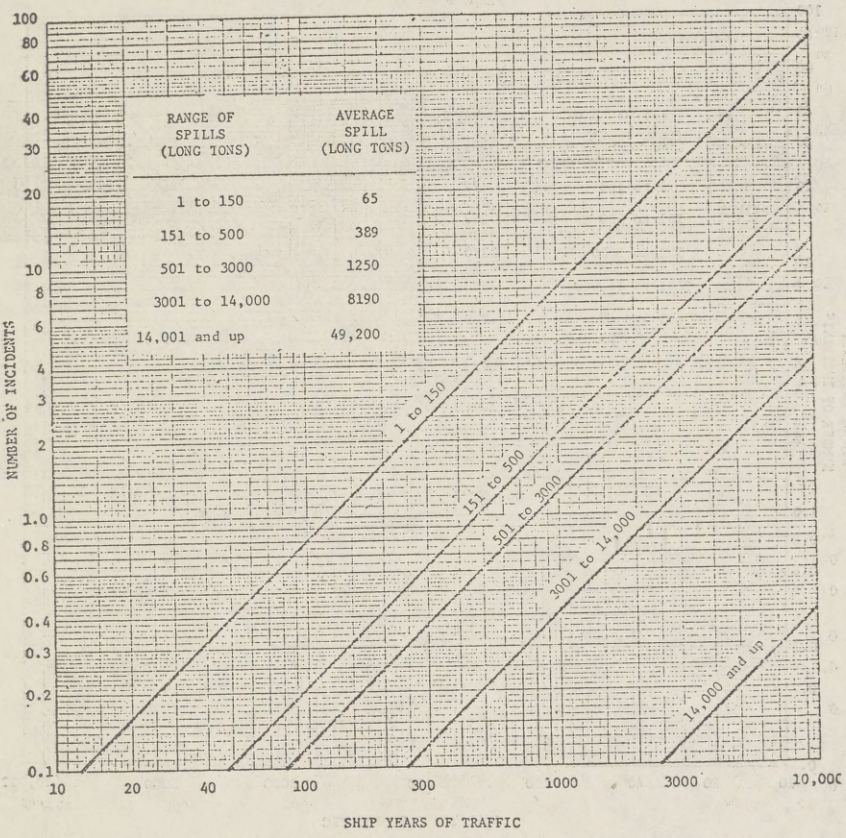
BASELINE RATE

Figure 2



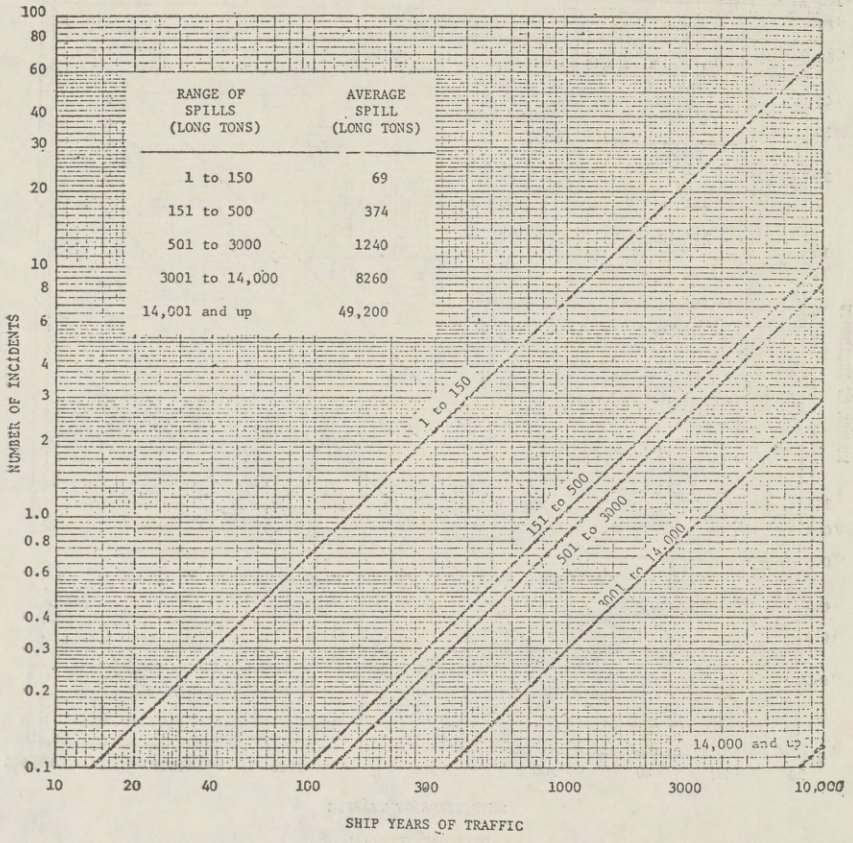
EFFECTIVE DOUBLE BOTTOM
(75% REDUCTION IN GROUNDINGS)

Figure 3



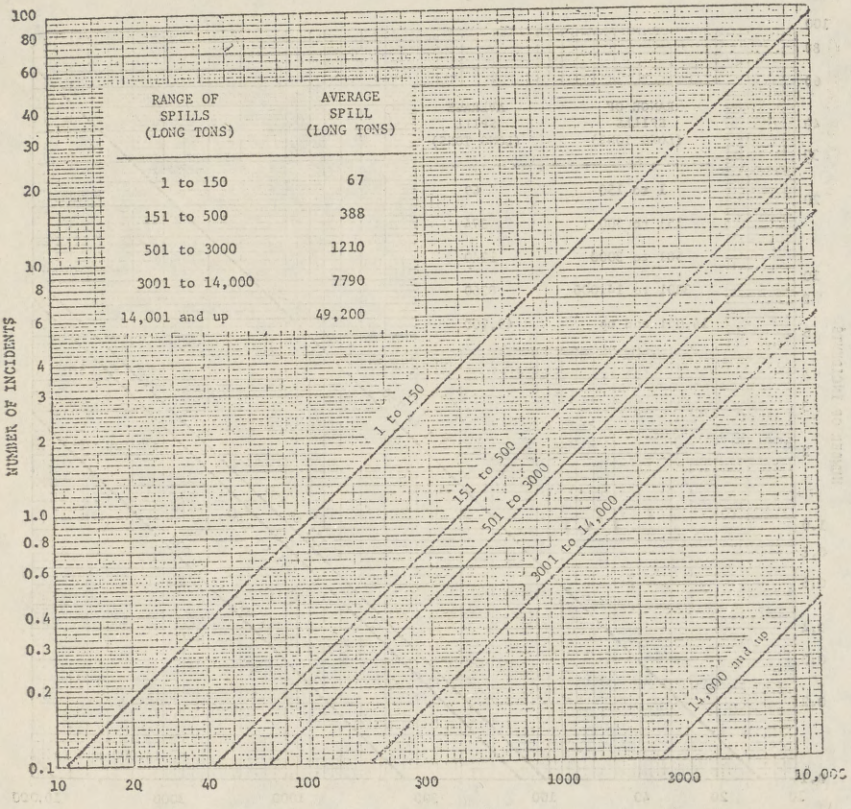
IMPROVED TRAFFIC CONTROL
(50% REDUCTION IN GROUNDINGS & COLLISIONS)

Figure 4



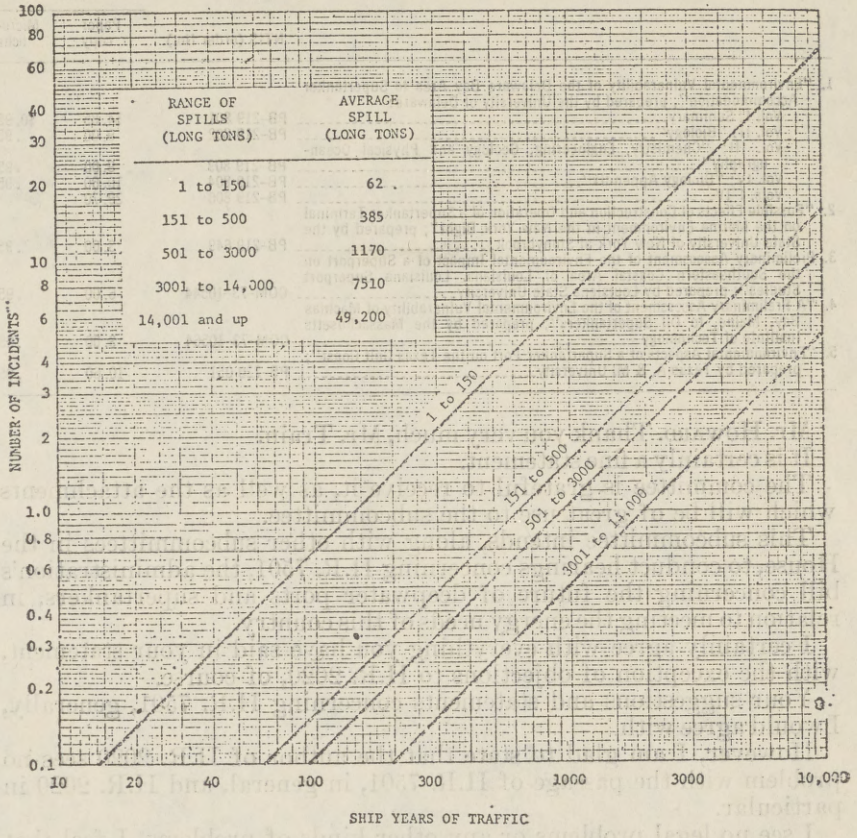
DOUBLE BOTTOM & IMPROVED TRAFFIC CONTROL
(85% REDUCTION IN GROUNDINGS & 50% REDUCTION IN COLLISIONS)

Figure 5



OFFSHORE TERMINAL
(40% REDUCTION IN CASUALTIES OCCURRING
IN HARBORS AND ENTRANCEWAYS)

Figure 6



OFFSHORE TERMINAL
(90% REDUCTION IN CASUALTIES OCCURRING
IN HARBORS AND ENTRANCEWAYS)

(Attachment C)

STUDIES OF THE EFFECTS ON THE MARINE ENVIRONMENT OF DEEP-WATER PORT DEVELOPMENT

Copies of the reports listed below may be obtained by writing the National Technical Information Service (NTIS), U.S. Department of Commerce, Springfield, Virginia 22151.

	NTIS (order No.)	Prices: Paper copy	Prices: Microfiche
1. "Environmental Vulnerability of the Delaware Bay Area to Supertanker Accommodation"; prepared by the University of Delaware:			
Vol. I: Summary	PB-219 801	$4.85	$0.95
Vol. II: "Biology"	PB-219 802	9.00	.95
Vol. III: "Chemistry, Engineering, Geology and Physical Oceanography"	PB-219 803	9.00	.95
Vol. IV: "Biology Appendix"	PB-219 804	10.60	.95
Vols. I–IV	PB-219 800	29.70	
2. "Possible Effects of Construction and Operation of a Supertanker Terminal on the Marine Environment in the New York Bight"; prepared by the State University of New York at Stonybrook	PB-219 649	3.00	.95
3. Preliminary Assessment of the Environmental Impact of a Superport on the Southeastern Coastal Area of Louisiana. Louisiana Superport Studies"; prepared by Louisiana State University	COM-73-10544	6.00	.95
4. "A Preliminary Assessment of the Environmental Vulnerability of Machias Bay, Maine, to Oil Supertankers"; prepared by the Massachusetts Institute of Technology	COM-73-10564	3.00	.95
5. "Environmental Aspects of a Supertanker Port on the Texas Gulf Coast"; prepared by Texas A. & M. University	PB-220 051	10.60	.95

Mr. HOWARD. Thank you very much, Mr. Train.

It is certainly a fine statement.

The committee is grateful to receive it, as well as the attachments which will be of great use to the subcommittee.

This subcommittee intends, along with other subcommittees in the House, to conduct hearings concerning H.R. 7501, the administration's bill concerning the future of deepwater ports and supertankers, in relation to meeting the energy needs of this country.

I certainly agree with everything you have said in your statement, with the exception of objections to H.R. 2020, of course.

Your suggestions and statements concerning H.R. 7501, generally, I would agree with.

However, I am glad to state that the author of H.R. 2020 sees no problem with the passage of H.R. 7501, in general, and H.R. 2020 in particular.

I see no legal problems or any other kinds of problems. I feel that the intent of H.R. 2020 does not reach into the area of whether or not this Nation should have deepwater ports, or of determining their location, other than that perhaps the States have a legal right in the decisionmaking process as to their location.

I believe that is all that H.R. 2020 does.

If H.R. 2020 were to become law today, it would not affect any area of the United States other than the State of Delaware, which has passed legislation in this regard.

The State of New Jersey, which is the State along the east coast that has been mentioned most prominently as a possible location for a deepwater port, has attempted to pass State legislation which would be a triggering mechanism should H.R. 2020 become law.

The State assembly passed the legislation and the State senate has twice had before it and voted down that legislation. So the thought that if H.R. 2020 should become law, immediately all the coastal States would pass legislation and would block the national interest in providing for safe transportation of our imported oil, I do not believe is backed up by the facts.

Mr. Train, in speaking of the shallowness, I guess, of the Los Angeles/Long Beach area, you say it is only deep enough to handle

tankers in the 100,000 to 500,000 deadweight-ton range and San Francisco is even less deep.

Is that a correct statement or is it a typo?

Mr. TRAIN. It should be 100,000 to 150,000 deadweight tons. That is a misprint.

Mr. HOWARD. Speaking to this H.R. 2020, it would prevent any Federal action to locate or construct a deepwater port facility off the coasts of the State which by law has prohibited such facilities or otherwise objects to such a facility, which is a correct interpretation on your part. Would you say that this does not supplant the need for H.R. 7501, or consideration of bills similar to that, if bill H.R. 2020 should become law.

There is certainly a great need for consideration of the administration's bill H.R. 7501, or similar type legislation to be able to clear up all the aspects that may be vague now concerning construction of such facilities.

Mr. TRAIN. Absolutely, Mr. Chairman.

As I stated in my statement we need comprehensive legislation providing a broad institutional framework for regulating, siting and regulating the operation of deepwater ports that, irrespective of a decision on the issue raised by H.R. 2020, I would urge this committee to look very favorably upon comprehensive legislation of the type presented by the administration's H.R. 7501.

Now, having said that, again let me make clear the administration does oppose the legal veto provision contained in H.R. 2020.

Mr. HOWARD. Would you state that under the present conditions, and if H.R. 7501 were to be passed, that the Federal Government would have the legal right to override the wishes of a State, voiced either by a Governor, or its legislature, and would have the legal right to place a deepwater port beyond 3 miles off the coast of that State?

Mr. TRAIN. It would have a legal right, and I underline the word legal, because I believe it would be a right in the technical sense of the word only.

In every practical aspect of the matter, I find it very difficult to conceive of a port being authorized by the Federal Government off the shores of the State with the oil coming into that State under circumstances which that State strongly objected to the facility, and to that kind of an operation.

The State, as you know, has legal control over the passage of pipelines through the 3-mile territorial sea. It has control over the movement of that oil from the pipeline onto shore and any facilities which may be located in the State, both for the storage and the processing of that oil, so that in every practical sense of the problem, the State does have a veto.

The bill also provides for thorough consultation by the Secretary of the Interior with the Governor of the State involved and the intent here is to build into the decisionmaking process the full concerns of the State.

The administration's position in opposition to a legal veto is based really entirely upon its concern that a legal veto would be injecting a State into jurisdictional matters involving the high seas, raising very serious law of the sea problems, and while I do not pretend to be an expert on law of the seas, I would defer to those in the State Depart-

ment who have particular responsibility for this, including Mr. Moore. I am not sure whether he has testified or not, but this does represent a very valid concern on the part of the administration.

Mr. HOWARD. We did establish yesterday the fact that States do have land use control, and control over pipelines and such things, and would not necessarily prevent the construction, in a rather practical situation, of deepwater ports off the coast of one State which could very adversely affect that State and yet run the pipeline to another State without ever coming within the 3-mile jurisdiction of the polluted State.

Mr. TRAIN. I agree, that is a possible result.

Mr. HOWARD. Very possible.

The thrust of H.R. 2020 determines Federal inaction, is that not right? If H.R. 2020 were to become law, it would state that under certain conditions the Federal Government could not do something that the Federal Government has the right to do now in licensing. H.R. 2020 would mean that the Federal Government could not issue a permit if the State passes a law against such construction.

Mr. TRAIN. That is correct.

Mr. HOWARD. I think it would be the same, now, no matter what happens in international agreements.

Mr. TRAIN. My only reservation is, and I do not think I am qualified to give a clear answer to this, that the reservation is the interaction between the legislation and a treaty assuming a treaty which took a different line was ratified by the Congress, the interaction of these two, I am not sure of myself.

Mr. HOWARD. The Federal Government now does have the legal right to override the wishes of a State to construct a deepwater cargo transshipment facility off its shores. I asked you before, and you stated yes, legally it does.

And the administration would like to keep that legal option in effect, is that correct?

Mr. TRAIN. That is correct, but I again stress not because the administration wishes to have the authority to shove a deepwater port down the throats of an objecting State, but in order to preserve the legal position of the National Government vis-a-vis the high seas.

Mr. HOWARD. I, myself, cannot see that with the intent of the Federal Government as stated in its relationships to the State, with the record the Government has had in this kind of an area in the past or intends to have in the future, I, myself, cannot see why they would be objecting to H.R. 2020.

Mr. Snyder?

Mr. SNYDER. Thank you, Mr. Chairman.

Mr. Train, I certainly want to commend you on a very outstanding statement. I should say, in all candor, it is one of the best pieces of testimony I have seen cranked out before this committee or the Merchant Marine and Fisheries Committee with regard to this subject.

I commend you and find myself in basic agreement with it, including your objections to the bill.

The chairman said the last time in his question, the Federal Government now has the right to go ahead and put a deepwater port out beyond the 3-mile limit despite the State's veto, and you answered affirmatively.

I think you perhaps might want to talk a little bit about what happens if H.R. 7501 is passed.

At the present time, they have no authority to put one out there, is that not basically right?

Mr. TRAIN. No, I think that the Federal Government, by exercising a variety of authority scattered among diffierent agencies, probably could license or acquiese in the creation of such a facility.

Mr. SNYDER. Now, apparently there is some question, since the Law of the Sea Conference will take up this matter next May. My understanding, of the testimony both here and at the Merchant Marine and Fisheries Committee, is that there are now in existence approximately 100 deepwater ports around the world and none are known to be in international waters at the present time, and this is the reason they wanted this legislation to attempt to key it in to the Law of the Sea Conference. When I say "this," I am speaking of H.R. 7501, to key it in to the negotiations this summer. Perhaps I am in error on that.

Mr. TRAIN. Again, this is a very ancient area of the law in which I hesitate to speak too affirmatively. It is my belief that any State has a right to make a reasonable use of the high seas.

It is a question of what is a reasonable use.

Irrespective of whether or not the Federal Government has the authority, assuming that it does by one way or another have such authority, we very badly need the kind of comprehensive framework that this bill provides and likewise we need the environmental safeguards that this bill provides.

I do not believe that those would be applicable, absent such enabling legislation.

Mr. SNYDER. I agree with you totally there. The only reservation I have about H.R. 7501 is whether Interior is the right Department to be looking after it. I am not sure Interior has the expertise that is needed as to what goes out in the ocean. I believe it might better be found in the Department.

So far as the general thrust of extending the protection, there are many laws we have passed including environmental laws out to where that port is.

Mr. TRAIN. Could I address the jurisdictional question for a moment?

Mr. SNYDER. Surely.

Mr. TRAIN. Because I think this is a matter of real concern to both the executive branch and to the Congress.

The location and operation of deepwater ports obviously involve a wide range of matters involving energy policy, oil supply, economics, environmental matters, navigation, management of the Continental Shelf, international affairs, and so forth.

There certainly is no one agency of the Federal Government that speaks to all of these functions and responsibilities.

Mr. SNYDER. If I might interrupt, in my opening statement before this committee, I listed 5 international conventions and 17 various laws that are handled by various departments and agencies, some of which are under Interior, some under Commerce, and yourself included.

Mr. TRAIN. You are quite right, Mr. Snyder, and that makes the point, so a choice has to be made among a number of agencies, no one of which is probably the ideal location.

The Department of Interior does have important responsibilities with respect to energy and with respect to the management of the Outer Continental Shelf.

Under the reorganization plan that will shortly be submitted by the President to the Congress creating a Department of Energy and Natural Resources, the Department of Interior will have more of these responsibilities; and indeed, it is my understanding would include NOAA within the Department so that the major functions involved in the operation of these ports would be within the new Department, but even absent such a reorganization, it is the administration's belief that Interior comprises more of the essential responsibilities than does any other agency at this time.

Mr. SNYDER. Thank you.

I think I understand the concern, and I understand the administration's position.

I really commented that this was my only reservation about the bill, and I certainly say to you that is not serious enough that it came to the floor with Interior in charge, that certainly I would not object to it. I hope you understand that.

Counsel has brought to my attention an observation I made awhile ago that none of these 100 ports are in international waters. Some are in international waters.

In your testimony, Mr. Train, you indicate that to bring needed oil into the United States and at the same time protect against spills and other environmental impacts, I wonder if you would expand on that a little bit and tell us what is going on with the citizens, the environmentalists in this area.

Mr. TRAIN. Well, I think about all I can add to that, Mr. Snyder, is that when the subject of deepwater ports first broke some while back, I think the initial reaction of many citizens was that this meant more oil coming into the United States, and putting it very bluntly, more oil on the shores. And I think that there has been some feeling that the operation of supertankers involved the possibility of catastrophic oil spills and so that there has been initially a reaction which I would say would be negative.

Mr. Snyder, I do not think that this is particularly the case at the present time. I cannot judge this too certainly, but listening to testimony, reading some testimony from conservationists, and conservation groups, my feeling is that that kind of opposition has given way in most cases to an understanding of the need and also understanding of the fact that given proper regulation and guidelines, that deepwater ports sited well offshore with oil being carried in by pipeline could, indeed, result in fewer oil spills than we have at the present time.

Mr. SNYDER. I think your prepared statement lays that out very well and I would hope that, and I am sure your shop is doing it, that you would get out as much publicity on that as you can get, to get that message across because I think that you made a good case in that regard.

In your statement you deal with the secondary effects of onshore, speaking of petroleum related industries, the creation of new commercial industry, more housing, the school impact problems, and things of that nature.

Now, you do not mean to imply that these secondary effects are going to take place because of the deepwater port in lieu of transshipment into smaller ports?

Mr. TRAIN. Perhaps more concentrated; yes, sir.

Mr. SNYDER. More concentrated because you would anticipate that it would be transshipped from the Caribbean or Canadian areas and it would come into more numerous port facilities.

Mr. TRAIN. Yes; I think that is the assumption.

Mr. SNYDER. That there would be bigger refineries, more concentrated areas because of the superport.

Mr. TRAIN. Yes. Let me add one other point that I do not think is in my testimony with respect to evaluating the impact of supertankers.

Instead of just looking at the situation today, I think it is also important to look down the road at the amounts of oil that are projected for import into the United States.

Now, I do not want to stand behind these particular projections of quantities because I have no expertise in the field.

At the present time, there is something like 4,000 tanker shiploadings coming into the United States annually with imported oil.

It is my understanding that if those same vessels were carrying the projected volumes of imported oil in 1985, we have something like 20,000 loadings coming in, 5 times as many; that if, on the other hand, all of that oil which, again, is unlikely, but if all of that oil were handled in large supertankers, that the numbers coming in would be something on the order of 2,500 annually in 1985.

Now, these are Coast Guard estimates but I think they help keep the problem in perspective.

Mr. SNYDER. You, of course, rely on local zoning laws in response to some of the chairman's questions, and in your statements as to the practical effect of the local communities' control over what is involved.

I would call your attention to something I do not believe you mentioned, that is, the Coastal Zone Management Act of last year which has not been funded, but which does certainly deal with these same matters and does give States pretty much of a pactical veto over what goes not only onshore but offshore.

Mr. TRAIN. You are quite right, Mr. Snyder.

That is important legislation as you know. You have before the Congress at the present time the national land use policy legislation which is closely related to coastal zone management.

We are hopeful that this, too, will pass, that these two packages of land use legislation together will provide a framework for effective State legislation of major developments of this kind.

Exactly how the two pieces of legislation will fit together is a little bit up in the air at the present time.

Mr. SNYDER. I would have to make this observation.

The other body is currently dealing with that act and there are many concerns being raised about its application and I would rather, at this point, rather than anticipating its passage, how it is going to operate, just rely on the fact that every State I know of has local

State zoning laws and other laws to deal with these things, notwithstanding the passage of that.

Mr. TRAIN. A very good point.

There is not a single thing contained in the Coastal Zone Management Act or the Land Use Policy Act that a State could not do under its own steam if it wished to at the present time.

Mr. SNYDER. Now, the chairman made a point that, and you said yes, legally, they could build these notwithstanding the State's opposition, their total opposition.

It is also true, I think, that from a legal standpoint, if H.R. 2020 were enacted, all of the States along the coast could prohibit deepwater ports, and again I do not think as a practical matter they would, but the analogy is the same as the chairman has pointed out, yes, legally they could do this.

Mr. TRAIN. Yes, legally they could under that bill, if enacted.

Mr. SNYDER. Well, Mr. Train, again I want to say I appreciate your statement and the responses to the questions.

Mr. TRAIN. Thank you, Mr. Snyder.

Mr. HOWARD. The gentleman from Texas.

Mr. MILFORD. Thank you, Mr. Chairman.

Mr. Train, thank you for your very comprehensive and complete statement. I really appreciate it.

I, for the record, would like to indicate my endorsement of the opening statement by the gentleman from Kentucky, Mr. Snyder.

I am in complete agreement with this statement.

I would also, Mr. Train, like to say I agree with you that the Federal Government must control the licensing of deepwater ports offshore from coastal States, with the coastal State having no jurisdiction. Many States inland, have interests which could be jeopardized by the coastal States maintaining too much control.

Let me say that I feel only the U.S. Government can act fairly to protect all of these States. Therefore, the passage of H.R. 2020, according to the evidence that I have heard thus far could endanger the interest of inland States. I agree that the coastal States must be protected as you have outlined, that their land use plans must be protected and respected.

Parenthetically, the rights of the inland States must also be protected.

There has been some discussion and concern during these hearings that H.R. 2020 was needed because of the "technical legality" giving the United States authority to license a port offshore from a State that did not want the port.

Now, turn that premise around. H.R. 2020, if enacted, would give a State a technical and legal right to prohibit construction of ports that could be a vital necessity for inland States, therefore, I would prefer that the U.S. Government be the sole determining factor in this matter.

I would like you to expand a little on your statement where you mention that the major environmental disadvantage of a single mount mooring was the fact that there was little control of spills during the fuel transfer. That is essentially the gist of your statement.

Whereas, you say in a fixed berth, you used the floating aprons. Actually in this fuel transfer out at the mooring mount, is it not a fact

that spill could occur, say, from a broken hose during the transfer? That would be about the only place we would experience a spill, wouldn't it?

Mr. TRAIN. I would suppose that either a broken hose or perhaps the coupling, either at the vessel or at the single point buoy.

Mr. MILFORD. In either case it is only the spill that is coming through the feeder hose out of the ship.

Mr. TRAIN. That is correct.

Mr. MILFORD. Furthermore, in this type of transfer couldn't you immediately stop a pump or have the design of the equipment so that the pumps themselves would automatically stop in case of a breakage?

Mr. TRAIN. There certainly should be fail-safe devices and assuming this is required and they are installed, the spill from a break of this sort would be limited by the volume that had passed through before such a device took effect.

Mr. MILFORD. Let us not expand too much on that particular part of your statement.

I am trying to emphasize that there would be a very limited amount of oil lost.

Mr. TRAIN. I would not discount the volume.

Although I do not have the figures at my fingertips, the volumes of oil that would be pumped are very large. The hoses are very large and the rate of pumping is very rapid, so that I think it can be up to 100,000 barrels per hour or something of that order.

Mr. MILFORD. I am trying to develop here, in questioning, a comparative thing between the amount of spill that might occur in this one point—the only point that you say it can occur—as compared to a spill that might occur in a fixed berth situation.

Actually, in the fixed berth area, if we have a spill it is a massive spill, is it not, a collision or grounding, comparatively speaking?

Mr. TRAIN. That kind of casualty can give rise to very large spills.

Mr. MILFORD. Furthermore, the aprons themselves are not 100 percent effective, are they?

Mr. TRAIN. That is right.

Mr. MILFORD. And compared again to what we would spill with an automatic pump transfer of fuel at a mooring, I think an apron spill would be very significant, do you not agree with that?

Mr. TRAIN. Yes.

Mr. MILFORD. I appreciate very much your testimony.

Thank you very much, Mr. Chairman.

Mr. TRAIN. With respect to that particular part of my testimony, we do believe that a constant effort should be made to improve the technology of these mooring systems. This can include, for example, moving the conventional coupling which is amidships on the tanker, to the bow to allow the tanker to swing from the bow with the wind and this can minimize the risk of the tanker cutting the line, which does happen, and likewise, as I mentioned, development of fail-safe devices are important and likewise, beyond that, regulatory systems which would perhaps prevent pumping during times when the sea levels reach a certain height or wind velocity reaches a certain height would also tend to minimize the risk of a break.

All of these things taken together, we feel, can produce an environmentally acceptable system particularly if a facility is sited well offshore, some 20 miles or more.

Mr. MILFORD. Thank you.

Mr. HOWARD. The gentleman from Mississippi, Mr. Cochran.

Mr. COCHRAN. Thank you, Mr. Chairman.

I have no questions, but I would like to join in commending Mr. Train for his exceptionally good testimony, concise and very helpful to the subcommittee.

Mr. TRAIN. Thank you very much.

Mr. HOWARD. The gentleman from Illinois.

Mr. HANRAHAN. Mr. Train, following Mr. Milford's line of questioning, how long do you think it will be before the necessary research and analysis will be done?

I am sorry I missed part of your testimony which I have not had a chance to read.

Mr. TRAIN. I think that the statement in my testimony may be subject to some misinterpretation. I am not suggesting that there should be no location or installation of a deepwater port until a great deal of further research and development be accomplished.

These systems are in effect around the world, as you know. A great deal of experience already exists with their operation.

The point I am trying to make, and I think the point I did make to Mr. Milford, is it is important that we put the pressure on industry and Government agencies, to continually upgrade the technology available and not necessarily be satisfied with existing technology and if we are looking forward to more of these ports, half a dozen or so over a period of time, I think it is even more important that we make every effort from the very beginning to upgrade the technology.

Mr. HANRAHAN Could you hazard a guess at this point, with your background and experience, as to how long this would take, looking ahead 10 or 15 years?

For instance, you mentioned the apron that is in a fixed berth. Do you think something like this can be developed and, if so, how long would it take on one of these floating-type ports?

Mr. TRAIN. I am not sure an apron would ever be feasible with respect to a single point mooring facility, because, by definition, the purpose of a single-point mooring is to permit the ship to swing from the bow with the changes in current and wind. That means that a supertanker would occupy a very large area, indeed. Offhand, I do not know the length of those things, but they are very big.

Mr. HANRAHAN. Someone said yesterday, Mr. Chairman, it is about 1,200 feet long, is that right?

Mr. TRAIN. My impression from the people I have talked to, is that it is generally considered that an apron is not a feasible device for use in connection with a single-point mooring nor may it be necessary, assuming these things are put far enough offshore.

Mr. HANRAHAN. So you are saying that the spill out in the ocean is no hazard?

Mr. TRAIN. I am not saying no hazard, but the further off, the less likely the hazard. And another aspect of siting which has to be taken into account, is the nature of the prevailing winds and currents, and it should be hopefully in an offshore direction, and this again minimizes the danger of spill.

Mr. HANRAHAN. Thank you.

Mr. HOWARD. The gentleman from South Carolina?

Mr. DORN. No, Mr. Chairman, I just want to welcome Mr. Train to the committee. He is a good influence on the environment, economy, and everything else. I am happy to join you in welcoming him to the committee.

I do feel that a deepwater port is something which is rather urgent. I know in my area of the country, we have millions of pine trees that have been planted and there is a lot of waste and sawdust that I understand countries like Japan need, but they cannot get in close enough to get this stuff, because of the lack of deep water. They use 100,000-ton ships which can be loaded offshore, I understand, if you had the right facilities, and this certainly would help the economy of my area.

Thank you very much, Mr. Chairman.

Mr. HOWARD. The gentleman from North Carolina, Mr. Mizell.

Mr. MIZELL. Thank you, Mr. Chairman.

I have no questions.

I appreciate your appearance, Mr. Train.

Mr. HOWARD. The gentlewoman from New York.

Ms. ABZUG. Thank you, Mr. Chairman.

I am pleased to see Mr. Train here because I am concerned with the environmental questions with respect to this entire issue.

I wonder if you could tell us what the permanence of an effect of construction and operation of offshore terminals would have on plant and marine life?

Would these affect, and in particular, would these effects be greater than if we would dredge our present harbor systems to accomodate larger tankers?

Mr. TRAIN. The answer to that question would depend on what sort of offshore facilities were involved.

If you are building an offshore island and a fixed berth facility, this would require breakwater, and if you want that reasonably far offshore, you are in fairly deep water, and this means the breakwater would be very large, would involve a great deal of material, a great deal of construction activity, and it is our belief that that sort of construction would involve a fairly severe impact on marine life.

Now, it is hard to compare that with inshore dredging because the amount of dredging in any given place would, I presume, vary considerably, depending upon the distance and the depth and so forth.

I pointed out in my testimony the amount of dredging that would be involved in trying to adapt Raritan Bay for use by supertankers and this would involve very large amounts of dredge spoil.

The single-point mooring which is the facility to which I have addressed most of my remarks would really involve no dredging or construction activity at the site itself which would have any particular impact on marine life.

It would involve as would any other deepwater offshore facility, a pipeline to be constructed between the facility and the shore.

It is our strong recommendation that such a pipeline should be buried below the sea bottom and this, indeed, would result and require some dredging activity but, again, a minimal amount as compared to the development of a shoreside facility.

I think that, in brief, in answer to your question, an offshore facility can be provided in ways which should have relatively minimal impact on the marine environment.

Ms. ABZUG. Well, have you really done any study as to what are the most efficacious ports to be built?

Do we really know what we are getting into? We have been in many ways environmentally in some very serious previous differences.

We have testimony before committees about problems of the environment which early study would probably have obviated, and we are now getting into an area which has many ramifications, very important ramifications, economic, trade stimulation of domestic needs and so on. We are also going to get into these critical environmental ramifications and I am curious to know whether we have really decided from a study point of view what kind of port facility would be the most effective and still be the least compromisable from an environmental point of view.

Mr. TRAIN. Let me say that I think the kind of an approach which you suggest is entirely right. It is exceedingly important as we undertake development of new technologies of this sort, that we do a careful assessment well in advance of the various alternatives available, and the impacts that would follow from the different alternatives.

I think that we have really been doing this very effectively in this area.

Our Council started studying these deepwater ports a year ago, approximately 1 year ago last January. We have now a series of studies primarily undertaken for us under contract with the universities of the various siting alternatives.

We have taken a look at 11 port facilities at different sites around the Atlantic and gulf coast. These involve both the single-point mooring and the artificial island alternatives. These studies have been conducted, depending upon the geographic area by Massachusetts Institute of Technology, the University of the State of New York at Stoney Brook, the University of Delaware, Louisiana State University, and Texas A. & M.

These studies have included the environmental impact from the different kinds of construction in these different areas. We have the results of those studies presently in hand. They are very extensive.

As I pointed out in my statement and I might just say the University of Delaware study, for example, is like 1 foot in thickness and there are volumes involved in each one.

These are available to the committee and I am not sure they have not been transmitted to you. I just do not know. They are available to the public and an attachment to my statement indicates how these can be acquired.

This is the last page, attachment C, to my statement.

Again, I might say they are very extensive, and they set out the impacts of different kinds of facilities.

I think, interestingly enough, all of these studies, although undertaken by different institutions, have come up with relatively the same general conclusions, and these are the conclusions which I have set forth in our statement.

Some have paid more attention to one aspect than another has, but by and large, the studies bear one another out almost completely.

Ms. ABZUG. Well, then, I missed your testimony. I have read through it, but do you believe that your testimony answers some of the problems, for example, what are we going to do about the increase in en-

vironmental problems that may be created by the oilspills which have already been a serious problem to us? There is a point of view that there is increased possibility of spills in these deepwater construction sites.

Am I wrong about that?

Mr. TRAIN. It is our belief that we will have less overall oilspillage along our shores if supertankers are used, utilizing deepwater offshore ports.

Ms. ABZUG. I am rather simple about my approach.

Essentially, the theory of developing these deepwater ports is to make them accessible to larger tankers, right?

Mr. TRAIN. That is correct.

Ms. ABZUG. That is the fundamental reason; is it not true that one catastrophe involving a supertanker loaded with more oil is much more of a disaster economically and environmentally than a catastrophe with a smaller ship?

I just use this as an example. We could find ourselves in a position of having an increase in the offshore kind of spills which, for example, could be caught by the Gulf Stream, and be brought out to the shores of Europe.

We could find ourselves in some very interesting problems. I am just using this as an illustration because I am not too clear how we really solve this problem environmentally.

Let me say that I have a suspicion underneath it all that if we build these deepwater ports for the large tankers, we have not really established how we solve the environmental problems. I have not read all of your studies, but I hope you have made some determination, Dr. Train, but perhaps I will get into some of it. I really find it very interesting because I have a feeling that this is going to aggravate an environmental problem.

Now, it may be that we are prepared to do that for economic benefits. This has been our whole approach, the devil take the hindmost with the environment, and we are going to make more profit. We do not control the polluters so we will add some more polluters. That is what I am afraid is under this.

Now, use that one example and tell me how that does not affect the environment.

And may I say, Mr. Chairman, if you will indulge me, I have a few more questions.

Mr. HOWARD. Take all the time you want.

Mr. TRAIN. Let me say at the outset, first, there is no way of eliminating all risk of oilspill, if you import oil.

Ms. ABZUG. I appreciate that.

I am talking about whether you increase the chances of a spill.

Mr. TRAIN. Now, obviously, if a 500,000-deadweight-ton tanker breaks up entirely it will create a catastrophic oil spill situation.

It is hard, in my mind, to imagine that happening.

Although large volumes are involved, the tankers have compartments. Supertankers are compartmentalized into at least 20 compartments, for example; a typical 250,000-deadweight-ton tanker and more for larger ships. It is difficult for me to conceive all of these somehow being ruptured at once.

The United States has taken a very strong position in IMCO, the Intergovernmental Maritime Consultative Organization in London, and is proposing that double bottoms be required of new construction, new tankers of a certain size.

We feel this is important because more oil is spilled from groundings than from collisions.

The double bottom is specifically addressed to the grounding problem.

By importing oil in supertankers, you achieve, as I point out, major economic advantages with respect to the cost of oil.

By delivering that oil at offshore facilities, well offshore and piping it into shore, you avoid two of the major causes of casualty: groundings in shallow waters and collision due to crowded traffic conditions.

I will not say you necessarily completely avoid these, but I think it is plain you are operating 20 to 30 miles offshore in water 100 or more feet deep. You are, in fact, running far less risk of casualty and assuming that a casualty does occur, far less risk of serious damage to the marine environment than if you tried to deliver the equivalent amount of oil to shore ports in more numerous smaller tankers. It just works out statistically.

Ms. ABZUG. We have proof of that, statistically?

Mr. TRAIN. You cannot prove anything in this business, I think, either the positive or negative of these propositions.

Ms. ABZUG. Probably, Dr. Train, you just testified that just works out that way statistically. Is that just a statement, or are you basing it on a study?

Mr. TRAIN. I have a very extensive analysis of the statistical methodology attached to my statement.

Ms. ABZUG. Fine.

Mr. TRAIN. It is not just a matter of statistics.

We are not dealing here purely with a sort of a mathematical computation. We are dealing with physical facts, ocean current and wind directions, and the fact that inshore shallow estuarine waters are biologically far more sensitive to oilspills than offshore locations.

These are, let us say, environmental facts that are also taken into consideration in this general analysis.

Ms. ABZUG. Well, what is being taken into account I assume by Dr. Train, is the environmental aspect and economic aspects, and I could debate them.

I am not sure I want to take the time of this committee to do that.

What effect would H.R. 2020 have on States where there are strong oil lobbies and weak conservation lobbyists, for example?

Mr. TRAIN. Well now, H.R. 2020 provides no regulatory framework insofar as environmental protections and so forth are concerned.

It is purely and simply a prohibition on the Federal licensing of a facility off a State which had enacted the prohibitive legislation.

Now, I am not sure that I follow your question.

Ms. ABZUG. Do you favor H.R. 2020?

Do you think it helps create a healthier and a cleaner environment?

Mr. TRAIN. The administration does not support H.R. 2020. As I have testified, the administration and the bill the administration sent up, H.R. 7501, requires the Secretary to consult closely with the interested States.

It does not permit a legal veto because what we are talking about here is the high seas beyond the 3-mile limit, and it is the opinion of the administration that to give a State a legal veto over such a facility or any facility beyond the territorial seas is, in fact, injecting the States into jurisdictional questions on the high seas, which are the province of the National Government and not of the States, and thereby creating a potentially very unfortunate precedent with respect to a whole range of international questions.

I have stressed to the committee that the administration has no intention whatsoever of trying to force a deepwater port down a State's throat.

Ms. ABZUG. What facility, what provision in the bill of the administration, provides for guarantees that supertankers would be built in a way which would make them facilities that would be less likely to create oil spills and so forth, in the event of a grounding, as you testified in your statement?

Mr. TRAIN. We believe it is very important that these kinds of specifications be arrived at by international regulation.

Now, that is the basic approach which the United States is taking.

We are taking a leadership role in IMCO on these matters because we do believe it is important to get international agreement. It is very difficult to satisfactorily control these problems through unilateral action.

Now, beyond that, the Federal Government would maintain the right to the regulation of the operation of these facilities to control the kind of ships that utilize them.

Ms. ABZUG. So we have not as yet had that in mind. We are talking about building these deepwater ports and offshore facilities for supertankers, and we do not have that in hand, as yet.

Mr. TRAIN. No, madam.

Ms. ABZUG. Now, could I get an idea from you why this is? Is it your opinion that the petroleum industry has been resisting, for example, the double bottoms for ships because of the cost and other things like that?

We are talking, you know, about environment again, versus oil and profit. It is an important issue.

Mr. TRAIN. First, of course, supertankers are not coming into the United States, but they are operating around the world, and I think it is fair to say that the oil industry as well as, I believe, the shipbuilding industry, has not been enthusiastic about double bottoms.

The reasons I think you put your finger on. It is a simple matter of cost. There are those, I think, who dispute the efficacy of double bottoms and believe that the objectives can be achieved in other ways.

Ms. ABZUG. Well, I find this very interesting.

Mr. TRAIN. But that is the U.S. position in IMCO, to get international agreement on double bottoms. That is the U.S. position.

Ms. ABZUG. Yes. We are dealing with this issue because of the demand or pressure for finding a greater way in which we can increase our facilities to welcome the supertanker and I find it very difficult in dealing with this very complicated question, because it has so many ramifications, nationally and domestically, from an economic and political point of view. What I find very difficult to understand is, where really is the input from your Department, Dr. Train?

As we are moving ahead, there is a lot of pressure in a lot of committees in this Congress and the administration, for this increasing of the amount of importation of oil.

I am not going to get into that issue, as I said, at the moment. Assuming I accept that premise as being essential—I do not necessarily do so, but just for the sake of argument—that we need to increase the amount of imported oil, I am not clear from your testimony what environmental protections are available.

You talk about decreasing the amount of oil spills and then you make an admission that we do not have any guarantee that will happen. If the supertankers are not going to take the protective building that is necessary, let us use that as one example, and would you respond?

Mr. TRAIN. Well, I do not know that I was making any particular admissions.

Ms. ABZUG. No; you were not. This is a different hearing here, Dr. Train.

Mr. TRAIN. Ms. Abzug, I would say supertankers, as presently constructed and operated, and presently available, if utilized in connection with properly sited offshore deepwater ports with pipeline transportation to the shore and carefully regulated by the Government, would provide substantially less risk of damage from oil spills than the existing situation and the projected situation, if you did not have them. That is, the existing ships.

What I am saying in response to your question is, I think we have to continue to impress, to improve the technology. We are doing so in IMCO.

You asked what input our Council has.

I have been designated the chairman of the U.S. delegation to the IMCO convention in London in October. We are the only Nation of the world to my knowledge that puts an environmentalist at the head of such an organization. I think this speaks well for our country. We do have a major input to make and we are making it.

You also have on the books the Port and Waterways Safety Act, presented by the administration about 2 years ago which became law, I believe, last year, which does give authority to the Coast Guard and the Department of Transportation in the absence of effective international regulations of the kind we are seeking, to move ahead and impose unilateral design specifications for tankers coming to the United States.

Ms. ABZUG. Let me come off that subject for a moment. I am very impressed with our input but I would like to see the action, OK?

The secondary effect you refer to also concerns me greatly because what you deal with there is the significant effect that the location of superports will have on inducing the industries, refineries, and petrochemical complexes, and create whole new shifts, is that not right, the need for housing, sewage, transportation problems, electric power—a vast array of problems?

You say a framework exists under our Federal legislation. I am somewhat familiar with the framework. I know a little bit about Federal air and water pollution laws, et cetera, and our views as to what we do about controlling emission and discharge of pollutants.

This is going to create a much more serious burden and you admit in your statement that this is a framework but you show no evidence that this is going to be a big thing if it ever takes place, is it not, all this movement?

Mr. TRAIN. Yes, madam.

Ms. ABZUG. And I see nothing in here in your statement, by the way, which indicates that you have actually considered specifically the new or special requirements that would have to be added to the law to make certain that this is not going to create a whole upset in our environment atmosphere.

You say the standards may require more stringent emission and effluent controls based on the best technology requirements, et cetera.

I think before we embark upon this major thing which is going to have a lot of profit for the oil companies, we want to know how the millions of Americans are going to be affected by it, and I would like you, Dr. Train, to give a little more input over here in the United States as to how this is going to affect us and what proposals you specifically make in the changes and the strengthening and making these more stringent requirements.

I would like that brought before this committee because I think this is part and parcel of the responsibility of this committee to do that. I want to hear from you your recommendations as to how we are going to really make these laws more environmentally responsive with respect to what would be the added pressures on it. I do not see anything in here like that in your testimony.

Mr. TRAIN. First, let me say the Air Quality Act and the Water Pollution Control amendments, both of which this committee is very familiar with——

Ms. ABZUG. Absolutely.

Mr. TRAIN [continuing]. Provide a major framework for EPA to influence land use decisions that impact on air and water quality.

Second, we have developed and presented to the Congress national land use policy, land use legislation which is presently being considered. You already have on the books Coastal Zone Management legislation.

With the enactment of the national land use policy legislation, together with these other existing statutory frameworks, we believe that there will be a comprehensive, institutional basis for strong State regulation of these facilities.

Let me also point out that irrespective of superports, if these volumes of oil come into the United States, you are going to have this kind of development. Perhaps not as concentrated, but it is going to be located somewhere in the United States.

I think we need these institutional controls in any event.

Ms. ABZUG. Well, if you could give some more clarity to me and the committee with respect to where you might envisage some deeper problems in the enforcement of the law or the laws we have on the books or some deepening requirements in terms of changes in some of the regulations under them, I think it would be very helpful.

Mr. TRAIN. We will be happy to do so. We have also an extensive study by the Council that is reaching completion through Arthur D. Little & Co., the secondary impacts from land-based facilities. This study should be available later this summer.

Ms. ABZUG. This would refer to what would happen in the event we have beefing up facilities to accommodate the oil being brought to the coast?

Mr. TRAIN. This would involve the impact of refineries and petrochemical facilities generated by a deepwater port facility.

Ms. ABZUG. Thank you.

Thank you, Mr. Chairman.

Mr. HOWARD. In reference to a comment a few minutes ago, Mr. Train, you stated that some studies and surveys had been sent to the subcommittee.

Mr. TRAIN. Yes.

Mr. HOWARD. I'd like to bring to your attention that the subcommittee requested those studies and surveys several months ago and still has not received them; so we would appreciate receiving them.

I have a letter here dated March 14, 1973, from the Executive Office of the President, Office of Management and Budget, sent to the chairman of the Committee on Public Works, John A. Blatnik, which states the administration's views on H.R. 2020.

Without objection, that will be made a part of the record at this point. Also, for the record, a memorandum to me from the Subcommittee Counsel, Mr. D'Amico,, commenting on the OMB letter.

[The letter and memorandum referred to follows:]

EXECUTIVE OFFICE OF THE PRESIDENT,
OFFICE OF MANAGEMENT AND BUDGET,
Washington, D.C., March 14, 1973.

Hon. JOHN A. BLATNIK,
Chairman, Committee on Public Works,
House of Representatives,
Washington, D.C.

DEAR CONGRESSMAN BLATNIK: This responds to your request of January 29, 1973, asking for our views on H.R. 2020, a bill "To prohibit under certain conditions Federal activities in connection with the construction of offshore bulk cargo transshipment facilities."

Although we share with Congressman Howard the concern for the environment that underlies H.R. 2020, we oppose its enactment for the following reasons:

(1) The bill undesirably extends state jurisdiction into Federal and international waters. Present state jurisdiction is quite sufficient for legitimate state regulation or prevention of the shoreside facilities and activities that would be necessary for development of offshore transshipment facilities. The proposed extension of state jurisdiction could intrude upon sensitive international agreements on development of outer continental shelves and on use of the high seas—areas clearly the concern of the Federal Government.

(2) The bill is unnecessary. The National Environmental Policy Act of 1969 already provides substantive and procedural safeguards that would apply to offshore transshipment facilities as well as to other types of initiatives.

(3) The bill has the potential of undermining environmental protection. An implicit assumption of the bill seems to be that preventing or delaying the development and operation of offshore transshipment facilities will maintain the status quo and at least preserve the present quality of harbors, waterways, and shorelines. In reality, the status quo cannot be maintained if oil imports increase substantially. Without new port facilities capable of receiving the economical, very large tankers, present ocean shipping lanes, coastal waterways, and harbors would experience substantial growth in traffic of smaller ships that would inevitably result in more congestion, collisions, groundings, and oil spills. Environmental experts who have considered alternative ways of handling increased oil imports advise that offshore terminals and pipelines offer the highest degree of environmental protection.

(4) The bill creates the potential for obstructing solution of interstate problems by a single state that need not consider any factors other than its own environmental interest, however remote. The short-run environmental concerns, possibly misplaced concerns, of a single state could be the basis for obstructing

the best common solution to complex, far-reaching problems of the environment, natural resource supplies, economic development, standard of living, and the security and well-being of a whole region, the Nation and, ultimately, of the state and its localities also.

In our view, possible offshore transshipment facility initiatives should be considered in the broad perspective of the Nation's energy problems and related matters that the Administration has had under an intense review, now nearing completion. The President's energy message, soon to be presented to the Congress, will help clarify these problems and suggest directions for reasonable solutions that are responsive to our mutual concerns for environmental protection as well as other vital National interests.

Sincerely,

WILFRED H. ROMMEL,
Assistant Director for Legislative Reference.

MEMORANDUM

June 18, 1973.

To: Hon. James J. Howard, chairman, Subcommittee on Energy.
From: Salvatore J. D'Amico, chief counsel.
Subject: OMB comments on H.R. 2020.

On March 14, 1973, Mr. Wilfred H. Rommel, Assistant Director for Legislative Reference, OMB, wrote to Chairman Blatnik in response to Chairman Blatnik's request of January 29, 1973, for OMB's views on H.R. 2020.

In his response, Mr. Rommel states: "Although we share with Congressman Howard the concern for the environment that underlies H.R. 2020, we oppose its enactment * * *" The reasons for OMB's opposition are laid out, under four items and a summary paragraph.

My views on OMB's position are as follows:

OMB REASON NO. 1

OMB's Item 1 states: The bill undesirably extends state jurisdiction into Federal and international waters. Present state jurisdiction is quite sufficient for legitimate state regulation or prevention of the shoreside facilities and activities that would be necessary for development of offshore transshipment facilities. The proposed extension of state jurisdiction could intrude upon sensitive international agreements on development of outer continental shelves and on use of the high seas—areas clearly the concern of the Federal Government.

The thrust of OMB's argument under Item 1 is that H.R. 2020 would "undesirably extend state jurisdiction into Federal and international waters" and that "present state jurisdiction is quite sufficient for legitimate state regulation or prevention of the shoreside facilities and activities that would be necessary for development of offshore transshipment facilities."

OMB's position here suggests a complete misunderstanding of the intent and purposes of H.R. 2020. The bill in no way assumes or extends state jurisdiction into Federal or international waters. The bill would not have any application at all unless and until the Federal Government were about to license a deepwater port in Federal or international waters.

As a matter of fact, the Administration's own proposed bill on deepwater ports may be guilty of an undesirable extension of jurisdiction by assuming the authority to be able to provide for the licensing of deepwater ports.

If there is any merit in OMB's position, then it would seem that it is the Federal Government that should withhold its proposed bill on deepwater ports.

The statement in Item 1 relating to sufficient state jurisdiction is really a separate issue. The issue is whether, as OMB's position implies, a state, by its ability to regulate shoreside facilities, already has the power to prevent construction of a deepwater port off its shores.

Neither is this position a valid objection to H.R. 2020, for: A deepwater port may be located just beyond the borders of a state and yet have greater impact on that state than it would on the state within whose boundaries it is physically located.

Further, it is questionable as to how free a state may be under ICC regulations in regard to the interstate shipment of any product unloaded at a deepwater port.

OMB REASON NO. 2

The bill is unnecessary. The National Environmental Policy Act of 1969 already provides substantive and procedural safeguards that would apply to offshore transshipment facilities as well as to other types of initiatives.

OMB's position here is that H.R. 2020 is unnecessary because the National Environmental Policy Act of 1969 (NEPA) already provides the substantive and procedural safeguards H.R. 2020 seeks.

Inasmuch as OMB's Reason No. 4 also deals with the environment, I will discuss Item 2 with Item 4.

OMB REASON NO. 3

The bill has the potential of undermining environmental protection. An implicit assumption of the bill seems to be that preventing or delaying the development and operation of offshore transshipment facilities will maintain the *status quo* and at least preserve the present quality of harbors, waterways, and shorelines. In reality, the *status quo* cannot be maintained if oil imports increase substantially. Without new port facilities capable of receiving the economical, very large tankers, present ocean shipping lanes, coastal waterways, and harbors would experience substantial growth in traffic of smaller ships that would inevitably result in more congestion, collisions, groundings, and oil spills. Environmental experts who have considered alternative ways of handling increased oil imports advise that offshore terminals and pipelines offer the highest degree of environmental protection.

OMB Reason No. 3 cites four basic objections:

(a) The impact of H.R. 2020 will be exactly the opposite to the OMB position that the bill has a potential of undermining environmental protection. Actually the bill will insure a state's right to preserve and enhance the environment.

(b) In OMB's stating that H.R. 2020 contains an implicit assumption that preventing or delaying deepwater ports will maintain the present quality of harbors, waterways, and shorelines, the OMB gives further indication that it does not understand the intent of H.R. 2020. In no way does H.R. 2020 seek to prevent or delay the development of deepwater ports.

Further, OMB in stating "that the status quo" in regard to the quality of shorelines, etc., cannot be maintained if oil imports increase substantially, implies that a inescapable consequence of the anticipated increase of oil imports will be a contamination of the shorelines, etc.

(c) Here OMB argues that without new deepwater ports with super tanker capability, there must be an increase in the number of smaller tankers and this will lead to greater risk of collisions, groundings and oil spills.

Again, OMB gives evidence of not understanding the intent of H.R. 2020. The bill in no way suggests that there will be no new deepwater ports.

The thinking of OMB in this regard suggests a complete swallowing, hook, line, and sinker, of the oil producers arguments for the development of deepwater ports. OMB does not indicate any consideration of alternatives. It does not consider that tankers constitute only seven percent of the total sea traffic; it does not consider that whereas there is existing technology for the controlling of an oil spill from smaller tankers, the technology does not exist to contain the spill from a super tanker; it does not consider whether a 500,000 dead weight ton tanker, tied to a monobuoy near a heavily trafficked sealane, in fact presents a much higher risk for collision than a number of smaller tankers. It does not consider whether the oil producers are willing to undertake the added expense of double hulls and double bottoms which many say would be a substantial contribution to the avoidance of a major oil spill in the event of collision or grounding.

(d) In stating that environmental experts advised that "offshore terminals and pipelines offer the highest degree of environmental protection," OMB takes a very narrow view, totally ignoring the *land side* environmental threat of deepwater ports.

OMB REASONS NOS. 2 AND 4

The bill is unnecessary. The National Environmental Policy Act of 1969 already provides substantive and procedural safeguards that would apply to offshore transshipment facilities as well as to other types of initiatives.

The bill creates the potential for obstructing solution of interstate problems by a single state that need not consider any factors other than its own environ-

mental interest, however remote. The short-run environmental concerns, possibly misplaced concerns, of a single state could be the basis for obstructing the best common solution to complex, far-reaching problems of the environment, natural resource supplies, economic development, standard of living, and the security and well-being of a whole region, the Nation and, ultimately, of the state and its localities also.

As I indicated above, OMB reasons 2 and 4 should be read together. The reason they should be read together is that they are contradictory, one cancelling out the other.

OMB Reason No. 2 states H.R. 2020 is unnecessary because NEPA provides the states "substantive and procedural safeguards" in regard to deepwater ports.

Reason No. 4, in referring to danger of a state's being concerned only with its own environmental interest, "however remote", and in stating a state could be the basis for obstructing the best "common solution", countermands the intent and purpose of NEPA and of the weight of court decisions on the intent and purposes of NEPA.

Reason No. 4 suggests a reversal of the basic American concept that *all* Americans are equal and equally entitled to life, liberty and the pursuit of happiness. Reason No. 4, taken to its logical conclusions, adopts the totalitarian concept that Americans, as individuals, are unimportant and must be subordinate to what the whims of the often poorly informed Federal Government are in regard to what is "the common solution".

Yet NEPA specifically provides that the end of Federal actions will be: To "assure for *all Americans* safe, healthful, productive and esthetically and culturally pleasing surroundings" [Section 101(b)(2)]; to "preserve important historic, cultural and *natural* aspects of our natural heritage, and *maintain*, wherever possible, an environment which supports diversity and variety of *individual choice*" [Section 101(b)(4)].

NEPA, Section 101(c) states: "The Congress recognizes that *each* person should enjoy a healthful environment and that *each* person has a responsibility to contribute to the preservation and enhancement of the environment".

OMB's election to ignore the needs and concerns of "*all*" Americans and of "*each*" American only underscores the need for H.R. 2020. Certainly, as NEPA will be interpreted in accordance with OMB thinking (and few will argue OMB's power to set Administration policy) NEPA cannot protect the needs of *all* Americans and contra to this intent of the act, individuals, individual states and individual sections of our country will be made sacrificial lambs. And since scientific knowledge of the impact of deepwater ports is still in an infant stage, sacrificial lambs to an uninformed opinion that OMB would have us believe is more learned than that of any state just because it is the opinion of the Federal Government.

As a practical matter, H.R. 2020 would save the Federal Government and the states untold millions of dollars. For it would eliminate the countless law suits that would inevitably ensue any Federal decision contra to a state's position against deepwater ports off its shores.

The futility of looking to NEPA is further emphasized by OMB's own position (Reason No. 1) that "present state jurisdiction is quite sufficient for legitimate state regulation or prevention of the shoreside facilities and activities that would be necessary for development of offshore transshipment facilities". If this is so, why should the Federal Government further burden its agencies, already overburdened by NEPA paperwork, with the need to go through all the time and expense of a NEPA study. It would be a vain, frivolous, tremendously wasteful act, one with the added tragedy of denying timely consideration of other NEPA duties.

OMB's Reason No. 1 implies that if any state does not want a deepwater port, it won't have it. All H.R. 2020 seeks to accomplish is to assure freedom to each state to make this choice with a minimum of costly red tape and futile Federal interference; and to assure it is not denied this freedom by a plan for a deepwater port which while not within its boundaries, materially affects its interests.

OMB's thinking implies that each of our states is petty, selfish, and indifferent to national interests and incapable of determining its own problems honestly. I don't believe this is so; how OMB can believe it is beyond me.

In its concluding paragraph, OMB suggests that "the President's energy message, soon to be presented to the Congress, will help clarify these problems" [including deepwater ports], and suggests directions for reasonable solutions

that are responsive to our mutual concerns for environmental protection as well as vital national interests.

The President's energy message has come and it has gone. It did not realize the promise of OMB's message. In fact, in regard to deepwater ports the President's message is largely a reflection of the OMB views herein above cited. They afford no help and continue to leave the nation with a fragmented and lumbering approach to a resolution of its energy crisis.

In summary, there is nothing in the OMB position on H.R. 2020, or in the President's energy message, which would cause me to recommend that you reconsider H.R. 2020. OMB's reasoning simply underscores the need for H.R. 2020.

Mr. HOWARD. Just one more statement, Mr. Train. I want to thank you very much for your testimony and your very excellent discussion with Mr. Snyder following your testimony, and if you reflect back on that for a moment, the last question which dealt with what might be considered a two-edged sword of H.R. 2020, will you not agree that everything you and the gentleman from Kentucky discussed, and discussed so very well, related to H.R. 7501 and similar bills and not at all directly in any way to H.R. 2020, as you can remember?

Mr. TRAIN. I think that is right.

Mr. HOWARD. Thank you very much.

Mr. D'Amico, counsel, has a question.

Mr. D'AMICO. Mr. Train, H.R. 7501, title I, section 101(a)(5) contains the following provision:

The construction and operation of deepwater port facilities off the coast of the United States by United States citizens should be subject to Federal license and regulation and closely coordinated with the regulations of the exploration and exploitation of natural resources under the Outer Continental Shelf Lands Act in order to insure adequate accommodation for such uses.

I request, Mr. Chairman, that the subcommittee ask Mr. Train to provide a paper indicating just what that section means and what impact it has on deepwater ports as we are discussing them today.

Mr. TRAIN. I will be glad to do that.

Mr. HOWARD. Without objection, that will be made a part of the record.

[The information received follows:]

This section calls for coordination between the regulation of natural resources under the OCS Lands Act and Deepwater Port Development. The need for such coordination is one reason for the Administration's decision to choose the Department of the Interior as the administering agency for the deepwater port program. Such coordination is necessary to assure, to the maximum extent possible, that the location and operation of deepwater ports and their associated structures does not conflict with, or foreclose present or future exploitation of offshore oil and gas or other natural resource development.

Mr. D'AMICO. You state the economic feasibility of supertankers in relation to the regular tankers. In determining that econmoic feasibility, do you take into account: all the impacts that are described in your statement under the heading "Secondary Effects"; all of the impacts of a spill on an area and on the individual persons affected?

I would like to know if you take into account the loss in marine life, if you take into account, for example, the added cost of the double bottoms, or is the economic feasibility purely an economic feasibility determination from the point of view of the petroleum or shipping industry?

Mr. TRAIN. The economic data, I believe, is primarily an analysis of the transportation cost including the basic capital investment involved

in the ships, taking into account the double bottom factor and does not seek to quantify possible damage to the marine environment from various spill assumptions.

I am not sure that could really be accomplished very effectively.

Mr. D'AMICO. That would be very real.

Mr. TRAIN. Any damage to the marine environment is obviously very real.

Mr. D'AMICO. Thank you.

Mr. HOWARD. Thank you very much, Mr. Train.

We certainly appreciate your testimony today and we will be looking forward to your responses to the questions.

We would appreciate getting them, of course, as soon as possible.

Mr. TRAIN. I will have it down promptly.

Mr. HOWARD. I hope we will be able to have it available for the subcommittee discussions on H.R. 2020 or any other one that will be coming before the committee concerning which we may be able to use your expertise.

The subcommittee will now adjourn until 10 o'clock tomorrow morning, at which time the first witness will be Mr. John C. Court, Deputy Assistant Administrator for Planning and Evaluation, EPA.

[Whereupon, at 12:27 p.m., the subcommittee recessed, to reconvene at 10 a.m., June 21, 1973.]

TO GUARANTEE AFFECTED STATES AN EQUAL VOICE IN THE CONSTRUCTION OF DEEPWATER PORTS

THURSDAY, JUNE 21, 1973

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON ENERGY
OF THE COMMITTEE ON PUBLIC WORKS,
Washington, D.C.

The Subcommittee on Energy met in room 2167, Rayburn House Office Building, pursuant to recess, at 10:08 a.m., Hon. James J. Howard, chairman of the subcommittee, presiding.

Mr. HOWARD. The Subcommittee on Energy of the House Public Works Committee will come to order.

This morning we continue our hearings on H.R. 2020 and related bills concerning States' activities in the area of cargo transport facilities for more deepwater ports.

This morning, for our first witness, we are very happy and honored to have before the subcommittee our colleague from the State of Delaware, the Honorable Congressman Pete du Pont.

Congressman du Pont, welcome to the subcommittee.

The subcommittee is very aware of your interest and activities concerning cargo transshipment facilities. And along with the State of Delaware, we in the Congress are grateful for your activities in this area.

I believe you do have a statement and some additional materials.

STATEMENT OF HON. PIERRE S. du PONT, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF DELAWARE

Mr. DU PONT. Thank you, Mr. Chairman.

I appreciate the opportunity to appear before your committee and discuss what is a very important question, not only to the State of Delaware, and not only for the coastal States of the United States, but for the whole country.

I have a prepared statement and two attachments that I would like to make a part of the record. The first attachment, some extension of remarks in the Congressional Record on February 5 of this year, remarks that I made before an Army Corps of Engineers hearing held in Rehoboth Beach in January. And, second, a copy of House Bill No. 300, passed by the 126th General Assembly of the State of Delaware; that is, our coastal zoning law, which bears directly on the question of superports.

And with the chair's permission, I will make both of those part of the record.

20-346—73——9

Mr. HOWARD. Without objection, your prepared statement and those items will be made a part of the record at this point.

[The statement and attachments referred to follow:]

STATEMENT OF HON. PETE DU PONT, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF DELAWARE

Mr. Chairman: Thank you for giving me this opportunity to appear in support of H.R. 2020, a bill giving to the states the authority to approve or disapprove the construction of an adjacent off-shore oil transfer terminal.

As the members of this subcommittee may know, Delaware Bay has become the focus of plans to construct a major deep water oil terminal for the East Coast. Industrial consortiums and government agencies have favored Delaware Bay as a site for the so-called superport because of the Bay's deep channel, the proximity to petroleum distribution networks and the existence of major refineries at the head of the bay.

As pressure began to build for the construction of more refineries and the development of a bulk transfer terminal within Delaware Bay, the Delaware legislature began to assess the impact such development would have on the State. The legislature initiated an extensive study of the coastal zone, for the first time compiling an inventory of the State's coastal resources. The study concluded that the coastal zone was ecologically vital to the bay and that further industrialization of the coastal zone would not only threaten an important recreation center but would cause serious imbalance to the marine ecology of the bay.

In June of 1971, the Delaware legislature, acting on these recommendations, passed the nation's first coastal zoning law which prohibited further industrialization of the coastal zone.

The explicit mandate of the Coastal Zone Act should have laid to rest plans for further industrialization of the coastal region; however, planners and government agencies continued their designs for terminal construction. The Commerce Department, for example, released a study recommending the construction of an artificial island eight miles off Delaware's coast, despite the fact that the Coastal Zone Act had been signed into law one year earlier. In this massive four volume report there was no mention of the Delaware law. Naturally, the people of Delaware began to think their wishes were being ignored.

In an effort to bring this issue squarely before the people in Delaware, I requested that the Corps of Engineers hold hearings in Delaware to both report on the study that they were conducting pursuant to a Senate Public Works Committee resolution and to give Delaware citizens an opportunity to voice their views to federal officials. The Corps cooperated and held 2 days of hearings, which were attended by about 1,000 people. Those who testified almost unanimously stood behind the Delaware Coastal Zone Act and opposed plans to locate an off-shore oil terminal in or near Delaware Bay.

I prepared extensive remarks for those hearings, outlining my reasons for opposing construction of a deep water port in Delaware Bay or surrounding waters. In the interest of time, I request that these remarks be inserted in the record as an appendix to my prepared statement.

Despite the continued opposition to superport development, Delaware Bay continues to be discussed as a possible site location. In short, the impact of the State law on what will presumably be a federal licensing activity is far from clear. We have a specific policy prohibiting refineries and superports in the coastal zone, yet the planning and pressure for construction persists.

Because of this experience, I favor H.R. 2020 for three reasons.

First, states which already have a coastal zoning policy should not have their statutes preempted by the federal government. The testimony which I submitted for the record discusses some of the impacts superport development would have on Delaware. Briefly stated it would mean changing the entire character of rural, agricultural, southern Delaware into an industrialized petrochemical center. The landside impact of deep water port development was assessed by Chairman Russell Train in his recent testimony before the House Merchant Marine and Fisheries Committee:

The creation of new petroleum-related industries would induce associated commercial and economic activities. An overall increase in economic development will cause population concentration and needs for new housing and added public services such as sewage treatment, transportation, schools, electric power, and

recreational facilities. Each of the activities in turn will result in a range of environmental impacts beyond what would normally be expected without a deep-water port. The impacts include demands for land and water supply; increased air and water pollution; and a burden on public services. Depending on the nature of a given area, induced effects could cause it to change from undeveloped to industrialized, or from developed to highly industrialized.

All these secondary impacts of superport development are intimately involved with the local decisions of the states. To deny the state a determining role in superport licensing would be to effectively deny them the right to make their own zoning and resource control decisions.

Therefore, a state like Delaware, which has already established its own land use and resource priorities, should be allowed to implement those priorities and not be preempted by the federal government. Superport development is like a wedge; the port itself is only the tip of the wedge. If you do not allow the states to participate in the initial decision, they will be denied the right to control the development which attends deep water terminals.

Second, states which do not have coastal zone laws should be given the opportunity to review their zoning procedures before the federal government acts in licensing a terminal. Section 2 is a desirable provision in H.R. 2020 because, it gives states time to assess their priorities and to conduct their own assessment of what superport development would mean to them. It would also encourage states to make the type of survey that Delaware did and to appraise the limits of their coastal resources.

Third, I also favor the enactment of H.R. 2020 because it fills a serious void left in present law and in the bills now pending before Congress which would authorize the licensing of deep water oil terminals. Doubt about conflicting laws will persist unless language as precise as that found in H.R. 2020 is enacted into law. The proposals pending before the other committees in the House make vague reference to carrying out licensing in a manner as consistent as possible with relevant state law. Such provisions, however, by no means guarantee that the states will have the determining role in superport licensing. They merely add to the confusion by leaving doubt in the minds of the planners and state officials what would happen when a headlong confrontation occurred between an applicant under a federal licensing procedure and a state trying to uphold some thing like the Delaware Coastal Zone Act.

Section 1 of H.R. 2020 leaves no doubt that state law will be a controlling factor in deep water port licensing.

While I think that the bill more than adequately deals with the case of a state which has an existing state statute prohibiting the construction of off-shore oil terminals, I have doubts about section 2(b) which deals with states which do not have such laws.

Section 2(b) establishes a procedure by which the state may object to a license application, yet it is unclear which branch of the state government would have the authority to file objections. I assume from the language that the governor would be the designated representative. If my assumption is correct, I think the bill would be criticized for giving governors the opportunity to single-handedly block an off-shore oil terminal without taking the issue to the state legislature. I would hope that the subcommittee would entertain the possibility of revising section 2(b) so that it would require the objection to be registered through state law. While this might in some instances require the convening of a special session of the legislature, I believe such an issue should be brought before a state's elected representatives.

In summary, I think the objectives of this bill are commendable. Uncertainty about the status of state laws, such as the Delaware Coastal Zone Act, will continue until legislation like H.R. 2020 is enacted into law. I hope that this subcommittee will continue its present course in trying to preserve the integrity of legitimate state interests in the field of off-shore oil terminals.

[From the Congressional Record—Extension of Remarks, February 5, 1973]

A National Energy Strategy

Mr. du Pont. Mr. Speaker, at no time in our history has the need for a national energy strategy been so great. News of impending rationing and brownouts comes as no surprise to those who have recognized the dangers of pursuing an ad hoc, uncoordinated national energy policy. One of the legacies of our ineffective and

often irrational energy policy, is the burgeoning demand for imported crude oil from the Middle East. To accommodate the demand, several private organizations and Government agencies have been developing plans for the construction of an offshore oil terminal capable of receiving supertankers. The Delaware Bay area has been chosen as a prime location for such facilities, because of the unique physical characteristics of the bay and the proximity of the bay to refineries and large markets.

The Corps of Engineers which is conducting a study of potential sites in the North Atlantic for a deepwater terminal, recently held public hearings in Delaware to discuss their findings and to gather testimony from local citizens. The issues raised in these hearings rise far above purely local and even regional concern. The development of a deepwater terminal would have far reaching national and international ramifications, affecting diplomatic relations, land use policy, the environment, and the balance of payments, to name a few. I am, therefore, inserting the remarks which I gave at these public meetings at this point in the Record, in hopes that my colleagues will find the information useful in their consideration of the energy crisis:

REMARKS OF CONGRESSMAN PETE DU PONT, ARMY CORPS OF ENGINEERS HEARING, REHOBOTH BEACH, JANUARY 5, 1973

INTRODUCTION

I want to thank Colonel Strider for agreeing to hold this meeting in Delaware and to thank his staff for their cooperation in making the preparations for the meeting on such short notice. I know that all Delawareans wanted to have a forum for the superport hearings in Delaware, and I am particularly grateful to have this opportunity to submit my views for the record.

In recent months we have all read about numerous studies and proposals for an offshore oil terminal on the Atlantic Coast, encompassing a wide range of facility designs and possible locations. While these studies represent preliminary conceptual work, requiring further detailed study. I have drawn some tentative conclusions which I want to submit today.

I. The superport location

The present proposals for an offshore facility include three tentative sites in or near the entrance to Delaware Bay. Despite the alleged economic benefits of these sites in the Bay, the hazards associated with the operation of an oil transfer terminal, near Delaware's coastline, lead me to conclude a site near or in Delaware Bay is unacceptable.

The one hazard foremost in everyone's mind is a massive oil spill such as the one which occurred off the coast of England when the Torrey Canyon broke up on a ledge. The description of such spill potential is best summarized in an article written by General Francis P. Koisch, director of civil works of the Army Corps of Engineers, written for the February 1971 *Journal of Waterways, Harbors and Coastal Engineering Division, Proceeding of the American Society of Civil Engineers.*

National Journal, volume 3, No. 49:

"Recall the national furor which followed the oil well drilling leak off the California coast near Santa Barbara . . . Esthetically and in all likelihood, ecologically, it was a disaster situation.

"Yet the Santa Barbara incident would appear trivial compared to the scope and the impact of a possible spill or fire involving a contemporary supertanker . . .

"Imagine the damage which could result if a 312,000 DWT carrier such as those which are now operating were to spill its cargo of 2,250,000 barrels of oil.

"The cargo load would have the potential of saturating every foot of a 200 mile reach of shoreline with over two barrels of crude oil."

The operating characteristics of these vessels suggest that within restricted waters, such as the Delaware Bay, there will be a high risk of collisions and groundings. A 250,000 DWT tanker, for example, when moving at a speed of 15.6 knots, requires 16 minutes and more than two miles to reach an emergency stop.

Unfortunately, the location of a superport within or near the mouth of Delaware Bay would only magnify the problems associated with supertanker operation and oil spills.

A major problem for supertankers will be maneuverability within the Bay. The amount of sea room available to such a large tanker would be very restricted and offer very limited leeway for meeting unexpected circumstances. Because maneuverability is such a critical factor in the safe operation of supertankers, I have requested that the Commandant of the Coast Guard undertake a study to determine the parameters within which a supertanker can safely operate.

If a spill were to occur in or near the mouth of the Bay, experts concede that the chances of containing the spill are sharply decreased by wave and tide action. It would only take a short time for the oil slick to reach shore, and the oil would have little opportunity to weather and diminish in toxicity and density. If a superport is to be built at all, it seems far wiser to construct it well offshore. If a spill takes place out at sea, at least there is more time to conduct a containment operation, and the weathering of the slick would substantially reduce density of materials which might eventually come ashore.

A location close to the coastline seems totally impractical with the limitations of today's technology. The danger to our coastal resources and the coastal industries would be immediate, leaving no margin for error. This risk is simply too high for Delaware and one which the state cannot afford to take.

II. Superports become magnets

Aside from the impact of the superport on Delaware Bay and on the coast, a superport would undoubtedly stimulate accelerated industrial development on or near the coast. An Arthur D. Little study of deep water oil ports around the world show a standard pattern of intense industrialization in the vicinity of the port. A typical example is the Port of Gladstone in Queensland, Australia. Ten years ago this was a small, undeveloped agricultural town. After a decade of oil port development, this is an industrial town of 13,000 people with all the problems of a major industrial center. Housing has become increasingly short as increased industrial development claims more acreage. The need to stockpile by-products and to store oil has led to a massive reclamation of wetlands and dredging of the harbor, destroying the existing ecosystem in the harbor. Town residents found their real estate assessments increased by as much as 1200% from 1960–1968 to keep pace with increased demand for municipal services.

I fear that a superport located anywhere near Delaware's coast would cause similar pressure for industrialization. Fortunately, the Delaware General Assembly, under the leadership of Governor Peterson, mandated the end to industrial development of the coastal zone. Delaware's citizens have long recognized the value of the coastal resources and have wisely exercised their right to protect them.

A superport would undoubtedly attract tank farms, trucking and rail depots and entire petrochemical complexes. Since the laws of Delaware have so expressly banned this type of development within the 3 mile limit, I think the proposals for development of a terminal near Delaware's coasts should reflect the wishes of the State. Plans for a superport within the 12 mile limit should have been effectively eliminated when the Legislature and the Governor enacted the Coastal Zone law.

III. Conflicting data

The major studies which have been released to date, have done little to dispel the doubts which Delawareans have about the proposals for an offshore oil transfer terminal. In fact, many new questions are raised by the new reports.

The environmental issues associated with the support are of prime importance, yet we read in the Nathan Report, the preliminary report requested by the Corps from Nathan Assoc., that "lack of knowledge concerning environmental and ecological parameters" prevented an assessment of environmental impact. This is an area which must be studied first, as an integral part of the planning process, not just a peripheral factor studied to appease local citizens.

The Nathan Report raises the question of the limits of the existing refining capacity in the Delaware Valley. Since the refineries in the area are already operating at close to 100% capacity, how can all the imports from the superport be refined without expanding the existing complexes? A superport would naturally create enormous pressure for increased industrialization, and as I stated a moment ago, if the state and local governments have already spoken on the issue of increased growth, Delaware seems to be an unsuitable location for a superport.

Even more unsettling are the discrepancies in data which exist between the Nathan and Soros (U.S. Dept. of Commerce study) reports. Without passing judgment on the accuracy of either, I found significant disagreement in the figures on the economics of scale of the supertankers as well as the figures describing the economic feasibility of dry bulk transfer operations.

It is improper to start building the conceptual framework for such a project with conflicting and inadequate information. It is important that Congress begin to take notice of this project before all these inadequacies and conflicts are burned in the volumes of a final report. With such great national and regional interests at stake. I think it is important that the Congress direct the decisions making of the planners.

I have, therefore, written to Mrs. Leonor K. Sullivan, the new chairman of the House Committee on Merchant Marine and Fisheries, of which I am presently a member, requesting early hearings on the entire question of superports on the East Coast.

IV. International implications

While the existing studies have devoted their time to supporting the construction of an offshore oil transfer terminal, and deciding where it should be, I am most disturbed by the lack of concern shown for the overall long range implications of a superport to the nation as a whole. While the regional impact of a superport is of great importance, the initial focus should be on the effects of this port on our national energy policy and on our international political and economic relations. Without such a focus, the study of the superport is presumptive and without a sound basis. As in so many cases, zealous planners have put the cart before the horse.

The evidence I have seen indicates that the construction of a superport would lead to an irrevocable commitment to oil as our sole source of energy and to almost total reliance on the Middle East nations for our imported crude oil.

Today our energy supply is derived from a variety of supply locations, foreign and domestic. In 1970 imports from the Middle East and Africa averaged some 300,000 barrels a day, a small portion of the national demand of nearly 15 million barrels daily. These figures, however, are expected to change dramatically; projections show that we will be importing two-thirds of our petroleum supply by 1985.

The Middle East is the single area which has the wealth of reserves to meet this demand. Of the 430 billion barrels of proven reserves in the Eastern Hemisphere, 350 billion barrels are located in the Arab nations. This compares to only 80 billion barrels of proven reserves in the entire Western Hemisphere. A superport would undoubtedly accelerate the switch to Middle Eastern oil since the supertankers offer such economies over the long haul. As the United States turns more to the Middle East for crude oil, the premium for stability in the Arab world becomes increasingly high. Internally, the Arab nations, particularly, face possible political instability. Unfortunately, as our dependency grows, our control over the flow of oil diminishes. Emerging nationalism among the Arab states has already strained relations between the international oil companies and the oil exporting countries. Negotiations are underway which center on the issue of control of oil exporting operations. Indigenous governments are determined to expand their control over their own resources. While some countries have been satisfied to increase participation in the operations, more nations are developing their own national companies. Although these are only a small factor today, their efficient performance and their present capability to market oil can only be a harbinger of their future importance.

Future uncertainty is compounded by changes in the supply situation. From 1951 to 1966, there was surplus oil production in the area. By 1975, however, there will be little, if any, surplus capacity, thereby driving prices higher and diminishing the bargaining position of the importing nations. In addition, the storage capacity of the Europeans, the Japanese, and the Americans is limited, making us all vulnerable to a prolonged cut off in supply. The Arab nations will soon hold all the trump cards.

Closely related to the economic factors are a series of internal and international political factors which contribute to the uncertainty of future relations with the Arab nations.

The decision to build a superport also amounts to a watershed in our ad hoc national energy policy. Although we have become heavily dependent upon oil, it is not too early to develop a more flexible energy program, to minimize the danger of cuts in supply.

Research must be carried out to develop some alternatives to the complete dependency on Middle Eastern crude. This should include exploration of the reserves which exist in the Outer Continental Shelf beyond the 200 meter isobar, development of the hydrocarbon reserves which exist in shale and coal. We should also accelerate research on atomic, solar, and geothermal energy. A single commitment to one source of energy, without the ability to fall back on alternatives is a dangerous policy. The superport cannot be considered in a vacuum without regard to our total energy needs. If considered at all, the superport must be considered as only one part of a national strategy.

This nation, however, has no national strategy. It is for this reason that I introduced legislation to create a White House level Council on Energy Policy. Without a national, coordinated strategy for our energy needs in the future, I believe proposals for superports are shortsighted and offer a dangerous piecemeal solution to our energy needs which could eventually jeopardize our national security and position in the world.

REMARKS OF CONGRESSMAN PETE DU PONT, ARMY CORPS OF ENGINEERS HEARING ON THE ATLANTIC COAST DEEP WATER PORT STUDY, REHOBOTH BEACH, JANUARY 18, 1973

I want to thank Colonel Strider and his staff for arranging this third meeting in Delaware to discuss the most recent installment of their Atlantic Coast Deep Water Port Study. Although the development of such a port necessarily encompasses a wide spectrum of considerations, I will confine my statement to the environmental issues raised in the report released on January 8.

When I first read the reports on this study, my initial impression was that site locations recommended both inside and outside Delaware Bay were made in apparent disregard to both local opposition and environmental issues. In the body of the report, however, I found many unequivocal statements about the unavoidable environmental hazards to both marine life and to life on land which attend deep water port development. I, therefore, find great irony in Colonel Strider's tentative conclusion that ". . . it is in the national interest to develop such facilities provided that the environmental values can be adequately protected." On the contrary, the conclusion which I draw from the findings of the report suggests that our technology will never be able to adequately protect the environment if such a facility is located anywhere near Delaware Bay.

I also question the criteria which Colonel Strider is using to describe the national interest. While it is in the national interest to develop a continuous and plentiful source of fuel for our energy needs, I do not believe that it is in the national interest to completely transform lower Delaware or Southern New Jersey from its present unspoiled state into a center for petrochemical complexes and oil refineries. Yet this seems to be the choice so strongly suggested by the report. If national interest means the destruction of an environmentally invaluable estuarine area, the industrialization of an important agricultural area and the destruction of an important recreation area serving three major east coast metropolitan areas, and an end to intelligent land use planning, then I think our national priorities are seriously misplaced.

Although the Corps is drawing off the same findings that I am, I have reached an opposite conclusion. Because of this fundamental disagreement, I would like to review the bases for my conclusions.

LANDSIDE IMPACT

I think the section on landside impact only reinforces the so-called magnet theory which I discussed in my testimony which was delivered on January 5. Very simply stated ". . . the location of a deep water terminal will tend to induce industrial concentration, particularly of refineries and petrochemical complexes. In turn, this concentration of basic petroleum-related industries would induce concentration of associated commercial and economic activities." (page 14, "Summary of Environmental Considerations".)

Implicit in this development would be a whole range of demands placed on the environment and natural resources by the industries and by the people themselves. Using the Corps' set of assumptions for the year 2000, the industrial development would create effluent which would have a basic oxygen demand equivalent to the raw sewage of 845,000 people. Water withdrawals would approach 1 billion gallons per day, and air pollution would be increased four fold. The additional human population which would be attracted to the industries would

total 138,000 by 2000 according to present estimates. The sum total of this development would place drastic demands on local resources and public services.

The development caused by the tourist industry alone in lower Delaware has already posed serious problems for local officials. For example, Sussex County has encountered serious obstacles in development of waste treatment facilities in order to meet the existing water quality standards. Industrialization and a rapidly growing population would only exacerbate this situation.

The demands of land alone are staggering. The Corps projects that "if the North Atlantic were to supply all of its projected growth for petroleum products for the year 2000, nearly ten times as much acreage would be required for refineries, petrochemical plants, and storage facilities . . ." (Page 16, "Summary of Environmental Considerations").

Assuming the projections hold true for lower Delaware, this would imply that ten more refineries, like the Getty refinery in Delaware City, would be built in lower Delaware. To commit some 45,000 acres for industrial purposes in lower Delaware would be tantamount to abandonment of rational land use policy. Delaware has already committed vast amounts of acreage and resources to the oil and petrochemical industry in Northern Delaware, and to further commit the unspoiled Southern region which is recognized for its environmental, recreational and agricultural value would be shortsighted, not to mention a violation of the policy stated in the Coastal Zone Act.

Development on the magnitude indicated in the Corps report would certainly result in a major transformation of the lower Delaware region from a predominantly rural area into an industrial center for the oil and petrochemical industry. The Coastal Zone Act recognized the wholesale transformation which can occur with oil refineries, and the state strongly expressed their intention and their right to maintain lower Delaware in its present state.

CARGO SPILLS

Underlying all the comments in the Cargo Spills section is a particularly ominous thought. "There is a lack of adequate knowledge of ways to design and operate a system without spillage, of techniques capable of handling major spills, and of total impact of oil spills on the ecosystem." (Page 7, "Summary of Environmental Considerations").

While the estuaries and coastal wetlands are acknowledged to be the most biologically productive areas of the marine ecosystem and to be the most sensitive to oil spills, the Corps has concluded that damage to these areas would be unavoidable. Even in the absence of a major spill, the expected chronic spills will have critical impact at the inshore sites. The water quality in the vicinity of the recommended inshore sites has already been significantly degraded by existing sources of pollutants. Chronic spills can only increase water quality deterioration and have possibly disastrous long term impact on fish, shellfish and recreation. Both the Cape Henlopen and the Delaware Bay site pose a serious threat to the coastline, even if the chronic spillage were kept at minimum levels. A major spill at either site would, in the words of the Corps report, be "disastrous".

A tentative conclusion drawn by the Corps is that the further off-shore you place the facility, the less risk of environmental damage by either chronic spills or a major spill. This conclusion may be supported by the information which the Corps itself has collected; however, man's persistent use of the open ocean as a dumping ground for his waste material has already affected marine life, to such a degree that Congress passed a law putting strict limits on what can be dumped at sea. About two million metric tons of oil are introduced into the oceans each year already, and any facility which will have chronic spills or even major spills may well have delayed an unpredictable impact on the coastal and marine environment.

CONCLUSION

All the sites recommended by the Corps have attendant environmental hazards which seem to vary in degree rather than in kind. As I stated in my earlier testimony, the risks associated with the sites near Delaware's coastline are simply too great to be acceptable to Delaware. While the superport is important to the whole nation, Delaware has the right and duty to protect its precious coastal resources, its recreation areas and its use of the Bay. Above all, I think Delaware's citizens have stated their intention to keep Delaware as it is. This

is not a reflection of provisionalism but a recognition that the unique features of lower Delaware must be protected under rational land use policy. To industrialize lower Delaware would effectively bring an end to options for land use.

[This bill appears as Chapter 175 Volume 58 Laws of Delaware Approved by the Governor April 11, 1971]

HOUSE OF REPRESENTATIVES, 126TH GENERAL ASSEMBLY, FIRST SESSION—1971

HOUSE SUBSTITUTE NO. 2 FOR HOUSE BILL NO. 300 AS AMENDED BY HOUSE AMENDMENTS NO. 1, 2, 8, 11, 12, 13, 14, 15, 18, 19, 22, 23, AND 24

AN ACT Creating a New Chapter 70, Title 7, Delaware Code To Establish a Coastal Zone in Delaware; To Prohibit or Limit Certain Uses Therein; To Create a State Coastal Zone Industrial Control Board

Be it enacted by the General Assembly of the State of Delaware: Section 1. Title 7, Delaware Code, is amended by creating a new Chapter 70 to read as follows:

"CHAPTER 70. COASTAL ZONE ACT

"§ 7001. *Purpose.*

"It is hereby determined that the coastal areas of Delaware are the most critical areas for the future of the State in terms of the quality of life in the State. It is, therefore, the declared public policy of the State of Delaware to control the location, extent and type of industrial development in Delaware's coastal areas. In so doing, the State can better protect the natural environment of its bay and coastal areas and safeguard their use primarily for recreation and tourism.

Specifically, this chapter seeks to prohibit entirely the construction of new heavy industry in its coastal areas, which industry is determined to be incompatible with the protection of that natural environment in those areas. While it is the declared public policy of the State to encourage the introduction of new industry into Delaware, the protection of the environment, natural beauty and recreation potential of the State is also of great concern. In order to strike the correct balance between these two policies, careful planning based on a thorough understanding of Delaware's potential and her needs is required. Therefore, control of industrial development other than that of heavy industry in the Coastal Zone of Delaware through a permit system at the State level is called for. It is further determined that off-shore bulk product transfer facilities represent a significant danger of pollution to the Coastal Zone and generate pressure for the construction of industrial plants in the Coastal Zone, which construction is declared to be against public policy. For these reasons, prohibition against bulk product transfer facilities in the Coastal Zone is deemed imperative.

"§ 7002. *Definitions.*

"(a) 'The Coastal Zone' is defined as all that area of the State of Delaware, whether land, water or subaqueous land between the territorial limits of Delaware in the Delaware River, Delaware Bay and Atlantic Ocean, and a line formed by certain Delaware highways and roads as follows:

"Beginning at the Delaware-Pennsylvania line at a place where said line intersects U.S. Route 13; thence southward along the said U.S. Route 13 until it intersects the right-of-way of U.S. Route I–495; thence along said I–495 right-of-way until the said I–495 right-of-way intersects Delaware Route 9 south of Wilmington; thence along said Delaware Route 9 to the point of its intersection with Delaware Route 273; thence along said Delaware Route 273 to U.S. 13; thence along U.S. 13 to Maintenance Road 409; thence along Maintenance Road 409 to Delaware Road 71; thence along Delaware Road 71 to its intersection with Delaware Road 54; thence along Delaware Road 54 to Delaware Road 896; thence along Delaware Road 896 to Maintenance Road 396; thence along Maintenance Road 396 to Maintenance Road 398; thence along Maintenance Road 398 to the Maryland State Line; thence southward along the Maryland State Line to Maintenance Road 433; thence along Maintenance Road 433 to Maintenance Road 63; thence along Maintenance Road 63 to Maintenance Road 412; thence along Maintenance Road 412 to U.S. 13; thence along U.S. 13 to Delaware 299 at Odessa; thence along Delaware Route 299 to its intersection with Delaware

Route 9; thence along Delaware Route 9 to U.S. 113; thence along U.S. Route 113 to Maintenance Road 8A; thence along Maintenance Road 8A to Maintenance Road 7 to the point of its intersection with Delaware Route 14; thence along Delaware Route 14 to Delaware Route 24; thence along Delaware Route 24 to Maintenance Road 331; thence along Maintenance Road 331 to Maintenance Road 334; thence along Maintenance Road 334 to Delaware Route 26; thence along Delaware Route 26 to Maintenance Road 365; thence along Maintenance Road 365 to Maintenance Road 84; thence along Maintenance Road 84 to Maintenance Road 384; thence along Maintenance Road 384 to Maintenance Road 382A; thence along Maintenance Road 382A to Maintenance Road 389; thence along Maintenance Road 389 to Maintenance Road 58; thence along Maintenance Road 58 to Maintenance Road 395; thence along Maintenance Road 395 to the Maryland State Line.

"(b) 'Non-conforming use' means a use, whether of land or of a structure, which does not comply with the applicable use provisions in this chapter where such use was lawfully in existence and in active use prior to the enactment of this chapter.

"(c) 'Environmental Impact Statement' means a detailed description as prescribed by the State Planning Office of the effect of the proposed use on the immediate and surrounding environment and natural resources such as water quality, fisheries, wildlife and the aesthetics of the region.

"(d) 'Manufacturing' means the mechanical or chemical transformation of organic or inorganic substances into new products, characteristically using power driven machines and materials handling equipment, and including establishments engaged in assembling component parts of manufactured products, provided the new product is not a structure or other fixed improvement.

"(e) 'Heavy industry use' means a use characteristically involving more than twenty acres, and characteristically employing some but not necessarily all of such equipment such as, but not limited to, smoke stacks, tanks, distillation or reaction columns, chemical processing equipment scrubbing towers, pickling equipment, and waste treatment lagoons; which industry, although conceivably operable without polluting the environment, has the potential to pollute when equipment malfunctions or human error occurs. Examples of heavy industry are oil refineries, basic steel manufacturing plants, basic cellulosic pulp paper mills, and chemical plants such as petrochemical complexes. Generic examples of uses not included in the definition of 'heavy industry' are such uses as garment factories, automobile assembly plants and jewelry and leather goods manufacturing establishments.

"(f) 'Bulk product transfer facility' means any port or dock facility, whether an artificial island or attached to shore by any means, for the transfer of bulk quantities of any substance from vessel to on-shore facility or vice versa. Not included in this definition is a docking facility or pier for a single industrial or manufacturing facility for which a permit is granted or which is a non-conforming use. Likewise, docking facilities for the Port of Wilmington are not included in this definition.

"(g) 'Person' shall include, but not be limited to, any individual, group of individuals, contractor, supplier, installer, user, owner, partnership, firm, company, corporation, association, joint stock company, trust, estate, political subdivision, administrative agency, public or quasi-public corporation or body, or any other legal entity, or its legal representative, agent, or assignee.

"(h) 'Board' shall mean the Coastal Zone Industrial Control Board.

"§ 7003. *Uses absolutely prohibited in the Coastal Zone.*

"Heavy industry uses of any kind not in operation on the date of enactment of this chapter are prohibited in the Coastal Zone and no permits may be issued therefor. In addition, offshore gas, liquid, or solid bulk product transfer facilities which are not in operation on the date of enactment of this chapter are prohibited in the Coastal Zone, and no permit may be issued therefor. Provided, that this section shall not apply to public sewage treatment or recycling plants.

"§ 7004. *Uses allowed by permit only. Non-conforming uses.*

"(a) Except for heavy industry uses, as defined in section 7002 of this chapter, manufacturing uses not in existence and in active use of the date of enactment of this chapter are allowed in the Coastal Zone by permit only, as provided for under this section. Any non-conforming use in existence and in active use on the effective date of this chapter shall not be prohibited by this chapter. All expansion or extension of non-conforming manufacturing uses, as defined herein, and all expansion or extension of uses for which a permit is issued pursuant to this

chapter, are likewise allowed only by permit. Provided, that no permit may be granted under this chapter unless the county or municipality having jurisdiction has first approved the use in question by zoning procedures provided by law.

"(b) In passing on permit requests, the State Planner and the State Coastal Zone Industrial Control Board shall consider the following factors:

"(1) Environmental impact, including but not limited to, probable air and water pollution likely to be generated by the proposed use under normal operating conditions as well as during mechanical malfunction and human error; likely destruction of wetlands and flora and fauna; impact of site preparation on drainage of the area in question, especially as it relates to flood control; impact of site preparation and facility operations on land erosion; effect of site preparation and facility operations on the quality and quantity of surface ground and sub-surface water resources, such as the use of water for processing, cooling, effluent removal, and other purposes; in addition, but not limited to, likelihood of generation of glare, heat, noise, vibration, radiation, electromagnetic interference and obnoxious odors.

"(2) Economic effect, including the number of jobs created and the income which will be generated by the wages and salaries of these jobs in relation to the amount of land required, and the amount of tax revenues potentially accruing to State and local government.

"(3) Aesthetic effect, such as impact on scenic beauty of the surrounding area.

"(4) Number and type of supporting facilities required and the impact of such facilities on all factors listed in this subsection.

"(5) Effect on neighboring land uses including, but not limited to, effect on public access to tidal waters, effect on recreational areas, and effect on adjacent residential and agricultural areas.

"(6) County and municipal comprehensive plans for the development and/or conservation of their areas of jurisdiction.

"§ 7005. *Administration of this chapter.*

"(a) The State Planning Office shall administer this chapter. All requests for permits for manufacturing land uses and for the expansion or extension of non-conforming uses as herein defined in the Coastal Zone shall be directed to the State Planner. Such requests must be in writing and must include (1) evidence of approval by the appropriate county or municipal zoning authorities, (2) a detailed description of the proposed construction and operation of the use, and (3) an Environmental Impact Statement. The State Planner shall hold a public hearing and may request further information of the applicant. The State Planner shall first determine whether the proposed use is, according to this chapter and regulations issued pursuant thereto, (1) a heavy industry use under section 7003; (2) a use allowable only by permit under section 7004; or (3) a use requiring no action under this chapter. The State Planner shall then, if he determines that section 7004 applies, reply to the request for a permit within ninety (90) days of receipt of the said request for permit, either granting the request, denying same, or granting the request but requiring modifications; he shall state the reasons for his decision.

"(b) The State Planner may issue regulations including, but not limited to, regulations governing disposition of permit requests, and setting forth procedures for hearings before himself and the Board. Provided, that all such regulations shall be subject to approval by the Board.

"(c) The State Planner shall develop and propose a comprehensive plan and guidelines for the State Coastal Zone Industrial Control Board concerning types of manufacturing uses deemed acceptable in the Coastal Zone and regulations for the further elaboration of the definition of 'heavy industry' in a manner consistent with the purposes and provisions of this chapter. Such plan and guidelines shall become binding regulations upon adoption by the Board after public hearing. The Board may alter said regulations at any time after a public hearing. Provided, that any such regulations shall be consistent with sections 7003 and 7004 of this chapter.

"(d) The State Planning Office and all agencies of State government shall assist the State Coastal Zone Industrial Control Board in developing policies and procedures, and shall provide the Board with such information as it shall require.

"§ 7006. *State Coastal Zone Industrial Control Board created. Composition. Conflict of interest. Quorum.*

"There is hereby created a State Coastal Zone Industrial Control Board, which shall have ten (10) voting members. Five (5) of these shall be regular members

appointed by the Governor and confirmed by the Senate. No more than two (2) of the regular members shall be affiliated with the same political party. At least one regular member shall be a resident of New Castle County, one a resident of Kent County and one a resident of Sussex County, provided that no more than two residents of any county shall serve on the Board at the same time. The additional five (5) members shall be the Secretary of Natural Resources and Environmental Control, the Secretary of Community Affairs and Economic Development, and the Chairmen of the Planning Commissions of each county, who shall be ex-officio voting members. The term of one appointed regular member shall be for one (1) year; one for two (2) years; one for three (3) years: one for four (4) years; and the Chairman, to be designated as such by the Governor, and serve at his pleasure. Thereafter, all regular members shall be appointed for five year terms. The members shall receive no compensation except for expenses. Any member of the Board with a conflict of interest in a matter in question shall disqualify himself from consideration of that matter. A majority of the total membership of the Board less those disqualifying themselves shall constitute a quorum. A majority of the total membership of the Board shall be necessary to make a final decision on a permit request.

"§ 7007. *Appeals to State Coastal Zone Industrial Control Board.*

"(a) The State Coastal Zone Industrial Control Board shall have the power to hear appeals from decisions of the State Planner made under section 7005. The Board may affirm or reverse the decision of the State Planner with respect to applicability of any provision of this chapter to a proposed use; it may modify any permit granted by the State Planner, grant a permit denied by him, deny a permit, or confirm his grant of a permit. Provided, however, that the Board may grant no permit for uses prohibited in section 7003 herein.

"(b) Any person aggrieved by a final decision of the State Planner under section 7005(a) may appeal same under this section. Appellants must file notice of appeal with the State Coastal Zone Industrial Control Board within fourteen (14) days following announcement by the State Planner of his decision. The State Coastal Zone Industrial Control Board must hold a hearing and render its decision in the form of a final order within sixty (60) days following receipt of the appeal notification.

"(c) Whenever a decision of the State Planner concerning a permit request is appealed, the Board shall hold a public hearing at which the appellant may be represented by counsel. All proceedings in such a hearing shall be made a matter of record and a transcript or recording of all proceedings kept, and the public may attend and be heard.

"(d) The Board shall publicly announce by publication in at least one newspaper of daily publication in the county in which the site designated in the request is wholly or principally located and in at least one newspaper of daily publication and general circulation throughout the State the time, location and subject of all hearings under this section at least ten (10) days prior thereto.

"§ 7008. *Appeals to Superior Court.*

"Any person aggrieved by a final order of the State Coastal Zone Industrial Control Board under section 7007 may appeal the Board's decision to Superior Court in and for the county of the location of the land in question. Likewise, the State Planner may appeal from any modification by the Board of his ruling. The appeal shall be commenced by filing notice thereof with Superior Court not more than twenty (20) days following announcement of the Board's decision. The Court may affirm the Board's order in its entirety, modify same, or reverse said order. In either case, the appeal shall be based on the record of proceedings before the Board, the only issue being whether the Board abused its discretion in applying standards set forth by this chapter and regulations issued pursuant thereto to the facts of the particular case. The Superior Court may by rule prescribe procedure by which it will receive, hear, and make disposition of appeals under this chapter.

"Provided, that no appeal under this chapter shall stay any cease and desist order or injunction issued pursuant to this chapter.

"§ 7009. *Condemnation.*

"If Superior Court rules that a permit's denial, or restrictions imposed by a granted permit, or the operation of section 7003 or section 7004 of this chapter, is an unconstitutional taking without just compensation, the Secretary of the State Department of Natural Resources and Environmental Control may, through negotiation or condemnation proceedings under Chapter 61 of Title 10, acquire the

fee simple or any lesser interests in the land. The Secretary must use this authority within five years from the date of the Court's ruling, for after said five years have elapsed the permit must be granted as applied for if the land has not be acquired under this authority.

"§ 7010. *Cease and Desist Orders.*

"The Attorney General shall have the power to issue a cease and desist order to any person violating any provision of this chapter ordering such person to cease and desist from such violation. Provided, that any cease and desist order issued pursuant to this section shall expire (1) after thirty (30) days of its issuance, or (2) upon withdrawal of said order by the Attorney General, or (3) when the order is superseded by an injunction, whichever occurs first.

"§ 7011. *Penalties.*

"Any person who violates any provision of this chapter shall be fined not more than $50,000 for each offense. The continuance of an activity prohibited by this chapter during any part of a day shall constitute a separate offense. Superior Court shall have exclusive original jurisdiction over offenses under this chapter.

"§ 7012. *Injunctions.*

"The Court of Chancery shall have jurisdiction to enjoin violations of this chapter.

"§ 7013. *Inconsistent laws superseded. All other laws unimpaired. Certain uses not authorized.*

"All laws or ordinances inconsistent with any provision of this chapter are hereby superseded to the extent of the inconsistency. Provided, that present and future zoning powers of all counties and municipalities, to the extent that said powers are not inconsistent with this chapter, shall not hereby be impaired; and provided that a permit granted under this chapter shall not authorize a use in contravention of county or municipal zoning regulations.

"§ 7014. *Severability and Savings Clause.*

"If any provision of this chapter, or of any rule, regulation, or order promulgated thereunder, or the application of any such provision, regulation, or order to any person or circumstances shall be held invalid, the remainder of this chapter or any regulations or order promulgated pursuant thereto or the application of such provision, regulations, or order to persons or circumstances other than those to which it is held invalid, shall not be affected thereby."

Mr. DU PONT. Mr. Chairman, I would like to offer my testimony and then I would be happy to answer any questions that the committee might have on the remarks I have made.

As the members of the subcommittee may know, Delaware Bay has become the focus of plans to construct a major deepwater oil terminal for the east coast.

Industrial consortiums and Government agencies have favored Delaware Bay as a site for the so-called superport because of the bay's deep channel, the proximity to petroleum distribution networks, and the existence of major refineries at the head of the bay.

As a result, H.R. 2020 is a bill giving the authority to States to approve or disapprove the building of adjacent offshore transfer terminal.

As pressure began to build for the construction of more refineries and the development of bulk transfer terminal within Delaware Bay, the Delaware Legislature began to assess the impact such development would have on the State.

The legislature initiated an extensive study of the coastal zone, for the first time compiling an inventory of the State's coastal resources.

The study concluded that the coastal zone was ecologically vital to the bay and that further industrialization of the coastal zone would not only threaten an important recreation center but would cause serious imbalance to the marine ecology of the bay.

As a result of this study, in June of 1971, the Delaware Legislature, acting on these recommendations, passed the Nation's first coastal zoning law which prohibited further industrialization of the coastal zone.

The explicit mandate of the Coastal Zone Act should have laid to rest plans for further industrialization of the coastal region; however, planners and Government agencies continued their designs for terminal construction.

The Commerce Department, for example, released a study recommending the construction of an artificial island 8 miles off Delaware's coast, despite the fact that the Coastal Zone Act had been signed into law 1 year earlier.

In this massive four-volume report, there was no mention of the Delaware law.

Naturally, the people of Delaware began to think their wishes were being ignored.

I have with me this morning, which I will not make a part of the record, since it is readily available, a copy of the Commerce Department's study which cost the taxpayers a great deal of money, and, as I say, came out a full year after our law was passed in the State of Delaware. And somehow the Commerce Department just failed to notice that a Coastal Zoning Act had been passed.

So I think the people of Delaware were very rightfully concerned that maybe nobody in Washington was paying attention to what our State legislature was doing.

Mr. HOWARD. Mr. Congressman, if you will read the title, the subcommittee will obtain a copy and make it a part of the committee file.

Mr. DU PONT. Certainly, Mr. Chairman.

This is an executive paper, published by the U.S. Department of Commerce, specifically the Maritime Administration, entitled "Feasibility of a North Atlantic Deepwater Oil Terminal." And it was issued in July of 1972.

Mr. HOWARD. Without objection, that will become a part of the committee files.

Mr. DU PONT. In an effort to bring this question squarely before the people in Delaware, I requested that the Corps of Engineers hold hearings in Delaware to both report on the study that they were conducting pursuant to a Senate Public Works Committee resolution, and to give Delaware citizens an opportunity to voice their views to Federal officials.

The Corps cooperated and held 2 days of hearings at Rehoboth Beach, and more than 1,000 interested citizens of Delaware turned out for those hearings.

Those who testified almost unanimously stood behind the Delaware Coastal Zone Act and opposed plans to locate an offshore oil terminal in or near Delaware Bay.

I prepared extensive remarks for those hearings, outlining my reasons for opposing construction of a deepwater port in Delaware Bay or surrounding waters. And these are the remarks I have prepared for inclusion in the record.

Despite the continued opposition to superport development, Delaware Bay continues to be discussed as a possible site location. In short, the impact of the State law on what will presumably be a Federal licensing activity is far from clear.

We have a specific policy prohibiting refineries and superports in the coastal zone. Yet the planning and pressure for construction persists.

Because of this experience, I favor H.R. 2020 for three reasons.

First, States which already have a coastal zoning policy should not have their statutes preempted by the Federal Government. The testimony which I submitted for the record discusses some of the impacts superport development would have on Delaware.

Briefly stated, it would mean changing the entire character of rural, agricultural, southern Delaware into an industrialized petrochemical center. The landslide impact of deepwater port development was assessed by Chairman Russell Train in his recent testimony before the House Merchant Marine and Fisheries Committee, and I quote Mr. Train's testimony:

> The creation of new petroleum-related industries would induce associated commercial and economic activities. An overall increase in economic development will cause population concentration and needs for new housing and added public services such as sewage treatment, transportation, schools, electric power, and recreational facilities. Each of the activities in turn will result in a range of environmental impacts beyond what would normally be expected without a deepwater port. The impacts include demands for land and water supply; increased air and water pollution; and a burden on public services. Depending on the nature of a given area, induced effects could cause it to change from undeveloped to industrialized, or from developed to highly industrialized.

All these secondary impacts of superport development are intimately involved with the local decisions of the States. To deny the State a determining role in superport licensing would be to effectively deny them the right to make their own zoning and resource control decisions.

Therefore, a State like Delaware, which has already established their own land use and resource priorities, should be allowed to implement those priorities and not be preempted by the Federal Government.

Support development is like a wedge, the port itself is only the tip of the wedge.

If you do not allow the States to participate in the initial decision, they will be denied the right to control the development which attends deepwater terminals.

Second, States which do not have coastal zone laws should be given the opportunity to review their zoning procedures before the Federal Government acts in licensing a terminal.

Section 2 is a desirable provision in H.R. 2020 because it gives a State time to assess their priorities and to conduct their own assessment of what superport development would mean to them.

It would also encourage States to make the type of survey that Delaware did and to appraise the limits of their coastal resources.

Third, I also favor the enactment of H.R. 2020 because it fills a serious void left in present law and in the bills now pending before Congress which would authorize the licensing of deepwater oil terminals.

Doubt about conflicting laws will persist unless language as precise as that found in H.R. 2020 is enacted into law.

The proposals pending before the other committees in the House make vague reference to carrying out licensing in a manner as consistent as possible with relevant State law.

Such provisions, however, by no means guarantee that the States will have the determining role in superport licensing. They merely add to the confusion by leaving doubt in the minds of the planners and State officials what would happen when a headlong confrontation occurred between an applicant under a Federal licensing procedure and a State trying to uphold something like the Delaware Coastal Zone Act.

Section 1 of H.R. 2020 leaves no doubt that State law will be a controlling factor in deepwater port licensing.

While I think that the bill more than adequately deals with the case of a State which has an existing State statute prohibiting the construction of offshore oil terminals, I have doubts about section 2(b) which deals with States which do not have such laws.

Section 2(b) establishes a procedure by which the State may object to a license application, yet it is unclear which branch of the State government would have the authority to file objections.

I assume from the language that the Governor would be the designated representative. If my assumption is correct, I think the bill would be criticized for giving Governors the opportunity to single-handedly block an offshore oil terminal without taking the issue to the State legislature.

I would hope that the subcommittee would entertain the possibility of revising section 2(b) so that it would require the objection to be registered through State law.

While this might, in some instances, require the convening of a special session of the legislature, I believe such an issue should be brought before a State's elected representatives.

In summary, I think that the objectives of this bill are commendable. Uncertainty about the status of State laws, such as the Delaware Coastal Zone Act, will continue until legislation like H.R. 2020 is enacted into law.

I hope that this subcommittee will continue its present course in trying to preserve the integrity of legitimate State interests in the field of offshore oil terminals.

Thank you, Mr. Chairman.

Mr. HOWARD. Thank you very much, Mr. du Pont.

I am sure the subcommittee appreciates your testimony, and I think it is excellent.

Your question and suggestion about section 2(b), I believe, is very valid, and the subcommittee—some members of the subcommittee and the staff have been discussing considering phraseology that would clear up any question that might be misinterpreted in that section.

I cannot add to your testimony at all. I have just one question I would like to ask because this does deal with States' rights. It does deal with Federal and national problems, in that there appears to be some question that our national security interests might be compromised by giving States the kind of authority that H.R. 2020 does.

As far as your knowledge of the State legislature in Delaware and other State legislatures is concerned, are you confident that State legislatures around the country can accept the responsibility given to them in H.R. 2020 in protecting their States, and yet, at the same time, not compromising in any way the national security interest of the Nation?

Mr. DU PONT. Yes, Mr. Chairman.

I think the State legislatures are fully capable of making responsible decisions in this area. I should identify the bias that I have.

I did serve as a member of Delaware's General Assembly, so my experience has been firsthand.

In Delaware's case, before our law was passed, we conducted a very thorough study of all aspects of offshore oil terminals. There was considerable debate, and I think that the legislature acted in a very responsible manner. And, as the chairman well knows, the State of New Jersey has tried to pass a coastal zoning law and, I think, on several occasions failed to get it through both houses.

So, I do not see any reason to believe that there would be a rush on the part of all the coastal States of the country to enact a law for their waters banning superports. And I further believe that if it appeared, and if the President made the case, that a superport in a particular location was essential to the national interest, I feel sure that every State legislature in the country would step forward and bend or change their law in the interest of the national security of the country.

Mr. HOWARD. If that should become necessary, do you feel that you might be able to support actions that Members of Congress may take in that instance to adjust the effect of H.R. 2020 in the national interest?

Mr. DU PONT. I certainly do.

Mr. HOWARD. Thank you very much.

The gentleman from Indiana.

Mr. ZION. Thank you, Mr. Chairman.

Congressman du Pont, it is a pleasure to have you here, sir.

The Congressman is a most conscientious and most capable Member of this body and, certainly by this testimony, you are proving again that you have a real compassionate interest in your constituents and their problems.

Some questions occur to me.

I held hearings up in New England on the fuel shortage and found that there was, in fact, a shortage of gasoline, and the price had gone up considerably.

Is Delaware currently experiencing any sort of a gasoline shortage, or do you anticipate that they might?

Mr. DU PONT. Yes, Mr. Zion, we are experiencing problems. Not so much in the retail end as in the distributors of gasoline.

We have had a particular problem with distributors serving our agricultural interests. And for Delaware, that is a very serious problem.

We have been successful in resolving most of those, usually by putting a tremendous amount of heat on the oil companies involved, and I think that some sort of national allocation plan may have to be adopted by the administration or by the Congress. But, yes, we have been experiencing problems.

Mr. ZION. Some people have suggested that we have enough energy. We are just not using it right.

For example, we have 300 or 400 years' supply of coal, and if we would require the business and industry utilities to burn coal rather than oil or natural gas, we would have enough petroleum products for transportation.

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Are the industries in your area having any difficulty getting low-sulfur coal?

Mr. DU PONT. I do not believe we have any industries in Delaware that are burning low-sulfur coal or burning coal in any quantity.

We have again had difficulty in getting the low-sulfur oil necessary to feed some of our generating plants and so forth.

Mr. ZION. Well, now, Delaware has recently had a tax increase. If, as a result of inadequate energies, energy sources, you would lose industry or your industry would fail to perform because of a lack of energy, is it probable that Delaware would have another unpopular tax increase? I understand it was quite an issue in the recent Governor's race.

Mr. DU PONT. I think that is probably an understatement. It certainly was an issue in the last Governor's race, and it is going to be an issue in the next one because, regardless of what the energy situation is, we are not to have another tax increase. And I do not look forward to that.

Mr. ZION. If you have an increase in employment and industry, would this then preclude a tax increase problem?

Mr. DU PONT. I do not think so. I think our financial status within the State is bad enough so that we need a general reorganization of our finances, and a big infusion of industry really would not balance the books in any case.

Mr. ZION. I wonder if your constituents were confronted as individuals with a situation where it could be demonstrated clearly in the national interest it was necessary to greatly increase the cost of low-sulfur fuel oil, and yet it might conceivably have an adverse effect on the State of Delaware because of a port, how would they feel about it? What would come first, local interest or national interest, Kent and Sussex Counties or the United States of America?

Mr. DU PONT. Well, that is always a difficult question.

Mr. ZION. It is one, of course, you are faced with.

Mr. DU PONT. For a Congressman, let alone for his constituent.

The last questionnaire I sent out to my constituents in February asked the question as to citizen opposition to superports, and, roughly speaking, it ran 70–30 opposed, depending a little bit on where you might place it.

I think the people of Delaware would step forward and recognize the national interest if it could be demonstrated to them that the national interest really lay in a superport in Delaware Ray, as opposed to a superport somewhere else. But it is very difficult for our people to understand why, when the State of Louisiana, for example, is asking for a superport, the Commerce Department is coming around to the State of Delaware and saying, well, Louisiana may want one, but we would like to put one in Delaware, where you do not want one, and that kind of reasoning does not sell very well.

Mr. ZION. I can understand that.

Now, the administration has a bill and currently is in hearing before the Interior Committee, I believe, and this is a bill in which it is the position of the administration that offshore ports will not be constructed if the States are going to object.

Now, they believe the future ought to be determined by a calculation and not just speculation. So they want to study the administration bill,

to study offshore ports in Louisiana, why they are welcome, and what they have experienced in the gulf coast. And if that experience is good, if the operation on the gulf coast is going to be a basis for convincing Delaware and other States and the environmentalists would agree, that there is no problem, that the ports are not mutually consistent with environmental considerations, it is the administration's position that, first, we demonstrate the feasibility and environmental compatibility in the gulf, and then offer the States an opportunity to enjoy the great benefits.

Now, if this approach were to be taken rather than H.R. 2020, such as this committee is offering, what would be your reaction to that approach?

Show the demonstration project and then permit the States to observe and approve it.

Mr. DU PONT. Well, I do not see any problem with that, other than the long leadtime involved in the demonstration project. But if you are referring to the administration's bill that is before Interior, that bill is exceedingly vague on the question of what the right of the States is.

They talk about acting in conjunction with State interests, and fully consulting the Governor, but in our hearings in Merchant Marine and Fisheries last week, when we tried to pin down, particularly the Interior Department, as to whether or not they would respect Delaware's coastal zoning law, they kind of slid off that question and said, "Well, we will certainly take it into account."

And I believe that vagueness is contributing to our problem, and that is why we need something like H.R. 2020 to spell it out.

Mr. ZION. We had some testimony earlier in the week, and it showed that tankers—the king-sized tanker of 20 years ago is now a peanut compared to those that have been built since, and they are growing larger. Japan is building larger and larger tankers. And as the size of tankers increases, the cost of transporting oil decreases.

Again, speaking of your constituents, if their choice is a small tanker that can now be conveniently handled from this coast, or a deep seaport, where the oil would come underground in a pipeline, if the difference in cost would be as much as 50 cents per barrel, and this is the difference in transportation, where we could handle this if we had a deepwater port, what would they feel about it then?

The reason I ask this question, down my way, people do not want electric generating plants at all. They want electricity but they do not want the electric plants. And they want to make sure that there are no sulfur oxide emissions from the stacks.

But if they are told that the cost of electricity is going double, then they have an entirely different point of view.

I wonder if the point of view of your constituents would change if the alternative would be 50 cents more per barrel of oil?

Mr. DU PONT. Well, I do not know what that translates to, 50 cents per barrel to a gallon of gasoline, but I feel sure that my constituents would rather pay another couple of cents a gallon than have a superport and all of its associated development in Delaware, if you are suggesting to them that the lack of a superport would mean the doubling of gasoline prices. Then, I think you have got a different situation, but you recognize, I hope, that the basic problem, at least in my opinion, with the superport is not so much the ecology and pollution problems.

I am confident that we will develop the technology to solve those as well as they can be solved, but if you are going to build a $300 million superport off the coast of Delaware, you are going to have to have a minimum, according to testimony we have received in the Merchant Marine Committee, of $300 million worth of onshore facilities to match that.

And that is what we are worried about. We do not want five new refineries up and down the finest piece of beach we have in the eastern United States, with all due respect to the chairman.

Mr. HOWARD. It is at least tied to these onshore facilities.

Mr. DU PONT. So I think industrial development is the problem, but I think we would pay a few cents more per gallon to keep southern Delaware the recreation place it is.

But if you are talking about doubling the cost of gasoline, then you have a different problem.

Mr. ZION. I think you have a point.

We have talked about this with several agencies, and they have—and the EPA has indicated that the cost to service an offshore port, it could not be constructed under existing law and regulations unless they were consistent with existing shoreline use and protecting laws.

And so this is another bridge.

Mr. DU PONT. Well, our Delaware Coastal Zoning Act, which I offered earlier as a part of the record, specifically prohibits the building of an oil refinery, for example, and that would be a problem. And the Commerce Department and the Interior Department both say, well, you are safe in that case. Nobody would want to build a superport if they could not build a refinery on the land.

My response to that is maybe. I still see plans going forward for the building of massive refineries. Even though it is against the law in Delaware to build a refinery, over the past few years the oil companies, acting not through their own name, but through strawmen, have bought 6,000 acres. They have assembled a 6,000-acre tract, and they are still buying that, knowing full well, under the law, they cannot build a refinery there.

I wonder why they are doing that, and I have the feeling that they feel that they can get that law changed or work in that direction.

Mr. ZION. Against the overwhelming interest of the ecology.

Mr. DU PONT. Exactly.

Mr. ZION. Thank you very much, Mr. du Pont.

I have no further questions.

It is a pleasure to have a man of this caliber to respond to our questions.

I have no further questions.

Mr. HOWARD. Thank you, Mr. Zion.

The gentleman from South Carolina.

Mr. DORN. Mr. Chairman, I just wanted to welcome our distinguished witness to the committee and, Mr. du Pont, I gather that you feel that environmental and ecological impact of an offshore port of the nature envisioned in this bill, if I understood the gentleman correctly, in the future the offshore port in itself would not necessarily cause any environmental ecological impact. But the offshoot of it, perhaps, could.

Mr. DU PONT. Well, I feel——

Mr. DORN. Of course, I guess some of these superport people really envision transshipment to smaller areas in other boats where they could have these things and it would be welcome, and——

Mr. DU PONT. Well, I do not mean to sluff off the environmental problems associated with the superport.

If you look at the data on the existing large facilities in Bantry Bay in Ireland, and the one somewhere in England, and if you take the rate of spillage that they have experienced over the past few years, you can quickly calculate that there are going to be a certain number of spills at a superport.

I believe we have the technology to keep cutting that number down. Certainly, you are going to have some spills and, yes, it is a problem.

But what I am really saying is that it is a much smaller problem than the associated problem of industry coming—flocking to that superport, being drawn to that superport like a magnet. And I think that is where the chief problem is.

Mr. DORN. I agree.

Thank you so much.

Thank you, Mr. Chairman.

Mr. HOWARD. As to the ecology around superports, I might just mention that 2 weeks ago, when we were investigating what may be the largest supertanker port in the world, off the coast of Saudi Arabia, on Sea Island which is a huge, open-ended dock, supertankers pull up to these installations and they get at least some of their supply of oil there.

We could see down in the water, down by the dock next to the supertankers, a great abundance of fish, very small ones, that were swimming around very well. And the Aramco people were showing us those, and some larger ones. And it really looked wonderful. And we were really very impressed.

And we asked, "Do the Saudi Arabian people eat this fish?"

They said, "Oh, no, they are full of oil!" [Laughter.]

Mr. Cochran.

Mr. COCHRAN. Thank you, Mr. Chairman.

Down in Mississippi, we eat those fish. [Laughter.]

Of course, we like catfish, too. That is not very popular up here, either.

I want to just thank our distinguished colleague for coming in and being with us and taking his time to present us with this point of view.

We appreciate very much having the benefit of this testimony, and I am sure it will be helpful to us in considering the bill.

Thank you very much.

Mr. DU PONT. Thank you.

Mr. Chairman, if I could add one comment relative to your oil-filled fish, I would recommend very strongly that the commitee take a look at this report, prepared by the Commerce Department, largely because of the lovely illustrations of the sun setting over Delaware Bay. [Laughter.]

Beautiful superport. And I am sure they have got plastic trees on there where the little birds in them that sing—and you cannot quite see that in the drawing, but they have done a beautiful job. And they almost make it look like a place to which one would want to retire. [Laughter.]

Mr. ZION. If the gentleman would yield on that one.

We have had a lot of fun with the oil-filled fish.

I think, in the interest of honesty, that species was full of oil anyway, and prior to the time that the superport was built. It is a characteristic of that fish. It was not something that was acquired. It is something that was natural with that fish.

I think, in the interest of honesty, then, rather than humor, we ought to point that out.

Mr. HOWARD. Maybe we could harness those fish to use in the energy crisis. [Laughter.]

Mr. ZION. Well, there are other things that have been suggested. Oil from manure and so forth has been advocated.

Mr. HOWARD. The gentleman from New York.

Mr. WALSH. I, too, want to compliment my colleague from Delaware.

I missed the presentation of your statement, but I have read it over, and I am very impressed with it.

I just have one question.

When I was on the Public Service Commission in New York State, we were faced with an energy crisis, and we adopted a resolution, and it is now a regulation, that forbids the utilities to take on new customers who use more than 12 million cubic feet of gas a year.

Now, 12 million cubic feet will heat, oh, probably a five- or six-room apartment house.

Do you, or have you imposed any such restrictions in Delaware?

Mr. DU PONT. No, sir, we have not. But our use of natural gas is relatively limited, I expect, compared to New York's.

Our utilities will not take on any new natural gas customers, not because there is a law against it, but because they have not got the supplies to adequately handle them.

So we, in effect, have a total embargo on it because of supply and demand problems.

Mr. WALSH. Is this true of other eastern coast States?

Does New Jersey have any restrictions on natural gas for heating purposes?

Mr. HOWARD. I do not know what they are, but I am informed that they do have some.

If you do not have a gas system in your home, you may not make application for one.

If you are not now a user, you may not convert to becoming one. The utilities do not take any new customers.

That has been the policy.

Mr. WALSH. I think the restriction was rather interesting because, in a sense, it backfired.

When you put the restriction on natural gas, and they cannot take on new customers, it then increases the demand for electrical energy, and we were short of energy, electrical energy, in New York State.

And all it did was increase the demand and create new problems for us.

I have no further questions.

Mr. HOWARD. Thank you.

And thank you, Congressman du Pont.

We certainly appreciate the benefits of your experience concerning activities for deepwater ports and supertankers. And I am sure the

entire subcommittee will get a great deal of benefit from your testimony.

And I am happy that you went into such depth with so many reasons for supporting H.R. 2020.

Thank you.

Mr. DU PONT. Thank you, Mr. Chairman.

Mr. HOWARD. For our next witness, we are proud to have the distinguished colleague from Louisiana, the Honorable Joe Waggonner.

And, Congressman Waggonner, we know that you, as a member of the Ways and Means Committee, have been involved and are presently involved in very deep serious and important hearings on legislation before that committee.

And so we further appreciate your taking time from those hearings to appear before our subcommittee, and please proceed as you wish.

STATEMENT OF HON. JOE D. WAGGONNER, JR., A REPRESENTATIVE IN CONGRESS FROM THE STATE OF LOUISIANA

Mr. WAGGONNER. Thank you, Mr. Chairman, and members of the committee.

I wish to express to you my appreciation for the opportunity to appear briefly before you this morning in behalf of your bill, Mr. Chairman, H.R. 2020, which is a bill that prohibits, under certain conditions, Federal activities in connection with construction of offshore bulk cargo transshipment facilities.

Mr. Chairman, I do not have a prepared statement this morning. I doubt, seriously, that one really is needed.

There are, however, a few pertinent aspects of your proposal and the overall matter which we, perhaps, should review, because you have been holding hearings prior to my appearance here this morning. And although I have not attended those hearings, it would be difficult for me to believe that at least part of which I would have to say would not have been expressed by others prior to my appearance here.

I might begin by saying that there is a need in the United States today, or offshore the United States, for deepwater ports.

The energy situation alone, under present circumstances, in my personal opinion, dictate this need and review of where we are now and where we are going in the future. And your proposal, Mr. Chairman, presents us with the opportunity to review what the circumstances are and where we are going.

It is my understanding that a distinguished Louisianian, Mr. P. J. Mills, a former member of the State legislature, but now director of the Louisiana Deep Draft Harbor and Terminal Authority, will appear before you before these hearings have been concluded. And perhaps he will appear today. I am not sure of that. But he will express a very detailed point of view with regard to Louisiana's feelings and Louisiana's plans with regard to your proposal and the overall need for such facilities in offshore Louisiana.

Now, Mr. Chairman, while there is a need for such facilities in Louisiana, being an advocate of States' rights since I have been in Congress, and a cause I championed before I came here, I respect completely the attitudes and the desires of those who, for one reason or another, do not want such a facility offshore their States.

I feel, however, that those who do want a facility, for whatever reason, and can justify the need and can comply with existing laws, should also be given some consideration. And I think this is what your bill proposes.

The east coast has had some experiences that we in Louisiana have kept in mind as we have moved to lay the groundwork for establishing a State agency to create the proper climate for public acceptance of such a superport in Louisiana. Hindsight is always better than foresight. And I can only conclude that perhaps the situation with regard to some of these east coast States would be different had they looked before they leaped, because we in Louisiana believe that we can reconcile the need for a superport with the problems at hand, although it requires we walk a tight line. We think we can do this.

We in Louisiana have created a deep draft harbor and terminal authority, and we established this authority in Louisiana for the express purpose of planning, promoting, and developing a deepwater port off the coast of Louisiana.

We have done this even though we in Louisiana have the distinction—some people call it a dubious distinction, but we consider it an asset—of being the second largest oil and gas producing State in the Nation. And we allocated for fiscal year 1972 and 1973 in Louisiana $350,000 State money to begin the initial operations of this agency, and $750,000 has been appropriated for the coming fiscal year to expand upon the development of an environmental plan as required by both Louisiana law and by Federal law.

We in Louisiana have done an economic impact study, a copy of which I have here, which will be submitted to you for inclusion in your hearings. The study is quite a review covering a number of things.

I enumerate only from the table of contents the depth of this study.

Of course, as a result of it, we have reached some conclusions, but we have analyzed the demands of petroleum supply and a balanced supply. We have analyzed the projections of our needs through the years.

The study deals with the impact of an offshore oil terminal in Louisiana with regard to employment, the impact on refining, not just for crude oil, but gasoline, which we hear so much about today. For those who are not familiar with this, gasoline is obtained from about the first 25 percent of a barrel of crude oil.

But we have looked into the needs of petrochemicals. We have considered the problem of construction. We have considered the methods and what it is going to do to the population, what it is going to do to transportation.

We have considered all of the benefits and cost ratios, and we think they are favorable.

We have looked at it from the point of view of construction by the State or construction by private sources, and what it means to revenues.

Now, in Louisiana——

Mr. HOWARD. Mr. Waggonner, if you would read the title of that document, without objection it will be made a part of the committee's files.

Mr. WAGGONNER. The title is "The Economic Impact of a Louisiana Offshore Oil Port," prepared by the H. J. Kaiser Co., in conjunction

with the Gulf South Research Institute, and published in May 1973. And it was their project No. AS–629, prepared for the Superport Louisiana Task Force.

Mr. HOWARD. Without objection, that will be made a part of the committee files.

Mr. WAGGONNER. In Louisiana we would not completely try to suggest to the Congress exactly what the Congress do with regard to who in the Federal Government would be best suited to the issuance of authority having to do with the construction of these superports.

This is a decision which you and this committee, after complete consideration, must make. But we feel that by our actions over the past 13 months, at least, we have created a climate in Louisiana which will welcome the development of such an oil terminal.

We feel—and the Corps of Engineers supports our feelings—that we have an ideal situation. We have deep water close offshore. Not only do we have deep water close offshore, but nobody else has access to the Mississippi River and distributors for distribution inland that Louisana has, nor does any other State have the pipeline facilities that we in Louisiana have for distribution by pipeline.

Mr. Chairman, H.R. 2020, in part at least, deal with the protection of the rights of the coastal States who do not want such a deepwater port, including those who have already enacted State legislation to forbid the construction of such a facility. The bill also protects the rights of the coastal States, who, even though they have not acted through their State legislatures to forbid the building of such a facility, would be able to in the future. Now, if we are going to give consideration to those people, we feel that it is simply a matter of equity to give the same consideration to those who wish to build a superport.

And, I think you intend this to those States who do feel that they want and can, in compliance with the laws, construct such a facility to serve the present day needs and the ever-increasing needs of the petroleum industry, and thereby industry in this country.

I do not know, Mr. Chairman, whether you are aware of it or not, but until this point in time, crude oil alone has supplied 44 percent of the energy needs of this country.

Natural gas has supplied another 33 percent.

So, oil and gas, which you cannot separate, have supplied—the record speaks for itself—77 percent of the energy needs of this country. And we are not going to change that quick.

So, the question of increased or unlimited imports, which may be a matter of necessity, will become an ever-increasing factor. But the interest of those States favoring development of these facilities must be placed on a par with those States who oppose such a development.

So, in my personal opinion, Congress should give to the coastal States who want these ports the authority to negotiate or the opportunity to do business with the private firms to construct and operate such facilities for the mutual benefit of not just our Nation, as a whole, in supplying its needs or meeting the present day demands, but both the public and the private parties as well.

Now, Louisiana favors construction of such a facility. We do not do it without regard to our invested interest. We in Louisiana have other vested interests. We have a tremendous fishing and trapping industry in Louisiana, and we know that the livelihood of literally

thousands and thousands and thousands of our people is directly related to what we do. And also it is relatively easy for a State to refuse a permit for the construction of such a facility. It is relatively hard to walk that middle road of protecting the fishing and trapping industries, which we already have, for example, say, and to balance these considerations with our environmental needs which we must do, and still go forward.

But, we in Louisiana believe that this can be done. And we in Louisiana support the proposal, Mr. Chairman, and ask that you only give us the same consideration in developing superports and a superport off Louisiana that you are giving to those that do not want such facilities, and that is to allow us to walk that middle road and negotiate with private interests and others involved to build such a facility.

Mr. HOWARD. Thank you, Mr. Waggonner, for your excellent testimony and statement concerning your views on H.R. 2020, and the situation as it has been developing in the State of Louisiana, and your request that those who wish to have the rights to prohibit a deepwater port off their shores be given consideration equal to those States which would appreciate a deepwater port off their shores.

And I, for one, would like to be of as much help as possible to the State of Louisiana in that regard.

One thing that has been stated during these hearings was to the effect that this bill, which states that a State may, by legislation, prohibit the construction of a deepwater port off its shores legally, might trigger off all of the other coastal States in the United States to immediately enact such a law, thereby legally blocking this country from being able to import oil from overseas.

Would you say that as far as you can determine in the future that at least your State legislature in Louisiana is probably not apt to enact such forbidding legislation, as far as you can see in the future?

Mr. WAGGONNER. Mr. Chairman, I say without any reservation whatever that Louisiana is not going to do that in the foreseeable future.

We in Louisiana want this superport. We in Louisiana know that we can comply with the environmental requirements of existing legislation.

Louisiana is going to walk the balanced road.

We in Louisiana know that the environment has been abused but we know that there is no such thing as standing still.

We in Louisiana believe that we can use, without abusing, the environment offshore as we build such a superport, and you need not have any fear that the Louisiana Legislature is going to enact such restrictive legislation.

Mr. HOWARD. Thank you.

One further question.

There had been concerns that in view of the strong needs for energy in this Nation, and its national security interest as well, that State legislatures might act against these national security interests by passing laws which might restrict the importing of needed oil.

As far as the legislature that you are familiar with in the State of Louisiana, and others you may be familiar with, do you have confidence that the State legislatures will be able to responsibly deal with the kind of opportunity and responsibility that may be given to them by the passage of H.R. 2020?

Mr. WAGGONNER. I have confidence, Mr. Chairman, that the Louisiana State Legislature will. I will not profess to speak for any other.

Mr. HOWARD. Thank you very much.

The gentleman from Indiana.

Mr. ZION. Very pleased to have you here, sir. I hope I am not going to be in the position of being the oxen with but one tongue between them and get into an argument.

We have had testimony, and some of us have had experiences in hearings up in New England on the east coast, where they are experiencing energy shortages, where they have had tax increases, where they have had an outmigration of employment.

There have been suits against major power users up there because of their inability to get low-sulfur fuel sources, such as low-sulfur oil or low-sulfur coal.

Would you care to comment on the effect in Louisiana of these deepwater ports on the availability of energy sources, on employment, on the tax levels, on the promotion of industry?

Mr. WAGGONNER. First of all, with regard to the first part of your statement, and the desires of those on the east coast, to get low-sulfur content fuels, high-sulfur crudes having come from South America.

Now, you have to look at the overall picture with regard to crude. We have known reserves, and these are Department of the Interior figures, and they are not subject to much question, in the United States of some 38 billion barrels of crude.

Now, that includes a few more than 10 billion barrels of known crude reserves on the North Slope, Prudhoe Bay of Alaska, which are not available to us.

Two-thirds of the known free world's crude reserves are not in North America, Canada, the United States, or South America, but in the Middle East. And that is what that argument is really about over there, oil, because that is where the crude really is today for future use, and this is the crude that we hope to have access to, to have access to over the long haul, although the Arab nations have us over a barrel, and they know it. And this is the reason for the formation of the OPEC marketing cartel over there.

Those crudes do not have the sulfur that South American crudes by and large do. We do not send an awful lot of crude from Louisiana north to be refined, although we do send an awful lot of natural gas.

Now, in Louisiana, the impact of building a deepwater port on employment will be good. We believe that private enterprise could construct and could operate a deepwater oil terminal at the outset, and expand on it as technology develops.

For example, and you have heard the figures, they are general, we look to the day when we have supertankers which haul maybe 2 million barrels of crude per ship. That is about half of the present day offshore and onshore production in Louisiana today.

Consider the magnitude of such a tanker. Consider the environmental aspects.

Certainly there is the potential for peril. There is the potential for accident. But consider the reduction of the peril from an environmental standpoint when you are dealing with just one ship, as compared to literally hundreds of ships which will be replaced by such a supertanker.

We think that in the final analysis, the peril will be somewhat reduced. And I want to make this point.

People are worried about pollution and the environment. We have got to start thinking about the environment in a very realistic and practical way.

Now, I am the first to admit that we have abused, as I have said earlier today, the environment in times past. But we have to get rid of this attitude that as we use the environment we are going to be able to totally eliminate all of pollution.

As long as one human lives on the face of this earth, we are going to have the pollution that one individual can produce.

Now, certainly we can, as time provides us new technology reduce that pollution to a minimum, but we can never eliminate it entirely, and I simply say this is saying something that I say in a somewhat joking but a real way, and that is you have got to face the facts, and the facts are that if you take a bath, you pollute the water, and if you do not, you pollute the air. [Laughter.]

So why do we not get rid of this idea that we can eliminate pollution, and why do we not work toward the goal of trying. And this we have to do to reduce it to a minimum.

The impact is going to be good, but down in Louisiana, jokingly, but seriously, some have bumper stickers on their cars. And bumper stickers say a lot of things these days. "Let the ——,"—and I will leave the rest of it to you—"freeze to death in the dark."

Now, what I am simply saying is that these people who want the benefits of this energy in some of these Eastern cities that you have alluded to will, when they get hot, or will, when they get cold, and do not have some of these conveniences, be willing to allow a tradeoff and allow us, maybe, to go ahead and do some of the things we have to do.

Mr. ZION. Well, my question was to the effect on taxes and employment, and I think your statement was that it has a very beneficial effect.

Mr. WAGGONNER. Absolutely, and the study I submitted for the record speaks to that in a very positive way.

Mr. ZION. I thank the gentleman.

Mr. HOWARD. The gentleman from South Carolina.

Mr. DORN. I want to thank my colleague from Louisiana for a very splendid statement, and a very real contribution to the deliberations of this committee.

I think you have put it real well, not only do we have to balance this need with the environment, and with technology to improve the environment but, also, the great danger to the environment itself if we do not have certain forms of energy.

I simply want to point out again what I have mentioned so often at this committee, and that is that energy sources have enabled us to have air-conditioning, and get rid of the outhouses, and all the other things, with the typhoid, and so an adequate energy supply is one of the greatest environmental assets we have, and so I appreciate the gentleman's testimony along that line.

You just have to be realistic and walk that middle road you are talking about.

I can think of nothing more horrible than for the citizens of this great country to have no energy at all. It would be the worst thing

that could happen to the environment. These little blackouts in the electric field around here worry me.

Mr. WAGGONNER. Mr. Dorn, we did not come to this crisis yesterday. It has been developing for a number of reasons over an extended period of time. There is no single cause, and there is no single answer.

This crisis has developed for a number of reasons, and it will require a number of tradeoffs, and a combination of a number of things to arrive at an answer.

We have got the energy problem, for example, say, because we in Government must accept the responsibility for having stifled exploration, research, and development.

We in Government have probably been a little overzealous, although I am here to say that I voted for the legislation, as far as environmental legislation is concerned, and we have probably brought about something which is too restrictive, and as we have done these things, a number of things have been happening, and they have just happened to us at this point in time.

As exploration diminished, as the curves crossed, and our new reserves located each year failed to keep up with our consumption per year, or even our production, whether it was oil from the United States or not, such things as enacting environmental legislation to produce desired, yes, to be sure, emission-free engines, but at the same time we have produced those emission-free engines and required their production, we have brought about something which we did not really anticipate, at least we did not consider it in Congress when we debated the legislation.

We have automobile manufacturers producing engines now whose consumption shows up now at a time of need because the figures generally are that all these reduced emission engines have a consumption factor at least a third larger than older, higher horsepower engines had, or higher compression engines had, which burned leaded gasoline, but consider all these things.

Now, we have got energy available to us in this world, but it is going to take a while to get that energy, for a number of reasons, and we are going to have to accept some tradeoffs to meet that need.

For example, say, I believe that we can meet the environmental requirements, which we should, and bring oil through the Alaskan pipeline now.

I believe that we can do better with regard to coal. I have already talked to you about the energy available to us in the way of reserves of crude.

As far as natural gas is concerned, we have got something like 278 trillion cubic feet of known natural gas reserves in this country. We are producing—at least we did last year in the United States—about 23 trillion cubic feet of natural gas per year, and it costs us, on the average, about 20 cents per thousand cubic feet to produce that natural gas.

By coal gasification we can produce a synthetic gas, but it will cost us about $1.50 a thousand to produce that synthetic gas from coal, and to do so, we have got to triple strip mining about three times over what we are doing now.

Are we going to be allowed to do this, environmental laws being what they are? I doubt seriously that we are.

Tremendous resources are available to us as far as shale is concerned. Shale technology has come along a little faster than some had anticipated. We have got, in both low-grade shale ore and high-grade shale ore, a trillion 800 billion known barrels of shale reserves. About 80 billion barrels could be processed now, or produced now with known technology.

I do not know whether we could satisfy the environmentalists or not——

Mr. ZION. Would the gentleman yield at that point?

Mr. WAGGONNER. Yes, sir.

Mr. ZION. On the shale oil, there has been some talk about the cost.

Mr. WAGGONNER. About $5 a barrel with the known technology now, and it is free of sulfur, too. And this is from a pilot plant operation. We have got about 600 billion barrels of high-grade shale reserves, about a trillion 200 billion of low grade.

How long it is going to take us to get that, I do not know, but to get any of it, we have to move more than 1 ton of rock to get 1 barrel of crude.

Now, consider the problem there on a big basis, and how far out ahead of us access and quality to such a product really is, and consider the matter of nuclear energy.

Nuclear energy today does not produce us but only 1 percent of all the energy we are using in this country. We have only got 25 or 26 nuclear plants.

Mr. ZION. Is this present or post-Nader?

Mr. WAGGONNER. Well, Nader is not an accomplice of mine, so I am not alluding to Mr. Nader in any respect. We sometimes, more often than not, have a different point of view, but as far as these facilities are concerned, we have 57 other nuclear facilities under construction, and 76 not under construction, but in the planning stage, and consider the fact—and this statistic comes from Dixy Lee Ray, who heads the Atomic Energy Commission—to this point in time, and this is an amazing statistic, but it shows you where we are, and where we are going.

We have been led to believe that by 1985, because of the availability of nuclear fuels, we would be able to meet our needs.

Well, that figure has been extended to 1990, and, maybe by 1990 the most optimistic projection is that 22 percent of our energy needs can be supplied by nuclear sources, and by the year 2000, if we meet that 1990 goal, we can supply a maximum of 45 percent of our energy from nuclear sources—but that is not the answer, either.

Even to meet that 1990 goal, we have got to bring on the line fast breeder reactors. They can take one of three forms. They can take the gas-cooled fast-breeder reactor route. We do not have the technology.

They can be of the liquid metal fast breeder source, or it can be supplied by fusion reactors, which nobody expects to be developed before the year 2000, and, if we are successful, they will be cooled by deuterium, and we have got centuries and centuries of that fuel, but we do not have the technology, and, gentlemen, we are talking about something for today and something for tomorrow, for this generation of Americans, for this generation of people the world over, and for future generations of Americans and the world over.

No single cause, and no single answer. We have got to do all these things, and we have got to proceed simultaneously with them, and allowing the construction of superports is only one very small factor in the overall energy problem.

Mr. DORN. I want to thank the gentleman again.

Mr. HOWARD. The gentleman from Kentucky.

Mr. SNYDER. Thank you, Mr. Chairman.

Counsel and I were just talking. We could listen to you all day here. It is great testimony.

Mr. WAGGONNER. I did not come prepared, gentlemen. [Laughter.] I am talking off the top of my head.

Mr. SNYDER. I said I could listen to you all day, and I wish I could absorb 1 percent of it.

The gentleman testifying is one of the most esteemed members of the Congress, of either body, as a matter of fact, and one to whom many of us have looked to from time to time for leadership, and he certainly gives it to us. I want to compliment you, certainly, for the position you take, and say that as we go forward with other legislation than that which is before us today, looking toward deepwater ports, your expertise and your knowledge in the fuel situation will certainly be helpful to all of us who have to deal with it.

The administration bill is before Interior, and there is a bill before Merchant Marine and Fisheries.

If we have any legislation for superports before this committee other than that which would permit States to prohibit them beyond the 3-mile limit within the international waters, I am not aware of it. There may be some, but of course, that is what we have before us today, and as the gentleman indicated earlier, he has been one of the strong supporters of States rights in the Congress, for which he is to be complimented. I do not like to think that I am anything less than a strong supporter of States' rights, but I find myself in the position where I must oppose the enactment of H.R. 2020, for several reasons.

I sort of got from the gentleman's testimony that his position on H.R. 2020 was that we really do not care because we want the deepwater port, and if somebody else does not want them, we will take them.

Maybe that was not the thrust——

Mr. WAGGONNER. No, sir, Mr. Snyder. We just, in Louisiana, recognize the fact that in times gone by we have made more mistakes with regard to energy than anybody.

If we had foresight, instead of hindsight, our crude and natural gas would not be in interstate commerce and going somewhere else. We would have kept it in Louisiana, but we had a surplus, and in the years of having a surplus, we did what a lot of other people were wanting to do.

We were looking for that Yankee dollar, and we let it go elsewhere, and we cannot get it back, now that it is in interstate commerce, but we do not intend to make any more mistakes.

You see, Mr. Snyder, your problem is a little different than mine. You have coal, and we have oil and gas. You have got your share of the problems.

Mr. SNYDER. We certainly have.

Directing your attention, though, Mr. Waggonner, to the legislation that is before the committee today, H.R. 2020, and an identical bill, a different number, it would not be your position, I take it, that if the State of Florida felt that they were going to be adversely affected by the superport off the State of Louisiana, that you would want them to be able, by legislative action in the State of Florida, to veto your superport, would you?

Mr. WAGGONNER. Mr. Snyder, it would be incumbent upon the State of Florida, if they had objection to our building a superport off the coast of Louisiana, for them to demonstrate in a very positive way how they were adversely affected by it.

Mr. SNYDER. Well, of course, under the administration's bill, those affected States all have input, but they do not have an absolute veto right which H.R. 2020 would give to the affected States who wanted to indicate that they were affected adversely.

Mr. WAGGONNER. I am not an attorney. Perhaps you are. I really do not know, but I think the courts have spoken to this question of how a person or a party might be affected in times gone by in a way which would probably be related to their interest in a case like this.

Mr. SNYDER. But under H.R. 2020 I do not find that a State has to be able to demonstrate being adversely affected, but only to show that they have passed a prohibiting law in the State legislature.

Mr. WAGGONNER. Well, I do not read H.R. 2020 to mean that they must have passed prohibitive legislation in their State legislature, that there are other—that is one means by which they can prevent a Federal agency, or the Federal Government, through an agency of the Government, from issuing a permit which would allow the construction of such a facility.

Am I right, Mr. Chairman.

Mr. HOWARD. If the gentleman would yield.

Mr. SNYDER. Surely.

Mr. HOWARD. In this legislation there were two concerns about these States' vetoes. One was the fact that a deepwater port might be constructed off the shores of the State which wants one, and from which that State would then get the economic benefits, while the adjoining State would receive all the adverse effects that might come from oil spillage which would be borne to its shores by tide flow.

Second, there might be the problem that you might have in the gulf coast area, where many States adjoining each other would each like to have a deepwater port located on its own shores.

Say we take the State of Texas and the State of Louisiana, both wishing to have a deepwater port. Should it be determined by whoever is going to determine it, under the administration's bill, or other legislation, that the State of Louisiana will be able to have a deepwater port off its coast, perhaps the State of Texas just may, because it did not get the deepwater port, try to object to the construction of the deepwater port off the State of Louisiana.

So the provision is in here that in order for an affected State to be qualified to object to the location of a deepwater port off an adjoining State, that the objecting State itself must have passed legislation banning superports off its own coasts, so that we could not have any kind of a tactic, for instance, of a State wanting a deepwater port, to be allowed to thwart another State's plans to construct a deepwater port off its coast.

We were thinking primarily of several Gulf States when this provision was put in, to prevent such dilatory tactics.

Mr. WAGGONNER. Mr. Snyder, if you will allow me to comment on the chairman's statement there——

Mr. SNYDER. Surely.

Mr. WAGGONNER. You asked me a moment ago about the prospects in Louisiana for restrictive legislation for time to come, and I said that for the foreseeable future there was none, do not worry about Louisiana and Texas.

If legislation is provided, and if procedure is developed to authorize the construction of these deepwater ports, we will build one off Louisiana and Texas. Do not worry about that, and the need is going to dictate that.

Mr. SNYDER. Look, I do not question the need aspect. I question H.R. 2020, and that is what I, you know——

Mr. WAGGONNER. I cannot take issue, Mr. Snyder, but if the construction of a deepwater port off any State really can be proven to be detrimental to somebody adjoining them, that we have got to try to get answers to that question; that we should not be allowed, to the detriment of somebody else, to go hell bent for leather without any consideration for anybody else, and I do not think this committee intends any such thing as that.

Mr. SNYDER. Well, I certainly agree with that, and I do not think the committee intends that, either, and I think the administration's bill, which is not before this committee, deals well with the matter of affected States being considered, and all of the environmental aspects being considered, regardless of who it affects within the area.

The gentleman, of course, in addition to being a great States' rights supporter, as he alluded to earlier, and which we agreed upon, is also a person who has been a supporter of a rather conservative interpretation of the Constitution, and a strong supporter of constitutional principles.

Now, the gentleman, of course, is aware of the fact that if H.R. 2020 were enacted, it would give the States the right of veto of a deepwater port, not only within the 3-mile limit, but on beyond the 3-mile limit in what is referred to as international waters and the gentleman is aware of the constitutional provision prohibiting the States entering into treaties or other transactions with foreign countries.

I would just ask the gentleman if he has looked at H.R. 2020 in any way as to how it might be related to the following matters; one, the Convention on the Territorial Sea and Contiguous Zone.

Two, Convention on the Continental Shelf, three, the Convention on the High Seas; four, the Convention on the Fishing and Conservation of Living Resources of the High Seas.

Five, the International Convention of Safety of Life at Sea, and six, the upcoming Law of the Sea Conference, which has, as item 18 on its agenda, deepwater ports.

Mr. WAGGONNER. Mr. Snyder, we are party to all these treaties to which you refer. There is sharp disagreement among the signatory nations about who has what authority, and how far offshore they have any authority.

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This is the reason that we have had the confrontations with regard to South America and what they think are their rights. This is the reason that the Icelanders and the British have been arguing about trawlers and the catch of cod in recent weeks.

Mr. SNYDER. And now H.R. 2020——

Mr. WAGGONNER. In Louisiana we cannot even agree with the Federal Government about where we start measuring our shoreline from to settle the tidelands dispute. We do not know whether it is at high tide, mean tide, or low tide that we start measuring seaward from.

We do not know whether we include man-made lands or not. All these things are in the courts now.

The truth of the matter is that the situation is urgent, and Louisiana is the only State that can build that port within the 3-mile limit.

Now, the rest of the States have got to get further out than the 3 miles, so the 3-mile limit does not pose a problem for Louisiana.

Mr. SNYDER. I want you to know, Joe, I think that that is great. I am for Louisiana having one. I think wherever we can get them the fastest, the most economical, to get the job done is best, but I have serious reservations about us passing a law that would attempt to give a State any kind of jurisdiction beyond the 3-mile limit, wherever you begin measuring it from, and this legislation purports to do that.

At least, that is my understanding.

Mr. WAGGONNER. Well, in some other States, although it does not apply to Louisiana, the Constitution, and the conditions for admission into the Union, clearly specify how far the State has authority offshore, and although it is only 3 leagues with Louisiana, it is 10½ miles with the other Gulf Coastal States, and we take exception to that, and that is being litigated itself now, and a Federal master is at work under a mandate from the court to try to resolve that situation.

Mr. SNYDER. Well, I certainly have no disagreement with the basis of your testimony today overall, that we are in total agreement about the need for deepwater ports, and the need to move forward, but I do have my reservation about giving the States the veto right with regard to international water.

I want to say it has been a pleasure having you before us—and it is——

Mr. WAGGONNER. Thank you, Mr. Snyder, and I am not saying that Louisiana will consider the most desirable location to be within 3 miles, because that gulf has a gentle slope out there, and that is one of its assets. It is not a quick drop off situation.

Mr. SNYDER. Well, the 3-mile limit is within your State border, and if you did that, I think there would be no problem one way or another.

As a matter of fact, other States that do not want these have no problem in the 3-mile limit, because they have the coastal zoning regulations. They can control this and, as a matter of fact, I do not think any private company is going to soak one-half billion dollars in a project off the coast of some State where the State does not want it. They just do not do those kinds of things, but I think we have got serious constitutional and international legal questions when we are trying to give a State the authority to veto something in international waters, which is what this bill purports to do.

And this is the only problem that I have with deepwater ports is, I do not want H.R. 2020 to get us fouled up so we are not going to have them.

Mr. WAGGONNER. Well, with the controversies that exist now, Mr. Snyder, if we in this Congress never acted—we are sure of what those nine old men in black robes over there would do—and we might as well go home.

Mr SNYDER. Well, I want to act affirmatively, not negatively, as H.R. 2020 does.

Mr. HOWARD. The gentlewoman from New York.

Ms. ABZUG. Well, I believe you have covered a great deal of testimony, Mr. Waggonner, and very interestingly, I would say.

The questions that we are really confronting, of course, are very complex, as your testimony here certainly highlights, and that is that there has to be some overall policy which would enable the Congress to deal with the issues which have to be counterbalanced, not necessarily opposed to each other.

Namely, we have got the problem of determining what our crisis really is, what the role of the States should be, what the environmental impact should be, and whether or not we can consider, if we do feel that we must build these superports, that we do consider the way in building that with complete environmental protection.

This may be more expensive, but nevertheless, I think it is a problem we have to face.

I agree with you, that what has been lacking essentially in dealing with the energy problem is the very massive research and development campaign to develop our own energy resources, and that, of course, has been lacking, and I think we have to emphasize that.

Of course, that is not before this committee at this time, and I am not going to get into that in very great detail, but the environmental question is raised by this bill before us, only one aspect of it, perhaps, but do you not believe that even though you accept the fact that pollution is all around us, that we have a responsibility, certainly, in finding the ways in which we can be assured that there is a policy which reflects the kind of environmental impacts that we are going to get which will increase our pollution problems?

Mr. WAGGONNER. Yes, madam.

Ms. ABZUG. Before we proceed with the building of superports?

Mr. WAGGONNER. Yes, madam. I think that I have said essentially that same thing earlier here today, and maybe I said this before you came into the room, I am not exactly sure, but I would only elaborate on one facet of your statement, and I find this in contradiction with what I feel is within the realm of possibility, and you alluded to being completely protective of the environment.

If you use the word "complete" in the context of totally eliminating pollution, then I refer back to my earlier statement, that it would be fine if we could, but as a practical matter, I do not believe that it can be done, but I do agree with you that as the ability becomes ours, and by perseverance, that we apply our energies to reduce to the minimum pollution from whatever source, and we have got an awful lot of things to worry about as we do that, too.

We are worried, for example, say, right now, and this may appear farfetched, but nevertheless, it is a matter which has to be considered, about our deteriorating trade balance overseas.

Last year we had an imbalance of trade of $6.44 billion. There is ample evidence to show that some—and how much, I do not know—

of that imbalance is attributable to the fact that we have placed the burden upon American industry with regard to the protection of the environment that foreign governments have not placed upon their industry, and I am not saying that we should reduce our effort, but if we do, if we go too far, we must be willing to accept the fact that we are aggravating another problem, but I mention this to prove that all of these things have other considerations.

That we have got to make some decisions about whether we are willing to trade off something that might be near perfect in one area to accomplish something in another area. If a foreign government does not require of their industry what we require of our industry with regard to pollution, for example, and they do not have any vessels in those areas, and they produce products in competition with ours which can be marketed in a much lower price range, so we have a basic agreement, I think, that we do have to pursue these things.

Ms. ABZUG. Well, I do not want to take the time of this committee to debate the issue of—I think one of our problems is our failure to develop technology in the whole consumer area because we spend too much of our energies in the military area, and we have been developing that technology while other countries have been developing consumer technologies and a lot of other things which you and I will debate for a long time to come, Mr. Waggonner, because we do not agree on that. And I do not see any reason to take the trouble here to discuss that, but I think it is wrong to suggest that we are going to trade off—it is a matter of what we want to do to benefit the people of this country.

Now, we know there is a lot of money involved in superports, and so on, and we appreciate that that is important for our country, to develop its industries and its energy resources so that there can be a way in which we can provide energy for all the people.

At the same time, if it is going to create unnecessarily by our haste, and by our not evaluating proper environmental policy, a very severe environmental impact which will affect our people deleteriously, we have to see it in that form.

Everybody here is talking superports, as if that is going to solve our basic energy questions. Well, it is not, as you yourself stated.

What is going to solve our pollution questions, of how we can utilize the technology that we have not been using to benefit all Americans?

As you said, we have to look into other ways of harvesting coal, and so on, and I am concerned—it is not a question in the form of limited States' rights, but frankly, how we can reconcile all the different problems that are going to come about, and what is really needed, it seems to me, is more of an overall policy which the Congress helps develop which reconciles the needs to define the role of the States, the environmental impact, and the nature of the impact, before we rush into the building of superports, per se.

Mr. WAGGONNER. That is exactly what I said, because I predicated everything I said upon the fact that if we could build these in compliance with the mandate of the environmental laws, that we should do it, and I said I believe we could.

Ms. ABZUG. No further questions, Mr. Chairman.

Mr. HOWARD. Thank you, Ms. Abzug.

Thank you very much, Mr. Waggonner, for your testimony.

Of course, getting back to H.R. 2020, you have heard us talk about international complications speculated in H.R. 2020.

I believe that everyone would agree that there is no sanction of any State's jurisdiction over the 3-mile limit. Would you agree, that what H.R. 2020 states is that when a State, in its own interest, goes as far as it can in passing legislation, and having it signed by the Governor, that the Federal Government, no matter what it does in any future conferences internationally, the Federal Government may not, under those circumstances, ram something down a State's throat if that State has gone as far as it can to indicate that it does not want such a facility?

Mr. WAGGONNER. I really do not think that the Federal Government should be able to ram those things down any State's throat.

With cooperation, a number of things can be accomplished, Mr. Chairman.

You have the authority just granted offshore Delaware, I believe, to Columbia Gas Co., chartered under the laws of Delaware, the largest integrated gas company in the United States, the authority which they felt they need to import liquefied natural gas into this country by barge in compliance with the environmental laws, utilizing a tunnel offshore to a point onshore to provide for the transportation of those products from seaborne tankers.

Mr. HOWARD. Thank you.

And one final question.

We talked a lot about the east coast, and big cities of the East needing energy.

Would you feel that even if H.R. 2020 does become law, that with plans that are abounding in the gulf area and the State of Louisiana, that the east coast could be served with energy that is needed in the future?

Mr. WAGGONNER. I not only feel that they could be served, I feel that they will be served in a manner more commensurate with their desires, that they be served by facilities from somewhere else.

Mr. HOWARD. Thank you very much, Mr. Waggonner.

We certainly appreciate your testimony and your appearance before the subcommittee this morning.

Mr. WAGGONNER. Thank you, Mr. Chairman.

Mr. HOWARD. Counsel.

Mr. D'AMICO. Mr. Chairman, may I observe that Mr. P. J. Mills, to whom Congressman Waggonner referred, unfortunately is unable to appear before us, but has submitted a statement, with attachments, which I offer for the record.

The statement is that of Mr. P. J. Mills, executive director, Louisiana Deep Draft Harbor and Terminal Authority, New Orleans, and the attachments are a copy of the Economic Impact of the Louisiana Offshore Oil Port which Congressman Waggonner has already submitted for the file, and also, a copy of Act No. 444, approved by the Governor of Louisiana, July 12, 1972, to create a deep-draft harbor and terminal authority as a political subdivision of the State of Louisiana.

I respectfully submit these for the record.

Mr. HOWARD. The Chair would like to state that we do have Mr. Mills' statement before us.

Mr. Mills is speaking in behalf of Gov. Edwin W. Edwards of Louisiana, who formerly was a member of this Committee on Public Works; the statement is made on behalf of the Governor in support of H.R. 2020.

The attachment referred to by Mr. Waggonner is already inserted in the committee files.

The statement and attachments of Mr. Mills will, without objection, be made a part of the record at this point.

[The statement and attachments referred to follow:]

STATEMENT OF P. J. MILLS, EXECUTIVE DIRECTOR, LOUISIANA DEEP DRAFT HARBOR AND TERMINAL AUTHORITY, NEW ORLEANS, LA.

Mr. Chairman, gentlemen of the committee:

I am P. J. Mills, Executive Director, Louisiana Deep Draft Harbor and Terminal Authority, known as Louisiana Superport Authority, State of Louisiana. I would like to thank you for giving me this opportunity to express the position of the State of Louisiana in behalf of Governor Edwin W. Edwards on the subject of deepwater port policy and the general purposes of H.R. 2020, which is presently before the Committee for consideration.

By way of introduction to my testimony today, I would like to define what we see as an exciting, vitally important project. I refer to the Louisiana concept of a "superport"; a multi-stage program that in its initial stage will be an oil terminal, and that grows through subsequent stages to a true "superport", handling bulk, slurried bulk and break bulk commodities. The timetable for development of the latter stages will be dictated by advances in shipping technology, in much the same way that the pressing need for oil terminal development is the result of the evolution of the supertanker.

The State of Louisiana and its Congressional delegation have watched with interest the announcement of plans for deepwater port development off several East Coast states. During that 3- or 4-year period, we have also observed that those announced plans have been repudiated by the states offshore from which the facilities were to be located, primarily because of inadequate environmental planning on the part of the developers.

With the experience of those East Coast states in mind, we in Louisiana moved last year to lay the groundwork for establishment of a state agency through which to create the proper climate for public acceptance of the superport concept in Louisiana and through which the most comprehensive environmental planning for deepwater port development could be undertaken. In cooperation with several oil companies and other private business and industry in Louisiana, who provided the funds, we established an ad hoc Task Force to pave the way for superport development off the Louisiana coast. One of the functions of the Task Force was to draft legislation to create a state agency to oversee the promotion and development of the superport concept in Louisiana. The Regular Session of the Louisiana Legislature last year created the Deep Draft Harbor and Terminal Authority, commonly known as the Louisiana Superport Authority, and charged this agency with the comprehensive planning associated with deepwater port development off the Louisiana coast. Written into the legislation was provision for one of the most comprehensive environmental protection plans adopted by any state up to this time as related to a project. The legislative plan was drawn by the Sea Grant legal staff and Center for Wetland Resources at Louisiana State University. The environmental protection provisions provided for an ongoing plan extending far beyond the environmental impact statement required by the National Environmental Policy Act (NEPA), and would insure the maximum protection possible for the delicate and valuable coastal marshes of Louisiana.

In creating the Deep Draft Harbor and Terminal Authority, Louisiana established the first state agency in the United States for the purpose of planning, promoting and developing a deepwater port off the coast of a state. In so doing, Louisiana allocated some $350,000 for fiscal 1972–73 for the operations of the agency and the initial development of the environmental protection plan mentioned above. Some $750,000 has been appropriated for the coming fiscal year to expand the environmental plan as required by our Legislature and perform the other work necessary to see the first phase of a deepwater port, the oil terminal, developed off the coast of Louisiana. This plan must be promulgated by January 1, 1974. Prior to that time, public hearings will be held on the plan and

public input to the plan obtained through workshops held throughout the State of Louisiana. The public workshops will precede the public hearings in order to obtain public suggestion as to environmental protection prior to finalizing the plan.

An economic impact study of the effects of an offshore oil terminal has just been concluded and was announced by Governor Edwards in Baton Rouge on June 8, 1973. A copy of that study is included as part of the original of this statement as is a copy of Act 444 of 1972 (Louisiana Revised Statutes 1950, as amended, Title 34, Sections 3101–3114). The latter spells out the items which must be contained in the Environmental Protection Plan which is to become a rule of procedure of the Louisiana Deep Draft Harbor and Terminal Authority.

We do not presume to suggest to the Congress which agency of the Federal government would be best suited to the issuance of authority—either environmental or total—for construction of a deepwater port off the coast of our state or any other state. We welcome the fact that serious consideration is being given to establishing that authority. With the critical need for development of deepwater ports to import oil to the continental United States, this action is quite timely.

We in Louisiana feel that by our actions over the past 13 months, we have created a climate in our state which will welcome the development of an oil terminal and subsequently other types of facilities in the Gulf of Mexico off our coast. It is our opinion that the construction of an oil terminal and its operation are logically the function of the private sector, either the oil companies themselves or terminal firms which have expertise in this area. Likewise, we feel that any authority emanating from the Federal government for the construction and operation of such deepwater facilities should be channeled through the state offshore from which that facility is to be located. The reasoning for this may seem unusual to some. However, it is not to us.

Louisiana has now and is willing to continue to expend state funds to promote the development of a deepwater port off its coast because we can envision the enormous economic benefit to our state and region. Also, we envision the development of this facility within the framework of the most modern environmental protections available and feel that the economic benefits can be won without jeopardizing our unique coastal environment. As we move to promote this project, we can also see that substantial economic impact will occur in our state because of the development of ancillary industries. That fact is borne out by the economic study attached to the original of this statement. There is a serious potential danger to the coastal environment from such a facility, particularly an oil terminal. Since our coastal area is highly productive in fish, shellfish, and fur-bearing animals we are particularly conscious of the potential damage from oilspills. We are also conscious that funds must be available to minimize damage and restore damage that might occur to the existing marshlands from an offshore spill or rupture of onshore facilities. These are burdens which would have to be assumed by any state offshore from which such a facility is built and is a further reason why the coastal states offshore from which such a facility is built should be given primary consideration in any permit granting procedure established by the Congress.

With regard to H.R. 2020 before the Committee at this time, we in Louisiana feel that the protection of the rights of the coastal states as contained in the measure is sound. However, we would carry the thesis of H.R. 2020 further to provide that those states who, by their affirmative actions, favor the development of deepwater terminals off their coast be given primary consideration in any licensing procedure that is established by the Congress. We feel that it is simple equity to place the same priority on the interests of those states favoring development of offshore deepwater port facilities as is placed on those states opposing such development. In essence, Louisiana is of the opinion that whatever legal regime is established to license the development of so-called "superports" off the coast of any state should grant primary consideration to the state offshore from which such a facility is to be built. This would apply in either granting a license for such an operation, or in the refusal to grant such a license because of the coastal state's specific legal prohibition against such coastal development. In this way, those states favoring such development will have the same voice in their destiny as will those states envisioned in H.R. 2020.

By giving the states the authority over the development of such deepwater facilities, Congress would in effect be giving the coastal states an opportunity to negotiate with private firms to construct and operate such facilities for the

mutual benefit of both parties and the public a large. Terminals such as are needed to bring in foreign oil have been built all over the world by both oil companies and firms which specialize in building and operating terminals. The operations of those facilities, coupled with the heavy development of industry which normally follows, has a high potential incidence of environmental difficulties which will affect most the states offshore from which they are located. Those operations also have a very high level of profitability from which some form of payment could and should be made to the affected coastal states either directly or through the Federal agency regulating such operations in order to give the coastal states which choose to permit such operations off their shores some immediate financial means to defray costs which must be incurred as a result of those operations.

Louisiana is one state which strongly favors the development of so-called "superports" at this time. However, the existing fishing and trapping industries of Louisiana's coastal areas are far too important to the livelihood of thousands of our citizens for state government to take them lightly. The wide-based public support for a Louisiana deepwater terminal in our view is contingent upon the knowledge of many of our state's people and some of our foremost environmentalists that the government of Louisiana is sincere in its determination to protect and maintain the integrity of our coastal environment. The fact that the legislation creating our Deep Draft Harbor and Terminal Authority goes to such lengths to insure environmental protection is in itself insurance that the faith will be kept with the environment.

It is relatively easy for a state to refuse to permit the development of such facilities off its coast. On the other hand, it is difficult to balance the economic benefits against the environmental considerations and walk a middle road that permits the development of superports. We in Louisiana have chosen the difficult course of wedding environmental excellence to economic development. We feel that it can be done and intend to see that it is done. Those in the private sector who would develop such facilities seem to be aware that only with the assistance of the coastal states can such a balance be attained. Louisiana is offering that assistance and has created the climate which will permit such development. We are merely asking that Congress, in designating which agency or agencies will have responsibility for granting authority for such development, consider the coastal states first. As legislation is drafted to place such authority in a designated Federal agency, we respectfully request that the auhorizing agency be required to offer primary permit authority to the state offshore from which a facility is to be located. In so doing, you will give the coastal states an opportunity to participate more viably in the Federal system and assist them in meeting the challenges which will naturally come from such offshore development. In our opinion, it is an excellent opportunity for the states to share with the Federal government the responsibilities for solving an immediate national crisis. It would also afford the states an excellent opportunity to work with private interests to develop deepwater terminals, with the states providing environmental safeguards and private industry, the economic development. Louisiana stands ready to play its role and asks your help in making that possible.

Thank you, Mr. Chairman and members of the Committee.

ACT No. 444

Senate Bill No. 714. By: Messrs. Kiefer, W. D. Brown, Guillory, Bauer, Blair, C. M. Brown, J. H. Brown, Carter, Davis, DeBlieux, Duplantier, Duval, Dykes, Eagan, Fontenot, Foshee, Gerald, Hardy, Hickey, Jones, Jumonville, Kilpatrick, Knowles, Lambert, Lauricella, Montgomery, Mouton, Nicholson, Nunez, O'Keefe, Osterberger, Peltier, Poston, Rayburn, Smither, Tassin, Tiemann, Williamson and Windhorst and Reps. Accardo, Ackal, Chabert, Fowler, Guidry, John, LeBlanc, Marullo, Strain, Tauzin, M. Thompson, Triche, Turnley and Womack.

An act To amend Title 34 of the Louisiana Revised Statutes of 1950 to add thereto a new Chapter to be designated as Chapter 35 thereof and to comprise Section 3101 through Section 3114 thereof, both inclusive, to create a Deep Draft Harbor and Terminal Authority as a political subdivision of the state of Louisiana, possessing full corporate powers, to define its authority and functions, to provide for organization and government, to define its duties, powers and jurisdiction as the governing authority, and to delegate to it authority to own, construct, operate and maintain docks, wharves, sheds, elevators, locks, slips, laterals, basins, warehouses and all other property, structures, works of public improvement necessary and useful for a deep draft harbor and terminal basin, to

dredge and maintain shipways, channels, slips, basins and turning basins, to establish, operate and maintain, in cooperation with the federal government and state of Louisiana, its various agencies, subdivisions and such bodies, a deep draft harbor and terminal in and upon the waterbottoms of the Gulf of Mexico and the Continental Shelf, to exercise the right of eminent domain, to enter into leases with the United States of America, state of Louisiana, subdivisions thereof and other public and private agencies, acquiring a lease, right of way or servitude over the waterbottoms of such land as may be necessary for the business of said Authority to collect tolls and fees, to borrow funds for the business of such Authority, to incur debts and issue bonds for the needs of such Authority in a manner provided by the Constitution and the laws of the United States, and the state of Louisiana, to provide for an Environmental Protection Plan to protect the coastal environment from damage, to authorize lease or sublease of lands leased from the State of Louisiana, to negotiate and enter into contracts or agreements with any public or private individual or corporation including, but not limited to contracts or agreements for the construction and operation of a petroleum terminal as an interstate common carrier and generally, to employ said Boards to do any and all things necessary and proper for the governing, regulation, development and control of the business of such Deep Draft Harbor and Terminal Authority.

Be it enacted by the Legislature of Louisiana:

Section 1. Chapter 35 of Title 34 of the Louisiana Revised Statutes of 1950, comprising R.S. 34:3101 through R.S. 34:3114, both inclusive, is hereby enacted to read as follows:

CHAPTER 35. DEEP DRAFT HARBOR AND TERMINAL AUTHORITY

§ 3101. Object; purpose of Act

A. It is the object and purpose of this Act to provide for the creation of a political subdivision of the state of Louisiana, possessing full corporate powers, known as the Deep Draft Harbor and Terminal Authority, hereinafter referred to as the "Authority", to promote, plan, finance, develop, construct, control, operate, manage, maintain and modify a deep draft harbor and terminal within the jurisdiction of said Authority and in order to promote the economic welfare of its citizens, and to provide the necessary facilities for docking, loading and unloading of vessels carrying liquid or dry bulk and energy cargoes. It is hereby declared to be in the public interest that this Deep Draft Harbor and Terminal Authority be created as a political subdivision of the state of Louisiana.

B. It is further the object and purpose of this Act:

1. To promote the economic industrial wellbeing [1] of the existing port authorities of the state of Louisiana and to promote interstate, national and international trade for the state of Louisiana, its subdivisions and the area served by the Mississippi River and its tributaries, and to provide that existing ports take such steps individually and collectively to assure the maintenance of the economic wellbeing [1] of each port authority, as well as the whole;

2. To promote the industrial and petrochemical base of the Mississippi Valley Region of the United States by providing adequate deep draft port facilities for the handling of the cargoes of deep draft vessels;

3. To promote, in addition to port operations, scientific, recreational, and all other uses of the Deep Draft Harbor and Terminal which shall be in the public interest;

4. To accommodate and plan for the technological innovations occurring in the worldwide and domestic shipping industry to increase efficiency and the flow of commerce through the Deep Draft Harbor and Terminal;

5. To protect environmental values and Louisiana's unique coastal marshland ecosystem through the adoption of an Environmental Protection Plan;

6. To assert and protect Lousiana's economic, social and environmental interests in the development of any Deep Draft Harbor and Terminal outside the state of Louisiana where such development may have an impact upon the state of Louisiana;

7. The authority to constitute a political subdivision of the state of Louisiana and such functions exercised by the board empowered herein shall be deemed to be held as governmental functions of the state of Louisiana, as the exercise of

[1] As it appears in the enrolled bill.

the powers granted herein will, in all respects, to the benefit of the people of the state, for the increase of their commerce and prosperity and for the improvement of their economic condition;

8. To assure that the Authority shall not be required to pay any taxes or assessments on any property acquired or used by it under the provisions of the Act or upon the income therefrom, and any bonds issued hereunder shall be serviced from the income of said facility and shall be exempt from taxation by the state of Louisiana, and by any municipal or political subdivision of the state.

§ 3102. Definitions

For the purposes of this Act, the following definitions shall apply:

(1) "Deep Draft Harbor and Terminal" means a structure, or series of structures or facility of any type emplaced in coastal waters and designed to accommodate the cargo or passengers of deep draft vessels whose draft is greater than the depths of typical inland harbors and waterways commonly used by ocean going traffic during the first half of the twentieth century, including all those structures and facilities functionally related thereto and necessary or useful to the operation thereof whether landward or seaward of the main structure or facility itself.

(2) "Authority Development Program" means all the phases of growth and development through which the concept of a Deep Draft Harbor and Terminal may go, including but not limited to promoting the concept, raising funds to support the program, planning the uses of the facility, selecting a site for the physical facility and support facilities, designing the structures, constructing the facility and the support facilities, operating and maintaining the facility, expanding or renovating the facility, modification and retirement of the facility, and any other phases through which Authority development may proceed.

(3) "Environmental Protection Plan" means a written document, prepared in conformity with this law, which shall be a regulation of the Deep Draft Harbor and Terminal Authority which establishes those steps to be followed to insure the protection of the environment throughout all phases of the Authority Development Program.

(4) "Three Deepwater Ports" means the Board of Commissioners of the Port of New Orleans, the Greater Baton Rouge Port Commission and the Lake Charles Harbor and Terminal District.

(5) "Three directors" means the director of the Louisiana Wildlife and Fisheries Commission, the director of the Louisiana State University Center for Wetland Resources and the Executive director as created herein.

(6) "Facility" means any structure or improvement actively used on a regular basis in waterborne commerce.

(7) "Coastal waters of Louisiana" means those waters extending three nautical miles from the coastline, or beyond to the extent of the jurisdiction of the state of Louisiana.

Nothing contained herein shall be construed to affect Louisiana's claim to it's [1] tidelands or the location of Lousiana's coastline as interpreted by the State of Louisiana.

§ 3103. Jurisdiction; domicile

A. The Authority shall have exclusive jurisdiction over the Authority Development Program within the coastal waters of Louisiana. The jurisdiction of the Authority shall not include or extend to the taking, control or operation of existing, proposed or future facilities of existing port authorities except by mutual agreement.

B. The Authority shall have the right to acquire by lease or purchase waterbottoms inside and outside of the territorial limits of the state of Louisiana for use in the construction, operation or maintenance of the facilities functionally required, related, necessary or useful to the operation of the Authority.

C. The domicile of the Authority shall be in the city of New Orleans; however, by appropriate act of the board of commissioners the domicile may be relocated to an appropriate location within the structures and facilities constructed or acquired by the Authority.

§ 3104. Board of commissioners; qualifications; selection; terms; vacancies; compensation

A. The Authority shall be governed by a board of commissioners consisting of nine members chosen on the basis of their demonstrated experience in civic

[1] As it appears in the enrolled bill.

leadership and their stature and ability to act effectively for the best interests of Louisiana.

B. All commissioners shall be appointed by the governor. Two shall be selected from a list of nominees submitted by Louisiana's Three Deepwater Ports, with each Deepwater Port recommending two nominees.

Two shall be selected from each of the three Public Service Commission Districts in the state of Louisiana.

One of the members selected from the three Public Service Commission Districts shall be selected for his primary interest in protecting the unique coastal environment of Louisiana.

One member shall be selected from the State at large.

Once a final determination is made as to the location of the deep draft harbor and terminal, the first vacancy occurring on the board shall be filled by appointment of a resident of a parish in which, or offshore from which, the deep draft harbor and terminal is to be located. This appointment shall be from a list of three names to be submitted by the governing authority of the Parish in which, or offshore from which, the deep draft harbor and terminal is to be located. If the deep draft harbor and terminal is located in, or offshore from, more than one parish, then the governing authority of each such parish shall submit to the Governor a list of three names and from the lists so submitted the Governor shall select said appointee.

C. Each of the nine commissioners shall serve a five year term, except the initial appointees.

A commissioner may not serve more than[1] two consecutive five year terms on the board of commissioners.

The first nine appointments shall be for terms of one member for one year, two for two years, two for three years, two for four years, and two for five years. The governor shall exercise his discretion as to which nominees to appoint to the initial shortened terms. Thereafter, all commissioners appointed as herein provided shall serve five year terms.

D. All vacancies shall be filled for the unexpired term in the same manner as the appointment originally made, except as herein provided. A commissioner may be removed by the governor for just cause.

E. The members of the board of commissioners shall serve without compensation, but shall be reimbursed for travel expenses incurred in attending meetings, at rates and standards as promulgated by the American Automobile Association or a comparable recognized standard.

§ 3105. Duties of board; officers; rules; meetings; quorum

A. The board of commissioners shall be the governing body of the Authority with full power to promulgate rules and regulations for the maintenance and operation of said Authority.

B. The board of commissioners shall be a governing body of laymen. It shall formulate general policy. It shall decide upon all matter relating to the Authority Development Program. It shall adopt an annual operating and capital budget.

C. The commissioners shall elect a president annually from among themselves.

D. The executive director, as chosen by the commissioners, shall be the secretary of the board.

E. The board of commissioners shall prescribe its[1] own rules, which shall be adopted and promulgated in accordance with law.

F. The board of commissioners shall meet at least once every sixty days or upon the written request of three members, or upon the written request of the president.

G. All matters to be acted upon by the board of commissioners shall require the affirmative vote of at least five commissioners, with the exception that the affirmative vote of not less than six commissioners shall be required to select the executive director.

§ 3106. Annual reports; revenues dedicated to Authority; revenue surplus; audit; central listing of employees and investment of idle funds

A. The board of commissioners shall make an annual report to the governor showing all receipts and disbursements of the board; the number of arrivals and departures of vessels and their tonnage; the exports and imports passing through the Authority; the general condition of the Authority and its structures, facilities and other properties; and make such recommendations for its development; welfare and management as may seem advisable.

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[1] As it appears in the enrolled bill.

B. All revenues generated by the Authority are hereby dedicated to the Authority to be used to further the purpose of this Act subject to the limitations stated herein.

Any revenues of the Authority derived from any source whatsoever remaining at the end of each fiscal year, after the payment and satisfaction of all obligations of the Authority under the terms of any resolution or resolutions authorizing the issuance of bonds hereunder, and after paying all expenses of operating and maintaining the Authority, providing for renewal or replacement thereof, providing adequate reserves for continuous operation of the Authority, providing for the acquisition or construction of improvements to such facilities and the purchase of equipment and furnishings therefor, shall be considered as surplus. Said surplus shall be turned over to the general fund of the state of Louisiana for the use and benefit of its citizens.

C. The fiscal affairs of the Authority shall not be subject in any respect, to the authority, control or supervision of any regulating body of the state or any political subdivision thereof, but its books and records shall be subject to audit annually by the legislative auditor and its employees shall be listed on the central listing of state employees and it shall invest its idle funds in accordance with the Investment of Idle Funds Act and it shall be subject to the provisions of the Code of Ethics.

§ 3107. Executive director; selection; duties; employees; compensation

A. The board of commissioners shall select an executive director who shall exercise all control over all executive functions and the general operation of the Authority. The executive director shall serve at the pleasure of the board. All employees of the Authority shall be responsible to the executive director who shall organize the personnel employed by the Authority in the most efficient manner to accomplish the purposes of the Authority as provided in this Chapter and by regulations established by the Authority's board.

B. The executive director, in addition to his usual functions, shall be secretary to the board of commissioners. The board of commissioners shall fix the compensation of the executive director.

C. Within six months after operation of the Port Authority has commenced, the executive director, with the advice and consent of the Board of Commissioners of the Port Authority, shall submit a plan of Classified Civil Service for all employees of the Authority except the board of commissioners, the executive director, an assistant executive director, an executive secretary to the executive director, and professional employees hired on a contract basis.

§ 3108. Acquisition of sites; lease of stateowned waterbottoms

A. To enable the Authority to perform the work herein provided, the state of Louisiana, acting by and through the register of state lands, is hereby authorized, empowered and directed to grant to the Authority a lease on stateowned waterbottoms in the Gulf of Mexico which are selected by the Authority as sites for the Deep Draft Harbor and Terminal; provided, however, that the mineral rights on any and all state lands shall be reserved to the state of Louisiana.

Upon receipt of a request from the governing body of the Authority describing the lands to be leased by the Authority, it is hereby made the mandatory duty of the register of state lands to issue a certificate of title evidencing the lease of the land to the Authority as described in the request.

B. The register of state lands shall lease the selected tracts to the Authority for five dollars per acre per annum.

C. All such leases shall be for a term of forty years, but the legislature may reevaluate the rental payments upward or downward to reflect changing economic conditions.

D. All proceeds arising from the sale of such leases of stateowned waterbottoms shall be paid by the Authority to the state treasurer and shall become part of the general fund of the state of Louisiana.

E. Nothing in this Part is intended to authorize the Authority to lease stateowned waterbottoms for the exploration, development and production of oil, gas, sulphur or other minerals or for the cultivation or production of marine resources or detract from the authority of the state mineral board and/or Louisiana Wild Life[1] and Fisheries Commission to lease for such purposes. However, tracts once leased to the Deep Draft Harbor and Terminal Authority may not be leased by the state mineral board or the Louisiana Wild Life[1] and Fisheries Commis-

[1] As it appears in the enrolled bill.

sion without the express consent of the Authority, unless it can be shown by the state mineral board or the Louisiana Wild Life[1] and Fisheries Commission, by clear and convincing evidence, that such lease or leases will not adversely affect present or future Authority operations.

§ 3109. Powers

A. The Authority shall be vested with exclusive and plenary authority to do any and all things necessary or proper for the Authority to promote, plan, finance, develop, construct, control, operate, manage, maintain and modify the Authority Development Program.

B. To assert Louisiana's interest in any Deep Draft Harbor and Terminal development in proximity to the Louisiana coast, the Authority is empowered to negotiate with and enter into contracts, compacts or other agreements with agencies, bureaus or other divisions of the federal government or other states of the United States concerning the Authority Development Program, including jurisdictional aspects of the location of the Deep Draft Harbor and Terminal, sharing of revenues derived from the operation of the Deep Draft Harbor and Terminal and promulgation and enforcement of regulations governing Authority operations.

C. The Authority is granted all powers capable of being delegated by the legislature under Article XIV, Section 31 of the Constitution of the state, including but not limited to authority:

1. To own, construct, operate, maintain and lease docks, wharves, sheds, elevators, pipelines, pumping stations and facilities, storage facilities, housing and food facilities, heliport, locks, slips, laterals, basins, warehouses and all other property, structures, equipment and facilities, including belt and connecting lines of railraods[1] and works of public improvement necessary or useful for Deep Draft Harbor and Terminal purposes.

2. To dredge and maintain shipways, channels, slips, basins and turning basins.

3. To establish, operate and maintain in cooperation with the federal government, the state of Louisiana and its various agencies, subdivisions and public bodies, navigable waterway systems.

4. To acquire by expropriation any real property in fee, leaving the ownership of any minerals or mineral rights in the former owners, and the prescription of nonuse shall not run against said minerals or mineral rights. In the event of expropriation, the compensation to be paid shall be the actual market value of the property at the time of taking. In the event of the acquisition of a servitude, or use of any state-owned waterbottoms on which there has been granted an oyster lease by the Louisiana Wildlife and Fisheries Commission, the private oyster lessee shall be reimbursed by the Authority for the actual market value of said lease.

5. To borrow from any person or corporation using or renting any land or dock or warehouse or any facility of the Authority such sums as shall be necesary to improve the same according to plans and specifications approved by the Authority, and to erect and construct such improvement, and agree that the loan therefor shall be liquidated by deducting from the rent, dock, wharf or toll charges payable for such property, a percentage thereof to be agreed on, subject, however, to any covenants or agreements made with the holders of revenue bonds issued under the authority set forth in Section 3108 of this Chapter.

6. To collect tolls and fees.

7. To borrow funds for the business of the Authority.

8. To select an official journal for the publication of the official acts of the Authority.

9. To mortgage properties constructed or acquired by said Authority and to mortgage and pledge any lease or leases and the rents, income and other advantages arising out of any lease or leases granted, assigned or subleased by the Authority.

D. The Authority is hereby empowered to take all necessary steps to protect Louisiana's unique coastal environment from any short-term or long-term damage or harm which might occur from any aspect of the Authority Development Program.

E. The Authority may contract with any agency, public or private, to provide for public utilities on such terms as are agreed upon[1] the Authority and the respective utilities for the financing, construction and extension of sewerage, water, drainage, electricity, gas and other necessary public utilities in and through said development.

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[1] As it appears in the enrolled bill.

F. Said authority may lease or sublease lands leased from the State of Louisiana and is authorized to negotiate and enter contracts or agreements with any public or private individual, or corporation, for the construction and operation of a petroleum terminal as an interstate common carrier.

§ 3110. Protection of deepwater ports

A. To prevent impairment of the bonds of the Three Deepwater Ports which are backed by the full faith and credit of the state, and to recognize the existing authority of and functions performed by the established ports and harbors of Louisiana, it is hereby recognized that the function, power and authority of the various existing port authorities established pursuant to Article 14, Section 31 of the Louisiana Constitution, and others established by specific Constitutional provision are not to be diminished by the jurisdiction and powers exercised by the Deep Draft Harbor and Terminal Authority except as provided in this Act.

B. The Authority may enter into intergovernmental contract agreements with existing port authorities, individually, or with any other parish, city, municipality or subdivision of the state, and may engage jointly in the exercise of any power, the making of any improvements which each of the participating authorities may exercise or undertake individually under any provision of general or special law.

C. The Authority, in establishing or enacting its rates and charges for bulk cargo shall consider the overall economic impact on the economy of the Three Deepwater Ports, and its charges and rates shall be compensatory.

D. The Authority shall not engage in the handling of break bulk or general cargo without the prior written agreement of the Three Deepwater Ports, which agreement, among other provisions, may provide for use of existing port facilities, rates, wharfage fees and other matters of mutual interest.

§ 3111. Public contracts

A. All public works exceeding the sum of ten thousand dollars, including both labor and materials, to be performed by the Authority shall be governed by Louisiana Revised Statutes 38:2211, et seq. However, this provision shall not apply in cases of extreme public emergency, where the Authority has certified such public emergency, but in such case notice of such public emergency shall be published in the official journal of the Authority within ten days thereof.

B. Where the Authority deems it advisable and in the public interest to purchase machinery, equipment or vehicles of certain makes, kinds or types, the advertisement may specify the makes, kinds or types and, after the advertising, the Authority may purchase those makes, kinds or types, but they shall not pay more than the actual market price for the machinery, equipment or vehicles.

§ 3112. Bonds; procedures for issuance

A. The Authority is hereby authorized to incur debt and issue bonds for its needs in the manner herein provided.

B. The Authority is granted the power to incur debt and issue bonds by any of the means authorized by the Constitution and laws of the State of Louisiana, including but without limiting the generality of the foregoing Article XIV, section 31, and Article XIV, Section 1, and paragraphs (b.2) and (b.3) of the Louisiana Constitution.

C. Any revenue producing wharf, dock, warehouse, elevator, industrial facility or other structure owned by or to be acquired by the Authority from proceeds of bonds issued by it is hereby declared to be a revenue producing public utility as that term is used and defined by the Constitution and laws of the state in connection with the issuance of revenue bonds of political subdivisions of the state.

D. As an additional grant of authority beyond other provisions of the Constitution, the Authority is authorized, with the approval of the state bond and tax board, to issue negotiable bonds for any purpose within their delegated authority, and to pledge for the payment of the principal and interest of such negotiable bonds the income and revenues derived or to be derived from the properties and facilities maintained and operated by them or received by the Authority from other sources.

E. Such negotiable bonds may be further secured by a conventional mortgage upon any or all of the property constructed or acquired, or to be constructed or acquired by them.

F. To further secure such negotiable bonds the Authority may apply in whole or part any money received by gift, grant, donation or otherwise from the United

States, the state of Louisiana, or any political subdivision thereof, unless otherwise provided by terms of the gift, devise, donation or similar grant.

G. Such bonds shall be authorized by a resolution of the board of commissioners of the Authority and shall be of such series, bear such date or dates, mature at such time or times not exceeding forty years from their respective dates, bear interest at such rate or rates per annum, payable at such time or times, be in such denominations, be in such form, either coupon or full registered without coupons, carrying such registration and exchangeability privilege, be payable in such medium of payment and at such place or places, be subject to such terms of redemption not exceeding 105% of the principal amount thereof, and be entitled to such priority on the revenues of the Authority as such resolution or resolutions may provide. The bonds shall be signed by such officers as the Authority shall determine, and coupon bonds shall have attached thereto interest coupons bearing the facsimile signatures of such officer or officers of the Authority as it shall designate. Any such bonds may be issued and delivered, notwithstanding that one or more of the officers signing such bonds or the officers whose facsimile signature or signatures may be upon the coupons shall have ceased to be such officer or officers at the time such bonds shall actually have been delivered. Said bonds shall be sold for not less than par and accrued interest to the highest bidder at a public sale after advertisement by the Authority at least seven days in advance of the date of sale, in newspapers or financial journals published at such places as the Authority may determine, reserving to the Authority the right to reject any and all bids and to readvertise for bids. If, after advertisement as hereinabove provided, no bids are received, or if such bids as are received are considered in the discretion of the board of commissioners of the Authority to be unsatisfactory, then and in that event the board of commissioners may publicly negotiate for the sale of such bonds without further advertisement. No proceedings in respect to the issuance of any such bonds shall be necessary except such as are contemplated by this Section.

H. For a period of thirty days from the date of publication of the resolution authorizing the issuance of bonds hereunder, any persons in interest shall have the right to contest the legality of the bond issue for any cause after which time no one shall have any cause or right of action to contest the legality of said resolution or of the bonds authorized thereby for any cause whatsoever. If no suit, action or proceeding is begun contesting the validity of the bond issue within the thirty days herein prescribed, the authority to issue the bonds and to provide for the payment thereof, and the legality thereof and all of the provisions of the resolution authorizing the issuance of the bonds shall be conclusively presumed, and no court shall have authority to inquire into such matters.

I. Such bonds shall have all the qualities of negotiable instruments under the law merchant and the Negotiable Instruments Law of the state of Louisiana, and shall be exempt from income and all other taxation of the state of Louisiana.

J. No bonds as herein described shall be authorized, issued or sold except in accordance with specific authorizations hereafter granted by the legislature for each issue.

§ 3113. Environmental Protection Plan

A. Throughout all aspects of the Authority Development Program there shall be in existence an Environmental Protection Plan, the details of which shall be followed in all respects by the executive director in carrying out any aspect of the Authority Development Program.

B. The Environmental Protection Plan shall be formulated by the three directors, as herein defined, with the advice and consent of the board of commissioners of the Authority.

C. The Environmental Protection Plan shall be promulgated by the executive director under the rule-making procedures of the Louisiana Administrative Procedure Act of La. R.S. 49 :951–49–966.

D. The Environmental Protection Plan shall be promulgated within a reasonable time after the appointment of the executive driector, but in no event more than eighteen months after the effective date of this Act. An acting executive director or a temporary executive director may fulfill this function if a permanent executive director is not as yet appointed.

E. The Environmental Protection Plan may be amended at any time in accordance with the provisions of the Louisiana Administrative Procedure Act, to reflect changes in the Authority Development Program. Initiation for changes may come from any of the three directors or any interested person

F. In preparing the Environmental Protection Plan, or any amendment thereto, at any time during the Authority Development Program, the three directors shall make every effort to reach a consensus. If they are unable to agree, each shall proffer his proposed Environmental Protection Plan and and present it to the board of commissioners for its consideration. Each of the three directors shall present detailed comments to the board of commissioners, with recommendations as to the best Environmental Protection Plan. After receiving and studying the recommendations, the board of commissioners shall decide which plan or combination of plans shall be adopted and promulgated.

G. The Environmental Protection Plan shall be an integral part of the Authority Development Program. Costs incurred to develop the initial plan, or any amendments to it, shall be considered an internal cost of the Authority Development Program and shall be considered a cost to the same extent that economic, engineering or promotional programs are considered costs. The three directors shall agree on the appropriate level of funding for the developing of the Authority Environmental Protection Plan, prepare any amendments thereto, and carry out the requirements of the Plan. To the extent possible, federal funds shall be sought to assist in this effort.

H. The best talent available shall be sought to perform the studies and surveys necessary to develop an Environmental Protection Plan and carry out its requirements in accordance with this Act. To the extent possible, University-based, public and private researchers in Louisiana shall be utilized. In all cases, the research in support of the Environmental Protection Plan shall be coordinated by agreement of the three directors. The results of all research done in support of the Environmental Protection Plan shall be open to the public and available to any interested person.

I. The Environmental Protection Plan shall contain specific provisions implementing Subsection J below. If specific provisions cannot be set forth due to uncertainties in the Authority Development Program, then the Environmental Protection Plan shall state in specific terms the uncertainties which do exist at the time the plan is promulgated, and why the uncertainties would make the inclusion of specific provisions in the plan premature. The Authority Environmental Protection Plan shall contain a separate chapter for each of the Paragraphs of Subsection J below and any other chapters necessary to meet the requirements of this Act.

J. The Environmental Protection Plan shall:

(1) Summarize the salient feature of an inventory of all potential and actual stresses on the natural and human environment which can be reasonably expected to occur in pursuing the Authority Development Program. Consideration shall be given to stresses which have occurred in other parts of the country and the world where similar functional operations were being performed. Consideration shall be given to the peculiarities of Louisiana's coastal environment. The inventory of potential and actual stresses shall include a prediction of the stress on the coastal environment of major accidents which could logically be expected to occur throughout the Authority Development Program, even though all precautions against such accidents have been taken.

(2) Describe the essential features of existing environmental data upon which the selection of a site for a Deep Draft Harbor and Terminal may be based. Indicate how this data has been analyzed and compared with the inventory of potential and actual stresses required in the above Paragraph so that the site selected will result in the least total stress on the environment. Indicate how economic considerations are compared with the assessed total stress on the environment to arrive at the best economic-ecologic formula for determination of a site for the Deep Draft Harbor and Terminal. State the location and availability of the environmental data upon which these determinations are based.

(3) State how the Deep Draft Harbor and Terminal facility design minimizes potential environmental damage, considers environmental factors as a positive part of the design, and controls long-term development so that growth and additions to the Deep Draft Harbor and Terminal do not result in random growth or in gradual environmental deterioration.

(4) Present details of how the operational aspects of the Authority Development Program will be conducted so as to minimize environmental problems, including but not limited to a monitoring program by the Louisiana Wild Life[1] and Fisheries Commission; establishment of constructional and operational guidelines for environmental protection; strong enforcement provisions, and mechanisms to insure cleanup of accidental spills by technical means, with a surety

[1] As it appears in the enrolled bill.

bond to insure performance. The plan shall consider the circumstances which may justify the temporary cessation of the port activities.

(5) Provide procedures for the funding of projects to be paid for by the Authority to the Louisiana Wild Life [1] and Fisheries Commission or any agency designated by the governor which shall compensate the coastal environment for loss that may be sustained through the stresses on the environment created by the Authority Development Program.

(6) Analyze ongoing programs of the federal, state and local governments designed to protect the coastal environment and to insure that there is no unnecessary duplication of effort and to insure that cooperation and coordination of environmental protection measures are achieved. The opinion of all agencies with a responsibility for monitoring the coastal environment shall be sought with regard to this Coastal Protection Plan prior to its promulgation, to determine if there are incompatibilities between specific provisions of this measure and the requirements of other rules and regulations.

K. Nothing in this Section is intended to diminish in any way the authority of the Louisiana Wild Life [1] and Fisheries Commission.

§ 3114. Coordination and cooperation

A. It is the policy of this Act that the Authority Development Program be pursued so that there is full coordination and cooperation between agencies and groups that have complementing or overlapping interests and the Authority. It is not the policy of this Act that the Authority Development Program be pursued independently and with a view toward narrow, short-term interests.

B. The board of Commissioners shall take affirmative steps to fully coordinate all aspects of the Authority Development Program with the Louisiana Advisory Commission on Coastal and Marine Resources (Act No. 35 of 1971) or its successor group, which is charged with the development of a coastal zone management plan for the state.

C. The board of commissioners shall take affirmative steps to insure that the Authority Development Program is coordinated into the planning programs of other modes of transportation, to include rail, road, waterway, air and pipeline, so that there is a long-term and orderly pursuit of transportation services in the coastal zone which are interrelated and coordinated so as to achieve the most efficient and economical transportation program that is feasible and that will be least destructive of other values in the state.

D. The board of commissioners shall insure that the appropriate federal agencies which are required by federal law to plan or regulate transportation facilities or programs are consulted regularly and are fully involved in the Authority Development Program where appropriate.

Section 2. If any provision or item of this Act or the application thereof is held invalid, such invalidity shall not affect other provisions, items or applications of this Act which can be given effect without the invalid provisions, items or applications, and to this end the provisions of this Act are hereby declared severable.

Section 3. All laws or parts of laws in conflict herewith are hereby repealed.

Approved by the Governor: July 12, 1972.

A true copy:

WADE O. MARTIN, Jr.,
Secretary of State.

Mr. HOWARD. Our next witness is Mr. John C. Court, Deputy Assistant Administrator for Planning and Evaluation of the Environmental Protection Agency.

We are very happy to have you with us, and on behalf of the subcommittee, we wish to thank you so much for your patience. We know a situation has occurred relevant to the legislative schedules of the Congress yesterday that had you waiting all day, and we are almost under the gun at this moment.

I wish to welcome you before the subcommittee, Mr. Court.

Mr. Court, we do have your statement, and without objection it will be made a part of the record at this point.

[The statement referred to follows:]

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[1] As it appears in the enrolled bill.

STATEMENT OF JOHN COURT, DEPUTY ASSISTANT ADMINISTRATOR FOR PLANNING AND EVALUATION ENVIRONMENTAL PROTECTION AGENCY

Good morning, Mr. Chairman and members of this distinguished committee. It is my pleasure to appear before you to present the views of the Environmental Protection Agency on our assessment of offshore port facilities from an environmental point of view.

The question of deepwater port facility planning, construction, operation and regulation is enmeshed in the energy problem. Such facilities, if properly designed, constructed and regulated can play a key role in minimizing environmental hazards inherent in water transport of oil. The present level of U.S. crude oil imports—3.8 million barrels per day—is expected to double by 1980. It may well increase to as high as sixfold by the year 2000. That is a staggering amount of oil requiring a tremendous fleet and greatly expanded port facilities and posing a formidable pollution hazard to our coastal waters unless we take appropriate steps now. With the quantity of oil entering the United States increasing at such a pace, we must do all that is possible to minimize the environmental hazards.

Information provided by the Coast Guard reveals that during the last 10 years there have been over 500 tanker collisions throughout the world, and that 80 percent of these collisions occurred while the tankers were either entering or leaving a harbor and most of these probably involved oil spills. If the number of tankers entering and departing our existing harbors increases to a level commensurate with the projected need for the importation of oil the hazards are obvious. Consequently, construction of a deepwater port facility, anchored as much as 30 miles offshore, to which deep-draft tankers could hook up and unload into a pipeline connected to the shore, becomes a compelling alternative to simply increasing the number of vessels entering our ports. The construction of such ports would decrease the tanker traffic and lightering operations in already congested harbor channels, thereby significantly reducing potential risks of collisions and oil pollution damage.

Secondly, such offshore facilities would be able to accommodate the new, very large tankers, commonly referred to as supertankers, which are now being built. These new tankers can be as large as 500,000 dead weight tons, while with few exceptions the largest fully loaded ship which can enter U.S. ports today weighs about 65,000 dead weight tons.

In studying the potential environmental problems which various types of tanker docking facilities pose, we have found that vulnerability to environmental damage is the greatest at inshore sites, less at offshore sites and least at far offshore sites.

Estuaries and coastal wetlands are the most biologically productive areas of the marine ecosystem and are also the most sensitive to damage from construction and oil spill effects. At inshore sites, such damage would be unavoidable. At offshore locations, however, construction effects are minimized and the probability that spilled oil will enter sensitive estuarine areas is greatly reduced. In addition, the weathering of oil which may be spilled at an offshore site could take place en route to an estuarine or other coastal area and would tend to remove the most immediately toxic and lethal fractions of the oil.

Not only would the offshore port handle less traffic than our congested harbors, but it could be designed and operated so as to provide maximum spill protection and safe vessel passage through installation of modern traffic control devices and navigational aids covering the approaches and maneuvering areas of offshore deepwater sites.

The use of larger, more efficient tankers as specially designed offshore terminals would mean that fewer vessels would be needed to carry the increased volume of U.S. oceanborne crude oil imports expected by 1980. The propensity for collision and accident exposure would be less with larger tankers using offshore terminals than with movement of the same volume of oil via more numerous and smaller tankers using existing terminals and port channels.

Our concern is not limited to the marine environment in an area surrounding a port facility, but it extends to the environmental consequences which deepwater ports would undoubtedly generate in land-related activities. In our view the law should provide a mechanism to permit the development of deepwater port facilities, should allow for legitimate State and Federal concerns, and should provide for the protection of the marine, coastal, and shore environment. The Administration bill which we support is such a comprehensive piece of legislation.

The Administration bill, introduced in the House as H.R. 7501 authorizes the

Secretary of the Interior to issue a license for the construction or operation of a deepwater port after appropriate determinations have been made by the Secretary. The Secretary's finding must include, among other things, that the applicant is financially responsible and has demonstrated his ability to comply with applicable laws, regulations and license conditions, that the construction and operation of the proposed facility will not unreasonably interfere with international navigation or other reasonable uses of the high seas, and that the facility will be located, constructed, and operated in a manner which will minimize or prevent any adverse significant environmental effects. Prior to the issuance of a license the Secretary shall consult with the Governor of any State off whose coasts the facility is proposed to be located to insure that the operation of the facility and directly related land-based activities would be consistent with State land use programs. This provision is intended to reenforce the Administration's encouragement of the States to develop their own land use programs, and to provide the States a voice with respect to the type of facilities that would be constructed in the waters extending from the States' coast.

The proposed bill also charges the Secretary to consult with all interested or affected Federal agencies in carrying out the responsibilities which would be given to him with regard to the licensing of deepwater port facilities. We would cut through the red tape in that an application for such a license would constitute an application for all Federal authorizations required for the construction or operation of the port facility. This does not mean that legitimate concerns would be ignored. Thus, the Secretary must insure that the applications require all of the information required by other agencies. For example, the application would have to contain sufficient information for use to issue a discharge permit pursuant to the provisions of the Federal Water Pollution Control Act.

The bill also provides that prior to the granting of a license the Secretary shall publish a notice of the proposed facility in the *Federal Register* along with information as to where the application and supporting documents may be examined. If substantial objections are raised to the granting of the license, the Secretary may convene public hearings on the application.

The potential environmental consequences which could result from the granting of a license are further addressed by the requirement that the Secretary shall neither grant nor deny a license without the preparation of an environmental impact statement as required by section 102 of the National Environmental Policy Act of 1969 (NEPA). Further, protection of the environment is provided by a provision which extends the laws of the United States, particularly specific provisions of the Federal Water Pollution Control Act and the Clean Air Act to the operation and use of the deepwater port facility as though such a facility were located in the navigable waters of the United States.

States would not be precluded from imposing more stringent environmental or safety regulations for activities occurring within their jurisdiction.

In summary, Mr. Chairman, the energy needs of our country will require the increased importation of oil in the immediate future. The best means of facilitating such an increase, from an environmental point of view, are deepwater port facilities. The bill which we are proposing facilitates the development of such terminals under a system of strict environmental and other controls.

This concludes my prepared statement, Mr. Chairman, and I would be pleased to answer any questions which the Committee might have.

STATEMENT OF JOHN C. COURT, DEPUTY ASSISTANT ADMINISTRATOR FOR PLANNING AND EVALUATION, ENVIRONMENTAL PROTECTION AGENCY

Mr. COURT. Mr. Chairman, it is a pleasure to appear before you and the rest of this distinguished committee.

As you mentioned, I have submitted written testimony for the record, and will very briefly now extend my remarks made there.

I think the superport situation can be summarized very simply. There is a consensus, widely shared, that oil imports, both crude and residual, in the United States, will increase very substantially over the next 5 to 10 years.

Common estimates call for a doubling of crude oil imports by 1985 to a level of about 15 million barrels per day.

In addition, as at present, at least 2 million barrels of residual oil will be imported, as well as some natural gas and distillates.

Furthermore, one-half a million barrels will be shipped from Texas to the east coast.

In short, the United States faces a need to greatly increase its imports of crude oil and residual, and other petroleum products.

I think, for the purpose of my discussion today, I will assume that this need exists and will be met one way or another.

The fact that this increase will probably occur gives rise to a number of environmental concerns.

I think that first and foremost, it should be clear that this massive increase of imports would, unless other measures were taken, lead to a very substantial increase of oil spills and other forms of pollution.

I think this has been pointed out in Mr. Train's testimony, that this could, unless positive action is taken, significantly affect the environment.

I think, on the other hand, from the Environmental Protection Agency's point of view, if we accept the need for oil imports, that a superport of the type we have been discussing today could be a very positive environmental factor.

I would like to mention in this regard that there are four considerations that we at EPA think are critical to having superports which do not have adverse environmental effects.

First, it is extremely important that all oil is piped directly from a ship to a tank farm on shore. I think a major form of oil spills in the past has been from transferring oil from a ship to shore, not a pipeline.

I think a monobuoy, discussed in connection with a superport, would have great advantages over past practices.

Second, it is very important that the oil receiving station be sited either in the open sea, or as far offshore as possible.

We agree with Chairman Train that the environmental effects from oil spills are greatly reduced the further offshore the spill occurs, for a variety of reasons which he very ably laid out.

Third, I think we are very concerned that superports not induce a concentration of refineries and other industries that could adversely affect environmental conditions.

We believe that the development of superports within the context of existing environmental legislation, both the Clean Air Act and the Federal Water Pollution Control Act, will control, but certainly not eliminate air and water pollution contributed by these refineries, and last, and I think this has been mentioned earlier, also that it should not involve a dredged channel.

The dredging itself, the disposition of dredged spoils, and so forth, can have major impacts upon the environment.

Now, given superports which are developed in the manner I have just discussed, I think we can anticipate that there will be a major reduction in oil spills, that whereas in the absence of superports we would face an increase in oil spills. Effective legislation could assist in the development of a small number of superports which would reduce the number of spills significantly.

A superport with a direct pipeline to shore is expected to spill about 60 percent less oil per year than a conventional port with smaller tankers.

Therefore, we think it is important that there be strong superport legislation. We think, with the construction of a limited number of superports under these conditions, that the oil spill problems can be contained.

Thank you.

Mr. HOWARD. Thank you very much, Mr. Court.

Many of us have read your statement, and have heard your testimony. Both seem to refer to an overall superport bill, the administration's bill, H.R. 7501, and related bills, under which various other committees, such as Interior, Merchant Marine, and Public Works intend to hold hearings in the future, but none of it pertains to H.R. 2020, which is a very limited bill that would have little or no effect on anything that would come out from congressional action on H.R. 7501, or any related deepwater port bill, only stating, under certain circumstances, do you not agree, that by State action the Federal Government may not do something. That is the extent of H.R. 2020.

Mr. COURT. Yes, it is, sir.

Mr. HOWARD. Thank you very much.

The gentleman from Illinois.

Mr. HANRAHAN. Thank you, Mr. Chairman.

Is it EPA's position, Mr. Court, that if the national interest requires huge imports of oil, that these larger vessels that you are talking about will have a lesser probability of oil spills than the larger number of smaller tankers that we have now that would be required if these deepwater ports were not available?

Mr. COURT. That is our position. We feel larger oil spills would be significant.

Mr. HANRAHAN. What about the possibility of traffic as far as vessels are concerned at a seaport? Would this be lesser, or an increase?

Mr. COURT. Well, of course, the number of ships would be greatly reduced, and I think the fact that they were anchored off a monobuoy offshore, the lesser constricted conditions in many sites would lead to a substantially reduced traffic problem, and therefore, a reduced chance of collision.

Mr. HANRAHAN. Consequently, this would lesson the possibility of oil spills that would be close to shore?

Mr. COURT. Yes. As I stated, taking all things into consideration, we think that a superport facility would have perhaps 60 percent less oil spills than a comparable facility using small tankers.

Mr. HANRAHAN. Would you agree that the States could preclude the feared industrial development caused by offshore ports?

Mr. COURT. Under the administration's bill?

Mr. HANRAHAN. Under present law.

Mr. COURT. Well, under the present law the States could limit or control industrial development to the extent that it violated either air or water control laws or land use planning programs.

Mr. HANRAHAN. Would it not be possible to protect the Delaware Bay and rivers and the shoreline with proper safeguards to control installation, if necessary, of pipelines, and limit tank farm construction on sites safely inland from the fragile coast?

Mr. COURT. Yes, we believe it would.

Mr. HANRAHAN. Could you elaborate on that a little bit more?

Mr. COURT. Well, the sort of structures which we think are necessary—monobuoys—are well offshore, and are served by the best navigational and radar facilities that money can buy.

Second, the type of covered trench going onshore, and third, the siting of tank farms away from fragile environmental areas and, of course, sited with due regard to the ambient air and water quality standards that have been set.

We think, through a combination of such measures, the environmental impact of superports can be controlled.

I think there was a larger issue which was alluded to earlier, which is the effect of an overall development of an area.

I think that we feel, from a narrow regulatory point of view, from the point of air and water pollution control, we have the authority under existing law which, if extended to a superport, would enable us to control pollution.

Mr. HANRAHAN. Would you feel that the west coast probably has the only available ports as far as channelization is concerned, as compared to the rest of the seaboards in the United States?

I am talking about—as you know, when you channelize, you are talking about dredging and disposing of the spillage and, of course, I am sure that the EPA has a position on this.

Mr. COURT. I believe there are a number of places on the east coast which could be subjected——

Mr. HANRAHAN. I believe the Corps of Engineers provided the information that the west coast provided not the only, but the best possible seaports for channelization.

Mr. COURT. That may well be the case.

Mr. HOWARD. If the gentleman would yield, they stated that on the east coast there would be so much dredging needed for them that there are none available now.

Mr. COURT. Yes, that is right.

Mr. HOWARD. The gentlewoman from New York.

Ms. ABZUG. We are running into an interesting problem here environmentally, and I think we all agree, if I understand your last remarks, that States obviously have a right to control the supporting industries under their land use policies by virtue of their rights to set land use policies.

Now, in your statement you support a position whereby the Secretary of the Interior would discuss a deepwater port with regard to the superport industries.

Should not the land use policies of a State be entirely within its province?

Mr. COURT. I think, as a practical matter, if either the State land use plan indicated that a superport was not desired, or there was an act of the legislature that a superport was not desired, or even if there was just broad public sentiment that a superport was not desired, that it would be the intention of this administration not to have a superport off such a State.

I think the question is one that Congressman Snyder mentioned, the applicability of State authority to a situation beyond the 3-mile limit, which has caused this bill to be cast in the way it is.

Ms. ABZUG. Well, we do have a very interesting problem on that question, obviously, but just let me get at it in a different way.

From what I have been able to gather, and it is not from any great expertise by any means, most of the studies being done today by the EPA, the Corps of Engineers, and the University of Oklahoma which, I think, conducted a study, suggests that the impact is on the land use policy, the refineries, the petrochemicals, and so forth.

Then we get into a complicated issue, because since that is primarily a matter which would be subject to either State policies by reason of their land use policies, or existing laws, to which States refer to, the question of how far does a State have a right to protect the area within a 3-mile limit or beyond a 3-mile limit becomes very fuzzy and, I grant you I am aware of the fact that many States have resorted to the request to extend their authority beyond their 3-mile limits, and New York, I think, in some cases, is pressing its original charter provision, which is a 12-mile limit, and there is no clarification on that whole issue. What I am trying to find out from you is whether you think it is correct and intelligent governmental policy even to proceed with a superport construction without having some greater clarity as to these serious lack of policies.

Mr. COURT. Well, I think there is a need to proceed with superports. My main concern is that they be developed in a way that minimizes their adverse environmental effects.

Ms. ABZUG. How are you going to do that?

Mr. COURT. I think there are a number of safeguards built into the process. First, there are requirements for environmental impact statements, requirements for public hearings, and, certainly, the extension of Federal and, by implication, State water regulations to apply to a superport; the work that we have done on the oil spill problem leads us to believe that it would significantly reduce the probability or, let us say, the amount of oil spillage.

I think the major uncertainties about superport construction are in the onshore and land use development area. There, it would be incumbent upon a State to develop its own land use plan, and I feel certain, in a situation where a State's land use plan indicated that development of an area, for instance Delaware Bay, was not desired, that a superport would not be licensed by the Federal Government.

Ms. ABZUG. My impression was that we had some problems in being able to feel so confident and secure, and being able to control the environmental impact. I received that impression from the testimony of Dr. Train yesterday, and the reason is that I have no clarity. Perhaps you could help clarify this for me, that the siting of superports at a particular place really does not quite create enough environmental protection because, although we have existing laws, from a safety point of view we still have not done too much, and have no control except for the general input and international conferences which we have not yet clarified as to the nature of the ships and how they will be built, and their safety features of design. We also have a problem with the foreign ships docking at the superport, to meet some of the safety requirements.

How are you going to get at that?

Mr. COURT. You mean the ships using the superports will be built in such a way?

I honestly do not know if, as part of the licensing—I do not know whether or not you can place a requirement on ships using the super-

port that will limit their design. I will be happy to look into it and provide an answer for you.

Ms. ABZUG. I will appreciate an answer.

Mr. HOWARD. If you will provide an answer and send it to Ms. Abzug, and a copy to the committee, it will be made a part of the record.

[Information to be supplied follows:]

RESPONSE TO MS. ABZUG

All interested Federal agencies including EPA, the U.S. Maritime Commission, the Coast Guard, and the Department of the Interior, are committed to doing all that is possible to minimize the potential for oil spills at deepwater ports. While we are all constantly reviewing various design and specification requirements for vessels which will use superports, we do not intend to impose design restrictions upon license applicants.

Mr. HOWARD. Thank you very much, Mr. Court.

In response to a statement by the gentleman from Illinois, I believe that you stated that you feel that spills of the kind that come from supertankers can be handled.

Mr. COURT. Yes.

Mr. HOWARD. Then the EPA is in disagreement with the Corps of Engineers on that topic, because the Corps of Engineers says the kinds of nasty spills that could come from supertankers—there is no known technology at this time to contain such spills.

Mr. COURT. Perhaps I misunderstood you. There is no known technology for totally cleaning up spills after they occur, I think we in EPA feel it is important to place as much emphasis on spill prevention as cleanup, and that is one of the reasons we are supporting supertankers.

Mr. HOWARD. And you do believe in the provisions indicated in administration statements and legislation concerning the fact that the Federal Government must consider the interest of the States that might be affected?

Mr. COURT. I do.

Mr. HOWARD. Would you say that H.R. 2020 does that?

Mr. COURT. Does——

Mr. HOWARD. Certainly, having the Federal Government concerning itself with the wishes of a State?

Mr. COURT. There is no doubt about that.

Mr. HOWARD. Can you think of a better spokesman for the interest of the State than its own State legislature?

Mr. COURT. No.

Mr. HOWARD. The Federal Government, then, probably would not be as good a guardian of the State's interest than the State legislature?

Mr. COURT. I assume not.

Mr. HOWARD. Thank you.

Counsel.

Mr. WOOD. Mr. Court, can you provide to the committee on what has been the long-term ecological effects of such incidents as *Torrey Canyon*, Santa Barbara, San Francisco, and the well blowout on the gulf coast, and provide the committee with the information of how long it takes for the ecology of these specific areas to return to their original conditions?

Mr. COURT. Yes, we will provide such information.

Mr. HOWARD. I would like to state that we have no objection, and when such information comes to the subcommittee, it will be made a part of the record.

[The information to be supplied follows:]

ANSWER TO MR. WOOD

Unfortunately, there were no definitive records kept on the ecological recovery of the four incidents which you mentioned, with the exception of San Francisco where local universities have only recently begun recording. However, it is estimated in each instance it will take the marine ecology in the spill area approximately 2 years to return to its original condition. I might add that the Woods Hole spill off West Falmouth, Mass., was closely recorded from the outset, and the recovery period was just over 2 years.

Mr. HOWARD. The Chair would like to say that he sees no relevancy whatever for the questions or answers to the bill before us at this time, but, without objections, the questions and the responses will be made a part of the record.

Mr. Hanrahan?

Mr. HANRAHAN. Mr. Court, in response to your answer to the question on States rights, if we are in an energy crisis, and we have been for a number of years, and the President sent a message to the Congress in 1971, and nothing was done. We are getting to the point now where it is, in the case of our national interest, do you think the Federal Government is more adept at solving these problems than the States when it comes to a crisis situation?

Mr. COURT. Well, I do not know if it could be said that the Federal Government is more adept. I think there is one situation in which all the coastal States would deny or veto the development of port facilities, and under those circumstances it might be in the national interest to have a superport, and that would raise a very profound constitutional question.

I think, in the more likely situation, there would be an agreement between the State involved and the Federal Government as to the need and desirability of having a superport in a given area, and I doubt very seriously, under the administration bill, whether there is any real risk that the Federal Government would override a State in a case where the State had strong and firmly expressed purposes against such a port.

Mr. HANRAHAN. I am glad you pointed out that clarification.

Mr. HOWARD. Thank you.

Then I presume that the passage of H.R. 2020 would not change the Federal Government's policy concerning its relationships to the States and deepwater ports, following your answer to the gentleman from Illinois.

Mr. COURT. Well, I think that it might, Mr. Chairman.

Mr. HOWARD. You might have a case where you might have to override a State veto?

Mr. COURT. It does change the legal nature.

Mr. HOWARD. Yes. It would make what the Federal Government says it will do or not do, it must legally do or not do, as I understand it.

Mr. COURT. Well, as I understand the situation, it might lead to a State which was not really involved in vetoing the action which a——

Mr. HOWARD. The legislation, I believe, gives much of the determination for the accuracy of that objection to the Department as to

the Administrator of EPA. Would you be afraid of that determination being made by EPA?

Mr. COURT. We appreciate the vote of confidence——

Mr. HOWARD. Thanks, but no thanks? [Laughter.]

Do you feel that should this become law, that most State legislatures would behave in a responsible manner concerning the powers that they have in the national interest, or do you have some fears that perhaps they might be irresponsible?

Mr. COURT. Well, I think one could always have fears that they would be irresponsible, but I would hope and predict that they would be responsible.

Mr. HOWARD. Counsel.

Mr. D'AMICO. Mr. Court, if I interpret your testimony correctly, I understand that you are proposing that H.R. 7501 would, in effect, permit any State which did not desire a deepwater port off its shores not to have one. Is that correct?

Mr. COURT. That is not, I think, explicitly included in the legislation. What I was expressing was the intent of the administration, the intent of the legislation to provide a process of consultation between the Secretary of the Interior and any affected Governor, or Governor of any affected State.

Mr. D'AMICO. Then it is not your interpretation of H.R. 7501 that it would have the effect of honoring a position by a State that does not desire a deepwater port off its shore. Is that correct?

Mr. COURT. Well, strictly speaking, as Mr. Train pointed out, the States would not have that legal authority.

Mr. D'AMICO. Thank you, sir.

Mr. HOWARD. Thank you, Mr. Court. We certainly appreciate your appearance. We appreciate your waiting for 2 days, and there is information that the committee will be receiving from you which will be a part of the record, and we hope we can have the benefit of your expertise should the committee need it during the further consideration of this legislation.

Mr. COURT. Thank you.

Mr. HOWARD. Thank you very much.

The subcommittee will stand adjourned until 2 p.m.

[Whereupon, at 12:15 p.m., the subcommittee was recessed, to reconvene at 2 p.m., the same day.]

AFTERNOON SESSION

[Whereupon, at 2:05 p.m., the subcommittee reconvened, Hon. James J. Howard, chairman of the subcommittee, presiding.]

Mr. HOWARD. The Subcommittee on Energy will come to order.

Continuing our testimony in consideration of the bill, H.R. 2020 and related bills, the first witness this afternoon is Dr. John E. Moeller, representing the AMERAPORT Corp., State of Alabama.

Dr. Moeller, I wish to thank you for appearing here before the subcommittee, and note that you have some expertise in the area of deepwater ports.

Without objection, the statement of the AMERAPORT Corp. will appear at this point in the record.

[The statement referred to follows:]

THE AMERAPORT CORP.

AMERAPORT—A NATIONAL CONCEPT

The ideal site for a superport is best determined from the point of view of the greatest national utility. The economic well-being of the individual states and their regions is reflected in the prosperity of the Nation. A superport located in the Eastern Gulf of Mexico would have regional and national utility by virtue of serving the energy needs of, and having a significant positive economic impact on, the coastal and a multitude of interior states. With these ideas in mind, AMERAPORT, a superport to serve the Nation, was conceived.

From the AMERAPORT concept came the AMERAPORT Corporation, a privately supported Alabama group, and the AMERAPORT Council, a tri-state pact joining Alabama, Mississippi, and Tennessee which other states may join and support. It is the purpose of both the Corporation and the Council to express the view that an Eastern Gulf location for a superport off the Alabama-Mississippi coast best fulfills the AMERAPORT concept.

To support the expression of this view, the AMERAPORT Council commissioned a preliminary study which considered the environment, air and water currents, land features, major consumer areas, pipeline distribution systems, consumer interest, industrial development and national security. This study concluded that "taking all the data available into consideration * * * a superport location off the coastline of Alabama-Mississippi appears to be the most desirable site for the Gulf Area." The completed preliminary study was submitted to the Corps of Engineers and became the basis for its recognition of the Alabama-Mississippi superport site which up to that time had not been so recognized.

Subsequent to this recognition, the AMERAPORT Corporation contracted with Battelle Columbus Laboratories to undertake a comprehensive analysis of the factors considered in the preliminary study and any other factors considered pertinent to locating a superport off the Alabama-Mississippi coast. This analysis is scheduled for completion in late June and findings thus far strongly support the conclusions reached in the preliminary study.

AMERAPORT Corporation, from knowledge gained through its various studies and activities, has reached an important conclusion concerning a state's decision to locate a superport off its coast. It concludes that every state should be able to determine its own destiny in this regard because the state is in the unique position of being best able to weigh all factors and their impacts.

The Nation must have a superport in the Eastern Gulf because this location will serve the greatest need and benefit the greatest number. Both the AMERAPORT Council and AMERAPORT Corporation will continue to express this view.

Mr. HOWARD. You may proceed with your testimony as you wish, Dr. Moeller.

STATEMENT OF DR. JOHN E. MOELLER, EXECUTIVE DIRECTOR, AMERAPORT CORP., STATE OF ALABAMA

Dr. MOELLER. Thank you, Mr. Chairman, and distinguished committee members.

It is indeed a privilege to appear before this committee. I enjoy the privilege of representing both the States of Alabama and Mississippi at this hearing as a member of the AMERAPORT Council, which is a bistate organization formed by executive order of the Governors of Alabama and Mississippi.

The AMERAPORT concept is best described as a national concept. And in making a statement to this distinguished committee, we have attempted to confine our testimony to the issues; that is H.R. 2020, although I am prepared to answer questions on the east gulf development of a deepwater terminal.

We view the AMERAPORT deepwater terminal as one of the solutions to the energy crisis. We do not consider ourselves as competitors with Louisiana or Texas, but see ourselves as partners in presenting a

unified approach to the Gulf of Mexico concept and the Gulf of Mexico opportunities for deepwater terminals.

Studies have been commissioned by AMERAPORT, which considered the environment, air, water currents, land features, major consumer areas, pipeline distribution systems, consumer interests, industrial development, and national security.

This study concluded that taking all of the data available into consideration, a superport located off the coastline of Alabama-Mississippi appears to be the most desirable site for the gulf area. This completed study was submitted to the Corps of Engineers and became a basis for its recognition for the east gulf effort.

I would just like to merely summarize my statement which does represent the viewpoints of both States, and that is that every State should be able to determine its own destiny in regards to deepwater terminals, because the State is in the unique position of being best able to weigh all of the factors and their impacts and, to this end, Mr. Chairman, we have commissioned studies to determine whether or not a deepwater terminal located off the Alabama-Mississippi coast was, in fact, a feasible entity.

I would like to describe briefly the approach that we observed in this area.

The program consisted of eight related research tasks which were to develop the information required to assess the most suitable type of port facility as well as the social, economic, and environmental impact of this kind of facility on the Alabama-Mississippi region.

These tasks consisted of an assessment of alternative configurations, that is, the type of facility best suited—monobuoy, island, or dredging.

We concluded that the single point mooring system or monobuoy was the most feasible.

We have identified the primary and secondary facility needs, and we have a comparative analysis of transportation costs. And we have the comparisons for the alternative configurations.

We have assessed the social and economic impacts of these configurations.

We have identified the onland environmental impacts, and we have identified the offshore environmental impacts.

These identifications have been made by reputable research organizations, the Battelle-Columbus Laboratories have done the onshore environmental assessments; the Alabama Marine Sciences and Environmental Consortium, consisting of 17 universities, have done the offshore environmental studies. They have cooperated with the research groups from the State of Mississippi, primarily with the Gulf Coast Research Institute, and the conclusions have been made that a deepwater terminal located approximately 25 miles due south of Petit Bois Island, which is approximately a point equally distant between Pascagoula and Mobile, would be economically feasible and environmentally defensible.

Mr. Chairman, I have a world of material here.

As I say, I have attempted to confine my testimony to the bill before your particular committee. We do support it. We support it from both States' viewpoints for the reasons that we have stated in the printed copy of the statement which we have submitted to your committee.

I have furnished to your committee, via your counsel, copies of the environmental assessments of the offshore studies, together with some of the legal implications of the international legal assessments of a deepwater terminal, and an economic assessment as to the economic impact of this deepwater terminal on the onshore side in terms of jobs, construction, added value, total value added to the economy of the local region.

These statements—these figures, Mr. Chairman, were developed by concentrated research by the Battelle-Columbus Laboratories. They are not an in-house work.

Mr. HOWARD. Thank you, Doctor.

Doctor, I will read the title of the material that you have submitted before each member of the subcommittee, and we will make them part of the committee file, without objection.

They are "AMERAPORT Interim Study by the AMERAPORT Research Team, Montgomery, Alabama." Second is the "AMERAPORT Corporation Progress Report," dated June 1, 1973, and the "AMERAPORT Council, Alabama-Mississippi Superport Preliminary Study."

[Items referred to retained in subcommittee file.]

Dr. MOELLER. Thank you, Mr. Chairman.

Mr. HOWARD. Thank you very much, Dr. Moeller.

Dr. MOELLER. In discussing the impacts of H.R. 2020, with counsel and from my own view of it, I do not see H.R. 2020 as having any impact as far as the international legal problems are concerned.

I see this bill as being strictly, you might say, a policy directional bill which, I believe, it is intended to be, and that we always recognize that all powers of the States have must—in this regard—must flow from the Federal level.

Mr. D'AMICO. In other words, Dr. Moeller, you see no inconsistency or no thwarting of any international conventions, agreements, or discussions by H.R. 2020?

Dr. MOELLER. No, sir, I do not.

Mr. D'AMICO. I have before me a list of sections, Federal laws, international agreements, et cetera, which were read to the subcommittee by the ranking minority member, Mr. Snyder, and I would ask you to just take a quick look at that.

The material I am referred to is contained in Mr. Snyder's opening remarks.

Dr. MOELLER. Yes, sir.

Mr. D'AMICO. Are you familiar with all those provisions?

Dr. MOELLER. Yes, sir.

Mr. D'AMICO. And having read them, does that, in any way, change the position you stated a moment ago?

Dr. MOELLER. No, sir, it does not.

Mr. D'AMICO. May we inquire, sir, as to your background other than as the representative of AMERAPORT?

Dr. MOELLER. Yes, sir.

I am a professor of international law at the University of Alabama, and I have postdoctoral work in international law from London. I hold a certificate in international law from London, granted with distinction and outstanding merit.

Mr. D'AMICO. And are you a participant in the various international meetings, et cetera?

Dr. MOELLER. I am, sir, and I do plan to be a participant at the Geneva Convention convening in July.

Mr. D'AMICO. Which particular convention is that, sir?

Dr. MOELLER. This is the Convention on the Law of the Sea, at which time the problem of superports, supertankers, pollution controls relative to superports and supertankers will be on the agenda.

Mr. D'AMICO. In other words, Doctor, to kind of summarize the point we are just making, whatever international questions may be involved in superports, deepwater ports is, in your expert opinion, entirely irrelevant to the text and substance, intents and purposes of H.R. 2020; is that correct, sir?

Dr. MOELLER. That is correct, sir.

Mr. D'AMICO. Thank you.

Mr. HOWARD. If you have further testimony before questioning, you may continue.

Dr. MOELLER. No, sir, I do not.

Mr. HOWARD. Well, thank you very much, Doctor. We do have some questions for you, but first I would just like to doublecheck.

You stated that the State leadership of the States of Alabama and Mississippi do support H.R. 2020?

Dr. MOELLER. Yes, sir. And I am authorized to state that.

Mr. HOWARD. Thank you very much. We do have, as a very valuable member of our subcommittee, a Representative from the State of Mississippi, who in the short time he has been in Congress and on the committee, has certainly shown his ability to fulfill obligations in the area of public works and also to more than adequately represent the people in his home district, so the chair will recognize first the gentleman from Mississippi.

Mr. COCHRAN. Thank you very much, Mr. Chairman. I appreciate your kind words.

Dr. Moeller, I want to congratulate you for your testimony before the subcommittee, and I know it will be quite helpful to us, particularly in view of your background in international law and together with your firsthand experience in dealing with some of the practical problems of planning for a superport location.

Both Mississippi and Alabama are highly complimented that you were able to participate in this effort, which means so much to both of our States.

I also would like, Mr. Chairman, to commend the AMERAPORT Council, which is served also from Mississippi by Mr. P. T. Bankston, who, at the request of our Governor Waller, has made an excellent contribution to the joint effort of the AMERAPORT superport task force.

Dr. Moeller, in particular regard to the provisions of H.R. 2020, do you have an opinion as to whether or not that bill, as currently proposed and under consideration by this committee, will have any real effect on the authority of a State to exercise jurisdiction over facilities located in international waters?

Dr. MOELLER. No, Congressman, I do not see H.R. 2020 as conveying on States any authority to regulate commerce in international waters per se.

Mr. COCHRAN. That was really the basis for my question because, as I understand the Constitution, the States do not have that power. And it occurred to me as to whether or not the Congress could, by law or by statute, grant such authority to a State without first having a constitutional amendment or some change made to the Constitution which would permit the Congress to extend such authority to a State.

Dr. MOELLER. Well, Congressman, if I may say so, sir, I really do not see the issue as being that which you have described, with all due respect, sir.

I see H.R. 2020 as a directional piece of legislation which gives the States that may not wish a deepwater terminal the veto power. I do not see it as conferring any jurisdiction over international waters.

I do believe that should the issue arise, that there may be a conflict between State authority or State policy or State jurisdiction and Federal policy. And obviously Federal policy would prevail.

But, under the treaty making powers granted to the executive branch and to the legislative branch, once that decision has been made, then, of course, this does have the force, in effect, of law. And this is a well-established principle. Then it would be binding on the States.

I do not know whether I have answered your question or not, sir, but I do not see any real jurisdictional issue there.

I go back to the case of *Missouri* against *Holland*, and we can go from there.

Mr. COCHRAN. On another subject, to sum up the preliminary study that has been made by the AMERAPORT Council, as well as the progress report under date of June 1, which you kindly submitted for the committee's review, is it not true that the information that has been assessed by the council so far has indicated clearly that a superport could be established off the Mississippi-Alabama coast that would provide a very needed means for accelerating our importation of crude oil and, at the same time, preserve the environmental advantage that we think we have in the Gulf coast area at this point?

Dr. MOELLER. Yes, sir, this is true.

Before we ever became a strong advocate of the deepwater terminal, we undertook—I say "we," the AMERAPORT Council, a bistate effort—we undertook an environmental assessment of not one single point but many points off the Alabama-Mississippi coastline.

At the 20-fathom mark, 20-fathom line, there is a shelf that runs along the coast there, and these studies were conducted by eminent marine biologists. Soundings were made at the bottom, core drillings were made. I am not familiar with all of their methodology, but they did trace the impact or effect of an oil spill, should it happen along this area, and they found that any oil spill in the recommended area would have a tendency to move along the coast rather than toward the beach. And the freshwater pressures that are present there, there would be tendency to hold it offshore so that the recreational activities, the estuarine areas would be afforded the maximum amount of protection.

Mr. COCHRAN. Very good.

Again I want to thank you very much and very sincerely for coming before the committee today and sharing with us the results of your studies and the work you personally have done and the AMERAPORT Council has done in Alabama and Mississippi.

Thank you very much.

Dr. MOELLER. Thank you, sir.

Mr. HOWARD. Thank you.

The Chair recognizes counsel, Mr. D'Amico.

Mr. D'AMICO. Dr. Moeller, yesterday you and I and Mr. Edler of our staff had a conversation regarding the respective cost of providing fuel for the Northeast section of our country, and we compared relative costs vis-a-vis, crude oil imports from the Mideast to Texas, Mississippi, and Alabama. Would you review our conversation for our members, please?

Mr. HOWARD. Dr. Moeller, would you consider your review for approximately 10 or 15 minutes when the committee will come back into session following the completion of the quorum call now in progress?

Dr. MOELLER. Yes, sir.

Mr. HOWARD. The subcommittee will stand in recess for approximately 15 minutes.

[Short recess.]

Mr. HOWARD. The Subcommittee on Energy will please come to order.

The witness is Dr. John E. Moeller for the AMERAPORT Council, State of Alabama, and when the subcommittee went into recess, counsel had asked you, Dr. Moeller, concerning conversations on prices and difference in price in having oil brought from various locations, either in the gulf or east coast of the United States.

Dr. MOELLER. Yes, sir.

Mr. HOWARD. Mr. D'Amico.

Mr. D'AMICO. Would you continue, sir?

Dr. MOELLER. Yes, sir.

The data that I am about to testify to is contained in a draft report on the economic aspects of AMERAPORT development by Battelle-Columbus Laboratories, dated June 11, 1973.

This particularly phase, a part of the report, deals with the transportation cost of finished products to the east coast, using Linden, N.J., as a terminus for a pipeline, and Philadelphia, Pa., as a terminus for tanker operations.

Using a 50–45 mix or percentage, as far as transportation vis-a-vis pipeline or tanker, the weighted average resulted in the following figures:

On the transportation of crude from the Middle East, using an Alabama-Mississippi location; or Louisiana location; and a Texas location, the shipping for crude is 90 cents, Alabama; 91 cents, Louisiana; 92 cents, Texas.

The port transfer charges, 8 cents, Alabama; 8 cents, Louisiana; 11 cents, Texas.

The crude distribution cost, that is, the cost it would take to get it from the tank farms, pipelines, to the refineries, 1 cent, Alabama; 2 cents, Louisiana; and 2 cents, Texas.

Product distribution to either Philadelphia or Linden, N.J., depending upon the mode of transportation, and these are weighted figures, 37 cents, Alabama; 41 cents, Louisiana; 45 cents, Texas.

So, the increment that we are really talking about, sir, is 37 cents a barrel for distribution of finished products to the east coast from

Alabama, and 41 cents a barrel from Louisiana, and 45 cents a barrel from Texas.

This is just very elementary, because it just represents the differences in distances. The major market, of course, being the Southeast and the east coast, the shorter distance you have to transport a product, why the less it is going to cost you.

These figures do include the cost of new pipelines. In other words, they are not based on current tariffs, but they are based on estimated construction costs of a pipeline with a throughput figure that had some variables in it. But they exercised these variables on a computer, and this is what they came up with.

Mr. D'AMICO. So, to rephrase what you just stated in lay terms, Dr. Moeller, it would seem that if a consumer of gasoline in New York or New Jersey or Connecticut or Virginia were to buy a gallon of gas, the cost to him would be less than 1 cent more for that 1 gallon, if that gas were the finished product of crude that had been imported from the Middle East through Alabama, and then transshipped to the Northeast.

Is that correct, sir?

Dr. MOELLER. Yes, sir, it is correct.

Mr. D'AMICO. So what we are talking about is the cost of less than 1 cent per gallon as a result of the noncreation of deepwater ports off the North Alantic coast; is that right, sir?

Dr. MOELLER. Yes, sir, that is approximately correct.

Mr. HOWARD. Doctor, you stated that that would include the cost of construction of pipelines to deliver that?

Dr. MOELLER. Yes, sir, because the current pipelines, Mr. Chairman, are at maximum capacity. And in order to meet the increased demand, new pipelines will have to be constructed.

And these figures do include cost of pipeline construction.

Mr. HOWARD. Some other questions and discussion that we have had before the subcommittee about the possibility, if deepwater ports are not located right off the greatly populated New York, New Jersey, Pacific coast, Delaware coast, that we might double the cost of gasoline.

Instead of 43 cents now, it might be 86 cents.

Does that seem to be valid?

From your testimony, in other words, if they come in through the gulf somewhere——

Dr. MOELLER. No, sir.

If they come in through the gulf—the only strong differences that you would have, in my opinion, Mr. Chairman, is any fluctuations in the price of crude from the Middle East, but we are importing crude from the Middle East now.

We are importing maybe somewhere between 3 million and 4 million barrels a day. These figures are based on National Petroleum Council's estimates of importation, ranging up to 14.9 million barrels a day in 1980.

Mr. HOWARD. I see.

That would mean, for instance, if H.R. 2020 were to become law, and many, if not all, the States along the east coast were to pass legislation against deepwater ports, and H.R. 2020 were to take effect and, alternatively then, that supply for the east coast were to come—

that additional supply were to come through the gulf to Alabama, the net result of cost to the people in these areas for making the decision they have made to protect their areas would be maybe 1 cent a gallon?

Dr. MOELLER. Yes, sir, that is correct.

Mr. D'AMICO. Do your studies reflect whether the gulf area has the capacity to supply the Northeast in the absence of deepwater ports off the Atlantic coast?

Dr. MOELLER. No, sir.

Our studies have looked into this matter, and current refinery capacity is not able to meet current demand. So these figures would require additional refinery capacity within the United States. And, to that end, Mr. D'Amico, I might say that we have undertaken an in-depth study in the AMERAPORT region to identify, describe, and interpret the significance of the probable environmental impacts of the on-land effects of the superport.

It is assumed that the offshore facilities would be fully considered by existing reports.

It is also expected that all or most data necessary to describe existing conditions in detail are available, which they are.

Now, the impacts that have been considered are as follows:

Physical chemical impacts; water quality and quantity; air quality; noise; the ecological impacts; terrestrial impacts; aquatic except in the Gulf of Mexico; and the esthetics.

The assessments of impacts includes two phases, facility construction and facility operation, and two geographical scopes, impacts on the development site, and impacts on the surrounding affected area.

Analysis is raised on no more than two alternative sites and two alternative configurations; that is, based on whether or not it is a single point mooring system or an island.

We eliminated the island, so we concentrated on a superport monobuoy.

The results of these studies are complete now. They have been done again by outside consultants, reputable ecologists, and environmental engineers, sociologists, and we have even gone around, knocking on doors of the people in the affected area, taking a door-to-door survey, if you will, as to the people's attitude toward their deepwater terminal and the attendant development that would result. And we have, by far, a favorable response.

It is almost a unanimous response. It is not unanimous, because I do not think you can get total unanimity on a point such as this, but it is by far—it is an overwhelming response in favor. I will not go into the technical details, but they are available.

And, as I indicated to you yesterday, Mr. D'Amico, I will furnish you the actual report. It runs some 200-odd pages.

Mr. D'AMICO. May that be included as part of the record to be kept in the file, Mr. Chairman?

Mr. HOWARD. Without objection, it will be made part of the committee file.

Dr. MOELLER. Yes, sir; it is in final printing now.

Mr. D'AMICO. In our discussion also yesterday, we discussed briefly the relative costs of a shipment of crude from the Middle East to Alabama vis-a-vis such shipment to Philadelphia or New Jersey, et cetera.

What, in your opinion, would be the differential in cost on that shipment?

Dr. MOELLER. It would be negligible, sir.

We estimate a figure based on known factors for the crude from the Middle East of 90 cents a barrel. We would estimate that for an east coast delivery—Atlantic coast delivery, this would be probably in the neighborhood of 88 cents or 89 cents. There would be 1 cent or 2 cents per barrel advantage, but this would then become fractional as far as gallons are concerned.

Forty-two gallons on the barrel, so we are talking about 2 cents a barrel.

Mr. D'AMICO. Now, the data upon which you based your conclusion regarding the cost of gasoline to the Northeast consumer was derived from what source, sir?

Dr. MOELLER. Well, this was derived from a methodology developed by the Battelle-Columbus Laboratories, using existing data plus independent research through industry and through various Government agencies to establish all of the various cost factors and variables, and to test them.

In other words, there was one variable, more than one configuration used, more than one set of assimilations. And so all of these have been taken into consideration, sir.

Mr. D'AMICO. Would you be kind enough to make that report available to the subcommittee?

Dr. MOELLER. Yes, sir; it will be our pleasure to.

Mr. HOWARD. Without objection, it will be made a part of the committee file.

Mr. D'AMICO. Now, Dr. Moeller, we also discussed yesterday a hypothetical situation in which we supposed that if from a deepwater port created off the coast of a State, a pipeline led from that deepwater port into the State and through that State into another State, the ability of that first State's land use regulations, programs, et cetera, could not, I believe, in your opinion, inhibit or deter the transference of oil from that deepwater port, so that the net effect would be that the port could exist out there despite any land use provisions of that particular State, the reason being that the pipeline itself would become, in effect, a common carrier, and any effort to interfere with it may interfere with interstate commerce.

Is that correct, sir?

Dr. MOELLER. That is correct, sir.

Mr. D'AMICO. Would you want to expand on that just briefly?

Dr. MOELLER. Well, the situation, I believe, Mr. D'Amico, that we discussed was what would be the net legal effect of a pipeline cutting across or going through a coastal State to a terminus outside of that State for processing, and that the pipeline itself would merely be a conduit or a carrier from the deepwater terminal to the ultimate destination, and because this would be a common carrier and because it would, in fact, be in commerce which would be under the exclusive jurisdiction of the Federal Government, then I would say that the land use—I do not think the land use or policies or laws of a particular State could go to defeating this purpose, this intent.

Mr. D'AMICO. I think we said further that the best the State could do, in your learned opinion as a professor, is that they may impose

strict environmental restrictions, but, nevertheless, they would have to be reasonable restrictions.

Dr. MOELLER. That is true.

In other words, the State's police power would not be abrogated in any way as far as the environmental concerns of that State were concerned, but they would have to be reasonable.

In other words, it would have to be possible in meeting reasonable standards to accomplish this transportation means. And it all, I think, turns on what is reasonable. This is a subject of interpretation.

Mr. D'AMICO. And, certainly, it would be interpreted as unreasonable and arbitrary any act whose sole purpose would be to interrupt the flow of that fuel?

Dr. MOELLER. Yes. There would have to be a showing, I believe, Mr. D'Amico, of some relationship between the State's policy and what they were attempting to prohibit.

Mr. D'AMICO. Thank you very much, sir.

Mr. HOWARD. Thank you.

The gentleman from Kentucky.

Mr. SNYDER. Doctor, I am sorry I did not hear the early part of your statement.

I also serve on the House Merchant Marine and Fisheries Committee, and have had considerable concern, as well as some other lawyers, over the right of the Congress of the United States to give a sovereign State of the Union any rights beyond the 3-mile limit that are not specified in the various conventions, some six of them, I think. And we will be involved in the Law of the Sea Convention, and I understand that you addressed yourself to this, and that you are very learned in this area.

And I understand that you are in disagreement with those who believe there is some serious question in this regard.

Dr. MOELLER. Yes, sir, I am. Basically because I do not see H.R. 2020 as conferring any jurisdiction. I see H.R. 2020 more as a policy statement, as an internal or domestic problem, and as not affecting our relationships with other nations.

Mr. SNYDER. Of course, that is based on whatever you might conjure to mind as to what will be developed in the Law of the Sea Conference.

Dr. MOELLER. That is true.

I think, quite frankly, until such time as the Law of the Sea Conference is finalized, that this particular issue may not be fully answered or solved, but just as a matter of opinion, that in my own reading of H.R. 2020, and my knowledge of the existing conventions on the Law of the Sea, and the basic philosophy of domestic versus international law, and the normal tendency to apply domestic law, I do not see any real conflict at this moment.

Again, I do not see H.R. 2020 as a jurisdictional matter. I see it more as a policy matter.

I cannot see where any State jurisdiction is conferred by H.R. 2020, It gives a State certain rights to determine their own destinies, which is an internal matter.

Mr. SNYDER. It does more than that. It gives the State the right to determine a lot of destinies of a lot of other people that need this crude.

You have talked about the cost of bringing the crude up from the gulf to Linden, N.J. Might it be cheaper if we transshipped up from Freeport, Grand Bahama Island, from some supertankers putting in there with a smaller tanker bringing it up?

Dr. MOELLER. We used that example, sir, and the answer was negative. The answer is "No." I do not have the figures before me, but I can get them. We did consider that, though, as an alternative, and these are the figures we came up with.

Mr. SNYDER. We do not want that to happen?

Dr. MOELLER. No, sir; if it does, they would like to see some Jones Act ships working if it does.

Mr. SNYDER. You filed, or brought along the AMERAPORT study?

Dr. MOELLER. Yes, sir.

Mr. SNYDER. You deal with the International Law of the Sea Convention on the Continental Shelf.

When you refer in this treatise with coastal states, are you referring to individual States within the United States, or are you referring to nations that have coastlines?

Dr. MOELLER. Well, as a general rule, when you speak of the coastal states you are talking about the sovereign. You are talking about the United States, with adjacent coastal states with the Gulf of Mexico, such as the Republic of Mexico, and others.

Although sometimes the term "Coastal States" as we are using it, I think, in some of our discussions tends to be confusing.

Mr. SNYDER. But you are talking about sovereign states here; is that correct?

Dr. MOELLER. Yes, sir.

Mr. SNYDER. I do not want you to misinterpret my questions, Doctor. I am for deepwater ports.

I think they should be wherever they ought to be. That is why I have some opposition to H.R. 2020 here.

Dr. MOELLER. Well, we would like to see everybody that wants one get one.

Mr. SNYDER. Well, I would like to see States get them, whether they want them or not, if it will solve our energy problems. We want gasoline and fuel oil.

The dissertation raises some questions—I think, as I read that briefly, just a second ago, as to the right of the United States to do any licensing beyond the 3-mile limit, unless it is with regard to exploration or some other matters, or short of a determination of whatever agreement we might reach under the Law of the Sea Conference.

Do you agree with that? Is that what it says?

Dr. MOELLER. Well, as you know, Congressman——

Mr. SNYDER. Let me ask you first, did you write that section?

Dr. MOELLER. Yes, sir, I wrote it.

Mr. SNYDER. I assumed you did.

Dr. MOELLER. Yes, sir, I wrote it.

Mr. SNYDER. Well, tell me what that means.

Dr. MOELLER. I think we have to go back to the preceding page, sir——

Mr. SNYDER. All right.

Dr. MOELLER [continuing]. And take this in its total context.

We have the problem of whether or not there is or is not physical contact with the shelf. If there is physical contact with the shelf, of course, then there is the onus of exercising jurisdiction over there.

However, when this contact with the shelf is made for purposes of other than a permanent structure up there, or is used for drilling or exploration, under the jurisdiction, this is permissible.

Now, when I was writing this part—when we talk about coastal States' jurisdiction, we are talking about the coastal States of the United States.

Mr. SNYDER. That is sovereign.

Dr. MOELLER. That is right.

Now, we exercise, then the licensing of exploring, whether or not the rights of the coastal States are the jurisdiction and the sovereignty of the coastal State would apply to a structure out there, or to an operation, if you want to call it that, that if there was no physical contact to the shelf.

Mr. SNYDER. Do you differentiate, Doctor, between the structure—I am thinking of a deep seaport that might have some artificial built up island, as opposed to some buoy type of thing.

Dr. MOELLER. I think you would have some real problems, Congressman, with an island out there. I would be afraid of it, myself.

I would be afraid it might be considered as an exercise in sovereignty.

I think that there are ways and means to——

Mr. SNYDER. That is barring some resolution——

Dr. MOELLER. Yes, sir. I think there are ways and means, of course, by analogy, utilizing a monobuoy system out there that would not be an exercise of sovereignty.

Mr. SNYDER. I think we have the technology for that.

Dr. MOELLER. The technology is there, yes, sir. So I would suggest that this should be read in the light of what an island would create, where there is physical contact with the shelf. It creates a very serious problem.

Mr. SNYDER. Do you anticipate anything in particular with your vast knowledge in this area as to what determinations are going to be made next May at the Law of the Sea Conference?

Dr. MOELLER. I look, and again——

Mr. SNYDER. It has to be speculative.

Dr. MOELLER. And it is speculative, sir, but this problem is not unique to the United States, and I think there is a general desire on the part of the nations who are signatories to the Continental Shelf, and who also will be participating in the Geneva conventions, to come up with a solution, because they are having legal problems in the North Sea.

They have the escalation in the North Sea, and the development of some monobuoys, and some superports by Norwegians is going to require some kind of resolution.

You have monobuoys in Singapore, you have them off of Australia, as well as Africa.

I think that there is going to have to be a general willingness to negotiate and resolve the question.

Mr. SNYDER. These do constitute some sort of an obstruction or hazard to navigation on the high seas, do they not?

Dr. MOELLER. Well, even an overturned rowboat is that, I understand, Congressman.

Mr. SNYDER. We are signatories to international treaties to deal with that subject?

Dr. MOELLER. Yes, sir, we are. And we have a responsibility to safeguard freedom of navigation, and not unduly and unnecessarily impede freedom of navigation.

Mr. SNYDER. Do you anticipate that there might be some joint licensing on the high seas off the coasts of various countries by several sovereign states, rather than individual states?

Dr. MOELLER. I do not think I can answer that question, sir. I really had not thought about it. It is a good question, but I would not want to——

Mr. SNYDER. I think it, first, is like anything else we talk about, is highly speculative in any regard, but if in fact such did occur, then we passed H.R. 2020, which gave an individual State within our States a veto of such licensing off its coast, might not that State be treating with a foreign nation in violation of the Constitution of the United States?

Dr. MOELLER. Well, I would suggest this, Congressman, and that is that should it occur as you have just described, I would presume that by the normal lines of priorities and preferences that the State law would have been preempted.

Mr. SNYDER. I see.

And this would be an exercise in futility, would it not?

Dr. MOELLER. Well, you posed the hypothetical, sir, of several sovereign states, and then a State of the United States, but again, we were not looking to that, but my answer was academic.

It has happened, I would presume that the State law would be preempted.

Mr. SNYDER. I see.

Do you not feel like, as a practical matter, that there are enough safeguards for the States, now speaking of the individual States of the United States, who do not want deepwater ports off their coasts, that they are not going to have them there without the enactment of veto type legislation to which the Coastal Zoning Management Act of last year, which unfortunately is unfunded at the present time, the various sovereign zoning laws of the individual States, again speaking of States in the terminology we are now using, the fact that free enterprise is not going to dump a half a million dollars off the shore of a State that is not going to be cooperative and does not want it, the fact that the licensing authority of any legislation that we pass, be it under Interior or Commerce, or somebody else, bound to consider the individual desires and wishes of the States.

Do you not think there are enough safeguards without putting this roadblock in front of the discretion of the deepwater ports as to where they can rightfully and economically go?

Dr. MOELLER. Well, literally, Congressman, there are many, many safeguards.

However, I am sure that the advocates of H.R. 2020 have their answer, and I see nothing wrong with them.

I do not see the conflict and this, again, is an exercise of State policy and State power, and not going to the item of States' rights, but going

to the idea of the States being best able to determine themselves, rather than having the will forced upon them would be in keeping with our general practices.

Mr. SNYDER. It is also true, Doctor, that if enough of these eastern seaport States exercise the vetoes, should H.R. 2020 become law, the deepwater port business would be a little bit better down in your part of the country?

Dr. MOELLER. Well, it would not hurt it.

Mr. SNYDER. I understand.

Thank you very much.

Mr. HOWARD. Thank you, Mr. Snyder.

I want to thank you for your testimony, Dr. Moeller.

There have been several questions about H.R. 2020, and what it will do, one being the fact that there are presently safeguards in legislation, in anticipated and proposed legislation by the administration, and then others, which stated that the Federal Government has the responsibility of consulting with the Governor and that is about as far as it goes.

We did have Mr. Russell Train here yesterday, and he stated that without H.R. 2020, the Federal Government could legally place a deepwater port off the shores of the coast of a State that had passed legislation prohibiting them as far as its jurisdiction goes.

Mr. Train's answer was yes. The question was, does the administration want to keep that option, of being able to override the State's wishes and legislative intent, and Mr. Train's answer was yes, so that would be some of the reason the advocates of H.R. 2020 feel that H.R. 2020 is necessary.

One of the possibly final arguments against H.R. 2020, which many people, including yourself, feel does not apply would be that the State would have jurisdiction beyond its 3-mile limit, or might interfere with this Nation's ability to negotiate internationally in laws of the high seas, and such things, and I believe that you had stated that if such a situation were to exist, that H.R. 2020 would not in any way interfere with the international negotiations or agreements of the United States, because those would preempt H.R. 2020.

And, therefore, H.R. 2020 would certainly do no harm to our international agreements.

Dr. MOELLER. That is my considered judgment, Mr. Chairman.

Mr. HOWARD. That is what I interpreted it as being.

We certainly wish to thank you for your testimony here today, Dr. Moeller.

We appreciate your information, and the information you have given us concerning studies that have been made in the Alabama-Mississippi area, and I am sure that they will certainly benefit the subcommittee in its deliberations on this legislation.

Thank you very much.

Dr. MOELLER. Thank you, Mr. Chairman.

Mr. HOWARD. Our next witness for the subcommittee today is Dr. Lubomyr Kurylko, associate professor of mechanical engineering, Stevens Institute of Technology, Hoboken, N.J.

The Chair would like to state that it does hope to hear both of the remaining witnesses, one coming from New Jersey, and one being here in the District.

We feel, if we are unable to do that, it may be a shorter trip for the Maritime Administration.

Dr. Kurylko, welcome to the subcommittee. We are very happy to have the benefit of your expertise concerning H.R. 2020.

We do have a copy of your statement, and without objection it will be made a part of the record at this point. Please commence your testimony as you wish.

[The statement referred to follows:]

STATEMENT OF DR. LUBOMYR KURYLKO, ASSOCIATE PROFESSOR OF MECHANICAL ENGINEERING, STEVENS INSTITUTE OF TECHNOLOGY, HOBOKEN, N.J.

SUMMARY

H.R. 2020 and its companion bill in the Senate, if passed, will make it almost impossible to build economically justified transshipment facilities off the coast of the United States. The main objection to superports is the desirability to preserve the present environment of the sea and of the coastal areas. This penalty to the environment, if indeed it exists, is very small to pay, if we consider that the economic well being of all the citizens of the United States is at stake.

We need to import crude oil because our domestic supplies are shrinking quite rapidly. We must import the crude oil at the lowest possible cost. We must ship it in American flag vessels. We must refine it in the United States.

In order to keep our balance of payments problem to a minimum; our economy alive; our industry competitive in the world market; and our labor force employed.

INTRODUCTION

The proposed bill restricts the powers of the Federal government in connection with offshore port development.

The bill, if passed, would recognize the right of States to prohibit construction activities within indefinite extensions of their boundaries seaward.

The bill, if passed, would give the veto powers to certain states bordering the seas, to regulate the construction of offshore transshipment facilities in other States, if the Administrator of the Environmental Protection Agency determines that the waters within the indefinite extensions of these certain States may be "affected".

It would appear that this bill is an attempt to safeguard the water quality off the coast of states bordering the sea. But it is far more than that. It gives one State, one governor, the power to determine the future of port development at sea near another state, indeed possibly on the whole Eastern seacoast.

This bill, and a similar bill in the Senate, will make it pretty much impossible to build economic transportation facilities for bulk cargoes in the United States. The party suffering most from the passage of this bill will not be Cape May or Cumberland County. It will be the whole state, the whole country.

PRESENT SHIPPING CONDITIONS AND U.S. HARBOR CAPACITIES

Tankers

Currently, with few exceptions, United States ports cannot accommodate ships of a size greater than 65,000 dwt fully loaded. The largest ships in service are now 477,000 dwt tankers. Ships of 700,000 dwt are on order.

To be sure, there are tankers of 80,000 dwt capacity that bring their cargoes to ports where the greatest demands for imported petroleum products and for crude oil exist, such as New York and Philadelphia. These ships, however, must first unload part of their cargo while anchored at sea, and then they proceed to their berth. The transshipments at sea are conducted mainly to take advantage of the economies inherent in the use of larger size vessels and in order to reduce the traffic of ships in the harbors. No one regulates the transshipment of bulk cargo a few miles off the coast of New Jersey, New York, and Delaware. The usual procedure is that the shipping agent notifies the Coast Guard 24 hours in advance that a certain ship will be at anchor at a certain point and that it will be transshipping its cargo at sea.

De facto, therefore, we do have daily transshipments of bulk cargoes off the coast of various states without any permission from the states, from the U.S. Coast Guard or anyone else.

The United States Congress has authorized subsidies for the building of many tankers in the 100,000 to 285,000 dwt class. Although these large ships will soon be at sea, there are no ports on the East Coast of the United States where these ships will be able to directly discharge their cargoes for processing in U.S. refineries. Again, some of the ships, by transshipment of cargo at sea will enter U.S. harbors, others, if this bill is passed, will never sail into U.S. ports.

LNG Tankers

The other ships that present unique problems are the LNG tankers. These ships are in the 66,000 dwt category and carry about 4.5 million cubic feet of liquefied natural gas. They will be able to enter the unloading docks in the congested ports of the East Coast.

The movement of these 895-foot long ships, due to their highly hazardous cargoes, will be subjected to strict control by the Coast Guard which does have special regulations for such cargoes. Any accident in the harbor or during the unloading of LNG could have most disastrous effects on many square miles of sea and land. Because of this, each ship, as it enters the port, will be given special instructions depending on tides, wind and other conditions existing in the harbor at that time.

Again, with the help of the shipbuilding subsidy by the U.S. Congress, six of these super LNG tankers will soon be in service. These large LNG tankers are scheduled to go into service beginning fall 1974. The unloading procedure for these ships has not been published.

ENERGY DEMAND CONSIDERATION AND SHIPMENT COSTS

Due to the petroleum product shortage in the United States, the demand for the importation of crude oil and of petroleum products is now at an all time high. After Japan we are the second largest oil importing country. We now import more than 240 million gallons daily of foreign crude oil and petroleum products (about 5.8 million barrels daily) into the United States. The cost of importing this energy source is close to $10 billion and constitutes a huge balance of payment problem.

By 1980, the throughout percent increase in the movement of crude oil and petroleum products is expected to rise 460% in Philadelphia, 200% in New York, 83% in Boston, 264% in Chesapeake Bay, 117% in Hampton Roads, 142% in Baltimore, etc. over the 1969 figure.

The tanker rates for the shipment of crude oil are also at an all time high. The spot rate for the shipment of crude oil from the Persian Gulf to New York on June 12, 1973, using an average size tanker entering the harbor, was 275% of the flat rate, or about 8.5¢ per gallon. Note the price of light Arabian crude oil on the Persian Gulf was on June 12, 1973 about 7¢ per gallon. The prices are probably higher today.

There is only one way to keep the price of refined products down in the United States, namely to ship the cargoes in very large tankers, using American ships and American crews.

BUILDING OF OFFSHORE U.S. SUPERPORTS WHERE NEEDED

Authorize and accelerate the construction of at least five large transshipment facilities on the East, Gulf and West Coasts. Construct these facilities, as close as it is economically, physically and safety-wise possible, to the existing petroleum oil refining areas, the possible new refining areas, the present and future steel and aluminum mills, and near major rail and barge shipping areas.

Benefits of such action

1. The savings in long haul shipment costs will be at least 2¢ per gallon and possibly 6¢ per gallon for crude oil and petroleum products and at least $6.00 per ton for dry cargo, such as coal, iron ore, grains, bauxite, etc.

2. The refining of the crude oil, employing American labor and using American-built equipment, will result in the spending of the refiners' spread (about 2¢ per gallon) in the United States. Chemical industry will have a local supply of basic petrochemicals, needed for everything from plastics to fertilizers.

3. Movement of refined products from refineries to demand centers in American vessels and pipelines will result in increased employment of American merchant marine sailors and workers, and will contribute to a lower balance of payment deficit.

4. Reduced harbor traffic in ports will result in cleaner ports and fewer accidents.

5. This action allows a safer handling in smaller quantities of highly hazardous cargoes, namely, liquefied natural gas (LNG) and liquefied petroleum gas (LPG).

6. United States governmental agencies will have the power to oversee and enforce regulations dealing with pollution and the safety of the seas and of the coastal areas.

7. Economic growth of the country will not be hampered by the lack of fuel, as long as crude oil is available overseas.

8. Assures a supply of refined products needed for national security.

Costs of Such Action

1. The seas and the landscapes of about 50 miles of the pastoral coastal areas will be changed and will not be preserved for the generations to come.

2. This decision will result in dredging and pipe laying at the sea floor, disrupting the ecology of certain offshore areas, and will disrupt the environment at land and sea.

3. This decision will involve the expenditures of up to $5 billion, which will be recovered by about 1980.

4. This decision will result in increased economic activity in industrialized areas where refineries are now located and will be located in the near future.

ALTERNATE SOLUTIONS TO ECONOMIC TRANSSHIPMENT PORTS NEAR THE U.S. COAST

A. Don't Build Superports in the United States

By passing the proposed H.R. 2020 it will be possible to prevent or to seriously delay the construction of large transshipment facilities on the Eastern Coast of the United States and possibly on the Gulf and West Coast, as well.

Benefits of Such Action

Our shores, especially in the remote and unpopulated areas, will remain in their natural and industry-unaffected state. Beautiful sea and landscapes will be unaffected for hundreds of years to come.

Costs of Such Action

1. The shortage and high cost of fuel, caused by high shipment costs and balance of payment problems, will prevent most people from visiting the beautiful land and seascape. Only the rich will be able to afford the visits.

2. Lack and the high cost of fuel will cause a serious economic depression in the country, forcing most people to work the land in order to survive; it will force a curtailment of many social services and benefits in the country; it will dislocate millions of people who will look for other jobs to which they can walk from their habitats.

B. *Build Superports in Foreign Countries*

Currently, there are three deepwater discharge oil terminals on the Canadian East Coast, namely Point Tupper, Nova Scotia, Come-by-Chance, Newfoundland and St. John, New Brunswick. On the other side of the Atlantic, off the coast of Ireland, there is a transshipment facility in Bantry Bay. One transshipment port is being constructed in the Bahamas, while serious considerations are being given to building a transshipment facility near the Verde Islands off the African coast and at other locations.

Benefits of Such Action

1. No pollution off the immediate coast of the United States.

2. Pastoral sea and landscapes are preserved.

Costs of Such Action

1. There will be heavy movement of small ships in and out of the harbors to accommodate the growth in imported crude oil and petroleum product demand.

2. There will be heavy shipping cost penalties because most ships entering the harbors will be small and of foreign registry. This situation exists now.

3. The transshipment of cargoes in open seas, in bays, etc. will increase, because even the intermediate size tankers cannot enter our ports fully loaded. This transshipment at sea is more dangerous to the environment and the ship than the transfer to cargo behind a seawall.

4. Refineries will still have to be constructed to process the crude either in the United States or close to transshipment ports. Most likely refineries will be built overseas.

5. The balance of payments problem now will not only exist between the United States and the oil exporting countries, but will include the crude oil refining countries, and crude oil transshipment countries, as well.

6. Chemical companies will have to import the raw materials for the petrochemicals from overseas.

7. American labor will not have the additional jobs associated with the increased activities in the production and the sea transportation of petroleum products.

STATEMENT OF DR. LUBOMYR KURYLKO, ASSOCIATE PROFESSOR OF MECHANICAL ENGINEERING, STEVENS INSTITUTE OF TECHNOLOGY, HOBOKEN, N.J.

Dr. KURYLKO. Thank you.

We believe that H.R. 2020, if passed, and if a complementary bill in the Senate is passed, it is going to make it almost impossible to build a port—a superport, an economically justifiable superport in the eastern part of the United States.

I also believe that should Florida, for example, object and pass a law, it may be impossible to build a superport in the Gulf Coast States, as well.

I believe that there is a slight penalty, there is an uncertainty about the requirement, and I believe that these have to yield, if at all they exist, in order that they do have economical supplies of fuel in the Northeastern and the Eastern United States.

Now, our crude oil imports are shrinking—I am sorry. Our crude oil supplies are shrinking rapidly. Our imports are increasing, also rapidly. The numbers you have heard this morning are obsolete. We are now importing approximately 5.8 million barrels of crude oil and petroleum products into the United States.

Numbers on tanker rates in here are also old. We are now paying fantastic prices for importing crude oil and oil products.

I was checking on some recent ships reaching Ras Tanura, where you gentlemen were, and there is one leaving for a refinery in New Jersey that left on May 30. It is a 200-percent flat rate, which means that we are paying about the same amount for transportation as we are paying for the crude oil in the Persian Gulf. It is coming on a tanker, 39,500 deadweight tons.

Another ship leaving for Houston, similar rate, 200 percent flat rate, to bring crude oil into Linden, again 275 percent flat rate.

That is, the cost of bringing crude and petroleum products is running around 8 or 9 cents a gallon versus cost of the crude oil of about 7 cents per gallon in the Persian Gulf, and this is all because we are not bringing in large vessels of crude oil and refined products into the United States.

I believe that the most economical way to solve our balance-of-payment problems and energy problems is to bring crude oils in large amounts in large vessels, in American vessels, so there is the minimum of transshipment, and this means bringing oil into areas where the demand is greatest.

Now, I believe that we also should think about refining this crude oil in the United States, because we need the byproducts in refinery operations for our chemical industry.

The chemical industry in the Delaware River needs cheap ethylene for making plastics. It needs cheap methanol for making polyester fibers, et cetera.

All of these things are pointing to the fact that what we should do is try to bring these products to the areas of demand, because these areas have the slowest economic growth in the United States, and these are areas which should benefit from the energy that can be imported.

Now, I have studied this problem for about a 2- or 3-week period, and I spent about a week preparing this testimony.

I would like to point out that we do have transshipment right now. Many vessels, more than 50,000 to 80,000 deadweight tons, pull up off the New York harbor—pull off into the Delaware River, and in the deep channel, they throw the anchor in. They make contact with the floor of the sea, and they transfer cargo up there off the coast. They do not get a permit from anyone, not from any State, not from the Coast Guard.

The agent just picks up the phone 24 hours before the ship arrives at any place, calls up the harbor, and the Coast Guard, and says, "Look, I am going to be anchoring at a certain place, and I will be transferring cargo."

And that is what we are doing now quite often. I believe that this transfer of cargo is very hazardous. It is most prone to pollution.

Now, the large ports would prevent this pollution problem from occurring, because here you can transfer hundreds of thousands of barrels of crude oil in a very short time, and very economically.

I believe that the use of large tankers will permit the American maritime industry to be competitive with foreign industry, and it is quite interesting, that Congress has authorized subsidies for large ships that can never come to American ports because they will be too big.

Here we have authorized ships up to 385,000 deadweight tons, and there is no port in the United States to accommodate them. There is Portland, Maine, that can take a vessel of that type, but in Maine, in Portland, that cargo can only be shipped into Montreal refineries. It cannot be shipped to Linden, it cannot be shipped to the Philadelphia area.

I would like to point out, also, that we do have the problem with LNG, with the huge, monstrous tankers, again subsidized by the U.S. Government, to anyone moving into the harbors of New York, unloading cargoes, and I just hate to see one of these ships blowing up, or spilling the cargo and causing a fantastic explosion.

I have looked at the increases that will have to occur in order to accommodate the rise in the demand for petroleum products, and they come up to something like 460 percent an increase in the next 10 or 15 years, or 8 years, rather, in Philadelphia, 200 percent increase in New York, et cetera.

Whatever method of transport of this oil will prove to be most economical for the foreseeable future, for the next 7 years, or so, I believe that these products will be moved by small tankers, and I believe that we should look into this problem.

I believe that this committee should think seriously about actually letting the federally proposed bill go through, because in this manner we will be able to build ports around the eastern coast where these products are needed.

If we fail to do this, we are going to build transshipment facilities overseas, we are going to construct refineries overseas. Plans are being made to build a huge transshipping port in the Portugese Islands off Verda, primarily to serve the eastern coast.

Bahama Island, off the coast of Newfoundland, and other places, and I believe what we will suffer is that all of these cargoes will be brought primarily in foreign-flag vessels. We will be paying money, not only for shipping, but also for crude oil.

All these products, or most of them, will be refined in foreign countries, not in America, and we are going to be paying the refiner's spread in other countries.

I think the reactions that will result from the passage of H.R. 2020 will be to the great detriment in the area of the balance of payments. It will be to the great detriment to the public in the Northeastern United States, where we are going to suffer the major consequences of this energy crisis.

Thank you.

Mr. HOWARD. Thank you very much, Doctor.

We certainly appreciate your testimony. I am certain that everyone will state that almost everything you said is true about the needs, and about the fact that we must import, and we must import in an economically feasible way, and that there may very well be a need for deepwater ports and supertankers serving the energy ports of our Nation.

Concerning the statement that H.R. 2020 would permit the States to work against the fundamental basic national security interests, either in providing energy or balance-of-payments losses to seriously hamper this Nation, do you have in mind any particular State legislatures that you feel would utilize H.R. 2020, should it pass, in such an irresponsible manner?

Dr. KURYLKO. I do not know about State legislatures, but I can tell you about officials who work for environmental protection agencies in these State legislatures.

Mr. HOWARD. I do not know if there is any legislation that is identical to this in the U.S. Senate at the present time, as you indicated there may be.

There are bills of similar nature regarding deepwater ports.

Dr. KURYLKO. Right.

Mr. HOWARD. Those bills, I believe, would give the Governor, on his own say so, or even on a whim, or suggestion, by some of the environmental people who work for him, as you indicated, the right to solely determine deepwater port jurisdictions within their own 3-mile limit, but this one specifically states that it may become operative only through an act of the legislature in making it law, which would be both houses of the legislature, and the signature of the Governor, as well.

So talking about what an Environmental Protection Agency State commissioner may say to a Governor does not apply to H.R. 2020.

Dr. KURYLKO. I read this bill about six or seven times, to make sure I understood it well.

Let me say this. In section 2(b), which deals with a State that has passed a law, and defines, by information from the head of the Environmental Protection Agency, this is the Federal Agency, I presume——

Mr. HOWARD. Yes, that is right.

Dr. KURYLKO (continuing). That its waters may be affected, can then, stop basically the development of a port because then there has to be a mutual agreement between the various parties.

Mr. HOWARD. Suppose the words in that section were changed so that "significantly, adversely, and environmentally affected" were placed in there instead of just the word "affect"? We have been discussing the word "affect" for weeks before the hearings began.

Would that be any better, or do you think that would not be a consideration?

Dr. KURYLKO. Well, I believe that this should not be discussed too much, because all the testimony you have heard today was that the waters will not be as significantly affected.

I do not understand why the concern should be here. I mean, the testimony of the Congressman from the State of Delaware, the Congressman from the State of Louisiana, and others, and you have been to the Persian Gulf, to Ras Tanura, where 400,000 deadweight ton tankers are being loaded, and they are not worried about the problem, so what I am saying is that where it says "waters are affected," and I can say, for example, that here is a tanker carrying 407,000 deadweight tons, carrying crude oil, and the worst tanker spill you can have is that of a tanker breaking up, you can have an oil spill that is several thousand miles long from something like this.

If that happens in the Gulf Stream, my God. The State of New Hampshire has passed the law, coming and objecting to the development of a port in South Carolina.

I look at this from the point of view of citizens of the whole country, people in Pennsylvania, people in New York State, and further up, away from New York City.

Now, here are people who are going to rely on imported oil—they are relying on imported oil.

What is happening is that they are going to pay a tremendous penalty because that oil is going to come in in small tankers, and we are seeing it in the State of Delaware.

When I stopped today at the gasoline station, I could get only 15 gallons. That is all. So I think that this is going to be most severe there.

What will happen is that industries are going to move to States where there are large supplies of energy, which means that you will have companies moving out of the State of New Jersey, the State of Massachusetts, the State of New York, going down to Louisiana, going South. They are doing it now, primarily with the gas shortage.

There are a number of companies who have done this, but we are going to have the same thing happening now for just plain old gasoline.

Mr. HOWARD. In your statement of the case of a 1,000-mile long spill, which, I believe, is beyond what the most ardent environmentalist has postulated, what would happen with supertankers and deepwater ports——

Dr. KURYLKO. Yes.

Mr. HOWARD (continuing). Do you read section 2(b) and the decisionmaking it gives to the Environmental Protection Agency to feel that that would be of enough probability that that kind of a situation would apply under section 2(b)?

Dr. KURYLKO. Well, I am saying——

Mr. HOWARD. I cannot see where that will apply in any way on this bill.

Dr. KURYLKO. What I am saying, it is possible for environmentalists to come up with arguments that take into account every possible type of occurrence, and if you look at the 2½ or 2 million barrels of crude oil sitting inside a tanker, and if you look at that stuff spilled, and if you consider the thickness of oil on this water, with no wind, with the leakage rate, you can come up with a number like this.

And this is what they are doing in the Atomic Energy Commission, all these possibilities being explored.

Now, there a spill is very serious.

Mr. HOWARD. When you say that, the things you are talking about are the kinds of things that State legislatures should certainly take into consideration, should H.R. 2020 become law, because if H.R. 2020 became law tomorrow, there would be no change in any kind of a situation with any State with the exception of the State of Delaware now.

Dr. KURYLKO. Yes.

Mr. HOWARD. Other State legislatures would have to take affirmative action before the responsibility of nonaction by the Federal Government came into play at all.

I can agree with a great deal of what you say. I just do not see where the problem is unless you have a very low regard for the people who serve in our State legislatures, and feel that they are not the people to be given the responsibility for protecting the State's interest.

I think they ought to be the prime ones.

Dr. KURYLKO. I am not saying that they are not looking out for State interests, and I am glad that the Senate of the State of New Jersey recently rejected a law similar to this, but what I am trying to point out is that we have to watch out for putting in laws that are going to stop the planning and development of energy supply centers on the eastern coast of the United States, and as I look at this bill, and especially at this provision, I see this being a problem.

Also I see a problem in that States that are further away from the shore, States like Pennsylvania, States like Kentucky, Ohio, et cetera, will have problems in getting their supplies of petroleum products.

This is a very serious problem.

Mr. HOWARD. States that may have everything to gain, and nothing to lose?

Dr. KURYLKO. That is right.

Mr. HOWARD. Such as New Jersey which has a large resort industry along the seashore.

Doctor, I feel that I could strongly advocate the passage of H.R. 2020 and agree with almost everything you said in your testimony, because I do have the feeling that the State legislatures will certainly work in the national interest, and not thwart, to any great degree, either their neighbors inland, nor the national interest.

The gentleman from New York.

Mr. WALSH. Doctor, this morning we heard testimony from Representatives of the Congress here who represent Delaware, and one of the concerns that he had, and some of the others have is not so much with the deepwater port facility but rather with the results of what the

deepwater ports are going to do to the shoreline, the need for refineries, and other buildings, and these things that will do much more harm and violence to the environment than will the deepwater ports.

Now, will you address yourself to that?

Dr. KURYLKO. Yes.

I have noticed, in reading the testimony of various officials that these are exactly their concern.

I would bring this thing to bear. Without a question, if a port were to be put in a Delaware estuary, there will be some dredging. You will have to dredge inland in order to lay a pipeline.

You are going to have to pump that oil inland. It probably in that area will be sent into the New York metropolitan area and into the Philadelphia refining areas.

Now, I understand the New York refining areas is going to increase to about 20 percent or 40 percent within the next few years. It just has to increase. Otherwise, we are going to be without gas or food.

There are just no tankers to bring in the refined products to New York, so the problem is there. You cannot get it from the gulf coast because Houston is getting the crude oil from the Persian Gulf. Texas is importing, so there is going to be an increased demand in that area.

Now, if Delaware does not want any more refineries, it does not have to have any. It can have its tidewater refinery that is there—getting oil—I guess it is a refinery there—and it can use the crude oil that comes in from a superport.

Now, with regard to the detriment of the rest of the environment, now I have looked at the sea and I can barely see something 8 miles away. I can give you an example.

A man came to court and said, "Look, these ladies in swimming suits were taking off their tops." And the judge said, "Well, how did you see this?"

He said, "Well, I used my binoculars, you see."

And that will be exactly the situation, looking out from the State of Delaware at the superport. You will have to have binoculars to see this big tanker moving in there.

So, as far as the scenery is concerned, I do not think they have to worry too much.

As far as environmental detriment, there will be some, because, as I said, about dredging, but as far as pollution is concerned, there will be no problem in my opinion.

Mr. WALSH. I am sure the people of Delaware would rather look at the beaches than the deep seaports off their beaches.

Dr. KURYLKO. How much can they see at 8 miles away?

I am not sure.

Mr. WALSH. Another matter that you mentioned is that if this law is passed, that the environmentalists will be able to use the power that this law contains to hold up projects such as this, and I would remind you, since I have had some experience with it, that they hold them up anyway, even without laws. And I merely point to the Storm King Mountain project, which is a power generating project for Consolidated Edison. And we approved that project when I was on the Public Service Commission.

The Federal Government approved the project.

I believe it was first proposed back 12 years ago anyway, about 1961 or 1962, along in there. That project is still not under construction. And this is one of the cleanest ways of generating electrical energy that is known. It is a pump storage plant. They merely take the water out of the Hudson, pump it up on top of a mountain, and when they need it, run it down through a generator. And they have got their energy. But it has been held up through the courts, through court action by the various environmental groups, so that they have the power, and they are able to hold these projects up, even without a law such as H.R. 2020.

Dr. KURYLKO. Yes; I concur with you, except this would just be one more stumbling block.

As I see it by now, I would like to see the State of New Jersey seriously consider having huge tank farms inland away from the sea in Pine Meadows, and so on, inside, which is pretty desolate, because we have an extreme shortage of storage capacity in connection with what we are using. And these superports will enable us to do this.

If we can store away millions of barrels of products and gasoline, it will do wonders for us, because by now we are using something like 7 million barrels per day of gasoline. We have storage of something like—we have stored about 200 million barrels.

So, take 200, divide by 7. This is how much capacity we have, a very small capacity.

The same thing goes for crude oil.

The president of Atlantic City Electric said that if the Arabs cut off the oil all of a sudden, it would be 50 days before everything in the Northern United States would come to a standstill, and I believe that the country needs storage capacity, needs importation facilities, and needs places to refine them, because this is best for us.

Mr. WALSH. I just have one other question, Mr. Chairman.

Could you provide us with a comparison of the costs of the finished product refined come up to New England by large crude carriers to New Jersey, and with the same finished product, from crude ship via tankers to the gulf, and then shipped back by pipeline?

Dr. KURYLKO. I probably can supply you with this information. I could work this out.

Mr. HOWARD. If you could and would send it to the subcommittee, without objection, it will be made part of the record.

[The material requested not received at the time of printing this record.]

Dr. KURYLKO. Yes.

Mr. WALSH. Your reference to LNG, the tankers being proposed to transport——

Dr. KURYLKO. They are being built.

Mr. WALSH. Yes; they are being built.

As I recall it, there was a fire in one of the storage plants that was built around New York City.

Staten Island, was it?

Dr. KURYLKO. Yes.

Mr. WALSH. Was that particular storage plant large enough to store the cargo from one of these LNG tankers? Would you know?

Dr. KURYLKO. I am not sure.

The ships that you basically have subsidized are going to carry something like 64,000 deadweight tons, and I do not have at my fingertips the figures to convert it to gallons. I am sorry.

Mr. WALSH. Thank you very much, Doctor.

Dr. KURYLKO. You are welcome.

Mr. HOWARD. The gentleman from Illinois.

Mr. HANRAHAN. Thank you, Mr. Chairman.

Doctor, I would like to commend you for your excellent statement.

There is only one question I have, but this is not very relevant to the statement you gave. But have you done any research on the actual standards for building these large tankers, and the possibility of preventing the oil spills by—I mean, do you believe in the double-bottom type of tanker?

Dr. KURYLKO. Yes, I do.

You know, before I went to graduate school, I had an offer to be the project engineer on the superport in Ras Tanura, actually, where Mr. Howard visited—was visiting.

The way these tankers unload their cargo and load it is to use so-called chicks and loading arms.

Now, I believe these are 24-inch pipes, that are metal pipes. They have metal swivel joints that are sealed. They monitor the pressure very accurately, and the operator sits in a little cab and operates levers. And he comes right down with that thing, up, and makes contact. Then he disengages the mechanism that controls the movements of the arms, and then the cargo is transferred via these chicks and loading arms.

Now, the reason these things were put in was because there were too many failures of rubber hoses that were used to connect between the tanker and the pier, so I believe that the introduction of these mechanical devices in the large port would greatly enhance the transshipment and prevent accidents and spillages.

Now, the addition of the double-bottom is also a very valuable thing, because there have been cases where a huge tanker went over an iceberg and cut his ship for 20 or 50 feet and had a big gash there. And he just kept proceeding nicely. He did not even know he had this big hole actually until they stopped in port and were trying to pump out the water from between the two hulls, so it is a very good safety measure. And I think we should probably insist on those.

But I would leave this up to the Maritime Administration.

Mr. HANRAHAN. That was my next question.

You feel that the Maritime Administration is doing a justified job? Should authority be——

Dr. KURYLKO. You see, the Maritime Administration was basically asleep for a number of years, and all of a sudden we gave them all of this money for subsidization programs. And they are alive.

I think they have a great number of capable people, and I think if we do have superports in the United States, then we will be able to control what vessels come here and what they do.

If they have them outside of the United States, and then bring from outside the United States both the cargo and crude oil via small tankers, then we are not going to have anything to say as to how crude oil is transported over the high seas.

Mr. HANRAHAN. Would this also be true of all tankers coming into the ports?

In other words, if you install the same type of standards you were talking about in superports, you would also avoid some of the spillage?

Dr. KURYLKO. Yes, it would help, but there should be a much smaller movement of small tankers if the superports were off the coast where they are needed most.

If you put it up in New Jersey, the movement by ship from this superport into the harbor would be much less than it is presently, or without a superport in New Jersey, because the cargo will be primarily transferred by pipeline.

Now, if you have the superport in Louisiana or Mississippi, Texas, or what have you, then the products, and some crude oil, will be shipped again by small tanker into the harbors of New York and Philadelphia, et cetera, and traffic will just increase fantastically.

You will have just a tremendous increase in traffic because the pipeline is not going to be built in—it will probably take about 7 years in order to get it built.

Mr. HANRAHAN. Thank you.

Mr. HOWARD. Thank you.

I like the comment concerning the safer metal pipe situation used at Ras Tanura rather than the rubber hose type, which is less safe. I guess it is not the type of thing being proposed here in this country.

The type of apparatus used in Ras Tanura was from a permanent fixed open-ended island dock, a dock that just never touches the shore. It just stands out there in the Persian Gulf. And as to the Storm King Mountain problems that they have, where people go to court and harass and hold up things, I would think the passage and implementation of H.R. 2020 would eliminate a great deal of that, because it would certainly clear the air. And there might not be the attempts to construct something which would cause all these court cases; so possibly H.R. 2020 could save time, money, effort and frustration for many people with the court cases that we do have. And as to the Arabs cutting off the oil, we would not only have a very quiet nation here, as you said, but we would also have a lot of inoperative industries and deepwater ports and supertankers, as well.

Doctor, thank you very much for your testimony. The committee will look forward to the information you will be sending and it will become a part of the record.

And I wish to thank you very much for giving us the benefit of your expertise in this field today.

Dr. KURYLKO. Thank you very much.

Mr. HOWARD. Off the record.

[Discussion off the record.]

Mr. HOWARD. On the record.

Our next witness before this subcommittee will be Mr. Leonard H. Dickstein, the Assistant General Counsel of the Maritime Administration of the Department of Commerce.

Thank you very much for coming before the committee.

STATEMENT OF LEONARD H. DICKSTEIN, ASSISTANT GENERAL COUNSEL FOR LEGISLATION AND REGULATIONS, MARITIME ADMINISTRATION, DEPARTMENT OF COMMERCE

Mr. DICKSTEIN. First, Mr. Chairman, I would like to express Mr. Cook's regrets that he cannot be here this afternoon. He had a meeting with the Assistant Secretary that he could not cancel.

I will read Mr. Cook's statement, and then I will be available for answering any questions concerning the relationship between deepwater port facilities and the Maritime Administration and H.R. 2020.

I appreciate this opportunity to appear before your committee to testify with respect to deepwater port facilities and H.R. 2020.

H.R. 2020 proposes to give every State affected by the construction of offshore bulk cargo transshipment facilities in its waters or within the indefinite extension of its boundaries seaward a veto power over Federal approval of such projects whenever the affected State has passed a law which prohibits the construction of such a facility in the territorial seas within its boundaries.

In any case where the facility is to be constructed in the waters or within their indefinite extension of a State which has not prohibited by law the construction of any bulk cargo transshipment facility in its territorial waters, the Federal Government would not be able to approve such a project unless the States which would be affected by the facility, as determined by the Administrator of EPA, and which have enacted a law prohibiting the construction of such a facility were given an opportunity to file their objections to the construction of such facility.

In some cases, the facility could only be constructed upon such conditions as the Administrator and the objecting State or States together with the Federal department or agency authorized to issue a license would jointly require.

On April 18, 1973, the President submitted to the Congress his message concerning energy resources. In that message he stated with respect to the development of deepwater ports:

> It is clear that in the foreseeable future, we will have to import oil in large quantities. We should do this as cheaply as we can with minimal damage to the environment. Unfortunately, our present capabilities are inadequate for these purposes.
>
> The answer to this problem lies in deepwater ports which can accommodate those larger ships, providing important economic advantages while reducing the risks of collision and grounding. Recent studies by the Council on Environmental Quality demonstrate that we can expect considerably less pollution if we use fewer but larger tankers and deepwater facilities, as opposed to the many small tankers and conventional facilities which we would otherwise need.
>
> If we do not enlarge our deepwater port capacity it is clear that both American and foreign companies will expand oil transshipment terminals in the Bahamas and the Canadian Maritime Provinces. From these terminals, oil will be brought to our conventional ports by growing numbers of small and medium size transshipment vessels, thereby increasing the risks of pollution from shipping operations and accidents. At the same time, the United States will lose the jobs and capital that those foreign facilities provide.
>
> Given these considerations, I believe we must move forward with an ambitious program to create new deepwater ports for receiving petroleum imports.

On that same day, the Secretary of Interior, in an executive communication addressed to the Speaker of the House of Representatives, submitted a draft of the administration bill, subsequently introduced as H.R. 7501, which would authorize the Secretary of Interior to license and regulate the construction and operation of deepwater port facilities. In that letter, the Secretary of Interior noted that:

> Most United States ports, already heavily congested, are not equipped to handle this increased trade. With few exceptions the largest ship which can enter United States ports fully loaded is 65,000 deadweight tons (DWT). (Compared to the new deep draft tankers which are now being built in excess of 200,000 DWT.) The use of small vessels is the least desirable method of importing large quantities of crude oil and products into the United States, both because of environmental and economic considerations. As imports of crude oil and products increase, our conventional ports will become more congested and the risks of collision and groundings will increase.
>
> The bill we are proposing would remove any legal impediments to the development of * * * deepwater terminals off the United States coast by establishing authority in the Department of the Interior for licensing the construction and operation of ports beyond the three-mile limit. This process would include strict environmental controls and specific provision for navigation and safety. Licenses would be issued to any United States citizen, domestic corporation, State or local government when the Secretary finds that the applicant is financially responsible and has demonstrated an ability and willingness to comply with all applicable laws and conditions. Prior to issuing any license, the Secretary is required to consult with the Governors of adjacent coastal States to insure that the facility and its directly related land based activities would be consistent with the States' land use planning programs.

We oppose the enactment of H.R. 2020 for several reasons.

The bill would extend State jurisdiction into Federal and international waters.

Present State jurisdiction is sufficient for legitimate State regulation and for the prevention of any undesirable shoreside facilities which might otherwise be associated with deepwater port development.

The proposed extension of State jurisdiction could intrude upon sensitive areas which have historically been the sole concern of the Federal Government. The bill is unnecessary since the National Environmental Policy Act of 1969 already provides safeguards that would apply to deepwater port facilities as well as to other types of initiatives.

We are also opposed to enactment of H.R. 2020 because that bill would give a veto power to the States over deepwater port facility construction.

The administration's bill provides that the Secretary of Interior shall:

> * * * consult with the Governors of adjacent coastal States to insure that the facility and its directly related land based activities would be consistent with the States' land use planning programs.

This provision is intended to provide the means for the development of a dialog between the Federal Government and affected States to insure that any deepwater port facility, and its related land based facilities, will be consistent with State land use programs.

We think that this approach is better than a bill which might encourage a State to unilaterally veto a deepwater port facility through State legislation which could well be passed before mature consideration of relevant facts and issues had taken place.

In view of the complexity of the environmental and economic issues involved in determining when and where a deepwater port facility should be constructed, we believe that a dialog between all interested parties is the best way to insure a correct balancing of the various interests involved.

The Department of Commerce supports the administration determination that energy and land use considerations of the deepwater port facilities are primary.

Within the administration, the Department of Interior has primary responsibility for energy matters and, as well, the responsibility for the licensing of offshore structures, such as drilling and production platforms and oil and gas gathering pipelines, and under proposed legislation, for coordination of State land use planning. We believe, all factors considered, that the Department of Interior can probably best coordinate the energy, land use, and other considerations most relevant to deepwater port facilities to insure balancing of both onshore and offshore environmental effects.

We look forward to working with the Department of Interior and other responsible agencies in reviewing specific deepwater port facility proposals.

Industry has recognized the need for deepwater ports for at least several years. And a number of projects have been initiated by major oil companies to develop deepwater off-loading facilities at specific sites.

The Department of Commerce is also concerned with deepwater port facilities. Our concern stems from our responsibilities for the promotion of efficiency in the transportation in U.S. foreign commerce and in the importation of petroleum.

At recent world scale rates, and these are last week's rates, it would have cost approximately $22.53 per ton to bring crude oil from the Persian Gulf to the U.S. east coast in a 54,000 deadweight ton tanker, while the transportation cost per ton for carrying crude oil in a 241,000 deadweight ton, VLCC, would have been only $14.11. That difference translates into approximately $1 per barrel of crude oil, since there are approximately 7 barrels of crude oil in a ton.

Mr. HOWARD. And these are deepwater port prices?

Mr. DICKSTEIN. Right.

Because of these and similar transportation economies, the Maritime Administration has been interested in encouraging the construction of VLCC's since the beginning of this decade.

A VLCC is a very large crude carrier, usually meaning a ship that can carry more than 200,000 deadweight tons.

In December 1969, the Maritime Administration granted title XI mortgage insurance for the first VLCC to be built in the United States and destined to fly the American flag, a 225,000-deadweight-ton tanker under construction at the Seatrain yard in Brooklyn.

On June 30, 1972, construction-differential subsidy was awarded for six VLCC's, including three tankers of 265,000 deadweight ton, the largest ships ever to be built in this country.

Levels of domestic energy productions and usage will fix the measure of required imports. To the extent that substantial imports will be required, given the transportation economies which exist, the issue is simply whether large tankers will unload their oil in the Carib-

bean or Canada prior to transshipment of petroleum, or refined products, to the United States, or whether they will bring their cargoes directly to this country using deepwater port facilities.

Over the past 2 years, the Maritime Administration has participated in and contributed to interagency economic and environmental studies of deepwater ports. These studies concluded that U.S. deepwater port facilities were environmentally and economically desirable.

We have also considered the environmental aspects of deepwater terminals independently and in our recently completed environmental impact statement on the Maritime Administration's tanker program. Our analyses reinforce the basic interagency findings that deepwater ports are economically and environmentally desirable.

The reaction of the coastal States has been mixed with, for example, Delaware banning an oil transfer facility under its Coastal Zoning Act, while the Louisiana Governor appointed a "superport task force" to facilitate efforts to establish a deepwater port facility off the Louisiana coast.

While we recognize that responses may vary from State to State, we are hopeful that all citizens will recognize the need for deepwater port facilities, and the fact that the import of petroleum through such facilities is preferable, both economically and environmental, to the import of petroleum in smaller ships using existing conventional port facilities.

Without regard to the nature of the State responses to proposed projects, however, industry has been unwilling to act until issues concerning Federal jurisdiction beyond the 3-mile limit have been resolved. And Federal legislation is, accordingly, a necessity.

Along with our desire to promote efficiency and reduce costs associated with U.S. foreign trade, the Department of Commerce has a parallel responsibility for the conservation of marine resources and the development of coastal zone management programs.

Approvals of particular site locations must consider the role of the coastal zone as a nursery for many important commercial and sport fishes, as an important source of mineral wealth and as a recreational haven.

The National Oceanic and Atmospheric Administration, as the prime environmental arm of the Commerce Department, is prepared to continue to exercise its authority and work closely with the Department of Interior in this matter.

This concludes my statement, Mr. Chairman.

I will now be happy to answer any questions that you or members of the committee may have.

Mr. HOWARD. Well, thank you, Mr. Dickstein, for your statement. We are very grateful for the statement and also appreciate your willingness to come here at the last minute to testify and answer questions. It is very generous of you.

Maybe we should correct one possible misunderstanding.

You stated:

> In any case where a State has not prohibited by law the construction of any bulk cargo transshipment facility in its territorial waters, the Federal Government would not be able to approve such a project unless the States which would be affected either directly or indirectly, as determined by the Administrator of EPA, were given an opportunity to file their objections to the construction of such facility.

Assuming, perhaps, that a State had not passed any deepwater port bill, it would first have to be notified if it were in fact affected, and then permitted the time to file an objection. Also reading from the bottom of page 2 of the bill, section 2(b), where it says:

> Whenever the issuance of any license, permit, or other authorization, or the taking of any other action by the Secretary of the Army, or any other officer or employee of the United States, would result, directly or indirectly in the construction of any offshore bulk cargo transshipment facility which may affect, as determined by the Administrator, the waters of the territorial sea, contiguous zone, or ocean within the boundaries, or within the indefinite extension of such boundaries seaward of a State which has by law prohibited such facilities within the territorial seas within its boundaries.

Would you agree, then, that under this legislation there is no requirement for EPA to notify an affected State if that affected State has not passed such legislation?

Mr. DICKSTEIN. Yes.

Mr. HOWARD. You state:

> We oppose the enactment of H.R. 2020 for several reasons. The bill would extend State jurisdiction into Federal and international waters.

I believe we did hear testimony from the professor of international law that this does not extend the State's jurisdiction in any way beyond territorial waters.

Mr. DICKSTEIN. Yes, I heard that testimony, and I spoke to Dr. Moeller afterward.

I believe that our position is that if a State has the jurisdiction to say no to a superport which is 20 miles off its shore, it is exercising jurisdiction over an area 20 miles off the shore, or at least, arguably, this constitutes the exercise of jurisdiction over an area 20 miles off its shore.

Now, at the present time we are engaged in extremely sensitive law of the sea negotiations with foreign countries who are claiming all sorts of territorial waters for their countries, and the administration is very concerned about not doing anything which would affect these sensitive negotiations in terms of our negotiating position as to how much territorial water a State can claim.

It is both a matter of tactics and of style that we do not extend our authority too far in this area.

The administration's position is that licensing of a superport is a reasonable use of the high seas, not a territorial exercise of jurisdiction.

On the other hand, the vetoing of a superport would be exercising jurisdiction over the high seas, and we might have problems with that.

Mr. HOWARD. I am not an attorney, and you are, so I may be taking a very unwise course, in proceeding with these questions, as to whether or not H.R. 2020 refers to any action that a State may take beyond the 3-mile limit.

We will get back to that, but first, the idea of not doing anything while our Nation is in secret, delicate, negotiations, for several years, was an argument for us to keep on bombing and invading, and such things, and so I hate to get into that kind of reasoning as to why the Congress should be inactive again. There is a vote on the floor, but we will be back with you just as soon as we can.

The subcommittee will stand in recess for approximately 15 minutes.

[Short recess.]

Mr. HOWARD. The subcommittee will please come to order.

I believe, before we recessed, Mr. Dickstein, you were saying that the bill would extend State jurisdiction into international waters?

Mr. DICKSTEIN. It would, arguably——

Mr. HOWARD. And I was stating that H.R. 2020 would not. I am not going to pursue that any further.

You stated also that you are opposed to enactment of H.R. 2020 because that bill would give a veto power to States over deepwater port facility construction.

I agree with you completely that it would do that.

You further state that the National Environmental Protection Act of 1969 already provides safeguards that would apply to deepwater port facilities, as well as to other types of initiatives, and legislation submitted by the administration and others would require the Secretary to consult with the Governors.

My wife very often consults with me as to what accoutrements I feel would go best with a certain dress she is wearing.

I can only say that if my wife's actions, after my making wishes known to her, are any measure of the actions of the Federal Government, after consulting on deepwater ports with the Governors, I feel great injustices could easily result for the States.

[Laughter.]

Basically, you gave some figures about costs which really did not deal in much of a way with H.R. 2020, unless H.R. 2020 were to trigger a situation where there would be no deepwater ports at all. I feel, though, that everyone could safely assume that with H.R. 2020 this would not be the situation, at least if he considered all of the gulf and east coast together.

Is that correct?

You say:

> The issue is simply whether large tankers will unload their oil in the Caribbean or Canada prior to transshipment of petroleum, or of refined products to the United States, or whether they will bring their cargoes directly to this country, using deepwater port facilities.

That is an issue that may exist somewhere, but does not exist directly with passage of H.R. 2020.

Mr. DICKSTEIN. Only to the extent that H.R. 2020 could possibly prohibit deepwater ports along the entire Atlantic and gulf coasts, as you have already stated.

Mr. HOWARD. If H.R. 2020 were to become law, and every State were to pass legislation, would you say that that would seriously affect the security of the United States?

Mr. DICKSTEIN. It could very well, yes.

Mr. HOWARD. Do you think that the States would stand by their implementation of H.R. 2020 under those circumstances?

In other words, not repeal their bills?

Mr. DICKSTEIN. Some of them probably would repeal their statutes.

Mr. HOWARD. I would feel—I do not know of any that would work against the national interest in that kind of a situation, but perhaps the view of the Department of Commerce, and men in the administration, I assume, as to why they oppose H.R. 2020 comes on where you state:

> We think that this approach is better than a bill which might encourage a State to unilaterally veto a deepwater port facility through State legislation which could well be passed before mature consideration of relevant facts and issues had taken place.

Would you indicate by that that the administration does not count much on the maturity or responsibility of State legislatures?

Mr. DICKSTEIN. No, that is too broad a generalization, Mr. Chairman.

Mr. HOWARD. I tend to do that about the administration. I am glad you brought it up.

Mr. DICKSTEIN. We all can probably point to examples of legislation passed by the States which, in hindsight, turned out to be poor legislation, drafted quickly, passed in haste, before an adjournment of a State legislature, right under the gun.

Only time will tell whether Delaware acted properly in passing their Coastal Land Use Planning Act.

There are occasions when legislative bodies act with a lack of maturity, a lack of consideration. We are afraid that H.R. 2020 might accidentally trigger such responses.

Nobody wants this.

After 3 days of hearings, I am sure that you are aware of the complexity of the superport issue, both economically and environmentally.

In order to have superports in this country, we must have the States, the Federal Government and industry all participating in decisions about where they are to be located, how they are to be built and what environmental controls are to be placed on these facilities.

Detailed, long discussions, consultations between these three partners in our American system are very important.

We think that H.R. 2020 encourages unilateral action by States rather than this process of "come let us reason together," which the administration favors in encouraging consultation with the States.

Pragmatically, if after consultation, a State reaches the conclusion that—

> We do not want a superport off our boundaries, and we are not going to let the pipelines from that monobuoy or island, or whatever facility is built, come within our 3-mile limits, and we are not going to build any refinery on our shore.

Industry is not going to go forward, the Federal Government is not going to go forward with building a port off the boundaries of that State.

All we want to do is to make sure that that State, industry, and Government all together realize what they are doing in making that decision, and therefore, we believe that the consultation provision contained in the administration's bill is far superior to a provision which would allow the States unilaterally to say no without having to even discuss the matter with industry or with the Federal Government.

Mr. HOWARD. Gee, I think that the first part of your statement was absolutely marvelous as to how the best way would be to have all interested parties, the Federal Government, the industry, the oil industry, and the State representatives have a dialog on this situation.

I think that that might be a marvelous way to go about solving this problem after H.R. 2020 becomes law, because without it, we certainly still have a great interest by the Federal Government in it, because they have the responsibility for the future of this Nation.

The oil companies will welcome any kind of dialog on it, certainly because of the profit that they have, but without H.R. 2020, it may occur to the States that they really are only window dressing in the

dialog, because the results of their determinations will have no effect whatever on the decisions, and so I think that this dialog would be a much better way of handling it.

I think we certainly should have it. I think once H.R. 2020 becomes law, whether the States implement H.R. 2020 or not, certainly they would be a real meaningful part of the effort in dialog to help solve problems that affect everyone in the Nation. I would just like to add that the kind of a situation where deepwater ports are off one State, and the pipeline and refineries end up in another, is a very real, simple situation that could exist, because they could have the refineries and the pipelines and the jobs and the economy off the State of New York, the deepwater port and the pollution off the State of New Jersey, and you can look on a map and not come anywhere within the 3-mile jurisdiction of the State of New Jersey, not to speak of the poor little State of Delaware. If the kind of situation that Dr. Moeller talked about, about pipelines being conduits, and common carriers, they could have the liabilities of a deepwater port but none of the economic benefits that go with them.

In mentioning, as you did, a few minutes ago, that for 2 straight days, you know, nobody wants H.R. 2020, in attempting to be fair, we bent over backward. And the Chair may have bent a little too far backward, because I think the only witnesses we had were administration witnesses, all of whom we knew were going to oppose the legislation for the first 2 days.

I think that you very accurately stated a situation as it is in the country where you stated:

> The reaction of the Coastal States has been mixed, with, for example, Delaware banning an oil transfer facility under its Coastal Zoning Act, while the Louisiana Governor appointed a superport task force.

I think that this shows that there is not going to be a great surge in one direction or another, because, certainly, just as there are States which do not wish to have deepwater ports off their coasts, there are others who do wish to have deepwater ports off their coasts.

We certainly appreciate your testimony, and want to compliment you on your knowledge of the subject, and your coming on a last-minute basis, and being so very familiar with the statement, the legislation, and the Department of Commerce's and the administration's position on it.

If there are no further questions, the Chair would like to state that other members of the subcommittee, due to legislation that we have on the floor, were not able to personally interrogate Mr. Dickstein, so the Chair has ruled that any members who wish to send questions to you may do so, and you will be happy to respond in writing. Also, the Chair would like to announce that the record of these hearings, should the situation arise that there are no further public hearings on this bill, the record will remain open for 1 week and 1 day, until a week from tomorrow, which will be Friday, June 29, so that any interested parties may submit testimony.

Mr. D'AMICO. Mr. Chairman, may I note that we have received replies from various States in answer to a letter sent to the States by Chairman Blatnik requesting the States' views on H.R. 2020; also, a statement from the Louisiana Offshore Oil Port, Inc., commonly referred to as LOOP, and from Seadock. I request, Mr. Chairman that these be included in the record.

Mr. HOWARD. That is noted, and they, and others who wish to submit testimony can contribute material which will be made a part of the record. This subcommittee will stand adjourned, subject to the call of the Chair.

(Whereupon, at 4:40 p.m., the subcommittee adjourned, subject to the call of the Chair.)

[The following were received for the record:]

SAMPLE OF LETTER TO STATES

JUNE 6, 1973.

Honorable ——— ———,
Governor of ———,
State Capitol,
———— ————.

DEAR SIR: Please be advised that on June 19, 20, and 21, the Subcommittee on Energy will hold hearings on H.R. 2020 (copy enclosed), a bill to prohibit under certain conditions Federal activities in connection with the construction of offshore bulk cargo trans-shipment facilities.

The Honorable James J. Howard is chairman of the Subcommittee on Energy.

The hearings will be held in Room 2167 of the Rayburn House Office Building, beginning at 10 o'clock each morning.

Should your State desire to present its view on this bill, please contact Mr. Salvatore J. D'Amico, Subcommittee Counsel, or Miss Carol Dahlstedt, Subcommittee Clerk (202—225–1500).

Respectfully yours,

JOHN A. BLATNIK,
Chairman, Committee on Public Works.

Identical letters sent to the Governors of the following States: Alabama, Alaska, California, Connecticut, Delaware, Florida, Georgia, Hawaii, Louisiana, Maine, Maryland, Massachusetts, Mississippi, New Hampshire, New Jersey, New York, North Carolina, Oregon, Rhode Island, South Carolina, Texas, Virginia, Washington, Puerto Rico, and the Virgin Islands.

REPLIES

STATE OF HAWAII,
EXECUTIVE CHAMBERS,
Honolulu, June 21, 1973.

Hon. JOHN A. BLATNIK,
Chairman, Committee on Public Works, U.S. House of Representatives, Rayburn House Office Building, Washington, D.C.

DEAR REPRESENTATIVE BLATNIK: This is in response to your invitation of June 6, 1973, to participate in the hearings on H.R. 2020 which would prohibit under certain conditions Federal activities in connection with the construction of offshore bulk cargo transshipment facilities.

At the present time, Hawaii has no prohibition against the construction of such facilities. As a matter of fact, we have two oil refineries which have marine offshore unloading facilities. However, the design of these is somewhat different from the sketches we have seen of proposed offshore bulk cargo unloading facilities. Nevertheless, the concept is the same.

Our concern, which I am sure is shared by most states, is that those facilities which are needed and may be constructed should be so built that they pose no serious danger to the environment. We believe engineering technology is sufficiently advanced to assure construction of offshore unloading facilities that are safe from a structural point of view and have enough safeguards to prevent damage to the local environment. It should be remembered that such facilities are not in constant use, only when a ship is being unloaded. Should there be adverse weather conditions, the unloading can be delayed until the weather is favorable.

We can appreciate the concern of heavily urbanized areas that such offshore unloading facilities can pose a serious hazard to the environment but at the same time I believe we must recognize that with a rapidly growing population in the nation, we must import more products and raw materials in greater bulk

quantities. Such greater importation requires larger ships, many of which cannot be accommodated in existing harbors. The construction of superports is a larger financial burden than most port authorities can bear.

The alternate solution is the construction of offshore unloading facilities. When such facilities are built, they must have adequate safeguards not only to protect the environment but also to protect life and property. I am sure the Corps of Engineers and the Environmental Protection Agency can develop standards and regulations to assure such safety. One of the standards could be that such facilities shall not be built offshore from heavily urbanized areas.

Thank you for the invitation to testify in person, but I do not feel it is necessary for us to do so. I believe the permit requirements of both Federal and State agencies will give Hawaii adequate protection to control the location and design of any offshore loading facilities.

With warmest regards. May the Almighty be with you and yours always.

Sincerely,

JOHN A. BURNS.

STATE OF NEW YORK,
PUBLIC SERVICE COMMISSION,
Albany, June 25, 1973.

Hon. JOHN A. BLATNIK,
Chairman, Committee on Public Works, U.S. House of Representatives, Rayburn House Office Building, Washington, D.C.

DEAR CHAIRMAN BLATNIK: Governor Rockefeller has asked me to extend his appreciation for your invitation to testify on H.R. 2020, a bill which deals with the construction of offshore bulk cargo transshipment facilities. He has asked me to express my views on H.R. 2020. Since I shall not be able to appear before the Committee because of prior commitments, I am submitting these comments for consideration by the Committee.

I endorse the concept of "superports" for the handling of large bulk cargo shipments by supertankers. Oil imports, both crude and product, may approach 15 million barrels per day by 1980, compared with six million barrels per day currently. To understand the significance of this figure, it must be kept in mind that the 15 million barrels per day of postulated imports approximates present total consumption of petroleum in the United States (16 million barrels per day). If the oil is transported in the "normal" tanker, such as 40,000 Dead Weight Ton vessels, an average of 66 oil-bearing ships would need to dock in U.S. ports daily. With port facilities capable of handling the supertankers, that is 250,000 DWT vessels or larger, the number of ships needed would decline to approximately nine per day, or less. The reduced number of vessels plying our waters to supply us with oil means a considerably lower risk of an oil spill or a collision, and consequent reduced probability of environmental damage.

If the United States does not permit construction of superports within our borders, they will be built in Canada or the Caribbean. The use of foreign superports would impose additional costs on the consumer in the United States. In the case of a Canadian superport the consumer might ultimately absorb the cost of shipping oil northward for unloading in the Canadian port and then south for use in the United States. Notably, the distance from the Persian Gulf around the Cape of Good Hope to a Montreal superport would be approximately 600 nautical miles longer than the trip to a Mid-Atlantic port and this distance would be reflected in a commensurate cost differential. In the case of a "superport" in the Bahamas, we should be required to pay the cost of trans-shipping in smaller vessels from the Bahamas to various locations in the United States. Recently, Dr. William A. Johnson testified before the House Committee on Merchant Marine and Fisheries to the effect that savings of as much as 16¢ per barrel of oil on the United States East Coast could be realized through use of a domestic superport rather than a foreign port.

The construction of superports would allow the United States to take direct advantage of the economic benefits which are afforded by use of large supertankers in the transport of imported oil. The cost of imported oil could be reduced by as much as $1 per barrel by use of 250,000 DWT rather than 40,000 DWT ships. The additional costs incurred by use of smaller vessels would impose a great burden on American consumers, industry, and employment.

Superports would enable this country to import more of its petroleum requirements in the form of crude oil rather than as gasoline, fuel oil, and other refined products. Crude oil has the best likelihood of continued availability under short-

age conditions. Superports would thus contribute to the security of U.S. fuel supplies.

In summary, there are substantial economic, environmental and national security advantages in the use of a domestic superport. In these days of rapidly escalating prices it is important that we take advantage of cost reducing technology wherever we can. The use of supertankers and superports is such an innovation. If we do not provide for the development of these facilities in the United States, we can expect neighboring countries to build superports. Ultimately, the choice is between a practical ban on the construction of superports with a resulting further escalation in the price of foreign petroleum and the realistic chance to cut the rising costs faced by consumers in our country. Environmental and national security considerations further support the conclusion that a viable superport program is in the best interests of the people of the United States.

I believe that the viability of a superport program would be undermined by legislation which provided for a local veto over construction of the facilities. Determinations with respect to the siting and construction characteristics of "superports" require an analysis of the trade-offs between national need, technical factors, environment, economics, and aesthetic considerations. The final choice should be based on consideration of the national welfare. It cannot be left to local groups with their necessarily more limited perspective. It goes without saying, however, that siting decisions should be made only on the basis of a careful appraisal of all alternatives, and subject to the utmost safeguards for environmental values.

Sincerely,

JOSEPH C. SWIDLER,

STATE OF NORTH CAROLINA,
DEPARTMENT OF NATURAL AND ECONOMIC RESOURCES,
Raleigh, June 26, 1973.

Mr. JOHN A. BLATNIK,
Chairman, Committee on Public Works, U.S. House of Representatives, Rayburn House Office Building, Washington, D.C.

DEAR MR. BLATNIK: Governor Holshouser has referred your letter of June 6, 1973, concerning H.R. 2020, the offshore bulk cargo transshipment facilities bill, for comment.

After study, I feel that legislation of this type would be a great help to North Carolina in preserving its coastline from the hazards of oil spills such as those which have plagued the West and Gulf Coasts. Unlike other coasts, North Carolina's shore is relatively untouched by the pollution that can attend large scale industrial port facilities. Before altering the State of North Carolina's coastline, consultation between state and federal officials is vital. For this reason, I feel that H.R. 2020 or a similar proposal merits support.

At present, North Carolina has no laws directly regulating the construction of offshore bulk transshipment facilities. By requiring the Administrator of the Environmental Protection Agency to notify our department and to await state comments before granting his approval, H.R. 2020 could be a valuable vehicle to protect one of the nation's most attractive, unspoiled areas.

Yours truly,

JAMES E. HARRINGTON.

STATE OF GEORGIA,
EXECUTIVE DEPARTMENT,
Atlanta, June 20, 1973.

Hon. JOHN A. BLATNIK,
Chairman, Committee on Public Works, House of Representatives, Rayburn House Office Building, Washington, D.C.

DEAR MR. BLATNIK: In response to your request for my views on the deep water port legislation now pending before your committee, my primary concern is that the states have an input in the decision process on this type of construction. H.R. 2020 insures this input, and has the additional strength of protecting the entire coastal zone. I therefore support it enthusiastically.

I would recommend three additions to H.R. 2020 based on my consideration of S–80 and S–180 which also relate to deep water ports. First, that adjacent coastal states be assured an input into any decision to locate such a port in a particular

state. Second, that criteria for the construction and location of such ports be developed by EPA. Third, that environmental impact statements be required on all such facilities.

Your attention and consideration is greatly appreciated.

Sincerely,

JIMMY CARTER.

STATE OF GEORGIA,
EXECUTIVE DEPARTMENT,
Atlanta, June 20, 1973.

Hon. JAMES J. HOWARD,
Chairman, House Subcommittee on Energy, Committee on Public Works, Rayburn House Office Building, Washington, D.C.

DEAR MR. HOWARD: Mr. Blatnik has solicited my views on the deep water port legislation now pending before your committee. My primary concern is that the states have an input in the decision process on this type of construction. H.R. 2020 insures this input, and has the additional strength of protecting the entire coastal zone. I therefore support it enthusiastically.

I would recommend three additions to H.R. 2020 based on by consideration of S–80 and S–180 which also relate to deep water ports. First, that adjacent coastal states be assured an input in to any decision to locate such a port. Second, that criteria for the construction and location of such ports be developed by EPA. Third, that environmental impact statements be required on all such facilities.

Your attention and consideration is greatly appreciated.

Sincerely,

JIMMY CARTER.

SOUTH CAROLINA STATE PORTS AUTHORITY,
Charleston, S.C., July 3, 1973.

Hon. WILLIAM JENNINGS BRYAN DORN,
Member of Congress,
Rayburn Building, Washington, D.C.

DEAR CONGRESSMAN DORN: This is in response to your letter of June 22, 1973, requesting our comments on H.R. 2020 and H.R. 7501.

H.R. 2020.—Recommend support of this bill, but with two changes:

1. The bill as written would be administered by the Environmental Protection Agency. It is our view that this bill would be best administered by the Department of the Interior. The land use aspects are "primary" and that involves the nation's interior. The Department of Interior has already-established expertise in licensing offshore structures, as well as primary responsibility for energy matters.

2. Broaden the scope of the bill to include *all* offshore construction, not just offshore bulk cargo transshipment facilities.

H.R. 7501.—Recommend support of this bill *provided* the following changes are made:

1. Remove the requirement that the Secretary of Interior "consult" with affected states and incorporate the provisions of H.R. 2020 as they relate to a state's right to veto offshore construction.

2. Strengthen the requirement for a public hearing. H.R. 7501 does not require that a hearing be held except in those cases where in the Secretary's judgment, it is needed.

3. Require that the economic effects of deepwater port facilities on the commodity and transportation markets served by them or by other port facilities be considered.

4. Three other areas within the bill should be examined by specialists before being accepted. The areas are:

(*a*) State taxation of the facilities.

(*b*) The judicial review process provided for in the bill.

(*c*) The administering of Customs and navigation laws beyond the 3-mile limit.

We hope the foregoing views will be helpful to the appropriate committees.

Respectfully,

W. DON WELCH.

SOUTH CAROLINA STATE PORTS AUTHORITY,
Charleston, S.C., July 5, 1973.

Hon. WM. JENNINGS BRYAN DORN,
Member of Congress,
Rayburn Building, Washington, D.C.

DEAR CONGRESSMAN: Thank you for your letter of June 22, 1973, concerning two recently introduced bills H.R. 2020 and H.R. 7501.

I would recommend that H.R. 2020 be supported. However, I feel the bill should be administered by the Department of Interior rather than the Environmental Protection Agency, and broaden the scope of the bill to include all offshore construction.

Also I recommend support of H.R. 7501 with the following changes: (1) give states the right to veto offshore construction, (2) strengthen the requirement for public hearings, and (3) analyze the economic impact on the local or state economic developments. There are three other areas of this bill that should be examined very closely: (1) state taxation of the facilities, (2) the judicial review process, and (3) administering of Customs and navigation laws beyond the three-mile limit.

Hope the above will be of some help to the appropriate committees.

With warmest personal regards, I am

Sincerely,

JOSEPH P. RILEY, *Secretary.*

LOOP, INC.,
New Orleans, La., June 28, 1973.

Hon. JAMES J. HOWARD,
Subcommittee on Energy, Committee on Public Works, U.S. House of Representatives, Washington, D.C.

DEAR CHAIRMAN HOWARD: As indicated at the conclusion of hearings on June 21, 1973, LOOP Inc. (Louisiana Offshore Oil Port) respectfully submits its views concerning H.R. 2020 under consideration by your subcommittee.

LOOP is concerned that an effective means be found for State participation in making the decision to grant or deny a federal license for an offshore oil port located beyond the territorial sea. LOOP agrees that there must be some suitable means for consideration of the interests of coastal states affected.

On June 15, 1973, you commented in the *Congressional Record* that H.R. 2020 takes neither a positive nor a negative stance on superports. To provide the proper balance among State, national and international aspects of licensing such facilities, the mechanism for State participation in the licensing procedure should be incorporated in the licensing statute. These aspects should not be treated separately in view of their interrelated nature. Operation of the mechanism in this manner is logical, reasonable, more certain to obtain a true expression of State attitudes, and conservative of a key element: time.

When the subject of State participation in offshore oil port licensing is viewed in this light, it leads to the conclusion that H.R. 2020 is unnecessary. This is particularly true since direct licensing bills are pending in the Congress.

The basic motivation in H.R. 2020 for State participation is sound, but the subject is best handled in offshore oil port licensing legislation.

On June 26, 1973, we appeared before the House Committee on Merchant Marine and Fisheries. A copy of our statement filed for the record in that hearing is enclosed to provide you with overall information on the LOOP project.

Yours very truly,

W. B. READ, *President.*

STATEMENT BY WILLIAM B. READ, PRESIDENT, LOOP INC. (LOUISIANA OFFSHORE OIL PORT), REGARDING THE INSTALLATION AND OPERATION OF A DEEP DRAFT PETROLEUM TANKER UNLOADING TERMINAL ON H.R. 5091 AND H.R. 5898

My name is William B. Read, and I am appearing this morning in my capacity as president of LOOP Inc. I would like to thank the members of the Committee on Merchant Marine and Fisheries for the opportunity to appear before you and explain our project.

LOOP Inc., with offices in New Orleans, is a corporation formed to design, finance, construct and operate a common carrier deep draft crude oil tanker unloading terminal in Gulf of Mexico waters off the coast of Louisiana.

Formed in October 1972, our thirteen stockholders include Ashland Oil, Inc.; Chevron Pipe Line Company; Exxon Pipeline Company; Marathon Oil Company; Murphy Oil Corporation; Shell Oil Company; Tenneco Oil Company; Texaco Inc.; The Toronto Pipe Line Company; Union Oil Company of California; Clark Oil & Refining Corporation; The Standard Oil Company (Ohio): and Texas Eastern Transmission Corporation. Additional shareholders may join through the completion of our engineering design.

Our staff of nineteen includes eleven professional engineers experienced in the various disciplines involved in the design, installation and operation of deep draft terminal facilities. We are presently involved in the design phase of our proposed project. Our staff efforts are being complemented by a number of advisory committees composed of representatives of shareholder companies, and engineering contractors. We will complete the design work necessary for an application for an offshore oil terminal by the end of this summer. In this regard, I submit for the record of this hearing a copy of the Louisiana Offshore Oil Port feasibility study completed in June 1972 and presently being updated by our engineering group. Brief biographies of key personnel responsible for the various engineering aspects of our project are attached to this statement.

The purpose of our project is to provide an economically and environmentally feasible facility to handle the transportation requirements of the large volumes of imported petroleum needed to meet the nation's growing energy demands.

By 1985 our nation's energy demands are expected to reach the equivalent of 60 million barrels of petroleum per day. Domestic sources of energy—including petroleum, natural gas, nuclear power, coal and hydroelectric power—are predicted to meet only three-quarters of the national requirement.

Presently crude oil supplies 42 percent of national energy consumption. Domestic crude production is expected to peak in this decade at about 13 million barrels per day. This represents only 77 percent of our present needs and by 1985, in light of both rapidly rising demand and domestic inability to meet that demand, we will need to import 52 percent of our crude oil requirements—an amount in excess of 15 million barrels of petroleum per day.

The cost of transporting this large volume of imported crude oil takes on great significance. Costs can be considerably lessened through the use of supertankers. Ten years ago there were virtually no ships in the world of 100.000 DWT. Today there are over 200, and this number is expected to reach 800 by 1975. By 1980 the 200,000–300,000 DWT tanker will become the world's standard. Pertinent excerpts from an analysis of the world tank ship fleet prepared by Sun Oil Company are attached to this statement.

At present bringing oil to East and Gulf Coast ports from the Persian Gulf in tankers of 47,000 DWT costs approximately $13 a ton. By contrast 250.000 DWT tankers can transport crude oil to Louisiana for about $5.70 a ton. The cost drops to $5.15 a ton in 500,000 DWT tankers. Looked upon conversely, these cost savings can be viewed as penalties to American industry and consumers for failing to utilize these larger vessels—higher transportation costs for crude oil will result in increased consumer product prices, a further loss of competitiveness in world markets for American products, and a high risk of the movement of critical processing industries outside the United States.

A second significant reason for the use of supertankers to satisfy our expanding oil import needs is the projected impact of these ships in reducing port congestion. The Port of New Orleans, for example, handles some 120 million tons of cargo annually, one-half of which involves the use of barge transportation. The 1,500-foot wide maintained channel at the foot of Canal Street is annually navigated, inbound only by over 44.000 barges, 17,000 towboats and tugs, and almost 15,000 ocean-going vessels. This average of 76.000 "bottoms" annually does not include pleasure craft or ferry boats nor outbound traffic, and amounts to 210 "bottoms" daily through the Port of New Orleans. Actually, this figure could be doubled for two-way traffic. For statistical purposes, the Port of New Orleans is defined as everything on the Mississippi River below the Port of Baton Rouge.

Because of depth constraints, ports on the East and Gulf Coasts cannot handle supertankers—ships requiring a draft over 60 feet of water. Although there are transshipment alternatives—bringing supertankers to deep draft ports near the United States and transshipping via smaller ships, or loading smaller ships directly from supertankers—transshipment alternatives do not solve, and in fact would aggravate, port congestion problems.

The use of marine terminals specifically designed to handle supertankers would reduce the potential number of ships arriving at our existing ports. For example, in the case of the use of 47,000 DWT tankers as opposed to 250,000 DWT tankers, arrivals would be reduced from more than 45 daily to less than nine daily by 1985. Industry figures show that more than 78 percent of tanker accidents occur in congested harbor areas. Reducing the number of ships in already congested traditional port areas reduces the potential for accidents.

In view of the significant economic and environmental advantages of supertanker operation, the construction of deepwater crude oil terminals in proximity to the United States refining centers is a pressing need.

Two deepwater terminal projects are being designed to serve the Gulf Coast—the LOOP and SEADOCK proposals. Refineries located along the Texas Gulf Coast and in Western Louisiana would be served by SEADOCK. The LOOP facility will serve refineries in Louisiana, Mississippi, Arkansas, Tennessee, Missouri, Kentucky, Illinois, Indiana, Ohio and Michigan. It is our opinion that these facilities are not in competition with each other. Both of these projects are required to meet the import projections mentioned previously.

The Louisiana offshore oil port project as proposed by LOOP would consist of a marine terminal for unloading deep draft crude oil tankers, large diameter buried pipelines from the marine terminal to an onshore storage facility, and the onshore storage facility itself. I refer subcommittee members to the map included in the addenda. The marine terminal would be located in 100–120 feet of water approximately 21 miles off the Louisiana coast. The storage facility would be located in Lafourche Parish.

An adjunct to the LOOP facility will be a pipeline from the onshore storage facility to the St. James, Louisiana, terminal of Capline.

The LOOP facility will supplement crude supplies to existing Louisiana and Mississippi refineries and through Capline, the largest crude oil pipeline in the United States, will supply many of the refineries of crude oil deficient mid-continent America as far north as Detroit. These areas contain more than 25 percent of the nation's total refinery capacity. A map of the LOOP service area is attached.

In order to illustrate the projected magnitude of imported crude oil supplies moving to the midwest through the proposed LOOP project, I refer the members of the Committee to two tables included in the addenda. These projections were prepared as part of a study of the economic impact of a Louisiana Offshore Oil Port by Gulf South Research Institute (located in Baton Rouge, Louisiana) and the H. J. Kaiser Company of California, and are based on estimates of U.S. energy requirements for selected future years as compiled by the U.S. Department of the Interior and the National Petroleum Council. As indicated by the table entitled "Projected Crude Throughput Volume for a Louisiana Offshore Oil Port", approximately 991,000 barrels of imported crude oil per day would move through a facility to mid-continent refineries in 1977, growing to 1,895,000 b/d by 1985 and 2,375,000 b/d by 1990. Each of these throughput projections are approximately fifty percent of the total throughput of the terminal as projected in the study.

The Economic Impact Study presents, in some detail, projections of an offshore oil port's impact on refinery capacity and employment, and expresses a benefit-cost ratio to industry and the State of Louisiana. In this regard, I submit a copy of the Economic Impact Study for the record of this hearing.

A number of different concepts for the marine unloading terminal were studied as LOOP facility alternatives. These included the "man-made island" facility of the type proposed by the Maritime Administration, the more conventional "fixed pier" facility and the "single point mooring" concept. Of these alternatives, the "man-made island" type was rejected as infeasible for both economic and operational reasons. The "fixed pier" type was also rejected for economic and operational reasons. This type of facility in a configuration designed for use in our project would cost in the vicinity of $225 million; however, docking supertankers to a fixed pier in the open sea with the weather regime prevalent in the Gulf of Mexico was considered infeasible without the addition of a prohibitively expensive breakwater system. In the opinion of LOOP engineers and engineering contractors, a fixed pier facility without a breakwater system would be inoperable more than 50% of the time due to unfavorable weather conditions. The $225 million quoted for such a facility does not include the cost of a breakwater system.

LOOP engineers chose the single point mooring, or SPM, as the most economical and safest method of operation for unloading large volumes of crude oil.

With regard to cost, an SPM configuration for the proposed LOOP project would call for an investment in the vicinity of $150 million dollars. This includes 5 SPM's, 2 pumping platforms, a crew quarters platform and 4 pipelines (48"–56" in diameter) 21 miles long, connecting the marine terminal to the onshore storage facility. In addition, the SPM concept would allow a Louisiana offshore oil port to be in operation in Gulf of Mexico weather conditions more than 90% of the time, based on studies of the significant wave periods and wave height categories.

The SPM concept has been proven in over 100 worldwide applications since the first single point mooring buoy was installed in 1959. A list of all single point mooring installations worldwide is attached in the addenda to this statement. SPM systems operated by one LOOP shareholder in Libya, Singapore and Okinawa have handled 1.2 billion barrels of crude oil without a major spill. Another shareholder presently operates installations handling 450 million barrels annually, and these systems have handled a total of 3.6 billion barrels without a major spill. A "major spill" is defined in the *National Oil and Hazardous Materials Pollution Contingency Plan*, as required by the Federal Water Pollution Control Act, as a volume of more than 10,000 gallons (approximately 240 barrels) in internal waters and more than 100,000 gallons (approximately 2,400 barrels) in offshore waters.

In order to develop a clear understanding of the system proposed, I refer the members of the committee to the simplified flow chart attached.

As indicated, the essential elements of the SPM concept include one or more single point moorings, pumping and operations platforms, and submerged pipelines carrying unloaded crude oil to a shore storage terminal. A diagram of a typical single anchor leg mooring is also attached.

Anchored to the floor of the Gulf by pilings, the SPM floating buoy can withstand very extreme sea and weather conditions. Vessel approach and departure from SPM's are relatively simple maneuvers for tankers of all sizes Vessels approach the SPM directly, and mooring can be accomplished in a very few minutes with the aid of a mooring launch. The vessel is secured to the SPM with bow lines only and is free to rotate around a 360° arc, like a weathervane, always heading into the wind, sea, and current. The vessel and SPM are not subject to as large environmental forces as a vessel rigidly secured to a fixed berth. When the tanker finishes unloading, hoses which had been connected to the tanker's manifold are capped and placed in the water. Mooring lines are slipped and the tanker leaves the berth without the aid of tugs or launches.

The design of the remaining elements of the LOOP project—the operations platforms, pipelines and tank farm are conventional in nature and certainly not unique to systems presently in use offshore Louisiana. Designs of these items are being developed in accordance with existing federal and state regulations and industry standard. I submit for the record of this hearing a draft of the listing of codes, regulations, standards and practices incorporated in the LOOP Basic Design Manual. A vast storehouse of successful experience with offshore platforms, submerged pipelines, and tank farm construction in Louisiana is readily available.

Engineering design criteria being developed by LOOP engineers have, as a key consideration, protection of the environment. Main factors to be considered in designing for minimum environmental impact for a deepwater crude oil unloading terminal include:

(1) location of the facilities;

(2) designing safety factors in response to potential internal or external forces such as pumping pressures and weather conditions;

(3) protection against abnormal conditions such as hurricanes or human error;

(4) containment and treatment of normal effluents such as waste water and sewage;

(5) design of monitoring systems and emergency reaction plans;

(6) design of methods to isolate and control spills.

Other factors requiring consideration, while not part of facility engineering design, include establishing operational procedures to prevent or detect spills, and portable equipment to control and clean-up spills.

Location of the offshore platform and SPM complex 21 miles offshore is outside of potentially dangerous bottom mudslide areas, such as those around the mouth of the Mississippi River, and clear of existing ship traffic. Proposed navigation fairways and maneuvering areas are clear of existing production platforms.

LOOP proposes that all fairways will be marked by lighted buoys, and that LOOP will undertake radar surveillance and monitoring of all tanker approaches in the fairway and to the marine terminal.

As I have previously mentioned, the proposed LOOP facility is conventional in nature, including the use of pipelines to transport crude oil to the shore. The safety record of pipeline transportation far exceeds that of other modes of transportation. In great measure this excellent record is due to the development and adoption of codes and standards by industry and professional organizations. Nineteen such codes and standards have been adopted by reference in the Department of Transportation regulations governing transportation of petroleum and petroleum products by pipeline, appearing in section 195.3 of Title 49 of the Code of Federal Regulations. These codes and standards pertaining to pipelines and those which concern other aspects of the LOOP project are shown in the addenda.

Pipelines from the marine terminal to the onshore stoarge facility will be corrosion protected, wrapped and anchored in concrete, and buried beneath the seabed, using the technology developed over many years of offshore pipelining. As an example of this technology, there are more than 1,685 miles of in-service oil pipelines of 8'' or more in diameter in the submerged lands and other continental shelf off Louisiana.

Pipe, valves, fittings and pumps must meet stringent manufacturer's testing specified by applicable standards. In addition, LOOP will employ third party inspection at pipe mills and will test pipe after shipment to Louisiana.

During construction, LOOP will inspect welding, corrosion coating and structural materials with radiographic and electrical test methods. All phases of the construction will be inspected by experienced personnel, and on completion of the facility installation, all parts of the system subject to pressure will be hydrostatically tested well above maximum operating pressure.

LOOP also proposes to install leak detection and reaction systems. Pipelines coming to shore will be equipped with custody transfer grade metering on the offshore platform and at the onshore terminal. These meters will be continuously monitored by a computer located in the control building at the onshore terminal. Should the onshore meter show a predetermined quantity less than the offshore meter, the system will alarm. Also, a simultaneous decrease in discharge pressure and an increase in flow rate at the platforms will cause the pumping unit on that pipeline system to shut down and an alarm to be transmitted to the control center.

LOOP operating personnel will be assisted by sophisticated visual displays of the facilities and operating conditions. Weather and sea data will be continuously monitored and visually shown. A first class communications network and computer assist will be installed, with standby power for emergency operation provided.

Facilities will be designed to contain effluents until treatment renders them harmless to the environment. Storage tanks will be equipped with floating roofs to minimize venting of hydrocarbons to the atmosphere. A system of dikes, sumps, and directed drainage will collect oily waste water which will then be treated prior to returning to the outside environment. The entire tank farm area will be enclosed in a dike higher than the incidence of any storm driven tide over a 100 year period.

Storage tanks will be surrounded by dikes to contain potential spills in the tank farm area, and pipelines in the area will be equipped with valve systems to isolate damaged pipes. Pumps will be available to clear damaged pipelines or storage tanks, and the entire facility will be equipped with both fixed and portable fire fighting systems.

The use of supertankers and deepwater terminals would, by reducing the number of tankers arriving at existing U.S. ports and thereby reducing the probability of collisions or groundings, reduce the number of oil spill accidents. The results of a CEQ study concluded that the use of supertankers and deepwater terminals would reduce spills to 10% of what they would be with the use of smaller ships. Further, the LOOP facility, as an unloading terminal, would not be subject to the problems of disposal of oily ballast.

Although the potential for a major spill is greatly reduced, contingency plans must be drawn in the event of a spill. Spilled oil must be contained and retrieved. The American Petroleum Institute, the Environmental Protection Agency and the Coast Guard are involved in extensive research programs into the mechanics of spill clean-up in open water. Trained personnel and fast reaction clean-up equipment are presently available in the Gulf of Mexico.

Industry and tanker operators assure financial liability for clean-up of spills. The "TOVALOP" program covers over 95% or tankers serving the United States and provides for clean-up costs based on tanker tonnage up to $10 million. In addition, oil companies participating in "CRISTAL" provide coverage up to $30 million for the clean-up procedures immediately, without delays waiting for responsibility to be assigned.

This immediate response mechanism certainly is in aid of the requirements of the Federal Water Pollution Control Act Amendments of 1972 for reimbursement from a vessel owner or operator and for reimbursement from an offshore facility owner or operator to the United States for clean-up costs. This act provides as to vessel owners and operators a liability of $100 per gross ton or $14 million, whichever is lesser, if the spill results from acts or negligence short of willful negligence or misconduct. In the latter case the act provides expressly that there is no limit on the liability of the owner or operator. As to owners and operators of offshore facilities, the liability is $8 million when short of willfull negligence or misconduct with no limit when the spill results from willful negligence or misconduct.

Initially it is expected that the LOOP facility will consist of three SPM's, operations platforms, and two buried pipelines to a shore storage facility. The SPM's would be located in 100 to 120 feet of water approximately 21 miles offshore, and SPM's and lines to shore would be added subsequently until the full configuration of five SPM's and five lines to shore is attained. This facility will have a potential throughput capacity of over four million barrels per day and would be able to unload tankers of 500,000 DWT at a rate in excess of 100 thousand barrels per hour.

Investment figures for the LOOP project include approximately $150 million for the offshore facility including pipelines, and $310 million for the onshore storage terminal. A large diameter pipeline connecting the storage facility with the Capline terminal at the Mississippi River will require an additional investment of $88 million. With regard to this pipeline, I should point out that it is being designed by LOOP, but will be separately owned by a number of LOOP shareholders.

In site selection for the various facility elements, LOOP Inc. has maintained close contact and continues to consult with local, state, and federal agencies.

In studying the various alternatives for the marine terminal location including navigation fairways, we have been in contact with state and federal agencies having interest in our proposed project.

We have maintained contact with representatives of both the Environmental Protection Agency and the Council on Environmental Quality and have consulted with them concerning design criteria, facility location, and operating procedures.

To determine the preferred routes for onshore pipelines, consultations are continuing with representatives of the Louisiana Department of Wildlife and Fisheries, Louisiana State University Center for Wetland Resources, and members of the Lafourche Parish Port Commission.

On March 30, 1973, in a presentation to the Louisiana Deep Draft Harbor and Terminal Authority—a state agency created by the legislature to promote and regulate deep draft port development in Louisiana—LOOP requested that our proposed terminal facility be included as "phase one" of the Authority's Development Program. The Louisiana statute requires that the Authority promulgate an Environmental Protection Plan to insure protection of the environment throughout all phases of the Authority's Development Program. I submit a copy of the act creating the Louisiana Deep Draft Harbor and Terminal Authority and outlining the Environmental Protection Plan for the record of this hearing.

In preparation for our designation as "phase one" of the Louisiana Deep Draft Harbor and Terminal Authority's development program, and in expectation of an application for an offshore oil port to be readied for federal approval late this summer, LOOP has recently initiated two major studies leading to a detailed environmental assessment.

LOOP has begun a twelve-month environmental assessment program, expected to cost up to one million dollars, designed to more than meet the requirements for environmental impact statements outlined by the National Environmental Policy Act of 1969. LOOP will prepare a complete environmental assessment report and submit this report as well as all basic data used to prepare the report to the designated federal lead agency as part of a permit application. The objectives of LOOP's program are to provide a comprehensive description of exist-

ing baseline conditions and to predict the impact of construction and operation of the proposed facility on these conditions. The study will be the most comprehensive ever undertaken in Louisiana's coastal zone, and the data will ultimately revert to the public domain for use by all citizens with an interest in this area.

For this study, the proposed facility has been divided into two basic components: the area of the offshore unloading terminal, including the area of the pipeline route to shore, and the area of the tank farm. A study of the pipeline route from the tank farm to Capline is being undertaken under the same contractual agreement. Study of the tank farm area will also include study of the adjacent bays and estuaries.

Three organizations have been chosen to conduct these environmental assessment studies. Nicholls State University located at Thibodeaux, Louisiana, will furnish seven principal investigators with expertise in chemistry or biology and will be responsible for all offshore chemical and biological investigations. The area to be studied by Nicholls consists of the waters located approximately five miles on either side of the proposed offshore terminal and pipeline route from the unloading area to shore. Bottom trawling will be employed monthly at each of fifteen stations to determine the species composition, relative abundance and seasonal distribution of the fishes and large benthic invertebrates, primarily crustacean. In addition, the water column and bottom sediment will be sampled for benthics, zooplankton, phytoplankton and chemical analysis.

The Louisiana State University Center for Wetland Resources has been chosen to conduct the offshore physical oceanographic studies and the complete onshore environmental assessments of the tank farm site, the adjacent bays and estuaries, and the pipeline route to Capline. The experience and expertise of the LSU Center for Wetland Resources in marsh land studies is widely recognized. LSU will furnish nine principal investigators as well as six research associates.

As part of the oceanographic study, a twelve-month general survey will be made of the seasonal variability of the circulation patterns in the areas of the Gulf of Mexico affected by the proposed facility. In addition, a detailed study will be made utilizing moored current meters to determine the velocity structure in the vicinity of the proposed offshore terminal site. Monthly samplings will be made of temperature and salinity distributions in the region from the Mississippi Delta to the area of the proposed offshore site and from the shore to the 120-foot depth contour. Net drift from the vicinity of the proposed site and from the shore will be evaluated by drift card releases, drogue tracking, and dye releases.

In addition to the offshore physical study, LSU will have responsibility for the onshore tank farm site and pipeline route. During the 12-month study, LSU will identify all present, past, and future land uses and provide a detailed description of the topographic, physiographic, and geologic features within the area of the proposed action. On a bi-monthly basis the study will identify and qualify all terrestrial and acquatic organisms in the various habitats involved, including the near-shore Gulf bottom, estuarine water bodies, natural levee forests, and back swamp forests. The socio-economic considerations for the environmental assessment report will be furnished by an economic impact study already completed.

Existing air and water quality at the proposed site and maximum noise levels at site boundaries will be determined. At the close of the 12-month program, LSU will prepare the final report and interpret all data and results, including those data obtained by Nicholls State University.

In addition to Nicholls State University and LSU, LOOP has retained the firm of Dames & Moore to serve as consultants. The primary purpose of Dames & Moore is to provide guidance as required for environmental report planning and preparation. Total cost of LOOP's environmental assessment program will be as much as one million dollars.

A common objective of state and federal governments and the oil industry must be to assure that the United States has the ability to receive sufficient supplies of foreign petroleum to meet energy requirements.

It is our position that federal legislation for offshore ports should take the form of a single purpose licensing law. H.R. 5898 appears to adopt this concept, as contrasted with H.R. 5091. Under H.R. 5091 the apparent purpose to provide for the fullest possible protection of the marine environment against adverse impact which may result from construction and operation of several kinds of offshore facilities.

Under the National Environmental Policy Act any Federal agency with special expertise concerning the environmental impact of action proposed by another

agency has a duty to comment upon such impact. Logically, if there is a justification responsibility envisioned in H.R. 5091, a similar justification could be reasoned for each other agency which has special expertise on other aspects of the environmental impact of such a project. But if all such agencies possessed certification responsibility, the application of the certificate procedure would reach the same result as that intended under the National Environmental Policy Act.

As indicated previously, the focal point in environmental assessment of a project under the National Environmental Policy Act is the agency possessing the responsibility for authorization of the project. Such an agency has not been designated for an offshore oil port. This is the pressing need and it can be met by application of the concept adopted in H.R. 5898. We concur with the statement of the chairman at the commencement of these hearings that neither of these bills meets the overall need.

We would be pleased to submit to the committee our analysis of necessary matters to be covered in legislation so far as it relates to offshore oil ports. Such an analysis would consider H.R. 5898 as well as the other bill which adopts the licensing law concept—H.R. 7501, as proposed by the Department of the Interior.

Pending submission of the analysis we observe generally that existing statutes ought not to be amended in a patchwork fashion; that the licensing procedure should be as simple as is possible and result in an expeditious administrative decision following concomitant consideration of energy needs and environmental impact; that a suitable means for consideration of the interests of the respective state be found; and that there be specific extension of such laws as are necessary to the offshore port.

In conclusion, there is a real and pressing need for governmental action which will establish procedures under which suitably located deepwater terminal facilities can be constructed without unnecessary delay. The urgency of this need is highlighted by rapid growth in United States petroleum imports and the time lag between a commitment to construct a deepwater terminal and its actual operation.

I would like to again thank the distinguished members of this committee for their interest and will answer any questions you may have concerning our project.

LOOP, Inc.—Biographical Data of Key Engineering Personnel

W. B. READ, PRESIDENT

Twenty-four years experience as a professional engineer with Marathon Oil Company. Responsibilities included (1) feasibility study and preliminary engineering design for pipeline system and oil exporting terminal for Oasis Oil Company at Es Sider, Libya; (2) transportation facility planning; and (3) representing Marathon Oil Company in joint venture projects, including Platte Pipe Line Company, Wabash Pipe Line Company, TransAlpine Pipe Line Company and Wolverine Pipe Line Company.

CLYDE E. SWITZER, VICE PRESIDENT (OPERATIONS)

Twenty years experience with Gulf Oil Company. Projects include pipeline and marine terminaling in Venezuela; analyst for Gulf Oil Company worldwide pipeline advisor; terminal manager of deep draft transshipment terminal in Bantry Bay, Ireland.

JOSEPH A. MASSEY, VICE PRESIDENT (ENGINEERING)

Twenty-six years experience with Chevron Oil Company. Projects include engineering responsibility in offshore Gulf of Mexico with seven years experience in the immediate area proposed for the LOOP, Inc., facility; installation of 220-mile pipeline in West Texas.

GEORGE A. WORKS, MANAGER

Twenty-five years experience with Union Oil Company of California, including design, construction and maintenance of oil refining and marketing facilities. Projects include responsibility for site preparation and shipping facilities for Union's Chicago refinery; and construction of 60,000 B/D refinery, tank farm, and marine terminal for Kyung In Energy Plant at Inchon, Korea.

HOWARD F. BELL, MANAGER, ENGINEERING SERVICES

Thirty years experience with Shell Pipe Line Corporation. Projects include design and construction of Capline system stations, terminals, communications and controls; and several pipeline systems including a 50-mile offshore pipeline in the Gulf of Mexico.

RAYMOND H. PFREHM, ASSISTANT PROJECT MANAGER, TERMINAL FACILITIES

Twenty-six years experience in pipeline engineering with Exxon Pipe Line Company and holder of 38 United States and foreign patents on pipeline equipment. Projects include tanker loading and unloading terminals, tank farms, crude oil treating plants and waste water treatment facilities.

ROBERT R. SCHLUCKEBIER, PROJECT MANAGER, ONSHORE PIPELINES

Twenty-seven years experience with Marathon Oil Company. Projects include the LOOP Inc. feasibility study; pipeline construction at Cook Inlet, Alaska; and feasibility study of the Trans U. W. Pipeline, a 48-inch line from Puget Sound to Chicago.

PAUL B. MILLER, PROJECT MANAGER, OFFSHORE FACILITIES

Twenty-four years experience with Gulf Oil Corporation. Projects include offshore production facilities; offshore gathering systems; offshore tanker loading pipelines; and installation of three single point mooring systems.

RANDOLPH H. MERCHANT, SENIOR ADVISOR, ELECTRICAL ENGINEERING SERVICES

Seventeen years experience with Exxon Corporation and affiliates. Projects include design of production and oil terminal facilities in Libya; design of electrical and communications facilities, power plants and distribution systems.

LYLE H. MARLOWE, SENIOR ADVISOR, SPM OFFSHORE FACILITIES

Five years experience with Esso Research and Engineering Company. Projects include preparation and testing of SPM system at Esso Singapore refinery; and planning, design, construction and initial operations of marine terminals.

KENNETH A. RING, DIRECTOR, ENVIRONMENTAL AFFAIRS

Twenty-five years experience with Shell Oil Company. Projects include Offshore Production Superintendent (Louisiana); and Onshore Division Manager, Safety and Environmental Conservation.

World Tank Ship Fleet Analysis Of

DECEMBER 31, 1971

SCIENTIFIC RESOURCES AND DEVELOPMENT PLANNING

SUN OIL COMPANY

ST. DAVIDS, PENNA. 19087

August 1972

AVERAGE DEADWEIGHT TONNAGE AND SPEED

Year	Average Deadweight Tonnage	Average Speed (Knots)
1961	21,200	15.2
1962	22,100	15.3
1963	23,200	15.4
1964	25,300	15.6
1965	27,100	15.7
1966	29,200	15.7
1967	31,100	15.7
1968	33,900	15.8
1969	37,500	15.8
1970	42,000*	15.8
1971	45,800	15.8

TANK SHIPS UNDER CONSTRUCTION OR ON ORDER
(NOT INCLUDING COMBINED CARRIERS)

Dec. 31	Number of Vessels	Deadweight Tonnage	
		Total	Average Per Vessel
1961	352	15,737,000	44,700
1962	324	14,040,000	43,300
1963	387	19,211,000	49,600
1964	332	17,683,000	53,300
1965	403	20,591,000	51,100
1966	441	27,385,000	62,100
1967	469	41,444,000	88,400
1968	514	53,729,000	104,500
1969	570	59,328,000	104,100
1970	649	75,447,000	116,300
1971	773	100,250,000	129,700

TANK SHIPS UNDER CONSTRUCTION OR ON ORDER
(NOT INCLUDING COMBINED CARRIERS)
DECEMBER 31, 1971

Intended Flag of Registry	Number of Vessels	Deadweight Tonnage		
		Total	Average Per Vessel	Per Cent of Existing Fleet
Liberia	114	23,010,000	201,800	48.0%
Japan	72	13,777,000	191,400	60.4
Norway	77	11,982,000	155,600	51.9
United Kingdom	83	8,926,000	107,500	35.5
France	31	5,911,000	190,700	76.1
Italy	34	3,075,000	90,400	54.4
Denmark	13	2,433,000	187,100	82.8
Spain	18	1,913,000	106,300	68.2
Greece	23	1,764,000	76,700	19.8
Panama	9	1,633,000	181,500	27.8
West Germany	30	1,563,000	52,100	43.4
Sweden	23	1,559,000	67,800	35.2
United States	13	1,365,000	105,000	14.8
U.S.S.R.	65	1,200,000	18,500	23.1
All Others	168	20,139,000	119,900	122.6
Total World	773	100,250,000	129,700	52.3

TRAFFIC COMPARISON: PORT OF NEW ORLEANS
(Source: U. S. Army Corps of Engineers)

Ships transversing the 1500-foot wide maintained channel at the foot of Canal Street, inbound only:

1965	38,346	Barges
	19,209	Towboats/Tugs
	12,515	Oceangoing Vessels
	70,070	Total
1970	42,865	Barges
	18,042	Towboats/Tugs
	17,689	Oceangoing Vessels
	78,596	Total
1971	44,135	Barges
	17,104	Towboats/Tugs
	14,460	Oceangoing Vessels
	75,699	Total *

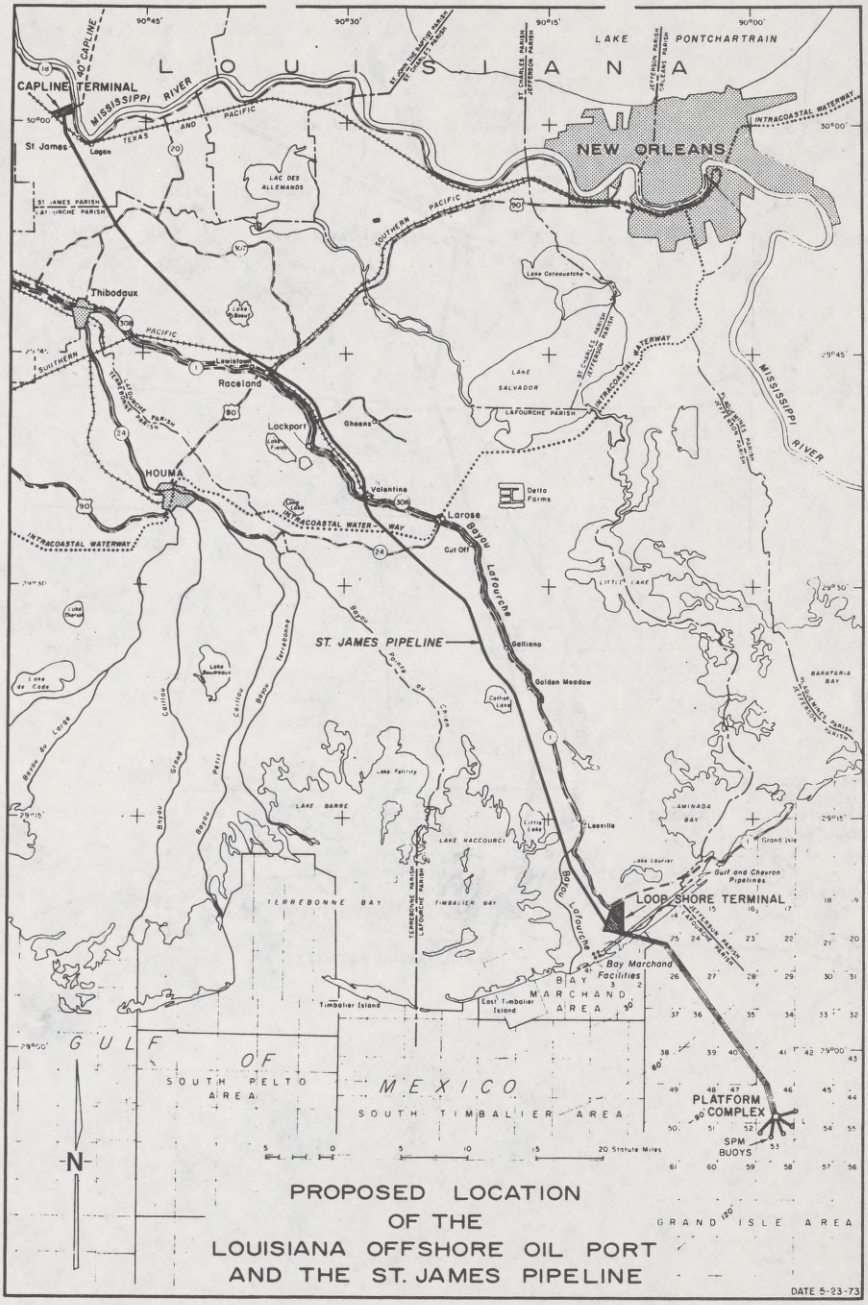
*Reflects strikes October 1-27; November 11-28, 1971.

TRAFFIC COMPARISON: PORT OF NEW ORLEANS
(Source: U. S. Army Corps of Engineers)

Ships transversing the 1500-foot wide maintained channel at the foot of Canal Street, inbound only:

1965	38,346	Barges
	19,209	Towboats/Tugs
	12,515	Oceangoing Vessels
	70,070	Total
1970	42,865	Barges
	18,042	Towboats/Tugs
	17,689	Oceangoing Vessels
	78,596	Total
1971	44,135	Barges
	17,104	Towboats/Tugs
	14,460	Oceangoing Vessels
	75,699	Total *

*Reflects strikes October 1-27; November 11-28, 1971.


LOUISIANA
LAKE PONTCHARTRAIN
NEW ORLEANS
CAPLINE TERMINAL
40" CAPLINE
MISSISSIPPI RIVER
TEXAS AND PACIFIC
SOUTHERN PACIFIC
INTRACOASTAL WATERWAY
St James
Logan
LAC DES ALLEMANDS
Thibodaux
Raceland
Lockport
HOUMA
Valentine
Larose
Bayou Lafourche
Cut Off
Delta Farms
LAKE SALVADOR
LAFOURCHE PARISH
MISSISSIPPI RIVER
ST. JAMES PIPELINE
Galliano
Golden Meadow
Leeville
LAKE BARRE
LAKE MACCOUREI
TERREBONNE BAY
TIMBALIER BAY
Timbalier Island
East Timbalier Island
Bay Marchand Facilities
BAY MARCHAND AREA
LOOP SHORE TERMINAL
Gulf and Chevron Pipelines
PLATFORM COMPLEX
SPM BUOYS
GULF OF MEXICO
SOUTH PELTO AREA
SOUTH TIMBALIER AREA
GRAND ISLE AREA
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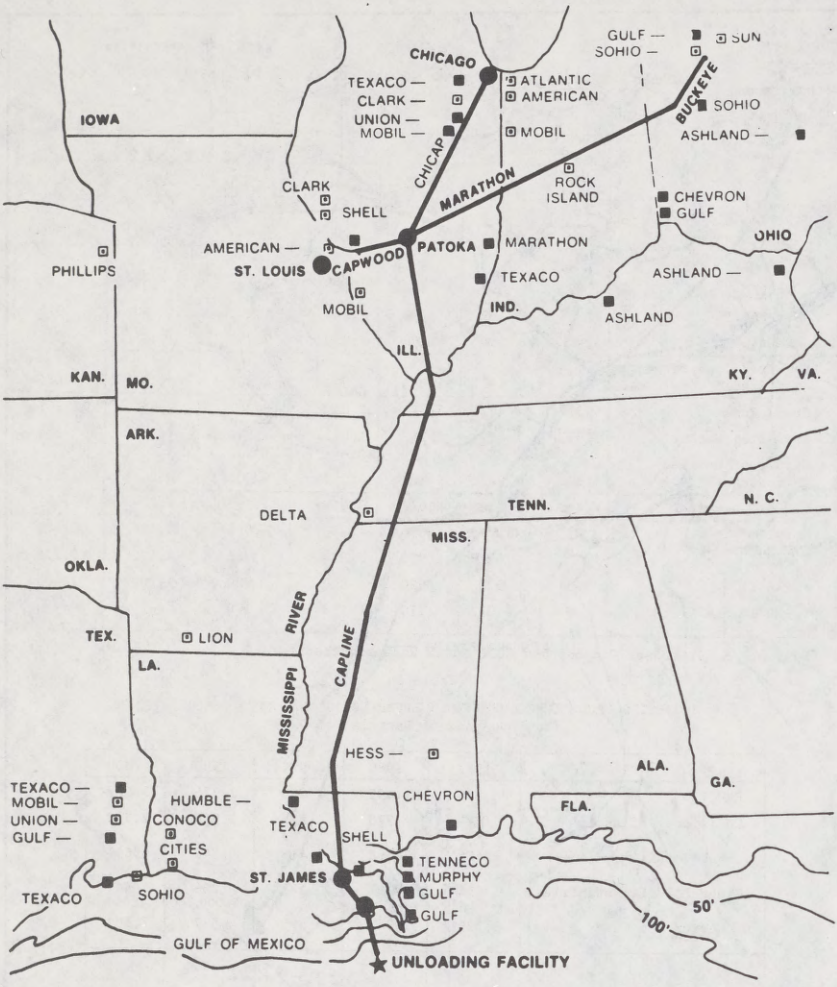
PROPOSED LOCATION
OF THE
LOUISIANA OFFSHORE OIL PORT
AND THE ST. JAMES PIPELINE
DATE 5-23-73


CHICAGO
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BUCKEYE
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MARATHON
ROCK ISLAND
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GULF
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UNION —
GULF —
HUMBLE —
CONOCO
CITIES
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CHEVRON
TEXACO
SOHIO
ST. JAMES
TENNECO
MURPHY
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GULF OF MEXICO
UNLOADING FACILITY

Table 10

ACTUAL AND PROJECTED PETROLEUM DEMAND AND SUPPLY FOR PAD DISTRICT III
(In Thousands of Barrels Per Day)

Item	Actual		Projected				
	1970	1971	1975	1980	1985	1990	2000
District III Production of Crude	6,507	6,484	6,200	5,800	5,430	5,060	4,300
Shipments							
To PAD I	651	567	558	510	473	405	300
To PAD II	1,454	1,559	1,380	1,240	1,200	1,160	975
PAD III	4,402	4,358	4,262	4,050	3,757	3,495	3,025
Required Imports of Crude	-45	134	1,053	2,990	4,604	6,057	9,084
Crude Runs	4,357	4,492	5,315	7,040	8,361	9,552	12,109
Expansion Factor	1,513	1,417	1,352	1,011	840	750	584
Supply of Refined Products	5,870	5,909	6,667	8,051	9,201	10,302	12,693
PAD III Demand	2,478	2,578	3,017	3,671	4,215	4,746	6,017
Surplus, To	3,392	3,331	3,650	4,380	4,986	5,556	6,676
PAD I	2,771	2,691	2,920	3,380	3,986	4,456	5,276
PAD II	534	533	620	850	900	1,100	1,400
PAD IV and V	87	107	110	150	100	--	--

Source: H. J. Kaiser Company and Gulf South Research Institute

Table 14

PROJECTED CRUDE THROUGHPUT VOLUME FOR LOUISIANA OFFSHORE OIL PORT
(In Thousands of Barrels Per Day)

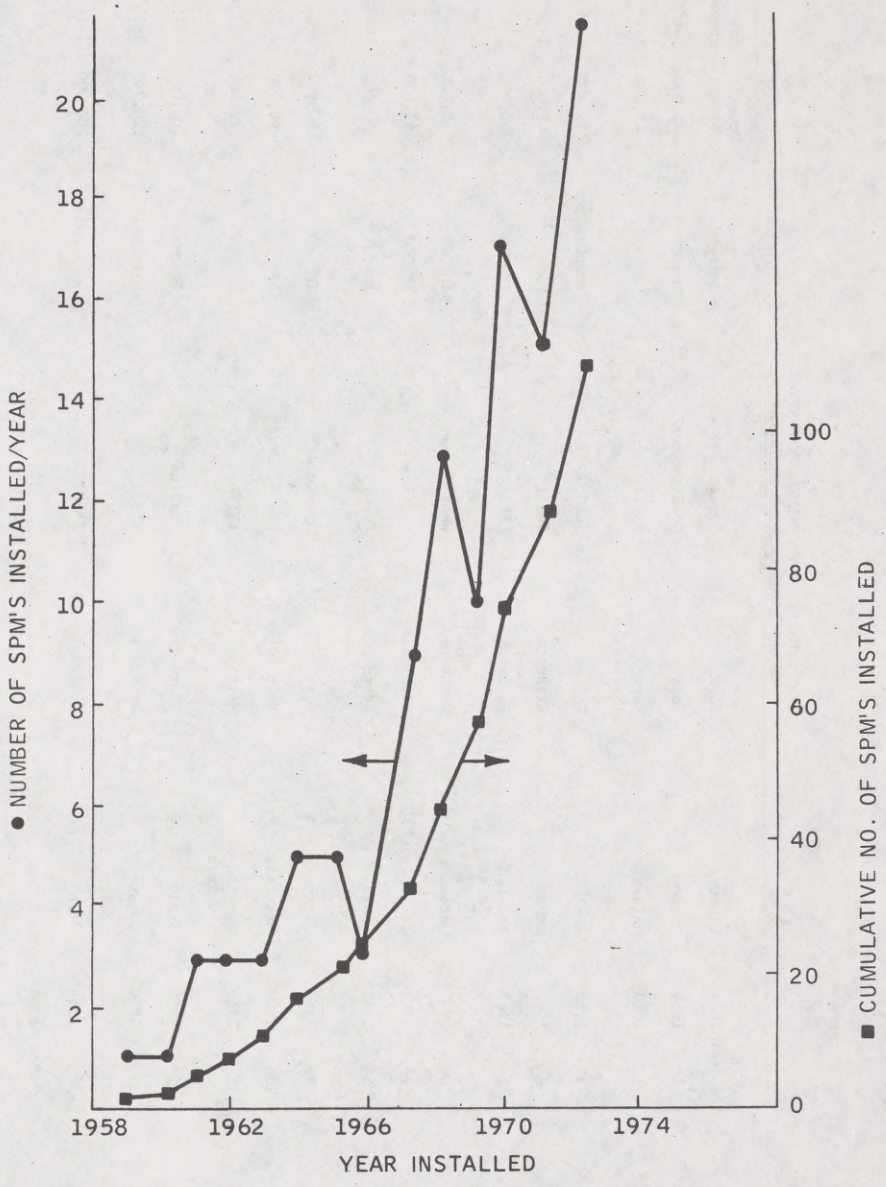
Item	1977	1980	1985	1990	2000
PAD II	991	1,495	1,895	2,375	3,677
Louisiana Refineries	494	973	1,518	1,966	2,978
Sub-Total	1,485	2,468	3,413	4,341	6,655
Other PAD III Refineries	54	97	182	236	447
Medium Estimate	1,539	2,565	3,595	4,577	7,102
Medium Estimate	1,539	2,565	3,595	4,577	7,102
Adjustment for Leveling in Louisiana Crude Output	-126	-250	-430	-600	-970
Low Estimate	1,413	2,315	3,165	3,977	6,132
Medium Estimate	1,539	2,565	3,595	4,577	7,102
Variance in PAD II Demand	302	342	400	450	570
High Estimate	1,841	2,907	3,995	5,027	7,672

Source: H. J. Kaiser Company and Gulf South Research Institute

WORLD-WIDE SPM INSTALLATIONS



SPM INSTALLATIONS



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SUMMARY OF INSTALLED OR PLANNED
SINGLE POINT MOORING INSTALLATIONS

No.	Year Installed	Country	Port	Owner	Designer	Max. Vessel Size	Hose System Number-Size
1*	1959	Sweden	Dolaro	Swedish Navy	IMODCO	3,000	1-4"
2	1960	Malaysia	Miri (Sarawak)	Shell	SBM	45,000	2-8"
3*	1961	Italy	Ravena	SAROM	IMODCO	75,000	2-10"
4	1961	Japan	Niiagata	Shell	SBM	65,000	1-20"
5	1961	Spanish Sahara	El Aaiun	CEPSA	IMODCO	5,000	1-8"
6	1962	Germany	Cuxhaven	West German Navy	IMODCO	2,500	1-4"
7*	1962	Italy	Fiumicino	Purfina	IMODCO	65,000	2-12"
8*	1962	Libya	Brega	Esso	Esso, F. R. Harris	100,000	loading arm
9*	1963	Japan	Oita	Kyushu Oil	IMODCO	100,000	2-12"
10	1963	Malaysia	Port Dickson	Shell, Esso	SBM	90,000	2-16"
11	1963	Spanish Guinea	Bata	CEPSA	IMODCO	20,000	2-8"+2-6"
12*	1964	Italy	Fiumicino	Purfina	Dalmine	100,000	1-16"
13	1964	Japan	Yokkaichi	Shell	Mitsubishi	120,000	2-16"
14	1964	Japan	Yokkaichi	Shell	Mitsubishi	200,000	2-16"

* See Notes

SINGLE POINT MOORING INSTALLATIONS

No.	Year Installed	Country	Port	Owner	Designer	Max. Vessel Size	Hose System Number-Size
15	1964	Malaysia	Miri	Shell	SBM	45,000	2-12"+1-6"
16*	1964	Malaysia	Miri	Shell	SBM	65,000	2-12"+1-6"
17*	1965	England	Nore Estuary	British Pet.	B.P. Harlan Wolff	100,000	-
18	1965	Gabon	Gamba	Shell	SBM	100,000	1-16"
19	1965	Japan	Chiba	Maruzen Oil	IMODCO	120,000	3-12"
20*	1965	Libya	Es Sider	Oasis Oil	SBM	100,000	3-16"
21*	1965	Qatar	Halul	Shell	SBM	200,000	2-16"
22	1966	Korea	Ulsan	Gulf	IMODCO	75,000	2-12"+1-8"
23	1966	Oman	Mina Al Fahal	Shell	SBM	225,000	2-20"+2-8"
24	1966	Oman	Mina Al Fahal	Shell	SBM	225,000	2-20"+2-8"
25	1967	Bangladesh	Chittagong	Chittagong Port Auth.	IMODCO	45,000	1-12"
26	1967	Japan	Koshiba	U. S. Navy	IMODCO	100,000	2-12"
27	1967	Kuwait	Ras Al Kaftje	Arabian Oil	McDermott	150,000	1-16"+1-12"
28*	1967	Nigeria	Apapa	Nidogas	IMODCO	4,500	1-4"
29*	1967	Oman	Mina Al Fahal	Shell	SBM	100,000	2-8"
30	1967	Philippines	Subic Bay	U. S. Navy	IMODCO	108,000	2-12"+1-10"
31	1967	Spain	Huelva	Gulf	SBM	100,000	2-16"

* See Notes

SINGLE POINT MOORING INSTALLATIONS

No.	Year Installed	Country	Port	Owner	Designer	Max. Vessel Size	Hose System Number-Size
32*	1967	Taiwan	Tai-Chung	U. S. Army	IMODCO	50,000	1-12"
33*	1967	USA (Louisiana)	Gulf Coast	Kerr-McGee	McDermott	8,000	1-4"
34	1968	Angola	Cabinda	Gulf	SBM	100,000	2-16"
35	1968	Egypt	Ras-el-Shaqiq	WEPCO	SBM	100,000	2-16"
36	1968	Japan	Hakozaki	U. S. Navy	IMODCO	100,000	2-16"+2-12"
37	1968	Japan	Kawasaki	Showa-Mitsubishi Oil	Mitsubishi	250,000	2-20"
38	1968	Japan	Hakodate	Asia Oil	IMODCO	35,000	2-16"
39	1968	Japan	Yokkaichi	Daikyo Oil	Mitsubishi	200,000	2-20"
40	1968	Korea	Yosu	Honom Oil, Caltex	IMODCO	100,000	2-16"
41	1968	Korea	Ulsan	Korea Oil	IMODCO	200,000	2-16"+1-12"
42	1968	Libya	Zuetina	Occidental	SBM	100,000	1-24"
43	1968	Nigeria	Escravos	Gulf	IMODCO	100,000	3-16"
44	1968	Taiwan	Kaohsiung	Chinese Pet.	IMODCO	100,000	2-16"+1-10"
45*	1968	Taiwan	Tai-Chung	U. S. Air Force	IMODCO	75,000	1-12"
46	1968	Venezuela	Moron	CVP	SBM	100,000	2-16"
47	1969	Brazil	Tramandai	Petrobras	SBM	105,000	2-16"
48	1969	Japan	Toyama	Japan Sea Oil	IMODCO	150,000	2-16"
49	1969	Japan	Yokohama	Asia Oil	Mitsubishi	200,000	2-20"

* See Notes

SINGLE POINT MOORING INSTALLATIONS

No.	Year Installed	Country	Port	Owner	Designer	Max. Vessel Size	Hose System Number-Size
50*	1969	Libya	Brega	Esso	Esso, Van Houten	300,000	1-24"
51	1969	Libya	Zuetina	Occidental	SBM	150,000	1-24"
52	1969	Libya	Zuetina	Occidental	SBM	150,000	1-24"
53	1969	Nigeria	Forcados	Shell, B.P.	SBM	240,000	1-24"
54	1969	Nigeria	Forcados	Shell, B.P.	SBM	240,000	1-20"
55*	1969	S. Vietnam	TanMy	U. S. Navy	McDermott	20,000	2-8"
56	1969	United Arab Emirates	Dubai	Continental	SBM	150,000	2-16"
57	1970	Argentina	Puerto Rosales	YPF	IMODCO	40,000	1-16"+1-12"
58	1970	Canada	Saint John, N.B.	Irving Oil	SBM	350,000	1-24"+2-16"
59*	1970	Indonesia	Pangkalan Susu	Pertamina	IMODCO	100,000	2-12"
60*	1970	Iran	Cyrus Field	IPAC	SBM	130,000	2-16"
61	1970	Iran	Iman Hassan	SIRIP/AGIP	IMODCO	150,000	1-16"
62	1970	Israel	Ashkalon	Elat-Ashkalon Pipeline		65,000	2-20"
63	1970	Japan	Atsumi	Chubu Electric	Mitsubishi	200,000	-
64	1970	Japan	Hemeji	Idemitsu Oil	IMODCO	220,000	2-20"
65	1970	Japan (Okinawa)	Nakagusuku Bay	Toyo Oil, Caltex	IMODCO	100,000	2-16"
66	1970	Japan (Okinawa)	Tengan	U. S. Army	IMODCO	55,000	2-12"

* See Notes

SINGLE POINT MOORING INSTALLATIONS

No.	Year Installed	Country	Port	Owner	Designer	Max. Vessel Size	Hose System Number-Size
67	1970	Japan	Toyama	Nihonkai Oil	IMODCO	100,000	2-10"
68	1970	Japan	Ube	Seibu Oil	Mitsubishi	200,000	2-20"
69*	1970	Libya	Es Sider	Oasis Oil	SBM	255,000	2-20"
70	1970	Libya	Ras Lanuf	Mobil	SBM	300,000	2-24"
71	1970	Morocco	Mohammedia	RAPC	IMODCO	100,000	1-20"+2-8"
72	1970	Singapore	Singapore	Esso	IMODCO	250,000	2-24"
73	1970	South Africa	Durban	Shell	SBM	200,000	2-20"
74	1971	Australia	Botany Bay	Maritime Services Board	SBM	120,000	3-12"
75	1971	Brazil	Tramandai	Petrobras	SBM	200,000	1-24"
76	1971	Brunei	Seria	Shell	SBM	250,000	2-16"
77	1971	Chile	Quintero Bay	ENAP	SBM	209,000	2-20"
78	1971	Indonesia	Balikpappan	Union Oil	SBM	250,000	2-20"+1-16"
79	1971	Indonesia	Java Sea	ARCO	McDermott	45,000	1-8"
80	1971	Indonesia	Java Sea	IIAPCO	IMODCO	55,000	2-16"
81	1971	Italy	Porto Torres	Sardoil	SBM	255,000	2-2-"
82*	1971	Japan (Okinawa)	Nakagusuku Bay	Esso	Esso Van Houten	250,000	2-24"
83*	1971	New Zealand	Waipipi Point	Marcona Corp.	IMODCO	75,000	2-12"

* See Notes

SINGLE POINT MOORING INSTALLATIONS

No.	Year Installed	Country	Port	Owner	Designer	Max. Vessel Size	Hose System Number-Size
84	1971	Nigeria	Qua Iboe	Mobil	IMODCO	255,000	2-24"
85*	1971	Norway	North Sea	Phillips	SBM	150,000	1-6"
86*	1971	Norway	North Sea	Phillips	SBM	60,000	1-6"
87	1971	Taiwan	Kaohsiung	Chinese Petroleum	SBM	250,000	2-20"
88	1971	United Kingdom	Humber River	Continental	SBM	210,000	1-24"
89	1972	Dominican Republic	Santo Domingo	Shell	SBM	-	2-16"+1-12"
90	1972	United Arab Emirates	Das Island	BP	IMODCO	300,000	2-24"+1-16"
91	1972	Ecuador	Porto Baleo	Gulf/Texaco	SBM	100,000	1-20"+1-16"
92	1972	Ecuador	Porto Baleo	Gulf/Texaco	SBM	250,000	1-24"+1-20"
93*	1972	Indonesia	Java Sea	ARCO	IMODCO	145,000	2-20"+1-12"
94	1972	Kuwait	Ras al Kaftje	Arabian Oil	McDermott	250,000	1-24"+1-10"
95	1972	New Zealand	Tahora	N. Z. Steel Corp.	IMODCO	70,000	1-12"
96	1972	Nigeria	Escravos	Gulf	SBM	326,000	2-24"
97	1972	Qatar	Halul	Shell	McDermott	300,000	2-24",1-12"
98	1972	Qatar	Um Said	Qatar Pet. Co.	IMODCO	300,000	2-24"
99	1972	Saudi Arabia	Zuluf	ARAMCO	SBM	250,000	2-24"+1-16"
100	1972	Saudi Arabia	Zuluf	ARAMCO	SBM	250,000	2-24"
101	1972	Tanzania	Dar es Salaam	E. African Port Auth.	SBM	100,000	2-20"

* See Notes

SINGLE POINT MOORING INSTALLATIONS

No.	Year Installed	Country	Port	Owner	Designer	Max. Vessel Size	Hose System Number-Size
102	1972	Trinidad	Galiota Pt.	AMOCO	SBM	250,000	2-20"
103	1972	United Arab Emirates	Dubai	Dubai Pet.	McDermott	300,000	2-24"
104*	1972	Spain	Amposta	Shell	SBM	60,000	2-10"
105*	1972	Italy	Genoa	Port Authority	CIDONIO	500,000	2-20"+2-12"
106	1972		North Sea	Gulf	SBM	60,000	-
107	1972	Tunisia	Gulf of Gabes	Aquitaine	SBM	-	2-8"
108	1972	Nigeria	Brass Terminal	AGIP.	IMODCO	250,000	1-20"

* See Notes

PLANNED SINGLE POINT MOORING INSTALLATIONS 1973 +

Approximate Installation Date	Country	Port	Owner	Designer	Max Vessel Size	Hose System Number-Size
1973	Trinidad	Pointe a Pierre	Texaco	IMODCO	265,000	2-24"+1-12"
1973*	Oman	Mina Al Fahal	Shell	SBM	300,000	2-20"+1-12"
1973	United Kingdom	Humber River	Continental			
1973	Mexico	Tuxpan	Pemex	IMODCO	60,000	2-16"
1973	Indonesia	Djatabarang	Pertamina	IMODCO	150,000	2-20",1-12"
1973	Taiwan	Chu Wei	CPC	SBM	250,000	2-20"
1973	Congo	Djeno	ELF-Congo	SBM	250,000	2-20"
1973	Nigeria	Bonny	Shell BP	Shell	300,000	1-24"
1973	Nigeria	Bonny	Shell BP	Shell	300,000	1-24"
1973	North Sea		Shell	Shell	50,000	1-10"
1974	Egypt	Suez	E.G.P.C	SBM	250,000	2-24"
1974	Egypt	Suez	E.G.P.C.	SBM	250,000	2-24"
1974	Egypt	Suez	E.G.P.C.	SBM	120,000	2-20"
1974	Egypt	Alexandria	E.G.P.C.	SBM	250,000	2-24"
1974	Egypt	Alexandria	E.G.P.C.	SBM	120,000	2-24"
1974	Egypt	Alexandria	E.G.P.C.	SBM	120,000	2-20"

* Will replace 29

PLANNED SINGLE POINT MOORING INSTALLATIONS 1973 +

Approximate Installation Date	Country	Port	Owner	Designer	Max Vessel Size	Hose System Number-Size
1974	Egypt	Alexandria	E.G.P.C.	SBM	120,000	2-20"
1974	Egypt	Alexandria	E.G.P.C.	SBM	120,000	2-20"
1974	Singapore	Singapore	Shell	SBM	300,000	-
1974	Saudi Arabia	Juaymah	ARAMCO	McDermott	500,000	2-24"+1-12"
1974	Saudi Arabia	Juaymah	ARAMCO	McDermott	500,000	2-24"+1-12"
1974	Saudi Arabia	Juaymah	ARAMCO	McDermott	500,000	2-24"+1-12"
1974	France	Frontigon	Mobil		275,000	-
	India	Kudrimukh	Marcona (Ore)	-	-	-
	Korea	Pohang	U.S. Army	-	-	-
	Brazil	Sao Francisco	Petrobras	-	200,000	-
	United Kingdom	Anglesey	Shell	-	540,000	-
	United Kingdom	Anglesey	Shell	-	540,000	-

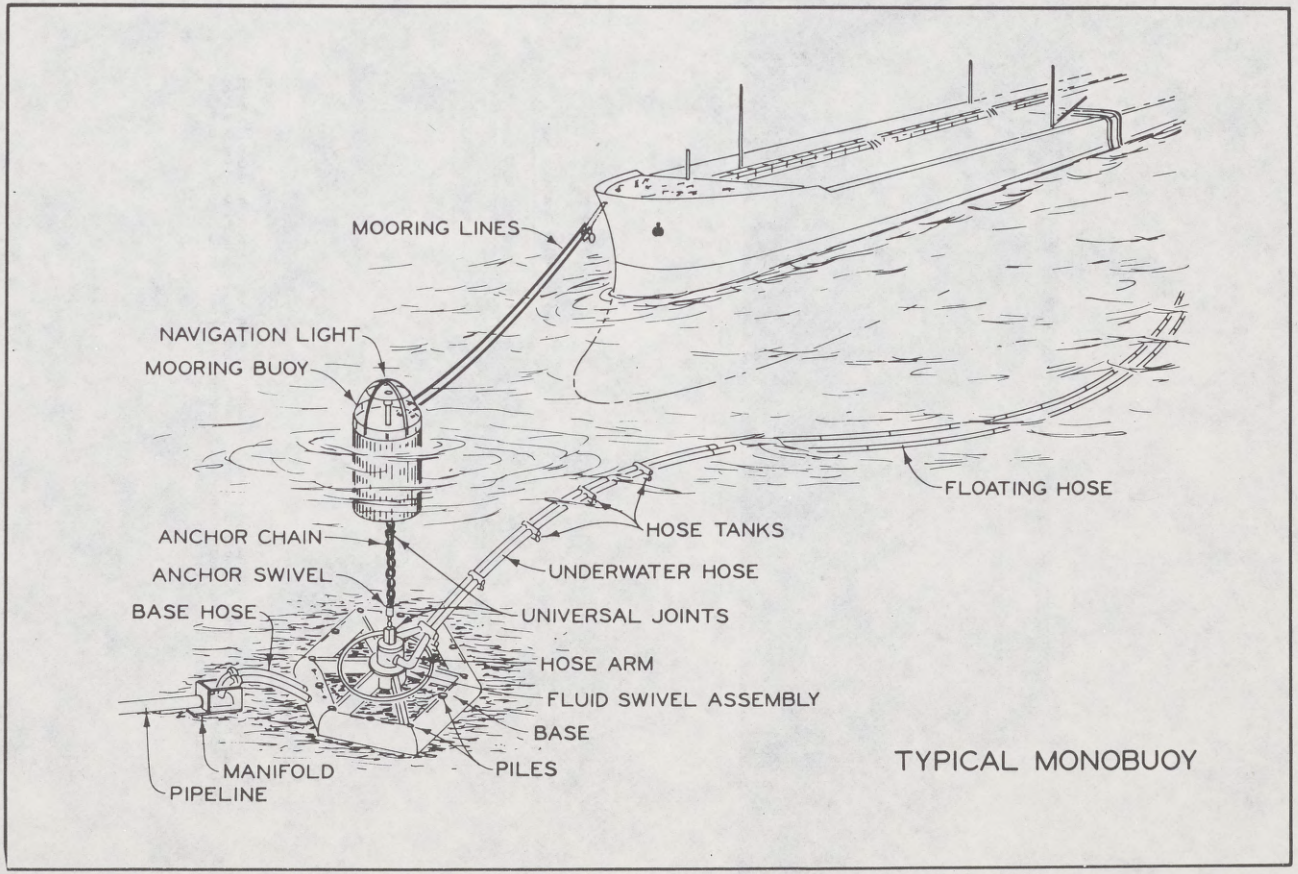
SINGLE POINT MOORING INSTALLATIONS

NOTES

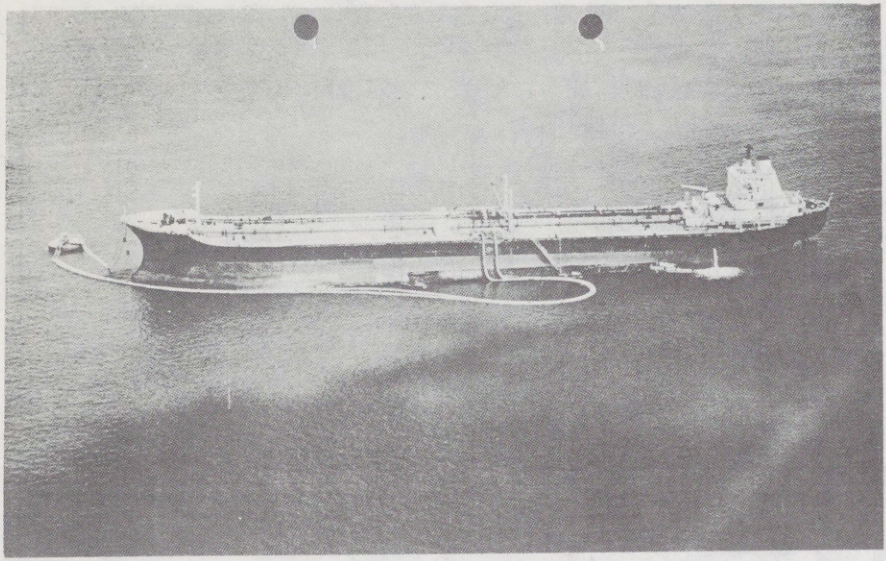
1	Out of service
3	Out of service, now used as part of multi-buoy berth
7	Out of service
8	Fixed mooring tower, underwater loading arm
9	Out of service, transferred to 59
12	Fixed mooring tower
16	An extra buoy was furnished to replace 2, 15 and 16 for maintenance.
17	Experimental, 4 taunt anchor legs, out of service
20	Out of service, replaced by 69
21	Storage vessel, out of service
28	Liquid petroleum gas facility
29	To be replaced in 1973 by SPM designed for 500,000 dwt
32	Out of service, replaced by 45 designed for larger vessel
33	Storage barge, out of service
45	Out of service
50	Single anchor leg mooring
55	A second buoy was delivered for installation but was not installed
59	Transferred from 9
60	Storage vessel Pazagrad
69	Replaces 21
82	Single anchor leg mooring

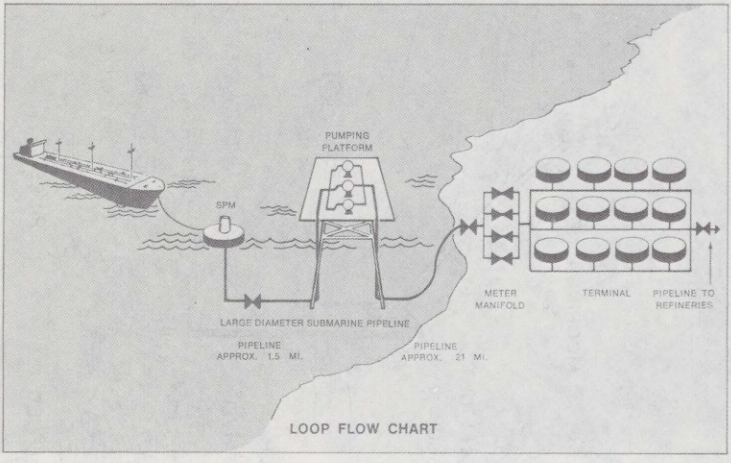
83	Iron ore slurry facility
85	Special production field mooring, 230 feet water
86	Special production field mooring, 230 feet water
93	Storage vessel
104*	Storage vessel
105	Fixed mooring tower

Revised 5/2/73



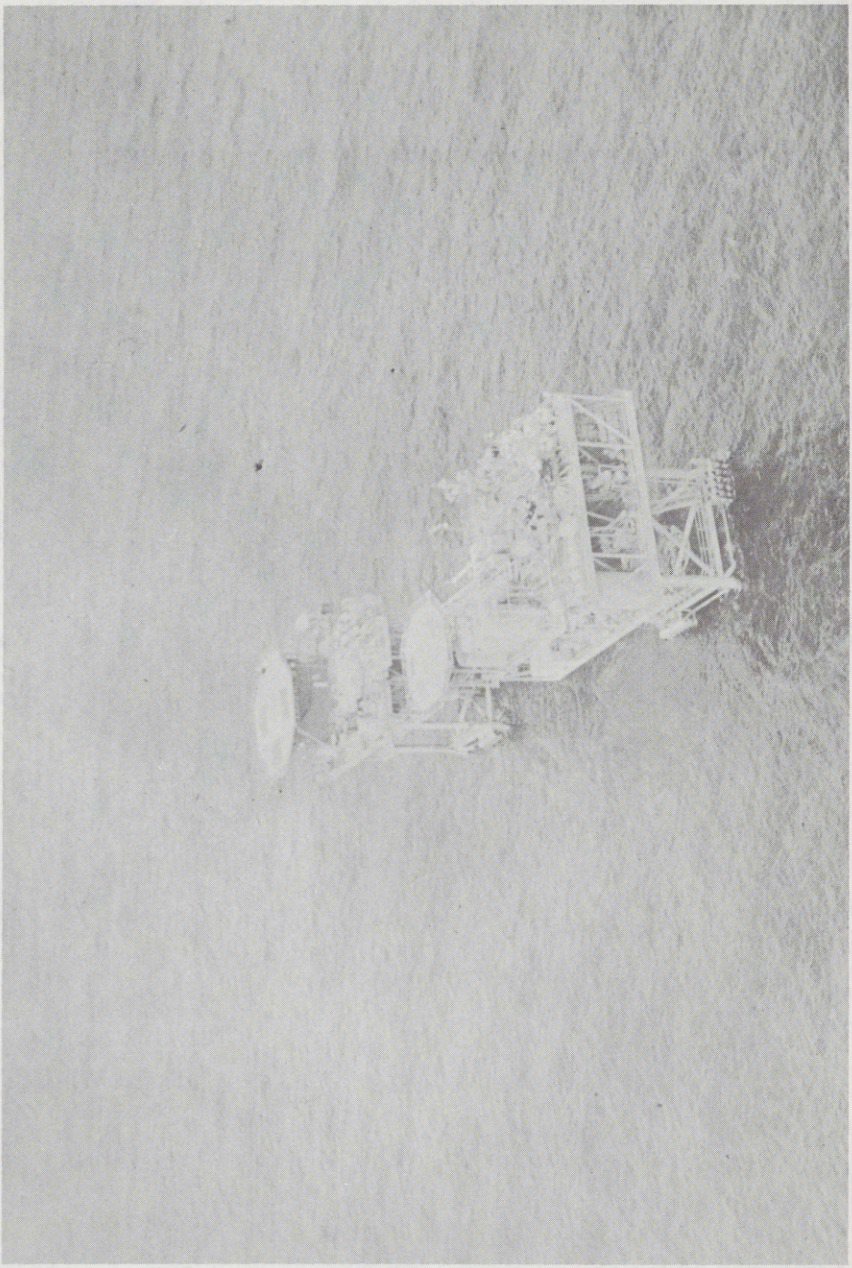
TYPICAL MONOBUOY

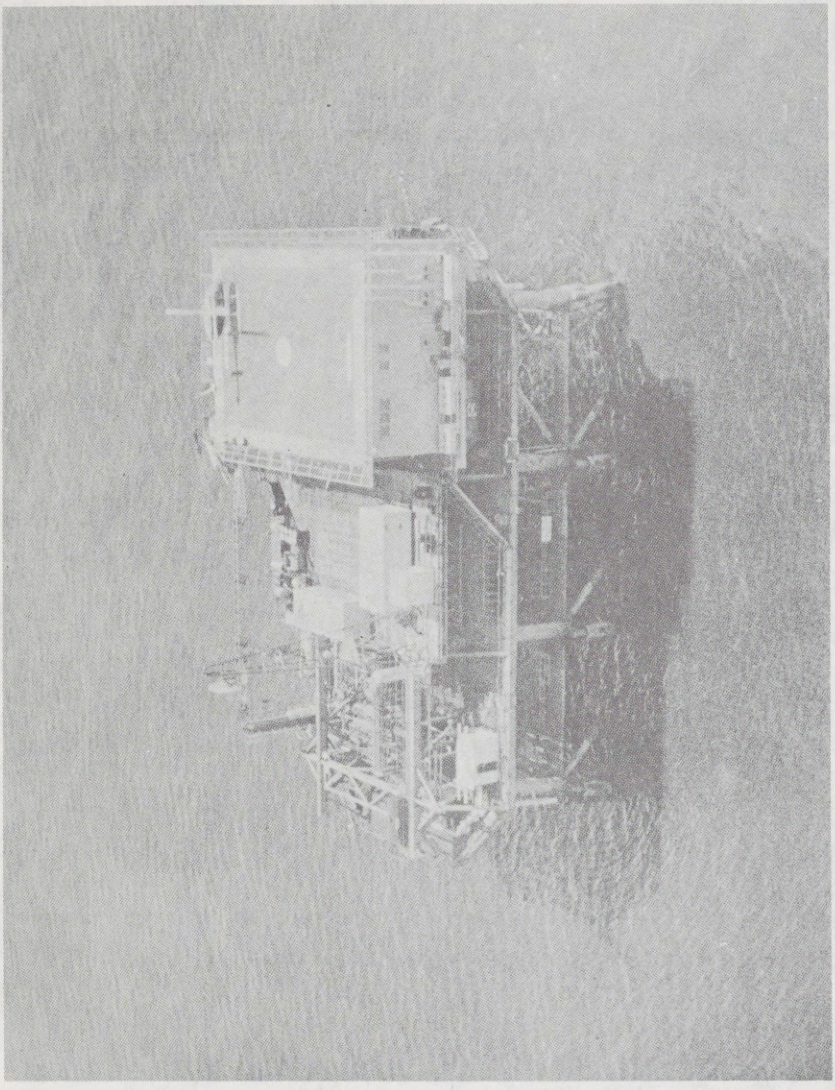


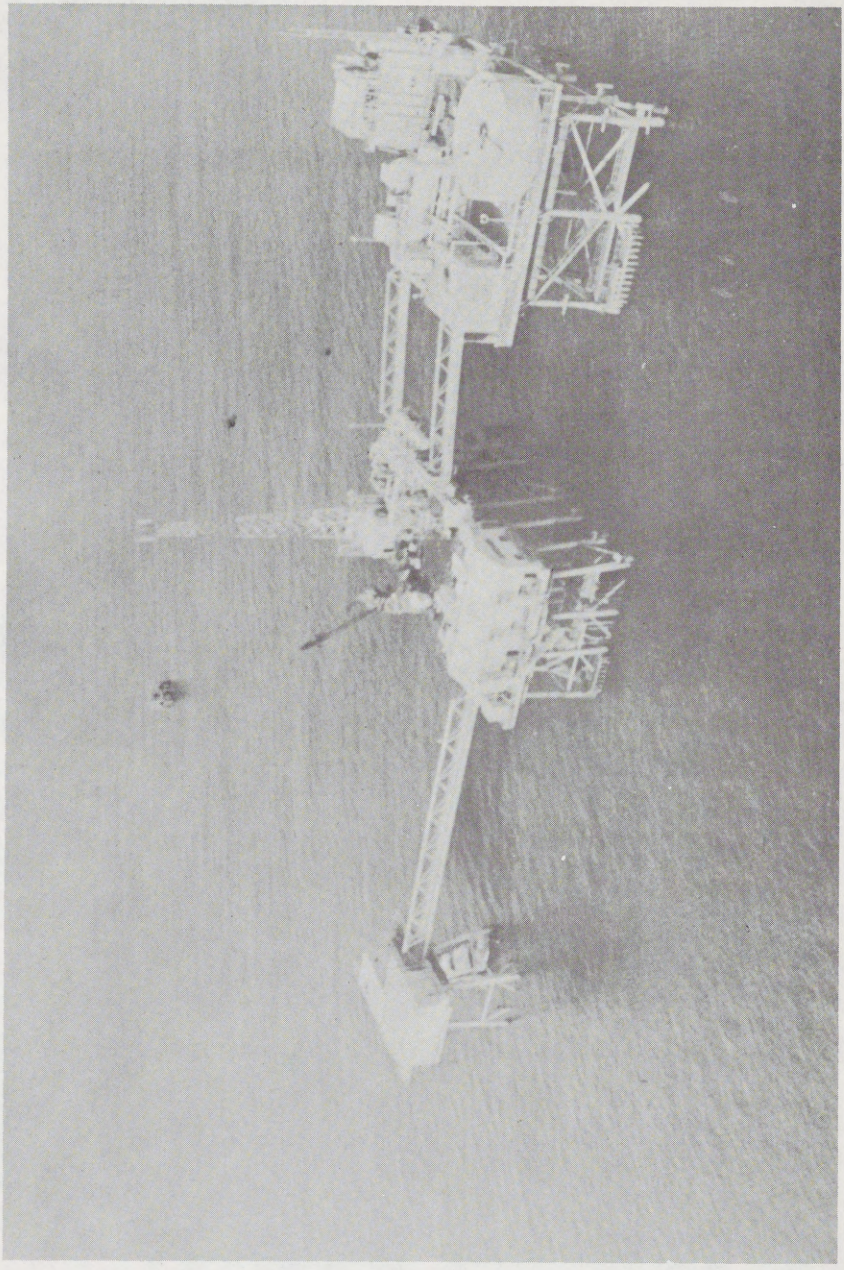


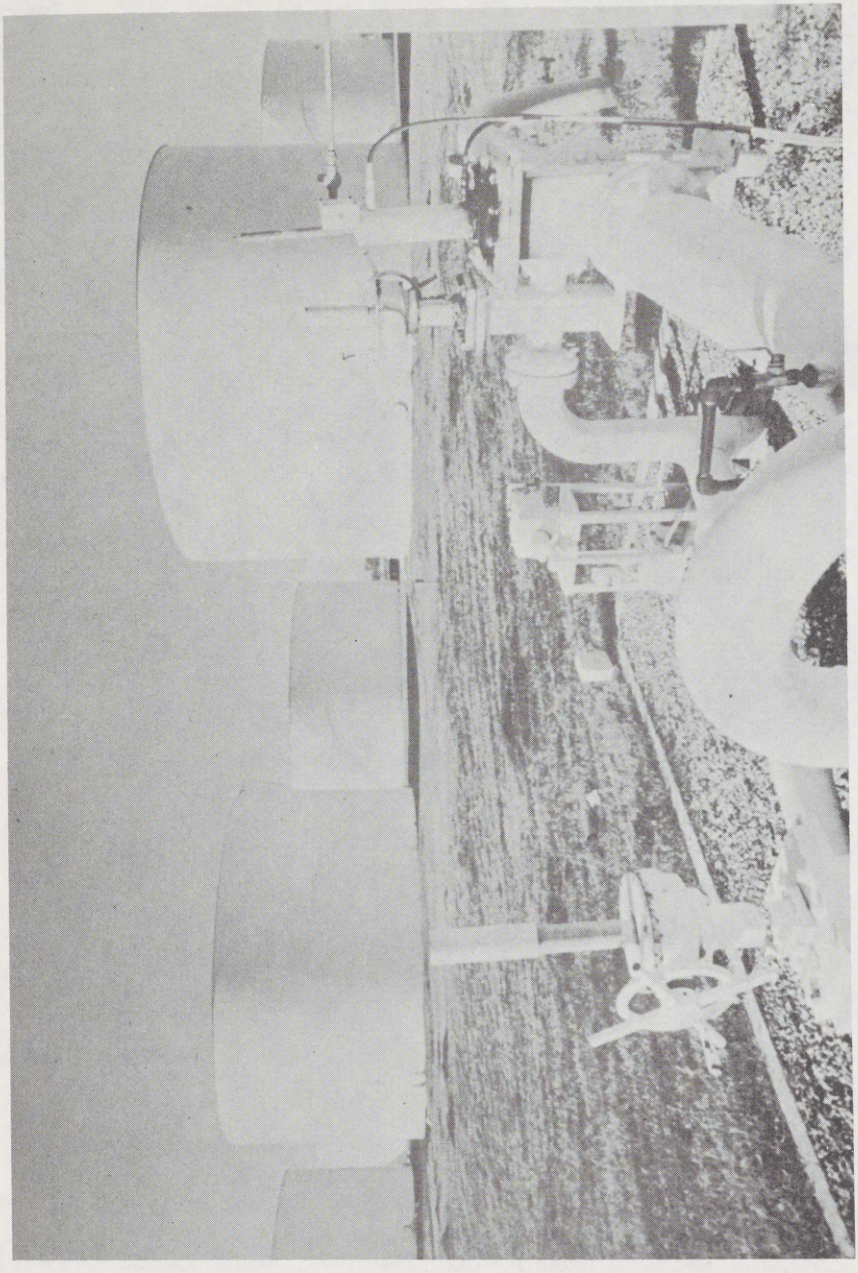
LOOP FLOW CHART

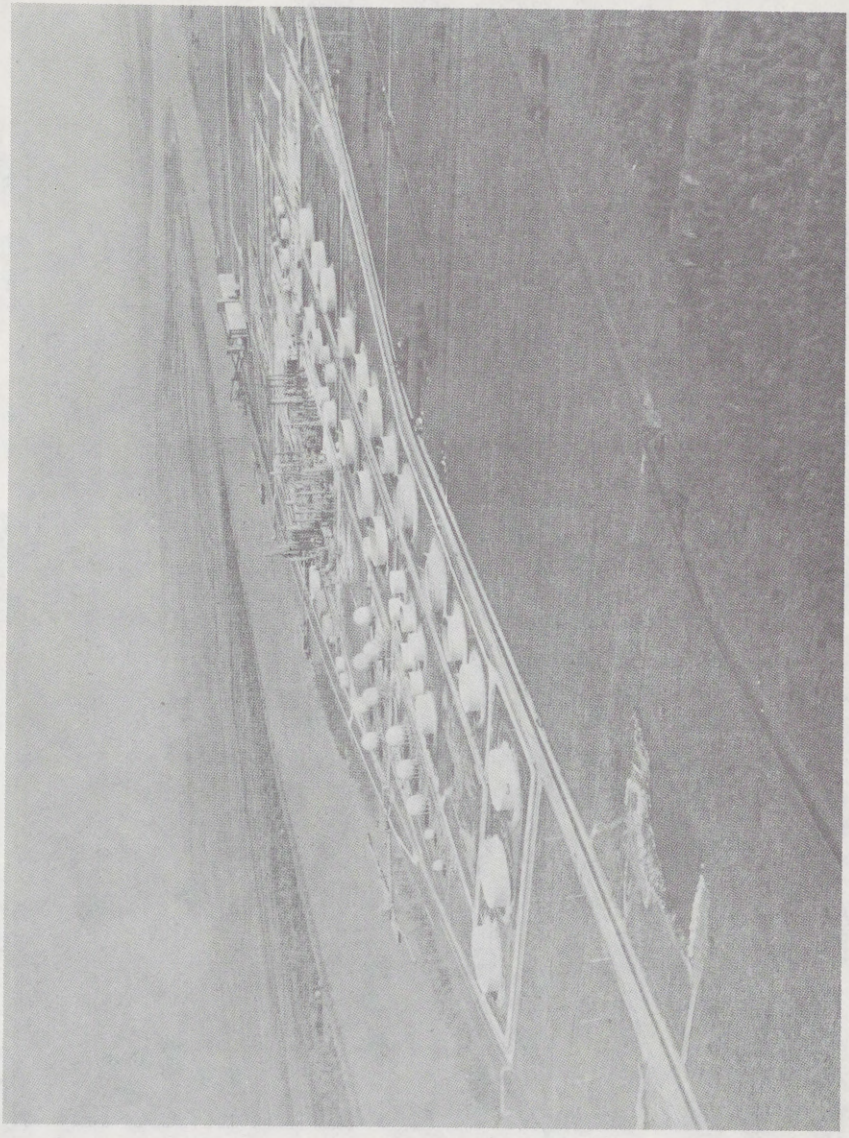
The use of offshore terminals of this type is commonplace, particularly at crude loading ports outside the United States. They have been used for a number of years with excellent results in areas with operating conditions much like those found in the Gulf of Mexico, where wind and wave conditions would cause a fixed-platform type of facility to be out-of-service more than 50% of the time.

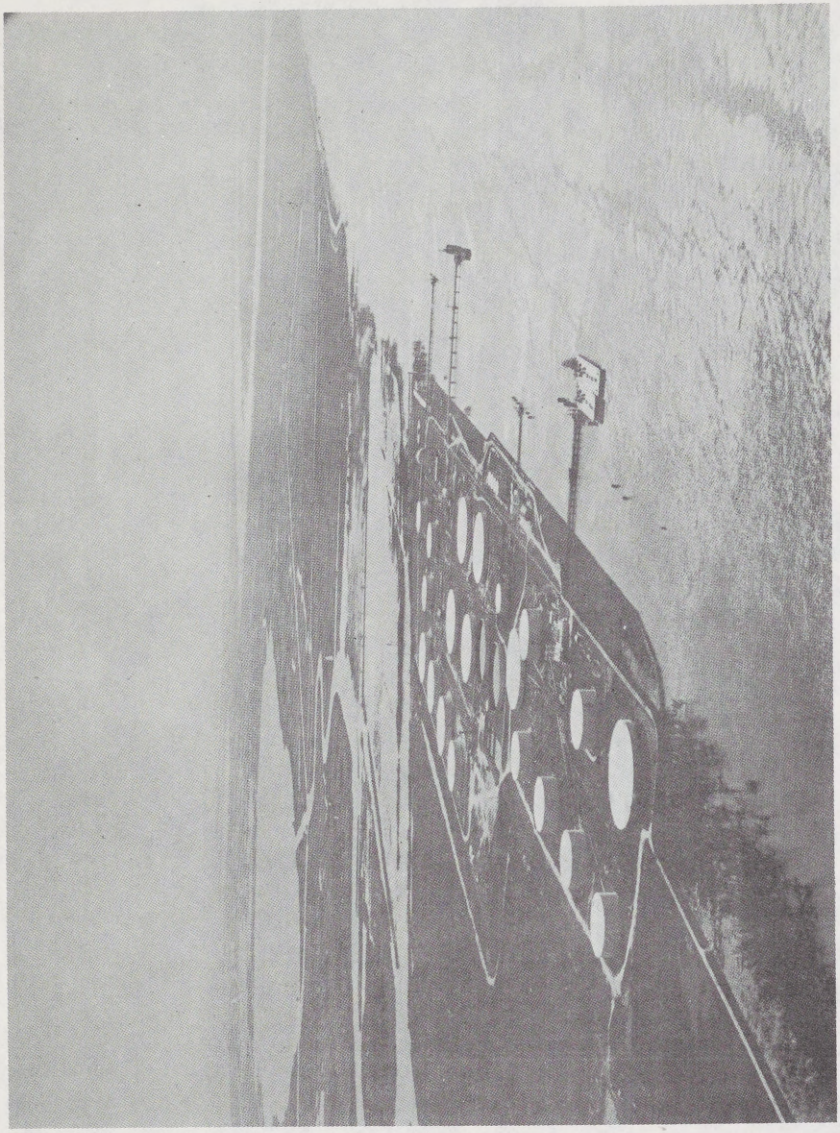












SEADOCK,
Houston, Tex., June 28, 1973.

HON. JAMES J. HOWARD,
Chairman, Committee on Public Works, Subcommittee on Energy, U.S. House of Representatives, Washington, D.C.

DEAR MR. CHAIRMAN: In accordance with recent discussions with your Subcommittee staff, I am submitting herewith the views of Project Seadock on H.R. 2020.

Enclosed also is a statement describing Project Seadock and the urgent need for comprehensive legislation to authorize one Federal agency to issue licenses for the construction and operation of an undetermined number of deepwater tanker terminals outside the territorial waters of the United States.

Seadock opposes the enactment of H.R. 2020 for two reasons. In the first place, it's unnecessary.

The five essential elements of any deepwater tanker terminal complex are one or more monobuoys in approximately 100 feet of water; a pumping station; one or more pipelines ashore; an onshore tank storage farm, and a pipeline distribution system to coastal and inland refineries and petrochemical plants. If any one of these elements is missing, the entire complex is rendered useless.

Existing statutes clearly establish the jurisdiction and control of the Coastal States over both of the onshore elements of any such complex, as well as any submerged pipelines within territorial waters. Under the circumstances, the Coastal States already have all the authority they need to block any deepwater tanker terminal off their coasts if that is the objective of the Governor and/or State Legislature.

Seadock also opposes the enactment of H.R. 2020 because it addresses only one facet of the deepwater ports issue—the role of the States in determining where such facilities will be located. Seadock recognizes the necessity of incorporating in any such legislation provisions to insure that the interests of the States are protected. But it's of utmost importance that those interests and those provisions be resolved and enacted within the context of a comprehensive licensing and regulatory package, rather than piecemeal.

In addition, Seadock shares the concerns expressed by many other witnesses over the proposal in H.R. 2020 to give each State statutory veto power over not only deepwater terminals in international waters off its coast but over similar projects off the coast of an adjacent State. This raises serious legal questions and could complicate International Conventions to which the United States may wish to be a party.

Seadock urges your careful consideration of these comments on H.R. 2020 and respectfully requests that this letter and enclosure be made a part of the record of your recently completed hearings.

Sincerely yours,

R. H. CHITWOOD,
Chairman, Seadock Management Committee.

STATEMENT OF J. E. ARNOLD, MANAGER, DISTRIBUTION, PHILLIPS PETROLEUM CO., AND CHAIRMAN, SEADOCK PUBLIC AFFAIRS COMMITTEE

INTRODUCTION

Mr. Chairman, I am J. E. Arnold. Manager of Distribution of Phillips Petroleum Company and Chairman of the Seadock Public Affairs Committee. I am pleased to be here today on behalf of Seadock. The purpose of the Seadock project is to develop a deepwater facility capable of unloading petroleum imports from the new 200,000 to 500 000 deadweight ton class of very large crude carrier or VLCC. The proposed location is 25 to 30 miles offshore of Freeport, Texas. We believe that Seadock is in the public interest because it offers significant environmental advantages as well as cost savings to the consumer. Today I will describe what we propose to do and bring you up-to-date on the status of our project.

Seadock's membership presently includes eleven oil companies and one petrochemical company. The oil companies are: Amoco, Atlantic Richfield, Cities Service, Continental, Crown Central, Exxon, Mobil, Phillips, Shell, Texaco and Toronto Pipeline. The petrochemical company is Dow Chemical. These companies operate about 2.7 million barrels per day of the total 3.3 million barrels per day of refining capacity located in the Western Louisiana and Texas Gulf Coast area.

Seadock will be financed by private industry and no federal subsidy will be required. Industry has the technical expertise and financial ability to design, build and operate the Seadock terminal; and we believe this is the role which industry should play.

Seadock will be a common carrier and provide a service to all who need to use it, both owners and non-owners alike. It will publish and file rules and regulations which are common to all its shippers. Its operations, including tariff charges, will be regulated by the Interstate Commerce Commission. Although membership in Seadock is open and we expect other companies to join the project, we are trying to anticipate the needs of those companies who have not chosen to participate by designing extra capacity into the system and engineering the means for future expansion.

Today I will discuss four main topics. First, I will briefly review the long term need and industry logistics related to Seadock. Then I will describe in more detail the Seadock project and its operations. Next I will discuss the positive effects that we believe the combination of VLCC's and deepwater terminals will have on our economy and environment. And finally, I will close with some comments pertaining to the type of Federal legislation which we believe is needed to make the Seadock project a reality.

LONG-TERM NEED FOR DEEPWATER TERMINALS

Deepwater terminals will supply a need that exists not only during the next decade but for many years beyond. Based on the recent two year study of the National Petroleum Council, nuclear power and synthetic fuels are expected to supply 16% of total U.S. petroleum demand by 1985 based on the most optimistic assumptions possible considering the problems being encountered in siting and construction. This compares to nuclear power's approximate 1% share of total energy demand today. Despite this rapid growth in other fuels, petroleum imports are expected to reach 15.0 million BPD by 1985. Hopefully during the decade following 1985, other fuels will be able to slow down the growth rate of oil imports; but it is highly unlikely that the volume of oil imports could be held constant during this period, much less be reduced. The need for deepwater terminal facilities should exist throughout the balance of this century.

CRUDE AND PRODUCT LOGISTICS

Due to the current high level of overwater crude imports and somewhat declining domestic production, deepwater terminals are needed to supply existing refinery capacity as well as expansions and new refineries. The crude oil imported through Seadock will be utilized by Gulf Coast and mid-continent refineries. This will be accomplished by permittnig crude oil currently flowing to the Gulf Coast to be diverted through existing pipelines to mid-continent refineries. In addition, existing pipelines may be reversed; and at least one new large throughput pipeline is being considered to directly move crude oil from Seadock to the Midwest. It is estimated that about one million BPD out of the three million BPD of crude oil expected to move through Seadock in 1980 will effectively supply Midwest refineries. Total petroleum imports are projected at 10.5 million BPD by 1980.

Products refined on the Coast from crude oil handled through Seadock will also be moved to other areas of the U.S. such as the Midwest, Southeast and Atlantic Coast. Today over 50% of the petroleum products processed on the Gulf Coast are transported to these other areas, and this is expected to continue in the future even with significant refinery growth in the Northeast.

EFFECT ON EXISTING PORTS

Deepwater terminals will complement existing port facilities and encourage their growth by providing petroleum raw materials at economical transportation costs to existing refineries, petrochemical plants and industries. Moreover, movements of finished products (including refined products, chemicals, grains, etc.) and specialized feedstocks through existing ports are expected to increase with or without deepwater treminals. Separate from the deepwater terminal legislation, attention needs to be directed toward modernization and expansion of existing ports to handle anticipated increasing commerce.

Some proponents of deepwater terminals have advocated "superports" which would handle dry bulk products, such as iron ore, coal and grain, as well as petroleum. We do not favor multi-use deepwater terminals. Most studies of this

concept indicate that there is relatively little economic incentive for using superports for dry bulk products, since they move in relatively small quantities compared to petroleum and because their point of origin and destination are much more diverse. In addition, the majority of dry bulk carriers have shallow enough drafts to permit the use of existing ports. Multi-purpose ports pose added environmental risk since the additional ships with their different types of cargo would cause both congestion and complication of equipment and operating procedures, resulting in an increased possibility of accident. Since human error is the major cause of oil spills, simplification of operating procedures is an important factor in reducing the chances of an accident. As previously mentioned, separate consideration should be given to dry bulk products through modernization of existing ports while deepwater terminal legislation should be directed toward single purpose petroleum facilities.

THE SEADOCK PROJECT

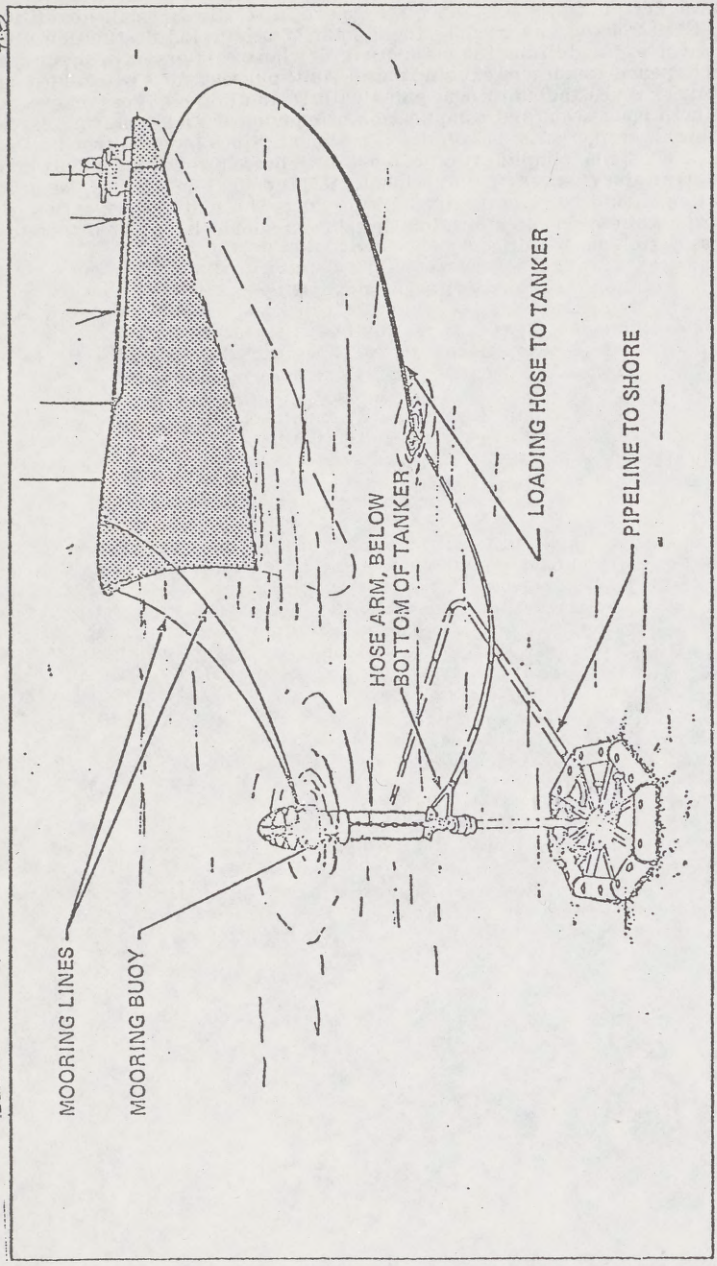

MOORING LINES
MOORING BUOY
HOSE ARM, BELOW
BOTTOM OF TANKER
LOADING HOSE TO TANKER
PIPELINE TO SHORE

FIGURE 1

Seadock has chosen the single point mooring or SPM technique for our terminal. With this system, the tanker moors at a buoy and oil is then pumped from the tanker through a floating hose to an SPM and from there into an undersea buried pipeline to shore. I would like to point out that this is a proven concept since over 100 SPM's have been installed and successfully operated worldwide since the first application in 1959. The single point mooring has the advantage of being operable in weather that would put other types of terminals out of service. The tanker is free to weathervane about the buoy, facing into the wind, current and waves to keep mooring line and other forces to a minimum. These buoys are sturdy and safe.

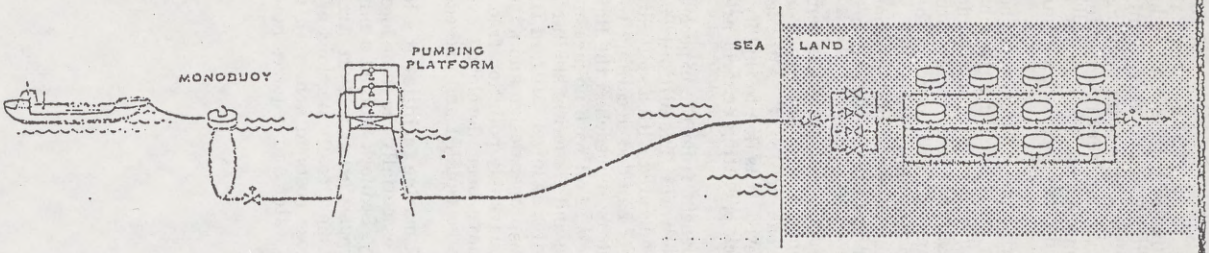
At the Seadock single point mooring buoy, VLCC's will be able to moor in up to 6′ significant seas with a mooring craft handling the mooring lines and hoses. Once moored, the VLCC will be able to operate in significant seas of up to 12′ while pumping oil ashore. Historical data from the Institute of Storm Research shows that significant seas less than 12′ will occur on the average of 96.6% of the time at the Seadock location. The buoys themselves would be designed to withstand hurricane conditions; however, the tanker would have to stop pumping, close its valves and disconnect from the hoses and mooring lines under such conditions.

In the North Sea, one of the Seadock companies has demonstrated, as a result of two years of successful experience, the ability to self-moor in seas up to 16′ and once moored, to operate in seas up to 24′. Although different operating equipment and conditions are involved, it is due to rapidly improving techniques such as this that the above Seadock operating criteria are considered conservative.

The operation of Seadock will benefit from the experience gained at some of the newer oil terminals around the world. The Milford Haven terminal, located in a national park in England, has operated with a spill rate of less than one-half barrel for every one million barrels handled according to a recent government report. In a region of Ireland noted for its beaches, the Bantry Bay terminal has handled well over 500 million barrels of oil with no measurable pollution. Single point moorings in Libya, Singapore and Okinawa, similar to those that Seadock will use, have operated with spill rates as low as Milford Haven and Bantry Bay. These operations will illustrate how proper design and adherence to good operating procedures have resulted in remarkably pollution free operations. With new technology and expertise which have been developed over the years, we are certain these accomplishments can be equaled and exceeded by U.S. deepwater terminals.

Seadock plans to build the initial marine facilities at a location 25 to 30 miles offshore of Freeport, Texas. This is essentially the same location recommended by the Corps of Engineers in its study. Seadock studied a number of offshore locatios ranging all the way from Corpus Christi to Port Arthur. The onshore and multiple offshore pipelines are the most costly portions of the Seadock system. The Freeport location balances those costs to achieve a minimum investment. This location is in naturally deep water and requires no dredging.

FIGURE 2



LARGE DIAMETER SUBMARINE PIPELINE

PIPELINE (±1.5 MILES)	PIPELINE (±34 MILES)	METER MANIFOLD	TERMINAL	PIPELINE TO REFINERIES

SEADOCK FLOW CHART

At least three SPMs are planned initially. Since a wide range of ship sizes are expected to call at Seadock, these buoys will be in 90 to 110 feet of water so as to be capable of handling ships in the 500,000 ton class. One buoy will be fitted to accommodate the small number of 50,000 to 100,000 ton ships expected. These buoys will be connected to a pumping platform by buried pipelines capable of unloading rates of 125,000 barrels per hour or more. Buried pipelines will move the oil from the platform to an onshore tank farm.

The initial offshore facilities will be equipped with sufficient pumping capacity to move the crude the 35 to 40 miles to the Freeport onshore terminal. An offshore pumping and control platform which is very similar to existing production platforms in the Gulf will also house the living quarters for the offshore crews and will be equipped with a weather station and monitoring and communication facilities. Additional platforms, buoys and lines to show will be added as needed. The modular design of Seadock insures easy expansion so that future, deeper draft ships can be accommodated.

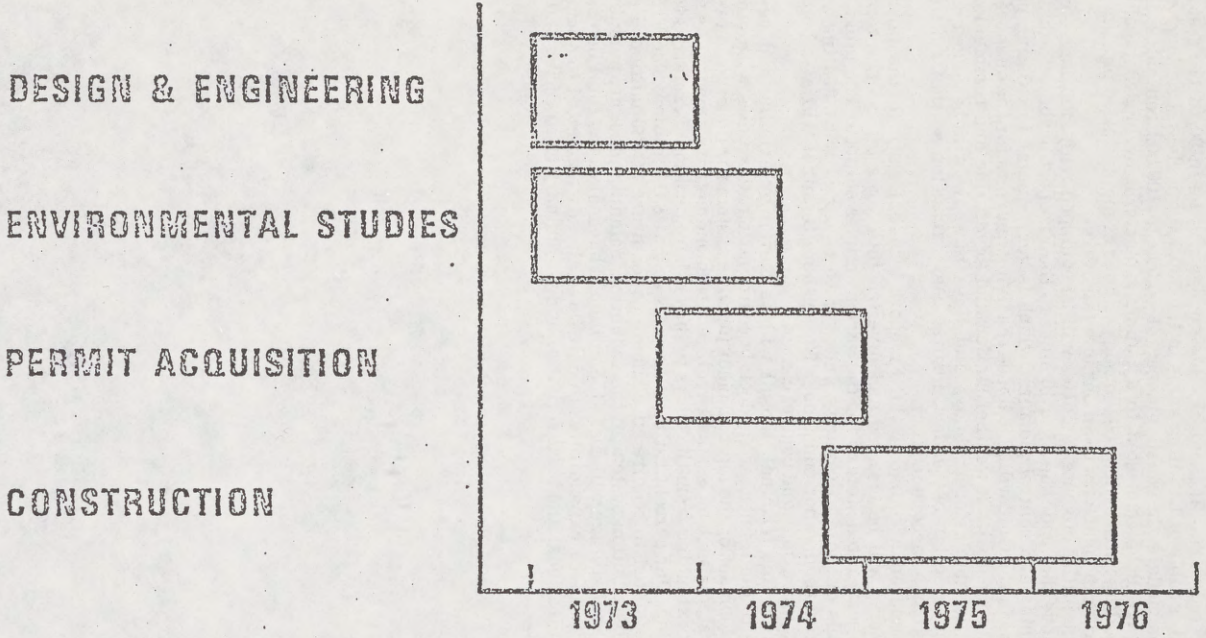
Crude oil arriving at the Freeport terminal through the pipelines from the platform will be metered and diverted into large tanks. The terminal will provide segregated storage for the various crudes shipped. The tanks will be 500,000 barrels or more in capacity and will be equipped with floating roofs to control hydrocarbon vapor emissions. The onshore terminal will also house the primary communications and control center.

From this terminal, the oil will be moved by existing and new pipeline systems to the refineries. Seadock is coordinating its studies with others engaged in development of the most efficient pipeline system for distribution to the refineries.

Systems such as Seadock require a tremendous investment. The segment of Seadock extending from the buoys to the onshore terminal is referred to as the marine portion. Our current estimate fixes its cost at $310 million. The Freeport terminal is estimated to require an ultimate expenditure of $80 million. Beyond Seadock, the distribution system to the refineries including pipeline, pumping stations and breakout storage will cost $155 million. That makes the total investment $545 million. Seadock expenditures to date have already amounted to about $1 million for organizational and legal activities and preliminary engineering and environmental work.

FIGURE 3

SEADOCK TIMETABLE



As you can imagine, the construction of Seadock will require considerable time. The timetable we hope to follow would allow Seadock to be in operation by 1976. However, the actual schedule will be greatly dependent on such factors as when Federal enabling legislation is provided, the time required for processing of the permit application, environmental impact statement preparation and review by Federal agencies, completion of necessary public hearings, cooperation of affected states and so forth. This project is currently being implemented by Seadock's Management Committee that functions much like a board of Directors, a Technical Committee that sets and reviews standards, a Legal Committee that has responsibility for the necessary legal research and permitting activities, a Public Affairs and Government Relations Committee that has responsibility for hearings such as this, and our full-time employees located in Houston.

Seadock has been in close contact with various Texas State agencies and officials to advise them of our plans, to offer our assistance, and to receive their ideas. They support the concept of deepwater terminals and are cooperating with Seadock in every possible way. To promote establishment of a deepwater terminal off the Texas coast, the Legislature, in 1972, established the Texas Offshore Terminal Commission.

We think this Commission can be a major asset to the State in meeting its goals and that it will be a critical link between Seadock and the government. Although existing Texas law and regulations appear adequate to cover the onshore terminal facilities and that portion of the pipelines within its territory, one of the Commission's important tasks will be to insure that efforts directed at developing deepwater terminals are kept moving in the various State agencies that will be involved.

Seadock has completed a considerable amount of design and engineering work and is currently concentrating on finishing that work as well as environmental studies that will be necessary in seeking a construction permit. Our Houston based engineering staff is engaged in gathering data regarding volume forecasts, physical information and design criteria. They have finished a preliminary onshore soil analysis and are working on a similar study offshore. Conceptual design, sizing and optimization of all facilities is well under way.

Environmental studies have been started to gather data required for an environmental assessment. Dames and Moore, a leading environmental consultant, and Texas A. & M. University have been awarded a joint contract for this work. Specialized segments of these studies will be handled by subcontracts, such as the measurement of air quality parameters being conducted by Southwest Research Institute. Seadock estimates that the environmental studies will take until early 1974 to complete.

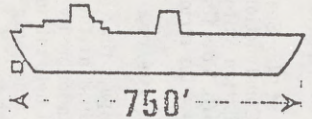
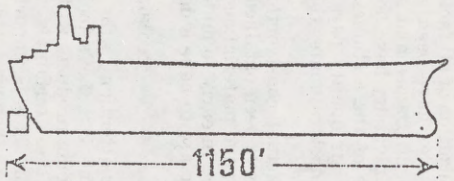
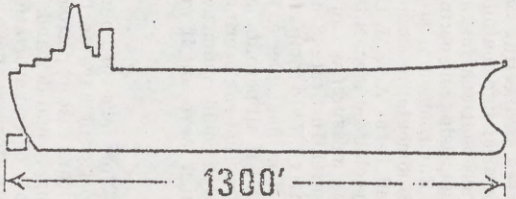
The final phase, actual construction of the Seadock facilities, can begin in 1974 if all permits have been obtained. Construction activities, including preconstruction engineering and material acquisition will take at least 18 months. Operation could commence in early to mid-1976. This timetable demonstrates why we must move *now* if we are to have a deepwater terminal when it is needed.

ECONOMIC IMPACT

Now let's turn our attention to the impact that deepwater terminals like Seadock will have on the U.S. Let's look first at the economic impact. While the future cost of petroleum products will undoubtedly rise in response to the law of supply and demand, these terminals will help minimize this cost by reducing the cost of transportation. This is important not only to the individual in what he pays for gasoline and other products, but to U.S. industry that depends on minimum cost energy to remain competitive. The recent trend in shipbuilding is

FIGURE 4

TRANSPORTATION COST – 1980
PERSIAN GULF TO U.S. GULF COAST

	SHIP	CARGO & DRAFT	RELATIVE COST/BBL.
1950		30,000 DWT 35 FT.	100 %
1960		50,000 DWT 38 FT.	88 %
1970		250,000 DWT 65 FT.	45 %
1975		500,000 DWT 95 FT.	38 %

aimed at reducing transportation costs. The 30,000 ton vessel is the average size ship that has called on Gulf Coast ports in the past few years. Let's consider the newbuilding cost of moving a barrel of crude from the Persian Gulf to the Gulf Coast on a 30,000 ton ship during 1980 as equal to 100 percent. The ship of today, the 250,000 ton vessel could cut this cost to 45 per cent of the 30,000 ton ship cost if it could be unloaded at a U.S. port; and the 500,000 ton ship of tomorrow could cut shipping cost to 38 percent. The 50,000 tonner is the biggest ship that can get into most U.S. ports when fully laden, and no U.S. port is deep enough to allow entry of a fully laden 250,000 ton and larger ships. A deepwater terminal such as Seadock has the flexibility to handle the deepest draft ships whereas the cost of deepening and enlarging existing ports to handle comparable VLCC traffic would probably be prohibitive.

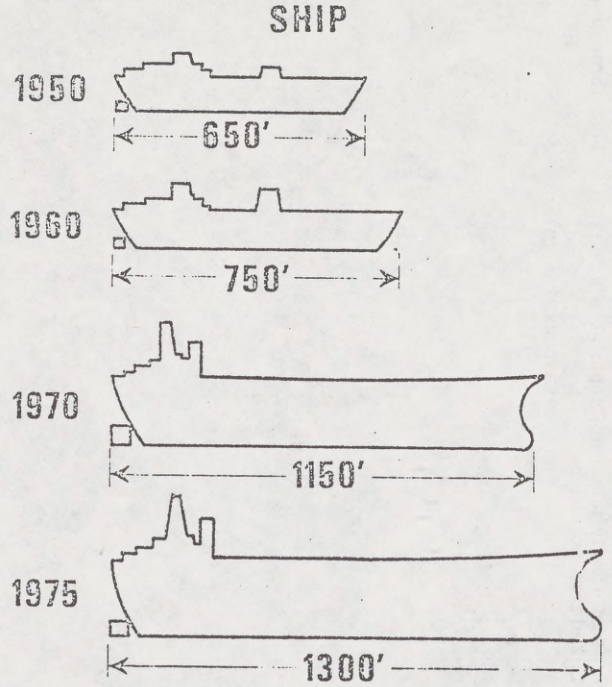
Seadock and other similar facilities will help provide an adequate supply of energy as the United States becomes increasingly dependent on imported crude oil. This will insure that existing industry is supplied with energy needed to continue operations.

All knowledgeable sources concur that there is no "short term" viable or publicly acceptable U.S. energy supply alternatives to increased imports of petroleum. Because of current rising import levels and somewhat declining domestic production, deepwater terminals are needed to supply existing refinery capacity. The actual land requirements for a deepwater terminal are minimal including pipelines for delivering oil to refineries. Downstream industrial developments that might follow construction of a deepwater terminal are already subject to state and local legislation and regulation. These downstream developments can thus be restricted in some areas but allowed to develop in other areas. To the extent development is desirable, deepwater terminals do provide a means to attract new industry and assure continued economic growth for the U.S. This growth opportunity exists not only for the Coastal region but also extends to many inland areas which will benefit from the large volume deepwater terminals feeding existing and new inland pipeline systems. Such inland systems are more likely with deepwater terminal development which permits high throughput economical inland transportation.

ENVIRONMENTAL IMPACT

FIGURE 5

TRENDS IN TANKER SIZE



	CARGO	FOR 3,000,000 BARRELS/DAY
1950	30,000 DWT (225,000 B)	13 EACH DAY
1960	50,000 DWT (375,000 B)	8 EACH DAY
1970	250,000 DWT (1,875,000 B)	1 & ½ EACH DAY
1975	500,000 DWT (3,750,000 B)	¾ EACH DAY

1–94–1806

Now let's look at the environmental impact of big ships and deepwater petroleum unloading terminals such as Seadock. The number of tanker arrivals required in the Western Louisiana and upper Texas Gulf Coast ports to supply the three million barrels per day of Seadock throughput I just mentioned will increase dramatically if a deepwater terminal is not provided. If 30,000 ton ships were used, 13 port arrivals per day would be required. This drops to 1½ calls per day for a 250,000 ton VLCC. In addition, with expected growth in refining capacity, oil products shipped from Texas ports will also increase, either with or without deepwater terminals. We estimate that the total load on Texas ports will double by the early 1980's without an off-shore terminal. This illustrates the positive effect VLCC's will have in reducing port congestion.

FIGURE 6

ANNUAL SHIP CALLS TO SUPPLY TOTAL UNITED STATES WATERBORNE CRUDE OIL IMPORTS

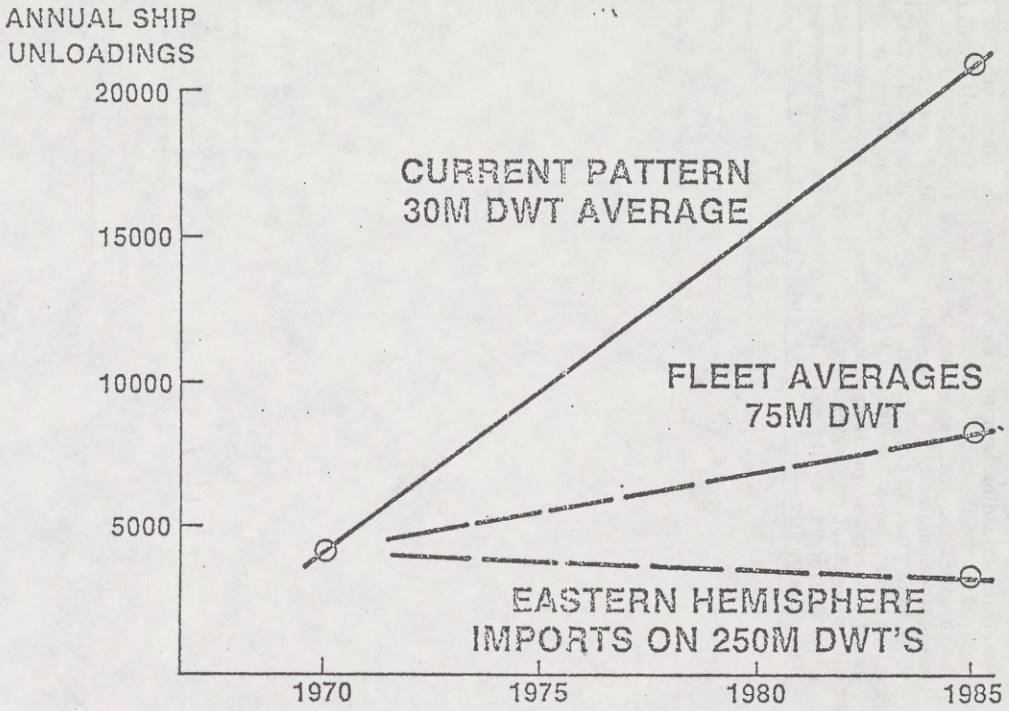
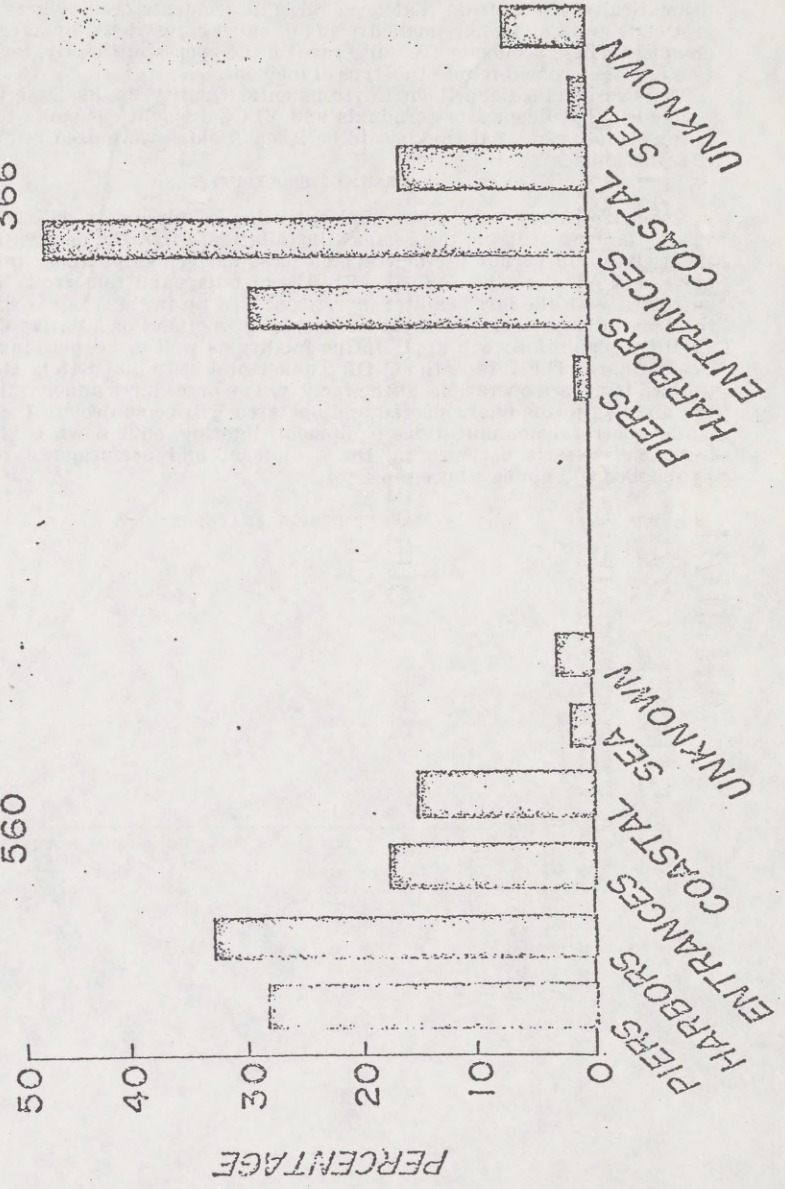


FIGURE 7 LOCATION OF TANKER ACCIDENTS



Historical data analyzed by the U.S. Coast Guard on collisions and groundings dramatically demonstrate that most oil spill accidents occur where harbor congestion is great and where maneuvering of ships is restricted by narrow, winding channels. These accidents are quite rare on the open sea. Clearly, Seadock's location far offshore will reduce this type of incident.

The President's Council on Environmental Quality, in its East Coast study, concluded that deepwater terminals and VLCC's would cut spills to about one-tenth (1/10th) of what they would be if small ships were used in direct service or transshipment.

TANKER PROCEDURES

Extensive safety precautions and operating requirements will be established for the tankers utilizing the Seadock installation. First, the deepwater terminals themselves will permit the newest and most modern ships afloat to be used for movement of oil to the U.S., the VLCC's of today and tomorrow. The Masters entrusted with the large capital investment tied up in the VLCC's will be highly trained and experienced. Intergovernmental Maritime Consultative Organization (IMCO) regulations will apply to the facility as well as regulations of the U.S. Coast Guard. The International Oil Tanker and Terminal Safety Guide will be utilized to govern operations at the facility. The procedures under which the ships are directed to the buoy, moored and operated will be subject to U.S. regulation traffic control, communications equipment, lighting, shut down equipment, drip pans, etc. Vessels not meeting the equipment and performance requirements established will not be allowed to moor.

SAFETY DESIGN FEATURES

FIGURE 8

DESIGN ASPECTS WHICH REDUCE POLLUTION RISK

- UNLOADING TERMINAL — NO BALLAST PROBLEMS
  — NO OVERFILLING OF TANKER
- PETROLEUM ONLY — NO DRY PRODUCTS
  — UNCOMPLICATED
- DRIP PANS
- ELECTRONIC MONITORING
- FACILITY INVISIBLE FROM SHORE
- PIPELINES FOR FINAL DELIVERY
- EMISSION CONTROL
- NO EXCESSIVE SOUND LEVELS

The Seadock facility will back up these tanker operating requirements with safety design features and precautions of its own. First of all, Seadock will be an unloading terminal not subject to the two major problems of ballast disposal and overfilling of ships' tanks during loading operations. Seadock will handle only petroleum; operations will not be complicated by multi-purpose equipment or procedures. The facility will be highly automated with a centralized control center and manual back-up capability. Computerized monitoring of operating systems, such as pressures, temperatures, flow rates, etc., will be utilized to indicate operating problems and facilitate rapid shut down of pumping operations. Automatic high pressure shut down system will be installed for extra protection as well as surge and thermal relief systems. Hoses will be visually inspected and pretested prior to unloading. Offshore pipelines will be buried a minimum of three feet in open areas and significantly deeper at shore aproaches, fairway crossings and at SPM and platform areas. Such pipelines have proven safe during years of extensive experience with similar installations. An Army Corps of Engineers' report indicates that oil spills should be almost completely eliminated through the use of buried submarine pipelines. Water treatment facilities will be installed at potential points of contamination; and facilities will include drip pans, curbing, drain systems, waste treatment and sumps. The onshore tanks will have floating roofs to control emissions, and there will be no excessive sound levels associated with Seadock.

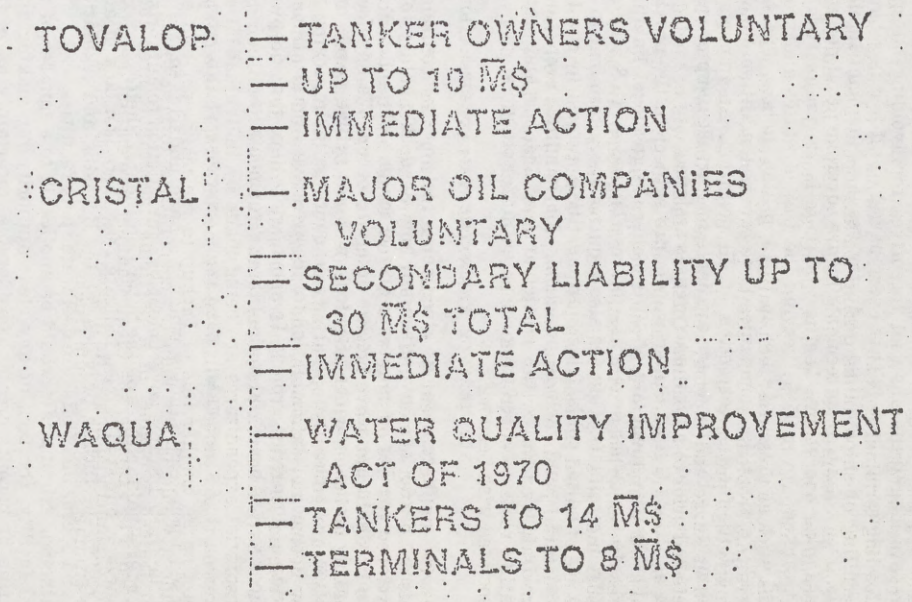
CONTINGENCY PLANS

In the unlikely event of a spill, the oil must be contained, then picked up. This is an area of new and rapidly improving technology. A spill boom recently developed for use offshore of the West Coast has been demonstrated to be effective in significant wave heights from six to eight feet. The U.S. Coast Guard is working on booms which might be deployed by helicopters. Skimmers to pick up the oil are currently operating satisfactorily in the Gulf. There are dozens of new booms and skimmers, and extensive research is continuing. The American Petroleum Institute, the Environmental Protection Agency and the U.S. Coast Guard have research programs totaling at least 10 million dollars per year; and substantial expenditures are being made by individual oil companies. I can assure you that Seadock will have the most appropriate equipment available.

Acting as another line of backup to the manpower and equipment on site at Seadock would be the industry cooperatives formed to marshall the equipment and trained personnel of a particular geographic area in the event they are needed. For example, the Clean Channel Association operates along the Houston Ship Channel and has at its disposal over 10,000 feet of spill booms, several floating skimmers, boats, vacuum trucks, etc.

FIGURE 9

INDUSTRY'S LIABILITY FOR OIL POLLUTION



In addition to the good intentions of tanker and terminal owners and operators, there are significant financial incentives for avoiding oil spills. The first, and most obvious, of these is that every barrel of oil lost is a barrel of product that cannot be sold. In addition, industry assumes financial liability for clean-up of spills. Two voluntary agreements insure coverage of oil pollution losses resulting from tanker operations. The first of these is known as Tovalop. Tovalop covers most tankers (over 95%) serving the United States and provides clean-up cost based on tanker tonnage for up to 10 million dollars. The second agreement is Cristal. Participating companies have provided additional coverage up to 30 million dollars for the correction of oil pollution. An important feature of both agreements is that funds are available to start clean-up procedures immediately, before responsibility for the accident is assigned.

In addition, United States waters are subject to the provisions of the Water Quality Improvement Act of 1970 which assigns legal liability up to 14 million dollars to the owner or operator of vessels, and up to 8 million dollars for pollution from terminals. This act also requires every terminal to have a contingency plan for handling spills. This plan must be approved by the United States Coast Guard and would include provisions for handling even the largest, most improbable spill. Clearly, the participants of Seadock and similar facilities have strong incentives for reducing the potential for oil spills.

SUMMARY OF ENVIRONMENTAL CONSIDERATIONS

I hope this discussion has given you a feel for the attention that is going into designing Seadock. I have discussed how Seadock's ability to serve VLCC's will reduce the number of tankers required for imports and will keep the ships far offshore where accidents are less likely to occur. We have seen that SPM technology is proven and that Seadock will not utilize novel, untried concepts. In addition, spill clean-up capability is continually improving with the design of new equipment, the formation of cooperative organizations and the financial backing of insurance groups. In short, we believe that deepwater terminals like Seadock will be beneficial to the U.S. environment.

FEDERAL LEGISLATION, NECESSITY AND TYPE

Based upon legal studies which we have undertaken, we are of the opinion that the United States government has jurisdiction to authorize and control deepwater terminal facilities on the outer Continental Shelf.

However, our studies also indicate that there is a lack of any codified Federal law which specifically provides for the licensing and regulation of the construction and operation of offshore deepwater port facilities.

Although existing law would be applicable to a number of aspects of our proposed facility, the lack of any clear authority for making applications and the granting of permits creates considerable uncertainty as to the legal standards applicable to a project of the scope of the one Seadock is undertaking.

This being the case, we believe that Congress should exercise Federal jurisdiction in this area by the enactment of legislation authorizing a Federal agency to issue permits under comprehensive statutory and regulatory provisions specifically governing such offshore facilities.

There are several bills now pending in Congress which deal to some extent with aspects of deepwater port facilities. However, H.R. 7501, which is being considered by the Interior Committee, is the type of comprehensive bill which would allow a Federal agency to license the construction and operation of a deepwater petroleum terminal. In general, this bill provides for a Federal agency to assure that any application for a license to construct and operate a deepwater port facility will meet all the requirements of other Federal agencies which now have jurisdiction over any aspect of such construction and operation. The bill also provides that adequate consideration will be given to the environmental impact such a facility might have as well as the need for such a facility from the standpoint of national interest requirements.

We can support the general approach to Federal legislation envisioned by H.R. 7501 as being comprehensive and designed to cover in one piece of legislation the authority of one Federal agency to issue a license for the construction and operation of a deepwater petroleum terminal while at the same time giving adequate safeguards and consideration to various effects the facility may have on the environment, the national interest and the jurisdiction of the state and Federal government.

The need for this type of legislation is pressing, both from the standpoint of national interest and environmental considerations. We urge Congress to enact this type of legislation as soon as possible.

STATEMENT OF HON. EDWARD J. PATTEN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NEW JERSEY

Mr. Chairman and members of the Subcommittee on Energy, I would like to make a few brief observations on the issue of offshore bulk cargo transshipment facilities and the legislation that is the object of these hearings.

I have co-sponsored Chairman Howard's bill in the form of H.R. 3003 for a number of important reasons which I shall discuss momentarily.

Certainly, the current and future supply of domestic fuel is cause for alarm. The American people are already witnessing the consequences of the fuel shortage. Service stations are closing or at least limiting their daily hours for lack of an ample gasoline supply. Construction firms and farmers are feeling the pinch because of their need for fuel and petroleum products. Expanded importation of foreign oil is necessary to meet the future demands for fuel.

Dr. Kenneth Lay, Deptuy Undersecretary of the Department of the Interior spoke before this subcommittee on June 19, and pointed out that new initiatives are being taken to solve the domestic fuel shortage. However, as Dr. Lay rightly noted, these initiatives take time in order to bear fruit. Correspondingly, facilities capable of handling this increased importation activity are needed. I recognize this need and do not wish that my co-sponsorship of H.R. 2020 be interpreted as a sign that I am necessarily against the construction of "super ports" anywhere offshore of this Country. Rather, my support for this legislation is based upon a number of concerns raised by the issue of "super port" construction.

H.R. 2020 and H.R. 3003 simply state that the state legislatures will have a role in the decision-making process when the construction of a deep water port is being considered for a site off their shores. This, I believe, is only fair and just. The question is not only of the pollution threat posed by the continuous presence of large tankers offshore, but by the pipelines necessary to transport the petroleum from the deep water port facility to onshore refineries. Even if the superport is located outside of the three mile state jurisdictional limit, the pipelines would certainly run the full three miles under water and then on the land. The particular state and affected adjoining states should therefore be a party to the final decision of whether to build or not.

My second great concern is admittedly a practical and understandable one. The Senate Public Works Committee agreed upon a resolution that authorized the Army Corps of Engineers to study the North Atlantic Region for the most efficient and economic site to provide facilities for handling very large crude oil carriers. After great consideration, the Corps of Engineers chose a point thirteen miles off the coast of Long Branch, New Jersey, as the prime location If a deep water port facility were to be constructed and utilized at this site, the adverse effects of such a decision would be severe to the northern section of the Fifteenth Congressional District which I represent. If you are not aware of this section of New Jersey, let me simply say that it is an area that is presently heavily industrialized, densely populated, and extremely polluted in the air and water. The Arthur Kill channel separating New Jersey and Staten Island, New York has long been considered "dead." The impact of the projected demand, as covered below, upon the Arthur Kill refineries of Middlesex and Union Counties would be serious for the people and services of that area.

Finally, I would like to include for the record statements of the Middlesex County Planning Board and the Middlesex County Board of Chosen Freeholders as presented on January 16, 1973, before a hearing of the Corps of Engineers, Philadelphia District, regarding Site Selection for Deep Water Port Facility. This statement will further explain the problems that would be encountered.

JOINT STATEMENT OF THE MIDDLESEX COUNTY PLANNING BOARD AND THE MIDDLESEX COUNTY BOARD OF CHOSEN FREEHOLDERS TO HEARING OF THE CORPS OF ENGINEERS, PHILADELPHIA DISTRICT REGARDING SITE SELECTION FOR DEEP WATER PORT FACILITY MIDDLETOWN, N.J., JANUARY 16, 1973

The issue of the feasibility of a Deep Water Port to handle immense crude oil imports, delivered by supertankers to meet the Nation's energy needs, has not been resolved.

Studies by the Army Corps of Engineers and the President's Council on Environmental Quality (CEQ) leading to the selection of a single desirable site along the east coast of the U.S., are nearing completion and may be released by March or April.

Contacts with some of the individuals involved in the studies of deep water port impact have produced the following:

(1) The need for a deep water port facility to provide for imported oil to serve the Northeast is supported and demonstrated by studies being undertaken.

(2) The location of a deep water port facility off the coast of New Jersey would have an "astronomical impact" on the future economic and social development of Middlesex County. Specific quantitative data on the impact have been developed by CEQ's consultants, however this data cannot be released until after submission to CEQ, sometime in February or March.

(3) The Robert R. Nathan study for the Institute of Water Research (Corps of Engineers) indicates that a regional port facility off Long Branch could have, by 1980, a through-put of 100 to 150 million long tons/year of crude oil with approximately 30 to 35 million long tons/year used at Arthur Kill refineries. Present capacity of the Arthur Kill refineries is 338,000 barrels/day or approximately 16 million long tons/year. Thus, to handle the increased refining requirement it would appear that the existing Arthur Kill facilities would have to be at least doubled by 1980. Projected through-put in the year 2000 of up to 70 million long tons/year in the Arthur Kill area puts capacity expansion needs at about four times existing capacity. Such expansion will most likely require considerable physical plant expansion at refinery sites in Middlesex County. The SOROS Report of the Maritime Administration has suggested that some additional land exists for future refinery expansion in this area, however major expansion could be facilitated by concentrating major storage tank farms where the deep water port pipeline would come ashore i.e. Monmouth County, and along the pipeline route, thus permitting elimination of existing crude oil tank farms adjacent to the refineries.

Refineries themselves are capital intensive operations, being highly automated, thus not spurring greatly increased refinery employment as a result of expansion. However, there are some 20,000 products produced by the petrochemical and related industries which would be likely to expand and take advantage of the increased output of area refineries. These industries would produce greater employment.

(4) When considering any benefits of greater economic growth, consideration must be given to the offsetting factors created by a massive increase in environmental pollution and the over-taxing of already inadequate public facilities in the Union/Middlesex/Monmouth County area. The overall cost to clean the environment spoiled by inadequately treated effluents from the petrochemical industry, and to provide adequate services for the new immigrants surely to be drawn to this area by new jobs, may be too great to be met.

To impose a project with such a massive impact on a region unable to correct many of its existing problems and without the type of regional development controls and adequate environmental standards needed to regulate development and provide coordination with the goals and objectives of adopted area wide comprehensive master plans appear to be foolhardy and dangerous at this time.

(5) The Coastal Zone Industrial Development Control Act passed by the State of Delaware has effectively deterred the development of a deep water port facility off Delaware either in the Bay or off Cape Henlopen. Port advocates in that area appear to have decided, at least at this time, not to contest the Act. It appears that the interests in favor of a deep water port have focused their attention on New Jersey.

Based on the above analysis the Middlesex County Board of Chosen Freeholders and Middlesex County Planning Board have taken the following position:

(1) Whereas, given the immense pressure for the construction of a deep water port, little detailed analysis seems to have been done regardng the impact of such a project on the areas to be served by it, and

(2) Whereas, little consideration seems to have been given to the possibility of establishing energy conservation programs to eleviate the need for increased oil and gas imports, and

(3) Whereas, Middlesex County requires considerable governmental and private effort to improve levels of basic services and eliminate environmental pollution as a result of the rate of existing development, and

(4) Whereas, regional development control powers required to deal with such a project are not presently available in New Jersey;

Now therefore be it resolved, that the Middlesex County Planning Board is opposed to the construction of a deep water port facility anywhere along the Coast of New Jersey, or in the Delaware Bay or in any other location which will substantially increase petro-chemical industrial development in Middlesex County and the surrounding region, until such time as evidence is presented that the resulting increased industrial development will be environmentally sound and beneficial to the people of this area and until such time that regional development control regulations are in effect.

STATEMENT OF THE STAFF OF THE MIDDLESEX COUNTY PLANNING BOARD TO HEARING OF THE CORPS OF ENGINEERS, PHILADELPHIA DISTRICT, MIDDLETOWN, N.J., JANUARY 16, 1973

Since the preceding statement was prepared additional information has become available through statements appearing in the press and supplementary reports issued by the Corps of Engineers.

Most of the new information reinforces our position and has strengthened our determination to oppose the installation of deep water port facilities in our region.

We note that Governor Cahill has stated that "The superport sites currently recommended by the Army Corps of Engineers are unacceptable to New Jersey" and we whole-heartedly agree.

Our opposition to the port is based primarily on the impact of such a facility on on-shore areas. The supplementary report provided with the notice for this hearing documents the massive impact on this region and Middlesex County in particular. Even with the location of the port in Delaware Bay, at least 8,350 additional acres of new crude oil storage, refinery and related petrochemical development will result by the year 2000 in the Middlesex-Monmouth County area if a deep water port is developed. The housing and related service sector growth such industrial development would require would place an unmanageable burden on existing public services, given the present institutional arrangements found in this region. Not only, as stated in the report, would Middlesex County "effectively 'run out' of land," but it would run out of water and probably out breatheable air.

We would also like to point out that U.S. Army Corps of Engineers, New York District report *Draft Environmental Impact Statement—Maintenance of the New York and New Jersey Channels Navigation Project* dated 4 January 1972 states that the area around the Arthur Kill and Raritan Bay "because of its highly developed industry is noted for the poor quality of its air" and "the area is industrialized to the extent that natural aesthetic values have been virtually eliminated." And "the current low quality of water in New York and New Jersey channels is largely a result of its convenient location to the petroleum refining plants."

The corps report states, and unfortunately, others seem to have agreed, that "the industrial investment in the vicinity of the project is too great to expect that the environmental characteristics in the project area will change in the foreseeable future . . ." Given the state of our institutions this may be true, but the inescapable fact is that people live in these same areas and given the state of our transportation technology it is desirable that people live relatively close to their jobs, so the quality of the industrial environment has a significant impact on the average person's total environment.

Should any group attempt to expand refining and petrochemical development anywhere in this region without the concurrent implementation of improved public services including transportation and water supply, and without concurrent construction of decent, well designed and constructed housing providing a choice for all income groups, the economic benefits to a few will not offset the disastrous environmental costs.

We recognize that the Corps has not been asked, nor has by itself determined, to construct a deep water port facility. However, it appears to us that at the present time there is no way to stop some other group from doing just that. Whatever legislation is required to prevent such construction at this time should be immediately enacted at the National and State levels. This action is mandatory given the absence of reasonable institutional controls on regional development, and the absence of a State or National growth and development location policy.

DEPARTMENT OF THE ARMY,
Washington, D.C., July 6, 1973.

Hon. JOHN A. BLATNIK,
Chairman, Committee on Public Works,
House of Representatives, Washington, D.C.

DEAR MR. CHAIRMAN: This is in reply to your request for the views of the Department of the Army on H.R. 2020, 93d Congress, a bill "To prohibit under certain conditions Federal activities in connection with the construction of offshore bulk cargo transshipment facilities."

The purpose of the bill is to prohibit the Secretary of the Army or other Federal agencies from permitting the construction of any offshore bulk cargo transshipment facility in the territorial seas, the contiguous zone, or the ocean, within the boundaries of any State, or within the indefinite extension of such boundaries seaward from the territorial waters, if such State has by law prohibited the construction of such facilities in the territorial seas within its boundaries. If a State has not enacted a law prohibiting such construction or if the Administrator of the Environmental Protection Agency determines that an adjacent State having such a law may be affected by the construction of such a facility, the bill would provide that the Secretary of the Army or other permitting agency must notify the Administrator of his intent to permit such construction, and to issue such permit only if, after 180 days from the date of notification, no objection has been raised. In the event that an objection is raised by one of the aforementioned States, then the proposed permit could only be issued under the joint approval of the Secretary of the Army or other permitting agency, the Environmental Protection Agency, and the affected State or States.

The Department of the Army shares with the States their concern for protecting the quality of the marine environment. However, we object to the enactment of this particular bill for several reasons.

First, the bill would provide for an undesirable extension of State jurisdiction beyond the three-mile limit which has heretofore been left to Federal and international control and agreement. The Department of the Army believes that the present State jurisdiction within the three-mile limit and on land is sufficient for State regulation or prevention of the shoreside facilities necessary for development of the offshore transshipment facilities.

Second, the bill would enable a single State, based on its own economic and environmental interests, to prevent projects outside its traditional jurisdiction which may have regional or national significance. The construction and operation of offshore transshipment facilities, however, may provide the best solution to the complex problems involving the environment, natural resource supplies, economic development, national standards of living, and the security and well being of the region and of the Nation as well as that of the State and its localities.

Third, the Department of the Army believes that enactment of the bill is not necessary from the environmental standpoint. The National Environmental Policy Act already provides sufficient substantive and procedural safeguards which could be applied to offshore transshipment facilities as well as to other types of offshore proposals.

Finally, enactment of H.R. 2020 may actually undermine efforts to provide environmental protection. Implicit within the bill is the assumption that preventing or delaying development and operation of offshore transshipment facilities will maintain the *status quo* and, at a minimum, preserve the present quality of the Nation's harbors, waterways, and shorelines. If oil imports increase substantially, however, maintenance of the *status quo* will result in a substantial increase in the number of smaller ships presently being used with the likelihood of more congestion, collisions, groundings, and resulting oil spills. The Department of the Army believes that the construction of offshore transshipment facilities, with the associated reduction in the number of ships and transfers of oil, can be expected to offer a higher degree of environmental protection.

It is essential that the development and operation of offshore transshipment facilities be considered in the context of the Nation's energy resources and problems of national concern. Pursuant to this objective, on April 18, 1973, the Secretary of the Interior transmitted to the Congress proposed legislation to authorize and regulate the construction and operation of deepwater port facilities. This proposal has been introduced as H.R. 7501. H.R. 7501 would assure that the Nation's energy requirements are satisfied in a manner consistent with its interest in environmental protection. Among other features of the legislation, H.R. 7501 would (1) establish authority in the Department of the Interior for licens-

ing the construction and operation of deepwater port facilities beyond the three-mile limit with strict environmental controls and other provisions for navigation and safety; (2) require the Secretary of the Interior to consult with the governors of the adjacent coastal States to insure that the facility and its directly related land-based activities would be consistent with the States' land use planning programs; and (3) require the Secretary of the Interior to coordinate its responsibilities with those other Federal agencies having jurisdiction over the construction of the facility pursuant to other authorities.

In lieu of H.R. 2020 the Department of the Army recommends enactment of H.R. 7501 which would harmonize our mutual concerns for the protection of the environment with the need to safeguard our other vital national interests.

The Office of Management and Budget advises that, from the standpoint of the Administration's program, there is no objection to the presentation of this report for the consideration of the Committee, and that enactment of H.R. 7501 would be in accordance wih the President's program.

Sincerely,

HOWARD H. CALLAWAY,
Secretary of the Army.

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