coasts, not merely on the Arctic coast but, perhaps because of its unique ecology, particularly on our Arctic coastline. As the hon member for Coast Chilcotin stated, yesterday some of us had an opportunity to visit the site of Canada's recent pollution crisis. Certainly one factor emerged—that very little scientific research exists to assist this or any other nation to combat a major oil pollution catastrope, especially should that pollution occur under subzero conditions.

When the Arrow foundered on our east coast, the fact of the matter is that Canadian science had not one single precedent to assist us in meeting that serious pollution crisis. It is to the credit of Canadian scientists from coast to coast, and members of our armed forces, that such a splendid job was done. But let no group of scientists be ever faced with that kind of problem again. The team of scientists and defence personnel who won the victory at Chedabucto Bay would have found it impossible to win a similar victory in Canada's far north had a mammoth supertanker been crushed in the ice, a tanker carrying not three million gallons of bunker-C but 75 million gallons.

I was in New York when the Manhattan came back from her historic visit to the Arctic. All of the New York tugs welcomed her. Not much mention was made of the role of the John A. Macdonald in all of the speeches of welcome that were delivered. But when placed in drydock it was soon determined that had the Manhattan been carrying oil in her tanks instead of test-run water, the result would have been very different. There were two large holes below the waterline in the cargo tanks, and one hole would have accommodated a large truck, and yet the voyage was termed a resounding success.

Had there been oil in the tanks of the *Manhattan* instead of seawater, there would have been serious ecological damage in our Arctic. Surely our friends in the United States who suggest they are not prepared to recognize our proposed claim of Arctic jurisdiction for the urgent and critical purposes of pollution control must realize that some of our concern at least stems from this incident, as well as from oil pollution caused by their numerous recent drilling accidents on the west, the east and the Gulf coasts.

The Americans have acted to protect themselves from further catastrophes. They have recently adopted a law calling for unlimited liability in cases of wilful negligence, plus fines of \$100 per gross ton up to a maximum

Arctic Waters Pollution Prevention Bill of \$14 million for even accidental spills. We must logically and understandably act in an even more critical area. American losses have been mainly affecting the leisure industry and the shrimp and oyster beds. There are fewer sandy beaches in Santa Barbara, and Louisiana shrimps will not be in as good supply this season.

The Americans are logical people. Apart from official policy pronouncements, undoubtedly they recognize Canada's need to protect the entire Arctic archipelago with its hundreds of thousands of square miles of surrounding sea and ice as a region into which ships should venture only under strict pollution controls.

It should be recalled that there is reason for Canadian concern. A spokesman for Standard Oil stated, as the *Manhattan* completed her maiden voyage in New York:

We may well see 25 to 30 supertankers operating across the top of the continent during the 70s, and if Arctic oil can be shipped in quantities through the northwest passage, so can iron, zinc, lead, copper, nickel and asbestos. They are only to be unearthed and delivered. The sleeping Arctic could become a very busy place.

I quote from the *Congressional Record* what a member of the United States House of Representatives said the other day:

Imagine a nation with our maritime history... being forced to rely on a foreign-flag icebreaker for the completion of the *Manhattan* project. We appear to be on the threshold of a dramatic breakthrough for commercial carriage in the Polar regions. Thus it is imperative that we establish and maintain a responsive icebreaking capability.

Congress has now authorized a start by the U.S. coastguard on the construction of the most powerful icebreaker fleet in the world. The first ship will cost \$59 million and it will be twice the size of the durable, hardworking John A. Macdonald.

Canadians are concerned about what might happen to a tanker that breaks up in the Arctic. We should be concerned. Not only is more oil being moved by sea each year but the size of oil tankers has also increased. The average tanker used during World War II had a capacity of 16,000 tons. By 1965 that average had risen to 27,000 tons, and a new tankers delivered in 1966 averaged 76,000 tons. A Japanese company has launched a 276,000 ton tanker, and other Japanese yards have orders for tankers as large as 312,000 tons. More than 60 tankers of 150,000 tons or more are on order throughout the world; tankers of 500,000 to 800,000 tons are on the drawing board, and those of more than one million tons are thought to be feasible. On the new