

Question. Would you give us for the record an analysis why that concrete is deteriorating?

Answer. As yet, there are no substantiated theories that explain the deterioration problem completely. The comprehensive investigation conducted by the Corps of Engineers has established that the terminal cause of deterioration is severe frost action; however, the root activity which rendered the concrete vulnerable to frost action has not yet been clearly delineated. There are several factors which singly or in some combination could have acted to render the concrete vulnerable to frost action, and study of these by the Corps of Engineers Waterways Experiment Station in Vicksburg, Miss., is continuing. The Corps of Engineers has reached the following tentative conclusions:

(a) Deterioration was the result of frost damage.

(b) For reasons not yet completely understood, the concrete was rendered vulnerable to frost damage.

(1) The severe climatic environment in the Massena, N.Y., area, where the U.S. seaway locks are located; and (2) the use of natural cement—portland cement blend and the accompanying slower attainment of minimum strength and frost-resistant levels are being considered as contributing factors. Whether this vulnerability was due to early-age freezing, freezing after the first season of subjection to hydrostatic pressures, or a combination of these, or to some other single factor or combination of factors must yet be determined.

Question. There is one other problem that I wish you would answer for the record. That is the controversy over damages in New York from overflow and wave action as ships pass through the channel.

Answer. A public hearing on the speed of large vessels on the St. Lawrence Seaway was held on June 3, 1968, at Alexandria Bay, N.Y., by Congressman Robert C. McEwen. Top-level representatives of the Department of Transportation, the U.S. Coast Guard, the Seaway Corporation, the Canadian Seaway Authority, the U.S. Army Corps of Engineers, and the U.S. Attorney's Office for the Northern Judicial District of New York were in attendance to hear the complaints of shore-property owners along the international section of the St. Lawrence River from St. Regis, N.Y., westward to Cape Vincent, at the head of the river and the outlet of Lake Ontario. In addition to numerous complaints from the Thousand Islands area, complaints were heard from Wilson Hill residents and the St. Regis Indian Reservation. The Federal officials explained their various roles in controlling vessels through the seaway and responded openly to all matters and questions raised by the hearing participants. A great deal was learned on all sides concerning the problems presented by speeding vessels through the seaway and possible means of control. A number of witnesses stated that the problems were created by a small percentage of seaway vessels and that the situation was already much improved in the 1968 navigation season. Of course, these are general observations without benefit of transcript review.

TRAFFIC PROBLEMS IN THE ST. LAWRENCE RIVER

In response to complaints from property owners a review of the speed regulations for the St. Lawrence River has been conducted with other Federal agencies having responsibilities in this area.

The waters of the St. Lawrence River on the U.S. side of the international boundary are under the general supervision of the District Engineer, U.S. Army Engineer District, Buffalo, N.Y. The commander, 9th Coast Guard District, has been designated in title 33, Code of Federal Regulations, section 207.611, as the duly authorized representative of the district engineer for enforcement of the vessel speed limit regulations. On December 13, 1967, the district engineer agreed with the Commander, 9th Coast Guard District, that direct measures by the Coast Guard to detect and suppress violations of the vessel speed limit regulations on the St. Lawrence River would be more effective than the procedure previously followed by reporting violations through the chain of command to the district engineer. This former procedure was unsatisfactory and ineffectual because of the delays involved in presenting the evidence and details of the violation to an authority with power to act against an offender. This direct action by the Coast Guard should be instrumental in eventually reducing the number of violations. The district engineer and the Commander, 9th Coast Guard District, also agreed to review from time to time the effectiveness of enforcement measures and to explore other related matters.

A conference was held in Syracuse, N.Y., on November 13, 1967, to explore solutions to this problem. The participants included representatives of the St.