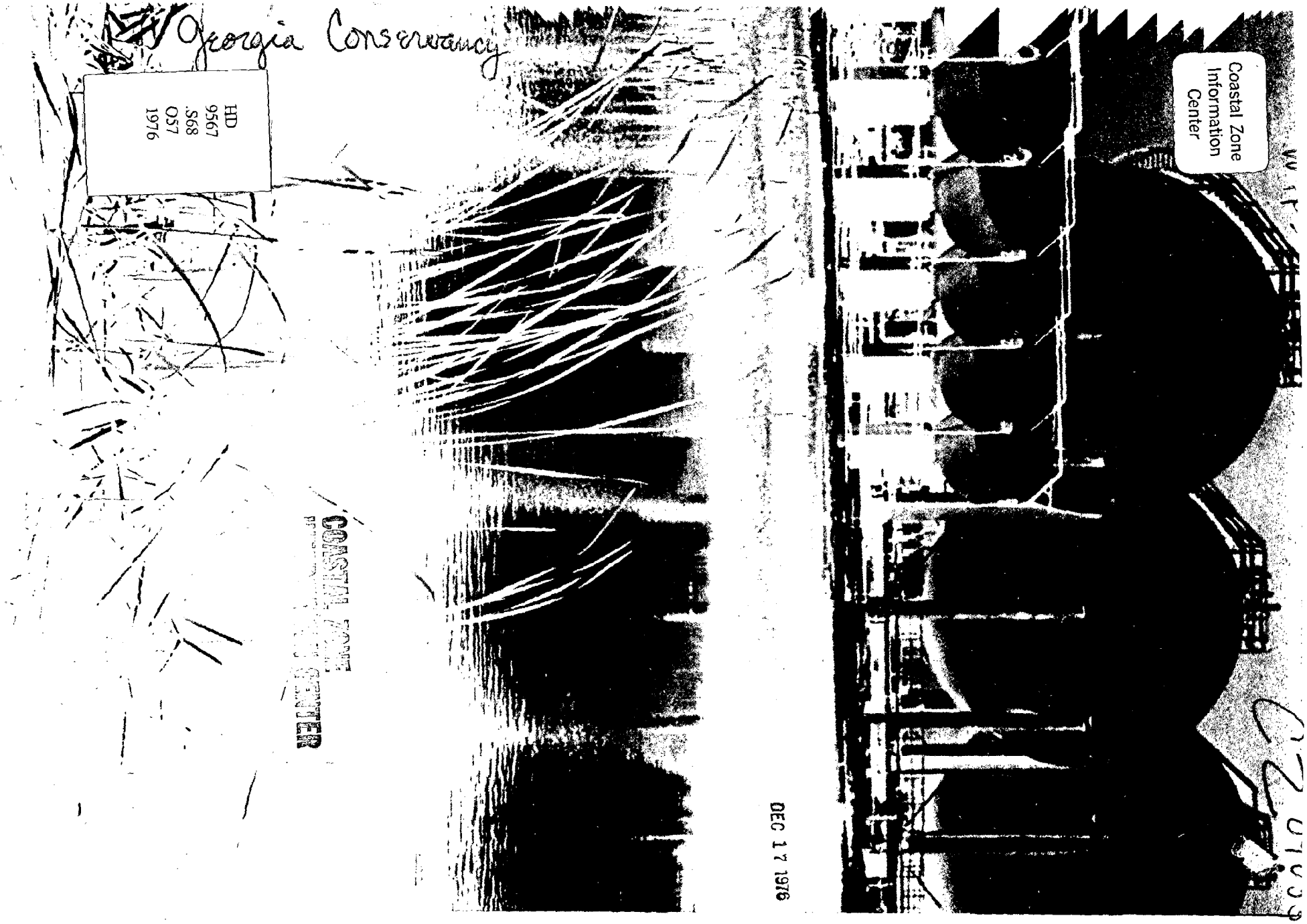
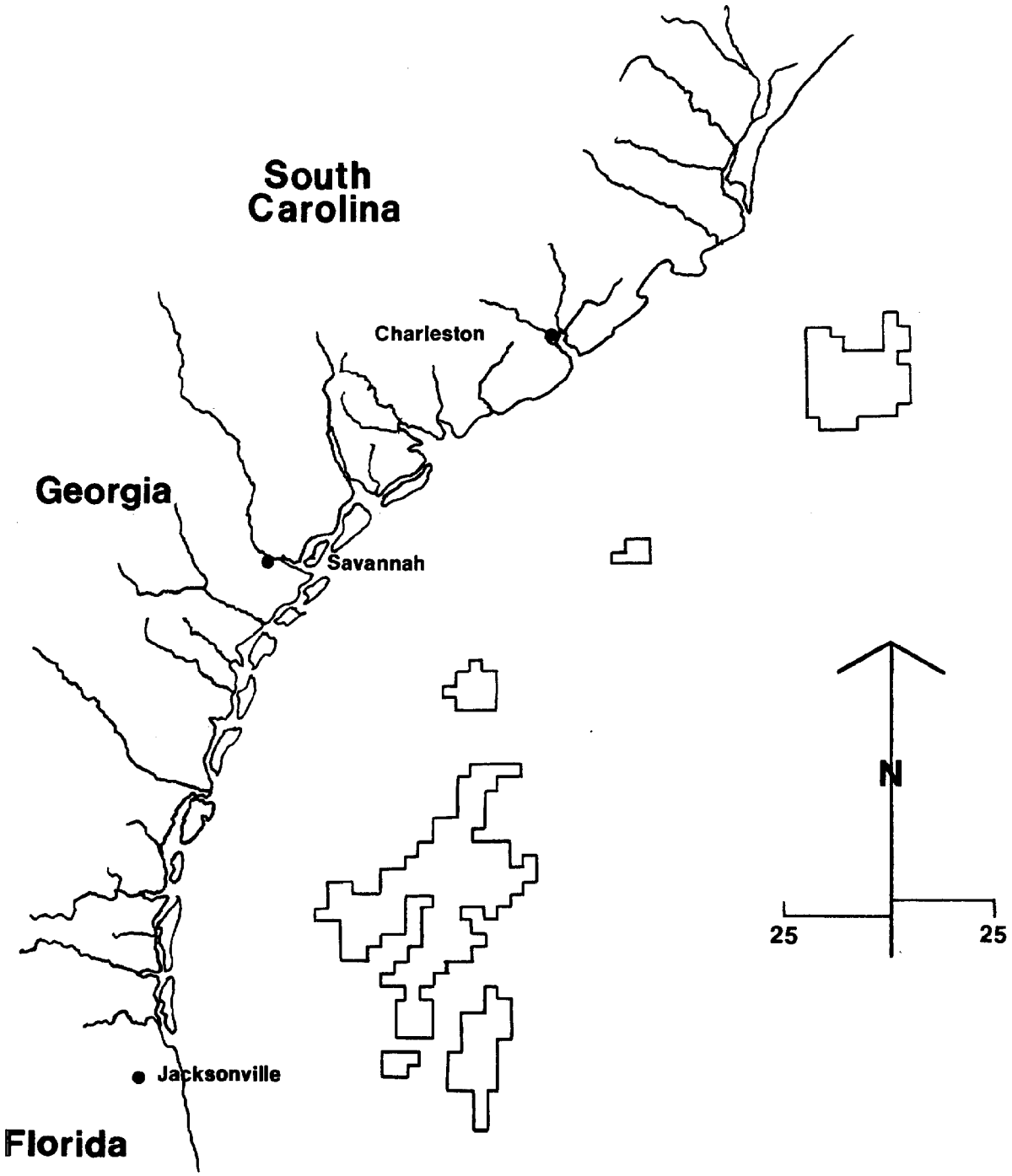


ONSHORE IMPACTS CONFERENCE-Executive Summary

Proposed Tracts
South Atlantic Sale #43



ONSHORE IMPACTS CONFERENCE
EXECUTIVE SUMMARY

SPONSORED

BY

THE GEORGIA CONSERVANCY

AND

GEORGIA'S COASTAL ZONE MANAGEMENT PROGRAM

MAY 12 - 14, 1976

SAVANNAH, GEORGIA

ONSHORE IMPACTS CONFERENCE

EXECUTIVE SUMMARY

A Conference on the Onshore Impacts of South Atlantic Outer Continental Shelf Oil and Natural Gas Development
Savannah, Georgia; May 12-14, 1976

Sponsored by the Georgia Conservancy and Georgia's Coastal Zone Management Program. Financial assistance for the Conference and the production of this summary was provided by the Coastal Plains Center for Marine Development Services and the Office of Coastal Zone Management, NOAA.

GEORGIA COASTAL ZONE MANAGEMENT PROGRAM

The Georgia Coastal Zone Management Program is a joint local, state and federal program to plan for the future of the Georgia coast so that economic and environmental needs are met in a balanced fashion. Mechanisms are being explored for wise resource utilization within the framework of social, economic and environmental parameters that will ensure future well being for Georgia's coastal residents.

The program is now in the second year of a three-year planning phase, during which a management program will be designed. Funding for the CZM Program is two-thirds federal and one-third state and local.

The agencies involved in the CZM Program include the Georgia Office of Planning and Budget, Georgia Department of Natural Resources, Coastal Area Planning and Development Commission, Brunswick-Glynn County Joint Planning Commission, and the Chatham County-Savannah Metropolitan Planning Commission.

THE GEORGIA CONSERVANCY

The Georgia Conservancy is an independent statewide, non-profit organization working on the quality of our environment. Founded in 1967, it has become the leading citizens' environmental force in the state. The membership includes almost 4,000 "citizen trustees of Georgia"--individuals, families, clubs and businesses throughout the State.

Key environmental issues are identified by our members and researched by knowledgeable professionals in the fields involved. Action is taken by working with officials and agencies at local, state and federal levels, contributing to public hearings, and directing membership toward positive acts.

Several chapters have been organized throughout the State to deal with issues of local interest. The chapters have their own newsletters and programs and are respected voices in their communities.

TABLE OF CONTENTS

Page

INTRODUCTION

Hans Neuhauser, The Georgia Conservancy
Gordon Carruth, Chatham County-Savannah Metropolitan Planning Commission..... 1

PROLOG

Harry Sieverding, Bureau of Land Management..... 3

KEYNOTE SPEAKER

Robert Armstrong, State Land Commissioner, State of Texas..... 5
Dr. Robert M. White, Administrator, National Oceanic & Atmospheric Administration..... 7

OIL INDUSTRY IMPACTS

M. Gordon Frey, Chevron Oil Company..... 9
R.R. Hickman, Exxon Company, USA..... 10
O.J. Shirley, Shell Oil Company..... 11
M.P. Zanotti, Gulf Refining & Marketing Company..... 13

ECONOMIC EFFECTS

Allen Pearman, Florida State University..... 15
Dr. Wilson Laird, American Petroleum Institute... 19

MARINE IMPACTS WITHIN THE THREE-MILE LIMIT

Dr. Edward Farnworth, University of Georgia..... 21
Lt. Cmdr. Sam J. Dennis, U.S. Coast Guard..... 22
Dr. Richard Lee, Skidaway Institute of Oceanography..... 23

ECOLOGICAL IMPACTS

Al Smith, Environmental Protection Agency..... 25
Dr. E.W. Mertens, Chevron Research Company..... 25

TABLE OF CONTENTS

Page

SECONDARY AND TERTIARY IMPACTS

Pamela L. Baldwin, Author: "Onshore Planning for Offshore Oil: Lessons from Scotland"..... 27
Ken Schafer, Coordinator: "The Coastal Plains Deepwater Terminal Study"..... 28
Richard Wallace, Office of Marine Affairs, State of North Carolina..... 31
J.R. Jackson, Exxon Company, USA..... 32
John Clark, The Conservation Foundation..... 34

THE LEGAL FRAMEWORK

Congressman Ronald "Bo" Ginn, 1st District, State of Georgia..... 35
Robert C. Smith, Amoco Production Company..... 37
Barbara Heller, Environmental Policy Center..... 38

INTERGOVERNMENTAL RELATIONS AND THE ROLE OF THE CITIZEN

Paul Stang, Office of Coastal Zone Management.... 40
T. Dewey Wise, State Senator, State of South Carolina..... 41
Ellen Winchester, The Sierra Club..... 42

INTRODUCTION

Hans Neuhauser, Director, The Coastal Office, The Georgia Conservancy, Inc., 4405 Paulsen Street, Savannah, Georgia, 31405

Gordon Carruth, CZM Planner, Chatham County/ Savannah Metropolitan Planning Commission, P.O. Box 1027, Savannah, Georgia, 31402

In early 1974, in response to the energy crisis, President Richard Nixon called for an acceleration of the schedule of leasing of tracts on the nation's outer continental shelf (OCS) for oil and natural gas production. While the original dates that were established for the accelerated schedule have slipped, residents of the South Atlantic states are still faced with a potential lease sale in the near future. The South Atlantic tracts that the Bureau of Land Management (BLM) has selected for intensive environmental review, and thus may select for leasing, are depicted on the map enclosed.

The public concern over the production of offshore oil has primarily focused upon the 1969 Santa Barbara oil spill and the wildlife and multi-million dollar damages that resulted. Little attention was paid to what was happening landward of these offshore developments. Two studies, however, one by the President's Council on Environmental Quality and the other by the Conservation Foundation, provided an early warning that it was on the land that the greatest impacts were likely to occur.

Stimulated by this warning, and recognizing the almost total absence of comprehensive information on the potential impacts on the South Atlantic states, representatives of the Georgia Conservancy and Georgia's Coastal Zone Management (CZM) Program decided to assemble experts on various components of the problem in a conference on the onshore impacts of South Atlantic outer continental shelf oil and natural gas development. On the following pages, summaries of the presentations made at the conference are provided. The conference was held in May, 1976. No attempt has been made to provide information more recent than was available at that time.

The objectives of the conference were to identify the potential onshore impacts as they related to existing social, economic and environmental resources, and to at least initiate the process by which undesirable impacts could be either eliminated or reduced to acceptable levels.

INTRODUCTION

It is hoped that the summaries will help to illuminate the complex and evolutionary nature of the problems associated with South Atlantic OCS development; at the same time, it is our desire to stimulate the actions that will be necessary to deal with the impacts.

****

ACKNOWLEDGEMENTS

We gratefully acknowledge the contributions of the following individuals and institutions in the formulation and production of the Onshore Impacts Conference:

J.R. Jackson, American Petroleum Institute

David Powers, Chatham County-Savannah Metropolitan Planning Commission

Col. Beverly Snow, Coastal Plains Center for Marine Development Services

Dr. Jim Jones, Florida Division of State Planning

Marie Davis, The Georgia Conservancy
Cathy Hewitt, The Georgia Conservancy
Betty Heyman, The Georgia Conservancy
Lucy Smethurst, The Georgia Conservancy
Dale Thorpe, The Georgia Conservancy

Lowell Evjen, Georgia Office of Planning & Budget
Larry Hand, Georgia Office of Planning & Budget
Gary Midkiff, Georgia Office of Planning & Budget

Dr. Ernie Carl, North Carolina Office of Marine Affairs

Ed Richardson, South Carolina Water Resources Commission

****

ATTENDEES

The names and addresses of the speakers and moderators are provided in this summary. A list of the conference attendees is available upon request. Write to The Georgia Conservancy, 4405 Paulsen Street, Savannah GA 31405.

PROLOG: AN INTRODUCTION TO THE OCS DEVELOPMENT PROGRAM

Harry Sieverding, Assistant Manager, OCS Office,
Bureau of Land Management, U.S. Department
of the Interior, Suite 841, 500 Camp Street,
New Orleans, Louisiana, 70130

Mr. Sieverding presented the key steps in OCS leasing procedure as administered by the Bureau of Land Management, U.S. Department of the Interior. As prepared by the Library of Congressional Research Service for the Ad Hoc Select Committee on the Outer Continental Shelf, the process can be summarized as follows:

> "Under the current leasing system, the Secretary of the Interior may lease tracts on the OCS to the highest responsible qualified bidder through competitive bidding. The OCS Lands Act of 1953 authorizes the Secretary to hold the bidding on the basis of either a cash bonus bid with a fixed royalty (not less than 12.5%), or a royalty bid (not less than 12.5%) with a fixed cash bonus. The latter has only been tried once. Also, the Secretary is authorized to set a rental fee at the time of the lease. The actual leasing process entails the following chronology: environmental baseline studies, resources evaluation, call for nominations, tract selections, environmental impact statement, and finally the lease sale. The decision of whether to accept or reject the highest bid is based on a postsale evaluation, which includes a resource evaluation conducted by the U.S. Geological Survey and carried out during the period after the announcement of the tract selections and during the preparation of the environmental impact statement. The resource evaluation entails an analysis and estimate of the resource potential of specific tracts. Of course, there is no way of knowing exactly how much oil and gas (if any) is located in each tract. Geologists of the U.S.G.S. and those of interested private parties, make their evaluation based on their own interpretation of seismic data available to both the U.S.G.S. and the industry. The difference in interpretation of seismic data translates into different evaluations of the commercial value of the tract.
>
> Lessees can proceed with their exploratory program after the lease sale, but they have to follow a complex set of specific OCS Orders issued by the U.S.G.S. Once oil or gas is discovered in commercial quantities and the lessee desires to produce it, the lessee must file a development plan with the supervisor prior to commencing development.

PROLOG: Harry Sieverding

"First, the total time frame involved in the BLM leasing process, from Call for Nominations and Comments to an issuance of leases on the OCS, is between 1½ to 2 years for each sale considered.

"Second, within this lengthy process are many opportunities for viable public involvement and impact. In most cases, BLM actively solicits the data and views held by the various public and private entities in the areas involved.

"Third, the BLM is concerned and involved in more than issuing leases for oil and gas resources on the OCS. Other resource uses on the OCS as well as potential impacts on onshore values from alternative uses are all considered. The OCS program is evolving toward multiple-use management with an overriding commitment to planned use and environmental protection."

KEYNOTE SPEAKER

Robert Armstrong
State Land Commissioner
General Land Office
State of Texas
P.O. Box 12428
Capital Station
Austin, Texas, 78711

At the present time, the states along the S/E Coast of the U.S. have not been affected by OCS development. This advance warning presents an opportunity to anticipate and prepare for hydrocarbon related development.

The first question to be answered is one of balance "do you (the S/E states) want to develop this resource and how do you make a decision?" The most important information needed is a basic inventory of facts to show potential for industry and its related affects.

The federal government decided on energy independence as a national policy, but they didn't explore who could accomplish this task. OCS development seemed to be the logical step at first glance, but there were constraints to this which needed to be explored.

- -shipping lanes
- -faulting
- -storms
- -currents
- -hydrocarbon distribution problems
- -protection of natural resources

Texas has explored other economic sectors as well as OCS development--shrimping and tourism for example--in an attempt to retain diversity of its economy. Tourism adds 2.1 billion dollars/year to the Texas economy, so one can see it can not be written off as an economic loss just for hydrocarbon development. As a former lieutenant governor has stated "It is easier to pick a tourist than a bale of cotton."

Another aspect to consider is natural gas production from OCS operations. Texas produces the largest amount of natural gas, with the possible exception of Louisiana, but it is also the biggest user. One reason is the extensive use of natural gas by petrochemical industries who have located in Texas close to the supply source. This use, however, is passed on to the rest of the states in the form of medicines, etc. which ultimately account for 13% of the U.S. GNP. Most of this industry is located near the coast and this points

to future decisions which will have to be made by states facing OCS development for the first time. For example, Texas is planning a single point unloading terminal called Seadock. During the planning phase, environmental and social parameters were weighed as to the affects this terminal would have at point of pipeline landfall on community structure and services. As a general policy, it was determined to move toward existing refineries and to concentrate new ones nearby rather than disperse them throughout the coastal zone.

Mr. Armstrong indicated growth is fine as long as the people of a community understand the costs associated with growth. He gave as an example a hypothetical town with a population of 3000 that has an opportunity to double in size. All looks fine, growth will occur and the town will retain its central downtown and community atmosphere. The town only miscalculated on one fact; when a population of 6000 is reached, chain stores can justify a new facility on the periphery of the town thereby sapping the strength of the community central business district. This is the kind of information communities need.

Planning is necessary to bring to light problems which an area may face. It has been Mr. Armstrong's experience that oil companies will work hand in hand with local and state requirements as long as they know the rules at the beginning of development.

These requirements take planning and coordination but they reduce the overall conflicts and costs which occur if all perspectives are not built into the process.

Potential problems can be dealt with most effectively if the state has established clear, definitive policy to deal with these problems. Both time and money are saved, as well as allowing all sides to have input before the conflict arises.

Additional areas to be explored are facility locations. In Texas, it was found that inland facility sites would be cheaper over the long run than coastal sites. Although initial costs would be lower, coastal sites would be more expensive due to maintenance costs and pre-emption of future uses along the coast.

Additional points made by Mr. Armstrong:

1. U.S. is the only major maritime nation without a national port development policy--the U.S. needs a policy to help set priorities.

KEYNOTE SPEAKER: Robert Armstrong

2. OCS development in Texas resulted in a net loss to the state of $50 million. OCS is concerned with pipeline routes, intracoastal transportation impacts and with Seadock, the offshore terminal.

3. CZM is attempting to regulate dune protection, dredging, shore construction, through various agencies. Until policies are made and adopted this program will be ineffective although the management network now exists.

****

Dr. Robert M. White, Administrator
National Oceanic and Atmospheric
Administration
Room 5128, Department of Commerce
Washington, D.C., 20230

Rapidly expanded oil operations are about to be visited upon a vulnerable coastline already reeling from massive population pressures and a wide variety of major demands. However, a consensus has developed among government, industry and coastal planners for dealing with the problem.

There is common acknowledgement of a Federal responsibility to aid communities suffering from such action as offshore oil leasing, and there is unanimity that the proper vehicle is the Coastal Zone Management Act. In this Act, Federal action is restricted to the provision of financial aid and overall guidance concerning the national interest; state and local programs meeting the national test will become guides for future Federal action.

Support for this concept is growing with the realization the introduction of facilities to support offshore energy development may be traumatic without adequate planning; Alaska is particularly vulnerable.

Both houses of Congress have passed bills directly addressing these problems (S.586 and H.R. 3981); these bills also change substantially the original Coastal Zone Management Act. Let us look at some of the provisions that may be contained in the final version (ed. note: speech delivered May 13, 1976).

It is expected that Federal loans and bond guarantees will be available for communities which must expand public facilities rapidly, and that these loans could be "forgiven" under

certain circumstances. Special planning grants would be available to those likely to be affected by development, and environmental grants would compensate for ecological impacts and assist in maintaining recreational resources.

The Act would be extended to 1981, with the funding level and the Federal share materially increased. Additional flexibility would be provided for the transition from program development to administration. Funds would be provided for training and short-range research needs, and for regional and interstate studies of major coastal issues.

Planning for onshore impacts must be accomplished as early as possible; it must be truly comprehensive; and it must involve all levels of government in a coordinated way.

The National Oceanic and Atmospheric Administration, home of the program, will guarantee that, despite the need for special attention to energy, the integrity of the basic coastal zone management effort remains intact, and the approach will be balanced.

We need to move as rapidly as possible--Federal, state and local governments working in harmony. If we can make the balanced approach work, the Nation will have a framework on which future decisions about growth, protection and resources can be based.

OIL INDUSTRY IMPACTS

MODERATOR: Gary Midkiff, Office of Planning & Budget, 270 Washington Street, S.W., Atlanta, Georgia, 30334

M. Gordon Frey
Chevron Oil Company
1111 Tulane Avenue, Rm. 800
New Orleans, Louisiana, 70112

EXPLORATION ACTIVITIES

Through the years the petroleum industry has determined the conditions that are necessary for a particular region or basin to be oil and/or gas bearing in commercial quantities. First there must be an adequate section of sedimentary rocks. These rocks must contain source beds; i.e., beds that entrapped and preserved from oxidation considerable plant and animal remains. This organic material passes through a kerogen stage prior to forming oil and gas. Some sedimentary rocks, generally shales, become rich source beds. The most prolific oil basins produce as much as two or more million barrels of oil per cubic mile of total sediment volume.

We believe that the organic kerogen in the sediment slowly changes to oil and gas as the source bed sinks and becomes progressively more deeply buried by younger sediments. Because of the ever present geothermal gradient, which amounts to an increase of 1° to 2° F or more per hundred feet of depth beneath the surface, rocks at depths of approximately 6000' to 7000' reach temperatures in the vicinity of 150° F. In the depth realm where temperatures of 150° to 250° exist, source beds slowly generate oil and gas. At still higher temperatures gas becomes dominate, at the expense of the oil. The petroleum is generated in minute amounts over a broad area and before becoming a commercial field must migrate through porous rocks and accumulate where trap conditions exist. If no suitable traps exist, the oil and gas may reach the surface where escape occurs as seeps on the land or beneath the water. Some students of the subject believe that most--up to 95%--of the oil is lost through land and marine seeps.

Even though source beds, reservoir beds and traps may exist in a basin, there is still no assurance that oil and gas fields occur. An ever important factor is timing. Questions such as, when did the oil generate, migrate, and when were the traps effective must be answered in any well conceived exploration program.

OIL INDUSTRY IMPACTS: M. Gordon Frey

Now the public, industry and the government are in the process of environmental impact hearings leading to lease sales in the basins along the OCS of the Atlantic Coast. In order to learn more regarding the presence of source beds and reservoir rocks, some 31 companies have embarked on a two well COST (Continental Offshore Stratigraphic Test) program. One well has been drilled in the Mid-Atlantic (Baltimore Canyon) Basin and the second is being drilled in the North Atlantic (Georges Bank) Basin. These wells are estimated to cost 8 to 9 million dollars each. Consideration is being given to such an informational well in the S/E Georgia Embayment.

The S/E Georgia Embayment area may or may not contain commercial fields of oil and/or gas. No one will know the answer until a lease sale is held and wells are drilled on the more promising structures. Should oil be found in sufficient quantity, it will replace oil that is currently being imported. Gas will find a ready market along the East Coast as domestic natural gas supplies are becoming scarcer each year with major curtailments predicted within the next few years.

We hope the geological conditions necessary for the generation, migration, and entrapment of oil and gas are present. We feel confident we have the technical knowhow to develop the reserves in an environmentally safe manner, once they are discovered.

****

R.R. Hickman
Exxon Company, USA
P.O. Box 60626
New Orleans, Louisiana, 70160

DEVELOPMENT AND PRODUCTION

If exploratory efforts prove the existence of commercial hydrocarbon deposits, development and production phase operations begin. The key element in this phase is the offshore platform which serves as a base for drilling and production operations. In the South Atlantic OCS area, it is most likely that these platforms will be steel space frame structures similar to those proven to be of sound design through years of use in the Gulf of Mexico. These structures will probably be built in existing fabrication facilities on the Gulf Coast and barged around Florida to their ultimate location.

OIL INDUSTRY IMPACTS: R.R. Hickman

With one or two drilling rigs located on the platform, multiple wells are drilled utilizing directional drilling techniques such that the bottom hole location of the well bore may be horizontally several thousand feet away from the platform. In this manner, the reservoir may be properly drained while both development costs and environmental impacts are minimized. As wells are completed and production begins, produced fluids including oil, gas and water are separated and otherwise processed in facilities aboard the platform to prepare them for transportation to their ultimate destination. While crude oil has sometimes been shipped or barged to shore, by far the most economic and widely used means of transportation for both oil and gas is pipelines.

Pipelines are laid on the sea floor, buried in the ocean bottom where appropriate, and buried in all onshore locations so that it is unlikely that the general public will ever be aware of their presence once construction is completed.

Onshore support facilities are required for all of the foregoing activities. A precise quantification of the number and type of such facilities cannot yet be made as several years of exploratory and development effort will be required to determine the production potential of the area. However, speaking generally, onshore facilities will consist of staging areas for men and materials used on the platforms, gas plants to recover liquid hydrocarbons from produced gas, crude oil receiving and pumping stations, and various warehouses, offices, and material storage yards for a variety of supplies and service companies. Only a portion of these facilities require direct access to water and a number of the facilities can likely be located in existing ports or other industrially zoned areas. Overall, the onshore impacts of offshore hydrocarbon development should be relatively small.

****

O.J. Shirley
Shell Oil Company
P.O. Box 60193
New Orleans, Louisiana, 60193

POLLUTION PREVENTION AND SPILL CLEAN-UP

Let me begin with the assumption that to most of you safety and pollution prevention are synonymous--that your primary concern is that no oil be spilled from offshore operations which would affect the coastal areas of your state.

OIL INDUSTRY IMPACTS: O.J. Shirley

With this in mind, let me say that the record of the offshore oil industry is quite good in this area. Of all the oil that reaches the oceans of the world, about 1.3 percent comes from a small fraction, perhaps 10 percent of the 1.3 percent, is spilled in waters surrounding the United States. This is true because of a strong effort of the oil industry and the federal regulatory agencies to make the offshore operation as safe as modern technology and human nature will allow.

In my company's operation in the Gulf of Mexico during the year of 1975, we spilled only 1/10,000th of percent of the oil we produced--50 barrels spilled out of about 50 million barrels of oil produced. Other companies have similar, or perhaps even better, records.

I think this is exemplary performance and imagine that most Coca Cola bottling plants spill a larger portion of their product than one bottle out of each million.

The reasons for this good performance are many. There have been many changes in the offshore industry since the infamous Santa Barbara spill in 1969. These include: (1) Tougher regulations, (2) Increased industry awareness, (3) Improved equipment, (4) Better training of personnel, and (5) Improved company safety standards and programs.

And we are still learning--I think you can be assured that any operations conducted in the Atlantic will benefit from past experience and, consequently, will be even safer.

Following this introduction a series of 35mm slides were shown to illustrate the many governmental agencies which regulate offshore drilling and production, safety practices initiated by the industry and the types of equipment and devices routinely used to prevent oil pollution. Approximately 30% of the cost of offshore platforms is related to improving their safety. A normal production platform may contain 400 safety devices.

Clean Atlantic Associates

Clean Atlantic Associates is a recently formed oil spill cooperative that will serve drilling and production activities in the entire Atlantic OCS. The organization was formed in November 1975, with 16 member companies. Approximately $1 million has been authorized for equipment to serve the Mid-Atlantic exploratory drilling. Equipment will be in place prior to commencement of operations. Additional equipment will be purchased as needed for other areas as they are opened to leasing.

OIL INDUSTRY IMPACTS:

M.P. Zanotti
Gulf Refining and
Marketing Company, U.S.
P.O. Box 701
Port Arthur, Texas, 77670

DOWNSTREAM EFFECTS

There are four areas which are of interest to a company who wants to build a refinery and a community that is considering allowing a refinery to be built in the area.

First, a new refinery built today would probably have a capacity of about 200,000 barrels per day of crude oil. The type of refinery, such as prime products or fuel oils, greatly affects all other factors such as cost, manpower requirements, and environmental controls. The location of the refinery must now be determined. Over the years, most refineries have been built either near a source of crude oil or near the big market areas. The refinery would need to receive crude by pipeline or large tankers to reduce freight costs. Products would be shipped preferably by pipeline which is the cheapest and safest from an environmental standpoint. Other factors are the need for an adequate supply of water and electricity as well as a suitable labor force.

The design and construction of the refinery would take over three years with the cost in the hundreds of millions of dollars. There would be a great demand for skilled craftsmen as well as laborers, many would come from outside the area for varying lengths of time. Construction would start with about 300 people and build to about 3500 people at the peak period. Major equipment would come from outside the area but most of the tools and general supplies would be bought from local business people.

A new refinery would be designed and built with the latest practical pollution control devices. We have found that training employees in anti-pollution measures is very effective for they must operate the equipment. There are three areas for pollution control:

1. Air pollution controls center around limiting the amount of sulfur, particulate and hydrocarbons emitted to the atmosphere. Various methods of control were listed.
2. Water pollution is minimized by using air and circulating water systems for cooling. Waste water is collected and treated.

3. Noise should not be a problem for the area. The noise levels in the refinery must be held down for employee protection.

New technology is continuously being developed in the pollution control field.

Citizens should keep these three points in mind when considering oil development:

1. Finding oil off the coast of Georgia would not mean that a company would rush in and want to build a refinery.
2. A new refinery can be designed and built to meet State and Federal Pollution laws as well as acceptable community standards.
3. A refinery, as any other industrial plant, brings jobs, business and tax dollars to the community.

ECONOMIC EFFECTS

MODERATOR: Lowell Evjen, Planning Director,
Office of Planning & Budget, State of
Georgia, 270 Washington Street, S.W.,
Atlanta, Georgia, 30334

Allen L. Pearman
Research Associate
Department of Urban and
Regional Planning
Florida State University
Tallahassee, Florida, 32306

The Florida Onshore Impact Study report presented the information base necessary for examining some of the options available to Florida. Some of the options identified could be implemented at the local level. Most of the alternatives would, however, require positive action by various units of state government. The following discussion presents the major points extracted from the chapters composing this report. These points provide the framework for identifying and describing possible policy alternatives designed to cope with the impacts of offshore oil and gas development.

IMPACT OF OCS ACTIVITY

Exploratory Activity (Socio-Economic Impacts)

The socio-economic impact of recent exploratory activity off the Florida Coast appears to have been relatively minor. The basis of this conclusion is drawn from the following observations:

1. Recent offshore oil and gas activity (twelve dry wells leased during the MAFLA sale in December 1973) produced minor impacts on the Florida economy primarily because most of the needed equipment and supplies could not be supplied by Florida firms.
2. Approximately 10% of the total cost of all exploratory wells drilled was spent in Florida communities. An estimated $3.0 to $3.4 million was spent locally.
3. Despite crowded conditions at Panama City, the State of Flordia appears to have adequate port facilities for future oil exploration off the Gulf Coast. If a new conventional port ("Superport of Florida") were constructed at Panama City, there

should be no problem in locating suitable marine support facilities in the Destin Dome area. Port Manatee can easily accommodate needed support facilities and has capability to enlarge its present operations. In addition, the Port of Tampa could also provide additional space for onshore support activities. Enlarged facilities at Pensacola would be needed, however, to support any increase in exploration and/or development in the area.

Development and Production (Socio-Economic Impacts)

Examination of the possible socio-economic impacts of offshore oil and gas production must be based upon projections of future levels of offshore activity. Seven major factors can be identified as affecting the primary employment impact of offshore oil and gas activity:

1. Estimates of recoverable reserves of oil and natural gas,
2. Lead-time from lease sale to full production,
3. Estimates of required onshore facilities,
4. Estimates of optional onshore refineries (e.g., refineries),
5. Local production of rigs and platforms vs. purchase elsewhere,
6. Adequacy of existing infrastructure,
7. Location of offshore fields.

Primary Employment

The approach taken in this study involved the selection of a specific case study area as a potential "host community." These statements are based on the case study rather than on actual experience. Estimates developed for the case study assume that offshore crude oil recoverable reserves total 736 million barrels and natural gas reserves total 1.0 trillion cubic feet. Reserves of this magnitude are estimated to produce at a peak daily rate of 136,000 barrels of oil and 215 million cubic feet of natural gas.

Translation of general projections of possible levels of offshore activities into specific estimates of onshore socio-economic impacts produced a pattern of onshore development which is briefly outlined as follows:

ECONOMIC EFFECTS: Allen L. Pearman

* If commercial quantities of oil and natural gas were discovered six months after the forthcoming Gulf of Mexico (General) lease sale, which is scheduled for February, 1976, the first production from an offshore field could take place in early 1979. The facilities necessary to support the various phases of assumed levels of offshore development are introduced in a fashion which will permit peak offshore production to begin in 1985 (approximately 8½ years after the first discovery of exploitable offshore reserves).

* The aggregation of the estimated employment levels for each of the required facilities provides the basic data for projecting future employment levels in the impacted area. Without optional facilities (such as a refinery), employment estimates include a projected peak employment of 2,300 approximately 7½ years after the first discovery. Direct employment requirements associated with the peak production of 136,000 barrels of oil per day total 1,500.

* If a major products refinery with a 200,000 barrel per day capacity is included as a "required" onshore facility, peak construction employment totals 4,200. Production employment would increase by an estimated 550 with the addition of the fully operational refinery.

* The total land-use requirement needed for estimated onshore facilities is quite small, 200 acres. A major products refinery would require an additional 1,400 acres. Approximately 130 acres would be required with direct waterfront access.

* The capital costs of onshore facilities (excluding refinery) total an estimated $29.3 million ($ 1973). Construction of a 200,000 barrels per day major products refinery would require a direct capital investment of $226 million ($ 1973).

Secondary Socio-Economic Impacts

The estimation of the secondary impacts of offshore development upon the residential, retail, wholesale, service, and office sectors of a local economy is limited to the period of peak production activity. Estimates of public revenues and expenditures associated with the direct and indirect affects of production related activity are also included as major "second round" impacts.

ECONOMIC EFFECTS: Allen L. Pearman

The general procedure for derivation of these estimates involves:

1. The determination of the size, character, and presumed location of industrial facilities directly associated with offshore production;
2. The conversion of employment and population estimates into associated residential development;
3. The derivation of indirect development parameters for retail, service, and office space likely to be associated with primary industrial facilities and residential growth;
4. The estimation of induced expenditures for local government services; and,
5. The estimation of induced revenues for city, county, schoolboard, and special district jurisdictions impacted by development.

The total population increase associated with the direct industry (including refinery) employment of 2,055 is estimated to be approximately 3,500. Development without the incorporation of a major products refinery would induce total population growth of 6,200.

Approximately 3,000 new housing units would be required by an additional population of 8,500. If a refinery is not built, only an additional 2,200 units would be necessary.

The annualized revenues of local government jurisdictions generated by new development (including a refinery) are approximately $7,800,000 while annualized local expenditures total $6,100,000. The net fiscal impact upon local governments is positive to the extent of $1,700,000 on an annualized basis.

If the refinery is excluded from the group of onshore facilities, the net fiscal impact on local governments is estimated to be negative. The annualized local revenues generated by new development (excluding the refinery) total an estimated $2,900,000. The annualized costs imposed on local governments equal $3,700,000. The difference is $800,000 on an annualized basis. We are estimating that under conditions outlined in this study, negative fiscal impacts on local governments are likely if a refinery is not constructed.

ECONOMIC EFFECTS:

Dr. Wilson Laird, Director
Exploration Affairs
American Petroleum Institute
2101 L Street, N.W.
Washington, D.C., 20037

It is a privilege to be here to address you on the potential effects of offshore petroleum in this area. It is heartening to know that so many people are interested enough to attend such a meeting.

There are two points I would like to bring to your attention at the outset. The first point relates to possible impacts during and subsequent to the exploration for oil and gas in the South Atlantic. The second point relates to facility construction.

Point one is this: There should be little impact--adverse or beneficial--on the area during the exploratory stage. And there will be no additional impact, if no oil and gas in commercially significant quantities are found.

Point two is that the presence of oil and gas offshore is not necessarily related to the construction of refineries or petrochemical plants in this area. It seems like that existing U.S. refining capacity would be used to process any South Atlantic oil production, certainly, in the early stages of development. Thus, the impacts on offshore Southeast Georgia Embayment would be limited primarily to onshore-support and transportation-associated operations.

Virtually all the estimates of adverse and beneficial effects of necessity assume that oil and gas will be found in commercially producible quantities, once the search is underway. But, the truth of the matter is that no one will really know the full socio-economic impact until petroleum operations have been diligently pursued for some time in the region.

In order to arrive at a ballpark estimate of the impacts in the Southeast Georgia Embayment area--should any significant discoveries be made--I have optimistically divided the estimates made for the Mid-Atlantic area by twelve. This represents more than the 15 to 1 ratio of estimated recoverable oil in the two areas. Not all of the factors covered in the Mid-Atlantic study made for the API by Woodward-Clyde, Consultants, can be treated in this manner, of course. And, admittedly, at best such an approach may prove overly simplistic. Nevertheless, it does provide a basis that may be refined at a later date, when more reliable data becomes available.

On this basis, an estimated 300-700 direct jobs would arise as a result of South Atlantic operations. It is anticipated that other job opportunities will be created--jobs not directly connected with petroleum operations. Estimates of these indirect and induced jobs vary significantly. However, liberally assuming that 10 such employment opportunities will be created for every direct job in petroleum operations (Woodward-Clyde used a multiple of about 1.2), it may be expected that from 3,000-7,000 indirect and induced job opportunities would arise during the height of exploration and development.

Again, using the one-twelfth divisor into the Woodward-Clyde projection, another $25 million may be anticipated to be invested in onshore exploration and production facilities in the Southeast Georgia Embayment area during the OCS development period. Thus, capital investment and wages could total about $200 million.

Certain land areas would be needed to support the offshore activities. For example, small amounts of acreage would be needed for service support of exploratory and development rigs, operations bases, offices and gas processing plants. The exploratory and development rigs, themselves, would probably be brought in from other areas. At best, in the entire South Atlantic, the land requirements would account for only a few hundred acres.

Depending on the success of the offshore exploratory phase, a facility to build platforms and a pipeline terminal may be required. Workers would be drawn from the local employment pools for a significant portion of such construction activities. And local firms, such as helicopter, boat, and food and equipment suppliers, could be called upon to provide support for the offshore operations and onshore facilities.

The petroleum industry is a dynamic industry, in which technological improvements are constantly taking place. One has only to attend the Offshore Technology Conference held each year in Houston to appreciate the tremendous strides which are made annually. However, any operation conducted by humans is unfortunately subject to the old bugaboo of "human error." There is no way this can be totally overcome. Nevertheless, I can assure you that everything that can be done to conduct a fail-safe operation will be done--subject only to this human limitation.

MARINE IMPACTS WITHIN THE THREE-MILE LIMIT

MODERATOR: Dr. James Jones, Division of State Planning, Florida Department of Administration Tallahassee, Flordia, 32304

Dr. Edward Farnworth
Institute of Ecology
University of Georgia
Athens, Georgia, 30602

Based upon the experiences of integrating two 30-inch diameter pipelines into fresh and saltwater marsh near the Savannah River, it has been determined that advance planning is a definite prerequisite for pipeline construction. Assessments must be made of drainage patterns, sediments, wildlife, and geologic characteristics.

Pipeline construction itself, as determined by a Battelle Laboratories' report, can be accomplished with minimum environmental damage if construction techniques are adopted to this sensitive environment. Techniques such as burying the pipeline throughout its entire length to prevent movement by currents or potential breakage from ship anchors. Berms along the pipeline resulting from spoil should have an elevation such that vegetative growth will reoccur. Some minor environmental impacts such as turbidity, can be expected during construction, but these are not long term. During construction, marsh buggies are used to set the particular line in place and to investigate the area for archaeological sites. Pipeline installation can be accomplished by floating the pipeline out into wet marsh after the trench has been dug and the pipe welded. Backfilling is then completed taking care to maintain the water flow over the marsh.

The primary problem with pipelines has been spills, usually the result of human error such as anchor dragging. The industry record has been quite good and new burying techniques combined with special safety precautions to prevent breakage from corrosion should improve this record.

Impacts on benthic organisms result from a pipeline construction but these impacts are short term as these organisms reestablish themselves once the operations are complete, usually within a year. Marsh and dunes have regenerative capacity also. This capacity can be enhanced by planning construction completion to coincide with the growing season, thus enabling vegetation regeneration prior to winter.

****

MARINE IMPACTS WITHIN THE THREE-MILE LIMIT:

Lt. Cmdr. Sam J. Dennis, Chief
Marine Environmental Protection
Branch, U.S. Coast Guard
51 S.W. 1st Avenue
Miami, Florida, 33130

A general overview was provided of (1) the extent of the oil pollution problem, (2) specific responsibilities which the Coast Guard is charged with under Federal law, and (3) steps the Coast Guard has taken in carrying out its responsibilities. The primary federal statute governing oil pollution in the U.S. is the Federal Water Pollution Control Act of 1972, as amended. This act sets forth the organization and responsibilities for a coordinated federal response to oil spills. Statistical data was presented regarding the frequency of oil spills, quantity of oil spilled, and conclusions drawn as to the present trends.

The source of oil spills is varied with the largest portion of the day-to-day spills involving vessels and facilities engaged in the handling and transfer of oil. It is the relatively small day-to-day spill which represents by far the largest percentage of spills which occur. The Coast Guard has an on-going surveillance program which serves to allow for (1) rapid effective response action to a detected oil spill, and (2) Coast Guard investigation of all spills in conjunction with civil penalty assessment provisions of the law. Chemical analysis of collected oil samples greatly assists in the determination of the responsible party, as was most clearly shown during the major spill off the Florida Keys in July 1975. The physical cleanup of an oil spill is a difficult task which often requires much equipment and many personnel. Upon completion of cleanup, attention is focused on the law enforcement responsibilities of the Coast Guard. The responsible party for a spill is liable for a civil penalty of up to $5,000. Also, the responsible party is required to report the spill to the Coast Guard when the spill occurs in the coastal areas of the U.S. Failure to do so subjects the party to a $10,000 fine and/or one year in jail. The responsible party also bears the burden of the cost of any cleanup involved.

****

MARINE IMPACTS WITHIN THE THREE-MILE LIMIT:

Dr. Richard Lee
Skidaway Institute of Oceanography
P.O. Box 13687
Savannah, Georgia, 31406

FATE OF OIL IN SOUTH ATLANTIC COASTAL WATERS

The main features of our coastline are fine sediment salt marshes characterized by the marsh grass, Spartina. Near-shore hydrographic conditions are characterized by a boundary or turbid zone located approximately 10 miles offshore. Inside this zone, currents are regulated largely by tidal flow which results in high sediment loads.

Results of oil spills in various parts of the world have indicated that oil is readily incorporated into fine sediments where much of it remains physically and chemically intact for at least four and often as long as ten years. Whether the biological effects of oil in fine sediments persists as long as its physical presence depends on the particular area and the composition of the oil. Resuspension of oil in sediments will occur during storms especially in shallow unprotected areas. Also marine organisms such as worms which ingest sediment will resuspend sediment and will also incorporate petroleum into their body tissues.

In our inshore waters most hydrocarbons are quickly absorbed to particles in the water and, if not degraded, find their way to the bottom. The biological effects of oil are due primarily to the aromatic hydrocarbons. The lighter weight aromatic hydrocarbons, such as naphthalene and benzene, are rapidly degraded in the estuarine water of coastal Georgia. However, the higher weight hydrocarbons, such as hydrocarbons in the asphalt class, are not so quickly broken down and will remain unaltered for some time in the sediments. The rate of degradation of petroleum components depends on such factors as light, temperature, presence of hydrocarbon degrading microbes and nutrient levels. The work we have done near oil storage tanks on the Cooper River in South Carolina shows that oil degrading microbes are far more active in area of chronic oil pollution.

The impact of an oil spill in our inshore waters will depend on the site of the spill and the path taken by the oil after the spill. As noted above different oils will have different impacts because of differing toxicity and also because some components of petroleum are readily degraded while others persist for years.

MARINE IMPACTS WITHIN THE THREE-MILE LIMIT: Dr. Richard Lee

Future studies which would help to predict the fate of oil on the inshore areas of the South Atlantic include:

1) Circulation characteristics of inshore areas;

2) Characteristics of types of suspended particles and their ability to absorb oil;

3) Incorporation of oil into the different types of sediments in the area; and,

4) Rate of degradation of oil in water and sediments of the area.

ECOLOGICAL IMPACTS

MODERATOR: Dr. James Jones, Division of State Planning, Florida Department of Administration, Tallahassee, Florida, 32304

Al Smith, Chief
Environmental Emergency Branch
U.S. Environmental Protection Agency
1421 Peachtree Street, N.E.
Atlanta, Georgia, 30309

Basically, the theme of my paper was that there are a number of collateral activities incidental to the total oil industry that are affected by outer continental shelf development. Transportation amplitudes contingent to onshore activities will focus attention on spills associated with these surges in transportation. This is one example. Various migrations of the economy toward the fuel supply, i.e., the development of refineries, interstate pipelines, etc. are all affected. The government has adequate statutes in the area of protecting the environment from emergencies that may arise from these developments. Regulations have been developed to implement these statutes with considerable emphasis on spill prevention. One single weakness in the oil spill prevention scheme is the lack of a regulation dealing with spills from pipelines and "rolling stock." This in and of itself is an onshore impact. The future of regulation and control of incidents involving the development of fossil fuel resources appears good, so long as public support is available.

This speaker offered documented evidence during the question and answer session to offset the generalized argument by some in the oil industry that "oil spills are relatively harmless to the environment and there is a lack of evidence to show otherwise."

****

Dr. E.W. Mertens
Chevron Research Company
576 Standard Avenue
Richmond, California, 94802

A widely held misconception is that low level chronic exposure of oil, which may occur from offshore producing platforms, has an adverse effect on marine organisms inhabiting the local area. Results from several major studies conducted recently negate this opinion.

ECOLOGICAL IMPACTS: Dr. E.W. Mertens

For example, a two-year study of the effects on marine life of offshore oil production in the Gulf of Mexico was conducted by 23 scientists from 12 Gulf Coast universities. This area is not only the greatest offshore oil-producing region of our nation but also our nation's most productive fishery.

These scientists concluded that the low level chronic exposure to oil has had no measurable effect on marine life, that the production of the fisheries has increased markedly during the 25- to 30-year presence of the oil industry there, and that every indication of good ecological health exists.

Similar results were obtained in a two-year study in Lake Maracaibo, Venezuela, where 6500 wells have been drilled during the past four decades.

In a three-year study on the effects of large natural oil seeps near Santa Barbara on the local marine life, investigators from the University of Southern California found that all organisms are present that would be expected to be in that environment if oil seepage were not there; exposure to natural oil seepage has no effect on either the growth rate or reproductivity of the organisms; and the health of the local marine community is not affected.

Also, under platforms in the Santa Barbara Channel, other researchers have found that a highly complex community of marine life has developed. Each platform is "home" for 20,000 to 30,000 fish, representing at least 50 species. Every available underwater surface of the platform is heavily encrusted with mussels, barnacles, sea anemones, and other forms of marine life.

Oil spills from platforms are rare. Out of nearly 20,000 wells drilled in our country's offshore waters, only three major spills have occurred. Only one of these, Santa Barbara, reached the shoreline and affected the intertidal life. The damage was slight and temporary.

These studies and experience provide ample evidence that offshore production of oil does not cause measurable harm to marine life.

SECONDARY AND TERTIARY IMPACTS

MODERATOR: Dr. Ernie Carl, Director, Office of Marine Affairs, North Carolina Department of Administration, 217 W. Jones Street, Raleigh, North Carolina, 27603

Pamela L. Baldwin
9300 Cornwall Farm Road
Great Falls, Virginia, 22066

Author, "Onshore Planning for Offshore Oil: Lessons from Scotland"

Pamela Baldwin's remarks were based upon a book she co-authored for the Conservation Foundation in 1974 concerning the affects OCS development has had on Scotland and the Shetland Islands.

At the time Ms. Baldwin assessed the situation, employment was at its peak. Subsequently, the scope of development has narrowed and communities are now beginning to feel the pressure of unemployment as some of the construction jobs end.

Scotland, which has a long history of land use planning, put local governments in charge of planning for industrial siting and associated community affects.

* Social impacts reflected the cultural discrepancies between the native residents and the new oil industry population, namely Americans. An element of traditional lifestyle which the locals felt important necessitated a rule imposing no Sunday work on the sites.

* In Aberdeen it was not possible for the craftsmen of the area to provide traditional stone housing fast enough to accommodate the influx of new residents. The solution was to import prefabricated wooden houses from Scandanavia. The housing construction workers had left their jobs to work for the oil industry.

* A recently constructed Michelin tire factory experienced a very rapid turnover rate for its employees because of job migration to petroleum induced sectors.

* Some sites were located in places inaccessible except by one lane tracks. These areas were to be supplied by sea rather than land. After 1½ years this policy seems to have been ignored.

SECONDARY AND TERTIARY IMPACTS: Pamela L. Baldwin

On the Shetland Islands closest landfall to the offshore platform sites, the government was strong enough to speak for all the people and deal with the oil industry on a unified basis. Because of the high cost of laying pipelines it was decided the petroleum would be piped to Shetland and stored in a terminal from which tankers would distribute the petroleum to other points in Europe.

The population influx was the major impact in the Shetlands. Characterized by fishing, crofting, and knitware cottage industry, the traditional lifestyle came under quite a bit of pressure from the large industrial influx.

The local residents favored new town development located separately from existing communities. Officials, looking at the possibility of community division between residents and newcomers, as well as the possibility of ghost towns when the boom is over, decided to distribute expansion to four existing communities, thereby reducing the cost and expanding the options for future use of the new development. Each of the four communities which is to be expanded will provide some form of public facility, i.e. schools, etc.

The conclusions reached by Ms. Baldwin indicate that although the impacts of oil development may be great, a community or state with clear policy on how their resources should be used, can deal with the petroleum industry on strong terms to preserve and enhance the community well being.

****

Ken Schafer
Howard, Needles, Tammen and Bergendoff
201 N. Washington Street
Alexandria, Virginia, 22314

Coordinator, "The Coastal Plains Deepwater Terminal Study"

(ed. note: This summary is derived from "The Coastal Plains Deepwater Terminal Study," prepared for The Coastal Plains Regional Commission by R.R. Nathan Associates and Coastal Zone Resources Corporation.)

1. The Coastal Plains region would realize substantial economic gains from the development of a terminal/refinery complex. Net direct regional benefits are positive, and the indirect impact on output and employment in other sectors are large. Public revenues generated by the project would

provide important additions to county and state government revenues. The construction phase, however, could produce stresses on the local economy.

2. Construction of a deepwater terminal/refinery complex would result in considerable additional direct employment in the Coastal Plains region, a large proportion of which would be high-skill, high-wage employment. For each refinery a peak labor force of approximately 3,000 workers would be required for construction and 600 would be required for operation. It is expected that part of the labor force would come from outside the region.

3. A regional cost-benefit analysis of the project revealed that direct benefits accruing to the Coastal Plains region (wage payments retained in the region, compensation for land, and tax payments) exceed the costs incurred by the region (essentially expenditures for such secondary facilities as transportation, power and social services). Net regional benefits, summed and discounted at 10 percent for the period through the year 2000, are positive for all alternatives. These may be summarized as follows for comparable alternatives in each state:

	Net Regional Benefits (million 1974 $)
North Carolina.....	572
South Carolina.....	607
Georgia.....	647

4. The introduction of a terminal/refinery complex would also generate substantial output, employment and income in other sectors of the regional economy. These indirect economic effects were estimated for the refinery impact area (an aggregation of 5 to 6 counties) in each state through multipliers derived from input-output analysis. For each refinery the estimated average annual impact on all other sectors in the refinery impact areas is estimated to be:

	Regional output (million 1974 $)	Regional income (million 1974 $)	Regional employment
North Carolina.....	114	23	3,080
South Carolina.....	131	29	3,690
Georgia.....	146	32	4,110

Most of this output and employment would be in transportation and services sectors, with relatively little impact on other manufacturing industries.

5. While the refinery complex would have few "backward linkages" to manufacturing industries in the region, there would be important opportunities for the development of "forward industrial linkages." In particular, a petroleum refinery industry in the Coastal Plains region could significantly expand the area's petrochemical capacity. A core petrochemical plant with an estimated capital investment cost of over $1 billion, which could be supported by feedstocks from one refinery unit, would generate an estimated $1 billion in annual sales and have a direct employment of approximately 2,000. The indirect economic impact could be significant for the region, with indirect output, income and employment per unit of output higher for a petrochemical facility than for petroleum refining.

6. Revenues from taxes on the proposed investments in the terminal/refinery complex could substantially increase public income. Payment of property taxes would enable local (county) governments to both generate significant additions to revenues and reduce tax rates. State governments would also realize additional revenue from income taxes--estimated at about $25 million in 1980, though these additions are equivalent to less than 0.5 percent of present total state revenues. It is recognized, however, that the county governments providing public services related to the refinery may not be the recipient of increased tax revenue from the refinery, and that tax revenues will be received over time while community facilities must be paid for when built usually by revenue bonds or general obligation bonds.

7. Additional expenditures for secondary facilities would be required in the state in which the complex was constructed. During the construction phase localized economic stresses could be placed on housing and community facilities (water and sewer, schools, medical services and transportation), and in addition, an upward push on prices could arise from increased demand for goods, services, and selected kinds of labor.

****

SECONDARY AND TERTIARY IMPACTS:

Richard Wallace, Office of Marine Affairs
North Carolina Department of Administration
116 W. Jones Street
Raleigh, North Carolina, 27603

That the rapid employment growth resulting from a large refinery construction project might result in hardships upon the local residents is an important concern to both community planners and residents. To determine the extent of any such changes in the local economy, a careful historical analysis was made of social and economic impacts at Southport, N.C., a small, isolated coastal community where a large nuclear plant has been under construction since November 1969. To standardize for inflationary factors, data gathered in Southport was compared to like data gathered in the neighboring coastal cities of Wilmington and Morehead City.

Cost of Living

Using a four person family budget designed for rural eastern North Carolina families, a comparison was made of cost of living increases in Southport, Wilmington and Morehead City. Upon initiation of construction, Southport showed a relative cost of living increase of 15% for renters and 13% for homeowners. Food price increases represent the bulk of the observed cost of living increase. Over time, food prices fell as capacity was expanded, eliminating approximately 8% of the increase. Consequently, the long run increase in living costs attributable to construction activity will equal 7% for renters and 5% for homeowners.

Local Labor Supply and Wages

The economic impacts of large construction projects include some significant increases in local wage rates and a general tightening of labor supplies. The major wage increases were among the construction crafts. The availability of higher paying construction employment affected most of the male workforce. Those employed in jobs with traditionally high turnover rates received larger percentage wage increases than those persons employed with firms which have a history of providing long-term, stable employment. Also, because the demand for skilled construction craftsmen far exceeded the local supply, substantial numbers of workers immigrated for these jobs.

Significant Local Effects at Termination of Construction

In general, the termination of construction employment tends to return the local situation to its initial state, but this

does not completely happen. The department of Social Services reported that the ending of construction caused some personal hardship. Sales of food stamps increased, and large numbers of workers applied for unemployment compensation. Typically, workers who were paid unemployment compensation found work within six to nine weeks. Furthermore, it appears that taxes paid by the contracting firm were more than adequate to cover the claims paid.

The next noticeable effect was the out-migration of most, but not all, of the construction workers who had migrated to the area. Those who remained found work at other construction projects in the area.

The reduction in population and income led to substantial reductions in the demand for local goods and services. But, because of increased permanent employment and a generally improved economy, demand did not decrease to its initial level. Also, most people were better off at the end of construction than before, in that they received higher incomes during construction. To some extent, their current situation depends on how well they managed their increased incomes.

Because of the general recognition that the construction phase was limited, termination was not accompanied by serious economic or social dislocation. In similar situations, hardship resulting from terminations might be lessened by government officials, bankers and employers cautioning individuals and business owners to be careful in planning new investments.

****

J.R. Jackson, Jr.
Exxon Company, USA
P.O. Box 2180
Houston, Texas, 77001

Impacts can be divided into various categories using the following guidelines: Direct Impacts--Impacts that would not occur if the proposed action did not occur. Secondary Impacts--Impacts that occur due to the proposed action but also occur in certain industries and areas whether the action takes place or not. Tertiary Impacts--Impacts that occur in all cases regardless of whether the proposed action takes place or not. These occur normally regardless of offshore operations, but certain increments can be linked to the action. This category is particularly difficult to identify and quantify as appropriate techniques are not available.

SECONDARY AND TERTIARY IMPACTS: J.R. Jackson, Jr.

It is difficult to identify impacts that might occur onshore because of offshore operations since the basic knowledge--amount of resources present--is unknown. Many wells over a long period of time are necessary to obtain accurate quantification of hydrocarbon reserves. Decisions as to the commercial nature of potential deposits depend not only on the amount of resources, but many other factors such as oil or gas, characteristics and quality of the reservoir, geology, distribution of production vertically and horizontally, producing depths, drive mechanism, economics of developing, producing and transporting as well as geographic location.

Location of operations bases will eventually be decided by successful bidders using guidelines applicable to that particular company. Decisions as to the type of transportation, location of pipeline corridors and landfalls, volume of production, and final destination of product are also important factors.

In the absence of definitive knowledge concerning these matters, it is impossible to make accurate predictions of impacts particularly since the most likely prediction would be the absence of commercial production and minimal impact. However, it is possible to make judgmental estimates of potential resources on the high and low sides and to develop scenarios predictions as to number of platforms, rates of production, number of people, onshore acreage required, etc. A range of estimates will normally bracket the eventual correct scenario which will not be known for a long time, and it must be understood these are hypothetical, and the large number of variables will probably cause them to bear little resemblance to the eventual real world.

Many studies of onshore effects have been made and except when using highly exaggerated potential resource estimates, the onshore impacts expected to occur in the South Atlantic region appear to be modest. Most of the employment, 75± percent, will be drawn from local areas. All activities are required to meet established performance standards to avoid environmental degradation. Studies indicate taxes generated should approximately balance expenditures by governmental agencies. Total population growth is expected to be only a small percentage of the normal regional growth rate and will occur over a considerable period of time creating little immediate impact. Phase-out of the operations after many years of production will be gradual and not create a boom and bust situation as envisioned by some alarmists.

****

SECONDARY AND TERTIARY IMPACTS:

John Clark, Senior Associate
The Conservation Foundation
1717 Massachusetts Avenue, N.W.
Washington, D.C., 20036

John Clark reviewed the role and effectiveness of present federal methodologies for environmental impact assessment. Basically, the methodologies are lacking. What has developed instead is a monster. The reports are too repetitive and too voluminous, and are usually designed to reenforce the reasons for formulating the project in the first place.

The fundamental problem of the South Atlantic lease sale is the boom town syndrome. Before the boom, there is no plan and no comprehensive review system. During the boom, there is no time for reasoned planning and development.

Where does the OCS development process become most susceptible to environmental review? To date, the onshore impact review proceeds with little attention paid to environmental consequences. The Conservation Foundation is in the process of identifying the types of activities in advance where a presumption can be made of adverse onshore impacts. For each of these activities, tests for adverse impacts will be developed.

It is important that these tests not be withheld until the developer comes in with an application. The developer needs to know what information is needed prior to his involvement with the permit application procedures.

THE LEGAL FRAMEWORK

MODERATOR: Ed Richardson, South Carolina Water Resources Commission, P.O. Box 4515 Columbia, South Carolina, 29240

Congressman Ronald "Bo" Ginn
First District, Georgia
U.S. House of Representatives
Washington, D.C., 20515

Congressman Ginn expressed his desire for the economic and environmental sectors to work together to preserve the beauty and resources of Georgia's coast while at the same time utilizing developing our energy resources to enhance the lives and opportunities of coastal citizens. The middle ground should be attained in this debate to guarantee the future well being of our country and avoid economic stagnation.

William Edington, a Research Assistant from Congressman Ginn's office, proceeded to outline the major provisions of pending legislation on Coastal Zone Management (CZM) and the Outer Continental Shelf (OCS).

CZM legislation is designed to strengthen the CZM Act of 1972; these provisions are included:

* Extend the planning period by 12 months to allow states to develop CZM plans acceptable to NOAA (Department of Commerce).
* Increase federal share of Coastal Zone funding from 66-2/3% to 80%, with the authorized funding for the present program being increased from $12 million to $24 million.
* Establish funding through FY 1980 of $50 million/year for approved management programs.
* Proposed new regulations for CZM plans:

  --Beach access and protection must be planned for and money will be provided for public purchase;

  --An assessment of the affects of shoreline erosion must be made by each state.
* Create a coastal energy impact fund consisting of 2 parts:

  1) Automatic payments based upon the produced and landed volume of oil, the number of wells offshore, the number of employees, the onshore capital investment for support facilities, and

the number of tracts adjacent to each state. These funds would be primarily for states with producing oil wells. Funding increases from $50 million in FY 1977 to $125 million in FY 1981.

2) Discretionary funds, projected at $125 million per year, are designed to assist planning for OCS onshore impacts and to offset any net adverse impacts suffered by a state resulting from OCS activities. The state has to request these funds and they can be used only for coastal related energy facilities.

The OCS Bill (HR 6218) consists of proposed amendments to the 1953 OCS Act. (The administration and industry oppose this bill.):

* Calls for a five year leasing plan to be developed by the Secretary of Interior.
* Requires that at least 10% of leases granted be other than on the cash bonus basis.
* Allows the secretary to cancel a lease if environmental impacts would be adverse.
* Establishes review procedures for public, state, and local review of the lease proposal.
* Calls for coordination with approved CZM programs.
* Safety regulations to be written for offshore facilities.
* States that exploration must be carried out according to an exploration plan submitted to the secretary for approval.
* Dictates development must be based upon a facilities plan and timetable for development.
* Authorizes Governors' regional body will have review of the development plan for 90 days after submitted.

Dr. T. Kitsose elaborated on these provisions:

The OCS bill would provide for lease cancellation if environmental damage is likely; industry would be reimbursed for their expenditures on that cancelled lease tract only if they were not at fault for the environmental damage.

Impact funds, whether loans or grants, would be for reimbursement of state financial costs which are not recovered by state revenue collection. The loan or grant would be forgiven if the state could not repay from collected revenues.

THE LEGAL FRAMEWORK: Congressman Ronald "Bo" Ginn

Net adverse impacts are defined as the costs minus the benefits from OCS development. It is the responsibility of the state to demonstrate this net adverse affect.

****

Robert C. Smith
Amoco Production Company
P.O. Box 50879
New Orleans, Louisiana, 70150

The Outer Continental Shelf Lands Act of 1953 and regulations authorized under the Act are sufficient to permit OCS operations to be timely conducted in the Atlantic OCS in an environmentally safe manner with due regard to the legitimate concerns of all elements of our society. The OCS Act, regulations under the Act and provisions of the National Environmental Policy Act currently provide for timely consideration by the public and affected state officials of both the exploratory and development phases of OCS operations.

Pending legislation in the 94th Congress, HB 6218 and SB 521, would effect substantial changes in the present method of granting and operating leases on the OCS to the detriment of the public and the industry. Proposals to provide a federal exploratory program and to separate the exploratory from the developmental phase of OCS operations will retard OCS development and add substantial unnecessary cost to OCS operations without providing any significant benefit to the public. The federal government is not in a position to risk substantial sums of public funds freely and timely without political consideration to an exploratory program nor is it desirable that the decision-making exploratory process be limited to solely the federal government as contrasted with a multiple evaluation process provided and financed by private risk capital committed by competing entities. Proposals to separate exploration and production phases of OCS operation under the guise of providing further resource and environmental data simply ignore the practicalities of the development phase and that resource and environmental data is presently reviewed under existing regulations.

The OCS development in the U.S. since 1953 has been highly successful. Drastic changes in the legal framework that have encouraged this development should not be undertaken without establishing both need and benefit, and neither need nor benefit has yet been established.

****

THE LEGAL FRAMEWORK:

Barbara Heller
Environmental Policy Center
324 C Street, S.E.
Washington, D.C., 20003

OCS development does not result in lower prices for the consumer. This is true in spite of the fact that OCS oil is less costly than imported oil purchased at the world market prices set by OPEC. What results is a larger profit to the oil industry.

Onshore impacts related to oil production have the potential to limit the diversity of the economic resource base. Reasons for this are that (1) Oil is in fact technology intensive rather than labor intensive and (2) Oil tends to preempt other economic sectors because of the high wages. But since oil is a non-renewable resource, the economy will be hurt over the long term.

Priorities should be established for drilling areas as they relate to:

--market potential
--resource potential
--environmental risk potential

Government should be chastised for acting without further knowledge of the resource potential. The U.S. Government is leasing offshore oil without knowing the worth of the resource.

The original OCS Act of 1952 was good for the oil industry because it provided an incentive for financial gain but at the expense of state and local interests.

Under the provisions of the new OCS bill:

1) Exploration phase would be separated from the development phase to allow affected government jurisdictions time to plan for onshore facilities and services. At the present time the development decision is up to industry.

2) Secretary of Interior could cancel a lease--after a hearing has been held--if it could be shown that continued activity would cause serious damage to life and property. Currently, the Secretary can cancel a lease only for gross negligence.

3) Secretary must accept recommended development plans submitted by affected governors or regional advisory boards unless he replies in writing that the national interest overrides their recommendations. Under the old law the federal government made the decisions and the states ended up with the janitorial duties. This should not be considered as a state veto.

The Department of the Interior is reluctant to use the bidding flexibility it now has. Although the OCS Lands Act authorizes both bonus bidding and royalty bidding, it took the Department 21 years to try royalty bidding. And this occurred only after tremendous external pressure.

The support for the new OCS bill comes from states, the AFL-CIO, citizens groups and NACO. The Ford Administration opposes everything except the oil spill liability provisions.

INTERGOVERNMENTAL RELATIONS AND THE ROLE OF THE CITIZEN

MODERATOR: Lowell Evjen, Planning Director, Office of Planning and Budget, 270 Washington Street, S.W., Atlanta, Georgia, 30334

Paul Stang
Office of Coastal Zone Management
NOAA, U.S. Department of Commerce
2001 Wisconsin Avenue, N.W.
Washington, D.C., 20007

The thrust of Mr. Stang's remarks centered on the provision of the CZM Act pertaining to Federal consistency. Although the final interpretation of Federal consistency has not been completed, the Office of CZM stated that if a State has an approved CZM Program, Federal agencies must act in a manner consistent with that program. This means:

1) Any Federal agency conducting or supporting activities directly affecting the coastal zone must conduct those activities in a way that they are compatible with an approved program. (applies to ocean dumping, nuclear wastes, federal rule-making, etc.)

2) Any Federal development project located in the coastal zone must be operated in a way consistent with State program. (applies to buildings, bulkheads, beach nourishment projects, etc.)

3) Any applicant (like an oil company) for a required Federal license or permit affecting coastal lands and waters must certify that it is consistent. (Bob White says that this, in NOAA's opinion, applies to OCS leasing. They will find out for sure when a program is approved and leases are issued.)

For Federal consistency, an applicant must provide all pertinent information and data to confirm that a proposed activity is consistent with a State's approved plan. After submission of all pertinent data to the State, the State has six months to respond to the Secretary of Commerce, who then will render a ruling on the application. The Secretary can override a State denial if he determines the act is in fact consistent with the State plans. OCZM is currently drafting regulations describing the procedures for Federal consistency.

****

INTERGOVERNMENTAL RELATIONS AND THE ROLE OF THE CITIZEN:

Thomas Dewey Wise
State Senator
10 State Street
P.O. Box 443
Charleston, South Carolina, 29401

The Outer Continental Shelf became an issue in South Carolina in 1971, when Troy Enterprises (Indiana) approached Governor West and offered to lease offshore areas. An ad-hoc legislative committee was formed to review the situation; Senator Wise was a member of that committee. A report was published in July 1973; copies are available upon request.

Senator Wise then related some general impressions of intergovernmental relations in OCS development. Due to the Supreme Court Decision on ownership of OCS lands, the Federal government has all the authority in OCS development. The Federal government needs to clearly define the role of the State, local government and the citizens in the process of OCS development; these roles should not be limited to janitorial duties. Basic to effective role-playing is the necessity of free information exchange between various levels of government and citizens' groups. The delegation of Federal responsibility necessitates funding to accomplish what is asked; assistance in providing funds for planning, etc. is necessary if OCS impacts are to be minimized.

For citizens to become involved, they must first learn who the decision-makers are on each issue. Citizens need to be aware of the restraints on their participation so that they will have realistic expectations. Decision-makers should view citizen involvement as valuable, because it alerts them to the needs and desires of the community, and sets up a mechanism for dealing with issues, needs and impacts before controversy begins. Citizen involvement can provide a solid base of support for decisions and plans which have been made.

All levels of government and citizens' groups should work, wherever possible, towards positive goals rather than negative goals. Senator Wise suggested trying to find areas of agreement initially and work from there. Communication can minimize confrontation, and confrontation means delay!

Senator Wise then provided an update on South Carolina's progress in passing a Coastal Zone Management bill. In 1975, the bill passed the House. In 1976, it passed the Senate, and was expected to pass the House. Governor Edwards has said he will veto the bill because he is opposed to zoning of any kind.

****

INTERGOVERNMENTAL RELATIONS AND THE ROLE OF THE CITIZEN:

Ellen Winchester, Chairperson
National Energy Policy Committee
The Sierra Club
2405 Delgado Drive
Tallahassee, Florida, 32304

The Citizens of this country are being excluded from education efforts like the Oil Onshore Impacts Conference because the public has to work during the week and they are not subsidized like the public and private sector individuals who do attend. Citizens need the opportunity for meetings which are free, close to home, and held at times they can attend--i.e., weekends or evenings.

Wise government should exercise stewardship over all of its resources. The concensus of opinion indicates that the world is running out of oil. This can be seen in the fact that oil companies are now buying coal lands. All these resources should be regulated according to the needs of the public and the supply of energy available. It should be noted that energy needs for the U.S. could be reduced 50%.

Leasing for the S/E coast should be delayed until after January, 1977, the projected lease date, to allow potentially affected states to finalize CZM plans and adequately prepare for any petroleum related impacts.

OCS development is thought to provide growth and economic gain for a community; in truth, OCS offers poor prospects for the existing residents. Seventy percent of new oil related employment comes from outside the area. In addition, what happens to the economy when the boom is over? As one example to be looked at, Morgantown, Louisiana, has experienced the affects of an oil boom with the resultant growth, but at the same time, Morgantown has experienced economic and environmental problems as well.

There are areas of research which need to be explored before development begins to avoid costly mistakes:

* What is the affect of chronic low-level hydrocarbon pollution on the natural systems of our coast?
* What affects are caused or distributed by the Gulf Stream?
* How do ocean currents affect the spawning of fish relative to hydrocarbon development?
* Concerning pipeline construction, who is responsible for regulation and protection of the coastal area? Who is fighting whom?

INTERGOVERNMENTAL RELATIONS AND THE ROLE OF THE CITIZEN:
Ellen Winchester

At the present time, improved management is needed to coordinate and protect our natural resources. The Department of Interior is handicapped by budgetary restrictions, so other jurisdictions and agencies will have to do their share to insure adequate management of OCS development.

Onshore Impacts Conference - 4405 Paulsen St., Savannah, Georgia, 31405

Dr. Robert M. White
N.O. & A.A.
Rm. 5128
Dept. of Commerce
Washington, D.C. 20230