EXHIBIT 4

FORM 442, ITEM *6*

6(a) A description of the nature of the research project being conducted.

The purpose of the "Great Lakes/Saint Lawrence Seaway Vessel Traffic Services System Project" is to demonstrate a capability to improve the management of vessels as they transit those waterways. The enhanced vessel traffic management concept involves providing accurate and continuous vessel position information to central management facilities, and situation information to individual vessels. With high-quality vessel position information, central managers will more efficiently use waterway facilities (e.g., locks) and expedite the transit of vessels through the system by better scheduling. Vessels with hazardous cargoes will be monitored continuously as they move. Pilots and Captains will have immediate and detailed information on nearby vessels regardless of the weather or visibility. Also, vessel Pilots will have very precise speed information of great value when approaching fixed objects such as locks and piers. The demonstration project will use prototype Automatic Identifications System (AIS) equipment and operate on the Seaway, Lake Ontario, and the Welland Canal.

6(b) A showing that the communications facilities requested are necessary for the research project involved

The method proposed is to use vessel position information determined with Global Positioning System (GPS) signals, and corrected locally (i.e., differential GPS), to establish vessel positions with an accuracy of one or two meters. One goal of the project is to emulate the planned international Automatic Identifications System (AIS) that will use VHF frequencies for communication between vessels and land sites. When the accurate position is determined, each vessel periodically will transmit that position for display with position information from all other vessels in the system. The periodicity of data transmissions will be at a rate of *50* vessel reports every 10 seconds. At frequent intervals the central facility will transmit all position information to all vessels. Since vessel positions will be identified uniquely, each vessel will sort automatically through received data to determine and display an "own-vessel" situation. Because of the rate of information transmission and the need for continuity of displayed situations, there must be no spatial gaps in communication system coverage. Signal availability must be to ground level throughout.

6(c) A showing that existing communications facilities are inadequate.

Existing communication links in the Saint Lawrence Seaway area were established to meet a requirement for mandatory position reporting at a number of fixed points along the Seaway. At mandatory reporting points each vessel Pilot reported the position (i.e., the position of the point) and estimated the time-of-arrival at the next mandatory point. Gaps in existing VHF signal coverage between reporting points were accommodated by forecasted vessel movements. Signal coverage gaps in the existing communication system will not be acceptable in the proposed system where continuous data are needed from all vessels.