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Mr. Chairman and members of this Committee. My name is Robert W. Adler. I am the Executive Director of Trustees for Alaska, a nonprofit, public interest environmental law firm based in Anchorage, Alaska. With me today is Lisa Speer, Senior Project Scientist with the Natural Resources Defense Council (NRDC), a national environmental organization with approximately 70,000 members and supporters nationwide. Trustees, NRDC and the National Wildlife Federation (NWF) have had a longstanding interest and involvement in oil and gas development in Alaska, and in issues related to the Arctic National Wildlife Refuge.

In July of this year, NRDC, Trustees, and NWF presented testimony before this Committee on the preliminary results of a major review that we are conducting regarding the environmental effects of oil and gas development on the North Slope of Alaska. Most of these impacts were not addressed adequately, and some were not addressed at all, in the Interior Department's Report to Congress and Legislative Environmental Impact Statement on oil and gas development in the Arctic Refuge.

Since that time, the Committee has had the opportunity to visit both Prudhoe Bay and the coastal plain of the Arctic National Wildlife Refuge. With your increased understanding of the nature and magnitude of development required for a major oilfield on the North Slope of Alaska, we would like to take this opportunity to elaborate upon some of the findings we presented to you in July, and to discuss them in light of responses recently raised by the oil industry.

To reiterate, the major conclusions of the NRDC/Trustees/NWF report on Prudhoe Bay are:

1) Industrialization of the North Slope related to oil and gas development has resulted in a wide range of environmental impacts, including pollution of the air and water and the destruction of substantial amounts of habitat.

2) The conduct of the oil and gas related industries on the North Slope has ranged from environmentally responsible to irresponsible, and in some instances has involved a serious disregard for environmental impacts. Hundreds of violations of state and federal regulatory controls designed to protect the environment have occurred. These range from minor infractions to at least one conviction on multiple criminal counts.

3) Existing environmental regulations as they are currently implemented and enforced have not provided adequate protection from significant environmental deterioration resulting from oil and gas activities.

4) The technology to achieve successful restoration of developed areas on the North Slope over the long term has not been effectively demonstrated for large scale projects

5) Major data gaps exist on environmental impacts and compliance on the North Slope due to a systematic failure in monitoring on the part of the resource agencies. These gaps seem unlikely to be filled in the foreseeable future given the current level of monitoring activity.

A. Compliance Issues

The oil and gas industry responds to many of the serious potential environmental impacts of oil and gas development on the North Slope by pointing to the extensive regulatory system that is designed to prevent or to mitigate those impacts. As we noted in our July testimony, we believe the present regulatory system is not sufficient to protect the air, water and wildlife habitat of the North Slope. Even if these regulatory controls are tightened, they will only be effective if compliance with them is greatly improved. Our July testimony demonstrated just the opposite -- there has been widespread noncompliance with many aspects of the regulatory program designed to protect the North Slope environment.

A few of the most notable examples of the industry's failure to comply with environmental laws and regulations are:

1. Waste discharges to the tundra from fully one half of the drilling mud reserve pits that were dewatered in 1986 violated state effluent limits. In 1985 and 1984 the situation was even worse, with discharges from 85 percent and 100 percent of pits violating permit standards.

2. State records document between 400-600 reported spills of oil and other chemicals per year associated with oil development on the North Slope and the northern portion of the haul road.

3. In 1985, the only year for which the state has compiled black smoke reports in a data base, 150 black smoke incidents in violation of state air quality regulations were reported.

4. There have been a number of hazardous waste violations on the North Slope. In 1983, a major hazardous waste event occurred at the site of North Slope Salvage, Inc., which stored and disposed of drums from North Slope operators.[1] During the cleanup, over 58,000 gallons of contaminated liquids were recovered. Extensive soil and water contamination was documented and the site was determined to pose a "serious environmental and human health hazard."[2]

Nor is this an isolated incident of improper storage and disposal of hazardous substances. Of 29 hazardous waste inspections by EPA and DEC, 11 revealed violations.[3] ADEC has closed two unpermitted oily waste pits with histories of leaking and overtopping fluids.[4] Most recently, ADEC has discovered additional problems on Deadhorse lease tracts. For example, ADEC discovered more than 500 drums of unidentified petroleum liquids and several tons of other waste on a pad leased to Child's Equipment Services, which has filed for protection from creditors in U.S. Bankruptcy Court. Some of the drums were leaking.[5]

Notably, the industry has done little to respond to these charges. They have not attempted to explain the many violations that are revealed in state and federal agency files. More importantly, they have given no assurances that this violation history will improve in the Prudhoe Bay region, and that such violations will not be repeated in the Arctic National Wildlife Refuge.

In fact, rather than giving assurances that this past disregard for existing environmental standards will be corrected, the industry has continued to press for less stringent environmental protections on the North Slope. For example, in a letter written to the Alaska Office of Management and Budget in April of this year, the Alaska Oil and Gas Association attacked many of the regulations designed to protect the North Slope

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[1] ADEC, 1984. Report on the Occurrence, Discovery, and Cleanup of an Oil and Hazardous Substances Discharge at Lease Tract 57, Prudhoe Bay, Alaska.

[2] Clar, J.M., 1984. An Evaluation of the Environmental and Human Health Hazards of Chemicals found at North Slope Salvage, Inc. (prepared for ADEC).

[3] The results of most of these hazardous waste inspections are unavailable in the public record because they are pending review or compliance action.

[4] The Pingut Oily Waste Pit and Drill Site 1C.

[5] Anchorage Daily News, 7/19/87.

environment.[6] This hardly provides reasonable assurance that the industry is willing to improve its environmental compliance efforts on the North Slope.

B. Hazardous and Solid Waste

As reported in our July testimony before this Committee, tremendous quantities of solid and hazardous waste are generated in conjunction with oil and gas development and production on the North Slope of Alaska. To date, the industry has not demonstrated that it can dispose of these wastes in an environmentally acceptable manner.

Much of the waste material produced on the North Slope is the inevitable result of any major industrial undertaking of this magnitude. Solid waste generated by the oil industry includes wrecked vehicles, airplanes, used batteries, styrofoam pipeline insulation, tires, prefabricated scrap construction materials, large quantities of scrap metal, and over 10,000 used drums per year.[7] As an example, a three-year pipeline construction project can generate over 500 destroyed vehicles, 3,000 batteries, 10,000 tires, 20,000 tons of scrap construction materials, 6,000 tons of equipment components, thousands of used drums, thousands of cubic yards of various camp-related wastes, hundreds of prefabricated buildings, and large quantities of unused pipe.[8]

Perhaps more importantly, North Slope activities generate tremendous quantities of liquid industrial wastes, some of which are hazardous. A review of North Slope liquid wastes by ADEC documented the following volumes of wastes disposed of on the North Slope in 1986:[9]

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[6] Letter dated 4/2/87 from the Alaska Oil and Gas Association to the Alaska Office of Management and Budget.

[7] ADEC, 1987(a). Solid Waste Management Standards for Arctic and Subarctic Alaska, page 2.

[8] ADEC, 1986(a). Environmental Information Relative to Air and Water Quality, Solid Waste Disposal and Oil Spill Contingencies for the Arctic National Wildlife Refuge, page 25.

[9] ADEC, 1987(b). A Review of Liquid Waste Production and Disposal at Oilfield Facilities on the North Slope of Alaska.

1986

Subsurface disposal

Injected wastes - ARCO Pad 3	-	3,649,422 gallons
CPF 1&2 disposal wells	-	23,753,907 gallons
Annular injection	-	116,006,142 gallons

Surface disposal

Reserve pit fluids to tundra	-	64,568,520 gallons
Road discharges	-	36,924,594 gallons
Excavation dewatering	-	369,500,000 gallons
Hydrostatic testing discharges	-	3,056,119 gallons
Domestic wastewater discharges	-	1,032,650 gallons
TOTAL		617,861,300 gallons

Many of these wastes have the potential to cause environmental degradation whether or not they are legally defined as hazardous. But the question of which North Slope wastes are hazardous is complicated by the fact that wastes uniquely associated with oil and gas exploration and development are currently exempt by law from classification as hazardous waste, whether or not the materials are in fact RCRA-hazardous. (RCRA §3001(b)(2)(A)).

Nevertheless, biennial hazardous waste generator reports on file at EPA indicate that large quantities of potentially hazardous waste are generated on the North Slope. Total volumes of wastes reported were 16,673,685 gallons in 1983 for all North Slope oilfields, and 166,669 gallons for the North Slope fields, not including ARCO Kuparuk, in 1985.[10]

As explained in the compliance history section above, the disposal of solid and hazardous waste materials on the North Slope has been problematic, and in many cases has resulted in direct contamination of land and water. Industry responds with excuses for several of the individual incidents. For example, problems documented at Deadhorse lease tracts are blamed on small, independent oilfield service companies. By bringing such lease tracts under direct oil company control, as has been done at Kuparuk, industry claims that such problems will be avoided. The oil companies also assert that no sites on the North Slope have actually been listed on the National Priority List for cleanup under the Superfund. Both ARCO and Standard now propose to dispose of hazardous wastes on the North Slope through deep

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[10] The Kuparuk report could not be located in EPA's files.

well injection,[11] a disposal technique they assert will reduce or eliminate hazardous waste problems.

We respond to each of these points below.

It is entirely disingenuous for the major oil companies to disclaim responsibility for the large volumes of wastes generated as a direct result of their profitmaking activities on the North Slope, regardless of the fact that, in the past, these wastes were transferred to smaller companies for handling. The industry will continue to generate significant quantities of hazardous and other liquid wastes on the North Slope, and will generate additional wastes if they are allowed to operate in the Arctic National Wildlife Refuge. These wastes will continue to be handled both by the major oil companies and by smaller, independent companies, whether or not support and production facilities are consolidated.

The overriding question is where and how these massive quantities of wastes will be disposed of if development is allowed in the refuge. The burden of proof is on the oil industry to demonstrate that they can permanently and successfully isolate these wastes from the fragile North Slope environment. To date, they have failed to make this showing. EPA is just beginning to review the industry's proposals for deep well injection of wastes, and there is no guarantee that this practice will be allowed.

In fact, there are serious potential problems with deep well injection of wastes. A study by NRDC of deep well injection of wastes around the country documents numerous cases in which underground injection wells have failed, resulting in extensive groundwater contamination.[12] Indeed, injection even of supposedly innocuous "brines" at oil and gas wells have resulted in significant problems; over one half of 32 oil and gas producing states reported groundwater contamination from underground brine disposal.[13] The Office of Technology Assessment agrees that underground injection poses a potential

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[11] ARCO engaged in deep well injection of hazardous and other wastes at Pad 3 from 1976 through 1985, when ARCO stopped accepting hazardous waste for injection at the facility, in part because it did not have "interim status," or authority to operate without a RCRA permit.

[12] Gordon and Bloom, Deeper Problems: Limits to Underground Injection as a Hazardous Waste Disposal Method (NRDC, 1986).

[13] Donald V. Feliciano, "Underground Injection of Wastes. Mini Brief Number MB83238," Congressional Research Service, Oct. 15, 1983, cited in Deeper Problems, supra.

threat to groundwater, and identified 8 possible contamination pathways.[14]

Nor has the oil industry demonstrated how it will dispose of the large quantities of nonhazardous wastes generated by North Slope oil and gas operations, including oily wastes. In fact, five supposedly nonhazardous waste disposal sites have been the subject of "preliminary assessments" under the Superfund Program.[15] The industry disclaims the importance of this by noting that none of these sites have actually been listed on the National Priority List (NPL) for Superfund cleanup. This claim is highly misleading. Due to the slow pace of the Superfund process in Alaska, none of the five sites have proceeded to the more detailed Site Assessment phase, which is necessary to determine the extent of contamination at any given site. But the five sites have been chosen for further evaluation:

1. ARCO Prudhoe Bay received a "medium" priority assessment.[16] The site allegedly contains 10,000 - 80,000 buried drums, some containing drilling muds, and has received "a substantial volume of industrial (oil drilling-related) wastes."[17] The preliminary assessment recommends that "the risk to nearby water resources should be further evaluated."[18]

2. Mukluk Dump - Prudhoe Bay (medium priority assessment) may include "small quantities" of hazardous materials, including drilling muds, mud additives, some heavy metals, and solvents. The preliminary assessment refers to the potential for leaching to the Sagavanirktok River, and potential contamination of a human drinking water source.[19]

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[14] Technologies and Management Strategies for Hazardous Waste Control, Office of Technology Assessment, U.S. Congress (1983), at 192, cited in Deeper Problems, supra.

[15] Preliminary Assessment of 45 Potential Hazardous Waste Sites in the State of Alaska. Tetra Tech, Inc. 1984.

[16] Four recommendation levels are possible in the Tetra Tech report:

None - no further action recommended
Low - inspection recommended on a time-available basis
Medium - inspection recommended on a scheduled basis
High - inspection recommended promptly.

[17] Id.

[18] Id.

[19] Id.

3. Mukluk Freight Lines (medium priority assessment) has been a storage site for a large number of industrial chemicals, and survey results indicated that some chemicals were leaking from drums or escaping from damaged and weathered sacks. The assessment also indicated that the site had insufficient structures for groundwater protection.[20]

4. North Slope Borough Landfill (medium priority assessment) accepts wastes from a large number of entities on the North Slope, and is currently the only operating landfill at Prudhoe Bay. The assessment refers to possible previous disposal of "oils, heavy metals and solvents," and recommends that the "risk to nearby water sources ... be further evaluated."[21]

5. Sand Dunes Landfill (medium priority assessment) also served as a major waste disposal site for North Slope oil and gas activities. Like the other landfills, this site may have received drilling muds, mud additives, heavy metals, solvents, and other hazardous materials. Previous EPA surveys mention potential leaching to the nearby river and possible contamination of potable water.[22]

These problems with sites that have been used for solid and liquid waste disposal in the past underscore the serious waste disposal problems that will be presented should oil and gas development be allowed in the Arctic National Wildlife Refuge. To date, neither the oil industry nor the Interior Department have presented a satisfactory plan for how these massive quantities of wastes will be handled in a national wildlife refuge, without posing a long-term contamination threat to the land and water resources of the refuge.

C. Reserve Pits

Built directly on the tundra, reserve pits are designed to contain drilling mud and other wastes with gravel dikes. Individual reserve pits on the North Slope can contain up to 13 million gallons of waste materials. Drilling wastes may contain toxic components such as heavy metals, hydrocarbons, and

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[20] Id. Standard claims that this site was incorrectly included in the preliminary assessments, and that an EPA official has recommended removal from the program. Standard Oil, 1987. Oil and Gas Development in the Arctic National Wildlife Refuge 1002 Area; Issues Raised by Environmental Groups During Testimony Before Congress, page 16.

[21] Id.

[22] Id.

additives in varying amounts. Many of these components are toxic to a variety of organisms. Disposal of accumulated drilling wastes and contaminated fluids which exceed reserve pit capacities is a major problem on the North Slope.

Despite a number of regulations and permit stipulation requiring reserve pits which store drilling wastes to be impermeable, numerous leaking pits have been documented. Waste fluids also escape due to overtopping or breaching of reserve pit walls. Drilling wastes are disposed of by pumping reserve pit fluids directly onto the tundra, spreading them on gravel roads which are not designed to be impermeable, and injecting them underground. In 1986, 64 million gallons of drilling waste fluids were discharged directly to the tundra from reserve pits and an additional 37 million gallons were applied to roads.[23]

In response to testimony presented by NRDC, Trustees and NWF in July, the oil industry has argued that reserve pit fluids are not RCRA-hazardous but instead are "generally innocuous,"[24] that new state solid waste regulations will effectively deal with the problem of leaking reserve pits, that state-of-the-art disposal practices have reduced or eliminated altogether the need for reserve pits, that underground injection poses no threat of environmental harm, and that a U.S. Fish and Wildlife Service study of reserve pit fluids we cited was only a draft and is technically flawed.

We address each of these points below.

In a study mandated by §8002(m) of the Resource Conservation and Recovery Act (RCRA), EPA is presently evaluating whether or not petroleum extraction waste should be regulated as hazardous. EPA has not yet determined what percentage of drilling and production waste is RCRA-hazardous; it is thus impossible to confirm industry's assertions that these wastes are not RCRA-hazardous. However, even if such liquids were not hazardous as defined by RCRA, they can in no event be termed "innocuous." Common types of pollutants found in reserve pits include salts, additives, oil and grease, and dissolved heavy metals,[25] many of

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[23] See pages 4-7 of NRDC/Trustees/NWF testimony presented before this Committee on July 21, 1987.

[24] Standard Oil, 1987, supra.

[25] EPA, 1987 in prep. Management of Wastes from Oil Exploration, Development and Production, August, 1987, page III-13.

which are toxic to a variety of organisms.[26] Pit fluid analyses performed by numerous investigators, including the industry, show concentrations of half a dozen metals at levels that exceed EPA's acute and/or chronic toxicity level for aquatic life.

The FWS study of reserve pit fluids, referred to as a "draft" by the industry, has been finalized and is now going to press.[27] The study found that reserve pits are the most likely source of metal and hydrocarbon contaminants that are spreading through tundra wetlands and that are associated with reduced biological diversity and abundance in associated tundra ponds. Presumably, the U.S. Fish and Wildlife Service which is the expert agency in these matters, did not reach this conclusion lightly.

After years of opposition by the oil industry, the Alaska Department of Environmental Conservation developed new solid waste regulations which went into effect in September of this year. These regulations will require that new reserve pits be designed not to leak. While industry has begun to submit new designs for reserve pits, these designs have yet to be proven effective, the numerous existing leaking pits have yet to be corrected, and the effects of long-term open pits have yet to be determined. While some of these designs rely on lining reserve pits, the technological feasibility of using liners in arctic conditions has yet to be demonstrated.

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[26] See, e.g.,:

- U.S. Environmental Protection Agency, 1987 in prep. Waste from the Exploration, Development and Production of Crude Oil, Natural Gas, and Geothermal Energy, Interim Report. April 30, 1987.
- Strosher, M.T., W.E. Younkin and D.L. Johnson, 1980. Environmental Assessment of the Terrestrial Disposal of Waste Drilling Muds in Alberta: Chemistry of Sump Fluids and Effects on Vegetation and Soils. A Report prepared for the Canadian Petroleum Association, December, 1980.
- Land, Bernard, 1974. Toxicity of Drilling Fluids to Aquatic Biological Systems, A Literature Review. Environment Canada, Fisheries and Marine Service Report 487.
- U.S. Department of the Interior, 1987. Final Coastal Plain Resource Assessment, Arctic National Wildlife Refuge.

[27] West, R.L. and E. Snyder-Conn, 1987 in press. Effects of Prudhoe Bay Reserve Pit Fluids on Water Quality and Macroinvertebrates of Arctic Tundra Ponds in Alaska. Only after a Freedom of Information Act Request and a subsequent appeal was Trustees able to obtain a copy of the final U.S. Fish and Wildlife Service study.

The other solution to problems posed by reserve pits proposed by the industry, underground injection, is not without its problems, as discussed above. These problems can be expected to be aggravated in the case of annular injection, where waste is disposed down the outside, as opposed to the inside, of the well casing, thereby increasing the opportunity for wastes to escape.

Industry claims that volumes of drilling wastes requiring disposal in reserve pits can be dramatically reduced or eliminated altogether and point to the Endicott project offshore Prudhoe Bay in the Beaufort Sea. While it is true that industry does not need to use reserve pits at Endicott, this is because Standard dumps some 4,600 tons of drilling mud and 31,700 barrels of cuttings per year from Endicott wells into the Beaufort Sea under an NPDES permit issued by EPA,[28] a practice which can entail very significant impacts to aquatic life. Thus, it is disingenuous for the industry to cite Endicott as evidence supporting the claim that it can eliminate reserve pits.

Industry also claims that it has reduced the use of chromium additives to drilling mud, which will reduce the heavy metal load in reserve pits. While it is true this may reduce the chromium content of muds disposed of in reserve pits, levels of other metals, including lead, mercury, cadmium, copper, aluminum, nickel, zinc, and other mud contaminants will presumably remain unaffected. Moreover, metals are not the only problem related to reserve pit fluids. Polycyclic aromatic hydrocarbons, which can be toxic to aquatic life at the parts per billion level (ppb), are apparently migrating from reserve pits and are accumulating in tundra soils near pits. On the North Slope, "considerable amounts of hydrocarbons were found in the tundra soil hundreds of feet from reserve pits."[29]

In our July testimony, we noted that discharge permits issued by ADEC allow discharges of cadmium, copper, lead and mercury at levels that exceed EPA's acute and/or chronic toxicity criteria for the protection of freshwater aquatic life. In addition, ADEC's permit places no limits on reserve pit discharges for a number of other metals, which, based on data developed by the industry, occur in reserve pit fluids at concentrations that exceed EPA's acute and/or chronic toxicity

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[28] NPDES permit No. AK-003866-1. DMRs submitted to EPA by Standard indicate that in 1986, some 22,000 barrels of mud and 31,700 barrels of cuttings were discharged into the ocean. Assumes a mud weight of 10 lbs/gallon.

[29] EPA, 1987 in prep., supra.

criteria.[30] The fact that millions of gallons of reserve pit liquids that may contain levels of metals that are acutely toxic to aquatic organisms raises very serious questions about the ability of existing state and federal regulatory controls in place to adequately protect the tundra ecosystem.

D. Air Pollution

Oil and gas facilities emit large amounts of air pollutants. For example, ADEC estimated of NO_x permitted to be emitted on the North Slope is greater than 90,000 tons, and that actual emissions are 70-90% of the permitted values[31] -- or 63,000-81,000 tons of NO_x. ARCO estimates that permitted NO_x emissions in the Prudhoe Bay region at 74,368 tons per year, with actual emissions "somewhat less" then those indicated.[32] This contrasts with Standard's assertion that Prudhoe Bay facilities emit only 20,000 tons per year.[33] By way of comparison, the Argonne National Lab estimates that Washington, D.C. emits approximately 23,000 tons of NO_x per year.[34]

The industry argues that although ambient concentrations of NO_x have doubled at Prudhoe Bay between 1980 and 1987, this is not a "significant change,"[35] and further imply that because ambient concentrations of air pollutants are below national standards, there is no environmental problem. While it is true that NO_x and SO_2 levels emitted by Prudhoe Bay facilities have not exceeded the NAAQS, arctic species are known to be more sensitive to air pollutants than are mid-latitude species which have been used to establish standards.[36] Moreover, ARCO's air quality monitoring data from Kuparuk indicates that average annual concentrations of NO_2 and SO_2 in 1986 -- the main precursors of acid deposition -- have increased as much as 3-10

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[30] See pages 6-7 of NRDC/Trustees/NWF July 21, 1987 testimony.

[31] ADEC, 1986(a), supra.

[32] ARCO, 1987. Air Issues on the North Slope of Alaska.

[33] Standard Oil, 1987, supra.

[34] Argonne National Laboratory, 1984. Estimated Monthly Emissions of SO_2 and NO_2 for the 48 Contiguous States, 1975-1984.

[35] Standard Oil, 1987, supra.

[36] ADEC, 1986(b). Response to ARCO's Comments on the Preliminary Air Quality Analysis for Kuparuk CPF-3, April 1986.

fold in certain areas over levels reported by the industry in 1980.[37]

These pollutants are of concern due to their potential to acidify the sensitive arctic tundra. The industry argues that because only 618 tons of SO_2 is permitted to be emitted on the North Slope, acidification should not be of concern. However, industry conveniently ignores the fact that NO_2 is also an acidifying pollutant, and that further SO_2 and NO_2 together have at least an additive effect, and usually more than additive effect.[38]

Moreover, EPA has raised concerns that acidification of tundra may result even if ambient air quality standards are being met. The Alaska Department of Environmental Conservation has noted that negative impacts have been known to effect lichen at concentrations at least as low as 39 ug/m^3 and that short term concentration are known to be more important to adverse effects than long term averages.[39] Maximum one hour SO_2 levels measured at the Kuparuk Field were 52 and 186 ug/m^3.[40] The U.S. Fish and Wildlife Service has also expressed concern about the short term and long term impacts of SO_2 on lichens, which are an important food source for North Slope caribou. The effects of NO_x and other pollutants on plant species which serve as caribou forage

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[37] In 1979-1980, ambient air monitoring was conducted to establish baseline data for the North Slope. Standard Oil, 1987 page 22. The following is a comparison of the annual average ambient concentration of NOx and SO2 measured as background for the North Slope in the 1979 and 1980 monitoring, and 1986 monitoring at the Kuparuk River "maximum impact" station.

	1979-1980	1986*	
		1st qtr	2nd qtr
NO_2 (annual average)	3.5**, 4.0**	11	19
SO_2 (annual average)	0.4**, 0.5**	3	5

From: ARCO, 1987, supra, pages 8-9.

* Includes monitoring data collected from June - December, 1986.
** Below the minimum detection limit of the analyzer.

[38] EPA, 1982. Air Quality Criteria for Oxides of Nitrogen. EPA-600/8-82-026, page 1-31.

[39] ADEC, 1986(b), supra.

[40] ARCO, 1987, supra., page 9.

are not known and there are no studies underway which evaluate potential effects.

Industry has responded with claims that North Slope lichens are not affected by industrial air pollution, in part because the North Slope is a desert and all precipitation, including acid precipitation, is low. While the North Slope's annual precipitation is low and comparable to desert regions, acid precipitation is not the only process by which acidifying substances can be added to water or land. Dew, frost, frequent fogs and dry deposition through gravitational sedimentation of particles, impaction of aerosols, and adsorption of gases contribute to acidifying effects.

E. Land and Habitat Impacts

Sixty million cubic yards of gravel have been used to construct facilities including over 300 miles of roads and 5,500 acres of gravel pads in the Prudhoe Bay area. Pads and roads are used to support facilities such as drilling sites, housing, and other facilities. Open gravel mines cover approximately an additional 720 acres. An additional 3,400 acres of habitat have been flooded due to the impounding of roads and pads in one of the region's oilfields alone.

The industry claims that only a small percentage of the oilfield are affected by development by only counting land surface which has been directly covered by oil facilities. However, the oilfields sprawl over a large area with development and support facilities connected by roads, pipelines, and transmission lines. While a relatively small amount of the total area affected by oil development is actually covered by gravel fill, additional habitat is altered by oilfield activities, as is demonstrated by the avoidance of maternal groups of caribou of pipelines, roads and other facilities, particularly during calving. An Alaska Department of Fish and Game researcher has concluded that:

> even if the amount of direct habitat loss (i.e., vegetation covered by gravel were an order of magnitude larger it would be of minor significance when compared with the amount of habitat that would become unavailable because caribou avoid developments.[41]

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[41] Shideler, Richard T., 1986. Impacts of Human Developments and Land Use on Caribou: A Literature Review, Vol. 2. Impacts of Oil and Gas Development on the Central Arctic Herd, Technical Report #86-3. Alaska Department of Fish and Game, Division of Habitat.

The habitat within the oilfield may also be altered by flooding caused by impoundments associated with roads, dust which coats vegetation and changes snowmelt patterns, fragmentation of habitat, and human disturbance.

While recent evidence indicates that a few small sites have been the subject of revegetation efforts, no large scale, long term rehabilitation efforts have been attempted, much less demonstrated effective. In addition, there is no assurance that monies have been set aside for what industry predicts to be astronomically high costs of restoration. For example, a letter from the Alaska Oil and Gas Association (AOGA) dated 4/3/87 to the Alaska Office of Management and Budget, claims that removal of facilities constructed for exploratory drilling and rehabilitation of the site will cost 1.5 to 2 times the original construction costs. While industry claims that all sites are still in use and so not available for restoration, state records show that 326 wells have been plugged and abandoned on the North Slope.[42] Presumably, a few of these lie within the Prudhoe Bay area.

F. Implications for the ANWR Decision

The issue of whether a core calving ground exists within the Arctic National Wildlife Refuge, and the magnitude of impacts of oil and gas development on the Porcupine Caribou Herd has consumed the vast majority of attention in this debate. Most people agree that there will be impacts on wildlife as a result of major oil and gas development in the coastal plain. Even the section 1002 report, which recommends full oil and gas leasing in the area, acknowledges that some of these impacts will be major. Only the precise magnitude of the impacts can seriously be debated.

While not wishing to minimize the critical importance of these issues, the NRDC/Trustees/NWF study, as well as critiques of the section 1002 report by CRS, EPA, and other entities, indicate that the chronic, long-range threats to the integrity of the Arctic National Wildlife Refuge include other far more subtle, less press-worthy, but equally serious issues. The following fundamental questions deserve attention by this Committee. Yet most of them were either not considered or received only cursory treatment in the section 1002 report.

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[42] Alaska Oil and Gas Conservation Commission printout, 5/21/87.

1. How would the massive quantities of drilling and production wastes in the Arctic National Wildlife Refuge be handled? Even assuming that the growing, pervasive pollution of tundra wetlands and ponds that has been allowed in the Prudhoe Bay area is acceptable (an assertion we strongly disagree with), such impacts clearly are not consistent with the purposes of a National Wildlife Refuge.

2. What would be the long-range, cumulative impacts of large numbers of spills of oil, diesel, and other substances on the environment of the coastal plain? While many individual spills are small, some spills at Prudhoe Bay have exceeded hundreds of thousands of gallons, and the total volumes from large numbers of "small" spills can be great.

3. What would be the effects of numerous, high visible black smoke incidents on the wilderness and other values of adjacent areas of the Arctic National Wildlife Refuge that have already been designated wilderness? Would such events in combination with other air pollution generated by oil facilities result in long-term visibility impairment?

4. What would be the long-range, chronic effects of acidification from NO_x and SO_x emissions on tundra vegetation within the coastal plain, and what would the effect be on lichen and other food sources for wildlife?

5. The Interior 1002 Report focused heavily on the "net" acreage of oil facilities, e.g. how many acres would actually be covered by roads, drilling pads, etc. They did not, as noted by CRS and other commenters, evaluate many of the secondary effects of these facilities, including indirect habitat modification via ponding, and behavioral impacts. Would habitat alteration in the coastal plain exceed what Interior predicts based solely on the physical number of acres actually affected?

6. Given the lack of substantial successful reclamation over the long-term of oil facilities at Prudhoe Bay, what assurance is there that the Arctic National Wildlife Refuge would be restored to its natural state, or close thereto, when development is over? Given the paucity of bonding requirements, even if reclamation is technologically feasible, who would pay for such work if irresponsible operators abandon sites, as has occurred in the Prudhoe Bay region?

7. How would hazardous wastes be handled, transported and disposed of? ARCO and Standard Alaska have pending permit applications fir deep well injection of hazardous wastes at Prudhoe Bay. Would similar hazardous waste disposal permits be required for the Arctic National Wildlife Refuge, and is this appropriate for a National Wildlife Refuge? What are the likely

long term problems associated with deep well injection in this region?

8. How and where would the massive quantities of other solid wastes be disposed in the coastal plain? A large number of landfills have been used at Prudhoe Bay, some of which are being considered for the Superfund program. Would the same be true in the Arctic National Wildlife Refuge?

9. Where would the massive quantities of water and gravel necessary to support oil and gas development in the arctic come from, particularly given the acknowledged shortage of freshwater sources in the Refuge? Both EPA and CRS criticized Interior for their lack of sufficient analysis of this issue.

Thank you for the opportunity to present our views.

Sam-
You can best on a lot of questions about environmental issues + DEC budget at the ANWR hearings in D.C. So here's a beginning to look at. Also you can meet w/ Tony Kyle + Kay next week to get briefed.
N.

TESTIMONY OF DENNIS D. KELSO
BEFORE THE HOUSE SUBCOMMITTEE ON
WATER AND POWER RESOURCES
October 8, 1987

Mr. Chairman and Members of the Subcommittee:

My name is Dennis Kelso. I am Commissioner of the Alaska Department of Environmental Conservation. With me today is Larry Dietrick, Director of our Division of Environmental Quality.

The Department of Environmental Conservation is responsible for protecting public health and the environment. We enforce regulations governing air quality, water pollution control, solid waste management, hazardous waste management, and oil spill prevention and response. We write permits specifying emission levels and disposal methods, monitor activities under permits, and take enforcement actions when needed. The Department has considerable experience with the effects of oil and gas related activities.

On Alaska's North Slope, the Department has developed stipulations for oil and gas lease sales, helped with siting of disposal facilities, and carried out the full range of environmental protection activities. We also participate in the design and review of environmental studies, collect monitoring data, and maintain a field office at Prudhoe Bay in Deadhorse.

Effective waste stream management for oil and gas activities in the Arctic National Wildlife Refuge (ANWR) requires the following steps:

1. Evaluation of past practices and operating procedures at other fields on the North Slope.

2. Advance planning for effective waste disposal facilities and practices.

3. Development and application of specific, effective requirements for industry as lease stipulations and permit conditions.

4. Coordination of efforts among agencies with authority to regulate oil and gas exploration and development.

5. Monitoring of impacts and compliance with environmental requirements.

I will briefly discuss each of these steps and will illustrate them with examples drawn from our experience with solid waste management. In addition to solid waste, key areas for adequate environmental protection measures include air quality, liquid wastes, hazardous wastes, spill prevention and response, and area of impact. I have included an overview of these issues as an attachment to my written testimony.

REVIEW OF WASTE MANAGEMENT PRACTICES IN ALASKA'S NORTH SLOPE OIL FIELDS

Decisions on the exploration and development of ANWR should reflect the experience and information gained by the State and the industry during operations at the National Petroleum Reserve in Alaska (where exploration began in the mid 1940's), Prudhoe Bay (where exploration confirmed the field in the late 1960's), Milne Point, Lisburne, Endicott, and the Kuparuk River oil fields. The technology and operating

methods used in oil and gas development have evolved considerably since the early days of Prudhoe Bay. Both the industry and the agencies have learned a great deal in the process. Operations in the newer fields at Endicott and Kuparuk differ substantially from those at Prudhoe. Some waste disposal practices have proven effective while others can and should be improved.

The Department is currently reviewing North Slope waste disposal practices. A technical accounting of these practices, a description of their evolution, and an assessment of potential impacts will help identify the most appropriate management regime for each waste stream for ANWR.

Moreover, there is a role for Congress in designing the waste stream management regime for ANWR by setting the standards to be met. If Congress concludes that some areas of ANWR warrant a particularly high degree of environmental protection, it may be appropriate, for example, to require removal of wastes from those areas. The level of protection deemed necessary by Congress can best be met through lease stipulations or permit conditions, evaluation of the effectiveness of these measures, and modification of the requirements if field experience warrants.

The State's waste stream management requirements have evolved in response to the North Slope oil development experience. During the past year the State developed new regulations for handling solid waste, particularly drilling muds. Those regulations are now in effect. They establish requirements for disposal of drilling muds and for water quality monitoring to ensure that the disposal techniques used will protect the environment.

PLANNING FOR ADEQUATE WASTE STREAM MANAGEMENT

Planning before start-up is essential for proper management of waste streams in ANWR. Inadequate planning before start-up was a major reason why some North Slope development occurred without the best technology. Similarly, inadequate planning led to the absence of sufficient waste disposal facilities for the oil field support industry, which does not have access to the same disposal facilities as the field operators. This has contributed to the abandonment of drums and dumping of other waste materials on vacant sites in the Deadhorse area.

Solid waste management provides numerous examples of the advantages of careful planning for disposal facilities and methods. Major sources of solid waste are garbage, drilling wastes, scrap metal, oily wastes, construction debris, drums, junked vehicles, tires and a host of other materials. Comprehensive waste material management plans could minimize the amount of waste and incorporate salvaging, reusing, and recycling as waste management tools. Backhauling scrap metal and crushed drums is an additional technique which could make most landfills in ANWR unnecessary. Ash and residue from incinerator operation could easily be consolidated into a single facility.

Comprehensive planning could also lead to regional disposal facilities. This would prevent unnecessary proliferation of landfills while enabling the support service industry to have access to proper disposal facilities. Ultimate disposal of pipelines, flow stations, camps, and related facilites should also be addressed at the outset of ANWR planning so that a financial mechanism is in place to provide for proper disposal upon completion of use.

Plans for management of drums should be required as a condition of operation. They should include inventory and tracking, cleaning, crushing, backhaul, and disposal of waste liquids or residues from cleaning.

PERMIT CONDITIONS AND LEASE STIPULATIONS

Stipulations placed in leases and conditions written into permits provide a means to address site-specific factors. Lease stipulations apply to the tracts to be explored and developed; they should be tailored to the conditions found there. An example of a solid waste issue that could be addressed by stipulation is the collection of litter and other debris.

Litter, including construction materials and other debris, can be a persistent problem near the arctic coast where flat terrain and strong winds combine to carry these materials considerable distances. Once "offsite", it is often difficult to determine their source. Consequently, it may be desirable to implement a "no fault" requirement in stipulations applied to successful tract bidders, so that litter and other debris are routinely collected regardless of their origin.

Permits are written to govern specific activities of the permit applicant, often in a particular location. They are useful in fine tuning the waste stream management system and in preventing undesirable side effects of disposal. For example, solid waste disposal facilities such as landfills require a permit from the Alaska Department of Environmental Conservation. By taking account of the site configuration and other circumstances, conditions written into the permit can help prevent air and water pollution which might otherwise result from an improperly placed or operated landfill. However, the site-specific characteristics of most permits also limit their ability to deal with area-wide problems involving many different activities. Waste management problems often affect large areas and several operators or industries. Consequently, permits are no substitute for area-wide planning for disposal needs.

Effective use of lease stipulations and permit conditions requires flexibility. Otherwise, new circumstances may undercut their appropriateness. Changes in available technology, legal requirements, or new scientific data may dictate corresponding changes in the way a particular waste is managed. In order to determine whether stipulations or permit conditions are having the intended effect, it is also necessary to monitor on a continuing basis.

COORDINATION AND REVIEW

To achieve the optimum level of environmental protection, State and Federal agencies and industry must coordinate their efforts. They must share data in order to ensure that the best available information is brought to bear on ANWR waste management issues. Agency requirements should also be consistent and flexible enough to respond to changing circumstances. Congress should establish a formal consultation process involving these parties. If developed properly, this would also allow the opportunity for the participating agencies to clarify their respective authorities and to avoid duplication.

Among the issues which this process would address are the timing of the various phases of development; the need for studies; and the coordination of permitting, operating plan reviews, field monitoring, and field approvals. In all aspects of this process, it is essential that State and Federal regulatory agencies maintain their own oversight responsibilities.

MONITORING

Monitoring provides data to evaluate the effectiveness of permit conditions and lease stipulations. It may demonstrate the need to modify environmental requirements or operating methods and may help identify areas where additional study is needed. Monitoring also allows a determination of whether operations are in compliance with these requirements and with other environmental standards. For example, data from water quality monitoring under the new drilling mud disposal regulations will show whether contamination is occurring. If it is, the regulations require corrective measures.

CONCLUSION

Governor Cowper has taken a firm position that ANWR exploration and development must be done right, that the environment and the special values of ANWR must be protected. I have outlined some of the steps that can be taken to achieve this goal. These are just highlights, of course. Oil and gas development in the Arctic is a complicated business and I have only touched on the major environmental issues to be addressed.

Mr. Chairman, the Department of Environmental Conservation is available to the members and staff to discuss the details of environmental matters affecting your decision about ANWR. Thank you for the opportunity to testify. We look forward to working with you.

Attachment

SUMMARY OF WASTE STREAM MANAGEMENT AND OTHER ENVIRONMENTAL PROTECTION ISSUES RELEVANT TO OIL AND GAS DEVELOPMENT IN THE ARCTIC NATIONAL WILDLIFE REFUGE

AIR QUALITY

The principal air pollutants discharged during oil and gas development are sulphur dioxide, suspended particulate matter, carbon monoxide, and nitrogen oxides. Concentrations of these four types of emissions depend, in large part, on the type and volume of fuel burned in the turbines, generators, and other internal combustion engines, the and the amount of flaring in the area.

Flaring is a significant contributor to visibility impairment. Flaring during exploratory flow testing and operational phases is potentially a major source of emission of soot -- primarily unburned hydrocarbons -- and other materials. Technology exists to prevent such problems in future developments.

The primary source of NOx at Prudhoe Bay is the more than 100 gas turbines, each rated at more than 10,000 horsepower. This may be the greatest concentration of large turbines in the world. Approximately 20 air quality permits have been issued, and three are pending. The cumulative annual discharge allowed under these permits is more than 90,000 tons of NOx. Actual emissions are approximately 70 to 90 percent of the permitted values. Modeling has been used to predict the ground level concentrations of NOx and ground level monitoring is now underway to verify the modeling effort and measure ambient levels.

LIQUID WASTE MANAGEMENT

Liquid waste discharges include domestic wastewater, reserve pit fluids, brine discharges, hydrostatic test discharges, vessel rinsates, radiographic wastes, excavation discharges, oily wastewater streams, equipment washing runoff, workover fluids, waste oil solvents, and a wide range of other wastewater streams. Each needs to be identified with a provision made for proper disposal.

Zero discharge of non-domestic (industrial) wastewater streams, with the possible exception of excavation dewatering, should be carefully considered for ANWR. Based upon current experience on the North Slope, alternatives to dewatering of reserve pits should be used in ANWR. The management regime selected for drilling wastes could eliminate the need to discharge to the tundra or roads. Conventional dust control measures or water should be used instead of wastewater. The planning stage should identify specific disposal methods for liquid waste streams classified under the Federal Resource Conservation and Recovery Act (RCRA) and non-RCRA liquid oily-waste streams. Rinsates from tank, vessel and truck cleaning also must be disposed properly. Consequently, both the oil field operators, and the oil field support service industry must have access to appropriate facilities. Underground injection, potentially an acceptable disposal solution for many of these waste streams, should be considered. Produced water disposal should be limited to subsurface techniques.

Unlined gravel impoundments have been used in other North Slope oil and gas developments to contain various wastewater streams. This technique may not be appropriate in ANWR because of its limited effectiveness and its requirement for large amounts of gravel.

Comprehensive planning is needed to ensure that liquid waste disposal solutions are available for all users. This would allow all liquid waste streams to be accurately identified, characterized, and quantified along with an acceptable method for disposal. For example, subsurface disposal options should be available for use by the support service industry.

SOLID WASTE MANAGEMENT

Major sources of solid waste are drilling wastes, scrap metal, oily wastes, construction debris, drums, junked vehicles, tires and a host of other materials. It is critical that proper management of all these wastes be addressed from the beginning. Drilling wastes are of particular concern. The State's new regulations governing drilling waste disposal provide an appropriate starting point.

Disposal of solid waste is another area for which careful planning can lead to development of proper facilities at the outset. Provisions for picking up "off-site" litter and other debris should be addressed by stipulation placed on successful tract bidders. Because it is often difficult to determine the source of off-site litter or debris, it may be desirable to implement a "no fault" policy by which litter and debris are routinely collected regardless of origin.

Plans for management of drums should be required as condition of operation. They should include inventory and tracking, cleaning, crushing, backhaul and disposal of waste liquids or residues from cleaning.

Garbage and other wastes which may attract wildlife should be incinerated. Collection and storage of such wastes must also avoid attracting wildlife. Plans for collection of these wastes and for central incineration should be prepared and adopted as a condition of field exploration and development.

Disposal methods for solid oily wastes from tank bottoms, sludges, hydrocarbon waxes, oil contaminated muds and cuttings and spill debris require very careful evaluation. At Prudhoe, the North Slope Borough operates one of two permitted non-RCRA solid oily waste disposal sites in Alaska. Results from the operation of this site are mixed.

Additional work and technology review are needed to develop acceptable solutions for this very difficult waste stream management issue. Incineration would provide the most reliable and complete solution to the problem. However, this is also more costly to the operators.

Comprehensive waste material management plans could minimize the amount of waste to be disposed and could incorporate salvaging, reusing, and recycling materials. Backhaul of scrap metal and crushed drums are additional tools which could make most landfills in ANWR unnecessary. Ash and residue from incinerator operation could easily be consolidated into a single facility.

Comprehensive planning to develop solutions for solid waste disposal must also enable the support service industry to have access to proper disposal options. Regional disposal facilities can also help prevent unnecessary proliferation of landfills. Ultimate disposal of pipelines, flow stations, camps and related facilities should be addressed at the outset of ANWR planning so that a financial mechanism is in place to provide for proper disposal upon completion of use.

HAZARDOUS WASTE MANAGEMENT

Hazardous waste management is governed by stringent requirements under the Federal Resource Conservation and Recovery Act (RCRA). Transportation of hazardous substances is regulated by the Federal Department of Transportation. The State has adopted hazardous waste regulations and is currently in the process of implementing them through a cooperative agreement with the Environmental Protection Agency.

As with other waste streams, it is essential that acceptable disposal methods be available both to the oil field operators and to the support service industry. Comprehensive planning is needed to develop appropriate management facilities at the outset.

OIL SPILL PREVENTION AND RESPONSE

Coordinated response capability should be required. Adequate oil spill contingency plans and secondary containment requirements for drums and small facilities are also important. Buffer zones should be established to isolate these facilities from sensitive areas.

If field gas or refining capacity is available to supply fuels it should be made available to the support service industry. This will significantly reduce the occurrence of spills by eliminating fuel storage and piping for space heating and electrical generation. Local availability of refined products to all users would eliminate haul road tanker spills.

AREA OF IMPACT

Many of the tools developed in other North Slope fields are directly applicable to minimize the "footprint" of individual drill sites and of the overall production effort. Appropriate facility siting criteria and buffer distances will also help maintain adequate levels of environmental protection.

Development plans should include the following: a design to minimize the number of drill sites and production facilities while optimizing the layout of roads and pipelines; provisions for a limited number of intensive use material sites; and plans to centralize and consolidate support facilities. Consolidation of the service industry at Kuparuk provides an example of centralized support services in planning for ANWR.

Ice pads should be considered for all exploratory drilling. Ice pads may also be used for temporary stockpiling of overburden and muds and cuttings.

Restoration of the site at each stage from exploration through production can reduce the cumulative impact of development activities. Adequate drainage must be provided for all facilities to prevent impoundments.

A.E. Hastings

conoco

To NED,

Date 10/26/87

A COPY OF CONOCO'S COMMENTS TO SENATOR JOHNSTON CONCERNING LEASING AND OTHER QUESTIONS ABOUT THE 100% AREA. HOPE THIS IS HELPFUL, AND LET ME KNOW IF YOU NEED ADDITIONAL INFORMATION

AL HASTINGS

Raymond L. LaGarde
Director
Industry & Regulatory Affairs
North American Exploration

Conoco Inc.
600 N. Dairy Ashford Rd.
P.O. Box 2197
Houston, TX 77252
(713) 293-2291

October 21, 1987

The Honorable J. Bennett Johnston
U.S. Senate
Senate Hart Office Building
Room 136
Washington, DC 20510

Subject: Comments on Arctic National Wildlife Refuge Leasing System

Dear Senator Johnston:

It was a pleasure to appear before the Senate Energy Committee on October 14, 1987, to present Conoco's views on an appropriate leasing system to govern the "1002 Area" of the Arctic National Wildlife Refuge. All of us in the petroleum industry appreciate your interest and leadership in pursuing legislation to open this area to oil and gas activities.

During our discussion, however, I believe some confusion arose over our recommendation that the 1002 Area be leased in its entirety. The point I was attempting to make was that the whole area should be offered for consideration during each lease sale. It is highly unlikely, however, that this approach would result in every tract contained in the 1002 Area actually being leased at one time. The following comments are intended to further clarify this matter.

Conoco believes that offering the entire 1002 Area for lease in each lease sale held will lead to the most efficient energy development, without reducing the extensive existing environmental safeguards that would apply to 1002 oil and gas operations.

As we envision it, the leasing process would begin with the designation of the 1.5 million acre region as a "planning area" on which federal and state governments, oil companies, environmental groups and all other concerned parties can focus their attention. Prior to a lease sale, oil companies would be invited to indicate which parts of the planning area they might be interested in leasing. The State of Alaska, federal agencies, environmentalists and others are invited to say which portions they think should or should not be leased.

After weighing all pertinent comments, the Interior Department could eliminate areas particularly inappropriate for leasing from consideration and offer the remainder for competitive bidding. This is commonly the practice, for example, in preparation for OCS lease sales. Companies then would submit sealed bids for the areas they most want to lease, and the Secretary would award leases to the companies offering the highest bids. However, the Secretary could reject bids with bonuses determined to be inadequate.

Although this approach to leasing would make the entire 1002 Area available for leasing, it does not suggest in any way that entire areas will be leased -- only that the entire area will be considered as part of the planning process. It also means that the NEPA review prepared as part of the leasing procedure will consider all areas.

The lease offerings held under the OCS leasing program illustrate how the narrowing-down process works. In five offerings, the government started by considering a total of more than 300 million offshore acres. They included the central, eastern and western portions of the Gulf of Mexico and the middle and southern sectors of the Atlantic coastal area. By the time negotiations with all concerned parties were concluded, nearly half of the acreage in the five planning areas had been dropped from consideration. That left 164 million acres that were offered for lease. Oil companies submitted bids on a total of 6.8 million acres and actually leased 6.5 million acres. Thus, the acreage leased amounted to 2.1 percent of the lands originally considered for leasing. Reference June, 1984, American Petroleum Institute booklet entitled "Should Offshore Oil Be Off Limits?", page 33.

Clearly, the offering of all 1002 tracts in one sale will not result in leasing the entire 1002 Area, as some fear. The oil companies invest their funds only in those tracts that they think offer good chances for significant oil and natural gas discoveries. Having paid millions of dollars for those leases, the companies have every incentive to move ahead rapidly to explore them within the limited terms of the lease, usually 10 years in deep water and frontier areas like Alaska. If they fail to do so, the companies will lose both their investments and their leases.

Finally, experience with the OCS leasing system has shown that of the offshore acreage actually leased, only a small fraction is likely to prove to contain commercially producible reserves. We expect this to be the case in the 1002 Area also.

This country will need to rely on oil and natural gas as its principal energy sources for many years to come. To protect national security, to shield the economy from sudden supply interruptions and to prevent shortages to consumers, the United States should try to produce these supplies within its own territory. Under the best of circumstances, however, it will take at least 10 to 15 years to lease and explore the promising 1002 Area and to develop any oil and gas found there.

American oil companies have demonstrated for years that they can search for and develop oil and gas in ways that are compatible with protecting the Arctic environment. We believe this record can be extended successfully to the 1002 Area.

It is clearly in the national interest for 1002 exploration, drilling and production to proceed at an accelerated, but orderly pace. It is clearly detrimental to the consumer when large amounts of prospective acres are ruled out of bounds and their energy potential cannot be determined. We look forward to working with you and your fellow Committee members on the legislation under consideration.

RLL3/dm 016

The Honorable J. Bennett Johnston
U.S. Senate
Leasing 1002 Area
October 21, 1987

In an attempt to quickly answer the seventeen issues set out in your "Issue List For ANWR Leasing Bill", we offer the following responses. I shall be happy to answer any follow up questions which you or your staff may have regarding any of these answers.

QUESTION:

1. How much of the coastal plain should be leased at any one time? Should there be one large lease sale or several smaller sales spread over time?

ANSWER:

The entire coastal plain should be offered for lease in the first lease sale. Each subsequent lease offering should make every unleased tract available for leasing. This is representative of the existing offshore leasing system where a very small percentage of the blocks offered and available for leases were actually leased. The chart below was derived from TABLE 10, page 24 of OCS Information Report MMS-85-0083. This table shows the number of tracts leased and the number of tracts offered in six lease sales in the Gulf of Mexico.

Year	Sale Number	Planning Area	Blocks Offered	Blocks Leased	Acres Offered	Acres Leased
1983	72	Central Gulf	7,050	623	37,867,762	3,089,872
1983	74	Western Gulf	5,848	436	32,620,248	2,246,005
1984	79	Eastern Gulf	8,866	156	50,631,513	897,786
1984	81	Central Gulf	6,502	529	34,743,780	2,278,179
1984	84	Western Gulf	5,441	361	30,038,593	1,949,213
1985	98	Central Gulf	4,567	409	24,100,000	2,076,907
			38,276	329	210,001,896	12,537,962

From OCS Information Report MMS 87-0026, we find examples of the application of this type of leasing system in Alaskan OCS lease sales shown below:

Year	Sale Number	Region	Blocks Offered	Blocks Leased	Acres Offered	Acres Leased	Wells Drilled
1984	87	Beaufort Sea	1,475	227	7,773,447	1,207,714	4
1983	57	Norton Basin	418	59	2,379,751	335,898	6
1984	83	Navarin Basin	5,036	163	28,048,995	927,989	8
1983	70	St. George Basin	479	97	2,688,787	540,917	10
			7,408	545	40,890,980	3,012,518	28

RLL3/dm 016

The Honorable J. Bennett Johnston
U.S. Senate
Leasing 1002 Area
October 21, 1987

We believe that these sales will show that fears that the entire 1002 Area, if opened to leasing, would be leased down to the last acre are unjustified.

Industry will be willing to put up bonus money only on the most prospective leases. Then exploratory drilling will be conducted only on the most prospective of those tracts leased. If these exploratory wells are extremely disappointing, then little further drilling would be expected. If the wells are very encouraging, then delineation wells and later development wells could be drilled from well pads to begin a coordinated, planned development of the field.

To break the lease offering process up into several smaller sales would impede the coordination and planning of the development phase because the lease operators would have to proceed in development without having properly tested offset leases which had not yet been offered for lease, but were held back for several small sales. Also, the Federal Government takes a large risk for the taxpayers when it leases only a few tracts allowing possible condemnation of the entire area by conclusively dry wells. If the first few wells are extremely disappointing, then subsequent lease offerings are likely to bring disappointing bonus bids.

QUESTION:

2. Should certain areas, e.g. all weather springs and core caribou calving areas, be totally off limits to leasing, leased later, or at the same time as other areas?

ANSWER:

The subsurface of all weather springs and so-called core caribou calving areas should be offered for lease, but subject to appropriate leasing stipulations. These areas can be tested without significant risk of any damage to their environmental values. Stipulations could include limitations on when, how and where drilling activity could be conducted, honoring environmental sensitivities and the particular unique characteristics of the area. We already honor such values in our operations in the Aransas National Wildlife Refuge in South Texas where we suspend certain kinds of operations during the period that the endangered whooping cranes winter on our leases there. We operate in the Eastern Gulf of Mexico in rotating drilling windows to allow for joint use of the area by the U.S. Air Force and Navy. We suspend drilling operations in the Beaufort Sea when the Bowhead whales migrate through our leases there. These examples point out that we are already successfully operating in areas of special environmental concern and other areas where joint use concerns must be dealt with, and the Secretary of Interior should be charged with the responsibility of developing similar reasonable regulations for operations in the 1002 Area.

RLL3/dm 016

The Honorable J. Bennett Johnston
U.S. Senate
Leasing 1002 Area
October 21, 1987

QUESTION:

3. Should there be an "exploration only" option? Should the government do any or all of the exploration?

ANSWER:

We must not adopt an "exploration only" option. Nor should the government do any of the exploration. These concepts represent a change in the basic entrepreneurial system which has served the Nation well. The risks inherent in exploration should be borne by the private sector. This provides for a more efficient exploration program at almost no cost to the taxpayer and keeps government out of the risk taking business which the private sector is willing and able to bear.

QUESTION:

4. What general standard of mitigation/protection should be used, e.g. "no unnecessary adverse effect"; "no significant adverse impact," etc?

ANSWER:

The general standard for mitigation/protection suggested by Assistant Secretary Horn ("no unnecessary adverse effect") seems to be an acceptable standard to use. Almost any standard must have some measure of subjectivity. We believe that the Department of Interior's study of the various standards which could have applied is extensive enough and provides a fair and practical standard.

QUESTION:

5. Should the LEIS for the Secretary's ANWR report be considered sufficient as a programmatic EIS for a leasing program?

ANSWER:

The LEIS for the Secretary's ANWR report should be considered as a programmatic EIS for the 1002 Area leasing program. The LEIS in addition to the 1002 Report sufficiently discusses the impact of oil and gas operations on this area. The 1002 Area is a relatively small and homogeneous area by OCS planning area standards. A requirement for a further "Programmatic" EIS is simply redundant.

QUESTION:

6. How should NEPA apply to and interact with the leasing program beyond this initial stage?

RL:3/dm 016

ANSWER:

The requirements of NEPA will continue to apply to the leasing program in every stage of the exploration and development phase without special Congressional exemption.

QUESTION:

7. Is there a need for additional authority with regard to the issuance of rights-of-way in the 1002 Area?

ANSWER:

We urge Congress to grant legislative authority to the Secretary of Interior for the issuance of rights-of-way in the 1002 Area. When this authority was not granted for the TransAlaska Pipeline System, new legislation from Congress was needed to proceed with the development of the North Slope discovery at Prudhoe Bay. Congress should do all it can to avoid having to go through the process again. The delay would mean greater cost to the consumer and industry and would take up more Congressional time than is warranted.

QUESTION:

8. What kind of leasing model is most appropriate for ANWR - the onshore leasing program, the OCS program, or some combination of the two?

ANSWER:

We recommend that Congress direct the Secretary of Interior to develop a new leasing system based upon the OCS program, but tailored for the 1002 program.

QUESTION:

9. What kinds of environmental stipulations, mitigation measures, etc., should the legislation contain? How specific should the legislation be in this regard? Some areas of concern include

   - availability of water and gravel
   - air and water quality concerns including monitoring
   - protection of fish and wildlife and their habitat
   - various types of waste disposal
   - consolidation of facilities.

ANSWER:

Environmental stipulations and mitigation measures should not be part of the legislation opening the 1002 Area to oil and gas exploration and development because the use of such stipulations and measures by the leasing authority needs to be specifically tailored to particular areas of

concern which cannot be handled well in enabling legislation. The Secretary of Interior should be granted the authority to impose whatever reasonable stipulations and mitigation measures are necessary to protect environmental values of the 1002 Area. North Slope operators already conduct their operations pursuant to extensive and far reaching, existing environmental laws and regulations. New legislation is unnecessary to deal with availability of water and gravel, air and water quality concerns including monitoring, protection of fish and wildlife and their habitat, various types of waste disposal and the consolidation of facilities. These concerns should be left to the administrative agencies already charged with those concerns. Well-meaning legislation would only compound and confuse the existing complex mix of State and Federal laws and regulations which adequately cover these subjects

QUESTION:

10. What type(s) of leasing systems should be used?

ANSWER:

The leasing system should be a competitive, sealed bid, fixed bonus system with a 1/8 fixed royalty. This is the system generally used for OCS frontier areas.

QUESTION:

11. What should be the maximum size of the lease tracts in this area?

ANSWER:

The maximum size of lease tracts should be 5,760 acres which is the same size as tracts in the Federal waters of the Beaufort Sea.

QUESTION:

12. What should the lease term be and under what circumstances should such term, be extended?

ANSWER:

The lease term should be a 10 year term. Extensions should be provided for by the Secretary's leasing program, and not as a part of the legislation opening the 1002 Area to oil and gas operations. The term could be extended by the Secretary if he determines that the lessee has made a good faith effort to explore the lease within the primary term, and that as provided for in the leasing program it is in the best interests of the Nation to extend the lease. Specifically, a lease could be extended if it has been unitized, and the Secretary has approved a plan of development for the unit. The lease should also be extended if the lease is producing, or the lessee is drilling at the time the lease term expires. A reasonable time between cessation of drilling, or production, and resumption of

drilling, or production should be provided for in the lease. If a lease has been unitized or a discovery has been made on the lease, but production cannot be commenced because a pipeline has not been constructed, then some extension should be permitted in such a case. Other extensions should be available if circumstances warrant, and the Secretary of Interior should have the discretion to determine when such extensions are in the Nation's interest.

QUESTION:

13. How should revenues from leasing in this area be distributed?

ANSWER:

Revenues from leasing should be distributed just as they are under the OCS leasing program.

QUESTION:

14. Is there a need for expedited judicial review or special liability provisions?

ANSWER:

Expedited judicial review is necessary because opponents of leasing will tie up the exploration and development of 1002 reserves for years with legal challenges to every step in the process. Added delay is not in the best interests of the Nation because it will ultimately cost the consumer more for the product, and will impede the assurance of a stable domestic oil supply, thereby threatening the national security.

QUESTION:

15. Should a new state/federal interdisciplinary team be created to deal with leasing, production and development in ANWR?

ANSWER:

A new state/federal interdisciplinary term need not be created to deal with leasing, production and development in ANWR. This approach exists already and will operate under existing law in any case.

QUESTION:

16. Should there be a requirement for unitization of leases on the coastal plain?

ANSWER:

Voluntary unitization must be allowed in the coastal plain. In certain cases, the Secretary of Interior should have the authority to compel

unitization just as he has under the existing OCS leasing program. Unitization rules should be developed by the Secretary of Interior in his leasing program. Legislation opening the 1002 Area to oil and gas operations should not attempt to deal with unitization other than to grant the Secretary the authority to approve or compel unitization when it is in the Nations's interest to assure the efficient development of oil and gas reserves and to promote conservation.

QUESTION:

17. Should the Secretary of the Interior have lease cancellation authority in this area?

ANSWER:

The Secretary of Interior should have the same rights to cancel a lease that he has under the existing OCS leasing system.

With regard to the question of whether or not summer drilling should be required in the core calving area to test whether drilling operations really have an adverse effect upon the caribou, we only wish to make a short comment. We are convinced that the record already shows without contradiction that industry can drill in the North Slope during the summer with no long term adverse effect on the environment. The so-called core calving area will have to face such a test in any case if production in paying quantities is discovered there. Whether the test occurs early in the exploration process or later in the development process is the question. It would appear that to have such a test during the exploratory phase would be best because the future of development operations would not be at risk if the test proves again that the caribou are adaptable animals who will tend to move slightly away from roads and facilities as was the case at Milne Point. The problem with the proposal is that the added cost of building a pad and gravel road for support of summer drilling would tend to be more expensive than winter drilling. Therefore, we probably would not choose to drill any first exploratory well in the core calving area in the summer if given a choice. Summer drilling tests would be best saved after a significant discovery is made on the core calving area to save costs and to assure the most limited surface effect possible.

Should you or your staff wish to discuss any of these comments further, please contact the undersigned at (713) 293-2291.

Very truly yours,

Raymond L. LaGarde

Raymond L. LaGarde

RLL3/dm 016

U.S. ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 SIXTH AVENUE
SEATTLE, WASHINGTON 98101

HD-13J

June 1, 1987

Honorable William P. Horn
Assistant Secretary for Fish and Wildlife and Parks
United States Department of the Interior
18th and C Streets, NW
Washington, D.C. 20240

Re: Arctic National Wildlife Refuge Report
Final Legislative Environmental Impact Statement

Dear Mr. Horn:

The Environmental Protection Agency (EPA) has reviewed the final Legislative Environmental Impact Statement (LEIS) and Report to Congress concerning the proposal to allow oil exploration, development, and production within the Arctic National Wildlife Refuge (ANWR). This letter, with its enclosure, provides EPA's comments on the recommended action and alternatives that were considered.

On February 6, 1987, EPA commented on the draft LEIS and recommended that several elements of the document were in need of revision or expansion. The final LEIS has undergone significant revision since the draft LEIS. Although additional discussion has been provided in response to many of our comments, the majority of EPA's concerns have not been adequately addressed in the final LEIS. In several important instances, EPA's level of concern has been increased by the revisions made to the document.

In reviewing the final LEIS, EPA found a document incomplete in its presentation of scientific data that would support the impact conclusions and the Secretary's recommendation. A large body of scientific information on the 1002 area's resources has been collected in recent years by the U.S. Fish and Wildlife Service (FWS). Likewise, information specific to the existing environmental regulatory program (including monitoring information) is available. Yet, this information does not appear to be reflected in the final LEIS.

The final LEIS constitutes the first step in the Secretary's recommendation for Congressional decision-making that must balance economic needs and environmental risks. Greater attention to, and better use of, the

resource data that have been generated in ANWR and elsewhere on Alaska's North Slope can provide for a better understanding of the following environmental priorities:

Assurance that the overall significance of environmental impacts, including cumulative impacts, and the ability to mitigate them are properly stated. In particular, we do not believe it appropriate to suggest that the Prudhoe Bay experience would be duplicated in ANWR. The data in the LEIS are insufficient to support such a conclusion.

A wider range of limited exploration/development leasing alternatives are developed and considered. The impacts of the limited leasing alternative (Alternative B) as revised in the final LEIS are now of the same high level of concern as for full leasing (Alternative A).

Identify potential regulatory conflicts which may involve interagency coordination. We are concerned about potential regulatory conflicts if, for example, leasing were proposed in environmentally sensitive areas for which the granting of other necessary permits would be inconsistent with existing laws and policies.

These and other concerns are discussed further in the enclosure which represents a summary of our more detailed technical review comments.

Based upon the inadequacy of the information presented in the final LEIS, EPA would normally recommend that a revised document be prepared. The final LEIS remains in need of corrective measures that require substantial changes, including the expansion of the range of alternatives, in order for it to be an adequate basis for any Congressional action. Since Congressional hearings have already begun, EPA recommends that the Secretary of the Interior's final recommendation to Congress be modified to better reflect the available scientific information.

Thank you for the opportunity to review the final LEIS. If the Department of Interior has questions about EPA's comments, please feel free to contact me directly or Mr. Alvin L. Ewing, EPA's Assistant Regional Administrator in Anchorage. We look forward to answering your questions and helping you prepare the final recommendation to Congress.

Sincerely,

Robie G. Russell
Regional Administrator

Enclosure

EPA REVIEW COMMENTS
ARCTIC NATIONAL WILDLIFE REFUGE
FINAL LEGISLATIVE ENVIRONMENTAL IMPACT STATEMENT

The primary issues and concerns identified during EPA's review of the ANWR final LEIS are outlined below. Comments are broadly organized under three major headings; Responsiveness to Comments, Technical/Scientific Issues, and Alternatives Analysis.

RESPONSIVENESS TO COMMENTS

The final LEIS has acknowledged most of EPA's concerns expressed in our comments on the draft document. However, an adequate analysis of the impacts associated with these issues is not apparent. Detailed analysis of the following issues, as referenced from our previous correspondence, remains a prerequisite to rational decision-making.

Air quality: Available knowledge of Prudhoe Bay development effects was not utilized, evaluation is deferred to future analyses.

Water and gravel supply needs: Significant shortages are acknowledged, but the final LEIS has not presented an adequate analysis to show whether water quantity/gravel quantity are sufficient to support the recommended action. The final LEIS assumes that major adverse effects can be handled in a manner which will not result in adverse impacts to water quality or habitat.

Marine transportation facilities: Existing significant impacts due to causeways around Prudhoe Bay are not reflected.

Wetlands: Only a very limited evaluation of large-scale hydrologic impacts and habitat fragmentation has been conducted. If the hydrologic impacts are greater than the brief discussions imply, the large amount of wetland acreage that could be affected could be greater.

Mitigation: The effectiveness of proposed measures is not evaluated. Discussions about rehabilitation are incomplete.

Regulatory processes: There is no discussion of how the new authorities requested by the Secretary in his recommendation would relate to existing environmental laws, other than that a leasing program 'might' require compliance with NEPA, the Clean Water Act, and the Clean Air Act.

Noise impacts: There is no quantitative evaluation of noise levels which makes it difficult to reliably assess the disturbance effects on sensitive wildlife species.

Cumulative effects: The final LEIS acknowledges cumulative effects by providing a list of projects which might occur but does little to actually evaluate their effects.

Subsistence impacts: An expanded discussion of the off-ANWR effects on distant inland native settlements has been provided. The impacts to the exchange network from the recommended action have not been evaluated.

These issues remain important even from a programmatic perspective. Their significance is increased by the Secretary's proposed recommendation that the final LEIS be statutorily adopted as the EIS for the leasing program itself. We disagree that this document is adequate for that purpose. Specifically, the leasing program inferred from the final LEIS might not provide the opportunity to consider alternatives for individual lease block deletions. Such deletions could be aimed at locally reducing risk to environmentally sensitive tracts. A greater degree of site-specific information (e.g. a tiered EIS) is necessary to evaluate such a program.

TECHNICAL/SCIENTIFIC ISSUES

In a variety of instances, the final LEIS conclusions and the Secretary's Recommendations do not appear to be well substantiated by the information provided in the draft and final LEIS.

Definitions of Impact Significance:

Definitions of significance of impacts are inappropriate in many cases. For example, impacts are not considered "major" in the final LEIS unless they exceed 30 years or more duration. For many fish and wildlife species, several generations could be adversely affected within this time, leading to severe population- and community-level impacts.

The final LEIS is inconsistent in its application of impact definitions. Often discussions in the text describe a "moderate" effect, but it is labeled in the conclusions as "minor."

Also, impacts are in many cases down-graded from the draft LEIS without any explanation or justification. The final LEIS has numerous examples of impact conclusions that are minimized in this manner. It is not clear on what basis these changes were made in the preparation of the final LEIS. As one example, modification of 12,650 acres of wetlands was evaluated in both the draft and final LEIS. The draft labeled this as a "moderate" effect, but in the final it was down-graded to "minor" with no explanation. Considering the potential for hydrologic disruption and habitat fragmentation, the impact could be "major".

Underestimation of Impacts:

Potential underestimation of impacts occurs throughout the LEIS. This is particularly true of impacts predicted for the Porcupine Caribou Herd (PCH), largely because they are based on selectively-chosen data from the Central Arctic Herd (CAH) in the vicinity of Prudhoe Bay. For example, the text notes that although the CAH no longer calves where development occurs around Prudhoe Bay, it has nonetheless increased in size. This is used as a basis to conclude that development in the 1002 area (and subsequent displacement) should similarly not affect the PCH. However, the text notes a variety of important differences between these two herds which include:

1) the CAH has a much lower population density;
2) the majority of the CAH's important calving grounds have not experienced development activities;
3) the CAH's calving grounds have not become overcrowded (even with displacement due to development around Prudhoe Bay); and
4) predation by wolves and brown bears on the CAH has been minimized.

These differences strongly suggest that the LEIS predictions, based on data for the CAH, are likely to underestimate impacts to the PCH.

Placing such emphasis on CAH data is not necessary. A large body of data on the PCH (summarized in the 1002 Area Final Baseline Report) has been gathered by FWS in the last few years. The Final Baseline Report contains additional PCH data that appear to not be adequately reflected in this final LEIS. The final LEIS conclusions are apparently not based on all the available information.

Mitigation:

The mitigation discussions throughout the final LEIS raise several concerns. The entire 1002 area has been designated Resource Category 2. However, several discussions in the text make a distinction in habitat value. The overall "2" designation is not supported by the information in the final LEIS. The final LEIS indicates that site-specific habitat designations will be conducted during the site-specific development/production phase. Characterization of habitat after leasing and exploration has occurred could result in habitat being upgraded to Resource Category 1. The impacts may not be mitigatable.

Mitigation discussions in the final LEIS are incomplete. The final LEIS assumes that mitigation measures will be both consistently implemented and completely successful. No analysis or references are provided to support these assumptions. Rather, the final LEIS states that the experience at Prudhoe Bay provides a basis for minimizing or eliminating adverse effects through the careful application of mitigation measures tested in that area. As the Corps of Engineers noted in its comments on the draft LEIS, industry has been reluctant to apply compensatory mitigation and restoration techniques on the North Slope, except in very limited experimental circumstances. EPA's own extensive experience with the major operators at Prudhoe Bay supports this conclusion; rehabilitation technology for the North Slope is particularly lacking.

Cumulative Effects:

Cumulative effects are not adequately evaluated in the final LEIS. The final LEIS provides a list of criteria for determining which actions should be included in the cumulative effects analysis. The criteria appear to be unduly restrictive and narrow the focus of the analysis. By using these criteria, a list of projects that constitute the cumulative case scenario has been developed for the final LEIS. Use of the criteria has resulted in only existing projects being considered. The potential for future large-scale development of offshore Beaufort Sea leases, oil and gas development in the Canadian Arctic, and construction of large diameter gas pipelines are only marginally considered.

The final LEIS suggests a particular development infrastructure that may result from ANWR leasing; however, other scenarios are possible. No useful cumulative effects analysis is presented either for those projects and activities listed or for other reasonably foreseeable scenarios. For any scenario, an adequate effects analysis must begin with a full reflection of existing impacts. For example, the LEIS could have described the existing cumulative effects to anadromous fish attributed to causeway construction in the Prudhoe Bay area. These effects are "major" by the final LEIS definitions. Conclusions regarding level of impacts should include the cumulative effects that are reasonably foreseeable.

Air Quality:

The final LEIS does not adequately assess primary and secondary air quality impacts. Secondary air quality effects (e.g., arctic haze and acidification of tundra) may result from upset situations and normal low level emissions even if standards are being met. Impairment of visibility is a potential impact where there is increasing concern relative to existing north slope emission sources.

ALTERNATIVES ANALYSIS

Alternative B, limited leasing, has been substantially revised in the final LEIS. This alternative is purported to reduce the impacts to the PCH; it implies that the most important calving area would be protected by setting aside the area where multiple years of heavy use overlap. However, the basic concept behind the limited leasing alternative appears to be flawed. The "overlap" area is merely the FOCUS of where concentrated calving has repeatedly occurred in the most recent years.

Alternative B is further complicated by other assumptions within the final LEIS. For example, the document states that only 27 percent of the "concentrated" calving area for the PCH exists in the 1002 area. In contrast, the draft LEIS stated that 80 percent of "core" calving was in the 1002 area. Although both statements may be statistically correct, the final LEIS does not point out that the 1002 area's 27 percent of the PCH's "concentrated" calving grounds has experienced approximately 85 percent of the PCH's total calving. The question of whether this small area can physically support calving for a significant proportion of the PCH casts doubt on the potential for Alternative B to satisfactorily reduce identified environmental risks.

Changes made to Alternative B have reduced the geographical area slated for maximum protection within the 1002 study area. The rationale for these changes have not been tied to a biological foundation. Therefore, Alternative B is now of the same high level of concern as Alternative A (full leasing). EPA believes that a new limited leasing option should be developed that can achieve the stated objective of substantially reducing impacts to the PCH while still allowing for development of oil resources. Alternative C, further exploration only, remains environmentally preferred should Congress consider only those alternatives presented by the Department of the Interior. Independent expert review of all information generated during the exploration activities outlined in Alternative C should be encouraged.

2/2/88 Horn

The map

Value - for - value

ASRC "missing in + missing in"

- no relationship at all betw the 2 ~~or~~ transactions
- relies on 1431 ANILCA
- state · AZUC/DGC new in mid-'83
- Barrow Gas Transfer Act
- Cowper Admin charges are invalid - "defense docket" wd inc Hammond/Sheffield, Andrus/Watt, 95/96/98 Congresses
- valuation "purely a paper exercise"
- Jen thought ASRC was unfairly treated
- nobody got "hoodwinked"

improper valuation?

- knew it wd be controversial + wanted to be able to defend trades
- followed statute + est'd valuation process
- public interest valuation - remote areas - no appraisals
- comp'l app'ls -

  Pribilofs · Bird Cliffs - Lake Clark - WSE -

- consensual arrangement -
- Kaktovik - raw value of $1000 - 22(g) discount of 15%
- state says no documentation or records - Feb memo on app'l methodology - notes on discussions - no comp. record of decision yet - if LEIS goes forward it will inc. full documentation
- didn't negotiate USFWS acq'n prices
- process had integrity

40% 24%

Menard - why get land - subsfc / subsistence / 22(g) -

Horn - 1) can prev. dev't; subsfc is usu. worthless - ensure env'l protection in perpetuity - 2) also get mgmt authy - 3) rec'l access - no trespassing signs on Russian River, Karluk access fees -

valuation of o/g lands -

- smaller tract size than OCS/NPRA
- resrg 85% of acrg not traded ed bonus in $2-4 billion on a lease sale
- state's geol'l argument is "nonsense"
- DOI mapped id'bl closures - cd not map closures in deformations - there is pot'l for closures but they'll be small - "our estimates are that most of the areas outside are so high-risk that they aren't even going to be worth it"
- Camden Bay sale is the same sequence - state's argument inconsistent
- std resc val'n methodology - for subsfc ~~[redacted]~~ -

  "risk-discounted value of the royalty" + 25%

  min. bid $300/ac on acrg off-shore - 12x OCS min $ bid

  median oil price - $33/bbl -

  not subj. to negn or bargaining

- Petty John - value to buyer or value to seller? - Caulello answer: it's value to seller [can't est. value to buyer w/o comp'n] [and it isn't even really the value to seller]
- Horn "same process" as a lease sale - [except there DOI establishes min. bid + leads to competition]
- OMB - bunch of bureaucrats working on personnel, they also

Horn steps in it → / Dougie Fresh ↓ Rocky Sanders 80 yds TD!!!

try to maximize federal receipts
- state shd be at table
- [inholdings map objcs. state acq's - 12 m. + acres -]
[ignores state stake in comp'v lease sale]
- real issue is opening ANWR - trades are 2° - [but they're 90% of the controversy]
[these guys are disorganized - time for Tyson KO punch]
- state reps heard that they won't in trade negs anymore in newspapers -
- kept state posted

Hudson.

- want state at the table -
- [if trade lands are totally unprod'v, what happens to expected bids for comp'v lsg on adj. lands? - cd result in feds nvr getting anything but the trade acreage? i.e. total loss of Horn's $2.4 b. + $538 m - 4 out of 5 chance there's nothing there, at least]
- "idiotic allegations" by state about giving away value
- 50/47 $/acre in state sales

Horn see these are private-bilateral agents;

- OH deal is esp. sweet - last deal -
- [NLG just signed up Conoco ☺]
- "more power to Old Harbor's negotiators"
- NEPA process - DOI under a Dem. president -

[Eason needs to get around + say why it's not in state interest to go back to the table - Hudson, Frank, Furnace, Menard, Heath, Hanley, Phillips, Rieger

NLOil was involved in discussions - Zawacki

state wd hv been the largest player if it had stayed -

NLG 300k ac, $100+ m - state had about $460 m still on the table - wd hv had 100% interest in 200-230 mil of tracts -

comparable values - chart shows some sales vs mean hi bid/acre - diff'c is just that DOI gets land instead of $ [wrong - what about comp'n?]

Krieger - why didn't DOI prop. state roy'y interest? - them - wanted fee arrangement w/o a prop'y interest - avoid further regulation + delay of drilling by divesting o+g interest - also state has no interest/roy'y entitlement now -

State revenues chart -

prop'y tax - added inc. tax - lease income tax - lease income - "pissing contest w Gov's"

State is accusing DOI of sleazy backroom deals

state left table for reasons of lacking info -

Now they seem to have more [wrong - look at Cowper strut]

"state is speaking w forked tongue"

"will the real state please stand up"

Dennerlein argument - env'lists will want to grab the land believes that the option shd be avail to Congress -

believes that prob'y the trades' impr poss'y of opening ANWR - did 103(c) repeal 22(g)

State is taking position that the ~~St~~ Fed'l gov't will prev. dev't -

seems inconsistent w/ past State positions re Uncle Sam's powers fr. D.C.

[mischaracterization of state's reasons for lvg the table]

[congress rtn is very imp't here]

[state shdn't be doing this]

~~having~~ ~~B~~ KIC well data wd hv bn useless —

having KIC well data wd hv bn > info, who knows if it wd hv bn useful —

Hobson, Pearce, Frank, Colvin, Menard, Zawacki, Riegn, Phillips, Hanly, Furnace, Petty John - Martin

1/26/88

Tom Williams

getting started
Sen Jr at end of session wanted
C+ to do something in Feb'y
that still looks good -
don't know when in Feb'y -
budget / hrgs 1st /
new sched has recess 8-15 Feb'y -
(so prob'y after) - probably -
still his intention to put it beg.
C. in Feb'y

10/14 Sen Energy ANWR — Wickles, Hecht, Murk, Wallop, Johnston, Ford, Wirth, Fowler, McClure, Bradley

Leggard - Conoco; Cook ~~[redacted]~~ Chevron; Herrera - SAPC; Weeks - ARCO

Conoco - lease all of 1002 area, w/o phasing or w/drawls; comp'v, regular lease sale; explore + develop under leases

Chevron - at least 10 yr. lease term; lease entire area; no grid explain - no specifics on envl oper'g cond'ns -; [unitization - want to be able to hv coop'v explor'n program -] call Bill Van Dyke

SAPC - delineation wells are ~~treated~~ regulated like exploration wells but shd be allowed to happen year-round as soon as a disc'y is made (no seasonal drilling req't) (how def. a discovery) (State approved is 2000 Bpd); NEPA process is adequate to produce best poss. oil don't known to man; on jt. state-fed'l regulin: unnecy bec. it already happens, analy to 404 permitting wh. gives state a veto anly, oppose bec. it wd req. oil ind'y funding -

ARCO -

Johnston - legis shd max'z env'l protection, minimize delay

∴ LCIS shd be deemed OK to begin lsg

staging? core calving may be leased, last, after another disc'y, no evidence of past damage to caribou -

Wallop - 17 technical pts re special drilling req'ts in Alaska -

clarify w/ Herrera/Herrera - don't need to exempt ls sales fr. NEPA, but often a discovery ~~then this~~ it can delay process -

clarify w/ Cooke. (Cooke - State has no clear concept of core-calving area studies plan
Isg calving area last might be sensible

Herrera - no unnecy advs effx seems like an OK std -
there is no hajc waste in explor/produc drilling, acc. to fed'l defn of haj's materials; cd very occ'ly use some haj's substances in produc -

Bradley - boating at Prudhoe?

Oliver Leavitt / Bill Van Ness

impact aid -

local hire -

Bennett Johnston asks about putting local hire lang. in report.

core calving area shd be avail. - wd stage Isg.

Johnston sees "gas people" most relevant re subsic, but actually it's Athabascans who are most relevant

litigation - prev. delays

5 yr o/g 1sg plan

footprints vs. Legos: if your kids play w/ Legos on the living rm carpet you know that they might cover 1% of the floor but you'll trip on your way to the kitchen

David Brower -

2/24 Kocsis —

orig'l CO rsvd all H/C's in ~~ANWR~~ Pet 4 to feds
Sec 11 Statehood Act acdm'd
"Congress prob'y did not intend for 90% to extend to Pet 4"
∴ the 50% deal was permissible

Elk Hills — no lsg - no revenue stream - but loss of produc'n -

---

2/24 Kocsis

— Stevens' stmt that state wd hv Ø entitlement, if ANWR wsn. op'd today
— "flat wrong" - Kenai Moose Range case.

1) Description of interaction between U of A + Division of Agriculture.

2) federal ag programs. future funding.

3) plan overview

4) pipeline R/W's

5) programs in place

2/24 SB 94

DNR etc. Bruggeof, McVee, Shaub, Koester, Geraghty, Tarjen, Ostrovsky, Gallagher, Holdsworth

Tom K. 38 05 185 - exg closure authg -
ck pull out that language + give it his portfolio?

DEC/ADF+G don't want law changed - some probs w/ jud'l enforcement -

BBAP/SAP agents on mun'l closures -
land sale closures -

Jerry G - don't want to change anything in AS 38 but adding the language here is sensible -

Cont: finding 1) incompatible → damage 2) protection of other uses wd serve long-term state social/econ'c interests

Jerry: a finding by soil conservs?

→ TK - Constn sees no public use is better than others -

Jerry: (B) - Comm'r will dev guidelines + procs - drop civil actn?

Bruce: The civil actn - accountability for the Commr -

TK: accountability exists now, but (b) gives authy to enforce on such broad grounds, the other directives (DNR etc) may be seen as have equal footing; does Leg't intend to repeal these, or does it repeal by implication

Cont - wd like to hv a reg't for a finding w/ specific steps/ criteria for the finding - looks substance to ~~[redacted]~~ complaints, action

TK: B) under APA the Commr in consultn w/ Min's Comm'n shall adopt regs to implement the Act? regs that relate planning areas +

decins to MCO's -

fiscal impx - regs - Title 16? DOTPF?

Jerry - how can DNR assure that OMB doesn't promulgate unreas'l regs?

2/24 Tom Roberts. - re OCS language
- staffy lang?
- ch the lease - MMS - (Navarin Basin)
- Title 43 US 1344. c. (req's of consultn w/ state + local govt's) (terms of leases)

1351.h. (req's Sec disapp a lsg plan if impact on envt, inc'g employment etc > adv'gs)

→ 1356 a.3. (lessees shd consr local hire + .2 and mitigate social/econ impacts)

+ definitions.

OFFICE OF THE GOVERNOR

MARGARET A. MORAN
SPECIAL ASSISTANT FOR THE
ARCTIC NATIONAL WILDLIFE REFUGE (ANWR)

Hall of the States
444 North Capitol Street, N.W.
Suite 518
Washington, D.C. 20001

(202) 624-5858

100TH CONGRESS
1ST SESSION

S. 1804

IN THE SENATE OF THE UNITED STATES

OCTOBER 21 (legislative day, OCTOBER 16), 1987

Mr. ROTH (for himself, Mr. BRADLEY, Mr. CHAFEE, Mr. METZENBAUM, Mr. DURENBERGER, Mr. SIMON, and Mr. HARKIN) introduced the following bill; which was read twice and referred to the Committee on Environment and Public Works

A BILL

To amend the National Wildlife Refuge Administration Act.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That notwithstanding any provisions of the National Wildlife Refuge Administration Act, a portion of the Arctic National Wildlife Refuge in Alaska comprising approximately 1,556,793 acres, as generally depicted on a map entitled "Arctic Coastal Plain Wilderness-Proposed", dated June, 1986, and available for inspection in the offices of the Secretary of the Interior, is hereby designated as a component of the National Wilderness Preservation System.

O

November 4, 1987

ANWR BILLS PENDING BEFORE CONGRESS

Set forth below is a brief comparison of how the five pending Coastal Plain bills treat the key issues relating to oil and gas leasing, the environment, and exploration and development. The five bills are in order of introduction:

H.R. 39.

Introduced by Congressman Udall, January 6, 1987 (96 cosponsors)

- would designate all of the 1.5 million acre area of the Coastal Plain as a Wilderness Area.

H.R. 1082.

Introduced by Congressman Young, February 11, 1987 (146 cosponsors)

- would authorize the Secretary of the Interior to lease all of the lands in the Coastal Plain for oil and gas exploration, development and production.

S. 1217.

Introduced by Senators Murkowski and Stevens, May 15, 1987 (9 cosponsors)

- would amend the Mineral Leasing Act of 1920 to authorize the Secretary to lease all of the lands in the Coastal Plain for oil and gas exploration, development and production.

S. 1804.

Introduced by Senator Roth, October 21, 1987, (7 cosponsors)

- would designate the Coastal Plain as a Wilderness Area.

H.R. 3601.

Introduced by Congressmen Jones November 3, 1987 (2 cosponsors)

- would require: (1) the drilling of four on-structure exploratory test wells; (2) extensive revision and complete duplication of all baseline studies, the Resource Assessment, and Draft EIS and Final EIS; and (3) only then initiate a new executive branch review and decisionmaking process, all prior to a determination of whether to lease, develop and produce oil from Coastal Plain

On Leasing

- H.R. 39 and S. 1804 would prohibit leasing and any use of lands in the Coastal Plain in any manner inconsistent with Wilderness.

- H.R. 1082 and S. 1217 would allow leasing, exploration and development of all lands in the Coastal Plain.

- H.R. 3061 would make leasing contingent upon the drilling of four "exploration only" wells, the preparation of extensive new studies, reports and NEPA statements, and would prohibit surface activity by designating "protective management zones" (de facto Wilderness) in large areas of the Coastal Plain.

On Protecting The Environment

- H.R. 39 and S. 1804 would prohibit leasing and most other activity on the Coastal Plain.

- H.R. 1082 and S. 1217 would subject all phases of activity to existing environmental laws and regulations, and provide for the reasonable protection of fish and wildlife resources, environment and subsistence uses of the Coastal Plain.

- H.R. 3601 would require the use of best available technology measures to mitigate the effects of exploration and development and related activity; would impose a standard of "no significant environmental impact"; and would make the 23.5 million-acre National Petroleum Reserve -- Alaska (NPR-A) a National Wildlife Refuge.

On Revenues

- H.R. 39 and S. 1804 would generate no new revenues.

- H.R. 1082 and S. 1217 would allocate revenues in accordance with applicable law (90% to State of Alaska and 10% to Federal government).

- H.R. 3601 would give 50% of revenues to the State of Alaska and 50% to the Federal government. The Federal share would be divided evenly between the Migratory Bird Conservation Fund and the Fish and Wildlife Enhancement Trust Fund.

On Further Studies

- H.R. 39 and S. 1804 owuld require no further studies.

- H.R. 1082 and S. 1217 would require no further studies.

- H.R. 3601 would require the Director of the FWS to go back and re-do all baseline studies, reports and EIS's required by section 1002(h) of ANILCA; and would require new studies by the National Academyu of Sciences, and the formation of a new ANWR Scientific Rdvisory Panel.

On A Timeframe For Development

- H.R. 39 and S. 1804 would prohibit any development.

- H.R. 1082 and S. 1217 would require the first lease sale to be held within one year of enactment of the Act.

- H.R. 3601 would require reports following the exploratory drilling program, and would permit the President to authorize development only if reserves are shown to be of significant size and importance to the nation. Development could be delayed four to six years while further studies and reports are made.

UNITED STATES HOUSE OF REPRESENTATIVES
100TH CONGRESS
H.R. 1082 - COSPONSORS

MEMBER NAME	PARTY	STATE
AKAKA, DANIEL K.	D	HI
ANDREWS, MICHAEL A.	D	TX
ANTHONY, BERYL F. JR.	D	AR
BEVILL, TOM	D	AL
BIAGGI, MARIO	D	NY
BOGGS, CORINNE C. (LINDY)	D	LA
CHAPMAN, JIM	D	TX
CHAPPELL, BILL JR.	D	FL
DANIEL, W. C. (DAN)	D	VA
DYSON, ROY	D	MD
ENGLISH, GLENN	D	OK
FLIPPO, RONNIE G.	D	AL
GARCIA, ROBERT	D	NY
GIBBONS, SAM M.	D	FL
GRAY, KENNETH J.	D	IL
HALL, RALPH M.	D	TX
HAYES, JIMMY	D	LA
HEFNER, W.G. (BILL)	D	NC
HUBBARD, CARROLL JR.	D	KY
HUCKABY, THOMAS JERRY	D	LA
JENKINS, EDGAR L.	D	GA
LELAND, MICKEY	D	TX
LLOYD, MARILYN	D	TN
MONTGOMERY, G.V. (SONNY)	D	MS
MURPHY, AUSTIN J.	D	PA
NICHOLS, WILLIAM	D	AL
STENHOLM, CHARLES W.	D	TX
STRATTON, SAMUEL S.	D	NY
TAUZIN, W. J. (BILLY)	D	LA
WATKINS, WESLEY W.	D	OK
WILSON, CHARLES	D	TX
ARCHER, W.R. (BILL)	R	TX
ARMEY, RICHARD	R	TX
BADHAM, ROBERT E.	R	CA
BAKER, RICHARD	R	LA
BALLENGER, CASS	R	NC
BARTLETT, STEVE	R	TX
BARTON, JOE	R	TX
BENTLEY, HELEN DELICH	R	MD
BEREUTER, DOUGLAS K.	R	NB
BILIRAKIS, MICHAEL	R	FL
BLAZ, BEN GARRIDO	R	GM
BLILEY, THOMAS J. JR.	R	VA
BOULTER, BEAU	R	TX
BROOMFIELD, WILLIAM S.	R	MI
BUNNING, JIM	R	KY
BURTON, DAN	R	IN
CALLAHAN, H.L. (SONNY)	R	AL
CHENEY, RICHARD B.	R	WY

UNITED STATES HOUSE OF REPRESENTATIVES
100TH CONGRESS
H.R. 1082 - COSPONSORS

MEMBER NAME	PARTY	STATE
COATS, DANIEL R.	R	IN
COBLE, HOWARD	R	NC
COMBEST, LARRY	R	TX
CRAIG, LARRY E.	R	ID
CRANE, PHILIP M.	R	IL
DANNEMEYER, WILLIAM E.	R	CA
DAUB, HAL	R	NB
DAVIS, JACK	R	IL
DAVIS, ROBERT W.	R	MI
DE LAY, TOM	R	TX
DICKINSON, WILLIAM L.	R	AL
DORNAN, ROBERT K.	R	CA
DREIER, DAVID	R	CA
DUNCAN, JOHN J.	R	TN
EDWARDS, MICKEY	R	OK
EMERSON, BILL	R	MO
FIELDS, JACK	R	TX
GALLEGLY, ELTON	R	CA
GEKAS, GEORGE W.	R	PA
GOODLING, WILLIAM F.	R	PA
GRANDY, FRED R.	R	IA
GREGG, JUDD	R	NH
HAMMERSCHMIDT, JOHN P.	R	AR
HANSEN, JAMES V.	R	UT
HASTERT, J. DENNIS	R	IL
HERGER, WALLY	R	CA
HILER, JOHN	R	IN
HOLLOWAY, CLYDE	R	LA
HOPKINS, LARRY J.	R	KY
HOUGHTON JR., AMORY	R	NY
HUNTER, DUNCAN L.	R	CA
HYDE, HENRY J.	R	IL
INHOFE, JAMES M.	R	OK
KASICH, JOHN R.	R	OH
KEMP, JACK F.	R	NY
KOLBE, JIM	R	AZ
KONNYU, ERNEST L.	R	CA
KYL, JON	R	AZ
LATTA, DELBERT L.	R	OH
LEWIS, JERRY	R	CA
LEWIS, TOM	R	FL
LIGHTFOOT, JIM ROSS	R	IA
LOTT, TRENT	R	MS
LOWERY, BILL	R	CA
LUJAN, MANUEL JR.	R	NM
LUKENS, DONALD E.	R	OH
LUNGREN, DANIEL E.	R	CA
MACK, CONNIE III	R	FL
MADIGAN, EDWARD R.	R	IL

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MEMBER NAME	PARTY	STATE
MARLENEE, RON	R	MT
MARTIN, DAVID O'B.	R	NY
MCCANDLESS, ALFRED A.	R	CA
MCCOLLOM, BILL	R	FL
MCDADE, JOSEPH M.	R	PA
MCEWEN, BOB	R	OH
MCMILLAN, J. ALEX	R	NC
MICHEL, ROBERT H.	R	IL
MILLER, CLARENCE E.	R	OH
MOLINARI, GUY V.	R	NY
MOORHEAD, CARLOS J.	R	CA
MYERS, JOHN T.	R	IN
NIELSON, HOWARD C.	R	UT
OXLEY, MICHAEL	R	OH
PACKARD, RONALD C.	R	CA
PARRIS, STANFORD E.	R	VA
PASHAYAN, CHARLES JR.	R	CA
QUILLEN, JAMES H.	R	TN
RHODES III, JOHN J.	R	AZ
RITTER, DON	R	PA
ROBERTS, PAT	R	KS
ROGERS, HAROLD	R	KY
SAXTON, H. JAMES	R	NJ
SCHAEFER, DANIEL	R	CO
SCHULZE, RICHARD T.	R	PA
SHAW, CLAY E. JR.	R	FL
SHUMWAY, NORMAN D.	R	CA
SHUSTER, (BUD) E.G.	R	PA
SKEEN, JOE	R	NM
SLAUGHTER, D. FRENCH	R	VA
SMITH, DENNY	R	OR
SMITH, ROBERT F.	R	OR
SMITH, VIRGINIA	R	NB
SMITH, LAMAR	R	TX
SOLOMON, GERALD B.H.	R	NY
STANGELAND, ARLAN	R	MN
STUMP, BOB	R	AZ
SUNDQUIST, DON	R	TN
SWEENEY, MAC	R	TX
TAYLOR, GENE	R	MO
THOMAS, WILLIAM M.	R	CA
VANDER JAGT, GUY	R	MI
VUCANOVICH, BARBARA F.	R	NV
WALKER, ROBERT S.	R	PA
WHITTAKER, ROBERT	R	KS
WYLIE, CHALMERS P.	R	OH
YOUNG, BILL C.W.	R	FL
YOUNG, DON	R	AK

UNITED STATES HOUSE OF REPRESENTATIVES
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H.R. 3601 - COSPONSORS

MEMBER NAME	PARTY	STATE
DINGELL, JOHN D.	D	MI
JONES, WALTER B.	D	NC
THOMAS, ROBERT LINDSAY	D	GA

UNITED STATES HOUSE OF REPRESENTATIVES
100TH CONGRESS
H.R. 39 - COSPONSORS

MEMBER NAME	PARTY	STATE
FAUNTROY, WALTER		
ACKERMAN, GARY	D	NY
ASPIN, LES	D	WI
ATKINS, CHESTER G.	D	MA
BATES, JIM	D	CA
BEILENSON, ANTHONY C.	D	CA
BERMAN, HOWARD L.	D	CA
BONIOR, DAVID E.	D	MI
BOXER, BARBARA	D	CA
BROWN, GEORGE E. JR.	D	CA
CLARKE, JAMES MCCLURE	D	NC
CLAY, WILLIAM L.	D	MO
CONYERS, JOHN JR.	D	MI
COOPER, JIM	D	TN
CROCKETT, GEORGE W. JR.	D	MI
De LUGO, RON	D	VI
DEFAZIO, PETER A.	D	OR
DELLUMS, RONALD V.	D	CA
DIXON, JULIAN C.	D	CA
DOWNEY, THOMAS J.	D	NY
DURBIN, RICHARD J.	D	IL
DWYER, BERNARD J.	D	NJ
EDWARDS, DON	D	CA
EVANS, LANE	D	IL
FASCELL, DANTE B.	D	FL
FLAKE, FLOYD H.	D	NY
FLORIO, JAMES J.	D	NJ
FORD, HAROLD E.	D	TN
FRANK, BARNEY	D	MA
FUSTER, JAIME B.	D	PR
GARCIA, ROBERT	D	NY
HAWKINS, AUGUSTUS F.	D	CA
HAYES, CHARLES	D	IL
HOWARD, JAMES J.	D	NJ
JACOBS, ANDREW JR.	D	IN
JONTZ, JIM	D	IN
KAPTUR, MARCY	D	OH
KASTENMEIER, ROBERT W.	D	WI
KILDEE, DALE E.	D	MI
KOLTER, JOSEPH P.	D	PA
LANTOS, TOM	D	CA
LEHMAN, WILLIAM	D	FL
LEVINE, MELDON E.	D	CA
LEWIS, JOHN	D	GA
LIPINSKI, WILLIAM O.	D	IL
LUKEN, THOMAS A.	D	OH
MARKEY, EDWARD J.	D	MA
MARTINEZ, MATTHEW	D	CA
MATSUI, ROBERT T.	D	CA

UNITED STATES HOUSE OF REPRESENTATIVES
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H.R. 39 - COSPONSORS

MEMBER NAME	PARTY	STATE
MINETA, NORMAN Y.	D	CA
MFUME, KWEISI	D	MD
MOAKLEY, JOHN JOSEPH	D	MA
MOODY, JIM	D	WI
MORRISON, BRUCE A.	D	CT
MRAZEK, ROBERT J.	D	NY
NEAL, STEPHEN L.	D	NC
OWENS, MAJOR R.	D	NY
OWENS, WAYNE	D	UT
PANETTA, LEON E.	D	CA
PELOSI, MARY	D	CA
PENNY, TIMOTHY J.	D	MN
PRICE, MELVIN	D	IL
PRICE, DAVID E.	D	NC
RANGEL, CHARLES B.	D	NY
RODINO, PETER W. JR.	D	NJ
ROSE, CHARLES	D	NC
ROYBAL, EDWARD R.	D	CA
SAWYER, TOM	D	OH
SCHEUER, JAMES H.	D	NY
SCHROEDER, PATRICIA	D	CO
SIKORSKI, GERRY	D	MN
SKAGGS, DAVID E.	D	CO
SLAUGHTER, LOUISE M.	D	NY
SMITH, LAWRENCE J.	D	FL
SOLARZ, STEPHEN J.	D	NY
SPRATT, JOHN M.	D	SC
STARK, FORTNEY H. (PETE)	D	CA
SUNIA, FOFO I. F.	D	AS
TORRES, ESTEBAN EDWARD	D	CA
TOWNS, EDOLPHUS	D	NY
UDALL, MORRIS K.	D	AZ
VENTO, BRUCE F.	D	MN
WAXMAN, HENRY A.	D	CA
WEISS, THEODORE S.	D	NY
WILLIAMS, PAT	D	MT
WOLPE, HOWARD E.	D	MI
YATES, SIDNEY R.	D	IL
BOEHLERT, SHERWOOD L.	R	NY
FISH, HAMILTON JR.	R	NY
GREEN, S. WILLIAM	R	NY
JEFFORDS, JAMES M.	R	VT
MORELLA, CONSTANCE A.	R	MD
RAVENEL JR., ARTHUR	R	SC
RINALDO, MATTHEW J.	R	NJ
ROBINSON, TOMMY	R	AR
WORTLEY, GEORGE	R	NY

UNITED STATES SENATE
100TH CONGRESS
S. 1217 - COSPONSORS

MEMBER NAME	PARTY	STATE
HEFLIN, HOWELL T.	D	AL
COCHRAN, THAD	R	MS
GARN, JAKE	R	UT
GRAMM, PHIL	R	TX
HELMS, JESSE	R	NC
MURKOWSKI, FRANK H.	R	AK
NICKLES, DON	R	OK
STEVENS, THEODORE F.	R	AK
SYMMS, STEVEN D.	R	ID

UNITED STATES SENATE
100TH CONGRESS
S. 1804 - COSPONSORS

MEMBER NAME	PARTY	STATE
BRADLEY, BILL	D	NJ
HARKIN, TOM	D	IA
METZENBAUM, HOWARD M.	D	OH
SIMON, PAUL	D	IL
CHAFEE, JOHN H.	R	RI
DURENBERGER, DAVID F.	R	MN
ROTH, WILLIAM V. JR.	R	DE

100TH CONGRESS

STATE	MEMBER NAME	PARTY	DISTRICT	H.R. 39	H.R. 1082	H.R. 3601	S-1217	S. 1804
AK	MURKOWSKI, FRANK H.	R	0				Y	
AK	STEVENS, THEODORE F.	R	0				Y	
AK	YOUNG, DON	R	0		Y			
AL	BEVILL, TOM	D	4		Y			
AL	ERDREICH, BENJAMIN	D	6					
AL	FLIPPO, RONNIE G.	D	5		Y			
AL	HARRIS, CLYDE	D	7					
AL	HEFLIN, HOWELL T.	D	0				Y	
AL	NICHOLS, WILLIAM	D	3		Y			
AL	SHELBY, RICHARD C.	D	0					
AL	CALLAHAN, H.L. (SONNY)	R	1		Y			
AL	DICKINSON, WILLIAM L.	R	2		Y			
AR	ALEXANDER, BILL	D	1					
AR	ANTHONY, BERYL F. JR.	D	4		Y			
AR	BUMPERS, DALE	D	0					
AR	PRYOR, DAVID H.	D	0					
AR	HAMMERSCHMIDT, JOHN P.	R	3		Y			
AR	ROBINSON, TOMMY	R	2	Y				
AS	SUNIA, FOFO I. F.	D	0	Y				
AZ	DECONCINI, DENNIS	D	0					
AZ	UDALL, MORRIS K.	D	2	Y				
AZ	KOLBE, JIM	R	5		Y			
AZ	KYL, JON	R	4		Y			
AZ	MCCAIN, JOHN	R	0					
AZ	RHODES III, JOHN J.	R	1		Y			
AZ	STUMP, BOB	R	3		Y			
CA	ANDERSON, GLENN M.	D	32					
CA	BATES, JIM	D	44	Y				
CA	BEILENSON, ANTHONY C.	D	23	Y				
CA	BERMAN, HOWARD L.	D	26	Y				
CA	BOSCO, DOUGLAS H.	D	1					
CA	BOXER, BARBARA	D	6	Y				
CA	BROWN, GEORGE E. JR.	D	36	Y				
CA	COELHO, TONY	D	15					
CA	CRANSTON, ALAN	D	0					
CA	DELLUMS, RONALD V.	D	8	Y				
CA	DIXON, JULIAN C.	D	28	Y				
CA	DYMALLY, MERVYN M.	D	31					
CA	EDWARDS, DON	D	10	Y				
CA	FAZIO, VIC	D	4					
CA	HAWKINS, AUGUSTUS F.	D	29	Y				
CA	LANTOS, TOM	D	11	Y				
CA	LEHMAN, RICHARD H.	D	18					
CA	LEVINE, MELDON E.	D	27	Y				
CA	MARTINEZ, MATTHEW	D	30	Y				
CA	MATSUI, ROBERT T.	D	3	Y				
CA	MILLER, GEORGE	D	7					
CA	MINETA, NORMAN Y.	D	13	Y				
CA	PANETTA LEON E.	D	16	Y				
CA	PELOSI, MARY	D	5	Y				
CA	ROYBAL, EDWARD R.	D	25	Y				

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STATE	MEMBER NAME	PARTY	DISTRICT	H.R. 39	H.R. 1082	H.R. 3601	S-1217	S. 1804
CA	STARK, FORTNEY H. (PETE)	D	9	Y				
CA	TORRES, ESTEBAN EDWARD	D	34	Y				
CA	WAXMAN, HENRY A.	D	24	Y				
CA	BADHAM, ROBERT E.	R	40		Y			
CA	DANNEMEYER, WILLIAM E.	R	39		Y			
CA	DORNAN, ROBERT K.	R	38		Y			
CA	DREIER, DAVID	R	33		Y			
CA	GALLEGLY, ELTON	R	21		Y			
CA	HERGER, WALLY	R	2		Y			
CA	HUNTER, DUNCAN L.	R	45		Y			
CA	KONNYU, ERNEST L.	R	12		Y			
CA	LAGOMARSINO, ROBERT J.	R	19					
CA	LEWIS, JERRY	R	35		Y			
CA	LOWERY, BILL	R	41		Y			
CA	LUNGREN, DANIEL E.	R	42		Y			
CA	MCCANDLESS, ALFRED A.	R	37		Y			
CA	MOORHEAD, CARLOS J.	R	22		Y			
CA	PACKARD, RONALD C.	R	43		Y			
CA	PASHAYAN, CHARLES JR.	R	17		Y			
CA	SHUMWAY, NORMAN D.	R	14		Y			
CA	THOMAS, WILLIAM M.	R	20		Y			
CA	WILSON, PETE	R	0					
CO	CAMPBELL, BEN	D	3					
CO	SCHROEDER, PATRICIA	D	1	Y				
CO	SKAGGS, DAVID E.	D	2	Y				
CO	WIRTH, TIMOTHY E.	D	0					
CO	ARMSTRONG, WILLIAM L.	R	0					
CO	BROWN, HANK	R	4					
CO	HEFLEY, JOEL	R	5					
CO	SCHAEFER, DANIEL	R	6		Y			
CT	DODD, CHRISTOPHER J.	D	0					
CT	GEJDENSON, SAMUEL	D	2					
CT	KENNELLY, BARBARA BAILEY	D	1					
CT	MORRISON, BRUCE A.	D	3	Y				
CT	JOHNSON, NANCY L.	R	6					
CT	MCKINNEY, STEWART B.	R	4					
CT	ROWLAND, JOHN G.	R	5					
CT	WEICKER, LOWELL P. JR.	R	0					
DE	BIDEN, JOSEPH R. JR.	D	0					
DE	CARPER, THOMAS R.	D	0					
DE	ROTH, WILLIAM V. JR.	R	0					Y
FL	BENNETT, CHARLES E.	D	3					
FL	CHAPPELL, BILL JR.	D	4		Y			
FL	CHILES, LAWTON	D	0					
FL	FASCELL, DANTE B.	D	19	Y				
FL	GIBBONS, SAM M.	D	7		Y			
FL	GRAHAM, BOB	D	0					
FL	GRANT, BILL	D	2					
FL	HUTTO, EARL	D	1					
FL	LEHMAN, WILLIAM	D	17	Y				
FL	MACKAY, K.H. (BUDDY)	D	6					

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STATE	MEMBER NAME	PARTY	DISTRICT	H.R. 39	H.R. 1082	H.R. 3601	S-1217	S. 1804
FL	MICA, DANIEL A.	D	14					
FL	NELSON, BILL	D	11					
FL	PEPPER, CLAUDE	D	18					
FL	SMITH, LAWRENCE J.	D	16	Y				
FL	BILIRAKIS, MICHAEL	R	9		Y			
FL	IRELAND, ANDY	R	10					
FL	LEWIS, TOM	R	12		Y			
FL	MACK, CONNIE III	R	13		Y			
FL	MCCOLLOM, BILL	R	5		Y			
FL	SHAW, CLAY E. JR.	R	15		Y			
FL	YOUNG, BILL C.W.	R	8		Y			
GA	BARNARD, D. DOUGLAS JR.	D	10					
GA	DARDEN, GEORGE W. (BUDDY)	D	0					
GA	FOWLER JR., WYCHE	D	0					
GA	HATCHER, CHARLES F.	D	2					
GA	JENKINS, EDGAR L.	D	9		Y			
GA	LEWIS, JOHN	D	5	Y				
GA	NUNN, SAM	D	0					
GA	RAY, RICHARD	D	3					
GA	ROWLAND, J. ROY	D	8					
GA	THOMAS, ROBERT LINDSAY	D	1			Y		
GA	GINGRICH, NEWT	R	6					
GA	SWINDALL, PATRICK L.	R	4					
GM	BLAZ, BEN GARRIDO	R	0		Y			
HI	AKAKA, DANIEL K.	D	2		Y			
HI	INOUYE, DANIEL K.	D	0					
HI	MATSUNAGA, SPARK M.	D	0					
HI	SAIKI, PATRICIA	R	1					
IA	HARKIN, TOM	D	0					Y
IA	NAGLE, DAVID R.	D	3					
IA	SMITH, NEAL	D	4					
IA	GRANDY, FRED R.	R	6		Y			
IA	GRASSLEY, CHARLES E.	R	0					
IA	LEACH, JIM	R	1					
IA	LIGHTFOOT, JIM ROSS	R	5		Y			
IA	TAUKE, THOMAS J.	R	2					
ID	CRAIG, LARRY E.	R	1		Y			
ID	McCLURE, JAMES A.	R	0					
ID	STALLINGS, RICHARD	R	2					
ID	SYMMS, STEVEN D.	R	0				Y	
IL	ANNUNZIO, FRANK	D	11					
IL	COLLINS, CARDISS	D	7					
IL	DIXON, ALAN J.	D	0					
IL	DURBIN, RICHARD J.	D	20	Y				
IL	EVANS, LANE	D	17	Y				
IL	GRAY, KENNETH J.	D	22		Y			
IL	HAYES, CHARLES	D	1	Y				
IL	LIPINSKI, WILLIAM O.	D	5	Y				
IL	PRICE, MELVIN	D	21	Y				
IL	ROSTENKOWSKI, DAN	D	8					
IL	RUSSO, MARTY	D	3					

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STATE	MEMBER NAME	PARTY	DISTRICT	H.R. 39	H.R. 1082	H.R. 3601	S-1217	S. 1804
IL	SAVAGE, GUS	D	2					
IL	SIMON, PAUL	D	0					Y
IL	YATES, SIDNEY R.	D	9	Y				
IL	BRUCE, TERRY L.	R	19					
IL	CRANE, PHILIP M.	R	12		Y			
IL	DAVIS, JACK	R	4		Y			
IL	FAWELL, HARRIS W.	R	13					
IL	HASTERT, DENNIS	R	14		Y			
IL	HYDE, HENRY J.	R	6		Y			
IL	MADIGAN, EDWARD R.	R	15		Y			
IL	MARTIN, LYNN M.	R	16					
IL	MICHEL, ROBERT H.	R	18		Y			
IL	PORTER, JOHN EDWARD	R	10					
IN	HAMILTON, LEE H.	D	9					
IN	JACOBS, ANDREW JR.	D	10	Y				
IN	JONTZ, JIM	D	5	Y				
IN	MCCLOSKEY, FRANK	D	8					
IN	SHARP, PHILIP R.	D	2					
IN	VISCLOSKY, PETER	D	1					
IN	BURTON, DAN	R	6		Y			
IN	COATS, DANIEL R.	R	4		Y			
IN	HILER, JOHN	R	3		Y			
IN	LUGAR, RICHARD G.	R	0					
IN	MYERS, JOHN T.	R	7		Y			
IN	QUAYLE, DAN	R	0					
KS	GLICKMAN, DAN	D	4					
KS	SLATTERY, JIM	D	2					
KS	DOLE, ROBERT	R	0					
KS	KASSEBAUM, NANCY LANDON	R	0					
KS	MEYERS, JAN	R	3					
KS	ROBERTS, PAT	R	1		Y			
KS	WHITTAKER, ROBERT	R	5		Y			
KY	FORD, WENDELL H.	D	0					
KY	HUBBARD, CARROLL JR.	D	1		Y			
KY	MAZZOLI, ROMANO L.	D	3					
KY	NATCHER, WILLIAM H.	D	2					
KY	PERKINS, CARL C. (CHRIS)	D	7					
KY	BUNNING, JIM	R	4		Y			
KY	HOPKINS, LARRY J.	R	6		Y			
KY	MCCONNELL, MITCH	R	0					
KY	ROGERS, HAROLD	R	5		Y			
LA	BOGGS, CORINNE C (LINDY)	D	2		Y			
LA	BREAUX, JOHN B.	D	3					
LA	HAYES, JIMMY	D	7		Y			
LA	HUCKABY, THOMAS JERRY	D	5		Y			
LA	JOHNSTON, J. BENNETT	D	0					
LA	ROEMER, BUDDY	D	4					
LA	TAUZIN, W. J. (BILLY)	D	3		Y			
LA	BAKER, RICHARD	R	6		Y			
LA	HOLLOWAY, CLYDE	R	8		Y			
LA	LIVINGSTON, ROBERT L.	R	1					

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STATE	MEMBER NAME	PARTY	DISTRICT	H.R. 39	H.R. 1082	H.R. 3601	S-1217	S. 1804
MA	ATKINS, CHESTER G.	D	5	Y				
MA	BOLAND, EDWARD P.	D	2					
MA	DONNELLY, BRIAN J.	D	11					
MA	EARLY, JOSEPH D.	D	3					
MA	FRANK, BARNEY	D	4	Y				
MA	KENNEDY, EDWARD M.	D	0					
MA	KENNEDY II, JOSEPH P.	D	8					
MA	KERRY, JOHN	D	0					
MA	MARKEY, EDWARD J.	D	7	Y				
MA	MAVROULES, NICHOLAS	D	6					
MA	MOAKLEY, JOHN JOSEPH	D	9	Y				
MA	STUDDS, GERRY E.	D	10					
MA	CONTE, SILVIO O.	R	1					
MD	BYRON, BEVERLY B.	D	6					
MD	CARDIN, BENJAMIN L.	D	3					
MD	DYSON, ROY	D	1		Y			
MD	HOYER, STENY H.	D	5					
MD	MCMILLEN, THOMAS	D	4					
MD	MIKULSKI, BARBARA A.	D	0					
MD	MFUME, KWEISI	D	7	Y				
MD	SARBANES, PAUL S.	D	0					
MD	BENTLEY, HELEN DELICH	R	2		Y			
MD	MORELLA, CONSTANCE A.	R	8	Y				
ME	BRENNAN, JOSEPH E.	D	1					
ME	MITCHELL, GEORGE J.	D	0					
ME	COHEN, WILLIAM S.	R	0					
ME	SNOWE, OLYMPIA J.	R	2					
MI	BONIOR, DAVID E.	D	12	Y				
MI	CARR, M. ROBERT	D	6					
MI	CONYERS, JOHN JR.	D	1	Y				
MI	CROCKETT, GEORGE W. JR.	D	13	Y				
MI	DINGELL, JOHN D.	D	16			Y		
MI	FORD, WILLIAM D.	D	15					
MI	HERTEL, DENNIS M.	D	14					
MI	KILDEE, DALE E.	D	7	Y				
MI	LEVIN, CARL M.	D	0					
MI	LEVIN, SANDER	D	17					
MI	RIEGLE, DONALD W. JR.	D	0					
MI	TRAXLER, BOB	D	8					
MI	WOLPE, HOWARD E.	D	3	Y				
MI	BROOMFIELD, WILLIAM S.	R	18		Y			
MI	DAVIS, ROBERT W.	R	11		Y			
MI	HENRY, PAUL B.	R	5					
MI	PURSELL, CARL D.	R	2					
MI	SCHUETTE, BILL	R	10					
MI	UPTON, FRED	R	4					
MI	VANDER JAGT, GUY	R	9		Y			
MN	OBERSTAR, JAMES L.	D	8					
MN	PENNY, TIMOTHY J.	D	1	Y				
MN	SABO, MARTIN O.	D	5					
MN	SIKORSKI, GERRY	D	6	Y				

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MN	VENTO, BRUCE F.	D	4	Y				
MN	BOSCHWITZ, RUDY	R	0					
MN	DURENBERGER, DAVID F	R	0					Y
MN	FRENZEL, BILL	R	3					
MN	STANGELAND, ARLAN	R	7		Y			
MN	WEBER, VIN	R	2					
MO	CLAY, WILLIAM L.	D	1	Y				
MO	GEPHARDT, RICHARD A.	D	3					
MO	SKELTON, IKE	D	4					
MO	VOLKMER, HAROLD L.	D	9					
MO	WHEAT, ALAN	D	5					
MO	BOND, CHRISTOPHER S. "KIT"	R	0					
MO	BUECHNER, JACK	R	2					
MO	COLEMAN, E. THOMAS	R	6					
MO	DANFORTH, JOHN C.	R	0					
MO	EMERSON, BILL	R	8		Y			
MO	TAYLOR, GENE	R	7		Y			
MS	DOWDY, WAYNE	D	4					
MS	ESPY, MIKE	D	2					
MS	MONTGOMERY, G.V. (SONNY)	D	3		Y			
MS	STENNIS, JOHN C.	D	0					
MS	WHITTEN, JAMIE L.	D	1					
MS	COCHRAN, THAD	R	0				Y	
MS	LOTT, TRENT	R	5		Y			
MT	BAUCUS, MAX	D	0					
MT	MELCHER, JOHN	D	0					
MT	WILLIAMS, PAT	D	1	Y				
MT	MARLENEE, RON	R	2		Y			
NB	EXON, J. JAMES	D	0					
NB	BEREUTER, DOUGLAS K.	R	1		Y			
NB	DAUB, HAL	R	2		Y			
NB	SMITH, VIRGINIA	R	3		Y			
NB	KARNES, DAVID	R	0					
NC	CLARKE, JAMES MCCLURE	D	11	Y				
NC	HEFNER, W.G. (BILL)	D	8		Y			
NC	JONES, WALTER B.	D	1			Y		
NC	LANCASTER, MARTIN	D	3					
NC	NEAL, STEPHEN L.	D	5	Y				
NC	PRICE, DAVID E.	D	4	Y				
NC	ROSE, CHARLES	D	7	Y				
NC	SANFORD, TERRY	D	0					
NC	VALENTINE, I.T. JR.	D	2					
NC	BALLENGER, CASS	R	10		Y			
NC	COBLE, HOWARD	R	6		Y			
NC	HELMS, JESSE	R	0				Y	
NC	MCMILLAN, J. ALEX	R	9		Y			
ND	BURDICK, QUENTIN N.	D	0					
ND	CONRAD, KENT	D	0					
ND	DORGAN, BYRON L.	D	0					
NH	GREGG, JUDD	R	2		Y			
NH	HUMPHREY, GORDON J.	R	0					

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NH	RUDMAN, WARREN	R	0					
NH	SMITH, ROBERT C.	R	1					
NJ	BRADLEY, BILL	D	0					Y
NJ	DWYER, BERNARD J.	D	6	Y				
NJ	FLORIO, JAMES J.	D	1	Y				
NJ	GUARINI, FRANK J.	D	14					
NJ	HOWARD, JAMES J.	D	3	Y				
NJ	HUGHES, WILLIAM J.	D	2					
NJ	LAUTENBERG, FRANK R.	D	0					
NJ	RODINO, PETER W. JR.	D	10	Y				
NJ	ROE, ROBERT A.	D	8					
NJ	TORRICELLI, ROBERT G.	D	9					
NJ	COURTER, JAMES A.	R	12					
NJ	GALLO, DEAN A.	R	11					
NJ	RINALDO, MATTHEW J.	R	7	Y				
NJ	ROUKEMA, MARGE	R	5					
NJ	SAXTON, H. JAMES	R	13		Y			
NJ	SMITH, CHRISTOPHER H.	R	4					
NM	BINGAMAN, JEFF	D	0					
NM	RICHARDSON, BILL	D	3					
NM	DOMENICI, PETE V.	R	0					
NM	LUJAN, MANUEL JR.	R	1		Y			
NM	SKEEN, JOE	R	2		Y			
NV	BILBRAY, JAMES A.	D	1					
NV	REID, HARRY	D	0					
NV	HECHT, CHIC	R	0					
NV	VUCANOVICH, BARBARA F.	R	2		Y			
NY	ACKERMAN, GARY	D	7	Y				
NY	BIAGGI, MARIO	D	19		Y			
NY	DOWNEY, THOMAS J.	D	2	Y				
NY	FLAKE, FLOYD H.	D	6	Y				
NY	GARCIA, ROBERT	D	18	Y	Y			
NY	HOCHBRUECKNER, GEORGE J.	D	1					
NY	LAFALCE, JOHN J.	D	32					
NY	MANTON, THOMAS J.	D	9					
NY	MCHUGH, MATTHEW F.	D	28					
NY	MOYNIHAN, DANIEL P.	D	0					
NY	MRAZEK, ROBERT J.	D	3	Y				
NY	NOWAK, HENRY J.	D	33					
NY	OWENS, MAJOR R.	D	12	Y				
NY	RANGEL, CHARLES B.	D	16	Y				
NY	SCHEUER, JAMES H.	D	8	Y				
NY	SCHUMER, CHARLES E.	D	10					
NY	SLAUGHTER, LOUISE M.	D	30	Y				
NY	SOLARZ, STEPHEN J.	D	13	Y				
NY	STRATTON, SAMUEL S.	D	23		Y			
NY	TOWNS, EDOLPHUS	D	11	Y				
NY	WEISS, THEODORE S.	D	17	Y				
NY	BOEHLERT, SHERWOOD L.	R	25	Y				
NY	D'AMATO, ALFONSE M.	R	0					
NY	DIO GUARDI, JOSEPH	R	20					

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NY	FISH, HAMILTON JR.	R	21	Y				
NY	GILMAN, BENJAMIN A.	R	22					
NY	GREEN, S. WILLIAM	R	15	Y				
NY	HORTON, FRANK	R	29					
NY	HOUGHTON JR., AMORY	R	34		Y			
NY	KEMP, JACK F.	R	31		Y			
NY	LENT, NORMAN F.	R	4					
NY	MARTIN, DAVID O'B.	R	26		Y			
NY	MCGRATH, RAYMOND J.	R	5					
NY	MOLINARI, GUY V.	R	14		Y			
NY	SOLOMON, GERALD B.H.	R	24		Y			
NY	WORTLEY, GEORGE	R	27	Y				
OH	APPLEGATE, DOUGLAS	D	18					
OH	ECKART, DENNIS E.	D	11					
OH	FEIGHAN, EDWARD F.	D	19					
OH	GLENN, JOHN	D	0					
OH	HALL, TONY P.	D	3					
OH	KAPTUR, MARCY	D	9	Y				
OH	LUKEN, THOMAS A.	D	1	Y				
OH	METZENBAUM, HOWARD M.	D	0					Y
OH	OAKAR, MARY ROSE	D	20					
OH	PEASE, DONALD J.	D	13					
OH	SAWYER, TOM	D	14	Y				
OH	STOKES, LOUIS	D	21					
OH	DEWINE, MICHAEL	R	7					
OH	GRADISON, WILLIS D. JR.	R	2					
OH	KASICH, JOHN R.	R	12		Y			
OH	LATTA, DELBERT L.	R	5		Y			
OH	LUKENS, DONALD E.	R	8		Y			
OH	MCEWEN, BOB	R	6		Y			
OH	MILLER, CLARENCE E.	R	10		Y			
OH	OXLEY, MICHAEL	R	4		Y			
OH	REGULA, RALPH S.	R	16					
OH	TRAFICANT JR., JAMES A.	R	17					
OH	WYLIE, CHALMERS P.	R	15		Y			
OK	BOREN, DAVID L.	D	0					
OK	ENGLISH, GLENN	D	6		Y			
OK	MCCURDY, DAVE	D	4					
OK	SYNAR, MICHAEL L.	D	2					
OK	WATKINS, WESLEY W.	D	3		Y			
OK	EDWARDS, MICKEY	R	5		Y			
OK	INHOFE, JAMES M.	R	1		Y			
OK	NICKLES, DON	R	0				Y	
OR	AUCOIN, LES	D	1					
OR	DEFAZIO, PETER A.	D	4	Y				
OR	WYDEN, RON	D	3					
OR	HATFIELD, MARK O.	R	0					
OR	PACKWOOD, BOB	R	0					
OR	SMITH, ROBERT F.	R	2		Y			
OR	SMITH, DENNY	R	5		Y			
PA	BORSKI, ROBERT A. JR.	D	3					

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PA	COYNE, WILLIAM J.	D	14					
PA	FOGLIETTA, THOMAS M.	D	1					
PA	GAYDOS, JOSEPH M.	D	20					
PA	GRAY, WILLIAM H., III	D	2					
PA	KANJORSKI, PAUL E.	D	11					
PA	KOLTER, JOSEPH P.	D	4	Y				
PA	KOSTMAYER, PETER H.	D	8					
PA	MURPHY, AUSTIN J.	D	22		Y			
PA	MURTHA, JOHN P.	D	12					
PA	WALGREN, DOUG	D	18					
PA	YATRON, GUS	D	6					
PA	CLINGER, WILLIAM F. JR.	R	23					
PA	COUGHLIN, LAWRENCE	R	13					
PA	GEKAS, GEORGE W.	R	17		Y			
PA	GOODLING, WILLIAM F.	R	19		Y			
PA	HEINZ, H. JOHN III	R	0					
PA	MCDADE, JOSEPH M.	R	10		Y			
PA	RIDGE, THOMAS J.	R	21					
PA	RITTER, DON	R	15		Y			
PA	SCHULZE, RICHARD T.	R	5		Y			
PA	SHUSTER, (BUD) E.G.	R	9		Y			
PA	SPECTER, ARLEN	R	0					
PA	WALKER, ROBERT S.	R	16		Y			
PA	WELDON, CURT	R	7					
PR	FUSTER, JAIME B.	D	0	Y				
RI	PELL, CLAIBORNE	D	0					
RI	ST GERMAIN, FERNAND J.	D	1					
RI	CHAFEE, JOHN H.	R	0					Y
RI	SCHNEIDER, CLAUDINE	R	2					
SC	DERRICK, BUTLER	D	3					
SC	HOLLINGS, ERNEST F.	D	0					
SC	PATTERSON, ELIZABETH J.	D	4					
SC	SPRATT, JOHN M.	D	5	Y				
SC	TALLON, ROBERT M. JR.	D	6					
SC	RAVENEL JR., ARTHUR	R	1	Y				
SC	SPENCE, FLOYD	R	2					
SC	THURMOND, STROM	R	0					
SD	DASCHLE, THOMAS A.	D	0					
SD	JOHNSON, TIM	D	0					
SD	PRESSLER, LARRY	R	0					
TN	BONER, WILLIAM H.	D	5					
TN	COOPER, JIM	D	4	Y				
TN	FORD, HAROLD E.	D	9	Y				
TN	GORDON, BART	D	6					
TN	GORE, ALBERT	D	0					
TN	JONES, ED	D	8					
TN	LLOYD, MARILYN	D	3		Y			
TN	SASSER, JAMES R.	D	0					
TN	DUNCAN, JOHN J.	R	2		Y			
TN	QUILLEN, JAMES H.	R	1		Y			
TN	SUNDQUIST, DON	R	7		Y			

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TX	ANDREWS, MICHAEL A.	D	25		Y			
TX	BENTSEN, LLOYD M.	D	0					
TX	BROOKS, JACK	D	9					
TX	BRYANT, JOHN	D	5					
TX	BUSTAMANTE, ALBERT G.	D	23					
TX	CHAPMAN, JIM	D	1		Y			
TX	COLEMAN, RONALD D.	D	16					
TX	DE LA GARZA, E.	D	15					
TX	FROST, J. MARTIN	D	24					
TX	GONZALEZ, HENRY B.	D	20					
TX	HALL, RALPH M.	D	4		Y			
TX	LEATH, J. MARVIN	D	11					
TX	LELAND, MICKEY	D	18		Y			
TX	ORTIZ, SOLOMON P.	D	27					
TX	PICKLE, J.J.	D	10					
TX	STENHOLM, CHARLES W.	D	17		Y			
TX	WILSON, CHARLES	D	2		Y			
TX	WRIGHT, JAMES C. JR.	D	12					
TX	ARCHER, W.R. (BILL)	R	7		Y			
TX	ARMEY, RICHARD	R	26		Y			
TX	BARTLETT, STEVE	R	3		Y			
TX	BARTON, JOE	R	6		Y			
TX	BOULTER, BEAU	R	13		Y			
TX	COMBEST, LARRY	R	19		Y			
TX	DE LAY, TOM	R	22		Y			
TX	FIELDS, JACK	R	8		Y			
TX	GRAMM, PHIL	R	0				Y	
TX	SMITH, LAMAR	R	21		Y			
TX	SWEENEY, MAC	R	14		Y			
UT	OWENS, WAYNE	D	2	Y				
UT	GARN, JAKE	R	0				Y	
UT	HANSEN, JAMES V.	R	1		Y			
UT	HATCH, ORRIN G.	R	0					
UT	NIELSON, HOWARD C.	R	3		Y			
VA	BOUCHER, FREDERICK C.	D	9					
VA	DANIEL, W. C. (DAN)	D	5		Y			
VA	OLIN, JAMES R.	D	6					
VA	PICKETT, OWEN B.	D	2					
VA	SISISKY, NORMAN	D	4					
VA	BATEMAN, HERBERT H.	R	1					
VA	BLILEY, THOMAS J. JR.	R	3		Y			
VA	PARRIS, STANFORD E.	R	8		Y			
VA	SLAUGHTER, D. FRENCH	R	7		Y			
VA	TRIBLE, PAUL S. JR.	R	0					
VA	WARNER, JOHN W.	R	0					
VA	WOLF, FRANK R.	R	10					
VI	De LUGO, RON	D	0	Y				
VT	LEAHY, PATRICK J.	D	0					
VT	JEFFORDS, JAMES M.	R	0	Y				
VT	STAFFORD, ROBERT T.	R	0					
WA	ADAMS, BROCK	D	0					

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WA	BONKER, DON	D	3					
WA	DICKS, NORMAN D.	D	6					
WA	FOLEY, THOMAS S.	D	5					
WA	LOWRY, MIKE	D	7					
WA	SWIFT, AL	D	2					
WA	CHANDLER, RODNEY	R	8					
WA	EVANS, DAN J.	R	0					
WA	MILLER, JOHN	R	1					
WA	MORRISON, SID	R	4					
WI	ASPIN, LES	D	1	Y				
WI	KASTENMEIER, ROBERT W.	D	2	Y				
WI	KLECZKA, GERALD	D	4					
WI	MOODY, JIM	D	5	Y				
WI	OBEY, DAVID R.	D	7					
WI	PROXMIRE, WILLIAM	D	0					
WI	GUNDERSON, STEVEN	R	3					
WI	KASTEN, ROBERT W. JR.	R	0					
WI	PETRI, THOMAS	R	6					
WI	ROTH, TOBY A.	R	8					
WI	SENSENBRENNER, J.F. JR.	R	9					
WV	BYRD, ROBERT C.	D	0					
WV	MOLLOHAN, ALAN B.	D	1					
WV	RAHALL, NICK J. II	D	4					
WV	ROCKEFELLER, JAY	D	0					
WV	STAGGERS, HARLEY O. JR.	D	2					
WV	WISE, ROBERT E. JR.	D	3					
WY	CHENEY, RICHARD B.	R	0		Y			
WY	SIMPSON, ALAN K.	R	0					
WY	WALLOP, MALCOLM	R	0					

11/17 Katz / Cotten / Navarre / Laschever

8(g) - Senate Approp'ns FY11 - $340m

Udall - Lowry / Jones - wrote Yates - don't want Senate language
orig 8(g) was done by auth'g cts - not approp'ns -

→ Katz - Issue paper Stevens attribute will tell - no clear schedule
for exh, conf c cts hv postponed -

high seas interception - Henry Mitchell -

Gap's might want a waiver on Mar Mammal Protect effort
4:30 here - also mgt'n of the agmt by State Dept.

drift nets -

Mitchell -

CZMA - amdmts -

Tongass - $ / cut / budget process -
Ct. hrgs in AK in May?
cancel long-term contr -
add'l W'ness?
approp'ns - full funding in Senate - conf'c ct. -
resolution - delegation needs to know AK pos'n
divergent Alas represent'n in DC. -

ANWR - hvmit hd anyone but Alaska because lack of a resol'n useful to hv a resol'n but not as valuable nat - land trades -

maritime unions are active, others are on the sidelines - might actually oppose opening soon:

Dingell - NPRA → Refuge -

nature of Pet 4 explor'n - govt sponsored? comp'v lcg after Husky went out + did explor'n on contract -

→ conceptual critique by Katz's ofc - conf'l

Jones' ofc. - willing to work on the bill -

→ who's testifying - ASRC / Kaktovik - Hugh Fleischer -

→ Van Ness did a compromise on caribou wh. may be presid by ASRC.

Alaska State Legislature
Senate

Official Business

P.O. BOX V
State Capitol
Juneau, Alaska 99811

January 26, 1987

Gov. Steve Cowper
State Capitol Building
Juneau, Alaska 99811

Dear Governor Cowper,

Sat. 24th, breakfast with Hensley, Kerttula and Stevens in attendance.

When meeting with Sen. Stevens, I expressed my concern over the state's 3rd party interest in ANWR being eroded with land claims exchanges. We have the example of the "gates of the arctic" trade for the Kaktovik 100,000 acres with sub-surface rights, the CIRI pressure in D.C. and Koniag's efforts.

Ted said native land exchanges would expedite drilling ..pressure was "on Interior"...he did not argue when I said we (the state) should have the same exchange rights with state lands and we had received little federal cooperation on exchange questions. But he stated "we had little of value to exchange with feds" and that there was a serious question about whether we even had 90% of ANWR royalty that, in fact, he doubted that the law intended or would give the state 90% royalty....and if it did the feds would take it anyway!

I believe we must research the law and all federal intent in this matter.

I am very worried that the Senator has made up his mind and it is really against the positic I feel elected to represent on both the 90% issue and state land exchanges for key ANWR areas.

Sincerely,

/s/

Jay Kerttula
Chairman,
Judiciay Comm.

JK/jck

cc: Members of Senate Judiciary

Sam:

Various ANWR issues; 1/22/87

1. 7(i)

Yes, ASRC (maybe others too) is saying that it doesn't have to share subsurface revenues from trade lands in ANWR with other ANCSA corporations because these aren't lands that ASRC has selected and received under ANCSA. So ASRC cintends that the lands aren't subject to 7(i). Other corporations are said by DNR to have taken the issue to arbitration in Interior, though no one in DNR knows the details. I'll try to find out more.

2. Legality of reducing 90%

The AG's Office has prepared a couple of memos saying that it's question ble whether the State could successfully challenge a federal reformulation of o/g revenue sharing in refuges. But there are three grounds that may support a challenge: a) the statehood compact; b) discriminatory effect (i.e. other states get better treatment); and c) policy considerations -- changing the formula would amount to a reversal of 65-year federal policies regarding long-term retention of public domain lands with benefits for states in the form of substitutions for property taxes.

3. 1002 study comments

I am getting copies of the agency comments on the 1002 draft, if you'd be interested. The State's position on major issues will be decided at a meeting of the Resources Cabinet next Thursday. The major issues are a) whether to support Altv. A or B (drilling in the core calving area or not); b) whether to establish a three-mile insect relief buffer on the coast; and c) whether to buffer streams with a 3/4 mile corridor, or instead use the standard 500/100' stream buffer for most state lands depending on the size of the stream and the resource values.

4. Reclamation funding

I don't have any figures yet, but do now know that Alaska has always been excepted from the Reclamation program, so has never benefited from it.

5. Compass/opinion piece

I have drafted one, am not happy with it, and will be reworking it to send out when your resolution goes in. I need more info on some of these topics.

6. Reactions to Sharman's report

The environmentalists say it's the most balanced state position they've seen yet, but doesn't recognize the other environmental issues besides caribou. So I've asked the Lobby to supply some background on other issues that you could mention in the resolution if you want to. Yesterday Shultz's aide Dave Stancliff was trashing the report as being too biased. (!!!) Until the greenies are ticked off too, I guess we won't have achieved a balance.

7. Alaska hire

No language from Mano yet; I'll call tomorrow.

8. TAPS issues

I got a copy of the TAPS tariff projections through 2011; after 2003 the tariff would be expected to rise over $10/bbl (up to $93.80/bbl in 2011) because of reduced throughput with the decline of Prudhoe/North Slope production. This would of course be affected by increased production elsewhere on the Slope, especially if there's a lot of oil in ANWR.

1/19 Gus re 92k / 17k / 3k

1983 exchange agmt.

ANCSA precluded ASRC fr. subsfc slctns in NPRA + ANWR

in lieu ASRC got to take + amt outside of NPRA + ANWR

→ Chandler Lk / Kurupa slctns (inc in Gates)

after ANILCA NPS wanted to clear out inholdings, ASRC wanted > favorable O+G subsfc

1431(c) ANILCA allowed ASRC into NPRA + ANWR, under vlg slctns only, w/in 5 yrs of the date of comm'l dev't; NPRA? only dev't - some wells = dev't; in 1983 NPS + ASRC negd, ASRC exercised its 1431(c) rights; gave up thr. 100k subsfc in Gates for 92k of KIC subsfc.

Did state ltr participate? didn't know about it, but ALUC got notice, state did review it; no stopping it bec of 1431(c) - but it happened under exchange vs. the dev't window solidified land ownership in ANWR, so ASRC isn't floating around any more;

KIC well completed later

then ASRC still had option on more acreage - cd only take subsfc under vlg lands, Kaktovik had a lot of overslctns, took land in a twp. in June 86 just 50. of ex'g ownership; ASRC has followed KIC there too. 17k conveyed, 3k in litigation - state opposed Jays (navigability) Aug. 86