

*West Coast
Oil Ports
Inquiry*

*Andrew R. Thompson
Commissioner*

*Statement
of
Proceedings*



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Review of Proceedings

I. ISSUES FACING THE INQUIRY

My Terms of Reference authorize me to inquire into the environmental, social and navigational safety aspects of oil port proposals and the general public concerns about oil tanker traffic on the west coast of Canada. These are not inconsequential matters. I am not to prepare a mere catalogue of concerns or an etiquette of environmental "do's and don'ts." Rather, this Inquiry involves what many residents of British Columbia see as life and death issues. These residents are not extremists. A great many ordinary citizens of this province are apprehensive. So far fears about oil spills on this coast are based mostly on fictional scenarios, many of which will no doubt prove to be exaggerated when all the evidence is heard. These fears are nonetheless real. Moreover, I cannot now set these concerns at rest, because I have not been satisfied thus far that a major oil spill in British Columbia coastal waters is unlikely or without the potential for catastrophic consequences.

Because these concerns about a major oil spill cannot be dismissed, this Inquiry is not merely about the mitigation of adverse environmental, social and navigational safety impacts -- it is about whether an oil port should be built at all!

Nor can this Inquiry proceed with the detachment of a scientific symposium. Concern about oil spills in Canada dates back to the Arrow disaster in Chedabucto Bay, Nova Scotia in 1970 and to the oil spill off the coast of Santa Barbara, California in 1969. British Columbians soon became more aware of the oil spill threat when David Anderson, then Member of Parliament for Esquimalt-Saanich

and Chairman of a Special House of Commons Committee on Environment Protection, held hearings into west coast tanker traffic. British Columbians shared vicariously in his triumph as one of the litigants when the British Columbia Wildlife Federation, which he represented, joined environmental groups in the United States to stop the Trans-Alaska crude oil pipeline. The triumph was only temporary. Congress finally overrode the objections of environmentalists and the pipeline was built, bringing regular oil tanker traffic into British Columbia waters for the first time. But public anxieties have not been legislated away. Instead, polarization about the issue of a west coast oil port has increased over the years.

Despite my familiarity with this history of determined opposition to tanker traffic, I have been surprised to find it so universal. In my preliminary meetings throughout the province and in the formal and community hearings of the Inquiry held to date, the oil port proposals have inspired few advocates other than the proponent companies themselves.

It alarms me that this opposition is so vehement. Whether they be motel operators, sport fishermen, shore workers, naturalists or just plain citizens, people are indignantly outspoken. Some have been pessimistic; they think that what the oil companies want, they get. But most believe that there is still time for a reasoned decision on behalf of Canadian interests. Some have spoken about the contradiction between their dependence on petroleum products to heat their homes and power their cars, on one hand, and their opposition to an oil port on the other; but they insist on their right to oppose the port until it is shown that the risks are within reasonable limits and that there are no safer ways to meet energy needs.

It was this dousing in a pool of hostility that led me to state early in the hearings that those proposing oil ports and pipelines would have to demonstrate a compelling need for them. Commercial convenience would not suffice. If those who would benefit from a port and pipeline expected to win the approval of British Columbians, they would have to make a convincing case that their need for imported crude oil outweighed the oil spill risks.

A unique aspect of the west coast oil port proposals is that all the benefits are seen to flow outside the province. Only the risks remain. Even the expert witnesses who were to testify on behalf of the government of British Columbia foresaw major detriments to the province in terms of crude oil pricing and allocation policies. These fears are not without substance. Certainly, the crude oil which would be imported through Kitimat is not required for British Columbia. Nor do the proponent companies include any Canadian needs in their projections. At start-up, all of the oil would go to refineries in the United States.

This split between those who gain and those who lose is a matter of deep concern. Should Ottawa allow a port to be built at Kitimat without a full and informed appreciation of how grave the risk is perceived to be in British Columbia, this indifference will be interpreted as another example of arrogance on the part of central Canada.

British Columbians are not trying to limit alternatives for transporting oil to markets in other parts of Canada, or even the United States. That is not the focus of their concern. Rather, they want the importance of Canada's Pacific Coast and marine resources recognized and taken into account. People see no reason why "national"

interests should necessarily be considered more important than their "regional" ones.

If the final assessment, after all the experts have been heard, is that oil spill damage may be catastrophic, British Columbians will expect other Canadians to respect their right to say NO! After all, the citizens of the State of Washington have been allowed to say NO! to the proposal to expand the oil port facilities at Cherry Point.

These are the two fronts on which the question of a west coast oil port must be pursued. On both fronts the answer must be affirmative if the port is to be approved.

Are the risks of a west coast oil port and the attendant tanker traffic within manageable bounds?

Are west coast oil imports needed now as part of Canada's long term energy policy?

There is another and indeed more immediate issue. On a "business as usual" basis there is a growing oil tanker traffic down the west coast of British Columbia, through the Strait of Juan de Fuca and into the waters of the Strait of Georgia and Puget Sound. Together, crude oil and petroleum product shipments total over 1,100 transits per year. While much of this traffic comprises smaller coastal tankers, it also includes deepsea tankers carrying crude oil from Alaska and Indonesia. There are indications that this traffic poses imminent danger to the coast of British Columbia. This issue may be stated as follows: What steps should be taken to ensure safe regulation of the existing oil tanker traffic affecting Canada's west coast?

II. WHAT PEOPLE HAVE TOLD THE INQUIRY SO FAR

The Inquiry has heard evidence from individuals in five community hearings, at Namu, Mount Currie, Lillooet, Steveston and Sooke. Hearings planned for Prince Rupert, Kitimat, Terrace and other central and northern communities in January, February and March were postponed when I adjourned the Inquiry last December.

Local evidence is important because the aspirations, concerns and knowledge of people must be the foundation of public policy. Within the Inquiry, this evidence serves two distinct functions. First, people in the communities help me to identify questions and issues which are relevant to my Terms of Reference. Second, many community people are the source of special and expert information which is gathered and tested throughout the Inquiry and will ultimately contribute to my findings and recommendations. It should be noted that the issues discussed in this chapter are relevant and consequential; but the evidence on them is not yet complete or balanced, and I am not now drawing any conclusions with respect to them.

How Much Is Known?

This is a coastal region about which many people know a great deal. There are many who live or work very closely with the sea, the estuaries, the major river systems, and the marine resources which are found there. Many have made their own careful observations and studies based on years of working the coast; still others have collected wisdom passed down through many generations. I have already heard evidence of all these types in the community hearings. It covers a wide range of matters, and is

often a type of collective knowledge from the community, as well as individual statement.

Ironically, this same coastal region is seriously understudied in academic terms. Many scientific studies and surveys about this region have yet to be done. Our scientists know less than they could know about many of the questions we are asking now. These gaps in full knowledge include information on marine mammals, on many parts of the marine food chain, and about tides and currents and weather conditions in many parts of the region. Many experts will be telling the Inquiry that they are not able to answer questions with the degree of certainty which they would like.

Thus the Inquiry will be faced with many different kinds of knowledge, gained from very different sources. At times these differences will lead to common answers. But we know now that there will also be serious and vital questions on which disagreements will be stated. The general problem of deciding how much proof is required about resources, their importance, and their vulnerability to risks will be with us throughout the Inquiry.

In his evidence at Steveston, John Clark discussed this problem:

To the extent that modern science has provided us with new insight and understanding of our condition in the world, I think the most significant aspect of it is the indication that we know so little.

In terms of coming to grips with social impact, particularly long term..., I think you should listen very carefully to the type of evidence that individuals who live on the coast and who make their living on the coast give....

Coastal pilots are the wrong people to ask about bringing ships into restricted waters..., because when you pose such a question to them, you're in effect challenging their professional competence, and they are put in a position where they either have to deny their own competence, or they have to give an affirmative answer to the question, "Can we do it safely?" (Clark, vol.C5, p.733).

The Historical Demands Upon Us

People who have given evidence to the Inquiry have told me time and again that they think there are things which can and must be done to protect or enhance marine resources and to help those who harvest them. Certainly many fear that these things will go undone, and they have many past examples which support that concern. But that is not the same as fatalism. I have not sensed that people have surrendered their futures. Rather, they are calling the Inquiry -- and through it, the Government of Canada -- to account.

The nature of the historical moment presented by the oil port proposals was brought into perspective at the first community hearing held by the Inquiry at the fish camp at Namu.

Dr. Roy Carlson, an archaeologist from Simon Fraser University, told the Inquiry about a "dig" at Namu last summer. They uncovered earth layers which revealed much about the culture of the people who lived there during past ages. Fish bones were found at the oldest levels. Carbon dating techniques establish that these bones were discarded about 9,000 years ago. As he pointed out, our coastal fishing industry is an old one indeed.

This historical claim is a special one for Indian people throughout this region. On the coasts and along the major rivers, the Indian people of the Pacific watershed have developed their culture and communities on the basis of marine resources.

Mr. Commissioner, if I may be so bold as to state that Indians and fish are inseparable. This has been quite so throughout history. Traditionally, the fisheries resources formed the economic base of the Indians throughout the entire west coast.

Many religious rites were established and performed through the centuries with the first return of the sockeye salmon in the Fraser River, and in the Skeena and other larger rivers along the B.C. coast. All designed in appreciation to nature's bounteous goodness.

The same can be said also to the annual return of the huge herring schools, from which were harvested the herring roe and kelp, the traditional food of the Indian people in earlier times and the present period.

Besides this, the return of the oolichan fish in the Nass River, the Skeena, the Kitimat, the Owekino River in the Smith Sound area on the central coast, Kingcome Inlet and the Fraser River, also marked occasions for huge, colourful festivities, in which the Indian people performed the specific rites for the incoming first runs of the salmon.

The sea, rivers and lakes was their larder. They harvested their needs as required, and they preserved for future needs, the surplus of their requirements. They developed a very close spiritual relationship to all these resources, and to the total environment, and there were also many taboos established by the Indian people, and instilled into the minds of the younger generations with each successive generation, to safeguard the continuity of these resources of salmon.

Salmon were not to be molested or disturbed in their particular spawning areas. It was improper to make any humorous remarks or any spiteful comments about any form of sea life, for fear of

reprisals from nature. This was the custom among all the different tribal groups, throughout the entire west coast.

The culture of each individual group was an interpretation of their own separate environment. They learned to live with nature, and they lived in harmony, trying in every measure to safeguard -- to perpetuate the salmon fisheries resources, as well as the other marine resources that are found along the shores of the entire coast, in the waters as well. (Kelly, vol.16, p.2572-74).

The Indian people are not alone in sensing the rich history of settlements in this region. Obviously other settlements are very young in relation to the history of Indian settlements on the coast. But that history is still very meaningful and important to us all. Daphne Marlatt gave evidence at Steveston:

Steveston sits at the mouth of the largest single salmon river in North America. The Fraser River Delta, some 70 miles wide, has since its origin 9,000 years ago provided a wealth of food for all manner of creatures including man. One hundred years ago it was frequented every summer by coastal tribes who gathered berries and shot game in its lush grassland and thickets. White settlers were attracted by the fertility of its soil and by 1863 farming had begun on the south side of Lulu Island.

In 1887, Manoah Steves arrived from New Brunswick to set up dairy farming and ultimately give his name to this town. In that same year Gihei Kuno arrived from the poverty stricken fishing village of Mio in Wakayama prefecture, Japan. The first of a chain of Japanese immigrants who came to fish.

And thus, 90 years ago began that humanly complex use of soil and water which led to Steveston's remarkable growth as a cannery boom town....

History, when it speaks of vast time spans gives us the comfortable illusion that even if nations and the relations that obtain between them constantly change, the earth we live on is stable. We forget how quickly the wealth of 9,000 years can be not just consumed, as in the case of oil, but actually destroyed. (Marlatt, vol.C4, p.549-550).

Human Settlements In This Region

People have told me in all the community hearings that their community has fundamental links to the sea and the rivers. There is a sense throughout this region that the connection to the Pacific and its ecology is not only very old, but is the foundation upon which basic cultural patterns are still built.

At Namu, Cyril Carpenter made the point that the salmon population has maintained "the industry, the population, the economy and the socio-economic strength of the native people here for 9,000 years...." (Carpenter, vol.C1, p.110).

Edwin Neuman explained at Namu how some Indian people who work in the commercial fishery continue to build a life dependent on the sea: "Most Indian people in this area buy boats. I have four of my sons as crew members. I bought a job for my family, and this is what most Indian people have to do in these areas." (Neuman, vol.C1, p.100).

Harold Steves contends that a major dependence on fishing continues in the community of Steveston:

We have a long history in this community.... I've got photographs of what the fishing industry was like in those days, when the sailing ships came, when the native Indians and the white fishermen were fishing in open dories with sails.... This is the kind of community we've had.... But if we have a major disaster such as an oil spill...then it would be the final nail in the coffin of this community and we could witness the death of our community, and the way of life of the people in this community. (Steves, vol.C5, p.681-682).

I have been told that fishing and especially fishing for salmon continues to be a main basis for community well-being and life in interior Indian communities along our major rivers.

At Mount Currie, Veronica Bikadi explained this:

Ever since I was a little girl I can remember my people have always netted fish for survival. This was our way of life. All summer long we were busy putting away our fish for our winter use. My people never waste any part of the fish. Right from the head of the fish we make soup, we make soup out of any part of the fish, fish soup, roe, even when we dry the head the top of the skin part of the head we make soup out of that, we mix it with berries or whatever, it doesn't seem to matter what part of the fish it seems to give us a different soup. If we totalled all our canning we would never be able to buy all what we put away." (Bikadi, vol.C2, p.172).

At Sooke, on the Strait of Juan de Fuca, I was told about the several different ways that salmon has supported people in that area. Tom Sampson explained that Indian settlements began in the Sooke area, and were centred on the salmon rivers. (Sampson, vol.C7, p.1007-1009). Frank Gray talked about the commercial Fish Trap which was built in 1904 and was still employing about 60 people when it closed in 1959. (Gray, vol.C7, p.959-961).

Both commercial and sport fishing continue to be important in the economy of Sooke.

Much of the village economy depended directly or indirectly on the salmon catch.... Now the Sooke harbour is home to a fair sized west coast troller fleet, and to many families it is their only source of income. (Brooks, vol.C6, p.826).

There are six marinas in this area, and I would say two-thirds of the boats are trailored into the ramps. From Pedder Bay to Sheringham Light there would be 500 to 1000 boats fishing any fair fishing day.... Records over the years show this area as first place, according to salmon per boat, and anything that would cut down this figure would cause a loud protest, such as an oil spill. (Brooks, vol.C6, p.831).

The conservation and protection of salmon is significant enough to the people of Sooke that they have organized volunteers to clean logging slash from local salmon streams and to build a dam to store water for dry periods to provide the coho fry the necessary fresh water for their first year of life.

Interests In The Pacific Watershed

(i) the commercial fishery

It is necessary to hear extensive evidence on the scope and value of the commercial fishery. A general statement in this regard was given by Jack Nichol in the opening remarks of the United Fishermen and Allied Workers' Union to the Inquiry:

Today the B.C. fishing industry is a multi-million dollar modern industry, employing directly 25,000 people and indirectly thousands more. The total direct value of its production last year was some 250 million dollars and vast untapped potential exists as well. Moreover, it is a self-renewable source of protein for a world in which two-thirds of the inhabitants are starved. (Nichol, vol.3, p.422).

The significance to the general economy of the fishing industry was discussed by W. Jarvie at Steveston:

If the B.C. coastal fisheries were to be seriously damaged, the effect on the national economy would be considerable. To the B.C. economy it would be very serious. To Steveston and similar fishing communities up and down this coast it would be absolute disaster. (Jarvie, vol.C5, p.703).

The Shoreworkers Local of the UFAWU at Steveston provided an example of the jobs held in fishing communities. Those working in boat shops, net lofts, canneries, reduction plants, warehouses, fresh fish and cold storage plants number from 1,200 to 2,500 at different times of the year. Seventy-five percent of these members live in the Steveston-Richmond area. "Any major disruption of the wage earning capacity of this work force would have a disastrous effect on this community." (Jarvie, vol.C5, p.697).

The very small spill at Steveston in August, 1977, demonstrates the range of economic loss which could be caused by damage from oil. The spill caused a 48-hour closing of fishing for about 750 boats. Three days of work were lost for perhaps 2,000 shoreworkers. So far, there has been no compensation for this loss. (Niishi, vol.C4, p.525; Gill, vol.C5, p.694-695).

(ii) the native food fishery

We have heard that fish is essential to the native economy which involves harvesting food from the sea or rivers, saving food for the winter, sharing food with the elders, and trading food with people from other regions.

Although the formal hearings have not yet heard evidence quantifying the economic significance of food fish for native people, we have heard many statements from the

community hearings suggesting that salmon in particular is a major part of the native economic base.

Even today there are many Indians that rely on food fishing from the Sooke River system.... The average annual take is 34,000 pounds. Approximately 100 permits would be issued for a hundred families and it was something that carried them over a hard winter." (Brooks, vol.C6, p.826).

People also explained that they could not describe the importance of the fish in solely economic terms. Susan James is a member of the Lillooet Band and a social worker; she said we could not put a simple dollar figure on the fish people caught for their own use:

...a lot of those Indian people that go down to the rocks to fish, they use that fish, they need that fish for their survival...because when they fish in the summer, they're fishing for all year around and it affects their budget all year around. (James, vol.C3, p.400-401).

We have been told over and over that fish continues to be a key component of community values and life:

I think it's really a disgrace that they could come and ask us to try to tell you exactly how important that fishing is to us. It's important, yes, I have one freezer full of fish that I went all the way to Lillooet for.... I have three freezers, I have nine children but I'm not going to let my children go hungry.

I made 700 dried fish. You cannot come to my house and find only us in there. There's always 13 or 14. So you see, I need that fishing. It's not only food -- our people had ceremonies because they thought it was so important. (Williams, vol.C2, p.210-211).

Or:

...without this fish my people wouldn't be very much any more. It is not just the way we eat the fish, it is the whole process of living by the rivers and the lakes and taking these fish out with love and care and preserving them for the winter. (Ritchie, vol.C2, p.301).

The importance of the food fishery is acknowledged by the Government of Canada. By policy, it has a higher priority than both commercial and sport fishing. The food fishery occurs throughout the Pacific watershed, on the coast and up the rivers. Fish are taken in specific places at definite times of the year. It has been explained to the Inquiry that different people plan for and depend on specific salmon runs for their fish. Indian people furthest up the rivers are especially vulnerable to any damage to the stocks they depend on because there are no alternative runs to take. In assessing risks, the Inquiry must be concerned with the vulnerability to oil spills of specific salmon runs in various locations and at different times of the year.

(iii) recreation

People who live on the west coast of British Columbia rely heavily on the coast for many kinds of recreational activities. At Steveston, C. Stainsby, speaking for the Scientific Pollution and Environmental Control Society (SPEC), described some of the recreational uses made of the Fraser River estuary. These include boating, hunting, bird-watching, nature studies, walking, cycling, horse-back riding, beachcombing and viewing. (Stainsby, vol.C5, p.769-770). Sandra Bourque, of the Richmond Anti-Pollution Association, described the Richmond dike as one of the very few aesthetically pleasing recreational areas available to local residents. (Bourque, vol.C4, p.571-572).

At Sooke, Jean Robinson from the Sooke Region Historical Society described the recreational uses made of the west coast of Vancouver Island. She talked particularly about the beaches and the hiking trails. (vol.C6, p.808-815). John Brooke brought up the importance of sport fishing in the Sooke area. (vol.C6, p.832).

The effects of oil pollution on the recreational resources available to people on the coast are seen as very significant. Beaches and trails could be ruined (vol.C4, p.572), birds destroyed (vol.C5, p.746-748, 765; vol.C6, p.829), boats damaged (vol.C5, p.770), and fish runs depleted.

Flora Manion spoke at Sooke about the emotional impact which loss of recreational space would have:

Well, many people seem to go down to the beaches or to the water for sailing or swimming or sun-bathing, but it's a form of relaxation to me to escape many just daily frustrations and build-ups and what have you, because people today need some sort of an escape from the pressure of living.... So you head for the beach and when you get there, what do you think the reaction is going to be if we ever get to the beach and find nothing but gunk and gunk and dying creatures and flapping birds and whales upside down? It's just going to be an absolute horror, and what does that do to people who today don't seem to have ways of contending with the pressure. (Manion, vol.C7, p.1073-74).

The Vulnerability of Marine Resources

(i) estuaries

An estuary is an inlet where seawater is diluted by the inflow of fresh water. Estuaries are among the most productive life sustaining systems on the earth's surface. (vol.C4, p.528). "The estuary contains a very complex

ecological system comprised of a series of intricate inter-relationships between a multitude of species that exist there." (Stainsby, vol.C5, p.763-764). The aquatic environment of the estuary produces plankton, phytoplankton, zooplankton and other microscopic organisms which serve as the base of a marine food chain which feeds multitudes of higher animals -- migratory birds, waterfowl, larval invertebrates, juvenile fish, salmon fingerlings, and herring, among others. (vol.C5, p.602; 661; vol.C4, p.527-529). Certain species of salmon fingerlings stay in the estuaries for three to six months after they come down from spawning grounds and before they go out into the ocean. (vol.C5, p.658; vol.C4, p.529; vol.C5, p.603-605). Here they find food, are protected from larger predators, and adjust to different salinities and temperatures. (vol.C4, p.529; vol.C1, p.16). Herring spawn in the lower tidal zone of the estuary. (vol.C5, p.767).

At Namu, we heard evidence concerning the multitude of small coastal streams whose estuarian areas support thousands of salmon. Ian Hilton, who works with the Department of Environment doing habitat protection work, testified:

...if you look at the coastline and travel around in the boats, or fly over it, you'll see that there is very, very small areas of estuary -- that's an area where there's a fresh water stream coming out, and these estuarian areas are extremely important, especially to the coho and spring salmon, as fry when they come out, they must have these mixed salt and fresh areas to feed in. (Hilton, vol.C1, p.129).

Don Taylor, a commercial fisherman, stated that

...a great deal of our salmon comes from a multitude of small producing streams, very similar to the Koeve River, which is just immediately south of us.... Now, these streams can spawn off possibly between 5,000 and 100,000 salmon, depending on the size of the run, and the conditions that nature provides. These streams, as they enter into an ocean, are usually in a little shallow bay. There's not very many of them that dump right into the saltchuck, they have a little small estuary all of their own, very shallow. They have the necessary fauna and flora to protect the small salmon, as they are migrating out of the stream, where they can hide from their enemies. (Taylor, vol.C1, p.16).

These fish make up a significant part of the salmon catch in these areas.

Estuary systems are biologically unique and absolutely vital to many forms of marine life. Yet these systems are extremely fragile:

It seems paradoxical that such a vast abundance of organisms can hang in such a precarious balance, where the slightest change in the environment could completely disrupt the system.... Furthermore, changes to marshes and mud flats are irreversible. If these areas are polluted or filled, the vital food chains and productivity are lost forever.... (Novakowski, vol.C5, p.602; 606).

Many estuarian food chain systems are being severely threatened by industrial development and pollution. For example, at the Steveston community hearing several people spoke about the destruction of the Fraser River estuary that is occurring as a result of ever-increasing industrial expansion. W. Paulik stated that:

The present state of land use along the waterfront is that less than one percent of the banks of the lower Fraser River falls within the category of recreation and conservation. Less than 30 percent of life producing estuarine marshland remains. (Paulik, vol.C4, p.533).

They cited a long list of completed and planned industrial developments for the area. (vol.C5, p.661-664; vol.C4, p.532-534).

The added threat of an oil port and subsequent oil pollution and spills increases the fear that estuary systems will be totally destroyed. Estuaries are said to be extremely sensitive to the slightest changes in the environment. It is argued that oil pollution in an estuary system could cause substantial damage to the food chains contained there and thus make it impossible for any higher animals to survive. (vol.C5, p.763-764). This could have profound effects on the fishing industry.

Mr. Hilton stated at Namu, in reference to estuaries, that:

There are just very, very few of them, and they're extremely vulnerable to any kind of oil or surface disturbance; the booming of logs, the debris that comes from logs and falls on the bottom is a serious enough problem already. Compounded, I think, with any amount of oil, we would lose the major productive areas of these small estuaries. (Hilton, vol.C1, p.129).

Mr. Taylor stated:

What would an oil spill do to this multitude of salmon streams that in the aggregate, produce a good part of our catch? I can see some of the salmon streams that I know in this country, that I fished around, being completely and totally destroyed, if there were to be an oil spill in that part of the country.

As I say, I have been in the industry for 30 years, and my whole livelihood depends upon this and I would like to finally say to you, Mr. Commissioner, that I don't think we should take this chance. As a matter of fact, we must not take this chance of destroying this resource. (Taylor, vol.C1, p.16-17).

And W. Paulik at Steveston:

Mr. Chairman, intensive port development and the probability of major petrochemical spills will be the "kiss of death" for the Fraser estuary for it to produce renewable resources. (Paulik, vol.C4, p.538).

(ii) *herring*

Herring serves as an example of a specific part of the marine food chain which must be studied. The herring fishery is also important in itself.

Cyril Carpenter described the role of herring in the native food fishery:

We depend very largely on seaweed, herring eggs. We harvest them by hanging trees in the water, we take a certain percent of the spawning herring for food. We dry them, or we salt them or we freeze them. (Carpenter, vol.C1, p.107).

The herring fishery has an estimated wholesale value in excess of \$50 million.

The herring spawning takes place mainly in the shallow bays and inlets all down through the tanker route, and there's many thousands of tons of herring that spawn in this area, and if there was an oil spill, and this oil were to reach these bays and shallows and deposit itself in the kelp and the grass where the herring spawn, well, it's only

self-evident that it is just going to wipe out that whole herring run, and we've gradually built that herring run up now to where it's 50 to 60 million dollar value to the fishing industry every year, and I think it would be just a darn shame to see that go down the drain. (Taylor, vol.C1, p.14).

At Namu, Ian Burnett explained the way herring are a critical part of the food chain:

If the herring have no spawning grounds for a year or two, then that run of herring is dead, because they don't have the good sense to go somewhere else. No herring, no salmon, and so on. (Burnett, vol.C1, p.37).

(iii) chronic pollution

It has been pointed out continually that the Inquiry must determine the seriousness of *existing* damage to marine environments, such as estuaries, because possible oil pollution on a large scale must be evaluated as an *additional* pollutant.

Saul Terry spoke at Lillooet about the Fraser River, about the importance of the river to his people, and about the many industrial developments which are interfering with and polluting the river along its course. He spoke about the plan to build a McGregor Dam and about pollution from pulp and paper and other industries which pour their waste into the river at Prince George. He went on:

It is commonly known that other industries are being contemplated up and through those areas which would affect other rivers which carry the fish, the Nechako, the Stewart Lake area runs and all the other rivers that are tributaries to the Fraser.

If we come down, we are into our own area here, the Lackson area, perhaps sometimes when we are catching our fish down by that river, we don't think too much of what is happening up river, but all those contaminants which are flowing into that river from us, from man, we feel do affect to a great extent, salmon fisheries of the Fraser and its tributaries.

If we think some of these things up river are bad, if we continue on down past us here, down to the area called the Fraser River delta, Hope on down, the populations living around this river are much, much greater than what we face above Hope. With an increase in population, there's an increase in industry and industrial waste and domestic waste which that much more seriously jeopardizes the marine life within the Fraser River system.

With all these obstacles which our fish must face...with all these obstacles, we hear now and have heard tonight, that there are further obstacles or greater risks which are going to be placed on the salmon fisheries, not only of the Fraser and its tributaries, but all up and down the Pacific Coast. (Terry, vol.C3, p.348-351).

Moreover, people have given evidence that the Inquiry must be concerned with chronic oil pollution as well as with dangers from single large spills.

May I give you some of my observations made patrolling this area as a Fisheries Officer?

There has been many oil slicks, one could not call them spills, from bilge pumping tankers, freighters passing in the night, and the results: dead marine birds, black oily sludge on the beaches, logs coated with bunker fuel, coagulated lumps of oil and sand washed up on the beaches. I have witnessed fishermen's gear that have trolled through oil. Can you imagine what a set of gurdies looks like after this treatment, or a gillnet?

I have witnessed seagulls, murres, grebes, puffins trying to preen themselves with this black gunk stuck to their bills. I have seen them die by the dozens when the cold water penetrated to their skins or die later on the beach, when too much oil

had reached their digestive tract; and this was just from bilge pumping, not a major spill. I hope never to witness one. (Brooks, vol.C6, p.829).

There's one thing that people don't seem to understand, to have an emergency, they say that you have to have a mass fish kill that everybody can see. A whole bunch of fish turning belly up some place. That is not the case at all in environmental effects. The ecology when it starts going dead and the fish slowly start getting the effects of the toxic material. They slowly start getting stupider and going around and the predators start preying on them, and they slowly start disappearing, and you just can't see them dying off that way. So, it has the effects on the ecology that we can't see. (Birch, vol.C4, p.500-501).

Navigational Safety Risks

Evidence will be presented to the Inquiry, based on world-wide experience in the shipping industry, of the statistical likelihood of accidents and spills which would result from establishment of an oil port at Kitimat. What is required from the community hearings is evidence concerning actual experiences with weather, tides and navigational hazards to give a sense of reality to this statistical evidence. Already I have received valuable information.

Gunnar Jacobsen gave extensive evidence at Sooke about dangers for tankers approaching Kitimat via either Caamano Sound or Hecate Strait-Principe Channel. In a letter to the Inquiry he wrote the following:

...both (routes) present great navigational difficulties under severe weather conditions which are the rule rather than the exception during the winter months.

At the seaward approach to Caamano Sound there lies a wide belt of pinnacles, many which are uncharted, stretching from the top of Banks Island to the lower end of Aristazabal Island. The channel between the pinnacles into Caamano Sound is narrow for a long way to seaward.

The only reliable way for positioning oneself is by radar as the Loran A station signals are commonly out of service, sometimes daily, for adjustments etc. Usually when you need them the most.

The new Loran C signals are not reliable within 5 miles of the coast as the transmitting stations are inland. (The master station is at Williams Lake, B.C.). These signals are subject to 10 microsecond errors in the Dixon Entrance-Hecate Strait area, which I believe are 4 to 5 mile errors.

But radar! How reliable is it? In the Caamano Sound area the land is low lying, hence a poor radar target at the best of times, when distant from the beach. Add heavy rainstorms and/or snowstorms, and it becomes absolutely useless in discerning the various points of land, as they blend together with rain clutter on the radar screen.

To all this confusion add the 45 to 60 knot winds which frequent the area from October to April with the odd big storm thrown in and boy you've got problems. (Letter to the Inquiry, April 12, 1977).

At Namu, Steve Carpenter discussed the volatility and unpredictability of weather conditions in the central coast area:

...(winds) shift about pretty fast, like crossing this little sound here, Queen Charlotte Sound, it only takes about three and a half hours to cross there. Three years ago, I think we had about four winds before we came across, we had a southeasterly, a westerly, it kind of switched right around, and then the result was that the sea was very unstable, you know, lumps and chops coming from all directions there. (Carpenter, vol.C1, p.122).

Also at Namu, Doug Miller pointed out that we must pay special attention to the rare weather conditions experienced on the coast, as well as normal patterns.

I've been up in this area I guess 12 months of the year sometimes years ago. You can have a swell condition that will last two months. That inhibits any kind of clean-up for two months; and you can have a condition where there's say, a whole tide period of maybe eight days of no swell at all, you can tie the boat alongside the beach and walk ashore. But normally this doesn't happen.

I have once seen, on a halibut trip, eleven days of calm weather, and that's in all my years of fishing halibut. Where there was no swell, that was a freak act of nature. (Miller, vol.C1, p.59).

At Sooke, Gunnar Jacobsen made the same point about tides. These would have a special importance for clean-up of spills as well as safe navigation:

We have -- you know, the normal tides the tide book will tell you about, but then you have other kinds of tides. For example, I remember in 1971 the guys on the radio phoned us saying "up here this tide is crazy, it's been running out all day." I was fishing down in the horseshoe and the tide was running out there all day. This was caused by a different type of oceanographic condition, probably the water came in underneath and flowed out on the top with an upwelling in the middle of the strait.

Coming down through here, off Porcher Island here, you have an area of about six and a half miles offshore that a freighter would run aground, and then in the other direction you have approximately a thirty mile strip that a freighter would also run aground. Then you get down into the narrow channel here in Browning Entrance, and that's a fairly narrow channel too with heavy tidal currents. The chances of making that -- you know, in good weather it's just dandy. Unfortunately, we don't always have good weather there. You know, you've heard comments about the bad weather down here in Juan de Fuca Strait. It gets bad once or twice a winter,

three times, four times maybe. We get our fifty, sixty or seventy mile an hour winds, but it seems up in that area it's just about the rule the entire season, the entire winter season, and occasionally they get a real blow-up there. (Jacobsen, vol.C6, p.855-856).

Clean-Up Problems

Community evidence has raised special concerns about oil clean-up problems in central and north coast areas.

I've worked on a couple of oil spills, small ones, Bunker C oil, not this horrible, crude oil that they want to bring down, and it's a disturbing experience. You don't have a sense for how horribly sticky it is, it sticks to everything. You're covered with it, everything you touch is glued with the stuff. When it gets onto rocky coastline, it's like paint, it's a layer, and once it's on there, it just doesn't come off and it stays for quite a long while. It doesn't weather off quickly at all, not as quickly as one would think.

When it gets into sand or the small estuarial kind of area, it just covers it, the tide comes up and pushes it up to the top of the tide-line and down it comes and leaves it behind. It's an extraordinary mess. In Vancouver when they dump a load of Bunker C out of a valve somewhere, say Stanley Park, there's a great hue and a cry, and there's a tremendous load of manpower down there in a matter of a few hours.

Up in a place like this, you're not going to have thousands of people that are going to be needed to clean it up, they're just not here. They're not going to ship them in here either, where are they going to put them? It's a complicated and messy business, and I can't see them cleaning it up. (Hilton, vol.C1, p.130-131).

From Caamano Sound right down to Cape Caution it's solid kelp patch and breaker patch, and you can't get any means ashore to clean this up. How do you clean it off kelp when it gets on the beach, in behind the breaker patches. And the other thing to look at, in the California spills, they use straw.

How do you use straw on a rock pile...where you might have a swell condition of two months, lasting two months, you can't get ashore.

There are a lot of things you have to think about, it's not just a cut and dried thing.... (Miller, vol.C1, p.58-59).

I have also been receiving evidence about contingency plans and existing clean-up capability. Although we have not yet had the opportunity to pursue these matters fully, the evidence to date is very disturbing. Evidence given at Steveston raised basic questions about the coordination and efficiency of those who undertook to clean up the August 1977 spill. Evidence at Sooke indicated that actual contingency plans and preparedness for spills may not be available for that area.

Traffic Conflicts

Conflicts between fishing boats and tankers or other vessels using the same coastal waters are increasing in frequency. For example, access to the Fraser River system for fish and access to the Lower Mainland for boats is restricted to the Strait of Juan de Fuca and Johnstone Strait. Because the salmon come from all over the North Pacific there is a funneling effect at each of these straits. This funneling creates high concentrations of fish and therefore, of fishing boats. Similarly both Johnstone Strait and the Strait of Juan de Fuca have high concentrations of shipping traffic funneling into the Lower Mainland from all over the world.

In his evidence at Steveston, Homer Stevens explained that this conflict raises issues of which fish stocks will be available for harvesting.

There are areas of greater or lesser concentration (of fishing fleets), but every time you set up another traffic lane, you are also cutting off areas that can be properly fished, and should be fished, for maximum use of the resource. (Stevens, vol.C5, p.654).

There are also traffic conflicts which increase accident risks, exposing fishermen and their boats to danger and raising the risk of oil spills.

In the Strait of Juan de Fuca there may be as many as seven lines of seine boats -- each line with 20-25 boats -- trying to fish in the midst of heavy tanker and freight traffic. Stories of net damage and near-collisions raise questions about the adequacy of navigational systems. Hoss Kristinsson told a story of a net-cutting of a gillnetter in the Strait of Juan de Fuca, by a passenger liner:

He came right up close to the boat, right through the net and what is it? It's a huge passenger liner, the Fair Sea, and the skipper must have called out, "You guys get out and have a nice look at these guys fishing." It was a nice sunny day, and the gangway was lined with people with cameras, waving and smiling. (Kristinsson, vol.C5, p.612).

Another example is provided by the story of the Silver Bounty, a seine boat whose net was cut by the Arco Juneau. The Arco Juneau is one of the fleet of super-tankers being used to transport Alaskan oil to refineries at Cherry Point. After unloading the first load of Alaskan oil, the tanker was heading back out to sea. The Silver Bounty was fishing one-quarter of a mile inside the voluntary traffic lane in the Strait of Juan de Fuca, about three-quarters of a mile from the international boundary. The Arco Juneau, visible from three miles

away, approached the fishing line and then tried to turn in order to avoid hitting other boats. By turning she came within 150 feet of the Silver Bounty and sucked 140 fathoms of seine and cork line into the supertanker's propellor. Fortunately, both the seine and cork line broke, avoiding the possibility of the boat itself being sucked under. Testimony by Paul Sigurgeirson indicates that the master of the Arco Juneau was receiving hand signals from a deck hand at the bow of the supertanker regarding turns and other evasive actions. (vol.C5, p.710).

If ship traffic of any kind is increased in the Strait of Juan de Fuca it is clear that conflicts with fishing vessels will increase. Another area of conflict is La Perouse Bank where salmon trollers operate five to six months of the year.

If a northern route is chosen for tanker traffic, the result will be some increase in existing traffic conflicts and also the beginning of new ones, in such places as Whale Sound, Squally Channel, Browning Entrance and Principe Channel.

Every fisherman knows that the salmon are working the back eddies along the beach, and of course, that's where we are going to have our nets.... At night time the salmon tend to break their schools up and leave the beach and go into the centre of the channels for their own protection. In other words, they scatter, and that's where we go with our nets at night time. (Taylor, vol.C1, p.20).

An added complication for the northern tanker route is its confluence with the inside passage route that brings traffic through Whale Sound, between McKay Reach and Grenville Channel. This traffic is largely coastal freighters and passenger liners. Combining tanker

traffic with the fishing fleet, the coastal freighters and the passenger liners will multiply the possibility of dangerous traffic conflicts.

An automatic reaction to traffic conflicts is to propose a rigorous system of mandatory traffic management which sets aside certain areas for shipping lanes and other areas for fishing grounds. It is frequently assumed that the two interests can be reconciled in this way. However, I was told that the net effect of a mandatory traffic scheme in the Strait of Juan de Fuca would be to reduce the amount of sea available to fishing boats. In some cases the areas excluded from the fishing boats would be what fishermen call "hotspots."

Questions of Jurisdiction

In many different forms, questions concerning jurisdiction over coastal resources will surface during the Inquiry. Evidence has already been given which speaks to these issues.

The existing regime of legal and administrative arrangements for the planning and implementation of oil spill clean-up has been criticized as ineffective. The distribution of authority to regulate ships and storage facilities which handle large quantities of oil is obviously not adequate. These matters are dealt with elsewhere in this statement.

There are also broader jurisdictional concerns underlying the Inquiry's work; many of these will not be matters for recommendations. But all of them must be understood.

The Indian people of the Pacific coast and watershed assert a right to share in jurisdiction over marine resources. George Manuel in the formal hearings expressed the essence of that claim in the same sense as many other native witnesses:

I want to declare here, that the Indian people are the owners and have jurisdiction over marine resources on the west coast and hence, claim our rights to manage, control and protect these and other resources from supertankers. (Manuel, vol.16, p.2578-79).

This claim to marine resources is made by the Indian people as an element of their land claims. The basic assertion is that the lands and resources have never been surrendered by the Indian people, and hence, still belong to them. Included in the claim over marine resources is the right to consent to or reject development in areas which would threaten this resource base. The concept of sea reserves is suggested as one possible means of recognizing and managing the marine resources subject to the claim. (Jackson, vol.16, p.2688).

In the community hearings to date, many Indian people have explained to me why they believe that unsettled claims are still a basis for their rights to food fish. Ted Seward told about history as explained in the oral tradition of the Squamish people:

...fish were here from the beginning of time when K'lass...the transformer... came down, when he came down from the sky the people were already fishing. The fish was there. It was there for our people. For as long as anybody can remember. There is no set date. Even your fancy biologists you have in the universities can't determine the exact time the fish was first created. (Seward, vol.C2, p.280).

Mrs. Rosie Stager, an elder in the community at Mount Currie, talked about her understanding of recent history:

But the main thing I would like to see is that we get our privileges of fishing and hunting, as we all know, as native people, that these games were put here for us to use by the Great Spirit. We happened, as Indian people, to be put back here on this continent on one side and the Spirit has given us fish, birds, deer, vegetation to live on. As the non-Indians came in they have taken control of most of it and they've given us very little and whatever we have left now we are struggling to try and hold it...for we know the fish is ours, the game is ours, and also the fowl and birds is ours and also the country is still ours because we are non-treaty Indians. (Stager, vol.C2, p.243-244).

The special right to fish has at times been recognized by government. Chief Victor Adolph gave one example when he explained what was done in Lillooet by the commission set up more than 60 years ago by the federal and provincial governments to adjust the boundaries of reserves in B.C.:

At the first visit of the McKenna-McBride Commission to the Fountain Indian Reservation, our elders told them, the first thing that we must have recognized is the fact that our food fishing stations on the Fraser must be given the status of reservations -- so that was done at that time.

To this day, we feel we still have those fishing stations and we appreciate the right that we do have to harvest this food, to the extent that it is an annual debate with the Department of Fisheries as to who controls which. We maintain, we contend, that it is our reservation, we determine who shall enter and who shall not enter and at this date, we do issue permits, Band Council permits, that are recognized by the Fisheries. (Adolph, vol.C3, p.364-365).

This Inquiry cannot resolve the legal issues relating to this claim. But there are at least elements of the native assertion which overlap very directly with the issues before us. The claim was explained in this way by Professor Doug Sanders:

The claim in general is not to land or water, but to the resource base traditionally exploited by the tribal groups. The economic significance of the claim, I suggest, lies in the fact that there has been a gradual transfer of resources from Indian owners to non-Indian settlers, and the legal basis of the claim is an assertion that transfer has not been authorized by the property laws of either the Indian tribes or of the colonial settlers. (Sanders, vol.16, p.2655).

Lying behind the claim is a history of management, control and protection of parts of the fishery by native tribes themselves.

At both Mount Currie and Lillooet elders described their past opposition to a salmon hatchery, an international spawning channel and a fish ladder because they believed that serious mistakes were being made in the care of the salmon. They had watched developments closely, making recommendations about the size of spawning channels and the nutrition of salmon. I was impressed not only by their sense of management and protection but also by the great learning they possessed about the nature of salmon. For example, they spoke about a strict code requiring that dead salmon be returned to the river. The code was explained to me as ensuring that fertilizer was added to the river for the young fish and to give the young fish the scent of the dead fish so they can find their home when they return to spawn.

Their concern was tinged with outrage as they told of times past when they watched the destruction of the fish through lack of understanding of the salmon by the managers of the hatchery.

They don't know how to survive because they were fed until such length and they were dumped in, and they all died.... Close the hatchery right now. (Ritchie, vol.C2, p.228).

They still have concerns about the way the facilities are operated.

I went right up to the caretaker there, I says, I want you to make a report, I says, to your supervisors. I says, I don't want any salmon taken out from the creek even after its dead. And this is another thing I don't like, your inlet and the main channel are a little too close together and the last two years you've been using electricity for a gate to stop the salmons from going up into the main channel. That I don't like. (Thevarge, vol.C2, p.322).

This concern for proper management of the fishery expressed by Indian people as an aspect of their land claims, is not different from the concern for responsible management stated by commercial fishermen and others who depend on the coastal resources. Doug Miller provided an example at Namu:

Those who seem to hold all the cards in this Inquiry are back east; they live 3,000, 4,000, 5,000 miles from here, in Ottawa, and the mistakes made there, we're going to pay for generations. If we have a tanker spill, say at Ashdown Island, and the spill drifts south, Aristazabal Island, and it could come down as far as Queen Charlotte Sound, and where does that leave us?

I mean, they are all right. It will be a mistake on their books, but it's us who pays the shot for this, and if there is a spill, how do they contain it? Do they write Ottawa and say, well who is going to clean up this mess now? By that time, it's all the way down to the Gulf of Georgia or down to Victoria. (Miller, vol.C1, p.57-58).

Who Will Use The Oil?

In evidence given so far, people do not dissociate themselves from the concerns we all share as consumers of oil. But they believe they can contribute to planning which will accommodate energy supply needs as well as respect coastal resources.

Susan James pointed out that Indian people often use very little oil, and should not be the ones to bear the risks from transporting it to other consumers:

These people, they don't drive cars, they don't use oil in their homes, they use wood to cook on, they use wood to heat their homes, and they walk. These are the people, that if the oil tankers come through, these people who are using wood and who are walking, they will be asked to pay a very high price for the oil that they aren't using. (James, vol.C3, p.400).

Ian Burnett stressed that although fishermen themselves use oil, there are alternative ways to obtain that oil:

I run a boat with a diesel engine, and I need diesel fuel for it, so I can see a need for oil. But I would really like to see that oil be transported in as safe a manner as possible, not the cheapest manner possible. (Burnett, vol.C1, p.38).

Frank Cox of the United Fishermen and Allied Workers' Union raised similar concerns:

It would be one thing if this oil was destined finally for our diesel engines, and it was an absolute necessity to harvest this protein to have that. Well, I see it as a contradiction that we don't need to live with, we don't need to have. That oil is not destined for our diesel engines. I don't know what it's destined for, but it's not in this country.

We have oil in this country that we're shipping out as fast as we can, in either pipelines or other ways. We seem to be in a position to sell it hand over fist -- and then we're asked to take this kind of nonsense. I just don't see that we have to accept what seems to be accepted by a number of people, that we need an oil port on the west coast. (Cox, vol.C1, p.66).

How High Are The Stakes?

Very serious claims have been made before this Inquiry about the scope of the interests at risk and the seriousness of the threats to them. People have alleged, time and again, that the very substance of their way of life is at stake.

A mere assertion of these dangers does not suffice to prove them. Their repeated assertion does not do so either. I think people know that, and are prepared to enter a full analysis of the extent and importance of coastal interests. That is the task for the Inquiry. The seriousness of the assertion made leaves no choice but to do the job well.

III. WHAT THE INQUIRY HAS LEARNED

1. ARE THE RISKS MANAGEABLE?

It is well understood that it is the oil spill risk that underlies the main concerns about the environmental, social and navigational safety impacts of a west coast oil port and tanker traffic. Spills, both chronic and accidental, are said to place in jeopardy the entire marine environment. An accurate gauge of this risk and a determination of how severe are the effects of oil spilled on water are central to this Inquiry.

There are important questions concerning the safety of fishermen, air pollution and the economic benefits and detriments of port construction and operation, but these are secondary to the overriding issue of oil spill risks. This conclusion is plain on the face of the evidence, whether we analyze the filed briefs of the experts or the spontaneous statements of citizens testifying at community hearings.

(i) Definition of Risks

(a) Oil Spills

In the TERMPOL Assessment, the issue of oil spill risk is analyzed very cautiously. On one hand, we are assured that:

Provided a disciplined operational procedure is implemented along with an efficient regime of aids to navigation and vessel traffic management, and subject to the recommendations made in this report, nothing was identified within the factors under this topic that represented an unusual degree of navigational risk. (TERMPOL Assessment, p.2-6).

On the other hand, we are warned that:

It is generally accepted that oil spills are inevitable as a result of the proposed oil terminal operation. The effect of such spills to the biological resources, and the socio-economic effects, could be serious. (TERMPOL Assessment, p.2-11).

I understand these conclusions to mean that a large tanker can safely navigate in and out of Kitimat harbour with appropriate navigation aids and vessel traffic management, but that a system of tanker traffic operating in and out of Kitimat harbour on a regular basis over a long period of time is bound to result in oil spills. There is no disagreement with this assessment. I am not aware that anyone is arguing that oil spills will not occur.

Hence the issue becomes one of attempting to measure the extent of this risk and the seriousness of the effects of spilled oil on the marine resources. Only past experience can provide a measure, with the consequence that assessment becomes a question of statistical probabilities based on the world history of chronic spillages and tanker casualties. If we can use the data accumulated over many years showing the total amount of oil spilled in harbours and their approaches, and then break this down into categories of casual spills while offloading, deliberate spills during tank cleaning operations and accidental spills from collisions and groundings, we can predict a probability of future spills in these various categories for Kitimat harbour and its approaches. This exercise will require a good deal of information about the number and types of oil tankers and other ships using the Kitimat approaches; the amount of oil carried; the navigational hazards; the winds, waves and tides; and the operation of berthing,

unloading and ballasting facilities. This information is needed in order to judge whether the proposed Kitimat terminal and tanker traffic will be an average operation or whether it will be more risky or less risky than the other oil ports whose experience we are relying on to provide the probability data.

It is not enough merely to define the oil spill risk in terms of the total quantities of oil likely to be spilled. For example, to know that over the years the amount of oil spilled in the Kitimat operation may average a million gallons per year, will not tell us the likelihood of a single disaster involving a 10-million gallon spill or a multitude of accidents involving no more than 10 thousand gallons in any one incident. Nor will it tell us where the spills are likely to occur. A much more detailed analysis is required which will assign mathematical probabilities to the likely range of events.

Assessing the effects of spilled oil on marine resources is an even more difficult task. In the 1960's the world community was aroused to the hazards presented by oil spills by disasters such as the grounding of the Torrey Canyon off the south coast of England. Since that time scientists in many countries have studied the effects of spilled oil. There have been many studies of how oil spilled on water is affected by winds and currents. In consequence, it is possible to carry out an assessment of where oil spilled in any particular location will likely travel at given times of the year provided that data concerning local winds and currents are known.

There is also a considerable body of knowledge of the effects of oil on marine organisms. This knowledge is derived from laboratory studies of the effects of oil on

individual organisms and from field observations of the results of actual oil spills. Nevertheless the prediction of the effects of spilled oil on marine ecosystems is fraught with difficulty. One must know the types of oil that may be spilled, for these vary from highly toxic and volatile kinds to less toxic but more persistent ones. The species of marine life must also be known, for their susceptibility to harm from oil varies greatly. Some are unaffected by or even thrive on oily wastes while others will succumb to minute concentrations. It depends also on the habitat which each species frequents. Species of marine life found in estuaries or dependent on kelp beds, for example, are more vulnerable than those which range the open seas, for these habitats accumulate and hold the oil in higher concentrations. Finally one must have a good understanding of the relationships among the organisms that comprise the web of marine life. Extensive damage to some areas, or to some species, will cause damage further along the food chain. All these effects will vary greatly in different seasons. It should be recognized that some of these matters are still subject to debate among the experts.

This need for site specific and project specific data to ensure that an assessment of the oil spill risk will be reliable was recognized in the TERMPOL Assessment when it was stated that:

Oil spill risk analysis, comprehensive oil spill scenarios, and viable, realistic contingency plans for "most likely" and for "worst possible" cases of minor and major oil spills (single and multiple) are required for the proposed and alternate marine routes, and oil terminal. Risk to, and protection of biological resources and socio-economic concerns as a result of an oil spill and its spill counter-measures must be specifically addressed. (TERMPOL Assessment, p.2-12).

Without this depth of analysis it will not be possible to gauge the seriousness of the oil spill risk. Nor should one presume that all will be right. *Since it is agreed that spills will occur, the onus lies on those proposing an oil port and tanker traffic to establish by credible evidence that the consequent oil spill risk is acceptable because either its probability is extremely remote, its consequences would not be too serious or the spilled oil can be contained and cleaned up without unacceptable damage.* The Inquiry evidence must demonstrate that beaches and estuaries will not be laid waste and that populations of shellfish and salmon will not be decimated.

(b) Traffic Conflicts

No one attending the community hearing at Steveston was unmoved when two crewmen on the Silver Bounty described their fear as the tanker Arco Juneau bore down on them to plough through their seine net. It is chilling to know that, were you a fisherman on a gillnetter or a seine boat, your fishing grounds in the Strait of Juan de Fuca could place you in the traffic lane for ships outbound for the Pacific. Even inbound ships could intersect your favoured fishing spot at the entrance of the Strait. In impenetrable fog, with the fishing fleet around you to confuse the bridge officer of the tanker by a myriad of blips on the radar and a babel of voices on the radio, the duration of your set, when the dragging seine makes you a vulnerable target, would be moments of apprehension and fear. Yet, were you to pull in your net every time a ship approached on the radar, you could not afford to continue fishing.

That is the fisherman's side. On the other side is the concern of the master of the tanker who must weigh in the balance the menace to the fisherman against his duty to preserve his ship. The conflict between tankers and fish boats must be seen as a threat of spilled oil as well as a danger to life and limb. This is particularly so in the case of the proposed Kitimat approaches for any evasive action by a tanker in the narrow channels would pose serious risk of grounding.

(c) Navigational Safety

The issue of navigational safety raises questions about the profile of the tanker fleet that would carry oil from Alaska and Indonesia to Kitimat. Would these be modern very large crude carriers with double hulls, segregated ballast tanks, inert gas systems and twin screws and rudders, or would they be the class of tankers that were rushed into service in the 1960's following the closure of the Suez Canal? These questions cannot be answered glibly by saying that only United States registered tankers could operate from Valdez to Kitimat because United States tankers are not always superior to the world tanker fleet, and in any event tankers from other ports and of other registry would come to Kitimat.

Even the best of tanker fleets require competent crews, efficient navigational aids and experienced pilots to guide their safe passage. The channels they traverse must have been surveyed for submerged reefs, hazardous turns and conflicting traffic patterns. Especially in the approaches to Kitimat, which would challenge mariners with one of the longest passages in confined waters to be found leading into any VLCC oil port in the world, and

which are untried for the hazards presented to these tankers, these factors of navigation must be carefully documented and weighed.

(d) Air Quality

Mr. Press, the witness for SOHIO, explained the efforts made by his company to find markets for its Alaskan oil production. For almost five years it has been seeking approval from regulatory bodies in the United States to enlarge an existing oil offloading terminal at Long Beach, California, and to convert an existing natural gas pipeline to move oil from Long Beach to Midland, Texas, where the pipeline would connect with the major United States pipeline systems. This project is the principal plank in SOHIO's program to gain a more economic access to markets for its Alaskan oil than that available by transshipping the oil through the Panama Canal.

But this Long Beach proposal is not yet approved. Inability to meet air quality standards for the Los Angeles basin may yet defeat the project. Tankers moving into harbour and standing by for berthing, operations at the terminal, and venting from storage tanks on shore contribute emissions of petroleum hydrocarbons and oxides of sulfur and nitrogen.

The Los Angeles basin is, of course, notorious for its air pollution problems. Therefore it is readily understandable that the addition of a major source of pollutants into the area can be viewed as a "yes" or "no" situation, with the life of the project at stake. But according to studies in the United States, even the proposal to locate an oil port in the remote region of Port Angeles in the Strait of Juan de Fuca presents

issues of air pollution control. It is possible that the emissions from the tankers, docks and storage tanks, mixed with the air pollution from the existing forest industry operations at Port Angeles, would exceed established standards with such frequency as to place in question the continuing viability of the oil port operations. If authorities enforce air quality standards by closing down offloading operations when violations occur, the resultant queuing of tankers in the Strait of Juan de Fuca could seriously heighten navigation and oil spill risks.

When the locale in which these problems must be addressed is shifted to Kitimat, it is apparent that serious and careful analysis must take place. It is known that air inversions occur frequently in the Kitimat valley. Adding the hydrocarbon, sulfur and nitrogen pollutants to the emissions from the existing pulp mill and aluminum plant may produce unacceptable air quality conditions which would require the shutting down of terminal operations on some occasions. Should this procedure be necessary, the study of navigational hazards for tankers operating in and out of Kitimat must take account of the effects of increased density of traffic and the need for safe anchorages while tankers queue up for their turn at the terminal.

(e) Socio-Economic Impacts

Serious impairment of marine resources by oil spills could have drastic socio-economic impacts. For example, a subsistence food resource of the inhabitants of the Indian villages along the tanker routes could be lost or the livelihood of fishermen dependent on the salmon runs could be substantially impaired. Tourist business

operators could find themselves without the attractive amenities on which their incomes depend. Some businesses might be bankrupted by local spill damage even if the damage could be cleaned up in a period of years. The owners of tourist facilities, aquaculture operations or oyster farms might not survive financially until the environment is restored. The blight of a major oil spill could undermine coastal communities whose every aspect of life is intimately tied to the sea.

The principal socio-economic impacts relate to the dependence of different people on the various coastal and marine resources that could be affected by oil spills and tanker traffic. In the community hearings, I have been told about the dependence on marine resources of commercial fishermen, native Indians and recreationists in British Columbia. I have come to learn that dependence is cultural as well as economic. The resources of the sea not only provide food and maintain livelihoods but also sustain a favoured way of life. All coastal residents acknowledge a special relationship with the sea. In the case of the Indian people, the sea supports family and community values which have been theirs for thousands of years.

However, the severity of the socio-economic impacts rests not only on the extent of dependence, but also on the extent of resource damage due to oil spills. We have not as yet received evidence on how great and enduring the resource damage would be. Until the environmental assessments are completed, the significance of these socio-economic impacts cannot be determined.

In addition to the socio-economic impacts of interference with the harvesting and enjoyment of marine resources, an assessment must be made of the impacts in the Kitimat region of the port and pipeline construction and operation. Social and economic benefits will accrue from increased employment and business. Social and economic detriments will occur by reason of the dislocations that are characteristic of such ventures. Local residents fear, with justification, that the skilled labour required for the highly specialized work of constructing terminals, storage tanks and pipelines will be brought into the region from outside so that local unemployment will only be marginally reduced. They also fear that the advantages of increased business activity and tax revenues will be offset by inflation and increased demand on social services.

A particularly important question to the people of Kitimat and the surrounding area is whether the port development would encourage other developments. Some have suggested that the provision of navigational aids and services needed for oil tanker traffic would improve the prospects for the establishment of a bulk cargo port at Kitimat. Others have suggested that the oil port would discourage other port development by using up the best of the limited supply of back-up land. The issue is complicated because local and regional attitudes towards development differ to a very large extent.

There are many indicators by which socio-economic impacts can be forecast provided that the necessary data are available. Then the trade-offs between benefits and detriments can be evaluated with a basis for reasoned judgment rather than arbitrary assumption.

(ii) The State of Preparedness

(a) Maritime Laws

Phase I of the formal hearings received evidence from experts in international maritime law and administration to aid in assessing the present world regime for regulating oil tanker traffic. These witnesses also explained the opportunities for improved standards of navigational safety emerging from jurisdictional realignment in the ongoing Law of the Sea Conference. With respect to tankers, the book Supership by Noel Mostert and the succession of wintertime groundings and collisions have left a skeptical public. Can this skepticism be set at rest?

The Phase I evidence has been reviewed in the submission of Commission Counsel and others. It is also analyzed in greater detail in the later chapter of this Statement of Proceedings entitled "Some Explanations" (pp.126-150).

The presentation of the West Coast Environmental Law Association is an especially detailed and critical analysis of the evidence. Relying on Mr. Wang of the Department of External Affairs to show that international law is "no longer adequate" for regulating tanker traffic, they conclude that if the Informal Composite Negotiating Text is adopted as an international treaty by the Law of the Sea Conference, its changes would amount to a backward step for Canada. Their reasoning is that the most effective preventive measures respecting oil spills by tankers have been legislated by the Canadian Parliament to be applied in Canada's territorial seas and fishing zones, but that adherence to the Informal Composite Negotiating Text would require Canada to give up these preventive measures

in exchange merely for more effective punitive measures. Even in the territorial seas this text would allow a coastal state such as Canada to enforce only international rules relating to the design, construction, manning and equipment of tankers. The rights to set and enforce standards are vital so far as tanker safety is concerned and it is here that the international system is so inadequate. The authors of the West Coast Environmental Law Association brief argue that within the narrow context of oil tanker traffic, it can safely be said that our interests lie in ignoring international law.

This guarded conclusion acknowledges that the issues at stake in the Law of the Sea Conference are so all-embracing that it may be in Canada's best interests to accept the unsatisfactory clauses in the Negotiating Text dealing with the authority to regulate maritime traffic in exchange for gaining a favourable text on other issues of concern to Canada. For their part the witnesses from the Department of External Affairs, Mr. Wang and Mr. Mawhinney, made an impressive case for the many initiatives Canada has taken to improve international standards for ship safety and pollution prevention. They explained why the process of negotiation towards internationally accepted treaties and conventions is so long and arduous, and they gave telling answers as to why it is in Canada's interests to nurture and support the improvement of international laws and regulations.

It may have been a similar concern about the weakness of the international maritime regime and a like desire not to upset the delicate processes of negotiating new international rules, that led the authors of the TERMPOL Assessment to recommend that "those responsible for chartering crude oil tankers to call at Kitimat be

requested to employ them on long-term charters and give preference to tankers" that exceed certain standards of construction and equipment that are set by international rules. (TERMPOL Assessment, p.3-22). The dilemma would then be resolved because Canada could accept the inadequate international regime for the purposes of governing traditional maritime traffic while at the same time seeking stricter control over oil tanker traffic by regulating the importers of crude oil.

Such stratagems may sometimes be necessary to find a balance between conflicting goals. In the United States the solution seems easier to achieve. Because the State of California regulates aspects of port facilities it can impose restrictions on the kinds of tankers that the terminal operator is permitted to unload at Long Beach. This action is not seen as violating the international law of the sea because it merely seeks to influence the commercial dealings of two parties engaged in the marine transportation of crude oil.

Most Canadians view the perils presented by substandard tankers to be too grave to permit niceties of international law to stand in the way of effective regulatory action. In my opinion the Government of Canada should study means whereby oil tanker traffic into Canadian ports can be regulated without upsetting the international maritime regime. Two alternatives at least merit study.

The first alternative is to amend the new Ports Act presently before Parliament to confer power on the Minister of Transport to impose terms and conditions in the licence for a marine oil terminal specifying the standards of the tankers which the terminal operator is authorized

to unload. Undoubtedly the Minister would rely on the advice of the Canadian Coast Guard and other agencies in developing terms and conditions.

The second alternative is for the Governor in Council to remove the restrictions in the National Energy Board Part VI Regulations which prevent the Board from issuing oil import licences. The Board could then insert conditions in the licences specifying the standards of tankers in which oil could be imported into Canada. Again, the Board would likely call on the expertise of the Canadian Coast Guard to define the kinds of conditions that would be desirable and feasible.

In effect, I am supporting the TERMPOL recommendation that tanker safety be improved by regulating importers and I am advocating that this regulation be given the force of law. In doing so I am aware that there are important aspects to such a proposal that have not been considered. Not the least of these is the question of additional costs that consumers of petroleum products would have to bear as the price of limiting tanker traffic to the premium quality vessels of the fleet. These and other issues can be addressed in the resumed hearings of the Inquiry, and for that purpose I have now placed this recommendation on record.

It must not be forgotten that even if only the best of an improving tanker fleet will call at Kitimat, it is still an open question whether oil spill risks can be reduced to acceptable limits.

(b) Oil Spill Responses

In Phase I we heard evidence concerning oil spill contingency planning and the availability of skilled manpower and appropriate equipment to deal with emergencies. In general, the Canadian Coast Guard of the Ministry of Transport is the lead agency to deal with oil spills originating from ships, whereas the Environmental Protection Service of the Department of the Environment is the lead agency to deal with spills from shore-based facilities. They find their authority respectively under the Canada Shipping Act and the Fisheries Act. How they "deal" with oil spills is ambiguous. The Coast Guard has a stand-by capability to deploy booms and mechanical sweepers, but the Environmental Protection Service relies on the self-interest of the onshore operator to provide containment and clean-up apparatus, or it engages the services of private contractors. In each case the clean-up responsibility rests initially on the party which has caused the spill.

In serious situations the agency can directly intervene to take control of the clean-up operations. Otherwise its role is that of onlooker and advisor. Direct intervention is not an action lightly taken; in order to recover the costs of such intervention from the polluter, the Coast Guard requires an order of the Governor in Council under the Canada Shipping Act, and the Environmental Protection Service must prove that their clean-up and containment costs were reasonably incurred.

Containment procedures are effective only if deployed quickly, and the equipment only performs satisfactorily in a limited range of wind and current conditions.

Clean-up technology is primitive. One witness stated

only half jokingly that the greatest recent advance in technology that he was aware of was the substitution of long-handled rakes for short-handled ones!

While detailed evidence about the methods of containment and clean-up is planned to be called in a subsequent phase of the formal hearings, I received first-hand accounts of the efforts to deal with the 20,000 gallon oil spill which occurred at Steveston last August. At the community hearing we were shown slides depicting the deployment of a boom and the labour of sopping up spilled oil from a skiff using mats of absorbants. I was given a view of the spill from a fish boat and could see that the clean-up did not cope with oil saturating the rocky shoreline and clinging to the pilings and beams of docks and buildings. Polluted marsh grasses had been dealt with by close-cropping and it was unclear whether the cure or the disease was the greater calamity.

I cite this evidence to make the point that I am not at all satisfied at this stage in the Inquiry that the Government of Canada is organized to deal effectively with oil spills. There was evident confusion and delay in response to the Steveston spill. It was disconcerting to discover that at Sooke, a tourist, fishing and logging community on the Strait of Juan de Fuca dependent on a natural harbour of unique beauty, no one could discover from the authorities whether there was any plan for community response to an oil spill or even who would be in charge.

The direction of my thinking at this time is that small oil spills in harbour locations or near populated areas can be effectively contained and cleaned up if immediate and controlled response is available. That it will be

available has yet to be proved. In the case of small scale spillage of oil, which is chronic at terminals, clean-up measures would have to be very effective to avoid progressive degradation of the environment. In the case of large spills in remote locations along the exposed coast of British Columbia, my impression is that containment and clean-up are impractical in most situations. Exactly what are the limitations on effective response is a matter for further evidence.

I said at the beginning of this review that I could not reassure British Columbia that the effects of major oil spills could not be catastrophic. Certainly to the extent that avoiding catastrophe depends on effective containment and clean-up, I cannot give such reassurance on the basis of the evidence heard so far in the Inquiry.

(c) Compensation

Following the grounding of the tanker Arrow in Chedabucto Bay in 1970, the Parliament of Canada dealt with the issue of oil spill liability by amending the Canada Shipping Act. The basic scheme was to create a more stringent liability, to provide for the recovery of clean-up costs by governments and to establish a compensation fund to cover cases where, despite successful legal proceedings, recovery was unavailable from the shipowner or an insurer. A special provision was introduced to give commercial fishermen a claim for loss of income.

Though the intention was to provide comprehensive redress in the case of oil spills, there remain many obstacles to successful recovery of compensation. Foreign registration and one-ship companies make legal proceedings

difficult. Because there is no requirement of insurance coverage, much effort may be wasted only to discover that there are no assets available to satisfy a judgment. Only then can a claim be made against the compensation fund. Apart from the special right of the commercial fisherman, the common law determines what losses can be redressed and there are many limitations. For example, native people cannot recover damages for the loss of a food fishery.

There are major exceptions to coverage provided by the Canada Shipping Act. It deals only with spills from ships in Canadian waters. A spill occurring on the United States side of the Strait of Juan de Fuca would not be covered. Nor would any land-based spills. Recently the Fisheries Act has been amended to make those responsible for land-based spills liable to pay clean-up costs of government if the costs have been reasonably incurred. A similar liability is imposed by 1976 amendments to the Pollution Control Act with respect to spill incidents cleaned up by the Province of British Columbia. But otherwise a person suffering damages from a land-based spill must find his remedy at common law.

A common occurrence is the slicing of a fisherman's net by a ship. The increasing tanker traffic in overlapping traffic lanes and fishing grounds is resulting in a higher frequency of these incidents. The loss to the fisherman will include not only damage to a \$1,500 gillnet or a \$35,000 seine net, but also loss of fishing time. The evidence at community hearings shows that fishermen experience difficulties in recovering compensation even when the vessel causing the damage is clearly identified. In most cases there is no recovery.

It was comforting to learn that under United States law the Trans-Alaska Pipeline Authorization Act makes the owners and operators of tankers bound from Valdez to a U.S. port such as Cherry Point liable to residents of Canada for a wide range of damages and clean-up costs and provides for compulsory insurance and a \$100 million fund in order to facilitate compensation. But this beneficial U.S. legislation does not now cover Alaskan oil shipped to Kitimat and bound for U.S. markets.

In Phase I, I received a complete description of the various compensation schemes that are proposed at the international level and in the United States. Obviously there is a concerted move toward ensuring that oil polluters face strict liability and that insurance and compensation funds are increased and are available to the victims of oil pollution with a minimum of expense and delay. *My reaction to the Phase I evidence is that the present situation in Canada is a well-intentioned hodge podge. A comprehensive review of all aspects of oil spill damage and recovery must be undertaken before one could determine that all the oil spill impacts of a west coast oil port would be adequately and swiftly identified and compensated.*

(d) Air Quality

The ability of governments in Canada to manage the air quality problems presented by the Kitimat proposal is weakened by unresolved jurisdictional conflicts.

Under the Pollution Control Act the legislature of British Columbia has established a regulatory agency which exercises control over provincial polluters by a system of permits. Pursuant to guidelines established

for particular industries, the Pollution Control Board decides on the permissible quantities of effluents which may be discharged into the atmosphere by a polluter and incorporates these restrictions into his permit. It is an offence to violate the permit, but prosecutions are seldom pressed unless persistent violations are reported, indicating deliberate evasion of the conditions of the permit. There are no guidelines for hydrocarbon emissions and there is no policy establishing ambient air standards for any particular locality. What consistent monitoring is done is carried out at the source of the pollutant. In the Kitimat area there are two major industrial complexes which are regulated under pollution control permits -- a pulp mill and an aluminum smelter plant.

Because shipping and navigation is a federal jurisdiction under the British North America Act, the authority to regulate emissions into the air from ships is conferred on the Governor in Council by the Canada Shipping Act. However, the Air Pollution Regulations made pursuant to this authority merely deal with the density of smoke from the ship's stack. Potentially more serious chemical emissions from activities such as the venting of tanks are not covered.

The control of harbours is also a matter of federal jurisdiction and Kitimat is a public harbour under the Canada Shipping Act. The Public Harbour Regulations under this Act deal only with dumping and do not displace the application of provincial regulation under the Pollution Control Act so far as polluters of harbours are concerned. That point was decided in the recent British Columbia case of R. v. Bordignon Masonry (BCCA, 1977, unreported). But, whether provincial pollution control

laws can apply to a federal undertaking such as a Kitimat port and connecting interprovincial pipeline is a matter of considerable doubt, at least to the extent that the provincial laws could interfere with the carrying on of business by the port and pipeline. For example, any application of the provincial laws that would seek a shut-down of the oil dock until provincial permit emission levels are met, could be unconstitutional.

The resulting position is that there are no existing federal regulations that deal effectively with the air quality problems of a Kitimat oil port. Yet, because the port and pipeline are federal responsibilities, it may be that the provincial pollution control system that regulates other polluters in the Kitimat region cannot be applied. This fact probably explains why Kitimat Pipe Line Ltd. has not filed any application with the provincial Pollution Control Board respecting its project, and why the Board has taken no steps to ascertain what studies are required to regulate the additional pollution load that the port and pipeline would introduce to an already burdened region.

We know that the air quality problems associated with a comparable port and pipeline located at Long Beach or Port Angeles are regarded in the United States as potentially serious. Even with the use of the most modern means of reducing and controlling emissions, the levels of hydrocarbons and of sulfur and nitrogen oxides, combined with the existing levels of air pollution, may require the closing down of offloading operations at the proposed terminals from time to time.

I must view the lack of a Canadian plan to deal with this problem as a serious matter to be examined in greater depth in this Inquiry.

(iii) Conclusions

If an oil port is established at Kitimat there will inevitably be oil spills on the adjacent coast of British Columbia. Many factors enter into the assessment of this risk.

On the navigation side the risk of accidents depends on the design, construction and manning of tankers; the effectiveness of navigation aids and vessel traffic management and the physical characteristics of the coastal route. A choice must be made between alternative routes from the sea to Kitimat -- a complex task involving consideration of pilot boarding, anchorages, weather and sea conditions, hydrography, distances of travel, and coastlines that would be exposed to oil spills. The operating constraints that would be imposed on tankers must be determined. For example, would a 320,000 ton tanker be allowed to proceed into Dixon Entrance if the 24-hour forecast for the route to Kitimat included zero visibility or 50-knot wind conditions?

To assess the effects of oil spills on marine resources it will be necessary to relate existing knowledge and experience about the effects of spills to the particular marine species and the special characteristics of the region itself. On this coast, with its major fish migrations, a highly mobile commercial fishing fleet and a variety of recreational and food fishing, the impact of oil spill damage may affect people far from the site of the accident.

Nor will it be sufficient to review these topics as if only a simple recommendation for or against an oil port were required. Oil ports for supertankers are an established fact in our industrially based society. The application to build the port has been made in good faith by companies who will certainly be receiving their oil through some North American port. I must review the evidence at the depth required to make sound recommendations as to the various controls and mitigation measures which should be imposed on a port if it is approved.

3- This will require evidence as to the ways in which large ports are managed and oil spill risks are minimized in other parts of the world. Similarly the evidence on the effects of oil on marine resources has largely to be obtained from experts who work where oil spills have occurred. Knowledge derived from studies of major oil spills in Japan, the east coast of America and the United Kingdom will be required.

3 The preparation and examination of evidence of this nature takes time, but it is only part of the job. To determine whether the risks are acceptable requires an appreciation of what those risks mean to different individuals and groups. This is not simply finding out how people react to the proposed project. What must be undertaken is the assessment, for each of the significant sections of the public, of the likely impact on them of the real risks they would be subjected to by tanker traffic.

Other serious issues raised by the proposal, such as the maintenance of air quality, the management of traffic conflicts and the amelioration of social and economic impacts of port construction and operation must be

sufficiently analyzed so that I can make appropriate recommendations as to how each of these problems can best be resolved. In this task the evidence of the experts in the formal hearings is not sufficient. To assess what are appropriate measures to lessen impacts affecting people in this province, I need the help and the evidence available only from the people themselves.

There are a number of areas in which the Canadian regulatory structure should be improved before a major new oil terminal is approved. Probably the most important single measure is the regulation of the safety and reliability of tankers permitted to call at Canadian ports. Administrative and legislative complications in the allocation of responsibility reduce the effectiveness of government response to oil spills. The evidence I have heard so far does not provide reassurance that containment and clean-up of oil spills could be relied on to avoid the catastrophic effects of oil spills.

Existing statutory schemes do not adequately provide for compensation of the many people and interests which would suffer injuries as a result of an oil spill. A comprehensive review of all aspects of oil spill damage and recovery should be undertaken to rectify this situation.

The management of air quality problems presented by a marine oil terminal requires the resolution of a jurisdictional conflict between the federal and provincial governments. Potentially serious air pollution is not being examined because of failure to resolve this dispute.

The experience I have gained so far from this Inquiry indicates that a period of about one year is required to hear evidence on the matters identified in my Terms of Reference and not yet dealt with. Considerable advance preparations have already been made for the resumption of hearings. The preparation of a report, following completion of hearings, would take a number of weeks. I cannot be more precise in my estimation of times because, as I have explained elsewhere in this Statement of Proceedings, I cannot dictate the exact content and timing if we are to have full and fair public hearings.

2. REGULATION OF EXISTING TANKER TRAFFIC

So far I have concentrated on the risks associated with the proposed Kitimat oil port and tanker traffic, and on the readiness of Canadian laws and agencies to deal with them. While I have stressed this hypothetical situation, an actual situation confronts British Columbia with present risks that far exceed those imagined when opposition to oil tankers was first voiced in the province in 1970. Since then, with the phasing out of Alberta exports to the Washington State refineries, the volume of crude oil carried in the Strait of Juan de Fuca and through the Gulf Islands to the refineries at Cherry Point, Ferndale and Anacortes has now reached levels that in 1972 were not forecast to occur until the year 2000. Currently the total oil traffic in the waters of the Strait of Juan de Fuca, Puget Sound and the southern portion of the Strait of Georgia is estimated to be 650,000 barrels per day -- nearly three times the 1970 figure. (Brewer, Exhibit 131, p.5). Of this total, over 300,000 barrels per day are brought by large tankers from Alaska, Indonesia and other offshore points to the Puget Sound refineries. The remainder comprises product shipments moving over Washington' marine waters and in and out of Vancouver. These total shipments involved approximately 1,130 transits of Juan de Fuca Strait by deepsea tankers in 1976. (Campbell, Exhibit 105, p.163).

These volume and transit numbers now exceed those that are proposed for the start-up of the Kitimat port and pipeline. Unless the apprehensions I have expressed concerning the Kitimat proposal are groundless, a dangerous situation now exists in the waters of southern British Columbia. I have been told at the preliminary meeting of the Inquiry in Victoria and at the community hearing at Sooke that

people are deeply concerned about these dangers. In the State of Washington the risk is perceived to be so great that transshipment facilities in waters east of Port Angeles have been forbidden by an Act of Congress. The firm opposition to new oil port facilities at Port Angeles has been expressed before this Inquiry by Clallam County where Port Angeles is located.

These concerns establish a need for immediate assessment of the present environmental, social and navigational safety aspects of tanker traffic into the Strait of Juan de Fuca and the waters of southern British Columbia. Since an increasing amount of this traffic is originating from Valdez and travels along the entire outer coastline of British Columbia, in the middle of our fishing zone, this assessment must encompass a broad geographic region.

If more were needed to establish that navigational safety and oil spill risk are an immediate concern, the record of the past six months speaks conclusively. At least four incidents involving oil tankers have been reported. First was a near collision between the tanker Arco Juneau and the seiner Silver Bounty in the fishing grounds at the entrance to the Strait of Juan de Fuca. Only a seine net was cut instead of loss of life. Second was a near collision between the tanker World Leader and a Washington State ferry Kaleetan near Anacortes. There was potential for serious loss of life and spillage of oil. In the third case the tanker Arco Sag River lost steerage in Rosario Strait. According to newspaper reports a grounding and major oil spill could not have been avoided had steerage not been quickly restored. The fourth incident involved a near collision between the tanker Arco Sag River and the U.S. Coast Guard cutter Modoc in the entrance to the Strait of Juan de Fuca.

It is not my intention to be an alarmist. But there is a tendency to lose sight of the existing tanker traffic problems owing to preoccupation with the superport proposals for Port Angeles and Kitimat. The issues which require examination from a Canadian viewpoint are where spills are most likely to occur and which Canadian waters and coastlines will be affected. We need a detailed look at contingency planning coordination between Canadian and United States authorities to determine whether prompt and effective containment and clean-up activity will occur. There is also the question of alternate measures to reduce the conflicts between traffic lanes and fishing grounds. Some of these issues are currently the subject of bilateral negotiations between Canadian and United States authorities. We were told in Phase I about the planning to establish a joint vessel traffic management system for the Strait of Juan de Fuca. Much more needs to be known before these matters can be fully assessed.

As to the oil spill risks, a great deal of information is available from sources in the State of Washington where public interest has been focussed on oil spill questions for as long as it has in British Columbia. With respect to contingency planning and traffic conflicts, various participants have carried out studies which will be presented to the Inquiry as evidence. Citizens from the Gulf Islands to Tofino have requested community hearings to express their concerns. I have been told by residents of the Queen Charlotte Islands that they wish to understand the full implications of the navigation tracks recommended for Valdez tankers so that they may assess the risks to which their coastline is subjected by the shipments of Alaskan crude oil.

Managing this existing oil traffic as safely as possible should be a matter of highest priority for Canada and the United States. If we are not now persuaded of this need, it is only a matter of time before a major oil spill will demonstrate it. Possibly the most acceptable solution is for this traffic to be phased out of the inner waters of the Gulf Islands and Puget Sound to the extent made possible by locating a major port at Port Angeles with pipelines carrying the oil to the Puget Sound refineries. This is an option that is available to government and regulatory agencies in the United States. Though opposed regionally, and imposing higher crude oil transportation costs than continuing the present system of tanker deliveries to Cherry Point, the Port Angeles proposal has many advocates in both Washington State and British Columbia who regard it as the preferred environmental choice. For example, Mr. David Anderson, appearing on behalf of the B.C. Wildlife Federation, has expressed strong support for the Port Angeles proposal.

When consideration of the existing traffic situation is combined with the fact that there is now a serious contender at Port Angeles in the Strait of Juan de Fuca as an alternative to Kitimat, it seems obvious that this Inquiry should assess the environmental, social and navigational safety concerns on the southern coast of British Columbia. This assessment can best be carried out in the context of an overall assessment of existing traffic and alternative port proposals. Port Angeles and Kitimat should be assessed side by side. Before the Government of Canada appointed me to conduct this Inquiry, I had publicly warned that we were drifting into a situation where there would be not one, but two, major oil ports affecting British Columbia's coastal waters. I had in mind Kitimat and Cherry Point. If we deal

piecemeal with the situations facing us, and do not assess the existing Cherry Point oil traffic, the Port Angeles proposal and the Kitimat proposal together as a set of alternative solutions, my warning will more likely come true, and oil spill risks and environmental and social impacts will not have been minimized.

3. IS A PORT NEEDED

This question was examined in Phase II of the Inquiry. When the hearing phases were planned last May it was assumed that the National Energy Board would be dealing with the Kitimat and Trans Mountain applications in the fall and that Phase II would be able to rely on evidence presented to the National Energy Board as a basis for estimating pipeline throughput and tanker traffic. In fact, Kitimat Pipe Line Ltd. asked to have its application "stood in abeyance" and the National Energy Board had not commenced hearings on the Trans Mountain application in October when the United States Congress ruled out that project by amending the Marine Mammals Protection Act. Consequently, the Phase II hearings were seen in many quarters as the only forum in which Canadian oil import policy could be canvassed and extensive evidence was presented.

I adjourned these hearings on November 9th after the Trans Mountain project had collapsed and it was unclear whether the Kitimat application would be reinstated. But I had already heard sufficient evidence to enable me to draw some basic conclusions about Canadian oil import policy and the need for a west coast oil port.

(i) Canadian Needs

(a) Forecasts

The basis of any oil import policy must be a forecast of future supply and demand. If Alberta crude oil production declines and this declining supply is not offset by increasing production of synthetic oils and heavy oils, by new discoveries of oil in the North and offshore, and by conservation measures, then increasing demand for petroleum in Canada can be met only by importing crude oil by tankers from other countries.

Many difficulties confront the forecaster. On the supply side he must predict price changes and their effects on recovery techniques and on the discovery of new reserves. On the demand side he must foresee the effects of economic slow-downs and of government-directed conservation measures. He must anticipate the trends that will dictate whether crude oil consumption will be decreased by the substitution of alternate energy sources.

In the face of these difficulties it is clear that forecasting is more of an art than a science. The most important thing to know about a particular energy forecast is its many policy assumptions, for future energy requirements depend in large measure on policy decisions at all levels of society; for example, policy on supply development, on pricing, on conservation standards. Most forecasters assess a range of future policies and provide low, medium and high forecasts.

In its last oil supply and requirements report (February, 1977), the National Energy Board forecast a need for new import capacity of 200 MB/D (thousand barrels per day) by 1985 and over 300 MB/D by 1990. In a submission to this Inquiry, witnesses from the Department of Energy, Mines and Resources presented this NEB and two EMR forecasts. As shown in Figure 1, the EMR forecasts indicate somewhat lower new import capacity requirements, with virtually no new requirements in a high supply case.

The differences in these forecasts result from different assumptions about the rate of development of synthetic crude oil. In effect the EMR witnesses were saying that with sufficient tar sands and other non-conventional crude oil development, Canada would not need new import capacity to meet its oil requirements. From a policy point of view, one could say that the government has a choice between more rapid synthetic crude oil development and an oil port. Either one would reduce or eliminate the need for the other.

Testimony at the hearings indicated that when these forecasts are next revised they will likely provide a more optimistic picture of the supply/demand balance. Recent oil discoveries in Alberta and dampened demand resulting from continuing economic recession and improving conservation practices may reduce the shortfall that would have to be met by new import facilities or more rapid synthetic crude oil development.

(b) Timing

Obviously Canadian refineries do not need west coast oil imports at this time. This conclusion is underlined by the fact that neither the Kitimat nor the Trans Mountain

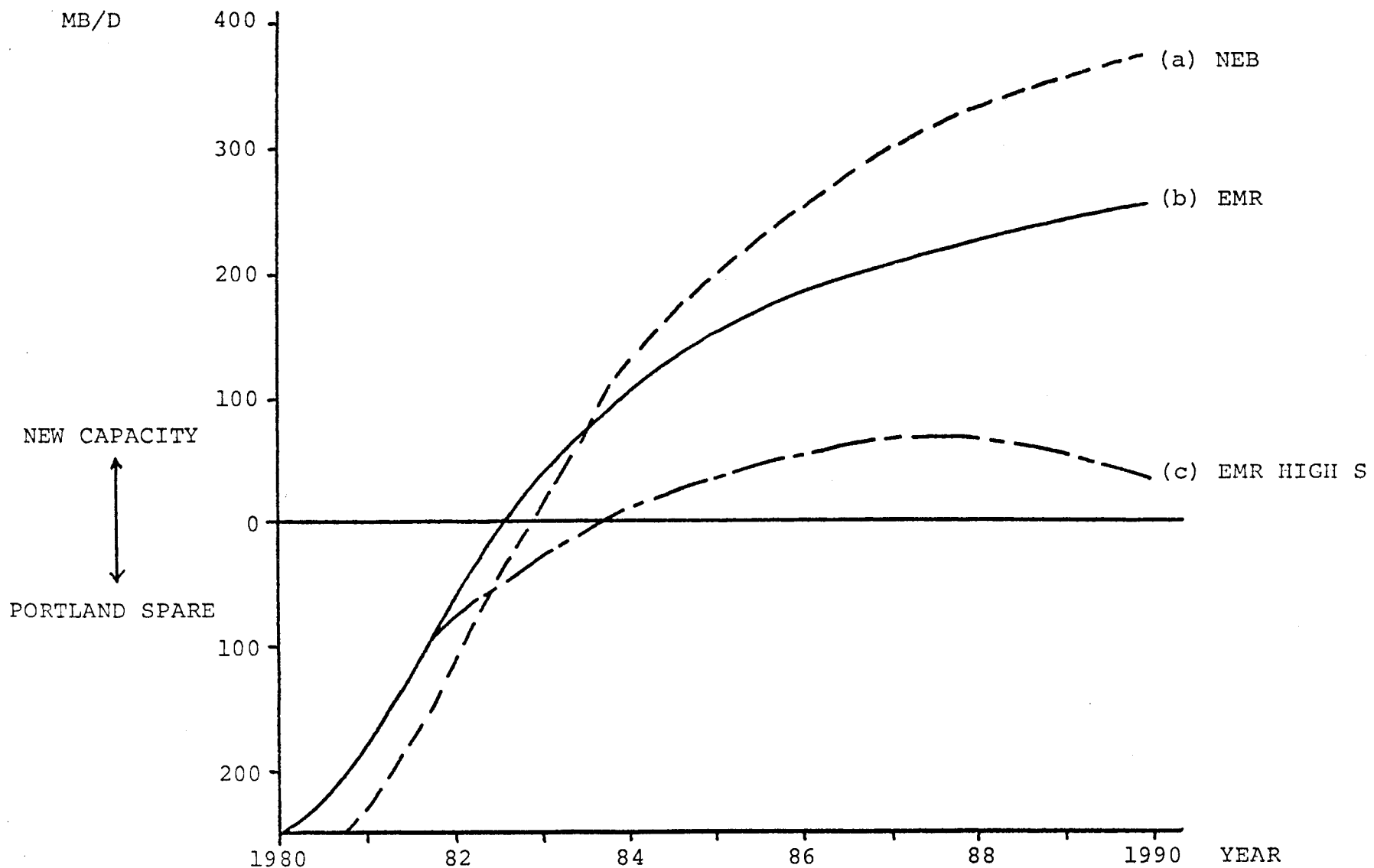


Figure 1. Summary/Comparison of Capacity Requirements: New Import Facility (Submission of the Department of Energy, Mines and Resources, Figure 5).

proposals included any Canadian demand in their throughput estimates for a west coast port. The only present Canadian advantage they cite is that the new port and pipeline would provide refineries in central Canada with access to west coast oil imports. Should a future need develop, this access could be the means of balancing Canada's crude oil requirements. Also, one should not forget that the Northern Tier proposal for a terminal at Port Angeles could also provide this access to west coast oil imports for central Canada. If a future Canadian need is established it will be appropriate to evaluate this Northern Tier option.

(c) Trade-Offs

But the witnesses testifying to Canadian needs were not at all convinced that a west coast oil port and pipeline would be the preferable way to meet a Canadian shortfall. The Kitimat proposal scored more negative indicators in the EMR directional analysis than any of the alternative port locations on the east and west coasts of Canada. With the collapse of the Trans Mountain proposal, first choice was expansion of the Portland, Maine port and pipeline to Montreal, followed by a new pipeline from the deepsea oil port on the Strait of Canso to Montreal, and new port and pipeline facilities at Saint John, New Brunswick or at Isle Verte, Quebec. The witness from Imperial Oil agreed that these alternatives might prove economically advantageous in comparison with a Kitimat port and pipeline.

Assessing the economic benefits of a west coast or east coast alternative, or, for that matter, of any new import facilities against alternatives such as stricter conservation measures or more rapid development of

synthetic oils, is a complex matter requiring the weighing of much data about the future costs and pricing of crude oil, transportation economics and security of supply considerations. The witness for the Department of Energy, Mines and Resources told the Inquiry it would require a year's time and one million dollars to carry out an economic analysis of the various port and pipeline alternatives.

For example, a new west coast port and pipeline has the substantial advantage of available surplus capacity in the existing system of Interprovincial Pipe Line Ltd. from Edmonton eastwards to central Canada. The reason Interprovincial is a member of the Kitimat consortium is that it wants to keep its pipeline filled. The question remains, who will benefit from this increased pipeline utilization? Such analysis takes time and is dependent on the availability of much data about transportation costs together with the ability to forecast future policies such as the principles which the National Energy Board will adopt in setting transportation rates. But there will be substantial savings if the Interprovincial system is used to capacity rather than left idle, and that is a benefit resulting from a west coast oil port and pipeline that should be quantified.

The analysis cannot stop there, for west coast imports may not be the only source of additional throughput for the Interprovincial system. The Parliament of Canada is now considering legislation to authorize subsidies for synthetic oils and to provide new incentives to encourage exploration and development of the northern and offshore petroleum lands. These policies are aimed at increasing the domestic supply of oil. To the extent they are successful, synthetic oil from Alberta and northern oil

from the Beaufort Sea could maintain throughput levels in the Interprovincial system. We are told that self-reliance in petroleum is a national goal. The central thrust of this policy is to encourage the development of indigenous sources of crude oil. The question is, would the competition of west coast oil imports impair this national strategy for self-reliance?

Another trade-off is that the building of a new port and pipeline on the west coast of Canada to increase the utilization of the Interprovincial system could result in under-utilization of existing pipelines in eastern Canada. At the present time both the Portland to Montreal and Sarnia to Montreal pipelines have extra capacity. In the latter case it will be Canadian taxpayers who carry the burden if this facility continues to be under-utilized, because this Sarnia-Montreal line is subsidized by the federal government. It is probable that this pipeline would be entirely unused if a west coast oil port were in use.

A benefit accruing to new port and pipeline facilities on the east coast of Canada at Canso, Saint John or Isle Verte is that they would bring transportation facilities within the reach of Atlantic offshore oil discoveries and of Arctic oil transported by tanker through Davis Strait. Oil stored underground in the Canso salt domes would have readier access to markets.

There are important political factors as well in choosing among alternatives. The Government of British Columbia fears that the establishment of a west coast oil port and pipeline would lead to national pricing or allocation policies that would divert Alberta crude oil from British Columbia refineries to refineries in central Canada.

Apart from such policies, the likelihood is that Alberta crude oil would supply British Columbia refineries for at least another twenty years. This Alberta supply is enormously advantageous to British Columbia because the Trans Mountain pipeline system is now in existence and the Lower Mainland refineries are designed to handle the sweet Alberta crude. Shifting to offshore crude would entail higher refining costs. Imperial Oil estimated the cost of converting Vancouver refineries to Alaskan crude to be over 400 million dollars. In the face of these prospects the position of the provincial government is that the National Energy Board should "hold hearings regarding a national oil allocation policy, including possible crude oil pricing mechanisms...."

On the east coast, the indirect benefits of new oil port and pipeline facilities may be viewed as sufficiently attractive to gain strong political support for a Saint John or Canso project, and quite likely the Quebec choice would be Isle Verte. These alternatives cannot be weighed strictly in economic terms.

A final concern in choosing among alternatives is the question of security of supply. This concern has already prompted the Government of Canada to subsidize a pipeline link between Sarnia and Montreal so that western Canadian crude oil can be delivered to that city if offshore supplies are curtailed. The question is on which coast of Canada is access to foreign crude oil more secure and less liable to interruption. One expert, Dr. Arlon Tussing, pointed out that, with the availability of Very Large Crude Carriers, the national security consideration of an east coast versus west coast alternative is no more significant than the extra time and cost of rounding the tip of South America.

(ii) United States Needs

(a) Forecasts

The immediate justification for the west coast oil port proposal is the need to find an alternate supply of crude oil for the refineries in the northern tier states now that Alberta supplies are being phased out as part of Canada's policy of self-reliance. Estimates of these northern tier needs in 1985 ranged between 200,000 barrels per day (Trans Mountain), 250,000 to 300,000 barrels per day (Ashland) and slightly over 300,000 barrels per day (Continental). For 1978-79, shortages in the order of 30,000 barrels per day of petroleum products have been forecast for the Montana area.

Beyond these needs, the United States utilization of a west coast oil port would depend largely on demand in the large Chicago market. If the establishment of a port at Kitimat were to make Alaskan oil available to refiners in the midwestern states at favourable prices, the demand could exceed one million barrels per day. That such penetration of the Chicago market is likely is evidenced by the recently announced amendments to the Kitimat proposal which call for an initial throughput of 500,000 barrels per day, reaching 700,000 barrels per day in five years. Proponents of the Port Angeles Northern Tier project have always included large sales into the Chicago market in their estimated throughput.

Certainly, once the investment in a new port and pipeline is made, economic considerations favour the incremental growth of that system rather than the beginning of any new system. At this time it is mostly speculation to predict how large the throughput at Kitimat might grow.

If, for example, the proposed Long Beach pipeline of SOHIO fails to meet approval by the State of California, if Alaskan oil throughput reaches its current potential of two million barrels per day to Valdez, and if the United States Congress continues to block the shipment of Alaskan oil to Japan, a Kitimat port, as the only deepsea oil port on the west coast of North America, could be expected to carry a throughput well in excess of one million barrels per day.

(b) Timing

Kitimat Pipe Line Ltd. and its backers have presented their project as requiring expedited decision-making; so much so that my Terms of Reference originally had a reporting deadline of December 31, 1977. If the inference of this haste was a spectre of unheated homes and gasoline rationing in the northern tier states, the evidence before the Inquiry did not support it. Rather, the case presented by the refiners Ashland and Continental was that there are alternatives to a west coast oil port for supplying the needs of the northern tier refineries. It is the choice among the alternatives that cannot be long delayed. In fact, Koch Industries Inc., a major Minnesota refiner, had already dropped from membership in the Kitimat consortium to pursue its alternative of building a new pipeline from Wood River, Illinois to link its St. Paul refinery with the transportation system from the Gulf ports.

The evidence convinced me that timing, in the sense of the need for an early decision about Kitimat, is pressed purely as a matter of commercial convenience to the proponents. Now that SOHIO has joined the Kitimat consortium a new kind of time constraint is added. When

the Alaskan oil throughput reaches 1.2 million barrels per day, SOHIO could have up to 53% of that oil, over 600 thousand barrels per day, to sell. Under the terms of the Trans-Alaska Pipeline Authorization Act, that oil must be used in the United States. It is now being shipped from Valdez and must quickly find its way to mainland refineries. The Puget Sound and California refineries can take only 500,000 to 600,000 barrels per day of the total Alaskan throughput. For the surplus there is no transshipment facility on the west coast and shipping through the Panama Canal, while profitable, is not economic in comparison to a west coast port and pipeline alternative. It is easy to understand why SOHIO is backing both the Long Beach and Kitimat proposals. It needs one and possibly both. For SOHIO, the sooner decisions are made, the better.

It is also the policy of the United States Department of Energy, of the State of Alaska and of the northern tier states, to seek a west coast transshipment facility for Alaskan crude oil, both to maximize its value and to make it available in the crude-deficient regions. There is before Congress, as part of the so-called "energy package," an expediting measure that would impose time limits on the decision-making processes of federal government agencies, the courts and Congress itself, so as to accomplish an early approval of a west coast oil port. In this legislation, Kitimat is seen as a suitable alternative along with the Long Beach and Port Angeles proposals.

From a Canadian point of view, this pressure to market Alaskan crude oil must also be seen mainly as a matter of commercial convenience. It is clearly not a matter of pending shortages justifying emergency or even expedited

action by Canadian government and regulatory agencies. There is no reason not to pursue all the studies, investigations, reviews and hearings that are necessary in Canada to ensure the wisest choice.

(c) Alternatives

For both problems -- needs in the northern tier and surplus Alaskan crude -- there are short term and long term alternatives.

The Ashland and Continental witnesses outlined the various ways in which they could find alternative supplies for their refineries. Nor was there any suggestion that products such as heating oils and gasolines could not be brought into their refinery regions if they experienced shortages of refinery stock. In the longer run, some of the northern tier refineries might find their supply from crude oil fields in Montana and Wyoming. Others could make connections like the Wood River line to acquire Gulf port supplies.

At the political level there is an obvious short term alternative that has been under discussion for some time between Canadian and United States officials. It involves crude oil exchanges whereby delivery of Alberta crude to the northern tier refineries would be continued by Canada in exchange for offsetting supplies delivered to Montreal through the Portland, Maine pipeline. The difficulty is that the United States does not have domestic supplies available to make this trade and Canada is reluctant to commit its secure Alberta oil in exchange for offshore oil. But discussions are continuing.

The short term solution to the Alaskan surplus problem is already operating. It is to ship oil via the Panama Canal. At the political level both short term and long time solutions lie in shipping Alaskan oil to Japan.

Finally, there are the alternative port and pipeline projects at Long Beach and Port Angeles which are expressly designed to take up the Alaska surplus. Like Kitimat, the Port Angeles project would also supply the northern tier refineries. The SOHIO witness stated that his company supports both the Long Beach proposal and one or other of the northern projects. Now that SOHIO has joined the Kitimat consortium, it will throw its weight behind Kitimat rather than Port Angeles.

(iii) Canada/United States Relations

The decision of SOHIO to participate in the Kitimat project clearly establishes that project as a facility for the marketing of Alaskan crude oil. According to public statements by officers of Kitimat, 80% of the expected throughput of 700,000 barrels per day would come by tanker from Alaska for transshipment to the American markets. Difficulties in obtaining approval and limitations to expansion in California suggest that Kitimat may, in fact, be eventually used as the major oil terminal on the west coast of North America. So characterized, Kitimat must be seen as a major element of a continental transportation system linking the Canadian and United States energy systems even more closely together.

If Kitimat is to become a major North American oil port moving Alaskan oil to U.S. markets it would be placed under the Canada-U.S. Transit Pipeline Treaty brought

into force October 1st, 1977. That treaty is based on two basic principles, uninterrupted transmission of hydrocarbons and non-discrimination.

In the treaty each nation has agreed that it shall not impose any fee, tax or other monetary charge for the use of a pipeline transmitting American hydrocarbons unless it also charges such fee or tax to similar pipelines in its own country. But the establishment of an oil port at Kitimat would almost certainly require large public expenditure on navigational aids, traffic management, oil spill clean-up equipment, additional monitoring staff and so forth. It appears that, although these costs would be solely attributable to an oil port constructed for the benefit of American oil consumers, they would have to be paid entirely by the Canadian taxpayer. One need only recall that the United States objected to paying the \$200 million fund recommended in the Lysyk Report to compensate the Yukon for the socio-economic impact of the Alaska Highway natural gas pipeline on the grounds that such a payment was contrary to the treaty.

A protocol under the treaty would likely provide for a prorationing of the facility in the event that the demands on the system should at some time in the future exceed its capacity. Careful negotiation would be required to ensure that a Kitimat port and pipeline would continue to serve Canadian needs in any emergency.

Nevertheless, if a continental approach to crude oil transportation is the desirable direction of Canadian energy policy then Canada might well serve its best interests by agreeing to an American timetable for Kitimat even though its own needs for imported crude oil are more distant. But energy needs cannot alone determine

whether to proceed with Kitimat. Should the oil spill risks be judged too great, the Americans could not regard the refusal of a port at Kitimat as an unneighbourly act. They have already recognized the right of their own citizens to refuse an oil port on the grounds of excessive oil spill risks when Congress passed the amendment to the Marine Mammals Protection Act ruling out transshipment port facilities in Puget Sound.

(iv) Conclusions

My conclusions are that:

- *There are no present Canadian oil supply needs for a west coast oil port.*
- *Should forecasts establish a potential shortfall in meeting future Canadian oil requirements, it is a complex question, requiring careful study, whether importing offshore oil is the preferred strategy for dealing with this shortfall as compared with alternatives such as incentives for synthetic and frontier oils or stricter conservation measures.*
- *If offshore imports are required to meet Canadian requirements, it is an equally complex question whether new port and pipeline facilities should be established on the east coast or the west coast of Canada.*
- *The United States has ways alternative to Kitimat, both short term and long term, of dealing with the crude oil shortages of the northern tier states and the surplus Alaskan oil production.*

- The Kitimat proposal is only one of three projects expressly designed to deal with the United States needs. If the Port Angeles proposal is approved, the Kitimat proposal would not proceed. If Long Beach is approved, while it would not necessarily eliminate the Kitimat proposal, it could reduce the pressure to build Kitimat in order to resolve the Alaska surplus problem.
- If the desirable Canadian policy is to participate in a continental oil transportation system then Canada is caught up in the American timetable for decision-making.
- Even if the desirable Canadian energy policy is to construct an oil port at Kitimat, this project should be rejected if the oil spill risks are too high, just as the Americans have rejected Puget Sound locations for transshipment port facilities.

IV. WHERE DO WE GO FROM HERE?

To quote Dr. William A. Brewer, head of the Washington Energy Research Center:

The key to prevention of long-term environmental damage from the oil trade remains in the realm of facility siting. Where there is no oil there can be no pollution; where there is oil there will be pollution.

The coastal residents of British Columbia do not use those terms. They will put it more bluntly: "Why us? Why our shorelines? Why should we put our islands, our inside passages, our bays and our beaches at risk?"

Is it an answer to say that our neighbours to the south need the oil for their landlocked refineries? That answer has a hollow ring when they, themselves, refuse to submit their coastline to these risks.

Is it an answer to say that refineries in central Canada will someday need the oil? Maybe. British Columbians are Canadians. But even if they are shown that all the possibilities of conservation, alternate energy resources and alternative transportation systems have been assessed, and that the west coast is the preferred site for an oil port, they may still insist that protection of coastal resources is paramount.

We have seen such a choice recognized in the north where the National Energy Board and governments in Canada and the United States all agreed with the findings of the Berger Report that the north slope of Alaska and the Yukon is too environmentally sensitive to bear a pipeline crossing. This route was rejected though it was the

preferred economic choice for a corridor to deliver Prudhoe Bay and Mackenzie River Delta gas to southern markets.

It should be remembered that in the case of the natural gas pipeline the federal government had announced the Expanded Guidelines for Northern Pipelines in 1972, which designated a corridor across the northern Yukon and up the Mackenzie River valley as the chosen route. Industry then spent millions of dollars in the assessment of this route and in the design of a pipeline only to find, after five years, that environmental and social impacts ruled out the project. An Alaska Highway alternative was then approved.

There is now an unwillingness on the part of industry to develop a major project to the brink of approval only to have it totally cast aside by government at the last moment. More systematic planning and approval systems are required.

It is clear from the evidence so far received in this Inquiry that the environmental, social and navigational safety impacts of a west coast oil port present issues of the kind by which projects stand or fall. It is therefore essential that these issues be dealt with from the beginning of the assessment process. We do not want another experience in Canada where industry is given a policy by government indicating that a proposal meets national energy needs only to have a fully developed project collapse in the end because environmental and social impacts were not assessed at the proper time. In the case of the Kitimat port and pipeline, the applicants must not back away from the reality that their proposal is a major development requiring a thorough and complete

assessment of environmental and social impacts. On the other hand, they are entitled to be told by government either that their proposal is now premature and will not be considered for a number of years, or that it will receive serious assessment from all public interest points of view in a straightforward and systematic way.

1. THE NEED FOR AN OIL PORT

In the case of assessing the need for an oil port, the course of action is obvious and the first step has recently been taken. The Honourable Alastair Gillespie, Minister of Energy, Mines and Resources, announced last month that he has instructed the National Energy Board, pursuant to s.22(2) of the National Energy Board Act, to undertake a review of Canada's future oil import needs and to advise as to the:

range of possible oil supply situations over the course of the next 10 to 15 years and the import dependence which might develop for British Columbia consumers as well as for eastern Canadians. When significant imports are required your views on the size, location and timing of petroleum ports of entry are requested.

The need for a Canadian oil import policy was made clear by government and industry witnesses before the Inquiry who stated that the application for a Kitimat oil port and pipeline must not be viewed in isolation from the overall questions of future demands for crude oil and alternative means of satisfying these demands. In their submissions to the summing-up session of the Inquiry in December, Commission Counsel, counsel for the government of British Columbia, and Mr. Cressey, speaking for Kitimat Pipe Line Ltd., all argued that the National Energy Board should undertake an oil import policy review.

In directing the Board to do so, Mr. Gillespie made particular reference to the concerns expressed by the Honourable Jack Davis on behalf of British Columbia that the establishment of a west coast oil port could have the effect of depriving the province of crude oil from Alberta at great cost to B.C. consumers.

I have already discussed the difficult issues that should be addressed in this policy review. Mr. Stabback, Chairman of the National Energy Board, has announced hearings commencing May 24, which are planned to last some six or eight weeks, with a report delivered to Mr. Gillespie by the end of September. On the basis of the evidence presented to me, I am concerned that an oil import policy hearing completed on this tight schedule will lack complete and comprehensive submissions.

At the request of Commission Counsel, experts in the Department of Energy, Mines and Resources undertook a "directional analysis" comparing possible port sites on the east and west coasts at Canso, Saint John, Portland (Maine), Isle Verte, Cherry Point (Washington) and Kitimat. These EMR witnesses were frank to say that this analysis led to no particular conclusion as to preferred port locations. When asked what would give some conclusiveness to this study, the response was that it would take a million dollars and one year to compile and analyze the required quantitative data.

Yet the timetable announced by Mr. Stabback allows only three months for such studies. Other policy questions require equally complex analysis. Since the outcome of this hearing will affect all Canadians, it is essential that all provincial governments as well as industry and private citizens have ample time to prepare submissions

for the Board. Nova Scotia, for example, should have time to develop a case for the increased utilization of the existing deepsea oil terminal at Canso by linking it by pipeline with the Montreal market.

The rushed timetable also means that the new oil discoveries in the west Pembina region of Alberta will not be adequately reflected in the supply/demand forecasts, because it is generally several years before reserve additions from new discoveries are fully credited to supply calculations. As well, it may not be known whether next summer's drilling season in the Beaufort Sea will indicate major new oil reserves.

I am not aware of any interests that would be served by rushing these hearings other than the interest of the applicants for the Kitimat port and pipeline and the interests of the United States Congress and government in obtaining an early decision about west coast alternatives for dealing with the Alaska surplus crude oil problems. The "energy package" which President Carter is asking Congress to enact includes a bill calling for an expedited schedule for decision-making by all federal agencies involved in the question of west coast ports. Kitimat is expressly mentioned as an alternative to be considered. This schedule requires reporting by the agencies in December of this year and a decision in February, 1979. If the impetus for speedy NEB hearings is the need for the Government of Canada to be prepared with an answer when the United States reaches its expedited decision next February, this reason should be acknowledged so that all aspects of the Canadian regulatory processes can proceed with this deadline in mind.

Because of the rushed timetable, the oil import policy hearings may well be inconclusive in terms of energy needs and means of supplying them. There will be little new information or detailed study. It would not be surprising if the outcome merely indicated a need for further studies before the location of an oil port can be decided one way or the other. That would leave the way clear for whichever applicant first presents a technically and financially feasible oil port proposal.

I have another concern about the oil policy hearings. In choosing between alternative oil transportation routes, the economic differences may be quite small and indecisive. Other considerations of a more social and political nature may constitute the paramount issues, but these are not appropriate ones for a quasi-judicial body like the National Energy Board. The oil policy hearings are important, but it should not be assumed that they will provide clear cut answers to the questions of location and timing of an oil port.

2. THE UNFINISHED AGENDA OF THE INQUIRY

The Inquiry was established in March, 1976. A round of preliminary hearings together with administrative organization, including funding arrangements for participants, occupied the first three months. Formal hearings commenced in July, as did community hearings. But progress was delayed because of the withdrawal of the Kitimat application and the need to amend the Inquiry's Terms of Reference to include specific reference to the Trans Mountain proposal.

Consequently, the Phase I hearings did not get underway until the last week of September. In the 6-1/2 weeks before the adjournment of the formal hearings the Inquiry

sat for thirty days. About one quarter of the planned agenda for the Inquiry was completed, but at a pace which pressed all participants, perhaps unfairly. Phase I covered the background of international, federal and provincial laws and regulations which would govern the establishment, construction and operation of a marine terminal and tanker traffic system. Phase II covered the supply/demand issues which underlie the need for a west coast oil port. It was this phase that was interrupted when I decided to adjourn the hearings.

At the time of adjournment the unfinished agenda included the marine operations phase, the environmental impact phase, the fishing industry impact phase and the socio-economic impact phase. In addition, community hearings had been held only at Steveston, Mount Currie and Lillooet on the Fraser River system and at Sooke on the Strait of Juan de Fuca. During the summer a special community hearing had been held at the Namu fish camp.

This recital of the Inquiry hearings and of the unfinished agenda demonstrates that, while the background laws and regulations have been examined, the environmental, social and navigational impacts of the proposed Kitimat port and pipeline and of the existing tanker traffic in the Strait of Juan de Fuca have not been assessed. Nor have citizens in the central and northern portions of British Columbia had an opportunity to present evidence or make submissions. The next formal hearing phases were scheduled for Prince Rupert and Kitimat, and a series of central and northern community hearings were planned for the months of January, February and March. All these were postponed by the adjournment.

In consequence, while the Inquiry staff has commissioned a number of environmental and socio-economic studies and has been briefed by experts from government and private industry on marine transportation and navigational safety issues and on oil spill risks and clean-up measures, the fact remains that the Terms of Reference I was given have not been carried out. The work of the Inquiry is incomplete, though a substantial background has been established and preparation for the continuation of the hearings is much advanced.

In January Kitimat Pipe Line Ltd. announced that it is renewing its application. Now that we have a serious port and pipeline proposal, the obvious place to go from here is to complete the Inquiry so that the Government of Canada will have an answer to the question whether the risks of a west coast oil port are manageable. The government must also be advised as to how best to regulate a Kitimat oil port and what terms and conditions should be applied to the existing and future tanker traffic affecting British Columbia.

This conclusion begs two major questions. Is an Inquiry of the type I am conducting the best way to carry out this assessment? Should this Inquiry be reactivated now?

3. WHY AN INQUIRY?

This Inquiry was established by the federal government under the Inquiries Act because of a public insistence, with which it agreed, that the issues of a west coast oil port are too important to be decided behind closed doors within the bureaucracy. Before I was appointed, the government properly decided to provide intervenor funding

in order to ensure effective public participation. That the proceedings would be adversary in tone was fore-ordained by the polarization of public opinion in British Columbia about oil ports.

Public hearings are what the Inquiries Act is all about. The concept is that an independent person will be given the powers of a Supreme Court Judge to conduct an inquiry free of government control in which the relevant facts will be presented by witnesses who will be cross-examined by parties who may be adverse in interest. In the case of a major project like an oil port it is expected that the proponent, who is applying to the government for the grant of special privileges, will have completed all the studies, prepared all the reports and presented all the witnesses necessary to satisfy the Commissioner, after questioning and argument by those opposed, that the project is in the public interest. Because the regulation of marine traffic and terminals is a government responsibility, government departments are also in a sense on trial to convince the public that they are able to discharge the duties given them.

It is an open process; it cannot and should not be precisely programmed in advance by either the Commissioner or the government. It can be lengthy and it can be expensive. If it works, the government and the public will be more reliably informed when the time comes for decisions; citizens should have a sense that they have been involved, that their views have been considered and that government works for them. It is individual and collective initiative, not passiveness, that makes society work.

4. RELATIONSHIP WITH THE NATIONAL ENERGY BOARD

The jurisdiction given in Canada to the National Energy Board by the National Energy Board Act is to recommend to the Federal Cabinet the granting of a Certificate of Public Convenience and Necessity for a proposed pipeline having regard to:

- "(a) the availability of oil or gas to the pipeline...;
- (b) the existence of markets, actual or potential;
- (c) the economic feasibility of the pipeline....;
- (d) the financial responsibility and financial structure of the applicant, the methods of financing the line and the extent to which Canadians will have an opportunity of participating in the financing, engineering and construction of the line; and
- (e) any public interest that in the Board's opinion may be affected by the granting or refusing of the application."

Under its legislative mandate the National Energy Board reviews economic and technical matters concerning pipeline construction and operation and then regulates the use of the pipeline. While the National Energy Board can give consideration to "any public interest," it has not been in the Board's tradition to make broad ranging assessments, based on environmental and social impacts. Nor does the make-up of the Board's staff suggest it will be able to give equal weight to environmental and social considerations as to economic and technical ones. In the public mind, in any event, the National Energy Board has

not established credibility in terms of carrying out broad ranging environmental and social impact assessments. Further, there is some disagreement as to whether the Board should discharge policy-making functions in addition to its main role as a quasi-judicial regulatory agency.

There is another factor which explains the inter-relationship of this Inquiry and the Board. The Board's jurisdiction must be exercised in the context of granting or refusing an application for a Certificate of Public Convenience and Necessity for a pipeline proposal. The Board has recently considered the limits to its jurisdiction in its approval of the Tenneco LNG application in New Brunswick. It ruled that in spite of "some uncertainty about the safety aspects of marine operations," these factors "do not come under its jurisdiction." (National Energy Board Reasons for Decision, November 1977, p.14-2). In this Inquiry, as I have previously explained, the proposed pipeline is to service a new deepsea oil port, which is at least equally a matter of public interest as is the construction of a new pipeline.

No matter how thorough the NEB hearings are, they cannot be a substitute for this Inquiry. Neither the tradition and expertise, nor the legislative mandate of the Board lends itself to the type of complex socio-economic and environmental assessment that is required if the government is to have all of the issues examined. Plainly stated, the Board's expertise has centred on energy issues and the technical aspects of pipelines. In the case of the proposals for a west coast oil port it is the marine aspects that are of greatest public concern. These concerns are not technical and financial only, but are general concerns about environmental and social

consequences. They centre on the marine environment -- an environment which the Board has found to be outside its legislative jurisdiction.

5. RELATIONSHIP WITH THE TERMPOL COORDINATING COMMITTEE

p On December 5, 1976, Kitimat Pipe Line Ltd. filed its six-volume TERMPOL Submission with the Ministry of Transport to show compliance with a draft code of recommended standards for the prevention of pollution in marine terminal systems (TERMPOL Code). This draft code provides an orderly means of evaluating a proposed marine transportation system in terms of navigation and pollution risks and the potential environmental impact of such risks. It was developed through the cooperation and expertise provided by a number of federal government departments including the Ministries of Transport and of Fisheries and the Environment. It is a voluntary review process and the Kitimat Pipe Line Ltd. proposal was its first submission.

A TERMPOL Coordinating Committee was established to prepare an assessment of the proposed marine terminal system based on the data provided. The time for completion of the assessment was limited to four and a half months from the date the submission was received from Kitimat Pipe Line Ltd. As is noted in the assessment, "the time frame allotted for completion of the assessment has controlled to a considerable degree the detail and nature of the report." (TERMPOL Assessment, p.1-5).

The TERMPOL Assessment performs the same function for this Inquiry as the written application and the deficiency letters do for the National Energy Board. The substantial TERMPOL documentation brought together in a systematic

way a great deal of the known data and analysis concerning navigational safety, oil spill risk, containment and clean-up, and environmental and social impacts of the operation of a deepsea oil port at Kitimat. The TERMPOL Assessment can be likened to the review of an application carried out by the staff of the National Energy Board, and the assessment, itself, to an elaborate deficiency letter setting forth the views of the working group authors as to the completeness or otherwise of the written materials. In fact, a lengthy deficiency letter was sent to Kitimat Pipe Line Ltd. by the TERMPOL Coordinating Committee dated February 25, 1977, listing some 46 questions. The TERMPOL Assessment, which was published in May, 1977, incorporated answers provided by Kitimat Pipe Line Ltd. to many of these questions, but many others, some of great significance, remain unanswered.

A review of the TERMPOL Assessment leaves one with great uncertainties as to the impacts of a deepsea oil port at Kitimat. In many instances critical data are missing. For example, even basic documentation about the fishery resources in the coastal waters which the tankers would ply was unavailable. The TERMPOL Assessment itself called for more information about hydrographic tidal currents and identified deficiencies in the meteorological information. The matter of aids to navigation, and particularly of vessel traffic management, required extensive further studies to determine types of systems to be initiated. In terms of the risk of oil spills from collisions or groundings, a great deal of information was compiled dealing with navigation problems, traffic management, wind, waves and tides, ship speeds and maneuverability, and ship accident data, and this was analyzed through a mathematical modelling technique to calculate the probability of collision and to assign a risk probability factor for

oil spills. It was a brave attempt to quantify risk factors in the operation of a complex system with necessary data often scant and in incompatible forms.

With respect to the containment and clean-up of oil spills, the TERMPOL Assessment could not be complete until Kitimat Pipe Line Ltd. developed a series of both major and minor oil spill scenarios, and this the company had not yet done. The company had also failed to provide an adequate contingency plan for dealing with oil spills. As to socio-economic effects, the TERMPOL Assessment could conclude only that the information was not of sufficient scope to measure these impacts.

My intention in identifying these limitations of the TERMPOL Assessment is to emphasize that at the time when the assessment was completed in May, 1977, there were substantial gaps in the information made available to TERMPOL. It had been assumed that these gaps in information would be supplied by the proponents through witnesses and documentary evidence presented to the Inquiry in the phases dealing with marine transportation, oil spills and environmental and social impacts.

Now that Kitimat Pipe Line Ltd. has renewed its Kitimat proposal, the remaining deficiencies listed in the TERMPOL Assessment must be answered. I expect that the TERMPOL Coordinating Committee will wish to take a new look at the revised Kitimat proposal. Since the revived proposal is different in scope from the original, it may be that the TERMPOL Coordinating Committee will conclude that a new or revised TERMPOL submission will be required or that further deficiencies need to be stated. It is assumed that any new TERMPOL Assessment and the responses to deficiencies would be available as basic documentation for the Inquiry.

TERMPOL has been a valuable tool in collecting and assessing the technical information currently available. But TERMPOL is an "in house" government assessment and does not allow for a comprehensive public review of the information. It is also a voluntary programme that cannot compel the production of evidence or undertake independent studies. The role of this Inquiry is to examine the TERMPOL Assessment and ensure that this assessment is evaluated and tested as rigorously as any other government or independent study.

6. RELATIONSHIP WITH ENVIRONMENTAL ASSESSMENT AND REVIEW PROCESS (EARP)

It has been suggested in some quarters that another alternative to a public inquiry is to conduct a review under the federal government Environmental Assessment and Review Process (EARP). Whatever the benefit and advantages of EARP it is not an alternative to a comprehensive and independent inquiry.

EARP is designed to review projects that have been initiated by federal government departments or involve federal lands or money. These projects normally arise within the existing policy framework and are therefore often seen as having been approved in principle. The issues are essentially mitigative and the viability of the project itself is not at stake.

There are also other serious limitations to the use of EARP. Though there is now provision for non-government personnel to join the EARP panel, the process is essentially government run and government controlled. It is still government officials, bound by government policies and subject to budgetary and other government constraints,

who are being asked to examine and evaluate the issues. These involve not only industry proposals involving federal lands or monies, but the ability of their fellow government officials (many co-workers in the same department) to carry out the responsibilities given to them. Nor is there reason to believe that EARP is speedier or any less costly than an inquiry, when all the indirect costs are taken into consideration. It is noteworthy that the EARP panel established by the federal government to review the environmental impacts of the Alaska Highway natural gas pipeline has not yet completed its work, though decisions to proceed with the pipeline have long been made. Also, it is essentially an environmental review panel and would not be in as effective a position as this Inquiry to take a comprehensive view of the social, navigational and other such aspects in addition to the environmental consequences. This "fractionalizing" of the total problem into separate review processes could result in a serious underestimation of the total impact. The Inquiry is uniquely in a position to undertake this comprehensive review.

7. REACTIVATION OF THE INQUIRY

The question of whether this Inquiry should now be re-activated involves both matters of principle and time factors.

The really serious issues facing the Government of Canada that will ultimately determine whether a Kitimat oil port is acceptable or not are the environmental and social ones. These issues are the ones now stalling the Long Beach proposal in California; they are what compels United States observers to predict that the Northern Tier proposal for a pipeline and port at Port Angeles cannot

clear regulatory hurdles and lawsuits for three or four years; and these issues collapsed the Trans Mountain, Cherry Point project. Even if they were only equally as serious, logic requires that we address both the energy issues and the environmental and social issues simultaneously.

Some have said that we should not begin to assess the environmental and social impacts of a west coast oil port until energy policy-makers decide we need such a port. It is equally logical -- and in this case more appropriate -- to say that the government should not consider the energy issues related to a west coast oil port until a full inquiry concludes that the environmental and socio-economic risks are acceptable.

When it was argued at the summing-up session of the Inquiry that the need for a west coast oil port should be addressed by the National Energy Board in a major policy hearing, no one suggested that this Inquiry should be delayed until the completion of the policy hearing. To the contrary, most participants, including the Government of British Columbia, have publicly stated that the Inquiry should continue.

As a matter of principle, the environmental inquiry and energy policy assessments should proceed simultaneously, as was originally envisaged. In that way the Government of Canada can be assured that it will have before it all the information it will need to make an informed decision. If the government were to approve in principle the concept of a west coast oil port because of certain energy benefits, one could not expect that the government would thereafter listen to Inquiry findings and recommendations with an open mind.

As to the time factors, if the National Energy Board proceeds with its oil import policy hearings on the schedule its Chairman has announced, the government could be faced with pressure to make a decision about Kitimat within twelve months. Mr. Stabback has said that the Board's policy review will be presented by the end of September. It may well be inconclusive about the need for a west coast oil port for the reasons I have previously given. In this case Kitimat Pipe Line Ltd. will ask the Board, as it has a legal right to do, to commence hearings on its application for a Certificate of Public Convenience and Necessity to build the Kitimat pipeline. A hearing by the Board centred on this issue will deal mainly with the engineering, economic and financial feasibility of the pipeline, can be completed in four or five weeks, and will likely result in a decision favourable to the applicant. Unless the Board, in its oil import policy review, has ruled out a west coast oil port as against the public interest, the decision of the Board granting the Certificate of Public Convenience and Necessity to Kitimat Pipe Line Ltd. will likely be before the federal cabinet for approval by December of this year.

It is not surprising that in its press release of January 10, announcing that it was joining the Kitimat consortium, SOHIO stated as its final reason for joining the Canadian project rather than the Northern Tier project in the United States that:

We believe at this time that the Kitimat project has the best prospects of obtaining regulatory approval in a timely fashion.

The dilemma which now faces the Canadian government is that if it delays proceeding with an environmental, social and navigational safety assessment of the Kitimat

project until after the National Energy Board's oil import policy report, it will either have to compress this assessment into a three- or four-month time frame or it will have to place the applicant, Kitimat Pipe Line Ltd., in the position where it will not know its fate until a full environmental, social and navigational safety assessment has been completed a year or more later. *What British Columbia residents fear is that the Canadian government, under pressure from the United States government, will not wait for a full environmental, social and navigational safety assessment, but will make a decision approving the port and pipeline before the assessment has been completed, as has been the case with the Alaska Highway natural gas pipeline. This would mean that the concerns of British Columbians about the risks of oil spills would have been given short shrift. The need for an oil port, though inconclusively determined, would have carried the day without the risks ever having been assessed. Such an outcome is not the kind that binds the country together.*

Even if these time factors could be ignored and sufficient time allowed for a full environmental inquiry after the NEB report, it does not follow that it is wasteful to proceed now with this Inquiry. The information we gather about coastal resources, oil spill dangers and clean-up systems is all needed now to improve our ability to deal with the existing oil tanker traffic and oil spill risks. Furthermore, an Inquiry beginning in the fall of 1978 would undergo the expense and delay of a fresh start; the experience of this Inquiry and the extensive preparations for the next phases of the hearings would be lost.

The applicant, Kitimat Pipe Line Ltd., is entitled to better treatment. If the Inquiry is not reactivated until next October or November, and must take three months to reorganize with new staff and new participants, it cannot have a report ready for the government until February or March, 1980. That is two years from now. Project development would be at a standstill during this time because Kitimat Pipe Line Ltd. knows that the really important issue it is confronting is whether its project is environmentally acceptable. It is entitled to know its fate at the earliest moment. Mr. Jack Cressey, now President of the company, stated in a submission to the Inquiry that

...we must encourage the regulatory agencies and governments at all levels to speed up the decision-making processes in order that industry can tell in advance what the monetary and time costs will be in business undertakings. It is, of course, necessary to ascertain the facts in order to make informed decisions. What we recommend is that we utilize existing agencies wherever possible in order to avoid costly education processes for new staff in highly technical matters. (Cressey, vol.30, pp.5333-5334).

The people of British Columbia are also entitled to better treatment. They are prepared to deal with the issues now. Already they feel victimized by the on-again, off-again nature of the Kitimat proposal. They have made it clear in public meetings that they do not want the Inquiry postponed.

There is a final compelling reason why the Inquiry should immediately resume hearings. Only if the hearings are resumed now can Canada be ready with a response when the United States deals with the issue of west coast oil ports early next year.

At the time I met with the Ministers in November to discuss my adjournment of the hearings, it was agreed that if the application of Kitimat Pipe Line Ltd. was reinstated following the collapse of the Trans Mountain project, either I or they could reactivate the Inquiry. We would discuss the questions of timing and funding. The new application announced by Kitimat Pipe Line Ltd. is a serious one. It now has the backing not only of major United States refiners, Ashland and Continental, and of the largest Canadian oil pipeline company, Inter-provincial Pipe Line Ltd., but also of SOHIO, the largest producer of Alaskan oil. This consortium has announced that it has a four million dollar budget to ensure that its application will be taken seriously.

In my opinion the Inquiry should be reactivated as soon as possible.

Some Explanations

I. THE INQUIRY

1. THE PORT AND PIPELINE PROJECTS

Until very recently, the crude oil requirements of west coast refineries in Canada and the Pacific northwest of the United States were met with Alberta crude oil shipped via the Trans Mountain pipeline system, supplemented by occasional small tanker deliveries into Puget Sound or Burrard Inlet. While the era of supertankers brought mammoth ships to the ocean lanes of Europe, Asia and Africa, they had not yet carried their cargoes along the western shores of North America.

Following the oil embargo in 1973, and concerned about the peaking of production in Alberta fields, the Government of Canada, through the National Energy Board, initiated a phasing out of exports of Canadian crude oil to the United States. This phasing out is well underway and exports of Alberta crude to the Puget Sound refineries have been reduced to a trickle.

To replace this oil, tankers in the class up to 125,000 DWT are now bringing crude oil from Alaska and Indonesia through the Strait of Juan de Fuca and the Gulf Islands to the docking facilities of the Puget Sound refineries.

The phasing out of Canadian exports of crude oil is also affecting refineries in the northern tier states, from Montana to Minnesota, which are dependent upon Alberta crude oil. Now they, too, must find alternative sources of supply.

Meanwhile, large reserves of crude oil had been discovered in the late 1960's at Prudhoe Bay on the north slope of Alaska. After prolonged hearings and much controversy, the United States decided that this oil should be delivered through a new pipeline which would cross Alaska from the north slope to a new deepsea port at Valdez. This Alaskan pipeline and port have now been constructed and crude oil is being delivered by tankers to refineries in California and through the Panama Canal to refineries on the Gulf of Mexico. Export of this crude to foreign markets is prohibited.

The advent of this new, large domestic supply led the United States to seek ways of receiving Alaskan crude oil at west coast ports for transshipment to American markets. The United States was thus faced with two distinct yet related problems: supplying crude oil to the northern tier states and moving the "Alaska surplus." The search for a solution to these problems led to a number of proposals for new pipelines, three of them directly affecting Canada's west coast.

One is the proposal of Kitimat Pipe Line Ltd. to build a deepsea oil port at Kitimat and a crude oil pipeline from Kitimat to Edmonton to connect with the existing pipeline system of Interprovincial Pipe Line Ltd. This existing system now delivers Alberta crude oil to the midwestern United States and to eastern Canada.

The second proposal was by Trans Mountain Pipe Line Co. Ltd., which operates the pipeline system that brings Alberta oil from Edmonton to west coast refineries. Trans Mountain's partner in this proposal was the Atlantic Richfield Co. (ARCO) which operates a major refinery at Cherry Point, Washington, and is also one of the major

producers in the north slope oilfield in Alaska. This proposal was to deliver oil to expanded ARCO docking facilities at Cherry Point, just a few miles south of the Canada-U.S. border. The Trans Mountain pipeline system would then be engineered to enable it to receive offshore crude, deliver it to the refineries in the Puget Sound region, and also deliver it into the Trans Mountain system. This system would operate on an alternating-flow basis to carry the offshore crude oil to Edmonton where it could enter the Interprovincial Pipe Line system for delivery to the northern tier states. The scheme was to continue the flow of Alberta crude oil to British Columbia refineries for part of each month and to reverse the flow for the remainder of the month.

The third proposal was the Northern Tier Pipeline Company proposal for the construction of a new "northern tier" pipeline to carry offshore crude oil from a terminal in the State of Washington across the northern United States to the refineries in the U.S. midwest. It has been proposed that a new deepsea terminal be located at Port Angeles in the Strait of Juan de Fuca to supply this pipeline from offshore.

In all three proposals the new port facilities would receive tankers from Indonesia and the Middle East as well as from Alaska, and Canadian waters would be affected.

While planning for these proposals has been underway for a number of years, no formal steps were taken until Kitimat Pipe Line Ltd. filed an application with the National Energy Board and a TERMPOL submission to the Minister of Transport in December, 1976. The company had been incorporated only in the preceding month when

five companies operating refineries in the northern tier states joined with Interprovincial Pipe Line Ltd., the Canadian pipeline company, to form the Kitimat consortium. Koch Industries, Inc., with a substantial refinery operation in Saint Paul, Minnesota, took the lead in corporate planning. Its first informal approaches to governments in Canada had been made only in the early months of 1976.

In the early stages of the Kitimat consortium, Trans Mountain was one of the discussion participants. Its interest lay in the possibility that the Kitimat project could use part of the Trans Mountain pipeline facilities en route to Edmonton, but the company withdrew from the consortium in early December 1976, when it appeared that no Trans Mountain facilities would be utilized in the project design. Meantime, it was exploring the alternating flow proposal with ARCO. While the possibility of expanding the Cherry Point facilities had been under controversial discussion in the State of Washington for some time, it was not until May 27, 1977, that Trans Mountain formally applied to the National Energy Board.

While the formal applications are recent, public anxiety at the prospect of west coast oil tanker traffic has been acute for almost a decade. The significance of the major oil discoveries in Alaska first came to public notice when Mr. David Anderson, then a Member of Parliament from B.C., aroused public awareness in British Columbia about the potential hazards of oil tanker traffic along the west coast. It should be appreciated, therefore, that when the applications for the Kitimat port and pipeline and for the reversal of the Trans Mountain system were formally presented to the Government of Canada, there was already an apprehensive public in British Columbia which had been sensitized to the risks of tanker collisions and groundings and the threats of oil pollution for many years.

2. OIL POLICY ISSUES

To understand fully the three port/pipeline proposals one must understand the overall crude oil policy issues that have beset North America in the 1970's. Severe winters, gasoline rationing and the Middle East oil embargo have convinced most North Americans that the era of cheap energy supplies is over and that there would be an increasing reliance on foreign sources of oil at prices which had trebled or quadrupled. Americans found that Canadians were not the ready suppliers they had been in the past because Canadians, too, were moving to conserve their domestic supplies.

By 1974 the phasing out of Canadian oil exports to the U.S. had begun. Puget Sound refineries immediately had to begin a programme of importing offshore crudes and the northern tier refineries had to begin a search for alternate supplies of crude oil. For the Americans, it became imperative national policy to speed the construction of the Alyeska pipeline and to legislate that Alaskan crude oil would be reserved for domestic use only.

When the U.S. Congress approved the Alyeska pipeline there was an expectation that the demand for crude products would continue to increase at pre-embargo rates and no great concern was expressed about marketing Alaskan crude oil in the United States. By 1977, when this oil would come on stream, west coast markets would be capable of absorbing most of the Alaska production and any surplus would be shipped through the Panama Canal to Gulf coast markets. Then later refinery conversions on the U.S. west coast to enable use of the heavier, sour Alaskan crude would take up the throughput of the Alyeska pipeline.

But market growth in the consumption of petroleum products was negligible in the years 1975, 1976 and 1977. As a result, west coast markets were unable to absorb the entire Alaskan production. Elements of the United States crude oil policy which discourage investment in conversion of refineries to enable them to take the Alaskan crude have further contributed to the west coast oil glut.

The three port and pipeline proposals affecting British Columbia have to be seen in this broader and more long term context of surplus Alaskan crude oil as well as in the narrower and short term context of the supply problems of the northern tier refineries. In terms of the Alaskan surplus problem, many far-ranging projects can be seen as alternatives. Whatever the ultimate solution, the port and pipeline proposals must be seen in the context of a matrix of oil policy issues, including oil transportation, refinery conversion, and the allocation of domestic production.

3. THE INQUIRY PROCESS

It is perhaps useful to consider the purposes for which this Inquiry was established. There are justifiable questions in the public mind about the role of an inquiry. Commissions of inquiry are not a new phenomenon in Canada, although we are more used to them in an investigatory role. I need only cite as current examples the provincial inquiry into the operation of the British Columbia Railway and the federal inquiry into illegal activities of the Royal Canadian Mounted Police. Our experience has also included inquiries into broad questions of social and economic policy. The Rowell-Sirois Inquiry into federalism in the 1930's, the Borden Commission examining energy questions in the 1950's, Walter Gordon's inquiry into

Canada's economic prospects in the 60's, and the LeDain Drug Commission in the 70's are familiar examples. But none of these is a prototype for this Inquiry. Rather, its genesis is as recent as the Berger Inquiry into northern natural gas pipelines which was established in March 1974 and reported last year.

The unique characteristic of this type of inquiry is that it is centred on a major development project -- in the Berger Inquiry, a northern natural gas pipeline, and in this case a west coast crude oil port. The novelty is not that hearings have been held into a development project; in the case of pipelines, the National Energy Board has conducted public hearings into the feasibility of oil and gas pipeline proposals since the Board was established under the National Energy Board Act in 1959. What is different about the new project-oriented inquiries is the broad ranging scope of their terms of reference. In requiring an assessment of environmental impacts, these terms of reference can be seen to have their roots in the heightened environmental consciousness that swept North America in the 1960's and, for the United States, manifested itself in the requirement for impact assessment contained in the National Environmental Policy Act, 1969 (NEPA). Indeed, the terms of reference of this Inquiry are even broader in scope than the mandate of that Act because this Inquiry is directed to examine social and economic impacts as well as environmental impacts, and is to study navigational safety and general public concerns about west coast tanker traffic.

It is helpful to study how the requirement of an environmental impact assessment is stated in the National Environmental Policy Act, 1969, because that is where the environmental assessment in the United States is focussed.

Under the statute, Congress directs federal government agencies to "identify and develop methods and procedures... which will ensure that presently unquantified environmental amenities and values may be given appropriate consideration in decision-making along with economic and technical considerations." The agencies were told to prepare assessments detailing environmental impacts, any adverse environmental effects, alternatives to the proposed action, trade-offs between short term and long term effects, and any irreversible and irretrievable commitments of resources which would be involved in the proposed action. The concern was that without clear instructions only the economic and technical impacts of a proposal would be considered and that adverse environmental effects would be given scant consideration in agency decision-making.

While neither Parliament nor provincial legislatures in Canada followed the precedent of NEPA to the letter, the same kinds of environmental concerns were pressed upon parliamentarians and legislators. For example, the Province of Ontario has enacted the Environmental Assessment Act, 1975, which incorporates some of the features of NEPA, but in more restricted circumstances. In British Columbia, orders made under the Environment and Land Use Act require environmental assessments to be made prior to development in certain environmentally significant areas such as the Fraser River estuary. In addition, assessment guidelines have been established at the administrative level for several key industrial activities such as coal development, highways and pipelines. At the federal level, no broad impact assessment legislation has been enacted, but there has been formal adoption within the government departments of an Environmental Assessment Review Process (EARP) to cover selected federal government projects. This procedure lays down

guidelines for the preparation of environmental assessment review procedures including public hearings.

In general, the Canadian response to the problem of assessing environmental impacts has been to proceed on a case by case basis under administrative practices rather than to prescribe by statute a requirement of impact assessment in all cases. The appointment of a commission of inquiry is part of the Canadian process of ad hoc response. The appointment of a commission signifies a decision by government that the issues in the particular case are so complex and significant that assessment and review under normal government procedures are inadequate. The ultimate step of appointing an independent commission is taken under general legislation such as the Inquiries Act. Consequently, while a commission of inquiry into a major development project is of recent origin in Canada, it has its roots in the emergent phenomenon of impact assessment.

4. INQUIRY EVENTS

This Inquiry was established by the Privy Council of Canada on the recommendation of the Minister of Fisheries and the Environment and the Minister of Transport by Order-in-Council P.C. 1977-597 on March 10, 1977. Under terms of that Order-in-Council I was appointed sole Commissioner.

From the preamble of the Order-in-Council it was clear that the Privy Council, faced with an application by Kitimat Pipe Line Ltd. for construction of a marine terminal at Kitimat, B.C., was requesting an examination of the implications of such a proposal. As a result of the Kitimat application I was appointed

- (a) to inquire into and concerning and to report upon:
 - (i) the social and environmental impact regionally (including the impact on fisheries) that could result from the establishment of a marine tanker route and construction of a marine terminal (deep water oil port) at Kitimat, B.C.;
 - (ii) navigational safety and related matters associated with the establishment of a marine tanker route and construction of a marine terminal at Kitimat, B.C.; and
 - (iii) the broader concerns and issues related to oil tanker movements on the West Coast as might be affected by the proposal; and
- (b) to report upon representations made to him concerning the terms and conditions which should be imposed, if authority is given to establish a marine terminal at Kitimat, on the size, construction and operation thereof and on the size, construction and operation of tankers in the approaches thereto.

Under terms of the Order-in-Council I was authorized to hold hearings in British Columbia and to adopt whatever practices and procedures I deemed expedient; I was given powers to engage the services of such accountants, technical advisors, counsel or other experts as might aid and assist the Inquiry. The Order-in-Council also directed that government departments and agencies assist and cooperate with the Inquiry.

The Order-in-Council also provided that I was to report to the Minister of Fisheries and the Environment and the Minister of Transport before the end of 1977 and thereafter to file all Inquiry materials with the Dominion Archivist.

The Government of Canada had recognized the need to provide funding to enable members of the public who would be specially affected by the port proposals to be represented at the Inquiry. Therefore, at the time my appointment was announced to the public, it was also announced that the government would make participant funding available. To assist the government in this matter, I issued a public notice on April 21st, 1977, setting out the criteria for participant funding and inviting interested groups to prepare the necessary applications for funding and make them available to the Inquiry for review.

I was also anxious to obtain public comment on the timing and procedure for the Inquiry. I therefore held a Preliminary Hearing at Kitimat on May 4th, 1977. I asked those interested to advise me, either at the Preliminary Hearing or by letter, of their views on the Terms of Reference and scope of the Inquiry, the structure, timing and location of hearings and the procedures to be followed. A total of 35 presentations were made at the Preliminary Hearing covering the wide range of issues of concern.

Subsequent to the Preliminary Hearing I issued a set of Preliminary Rulings on May 27th, 1977 outlining the practices and procedures to be followed before the Inquiry.

While the Inquiry staff and the participants were organizing themselves for the hearings and conducting the necessary research and review of the evidence that would have to be called, a series of events took place which dramatically altered the scope and focus of the Inquiry.

For the American refinery members of the Kitimat consortium, timeliness in carrying out the project has been a prime consideration. They hoped that the Canadian regulatory process examining the Kitimat proposal would provide for a speedier response than would the parallel processes in the United States. In its TERMPOL Submission of December, 1976, the consortium referred to approval to construct by July 1977, with the whole project completed and ready to go on stream in April, 1979. Obviously, the consortium was disappointed by the deficiency letter received from the TERMPOL Coordinating Committee in February 1977 because, as then Vice-President Jack Cressey stated to the Vancouver Sun, some of the 46 questions in the deficiency letter would take a million dollars and several years to answer. The appointment of this Inquiry in March with a reporting date of December 31st, 1977, made it clear that there would be no immediate approval by Canadian authorities.

When the Preliminary Hearing of the Inquiry took place at Kitimat on May 5th, it became apparent that even a December 31st deadline for a report of the Inquiry was in doubt. Most of the intervenors representing different segments of the public pressed for more time to prepare for formal hearings and urged that the duration of the Inquiry should be extended.

Meanwhile, Trans Mountain and ARCO were developing their Cherry Point alternating flow proposal. On May 30th, 1977, Trans Mountain filed an application with the National Energy Board requesting approval for their project. Shortly thereafter, on June 1st, 1977, Kitimat Pipe Line Ltd. announced that it was placing its application before the Board in abeyance. In public statements, Mr. Earl Joudrie, then President of Kitimat Pipe

Line Ltd., and Mr. Jack Cressey stressed that the "Kitimat project was not dead" and, should the Trans Mountain project fail for any reason, the Kitimat consortium would likely resurrect their application. They gave as their reasons for backing the Trans Mountain project that it apparently could supply the needs of the northern tier refineries more quickly and at a lower capital cost than their own project and that their primary concern had always been providing crude oil to these refineries rather than owning a pipeline system.

Their caution in not abandoning the Kitimat project altogether seemed prudent considering the controversy which surrounded the question of enlarging the docking facilities at Cherry Point. The Trans Mountain proposal encountered stiff opposition on both sides of the border. In fact, a bill which would prevent construction of a major oil port at any site east of Port Angeles was then in the process of enactment by the Washington State Legislature, and it was only a veto by Governor Ray in mid-June that kept the Trans Mountain project alive.

Because the members of the Kitimat consortium now backed the Trans Mountain project, Kitimat Pipe Line Ltd. reduced its level of activity before the Inquiry. This was communicated to me by Mr. Joudrie at a meeting held in my office on June 2nd. At that time Mr. Joudrie, together with his counsel, Mr. Saville, gave assurances that Kitimat Pipe Line Ltd. would nevertheless cooperate fully with the Inquiry. I warned them, however, that so long as there remained a prospect that the Kitimat application would be reinstated, they would be treated by the Inquiry no differently than if their application was being actively pursued. I took this stand because the U.S. opposition to the Trans Mountain/Cherry Point

proposal seemed insurmountable and made it likely that the Kitimat project might be soon reinstated. In that event it would be in no one's interest to have to start a second Inquiry because the Kitimat proposal had not been thoroughly examined in the first Inquiry. The hearing phases of the Inquiry had been structured so far as possible to deal with the issues in a logical sequence independent of which port site might ultimately be chosen. Therefore, all prospective sites had to be thoroughly examined in each phase of the hearings and it would have been wasteful to proceed without full coverage of the Kitimat proposal.

Kitimat's cooperation turned out to be less than satisfactory. In answer to the requests of Commission Counsel, Mr. Saville wrote on September 21st, 1977, stating that:

Our purpose in writing is to inform you that Kitimat Pipe Line Ltd. has instructed us not to attend the West Coast Oil Ports Inquiry on its behalf when the hearing resumes. It is possible that at some future date it may alter these instructions, and we will of course let you know should our instructions be changed.

We would ask that you advise Dr. Thompson of the contents of this letter, as well as the other participants in the Inquiry.

Even if the Trans Mountain project had remained the prime candidate throughout the Inquiry, it is unlikely that participation by Kitimat Pipe Line Ltd. on the basis outlined in Mr. Saville's letter would have been satisfactory.

By June 30th, 1977, my Terms of Reference had been amended to include specific reference to the Trans Mountain proposal and the Inquiry was renamed the "West

Coast Oil Ports Inquiry." It was clear that the Inquiry would continue on a broad front to examine the environmental, social and navigational safety aspects of the alternative port and pipeline proposals together with the general public concerns about tanker traffic along the west coast.

That the Inquiry would be broad in scope as well as thorough was made apparent at the opening session held in Vancouver on July 18th, 19th and 20th. It was clear from the opening statements delivered on behalf of the three proponents, Trans Mountain, Kitimat Pipe Line Ltd. and Northern Tier Pipeline Company, that each of the proposals was complex and had its own particular set of problems. The participants representing environmentalists, the fishing industry, native people and others made it clear that the marine navigation aspects and the likelihood of oil spills and their effects would be the subject of searching questioning and that they would be bringing expert witnesses from around the world to ensure the completeness and accuracy of the evidence. It was also made clear that the Commission itself, through Counsel and staff, was expected to amass a good deal of the required evidence, particularly from government sources in both Canada and the United States.

Intervenors on behalf of British Columbia's Indians introduced their position in terms of aboriginal rights and the special claim which they assert with respect to the marine resources and the coastal areas where many of the Indian villages are located. From a social and economic point of view, they stated that their dependence upon the salmon as a food resource was as important for communities in the headwaters of the river systems as for those along the coast.

Many regional interests were also represented. The Inquiry was urged to have regard to the need to protect the coastline of the Queen Charlotte Islands lying along the southward route of the tankers from Alaska just as it was urged to pay regard to the needs to protect the waters of the Gulf Islands and the Strait of Juan de Fuca. The Mayor of the District of Kitimat spoke in favour of the Kitimat project because of the economic benefits it would bring to the region, but he also urged that its environmental and economic impacts be carefully assessed. Other intervenors indicated that their efforts would be directed to showing that the boom and bust cycle of port and pipeline construction would have minimal long term beneficial effects in the region.

Following a community hearing at the fish camp at Namu, Phase I of the formal hearings opened in Vancouver on September 26th. Beginning the formal hearings was not without misgivings and trepidation on my part. It was perfectly obvious by this time that I could not complete the hearings and report by December 31st, 1977, the date called for in the Order-in-Council establishing the Inquiry. While at the very beginning of the Inquiry it had been publicly announced by the Honourable Mr. Basford that an extension of time would be granted if required, I was aware that there were still considerable pressures in Ottawa for an early completion of the Inquiry, and considerable anguish in a period of fiscal belt-tightening at the prospect of the further funding that would be necessary if the Inquiry were extended. This reluctance in Ottawa to give the Inquiry the time to conduct its investigation properly was based in part on the importuning of the proponents, who were pressing for an early decision, and in part on a lack of understanding of the complex issues facing the Inquiry and of the nature of Inquiry proceedings.

Meanwhile, I was being pressed by the participants representing various segments of the public. They wanted me to slow down the pace at which I was conducting the hearings of the Inquiry so that they could properly prepare and effectively represent their interests. They also asked for additional funding beyond that which had already been made available by government to enable them to research and present evidence on the complex issues before the Inquiry. Throughout this period, I kept the responsible Cabinet Ministers advised of the timing problems being faced by the Inquiry. At the same time I maintained a very tight hearing schedule.

These two issues of timing and funding created uncertainties about the future of the Inquiry itself. In this circumstance, it was not unusual that there was speculation that Kitimat Pipe Line Ltd., with its application before the National Energy Board in abeyance, was playing a waiting game with the Inquiry. For whatever reason, I had to face the prospect that the Inquiry would receive as little participation as possible by Kitimat Pipe Line Ltd. while at the same time facing pressure to complete its investigations at an early date.

While Trans Mountain was willing to cooperate fully with the Inquiry, it indicated that the port facilities and tanker routes which would serve its project were located in the State of Washington and that obtaining U.S. and state regulatory permits had to be its first priority. Therefore, it qualified its willingness to be a major participant before the Inquiry by stating that it would have to await clarification regarding hearings before federal and state agencies in the United States.

Furthermore, most of the studies concerning the safety of navigation and the risk of oil spills with respect to traffic through the Strait of Juan de Fuca into Cherry Point have been carried out by United States agencies, and the descriptive and analytical studies respecting Cherry Point were, in part, being carried out by ARCO, a U.S. corporation. All of this evidence was beyond the reach of this Inquiry through subpoena processes and therefore its presentation depended upon the willingness of United States corporations and government agencies and personnel to cooperate. Assurances of such cooperation had been given, but there remained the possibility that changing circumstances would make this evidence difficult to secure.

Nor could I expect that the hearings would proceed with the calm and detachment of a scientific symposium. Many segments of the public were strongly opposed to the oil port and pipeline. It was made clear at the opening sessions of the Inquiry that this opposition would be vigorous and unrelenting. The provision of funding by the federal government meant that these participants could be effective adversaries, with legal representation and expert advice on a par with the proponents themselves. In these circumstances, it was obvious that I was not going to be able to mold the Inquiry process to my own preconceptions about the issues or the time that should be devoted to the presentation of evidence.

Looking ahead to Phase II a difficulty of a different kind was confronting me. This phase was designed to investigate the crude oil supply and demand situation in Canada and the United States so as to have a basis for projecting the volumes of crude oil and numbers of tankers which a west coast oil port would have to handle.

When I made my preliminary rulings on timing and procedure it was expected that the National Energy Board would be conducting public hearings on the Kitimat and Trans Mountain applications during the fall months of 1977. Therefore, I assumed that our Phase II hearings would be coordinated with the Board's hearings. The main submissions on supply and demand would be made to the National Energy Board and Phase II of our hearings would take a subordinate position. Events did not work out that way. The Board did not begin hearings and Phase II began to be seen by some of the participants as the most critical phase in the entire Inquiry. It became clear that, whatever our original expectation may have been, this phase obviously was going to take considerably longer than the three weeks planned and a much wider selection of witnesses was going to be required.

Events external to the Inquiry then began to unfold which would have an important bearing on the timing of the Inquiry and the ability of the Inquiry to obtain and evaluate the information necessary to advise the Government properly on the potential implications of a west coast oil port. On October 5th the United States Congress passed an amendment to the Marine Mammals Protection Act (commonly known as the Magnuson amendment) which effectively ruled out Cherry Point as a major oil transshipment port. Without the expanded facilities at Cherry Point, the Trans Mountain alternating flow proposal was no longer feasible. On October 31st, 1977, Trans Mountain advised the National Energy Board that it, too, wished its application to be placed in abeyance. In evidence before the Inquiry the President of Trans Mountain indicated that the Trans Mountain/ARCO project was dead.

At this time, Kitimat Pipe Line still had its National Energy Board application in abeyance and, as I discussed earlier, was not actively participating in the Inquiry. Kitimat had earlier lost Koch Industries, one of its original members, and was unable to advise when, or even whether, it intended to revive its application.

The Government of Canada and the Inquiry found themselves, therefore, in a position where there were no active applications for a west coast oil port and, hence, no proponents before the National Energy Board or the Inquiry. Furthermore, there was speculation that Kitimat Pipe Line Ltd. might revive its application in a form that would be substantially different from its earlier application.

Meanwhile, in the U.S. Congress bills were being considered by both the Senate and the House of Representatives that would expedite the time for federal U.S. approvals of a west coast oil port and pipeline. While this U.S. legislation would not have any binding effect on Canada or Canadian regulatory agencies, it was obvious to me that it would be of persuasive effect on Ottawa and would reinforce those who were urging rapid consideration of a west coast oil port.

By early November the confusion and uncertainty within the industry and the regulatory agencies convinced me that to proceed with further hearings at that time would not do justice to the important issues referred to me for consideration. While there was continuing pressure, through government and otherwise, for an early decision, there were no active applications in Canada for a west coast oil port and, perhaps as important, the evidence received by the Inquiry indicated that there were alter-

natives to be considered before a decision should be made. I was also satisfied that there was no emergency situation that would compel me to proceed with the additional hearings before the industry had sorted out its intentions.

Faced with this uncertainty and concerned that the Inquiry not lapse into examining hypothetical projects that might or might not ultimately be proposed, on November 9th, 1977, following meetings with the federal Cabinet Ministers, I announced the indefinite adjournment of the formal hearings of the Inquiry. I indicated at that time that I had received their agreement that the hearings would be reconvened. The official government news release issued at the time of the adjournment stated, in part, that "the Inquiry will be reactivated as required at some later date by the Commissioner or on the direction of the Federal Government."

It was agreed that the Order-in-Council established the Inquiry would be amended to remove the final reporting date of December 31, 1977, and to provide for my submission of an interim Statement of Proceedings on or before March 31, 1977. The Terms of Reference were to remain unchanged and I insisted that no final reporting date was to be included, because the December 31st, 1977 final reporting date had proved merely an embarrassment.

Based on this understanding, I called for interim submissions by Commission Counsel and the major participants to assist me in preparing this Statement of Proceedings. These interim statements were presented at a reconvened formal hearing in Vancouver on December 13th to 15th.

On December 22, 1977, I was notified of the text of the amended Order-in-Council as follows:

The Committee further advises that Dr. Thompson be directed to report to the Minister of Fisheries and the Environment and the Minister of Transport before the end of March, 1978, and to file with the Dominion Archivist the papers and records of the Inquiry as soon as may be reasonable after the conclusion thereof; provided that, if another serious application to establish a marine terminal on the west coast of Canada is made in 1978, Dr. Thompson and the Minister of Fisheries and the Environment and the Minister of Transport will consult regarding a further extension of the life of the Commission or the reestablishment thereof.

It was my understanding that funding would be provided to the participants to cover this stand-by period to March 31, but I was advised by the Ministers on January 31, that a decision about further funding would be delayed until after receipt of the Statement of Proceedings.

On January 9th, 1978, Kitimat Pipe Line Ltd. announced that it was reactivating its application before the National Energy Board and that, more importantly from the Inquiry's point of view, it was now proposing a project of greater size and dimension than initially proposed, with SOHIO, the largest Alaskan oil producer, as a partner.

Subsequently, on January 16th, 1978, The Honourable Alastair Gillespie, Minister of Energy, Mines and Resources, wrote to the National Energy Board requesting that it conduct a general inquiry under Section 22(2) of the National Energy Board Act. This inquiry was to go beyond merely a supply/demand hearing to include consideration as to the need for access to offshore crude, the timing for such potential need and, if such need is established, whether the Canadian interest would best be

served through a west coast or east coast oil port or, indeed, some other alternative. On January 26th, 1978, the National Energy Board issued a formal notice of hearing setting out the issues it proposes to address and a commencement date of May 24th for the hearing.

The staff of the West Coast Oil Ports Inquiry, meanwhile, was concentrating its attention on the marine safety, navigation, environmental and socio-economic aspects of the project in readiness for the reactivation of the Inquiry.

II. JURISDICTION AND REGULATION OF TANKERS

Earlier in this Statement of Proceedings (pp.47-58) I made recommendations concerning the regulation of tankers, air pollution control and compensation. These were based on the more detailed analysis of the evidence set forth in this chapter.

1. JURISDICTION TO REGULATE

Shipping is by nature an international activity. The movement of crude oil on Canada's west coast is no exception. Indeed, the fact that much of the oil tanker traffic of concern to the Inquiry is destined for ports in the United States adds another dimension to an activity which already has an inherent international aspect.

Because shipping does have such an international character, the legal regime which has evolved to control it involves an interrelationship of national and international maritime law. The uniformity of maritime law has been of considerable concern to shipping interests because it facilitates the movement of maritime cargoes.

The traditional allocation of jurisdictional authority among nations also served to facilitate the free movement of trade. Except for a thin band of territorial sea paralleling each nation, the seas were known as high seas, free to be used by any nation as it saw fit. The only nation with the authority to control activities of a ship on the high seas was the ship's flag state. Only it could prescribe standards for the ship and its operation and only it could enforce those standards.

Within the territorial seas, authority to set and enforce standards was also vested in the flag state. Only if the passage of the ship was not innocent, that is, if its passage threatened the peace, good order, or security of the coastal state did the latter have a right to intervene and apply its law to the ship.

Within these broad jurisdictional guidelines, nations sought to regulate shipping, principally in the interest of ship's safety. Other regulations sought to reserve shipping to a nation's own nationals and to protect them from foreign competition. In the United States, Congress enacted the so-called Jones Act. It provides that any ship carrying cargo between points in the United States, either directly or via a foreign port, shall be built in, and documented under the laws of, the United States.

Because a large percentage of the crude oil movements on the west coast will originate in Alaska and be destined for continental U.S. markets, this is of major relevance to the Inquiry. It means that the Alaskan tanker fleet will be composed of ships of American registry, built and operated in accordance with U.S. law. The balance of the ships calling at west coast oil ports are likely to be of some registry other than Canada or the United States.

The traditional approach to the regulation of ship safety has been to develop uniform international standards which national governments could apply to their ships. In recent years, the Intergovernmental Maritime Consultative Organization (IMCO) has taken the lead in developing new international standards. Both Canada and the United States participate in IMCO and many of their regulations applying to oil tankers are a reflection of its work. It

is important to note, however, that IMCO is merely a technical agency dealing with technical shipping questions and not a forum for discussing the redistribution of jurisdictional responsibilities.

IMCO's approach, and that of Canada, has been to apply its regulations to the ship and make the shipowner or the master responsible for its standards and operation.

International concern with oil pollution from ships predates the formation of IMCO. The 1954 International Convention for the Prevention of Pollution of the Sea by Oil was the first initiative in the area. Amendments to this convention passed in 1962 and 1969 have been brought into force, the latter amendments taking effect January 20, 1978. In 1973 IMCO passed the International Convention for the Prevention of Pollution from Ships which is not yet in force.

The main features of these conventions have been implemented by Canada under regulations made pursuant to the Canada Shipping Act. Their main purpose is to reduce the operational discharge of oil from tankers. There is an absolute prohibition against tanker discharge of oil or oily mixtures within 50 miles of land. Beyond 50 miles, limited discharges of 60 litres per mile are permitted, provided that the quantity discharged does not exceed 1/15,000 of the total cargo carrying capacity of the tanker.

The Oil Pollution Prevention Regulations, as amended, implemented these standards in Canada. The regulations were drafted to apply to all ships within Canadian waters and fishing zones. With the extension of Canada's

fishing zones to 200 nautical miles on January 1, 1977, an immediate contradiction arose between the Regulations and the Convention. The Regulations prohibit discharges within 200 miles from Canada's coast while the Convention authorizes limited discharges beyond 50 miles of land. At present, in accordance with a "policy of restraint" (Wang, vol.7, p.1033-34), and pending a review of enforcement policy options, the Regulations are not being applied. (Buchanan, vol.10, p.1519-29).

Two additional IMCO conventions on oil pollution have been brought into force but do not apply in Canada. The 1969 International Convention Relating to Intervention on the High Seas in Cases of Oil Pollution Casualties and the 1969 International Convention on Civil Liability for Oil Pollution Damage have not been ratified because they do not go far enough in addressing the problems they deal with. The intervention right exists in customary law (Wang, vol.5, p.604) and the Canadian Maritime Pollution Claims Fund is more comprehensive than the liability convention.

My analysis of the international efforts reveals that their purpose has been largely to prevent operational discharges or to provide for remedial measures in the event of an accidental spill. While these efforts are useful, it is clear that the most important legislation in regard to oil tankers and oil spills is legislation that prevents oil spills through high quality, well-enforced safety standards. The international legal regime has failed to provide leadership in this regard.

Even the international regulations which exist on paper are deceiving. Alleged violations are reported to the flag states for prosecution but Eric Wang, Director of Legal Operations for the Department of External Affairs, labelled Canada's experience with this system over the past 10 years as "highly unsatisfactory." (Wang, vol.5, p.701). In that period, Canada was successful in identifying only eighty violations of the 1954 Convention where sufficient evidence existed to justify transmission of a report to the flag state. Other violations undoubtedly occurred, but were not noticed or reported. Of the eighty violations, only in seventeen cases were penalties assessed while in thirty-nine of the cases, Canada received no response whatsoever from the flag states involved. (Wang, vol.5, p.701-704).

Compared with this is the evidence of H.O. Buchanan, Regional Director of the Western Region of the Canadian Coast Guard. He testified that in the six years that Canada's new Oil Pollution Prevention Regulations have been in force, the conviction rate on the west coast has been greater than 90% and the fines have ranged from nominal to \$20,000. (Buchanan, vol.10, p.1503).

This comparison provides graphic evidence of one of the critical weaknesses of international regulation of the marine transportation of oil: lack of enforcement by the flag state. Equally critical are the restrictions on the authority of Canada to set standards for the tankers which present risks to her coasts.

The limits on the rights of a coastal nation to prescribe and enforce pollution prevention standards against ships have, with the changes in oil tanker technologies,

created an imbalance between the navigational interests of maritime nations and the resource interests of coastal nations. In the words of Mr. Wang:

...this system of law, based upon a firm doctrinal attachment to the principle of freedom of the high seas and restricted coastal state rights is no longer adequate in light of the problem created by modern technology, to ensure the preservation of the marine environment. (Wang, vol.5, p.575).

It is clear that change is necessary; a new balance must be struck.

The search for a new balance of interests is the goal of the United Nations Conference on the Law of the Sea (UNCLOS III) which began formal sessions in Caracas in 1973. It has produced several negotiating texts, the latest of which does little to remove the handcuffs placed on coastal states by the existing international regime. In the territorial sea, the right of innocent passage would still prevent a coastal state from taking any enforcement action against an oil tanker until after an oil spill has occurred. Beyond the territorial sea, in the economic zone, coastal states will be given new but not very significant rights. Enforcement will still be left in the hands of the flag state. Only if a ship has committed a gross or flagrant violation of international standards resulting in a substantial discharge of oil or threatening major pollution damage will the coastal state be permitted to take proceedings. Once again the coastal state is being denied a preventive role. It is easy to share the frustration of Canadian officials who "are not happy with the provisions" of the text and "are going to continue to pursue efforts to strengthen them." (Mawhinney, vol.6, p.773).

Even if a Law of the Sea treaty succeeds in developing new pollution control provisions, it is unlikely that they will be in force soon enough to be of value in preventing an oil spill on Canada's west coast. While it is possible that UNCLOS III may produce a draft treaty by the end of the decade, according to Barry Mawhinney, Head of the Law of the Sea Section of the Department of External Affairs, "it could be up to twenty years and it could be beyond that before a sufficient number of states have ratified a draft convention" to make it law. (Mawhinney, vol.6, p.726). Further evidence of the excruciatingly slow rate of change in international maritime law is provided by the length of time it took to bring the 1969 amendments to the 1954 Oil Pollution Prevention Convention into force. It took over eight years to bring these amendments into force, despite the fact that they merely required ships to make changes in operating procedures. There is little doubt that change is necessary. Uncertainty exists only as to the degree and method of change.

It is essential that Canada continue to press for an improvement in the international regime in every forum where it has an opportunity. Canada has been a progressive leader in advocating the changes which have taken place within the Law of the Sea Conference and other forums and it is clear that the world can benefit by its continued leadership. And while it is obvious that the international regime leaves much to be desired, it is clear that broad international agreement is the only practical way that Canada has of achieving some of its marine pollution prevention objectives.

The immediacy of the risks presented by the present and proposed west coast tanker traffic preclude the option of waiting for the evolution of a new international consensus that would ensure a world tanker fleet of high quality ships and crews. Under the present international regime substandard ships do exist and will continue to participate in the world oil trade. Because the west coast is involved in the world oil trade, and because it may become further involved in the future, it is necessary to search for new tools to manage the risks presented by the Alaskan and world tanker fleets. We must strike out in new directions and take new initiatives which can complement existing efforts.

There is presently an average of more than 300,000 barrels per day of crude oil moving through the Strait of Juan de Fuca to American ports. Loaded inbound tankers travel on the American side of the international boundary, while the empty outbound tankers are in Canadian waters. The Northern Tier Pipeline Company's proposal could add as many as 1.2 million additional barrels per day of crude oil to the already busy Juan de Fuca waters. Kitimat Pipe Line Ltd.'s proposal is to move up to 700,000 barrels per day of crude oil through the waters of Douglas Channel to Kitimat within five years. The potential could be twice that volume.

Substantial percentages of the existing oil movements in Juan de Fuca are of Alaskan crude. Similarly, the two proposals for new ports involve large volumes of Alaskan oil destined for U.S. markets. Because it is Alaskan oil for U.S. consumption, the tankers will be Jones Act American ships. Because the oil moves along Canada's coast and places its coastal interests at risk, Canada has a special interest in how the risk is managed. The

existence of the risk was implicitly acknowledged by the U.S. Congress in the Trans-Alaska Pipeline Authorization Act, which makes its compensation measure available to residents of Canada.

Canada stands between Alaska and the continental United States. As a result it has since the days of the Manhattan been intimately and almost continuously involved with the movement of Alaskan hydrocarbons southward to market. This accident of geography makes Canada's interest in the southerly movement of Alaskan tankers a special case. Canada's situation is different from that of any other coastal state which American shipping might pass. With respect to the proposed Kitimat port, Canada's special interest is without question.

The special circumstances deserve special attention and may merit special arrangements. Canada and the United States are already negotiating certain aspects of vessel traffic management in Juan de Fuca Strait. (Wang, vol.5, p.608-618). It may be advisable to introduce into the negotiating package the entire issue of the management of west coast tanker traffic. Or, if a decision is made that a west coast oil port is necessary, it may be preferable to treat the regulation and enforcement of tanker movements as one element of the negotiations which would likely take place in relation to several issues including the ultimate site of the port.

There is ample precedent for the joint regulation of ocean activities which concern both countries. The Juan de Fuca vessel traffic management system will be an interdependent system. Inbound traffic for both the U.S. and Canada will report first to the traffic station at Tofino on Vancouver Island and then will transfer to the

Seattle traffic centre. The electronic position fixing system, Loran C, which the U.S. Coast Guard has adopted, is dependent on a signal from Williams Lake, B.C., for its effectiveness. And the fishery resources of the North Pacific have been the subject of joint management for over half a century.

Much of the west coast tanker traffic is made up of ships of an overseas registry. This is not likely to change in the future. The prospect of having the so-called "flag-of-convenience" tankers on our doorstep must be faced. Existing Canadian regulations require every tanker of more than 500 gross tons that enters Canada's fishing zones to have a Non-Canadian Ships Compliance Certificate on board. This certifies that the tanker complies with the equipment standards in Canada's Navigating Appliances Regulations (2 magnetic compasses, a gyro-compass, an echo sounder, 2 radars on ships over 1,600 tons, an internal communications system, a V.H.F. radio telephone, maneuvering systems, data and searchlights) and the safety standards in the 1960 SOLAS and 1966 Load Line Conventions. This certificate may be issued by an exclusive surveyor for one of the international classification societies.

This system suffers because inadequate surveys and sub-standard ships cannot be detected until the ships are inspected by Canadian authorities -- usually after they have entered port or placed Canadian resources at risk. Ideally, the system should ensure that tankers meet Canadian standards before they enter Canadian waters.

In the Non-Canadian Ships Compliance Certificate are the seeds of a concept which could be introduced to control tanker traffic to a Canadian port. This concept has two

principal elements: that tankers should meet Canadian standards prior to entry into a Canadian port and that all participants in the oil transportation delivery system must be regulated as well as the ship.

The international legal authority to implement such a system of control is beyond question. Canada has "unrestricted sovereign rights" within internal waters, which are defined as being those waters lying landward of a straight line drawn from headland to headland. (Wang, vol.5, p.590). It goes without saying that similar authority exists with respect to Canadian ports and all persons within the territorial boundaries of Canada.

The policy reasons for seeking the safest possible tanker delivery system must also be beyond question. There are at least three parties concerned with the delivery of oil to its destination in the United States or eastern Canada through a Canadian west coast oil port. The shipowner, the port operator, and the importer all have the capacity through their business operations to influence the standards of tankers moving oil to a Canadian west coast port. The importer selects the ship; the port operator unloads the ship; and of course, the shipowner owns and manages the ship. These persons should be induced to exercise their influence in a way that will ensure that only high quality tankers would have any reason for calling at the port.

The authors of the TERMPOL Assessment of the Kitimat Pipe Line Ltd. application must have had such a system in mind when they recommended that "those responsible for chartering crude oil tankers to call at Kitimat be requested to employ them on long-term charters and give preference to tankers" that exceed certain standards of construction and equipment that are set by international rules.

(TERMPOL Assessment, p.3-22). In California, SOHIO, the operator of the proposed oil port at Long Beach, will be prohibited from unloading tankers which do not meet prescribed standards.

The Government of Canada should study at least the following two policy options with a view to giving them the force of law. The first alternative is to amend the new Ports Act presently before Parliament to confer power on the Minister of Transport to impose terms and conditions in the licence of a marine oil terminal specifying the standards of the tankers which the terminal operator is authorized to unload. The second alternative is for the Governor in Council to remove the restrictions in the National Energy Board Part VI Regulations which prevent the Board from issuing oil import licences. The Board could then insert conditions in the licences specifying the standards of tankers in which oil could be imported into Canada. In each alternative, it is likely that the advice of the Canadian Coast Guard would be relied upon in developing terms and conditions.

The system that is contemplated is not one that would necessarily apply to all ports, or indeed to all oil ports, within Canada. The decision to implement such a system must be based on a more complete understanding of industry practice and fleet data than has been presented to the Inquiry to date. But such a system may be the most significant measure that can be undertaken to reduce the oil spill and navigational safety risks of west coast oil tanker traffic.

2. REGULATORY DEFICIENCIES

At this interim stage in the work of the Inquiry, it is impossible to make any final judgments about the adequacy or inadequacy of the technical standards applied by public agencies to oil tankers in west coast waters. Any final judgment must be based on a thorough review of navigational risk and environmental resources. Without fully developed evidence, it is only possible to make preliminary assessments which in no way prejudice final judgments. I hope, however, that this brief review will provide guidance to interested parties by identifying areas of concern.

(i) Human Errors; Collisions

Captain W.S.G. Morrison, Chief of the Nautical Division of the Canadian Coast Guard, told the Inquiry that "human error... is involved in eighty-five per cent of the hull insurance claims, according to the American Syndicate of Underwriters." (Morrison, vol.13, p.2109-10). This statement was not contradicted in evidence and indeed is generally supported by accident studies available to the Inquiry. These figures should be of guidance in searching for ways to manage the risks presented by oil tankers.

Captain Morrison used these figures to support his argument in favour of regulations governing navigation practice and procedures, which he called "an essential element of the regime of navigation safety that we are attempting to establish in Canadian waters and fishing grounds." (Morrison, vol.13, p.2110). While it is not within the mandate of this Inquiry to make recommendations about the merits of implementing these regulations in all Canadian waters, the possibility of requiring specific

navigation practices and procedures for west coast tanker traffic is certainly a pertinent area of inquiry. The importance of these aspects of navigation is emphasized by the fact that IMCO is preparing for an international conference on these topics to be held during the summer of 1978.

Another method of reducing the element of human error which has been identified may be to require high standards of competence from the masters and crews of oil tankers calling at west coast ports. The Ships Deck Watch Regulations, which are presently being phased in, require that certain watches be maintained by certificated personnel. The special risks presented by oil tankers on the west coast may, however, demand a higher degree of competence from the officers and crews than is presently required.

Another issue associated with increased tanker traffic and one which has repeatedly been brought to my attention is the issue of traffic conflicts between fishing boats and oil tankers. This problem, which is particularly acute in Juan de Fuca Strait, is in truth, a conflict between deep sea traffic generally, and fishing boats. The introduction of the much larger and less maneuverable oil tankers merely serves to exacerbate an already dangerous situation.

The Collision Regulations are the navigational "rules of the road" which govern the movement of all vessels, including oil tankers, and are designed to resolve these kinds of chronic traffic conflicts. These regulations adopt, with some reservations and modifications for special Canadian circumstances, the 1972 International Regulations for Preventing Collisions at Sea, and apply

to all ships within Canada's 200 mile zone and to Canadian ships wherever located.

The Collision Regulations provide for the establishment of routing systems and traffic separation schemes and for the rules to resolve traffic conflicts. It was established in evidence that fishing boats may fish in traffic lanes adopted by IMCO but that they must give way if they impede the navigation of deep sea vessels using the lanes.

(Morrison, vol.10, p.1649-59). How does a fisherman decide if his boat is impeding navigation and must give way? No easy answer is available; it depends on the facts in each set of circumstances and the fisherman is called upon to exercise his best judgment.

The question is complicated legally by the fact that the traffic lanes in the Strait of Juan de Fuca have not been approved by IMCO and are not mandatory. It is therefore uncertain exactly what rules apply. What is clear is that the law is presently in an unsatisfactory state. It may be that the recommendations of the Inquiry can contribute to the development of new regulations which might reduce the levels of conflict. But the ultimate aim must be to separate traffic from fishing.

(ii) Air Quality

A further issue of concern is the possible degradation of air quality in the air shed surrounding an oil port within Canada. Although this is a matter of overriding concern in relation to the United States proposals, particularly at Long Beach, little attention has been given to air quality impacts in Canada.

Regulatory control over the emission of contaminants into the atmosphere at an oil port in British Columbia will apparently be shared between the province and the federal government. The authority to make regulations limiting air emissions from ships is found in the Canada Shipping Act. This authority could be used to control the hydrocarbon, sulfur dioxide, nitrous oxides, and particulate emissions from a ship engaged in unloading oil. In spite of this, the Air Pollution Regulations made pursuant to the Act regulate only the density of smoke from ships and do not apply to these potentially more serious chemical emissions. (Buchanan, vol.10, p.1521-23). Ambient air quality objectives have been developed under the federal Clean Air Act for sulfur dioxide and nitrogen dioxide levels but not for hydrocarbons. (Heskin, Exhibit 50, p.22). It may be necessary to impose restrictions on the unloading of tankers in order to meet these federal goals.

The upland facilities associated with an oil port may also present a risk of serious air pollution. The authority to control emissions from oil storage tanks and the connecting interprovincial pipeline is somewhat unclear. It is the view of the Province that the British Columbia Pollution Control Act, 1967, gives the Pollution Control Branch the power to require that all facilities associated with a port obtain provincial permits. There may, however, be some questions about its authority to impose conditions in the permit which are highly restrictive or which, for practical purposes, serve ultimately as a denial of the right to construct or operate the port.

The resolution of the legal rights and responsibilities of the various levels of government is not the task of this Inquiry. It may be that a joint federal/provincial management program is the most appropriate manner to deal with the issue of air quality. It may be possible for the federal cabinet to treat the combined oil port and connecting interprovincial pipeline as an undertaking within the legislative authority of the Parliament of Canada and prescribe and apply specific emission standards under the Clean Air Act. Such a decision, however, would not eliminate the problem of shared jurisdiction when, as in Kitimat, there are other sources of emissions permitted by the province which adversely affect the ambient air quality in the region. At this point, all that can be safely said is that the air quality management responsibilities and the existing and absent emission standards deserve further attention.

3. LIABILITY AND COMPENSATION

The existing and proposed levels of west coast tanker traffic make oil spills and their associated adverse impacts inevitable. Many of these impacts will be borne by the innocent spill victims; some will be borne by governments. It is desirable that primary responsibility for compensation should be placed on people who benefit from the oil transportation system.

Until relatively recently there has been an almost exclusive reliance on the common law of negligence and nuisance to ensure compensation and impose liability for oil spills in Canada. During this decade, however, there has been a trend to replace the common law with strict liability statutory schemes. Four different statutes now co-exist to provide the liability and compensation framework

in the event of an oil spill affecting Canada's west coast. They are found in Part XX of the Canada Shipping Act; s.33 of the Fisheries Act; s.26 of the British Columbia Pollution Control Act, 1967; and the United States Trans-Alaska Pipeline Authorization Act. The provisions and coverages of these statutes are in no way uniform and the only way to understand their combined effectiveness is to weave their separate threads into a common fabric.

A statutory right of action does not exist for all persons in all cases under all these statutes. The Canada Shipping Act only applies to spills from ships within Canadian waters and not to spills which occur south of the international boundary and are brought into Canada by wind or currents. The Fisheries Act only applies to oil spills from land, shorebased facilities, or ships carrying less than 1,000 tons of oil. The Pollution Control Act only applies to spills within the jurisdiction of British Columbia and as a result is confined in its operation to spills on land or in internal waters. And the Trans-Alaska Pipeline Authorization Act, which extends its compensation provisions to residents of Canada, only applies to oil discharged from a ship which is loaded at Valdez, Alaska and is destined for another port in the United States. As a result, it would be of no use if oil were spilled by a tanker en route from Valdez to Kitimat or any other port in British Columbia.

The statutes are not uniform as to the parties which they compensate. Governments can recover the cost of their clean-up efforts under each Act, although rights to recover under the Pollution Control Act are restricted to the Government of British Columbia and, perhaps, its municipalities. (Ferguson, vol.16, p.2553-55). Clean-up

costs of governments and private citizens must be authorized by the Governor in Council before they can be recovered under the Canada Shipping Act. Testimony revealed that authorization can take three or four days to secure (Buchanan, vol.12, p.1938) and it is unclear if the power exists retroactively to authorize action already taken.

Only the Canada Shipping Act and the Trans-Alaska Pipeline Authorization Act provide a right to recover damages. Both Acts give this right to private citizens as well as governments.

The net effect of all the legislation is that there is no statutory scheme to provide for recovery of damages or clean-up costs from a discharge of non-Alaskan oil which occurs in United States or international waters but which causes damage in Canada. This is despite the fact that the movement of foreign oil to and from Puget Sound refineries and the prevailing currents make such a scenario a very real possibility. In addition, no legislation imposes statutory liability for damages in the event of a shore-based spill. In the event of a spill from a marine oil terminal in British Columbia, governments could recover their clean-up costs under the Fisheries Act or the Pollution Control Act but the surrounding shoreline property owners would be left to rely on those common law remedies which legislators have found so ineffective.

The legislation varies as to who is liable and what he is liable for. The Canada Shipping Act makes the owner of a ship carrying more than 1,000 tons of oil liable without fault for authorized clean-up costs and all actual loss or damage occasioned by an oil spill. A provision which would make the cargo owner jointly and

severally liable with the ship owner has not been implemented by the Governor in Council. The Trans-Alaska Pipeline Authorization Act imposes strict liability on the owner or operator of a tanker for all damages including clean-up costs. The other Acts are framed more broadly. Under the Fisheries Act, the owner of the oil or the persons having the control of the oil are liable for costs which have been reasonably incurred to counteract, mitigate, or remedy the adverse affects of the spill. The provincial legislation merely provides that any person named in a certificate filed with the Supreme Court is liable for the clean-up costs stated therein unless that person proves he did not cause or permit the pollution.

The concept of damages which are recoverable is not uniform nor is it comprehensive in compensating for all the adverse impacts of a spill. The traditional concept of damages is limited to personal injuries, damage to real and personal property, and economic loss which flows directly therefrom. Although there may be difficulty calculating or proving the amount of these damages, there is no question that both the Canada Shipping Act and the Trans-Alaska Pipeline Authorization Act authorize their recovery. The adverse impacts of an oil spill are likely to be more pervasive than this traditional concept, however, and the statutory schemes have only gone part way in recognizing this.

Under the Fisheries Act or the Canada Shipping Act, licenced commercial fishermen can recover loss of income incurred by an oil spill. With the exception of whatever measures might be taken to remedy the adverse effects of an oil spill (restocking salmon runs?), Canadian law does not depart any further from a narrow common law notion

of damages which precludes recovery where the loss flows from interference with natural resources like fish or marine mammals.

In this regard the Trans-Alaska Pipeline Authorization Act is much more responsive to real concerns. It defines damages as any economic loss resulting from an oil spill including, among other things, loss of use of real or personal property or natural resources; injury to, or destruction of natural resources; loss of profits or impairment of earning capacity due to injury or destruction of property or natural resources, including loss of subsistence hunting, fishing, and gathering opportunities, and loss of tax revenue for a period of one year due to injury to real or personal property.

Under this Act, many people in British Columbia would be able to gain compensation for injuries which simply is not available under Canadian law. There would be compensation for damage to the Indian food fishery. It would also cover the loss of income suffered by the salmon fishing guide whose runs are injured; the coastal resort operator whose beach is coated; the logging company whose booming ground is slicked; the dive shop owner whose sales are impaired; and the shoreline owner who cannot realize as high a selling price for his property after it has been touched by oil.

It is both appropriate and ironic that American legislation should provide such wide benefits to Canadian residents. It is appropriate because Canadians will bear the risks presented by the movement of Alaskan oil down the coast. It is ironic, however, that it should provide to Canadians a more complete compensation system than their own elected representatives have seen fit to provide.

However, this beneficial U.S. legislation applies only in the case of Alaskan oil shipped to a U.S. port such as Cherry Point of Port Angeles. In addition, there have been some suggestions that its benefits may be denied to Canadians in the future unless reciprocal arrangements are developed. Not only does the Trans-Alaska Pipeline Authorization Act impose liability for a broader range of damages than Canadian law, but it has a number of mechanisms which make it easier for a successful litigant to recover the money which a court might award him.

Under Canadian law, ship owners are allowed to limit their liability. Ships are owned by companies which take advantage of the corporate concept of limited liability to limit their liability to the value of the assets of their company. This has created the incentive for the incorporation of "one-ship" companies and the holding of assets in foreign countries, both of which make it difficult to realize a judgment against the ship owner.

When Louis Audette, Administrator of the Maritime Pollution Claims Fund, appeared before the Inquiry, he explained his difficulties as follows:

...Many of these ship owning companies are one ship companies and well, the two ship owning companies that I am now dealing with are incorporated in Bermuda and in the Cayman Islands.

I have a strong feeling that they may have one table, one chair and one telephone as assets, and one ship has been scrapped and (the) other is lying as a wreck on the shores of Nova Scotia. I have some anxiety about the solvency of these companies, should I seek to realize upon their assets.

I have some anxiety about my ability to determine what their assets are. I'm trying to do this at the moment with the Cayman Island company, and I'm having great difficulty, I may say. (Audette, vol.16, p.2739).

The same device of limited corporate liability is available to ship owners under American law. However, under the Trans-Alaska Pipeline Authorization Act, the tanker owner or operator is required to demonstrate evidence of financial responsibility for \$14 million before oil destined for a port in the United States is loaded at Valdez. In effect, this means that the ship must be insured against all liability which the Act imposes upon it. In the event of a spill, the insurer pays the successful litigant and the one-ship company does not prevent recovery.

The Canada Shipping Act section requiring ships entering Canada to file evidence of financial responsibility has not yet been proclaimed. It was suggested to the Inquiry that this omission stems from a dispute with the insurance industry. (Bishop, vol.7, p.919). Whatever the reason, it seems unfortunate that it has not been proclaimed. The risks created by an oil port in British Columbia may necessitate the filing of evidence of financial responsibility in Canada. The precedent recently set by the National Energy Board in its reasons for decision in the Tenneco LNG application is instructive in this regard. In this case, the Board required the importer to file with it and the Coast Guard evidence that the LNG tanker carries \$200 million of public liability insurance.

The other method of overcoming the difficulties created by one-ship companies is through a compensation fund. Both the Trans-Alaska Pipeline Authorization Act and the

Canada Shipping Act create funds paid for by a per barrel surcharge on oil moved by ship. The Canada Shipping Act fund is liable to commercial fishermen for loss of income and serves as an avenue of last resort for spill victims who either are unable to identify the polluting ship or cannot realize judgment against a guilty ship. The Trans-Alaska fund is liable for damages in excess of \$14 million which are caused by an Alaskan tanker. The first \$14 million of damages are paid by the ship owner's insurer and the fund is liable for the balance up to \$100 million.

In addition to the corporate limitation of liability, the owner of a ship may limit his liability through the application of a formula based on the ship's registered tonnage. In Canada, there is a limit of slightly more than \$75.00 per ton with an upper limit for large ships of nearly \$16 million. (Bishop, Exhibit 49, p.13).

At this interim stage, several points are clear and others await further review. The compensation system which the four statutes combine to provide is not uniform in its coverage nor is it comprehensive.

There are other inconsistencies. The benefits of the Canada Shipping Act and the Maritime Pollution Claims Fund are not available to a Canadian who suffers damage from oil discharged in American waters. Furthermore, if a tanker is unloading oil at a terminal in Canada and an oil spill is attributable to it, surrounding shoreline property owners could recover damages without having to prove fault on the part of the ship. If the same amount of oil was spilled from the terminal, those same shoreline proprietors would have to prove that the terminal operator was negligent before they would have a right to recover anything.

The systems' inadequacies from a compensation perspective have already been discussed. On the other hand, it is important that the liability to compensate be transferred to those responsible for the spill. A government fund can be devised to provide full compensation, but if it does not ensure recovery from those responsible, the proper liability will not be achieved.

Economists argue that imposing liability on those responsible can help reduce the chance of accident. A charterer facing the prospect of multi-million dollar liability in the event of accident will take much greater care in his choice of tanker and crew than one who risks his cargo alone. Of course, insurance can diminish the effectiveness of liability as a means of self-regulation, but as long as premiums are based on performance, the effect will not be lost. Liability, as distinct from compensation, is another important issue to be studied.

This is where we are with the issues of liability and compensation. More evidence is needed to determine if initial perceptions and understandings are accurate. A comprehensive review must be undertaken. It may be necessary for the Province of British Columbia to enact legislation in fields which Parliament, under the British North American Act, 1867, cannot occupy. At this stage, the direction and manner of change cannot be determined; only problems and principles can be identified.

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