

P U B L I C H E A R I N G

before

SENATE ENERGY AND ENVIRONMENT COMMITTEE

on

SENATE NO. 22

(Off-Shore Oil Pipelines)

Held:

March 28, 1977

Ocean County College

Ocean County, New Jersey

MEMBER OF COMMITTEE PRESENT:

Senator Alene S. Ammond (Acting Chairman)

ALSO PRESENT:

Senator Herbert J. Buehler

David C. Mattek, Research Associate

Legislative Services Agency

Aide, Senate Energy & Environment Committee

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SENATE, No. 22

STATE OF NEW JERSEY

PRE-FILED FOR INTRODUCTION IN THE 1976 SESSION

By Senators BUEHLER and CAFIERO

AN ACT prohibiting the construction of off-shore oil port apparatus
and attendant pipeline and storage facilities.

1 BE IT ENACTED *by the Senate and General Assembly of the State*
2 *of New Jersey:*

1 1. No individual, partnership or domestic or foreign corporation
2 shall construct or cause to be constructed any facilities in the
3 Atlantic ocean adjacent to the State of New Jersey for the purpose
4 of unloading or transferring any petroleum products or byproducts
5 from any sea-going vessel.

1 2. No pipeline either above or beneath the ocean floor adjacent
2 to the State of New Jersey shall be constructed for the purpose of
3 transferring any petroleum products or byproducts to on-shore
4 facilities whether such facilities be located in this or any other state.

1 3. No on-shore storage or pumping facilities shall be constructed
2 within the State of New Jersey for the purpose of holding or
3 transferring any such products to be unloaded and transferred from
4 any such off-shore port regardless of location.

1 4. This act shall take effect immediately.

SENATOR ALENE S. AMMOND (Vice Chairman): We will now convene this public hearing. Some of the members of this Senate Energy and Environment Committee will be here later and some of them are out of town and will not be able to attend.

If you don't mind - if there are any objections, let me know - we will try and limit the witnesses to approximately 7 minutes so that everybody will get a fair chance to be heard. We are doing this because we have held other hearings where they went on into the wee hours of the night and people were forced to go home without being heard. If there is anyone who objects to that rule, we will be very flexible about it.

This is a hearing on Senate Bill No. 22. The chief sponsors of this legislation are Senator Buehler and Senator Cafiero. This bill is an act prohibiting the construction of off-shore oil port apparatus and attendant pipeline and storage facilities. For those of you who do not have a copy of the bill, it is worded as follows:

1. No individual, partnership or domestic or foreign corporation shall construct or cause to be constructed any facilities in the Atlantic ocean adjacent to the State of New Jersey for the purpose of unloading or transferring any petroleum products or byproducts from any sea-going vessel.

2. No pipeline either above or beneath the ocean floor adjacent to the State of New Jersey shall be constructed for the purpose of transferring any petroleum products or byproducts to on-shore facilities whether such facilities be located in this or any other state.

3. No on-shore storage or pumping facilities shall be constructed within the State of New Jersey for the purpose of holding or transferring any such products to be unloaded and transferred from any such off-shore port regardless of location.

Mr. Russ Corby, to my right, is an aide to Senator John Russo and Mr. David Mattek, to my left, is the committee aide in Trenton - our legislative staff aide.

The first person to be called will be Mr. Steven Picco, who is the legislative liaison for David Bardin of the Department of Environmental Protection.
S T E V E N P I C C O: Thank you, Senator. I appreciate the opportunity to represent the Department and to give testimony on S-22, sponsored by Senators Buehler and Cafiero.

One of the good points about S-22 is that it focuses on the issue of off-shore deepwater ports, generally. Recent Federal studies have indicated that the danger of spills from transfer operations in deepwater ports is a significant hazard, in terms of statistical significance, and one that should be addressed. However, we feel that S-22, in its present form, is premature. The technical wording is ambiguously written. I am not sure if it applies only to deepwater ports or to offshore OCS pipelines and pipelines from deepwater ports. That is one thing that should be looked at by the technical staff.

Another problem with the bill is that it ignores the Federal law which governs outside the three mile limit. The Federal law outside the three mile limit is paramount. It is unlikely that New Jersey could exert any meaningful controls on facilities which are located outside of New Jersey's jurisdiction.

I have a small problem in that this did not specifically address the issue of the deepwater port built outside the jurisdictional boundaries of the State but which has pipelines running through the State. It is my gut reaction that those pipelines would probably be interstate commerce and thus not susceptible to easy state control.

I think there is also another problem for another reason. Interior is supposed to do pipeline studies which will indicate the effect of several alternative

pipeline routes in the affected states. Interior has not as yet done those studies and Commissioner Bardin and Assistant Commissioner Pauson have written a series of letters, the latest one is dated March 14th of this year, urging Interior to commence those studies. We expect that under Secretary Andres that they are going to be more receptive to our request and we expect the studies to be commenced shortly.

Perhaps another reason that we tend to ask you to hold off action on this bill for a while is that we think we already have the existing statutory handle on the problem. We believe that the Coastal Areas Facilities Review Act gives us the statutory authority to regulate the kinds of facilities contemplated in this bill - in other words, deepwater ports situated within New Jersey's jurisdictional limits. We are, at present, completing a draft of the final plan which is due in September and which will address the different pipeline issues that were raised over the past several years.

I have a series of recommendations. The first, of course, is that we wait. In that regard, I urge the Committee to direct its legislative counsel to give the Committee an opinion as to the preemption effects of the Deepwater Ports Act and the Federal Outercontinental Shelf Act. The latter is now going through various United States Senate Committee hearings.

Before we take any action on deepwater ports or pipelines at the State level, I think it is incumbent upon the Committee to be absolutely certain of its legal basis for proceeding for two reasons: One, to avoid drafting a bill which may be preempted and, two, after recognizing exactly what the legal issues are, to be able to draft a bill which adequately addresses all of the problems of offshore ports and pipelines which covers any and all holes that may be left by the Federal legislation.

The last recommendation I have is that the legislative counsel study the role of the State and the State Legislature in the Federal Coastal Zone Management Act, which allows the state to attain, in conjunction with the Federal Deepwater Ports Act, something that is known as favored status. That status will allow us to absorb more control at the state level over operations which may or may not be within our normal jurisdiction, than we could if we were acting on our own without any other kind of authority.

In summation, we think that the bill does address the problem, although I do not think the problem is going to manifest itself in the next several years. Recent studies have indicated that New Jersey is not going to be the site for a major deepwater port, at least in the near future. However, the size and the intensity of the continental shelf activity may be a factor in deciding whether or not deepwater ports are built in New Jersey.

So, I would ask you to hold off action on this bill pending a study by legislative counsel as to its effects and its interrelationships with existing Federal and State legislation. Thank you.

SENATOR AMMOND: Mr. Picco, Senator Buehler, who is the prime sponsor of the bill, is here. Would you like to address anything to Mr. Picco, Senator?

SENATOR BUEHLER: Mr. Picco, you are representing--

MR. PICCO: The Commissioner.

SENATOR BUEHLER: Commissioner Bardin?

MR. PICCO: Yes.

SENATOR BUEHLER: I discussed this matter with the Commissioner over the last several months.

MR. PICCO: Yes, I know.

SENATOR BUEHLER: What are some of the alternate proposals that the Commissioner would make, notwithstanding the legal questions, which haven't been

resolved yet? Looking down the road, what proposals would you make that would be alternate proposals?

MR. PICCO: The entire issue is the pipeline siting, Senator. We feel there are a number of ways to address the problem - one is to draft a new piece of legislation. The other is to apply existing statutory controls to the problem. It is my belief that in the CAFRA Act we will have most of those controls. The controls we may not have under the CAFRA Act could easily be accomplished with a relatively minor amendment to the CAFRA Act.

The advantage the CAFRA Act has over this bill is the major planning capability the CAFRA Act gives to the Department. There may be instances where pipelines coming in are environmentally sound or might not have disastrous side effects and would be a boon to the economy of the affected areas. In those instances, we would like to have the opportunity to grant that pipeline. Now, I am not saying that there is an alternative. At this point we just don't know. We are waiting for an Interior study on the issue. We are also doing our own studies which will be finalized next September.

SENATOR BUEHLER: Regardless of what the CAFRA Plan ultimately decides, is there really such a thing as a safe pipeline from the drilling site to the coast? That still doesn't answer the problem that we have in this section of the State, in this county and in Monmouth County. We have looked at charts put forth by the Army Corps of Engineers that indicate there will be large areas of our counties that would house the storage tank farms to take the crude oil and ultimately pipe it up to North Jersey. Now, how do you respond to that?

MR. PICCO: Those tank farms would be subject to CAFRA review. They would have to do the proper planning and if they couldn't accomplish this in an environmentally acceptable manner it would not be approved.

As to those areas outside the CAFRA zone, the CAFRA zone would be in that instance to deal only with those facilities for offshore oil activities. There is a real preemption question as to a state's role in outercontinental shelf activities. I don't think the final decision is in yet on the preemption argument for OCS activities. I frankly don't know, and none of the attorneys in the Department know, what the final resolution on that issue is going to be. It is entirely possible that the State will not be able to regulate OCS activities.

SENATOR BUEHLER: Are there any alternate proposals, other than the onshore pipelines and the inshore storage tank farms that the Department is looking at, in terms of alternate proposals for delivering the natural gas and the crude oil?

MR. PICCO: I honestly don't know. That is done by the capital planning section and I would suggest you talk to them about what specific proposals they have. One that occurs to me off the top of my head is the lightering offshore, where it goes from the rig right to a tanker. That raises some major environmental problems in my mind because lightering is probably the worst offender in terms of spills of any significant amount.

SENATOR AMMOND: I too am not sure about the Federal Government regulating the pipeline because it may come under interstate commerce, ultimately.

MR. PICCO: Right.

SENATOR AMMOND: Am I wrong in assuming that we have a pipeline running from Huston, Texas right clear through and crossing the United States, down the New Jersey Turnpike? There was a big scandal about it at one time, if you remember.

MR. PICCO: Yes, I do.

SENATOR AMMOND: The pipeline runs into the North Jersey refineries.

MR. PICCO: That's right.

SENATOR AMMOND: Is it not incorrect that the pipeline, excluding the environmental factors, is not supposed to be the most economical, cleanest way to deliver the oil? It is supposed to be the most economic way. Do you agree with that?

MR. PICCO: No. There are conflicting studies. Some would say that some sort of offshore port with adequate safeguards to prevent spills would be the safest way to transfer oil. Other studies indicate that properly buried and maintained pipes are the safest way.

SENATOR AMMOND: Well, what about our pipeline that comes clear across New Jersey and that has been in operation for many years?

MR. PICCO: As far as I know Colonial Pipeline testified at a hearing that they had, in 12 years or so of operation in New Jersey, only one major spill and that occurred last year, with rather minimal damage.

The Department of Transportation, among others, has some very specific and relatively sophisticated regulations governing the use of pipelines. So, their track record, in terms of the volume of product versus the amount of spills, is pretty good.

SENATOR AMMOND: Well, that was my understanding.

Senator Buehler, do you have any further questions?

SENATOR BUEHLER: No. I have no further questions at this time due to the fact that I am waiting for the Commissioner to give me the bottom line review of recommendations for alternate proposals, other than those that would provide what I would consider to be a detriment to the coastal communities. In light of the research I have looked at, it would appear to me that offshore drilling could have a positive effect only if it doesn't intrude on the coastal tourist trade, which is a multi-billion dollar operation, not to mention the fact that we have the richest farmland in Monmouth and Ocean Counties. I fear, looking way down the road, that this could be delivered over to the hands of the oil companies and we would have to change the name of the State from the Garden State to the Oil State.

MR. PICCO: That is the last thing you or I want, Senator. You can be assured that the Department is going to do everything it can to prevent that sort of thing from happening.

SENATOR BUEHLER: Are there other more sophisticated means of delivery that we haven't even addressed ourselves to, that the Commissioner is aware of?

MR. PICCO: Not to my knowledge. The Russians are experimenting with blimps, I understand. That is not a joke, they are actually doing this.

SENATOR AMMOND: That doesn't sound like a happy alternative.

SENATOR BUEHLER: I will probably ask most of my questions of the representative of the Petroleum Council.

SENATOR AMMOND: Thank you very much, Mr. Picco.

MR. PICCO: Thank you very much, Senator.

SENATOR AMMOND: I would now like to introduce Senator Buehler, who is to my right. He arrived late. He is the prime sponsor of this bill.

We will now hear from Mrs. Alma Hutchings, representing the Chamber of Commerce from Toms River.

A L M A H U T C H I N G S: My name is Alma Hutchings. I am the President of the Greater Toms River Chamber of Commerce. The purpose for my appearance here this evening is neither to oppose or approve Senate Bill No. 22, rather my purpose is to obtain confirmation of the actual intent or import of the proposed legislation.

Senate Bill No. 22, as has been said before, is rather vague and non-specific.

It appears to me that the actual intent, or purpose, of the bill is to eliminate offshore drilling in the Atlantic off the Jersey coast, for it would seem that if a company could not construct the facilities to unload and transfer petroleum products, or by-products, from a seagoing vessel, or to store it in onshore facilities, that these companies would seek offshore drilling in other areas.

Assuming that this is the intent and also assuming that the companies will continue to seek offshore drilling in the Atlantic adjacent to our State, it would mean that if the bill were passed, that the facilities would be constructed within the geographic boundaries of another state and the benefits of that, in the form of tax revenues and employment, would certainly be reaped by those other states while the offshore drilling exposure would remain with New Jersey.

It would appear - it seems inevitable - that offshore drilling will occur off the coast of New Jersey. It would also seem in the best interest of the State of New Jersey - after weighing all of these considerations - that if this were the case, the facilities indicated in Senate Bill No. 22 should be allowed, or permitted, within the geographic boundaries, thus giving a stimulant to the economy and employment in the coastal areas of the State of New Jersey specifically, and to the State of New Jersey in general.

With all the recent publicity accorded to the fuel crisis, to the Mid-East situation and to reported price increases in oil and oil by-products, it seems to the Greater Toms River Chamber of Commerce that the ability to store these products within the State of New Jersey would well alleviate any potential crisis, whether it be national or statewide, and could further aid the State of New Jersey in the event of a fuel product dislocation.

The bill seems to be a general and blanket condemnation of these facilities. We believe that a bill would best serve the State if it would allow such facilities, with certain protections built in to eliminate, as much as possible, any of the disadvantages of incorporating those facilities with those adjacent to the State and within the State itself.

The bill, as we see it, is a model of brevity which sometimes is to be lauded but in this case the expansion of the bill to incorporate protection of the environment while still promoting the economy of the State of New Jersey would seem to be more in line with necessities presently existing in New Jersey.

I don't think anybody wants to see oil spills, leakage, or breakage, etc., however, the Chamber of Commerce would not want to see the advantages of these facilities as far as potential economic and employment benefits are concerned to be transferred to another state. We believe that a bill in an expanded form can protect against the degradation of the environment while still providing for the economy and employment benefits connected with the facilities to be established, which facilities would be truly prohibited by the bill. To totally prohibit this, as the Chamber feels this bill does, without further investigation as to possible alternative legislation, is to do a disservice to the citizens of our State. Thank you.

SENATOR AMMOND: Thank you, Mrs. Hutchings.

Our next witness will be Mr. Fred Sacco, representing the New Jersey Petroleum Council.

F R E D S A C C O: My name is Fred Sacco. I am the Associate Director of the New Jersey Petroleum Council. We are a division of the American Petroleum Institute, with offices in Trenton, New Jersey, located on West State Street. We represent the major and independent oil companies. We do business within New Jersey and a number of these companies have been successful bidders during the recent Atlantic OCS lease sale.

My purpose here is to register a strong objection to the release of Senate Bill No. 22 from your Committee. Our industry interprets the language of the bill as a measure which would totally prohibit any pipelines that would be able to be constructed from any offshore drilling activity, so that those discoveries would not be able to be brought into New Jersey. We also feel that enactment of Senate Bill No. 22 would also mean that no facility could be constructed in deep water to ease the impact of the current tanker traffic into New Jersey's harbors.

We know that the Federal Government has leased an area to the oil companies. We thought we would have drilling activity begin this Spring, but we have had a court decision and it now looks as though we will have a two year delay, possibly.

The implications of the national petroleum supply situation are such that demand will continue, so we feel it is a pretty good guess that offshore drilling will go forward. So, within a period of three to five years, we can make a pretty good assumption as to what kind of supplies of oil or natural gas would be made available to the northeastern market.

Passage of Senate Bill No. 22 would dictate that any oil we find would have to be tankered or barged to refineries located within New Jersey because of the pipeline prohibition and that any natural gas that was discovered, before it could be brought into New Jersey, would have to be liquefied so that we could transport it into some kind of vessel.

I really feel somewhat foolish addressing the members of this Committee about some of the aspects of this bill because I have been talking to you over several years and I know you are beginning to understand this energy problem as well as we do. So, with due respect to your knowledge of the pipeline prohibition aspects of Senate No. 22, as it pertains to offshore production of oil and natural gas, my associates and I, having spoken, feel that we at least trust that all of the members of the Committee would be equally concerned about foreclosing large quantities of oil and natural gas from New Jersey's energy-starved market because pipelines could not be laid from the fields into New Jersey.

So, I am going to address the rest of my remarks to that part of the legislation that we feel prohibits construction of offloading facilities at sea. We recognize Senator Buehler's concern for his constituency - and it deserves due consideration. But, his proposal to ban deepwater ports, or the single-point mooring systems, cannot, however, be expected to diminish the number of tankers trafficking New Jersey's shorelines nor from entering the harbors. It is the considered opinion of the membership of the New Jersey Petroleum Council that the action described in Senate No. 22 will make a mandated continued system of transshipping oil and petroleum products in a less environmentally sound fashion than deepwater offloading.

One hundred percent of the raw material coming into New Jersey now is coming from foreign sources. We can expect this situation to continue for 7 to 10 years and possibly longer, depending upon how rapidly the exploration and development of oil can move forward in the OCS and on whether or not anything is going to be found at all. So, not until sufficient reserves of oil can be brought in from the Baltimore Canyon, can we expect to back out of foreign oil and replace it with domestic supplies.

So, in order to put this question of long lead times into a proper perspective, I would like to note that the petroleum production of oil in the Gulf Coast reached one million barrels a day about twenty years after the initial leases were sold in 1954. So, in spite of the announced goal of energy independence for the United States, we can expect to import large amounts of crude oil and petroleum products for many years and it is clearly the trend in the transshipment of oil, that

it is going to be done in very large crude carriers. More than one-half of the world's tonnage is being moved in ships larger than 200,000 dead weight tonnage. There is no sufficient water depth in either New York or Philadelphia ports to accommodate these vessels. So, in this area, we have seen a continuation of the use of smaller vessels, by necessity. Smaller, older vessels, I should emphasize, are being used to bring in these 1.3 million barrels of crude oil to a refining complex.

So, the problem of congestion, grounding, and the danger of spills continually increases because the petroleum demand has continued to escalate. Refining capacity is not large enough to meet the demand for products on the east coast, so, therefore, we even see an escalation in the importation of refined products - and that is continuing on the upswing. So, we have a twofold problem in terms of the numbers of tankers that are visiting the ports adjacent to New Jersey and in terms of the age of these vessels. We can only expect to lessen the congestion, the problem of groundings, and the fears of spills into our estuaries by giving some serious consideration to offloading large quantities of crude oil far out at sea and piping it into storage facilities, or directly to refineries.

There are many, many deepwater ports around the world. Contrary to popular conception, nearly all of these facilities are not super structures. They are large buoys with a floating hose which transfers the oil from the very large crude carrier into a buried pipeline. The oil moves through an offshore platform with a pumping station, into a buried pipeline which is connected either to an on-shore storage facility or goes directly to a refinery, depending upon the location.

We have here three artist's renderings of what these mono-buoy systems would look like. There are two deepwater facilities, one called the loop and one called sea dock. They are in the developmental stages in the Gulf of Mexico. It would be a prudent course for this committee to recommend tabling Senate Bill No. 22 and to take a close look at the future construction and operation of the facilities that are being built in the Gulf of Mexico. They could very well serve as a prototype for deepwater offloading terminals throughout the United States.

Presently, to my knowledge, there are no plans to move forward with applications for permits to build offshore unloading facilities in the Atlantic Ocean. Mono-buoys could, however, become a focal point in the petroleum demand picture should the east coast offshore areas fail to provide us with adequate supplies of domestic oil and natural gas.

We are now importing 42% of the oil needs - the petroleum liquid needs - of these United States and events in recent months are making it kind of precarious for people to make predictions. But, it is somewhat accurate, according to experts, that we can expect it to surpass the 50% level of imported products - imported crude and products - coming into the United States and this is roughly around the 8 million barrels a day area.

So, in the meantime this Committee should adopt a wait and see attitude with Senate Bill No. 22. The State is adequately protected. We need not fear this unwanted intrusion from any deepwater port facility. The State has a veto power under the provisions of the Deepwater Ports Act. Mr. Picco alluded to other pieces of legislation. We have the Wetlands Act. We have the CAFRA Act. And, we are soon going to have the Coastal Zone Management Act in New Jersey, all of which have a bearing upon any pipeline construction anywhere in New Jersey.

So, in conclusion, our industry has provided a significant amount of

a lot more technical testimony at previous hearings on this deepwater port question. There are five volumes presently on file in the State Library from the February, 1974 series of hearings. I have also asked the American Petroleum Institute for more detailed information on loop and sea dock and I will make that information available to this Committee as soon as possible.

Thank you very much for your consideration. I will attempt to respond to any questions you may have. Of course, I will provide written responses to anything that I am not familiar with.

SENATOR AMMOND: Senator Buehler.

SENATOR BUEHLER: First, would you care to explain for the members of the Committee these diagrams and charts?

MR. SACCO: The three diagrams - the three artist's renderings that you have there are three different types of offshore unloading facilities. I neglect to use the term ports because of the misconception that it has bred over the last several years. The very large crude tanker would pull up to a mono-buoy and this buoy is a floating unit with a circumference of about 30 or 60 feet. It would have a pipeline that would extend down into the surface below the ocean floor. The pipeline would then move to a structure that would have to be built. That would be about the same as an offshore platform, very often the size of about a football field - the deck of these types of installations. That would house a pumping system. If you are going to move oil 30, 40, 50, or 60 miles, you are going to have some kind of pumping system. Then it would move, again, through a buried pipeline to an onshore facility. None of these onshore facilities need to be near the shoreline. Very often, they are piped many miles inland to existing refineries.

The other two diagrams are just--

SENATOR BUEHLER: Before you leave the first one, where is this? Is this similar to what we have in the Gulf?

MR. SACCO: There is nothing constructed in any U. S. waters.

SENATOR BUEHLER: Where is this located?

MR. SACCO: I am not certain of its location. I think it is in the Middle East - one of the countries in the Middle East. I could get exactly where it is located in the world.

SENATOR BUEHLER: Has this been successful?

MR. SACCO: Yes. The history of spills from the offshore loading facilities in the world is minuscule. The pipeline history has been absolutely overwhelming. I will provide the Senate Committee with some pretty significant statistics that would bear out my statement.

SENATOR BUEHLER: Now, this onshore terminal and the pipelines to what would be the storage tank farms would be located how deep as we come into Monmouth and Ocean Counties - these pipelines you are talking about?

MR. SACCO: It is hard for me to address that, Senator, because there is no likelihood that we would even see a pipeline facility here in Monmouth County. Nobody is even proposing one. It would be very difficult for me to conjecture where and how it would be constructed. Right now, most of the expectations - that is, of offshore drilling activity - are that that is going to be piped, if we find anything, directly to refineries and the corridors are going to be established through the existing State and Federal regulations. We are very stringently regulated by the U. S. Department of Transportation. I could go on through a myriad of departments that regulate the construction of a pipeline.

SENATOR BUEHLER: When you say the crude oil will be piped directly to

the refineries, are you talking about existing refineries?

MR. SACCO: I mentioned earlier, trying to put this lead time into its proper perspective, that it took 20 years to achieve one million barrels per day production, okay? We have, presently, in the New York, New Jersey, Delaware, Pennsylvania complex, refining capacity of 1.3 million barrels of oil a day. We can double that. We can go to 2.5 million barrels of oil a day within existing fence lines of about ten refineries that already exist. So, it is extremely unlikely that we would see any new refinery construction in New Jersey. The eastern part of the United States is refinery poor. We are insufficient. We are now importing about four million barrels a day of product that is being manufactured in other parts of the world. So, that is an indication of our refinery deficiency.

Somewhere on the East Coast, somebody is going to have to look at the refinery question and decide where they are going to build if we are going to achieve this energy independence that we hear constantly talked about.

SENATOR BUEHLER: Are you representing, before this Committee, that there is no current plan to construct storage tank farms in Monmouth or Ocean Counties?

MR. SACCO: I cannot speak for all of the companies. I am saying to my knowledge there is no proposal, or there hasn't been any proposal beyond the 1972 proposal.

SENATOR BUEHLER: I saw the charts of the Army Corps of Engineers.

MR. SACCO: Okay, I was going to go back to that, sir. I think that goes back to about 1972 - that was pre-Arab embargo. That was a decision by the Corps of Engineers. That was not a proposal of any of the oil companies. I would safely say that there are still no oil companies that are talking about that.

The issue of deepwater ports, right now, in in a limbo, in terms of the East Coast. The economic question has to be answered, as well as the environmental question. The economic question in itself dictates that the movers of the product are taking a wait and see attitude and that is really what we are asking this Committee to do. We think it might be wise to adopt that attitude.

SENATOR AMMOND: Let's assume you win the law suit and you could construct tomorrow, where would you plan to construct pipelines and tank farms?

MR. SACCO: Senator--

SENATOR AMMOND: I heard Camden. See, you hear your county and I hear my county.

MR. SACCO: Senator, I represent-- There are 10,000 companies who are in the exploration and production business in this country and it is very difficult for me to answer that. You recognize that in spite of everything we are not a monolithic structure and I cannot address questions that deal with a specific proposal by a specific company. I honestly don't know. Somebody may have a proposal on their drawing board.

SENATOR AMMOND: Well, I am not asking you for specifics because I think the major companies will be the ones that can afford to do this anyway.

MR. SACCO: If offshore drilling goes forward, a pipeline will have to be constructed. The likelihood is that that pipeline construction will go to the existing refinery complex. So, this means that it is going to come somewhere in New Jersey, Delaware, Pennsylvania.

SENATOR AMMOND: In other words, it could come from the ocean area in Atlantic City?

MR. SACCO: We have a pipeline system that is bringing in this product from Texas. So, there is no foreclosure that a pipeline couldn't come in at Atlantic

City, find its way through a pipeline corridor into the existing pipeline system and be piped north to the refining complex and south into Pennsylvania and Delaware.

I am sure that the managers of this are looking at the most prudent way to do this.

SENATOR AMMOND: The cheapest way to do it?

MR. SACCO: I wouldn't say cheapest. I would say the most economical way. There is something that implies a derogatory meaning when you say cheap.

SENATOR AMMOND: I didn't mean that in a derogatory way.

SENATOR BUEHLER: Do you want to explore these other two charts briefly for us?

MR. SACCO: If you look at the other two charts you will see that in some parts of the world you have the movement of product and crude oil. What you see are some alternatives whereby you would move product through a different system of lines and crude oil through another system of lines. You don't interchange the lines. You can't use a product line and transport crude oil.

SENATOR BUEHLER: Is this the super tanker concept on chart 9?

MR. SACCO: Well, these are all very large crude carriers. They are all greater than 200,000 dead weight tonnage. When you get into that range, you are narrowing this into what is called the super tanker class-- anywhere from two on up to five. We know that there is construction in the world of 500,000. The Japanese are building them. They are probably going to be used in the long-distance haul from the Middle East to Japan because they can move an \$18 ton in a 75,000 dead weight tanker for \$6 a ton, or less, in a 500,000. So, that government is looking at their economic problem in the world oil market and they are addressing that.

SENATOR BUEHLER: Are these diagrams in here alternate proposals for delivery, or what specifically are they in here for?

MR. SACCO: All of the deepwater areas of the world are not the same, so therefore -- you know, it is just like sending a man to the moon; we had to devise different systems to meet the criteria within that offshore area. That is what we have here. You have lots of different alternatives.

Take Bantry Bay in Ireland. They have virtually one system and everything goes into a large storage complex. You take something in the Caribbean and they have a simple mono-buoy with a pipeline going directly to the refining complex. So, it varies, depending upon what part of the world you are in and whether it covers the environmental features you have to handle and what the depth of the water is, etc. I am sorry,, I am not a technician in terms of constructing these things. I do have a basic understanding.

SENATOR BUEHLER: These really are not related to what we are talking about in the Atlantic off the coast of New Jersey?

MR. SACCO: It could very well be that one of these is the option that would be selected if somebody decided to do it. I seriously doubt that we would see any super-structure, in terms of the artificial island. That is like somebody alluding to the transport of crude oil by blimp. We looked at bringing crude oil from the north slope in submarines. We have looked at it in air tankers. We even sent the Manhattan up through the north. So, all of these concepts are being looked at. Many of them may turn out to be pie in the sky.

SENATOR BUEHLER: Mr. Sacco, you represent all of the--

MR. SACCO: The New Jersey Petroleum Council is a division of the American Petroleum Institute. We are a trade association, representing even people who sell the equipment for the drilling companies.

SENATOR BUEHLER: Then let's see if we can get down to the nitty-gritty

because as ludicrous as my bill may sound, it has two purposes: One, to guarantee that in the year 2200, there will still be some farmland in New Jersey that won't be taken over by the enormous wealth that is associated with the petrochemical industry and, two, that there is in New Jersey - and there shall be, in my opinion - a balance between the three, the petrochemical industry, agriculture, and our beaches.

Are you saying that there are no hard and fast plans that the oil companies have coordinated? We know about the drilling. We all agree that the drilling will take place. New Jersey is now concerned about how does it protect two major industries from intrusion by the third.

All I have heard is a lot of "ify" things that could develop "provided this happens" and "it is going to happen but it will happen maybe 20 years down the road." I know it is going to happen. Everyone in New Jersey knows it is going to happen. All I am trying to put my finger on is some specifics in terms of what the plans are.

It is obvious that the Department of Environmental Protection doesn't have a plan yet. That is why we asked people, last year, to hold my bill up. My bill only really represents some panic that something could happen in New Jersey in the next couple of hundred years that I don't want to happen, even though you and I aren't going to be here. That is all I am asking for. What are some specific plans for littering and for the inland storage tank farms that I see growing up in this State - because I don't think the capacity is up there in North Jersey. I want to get answers to some of those questions so that I can rest with a bill that I can withdraw if I know there is not going to be any danger to the coast of New Jersey nor to the rich farmland in our State.

MR. SACCO: Senator, it is very difficult for me to get the question out of that. Let me try and answer you. We discovered oil on the North Slope of Alaska in 1967. The oil companies said, we would like to get that oil and bring it to the marketplace. Okay? We were foreclosed from doing this for about 6 years. It took an act of Congress for us to proceed.

Once we made the discovery and knew what we had, we said, "This is what we are going to do: We are going to build a 750 mile pipeline from the North Slope to the ice-free Port of Valdez and then we are going to move it out to the West Coast markets."

What I am saying to you is, if and when we ever get out there and start putting the hole in the ground - because that is when you begin to find out what you have in terms of hydrocarbons - that generally takes three to five years. We don't know what action the State of New Jersey is going to take. We don't know what action the Congress of the United States is going to take. When we get out there and start drilling the wells and finding the fields and know how much we can have, in terms of oil, then we can figure out what is the best way of moving this to the marketplace.

SENATOR BUEHLER: On that point, haven't you made two significant test drillings off Atlantic City and off Massachusetts in the Cape Cod area?

MR. SACCO: Those borings were done purposefully so that we would not find any oil. There are lots of implications because Interior had not sold any leases and there were lots of legal ramifications. You just don't go out and sink one hole in the ground to determine what you have. The average is at least two out of one hundred that are successful. So, what I am trying to say is, there has to be at least five semi-submersibles out there working maybe for three to five

years putting holes in the ground trying to determine what kind of hydrocarbons are there and then how much is there. Once you determine how much, then you determine how you get it there: Where is the best place to put the pipeline on shore? Then you have to go to the Federal Government, the U. S. Department of Transportation, the U. S. G. S., the Department of Environmental Protection and, at the same time, you are also going to the state agencies. That is when you begin to formulate a plan.

I don't believe there is any oil company in the United States that really knows where they are going to put a pipeline.

SENATOR BUEHLER: That answers my question.

MR. SACCO: Fine.

SENATOR AMMOND: Thank you very much, Mr. Sacco.

Mr. Robert K. Berring.

R O B E R T K. B E R R I N G: My name is Robert K. Berring. I reside in the Freehold area. I represent myself and, hopefully, the thinking citizens of the State of New Jersey. I am somewhat pleased and surprised that the long list of conservation organizations, which you just read off, failed to appear at this hearing.

I am a citizen who is concerned that the environmental panic is hurting and helping to destroy the American way of life. It is interesting, Senator, that you termed your legislation, with your own words, a "panic" act. I would suggest that if this bill is presented for a vote to our elected officials in Trenton, that the name of the act be changed for it might be more appropriately called the "insult, ostrich, suicide act."

Let me, if I might, explain that. We are holding this hearing this evening at a college which endeavors to produce thinking talent. But, your act is an insult to the engineering ability of the products of the universities of the State of New Jersey, for your act suggests that there isn't, anywhere in the State, the engineering ability to solve the monumental problem of burying one or more pipelines anywhere along our long coastline. However, it is a proven fact that in many other states, who enjoy the economic benefits of petroleum production, the talents of their schools of higher education have been able to produce the engineering know-how to correctly bury pipelines.

This act suggests the term ostrich because it appears that our elected officials are poking their head into the sand and pretending that New Jersey is not a part of the rest of the world.

It is an interesting fact that in one of the moments of high emotion in our recent gas shortage, Governor Edwards of the State of Louisiana threatened to cut back his State's production of natural gas until new offshore areas elsewhere were opened for development. I suggest that we consider what would happen if the unfortunate day comes in the future when we are really faced with a shortage to the point when the elected officials of the petroleum producing states have to decide whether they will use their production to take care of the needs of their own citizens or whether they will continue to allow it to be shipped out of their state to other states who ignored their needs, who postponed action, who took negative steps, who only wanted to enjoy the benefits but didn't want to pitch in and face the fact that everyone has to make sacrifices to enjoy the way of life we are living.

I suggest the name suicide be added to this act because an interesting article appeared last month in the New York Times. This article went on to say

that the mid-Atlantic States had joined together to apply for U. S. funds to aid in the economic development of the mid-Atlantic States of New Jersey, New York, Pennsylvania, Delaware, and Maryland. This article goes on to say that we have lost 714,000 manufacturing jobs, or 15.9% of factory employment in this region from 1970 to 1975, with the worst losses concentrated in New York, Philadelphia, Baltimore, Newark, Jersey City, and Camden. It is a fact that our unemployment in 1970 was well below the national average and, unfortunately, is now well above the national average. It is a fact that Ocean County and my home, Monmouth County, have done better than some of the counties in our State of New Jersey, but I realize that this piece of legislation, if put to vote, would have to be considered by all of the county representatives.

I suggest that this legislation is another nail in the coffin of the American free enterprise system and as one taxpayer - and, hopefully, expressing the feelings of other taxpayers - I sincerely request that the legislation not be presented for a vote in the State Senate.

SENATOR AMMOND: Thank you.

Mr. Lee C. Lemar.

L E E C. L E M A R: My name is Lee C. Lemar of Colts Neck, New Jersey. I am a professional geologist by trade for some 40 years. I have been retired for the past 10 years. I am a student of energy. I am Environmental Commissioner for the Town of Colts Neck. I am also a member of other environmental groups. But, I speak for myself. Some of my environmental friends will probably throw me out when I get through here.

I am not a foe of the environment; I am very much for it. I have been fighting for it for many years. I am a hydrogeologist. I understand the ground and water problems we have here and I must caution, before I get through, about some of our ground and water problems.

I will start with explaining to you, Senator Buehler, a little better, perhaps, this question about whether or not we ought to dig for oil offshore. When I retired from petroleum geology, I represented a company that was involved in the entire world, but I was in charge of the Western Hemisphere, in exploration.

I have studied some 40 basins and of those 40 basins, I find that very few of them contain oil and gas. Now, as far as the Baltimore Canyon area is concerned, I will refer you to Canada. They have the same geologic formulations, the same potential source beds, the same ages of rocks there. To date, there have been well over 100 wildcat oil drills off the east coast of Canada and there has yet to be one economic find and the industry has spent well over one-half billion dollars.

Industry also has explored off Washington and off Oregon in equally good structural relations as we have offshore. To date, there has been no oil found there. The same thing applies to British Columbia. All I want to point out is, we must look because we are in dire circumstances. We must do something. We have already gotten up to 42% of imports as compared to 30% about five years ago. We are at the mercy of those who control this.

The U. S., today, has used up almost 60% of the petroleum reserves that we predict are available. The world itself has used almost half of it. We are looking at 25 to 50 years from now when we won't have it. So, we are in dire straights.

As to deepwater ports, I would like to give you a few figures. I have lots of them here but I won't give them to you because it is rather statistical

and I dislike statistics. But, to give you some idea, I have three items here. There are some over 100 deepwater ports in the world. These, of course, are all outside of the U. S. simply because we have none in the U. S. The spill ratio of some six deepwater ports by one company - Shell - and this is all reported in the Marine Technology Magazine of October, 1974 and these statistics come from non-biased sources -- The spill ratio is one barrel of oil to every 4.1 million barrels of oil handled. This is the worst statistic that we have. We can go on to another of Shell's groups wherein there are 10. These are loading S.B.M.'s. There are two types of S.B.M.'s - loading platforms and deepwater ports. The others I just gave you are discharge S.B.M.'s. These are loading S.B.M.'s and the spill ratio is one barrel of oil to 232 million barrels of oil handled.

Then we can go on from that and we have another group of four in which the spill ratio is one barrel of oil to 594 million barrels handled.

So, you can see, as has been reported, the amount of oil spilled by deepwater ports is really miniscule.

Now, let's look in the other direction. As you know, we have increased amounts of shipping coming into our harbors. Now, if you want pollution the best way to get it is just to increase our import needs. The Coast Guard itself says that everytime you double the number of ships coming into a port, you multiply the risk times ten. And, we are fast approaching that, witness the number of spills that have been offshore on the east coast since December 15th - some 11, I believe off the east coast; some 17 in the U.S. Now, part of this was manpower failure but as long as you have ships and you have men to run them, you are going to have failures.

So, I am saying, let's don't pollute our shores. This is where these intra-coastal ships go - 10, 15 miles off our shore. All we need is for one of those to break up and you will have all the pollution you need. Offshore pollution is about 1.9% of all the pollution in the marine environment as compared to 10% or 12% for shipping, tankers, liners, coasters, coastal steamers.

So, there is a perfectly good reason to cut down pollution. Have them bring in a pipeline if we find any oil offshore - and we don't even know if we have oil there. Certainly, we don't even know the color of it. So, let's don't worry about it until we find whether we have it or not. Thank you.

SENATOR BUEHLER: Mr. Lemar, your field of endeavor was in geology?

MR. LEMAR: Yes, sir.

SENATOR BUEHLER: And you have no insight as to what we have out there?

MR. LEMAR: Except from the experience that I have had, that is correct.

SENATOR BUEHLER: I must say you are not too optimistic.

MR. LEMAR: Well, if you look at it statistically you can't sound optimistic. This is the risk the oil industry takes all the time. Now, the risk offshore, most recently, according to the A.A.P.G. - the American Association of Petroleum Geologists, and this again is not biased-- These are statistics gathered from and by the government and given to the government. The offshore risk is about one in ten. Onshore it is one in fifty-two. That is simply because we are looking in a frontier area offshore.

Now, back when I was starting as a petroleum geologist, the risk onshore was one in ten. So, you can see we found all the big ones. We found the easy ones. Now, you have to go out and -- It costs seven times, at least, as much to build offshore as it does onshore. So, to find an economic one, you have to find a real good one in order to get it onshore.

SENATOR BUEHLER: And once you find it, what is the best way to handle it?

MR. LEMAR: I think we will have to do just like one of the speakers said: We are going to have to find out what is the most expedient way to handle it. Now, I am quite active in the environmental field and I have looked at the laws and there are quite a few. The Coastal Zone Law is the first one. The DEP speaker pretty well covered the waterfront, I think. I think we have plenty of time to determine how to get it in.

Now, there is one thing I would caution about. It appears that we do not need - and I have talked to many major companies, I have friends with many major companies-- Again, I repeat, there is no interest, insofar as I can find out, in building a refinery.

The Coastal Zone, which is just east of the Colonial Pipeline consists of unconsolidated sediments. I would want to be very careful about tank farms or any storage facilities of any consequence in this area. The U. S. Geological Survey has most recently completed two studies in Monmouth County and part of Ocean County in which they have proven that the vertical migration of fluids - the fluid transmissibility vertically - is quite considerable and once a fluid - a toxic fluid - gets into the surface ground water, it will go downward as well as along the aquifer or the reservoir in which water normally moves.

I am trying to get information concerning the Gulf Coast in California right now because there are similar geological conditions there, except there they do have clay, which means that they have formations through which water will not move. Here, we do not have this.

So, the ground water, as indicated, in Howell Township, Jackson Township, and Dover Township where they have had these chemical spills could be quite serious. Now, there is no reason, except for an economic one, - and I am sure that could be solved - why the oil could not go directly under the water into the refineries. If you have a leak under water - and it is pretty rare, quite rare anymore-- In the beginning it was not too good but now it is very good because they have developed a technique. If you spring a leak, it would be visible on the surface. But, if you build a pipeline and you have a leak that gets into the ground water supply, then you are in trouble.

SENATOR BUEHLER: I am glad you made those last remarks because that is fairly consistent with the concept of S-22, that if there is a means of delivery under water through pipelines to existing refineries without disrupting anything on the coast or inland to storage tank farms, then I think that is the route I would approve. I am glad you brought out that last point.

MR. LEMAR: I wouldn't disagree. But, again, we need to take a look. Pipelines have come an awful long way. Back when I was young, pipelines were subject to frequent breakage and spills. That is a rare occasion anymore because they have developed protection. They have developed new techniques. They have developed new insulation. They have developed new types of binding. They x-ray all the walls and all this sort of thing. So, it is a pretty rare thing. The risk to a pipeline going across an area is small.

There are also other ways this can be done. In particularly fragile areas, you can do what they call a double pipeline - a jacketed pipeline. You put an outside shell around the inside shell. If a leak springs up, you have pressure gauges to show you that there is a leak there. You can stop the pipeline and repair the leak, or you can repair it while it is pumping. They do that

all the time.

So, there are ways. So, I would be opposed to a bill which said, no, you can't. But, I would be very much in favor of regulating it very carefully before it was allowed.

SENATOR BUEHLER: Could you present this Committee or me with any documented evidence concerning that problem you mentioned about delivery to storage tank farms, where there is a risk involved with the chemicals already in the ground that could have an adverse effect on that delivery.

MR. LEMAR: Well, the ones that I am talking about, I am sure you have read about in the paper-- the chemical spills. This plant down here - I don't recall exactly where it is - that got chemicals into the--

SENATOR BUEHLER: You mentioned a part of California which is similar to my area where they have had some severe problems.

MR. LEMAR: Well, I didn't say they had severe problems. I said I am trying to get information on it to find out if they have. I don't know if they have. But, it is a possibility. I just wanted to bring this to your attention. We certainly don't want to ruin the ground water supply.

SENATOR BUEHLER: Where did this occur? Or, where did you get this information?

MR. LEMAR: Through various pipeline companies and companies who have pipelines in California and the Gulf Coast. I have friends.

SENATOR BUEHLER: You said that there was some danger that should be addressed?

MR. LEMAR: I am saying that--

MR. MATTEK: Was there a recent geology report for New Jersey?

MR. LEMAR: Well, there are two recent ones in New Jersey: One on the Englishtown sand and the other on the Mount Laurel sand. The Englishtown one just came out a couple of weeks ago. If you want to find out about the vertical migration of fluids, those are the two you should see. I can give you the references on those. You can get them in Trenton from the U. S. G. S. The geologist there has them.

I am not quite sure about your question, Senator.

SENATOR BUEHLER: All right. I misunderstood you. Your comments were directed towards dangers that could result as a result of the vertical--

MR. LEMAR: Yes, sir. It is just a comment because I don't have the information. I am sure it is available. But, I am not in a position to get it very well. It takes me a while. But, I will have it.

SENATOR AMMOND: Mr. Lemar, I would like to ask you, considering all of the problems that might happen, in your opinion there is nothing that cannot be handled academically and scientifically, is that correct?

MR. LEMAR: Insofar as I know, there is no problem that with enough money and with enough expertise cannot be solved. Correct.

SENATOR AMMOND: Thank you very much.

Mr. Alan Siferski from Exxon is our next witness.

A L A N S I T E R S K I: Senator Ammond, Senator Buehler, it is getting late and I will try to be very brief. I might just mention at the outset, Senator Buehler, that we endorse and embrace your objectives to protect the farmland in the two adjoining counties. I might also remind you that the food industry, from the farmer up through the distribution chain, consumes 13% of our nation's

energy. So, the farmers, in order to carry out their job, need a reliable source of energy also.

We also endorse and subscribe to your objective of maintaining New Jersey's beautiful beaches. I guess what we are really saying is, we think our energy goals can be met and be compatible with your two goals.

However, in terms of Senate No. 22, we are concerned that enactment of such legislation does not really serve the public interest and will clearly be counter-productive from both an economic and environmental point of view.

I will try to be brief. Really, what we are concerned about is, the bill, as written - as we see it - would also prohibit the water redevelopment and the production of energy resources - either gas or oil - off the continental shelf if, in fact, any discoveries are ever made.

I might also mention that at this point in time, and for the record, we know of no specific plans for offshore, deepwater unloading terminals. We know of no facilities for storage or otherwise. I think if that question keeps coming up, I for one, would appreciate it if you would just refer this to the Army Corps of Engineer's study so we can clear the air on that one.

I guess what we are saying is, let's not cut off New Jersey's opportunity to develop energy. We are afraid that S-22 might do that.

In addition - and I don't want to be repetitive - we think there are some points that maybe the sponsors of the bill and this Committee ought to consider. There are four points. Steve Picco mentioned several of these. One, we have the New Jersey CAFRA Act and, in effect, what we are saying is, we have statutory control for the kind of development that we are concerned about. I think that within CAFRA, points, such as the one that Mr. Lemar raised, can adequately be dealt with for regulation and control.

The second point I think should be emphasized is the Federal Deepwater Ports Law of 1974. This is an Act that provides for regulatory requirements for deepwater port development, with state interests protected

Number three, the Legislature - as you all know - recently enacted Chapter 141, the Spill Compensation Control Act. Again, this has very tough provisions concerning spills, cleanup, containment, and also compensation for damage. This is admittedly kind of a negative statute to protect things after the act, but as part of that package will come a very stiff set of regulations out of the DEP.

A fourth point that I don't think anyone has mentioned here is - and it should be noted - the Department of Interior, Bureau of Land Management's Stipulation No. 4 on all the leases issued for the Baltimore Canyon trough development. This stipulation indicates that pipelines will be used to transfer oil if technically and economically feasible. So, really S-22 would be incompatible with this Federal Agency's requirement.

The fifth point - and I don't think this has been covered - is that the New Jersey DEP is currently preparing a Coastal Zone Management plan to meet the provisions of the Federal Coastal Zone Management Act. This Federal Act has a national interest provision. This is Section 306c:8 of the Federal Act and it says that prior to the Federal Agency granting approval of a management program - which, incidentally, makes the state eligible for Federal funds to finance 80% of the cost of administering their Coastal Zone Management Program - the Secretary of Commerce shall find - and I quote - "The Management Program provides for adequate consideration of the national interest involved in the

planning for and in the siting of facilities, including energy facilities and/or which significantly affect such state's coastal zone which are necessary to meet requirements which are other than local in nature. In the case of such energy facility, the Secretary shall find that the state has given such consideration to any applicable interstate energy plan or program."

I guess what I am saying is, if S-22 were enacted into law and became part of the State's Coastal Zone Management Program, it might preclude any benefit of Federal matching funds.

I think all the other points have been covered. We would urge the Committee not to release the bill for the reasons we have enumerated and others have also. That, very briefly, is what I have to say. Thank you.

SENATOR AMMOND: Thank you very much. The bill will not be considered tonight. It will be considered in a normal open-session Committee meeting. Thank you for coming.

MR. SITERSKI: Thank you very much.

SENATOR AMMOND: The hearing is now adjourned.

JUN 27 1985



