



REASSESSMENT OF THE RESPONSE TO TSB RECOMMENDATION M96-17

Allocation of marine pilotage assignments and fatigue

Background

On 11 December 1993, the bulk carrier *Nirja*, carrying a partial load of steel, was attempting to berth at a slip in Hamilton Harbour, Ontario. While turning off the entrance to the slip in strong stern winds and with three tugs assisting, the *Nirja* did not successfully negotiate the turn and struck the tanker *Hamilton Energy*, which was moored alongside the oil barge *Proovmar Terminal I* at the entrance to the slip. There was no injury or pollution, but the wharf and the vessels involved sustained some damage.

The Board determined that the *Nirja*, while manoeuvring in strong wind conditions under the conduct of a pilot, did not successfully negotiate the turn into the slip and struck the *Hamilton Energy* because the vessel was not stopped in the available distance. The fact that the tugs were not secured to the vessel, that the anchor was not deployed and that the performance of the pilot was probably less than optimal contributed to the accident.

The Board concluded its investigation and released report M93C0003 on 23 December 1996.

TSB Recommendation M96-17 (December 1996)

The Board had two specific concerns arising out of this occurrence. First, current pilotage assignment practices permit extended duty days such that significant performance degradation can occur. Secondly, both the Great Lakes Pilotage Authority and the pilots themselves apparently do not fully appreciate the negative effects of fatigue on performance and the strategies for mitigating those effects.

Given the vulnerability of individuals in safety-sensitive positions to significant errors in judgement when fatigued, and given the potential consequences of such errors, the Board believes that mandatory rest provisions should be strictly enforced in the assignment of marine pilots.

Therefore, the Board recommended that

The Department of Transport and the Great Lakes Pilotage Authority implement a policy and procedures for allocating pilotage assignments, such that pilots receive sufficient rest to minimize the adverse effects of fatigue on performance.

TSB Recommendation M96-17

Transport Canada's response to Recommendation M96-17 (May 1997)

The Minister of Transport notes the recommendation. The Great Lakes Pilotage Authority (GLPA) is responsible for its operational policy and procedures. The GLPA and some of the pilots have already instituted safeguards to address the issues. The collective agreements for two of the GLPA's districts now contain an article aimed at alleviating and reducing some of the negative effects of altering sleep patterns. The inclusion of a similar article in its other collective agreements is an objective of the GLPA and is supported by the Department.

TSB assessment of Transport Canada's response to Recommendation M96-17 (July 1997)

In reply to Recommendation M96-17, TC indicated that the Great Lakes Pilotage Authority (GLPA) and some pilots have already instituted safeguards to address the issues. In additional correspondence obtained by the TSB, it was determined that the GLPA and some pilot groups (Cornwall District and District No. 1) had recognized that shift work can cause sleeping disorders, increasing fatigue levels and potentially reducing safety. As such, in 1996, to alleviate and reduce some of the negative effects of altering sleep patterns, the GLPA introduced an Article in the Collective Agreements that reads:

When a pilot has worked two (2) consecutive nights, he may ask not to be despatched before 0600 the following morning. The pilot would keep his position on the tour-de-role, if his services are required before the end of his rest. The next rested pilot would then be despatched. For the understanding of this article, working nights means to be ordered for a vessel or transfer between 16:00 and 06:00 or an assignment ending between 00:01 and 08:00.

Apparently, during the 1996 high traffic period, pilots of both districts took advantage of the new clause to break the "disruptive" cycle of working nights. It is also understood that the other districts of the GLPA are now considering a similar clause.

The initiative taken by the Pilotage Authority and pilots to address the issue of fatigue is recognized as being a positive one. However, use of the new clause may increase the necessity to recall pilots on rest days in order to cover the additional assignments, thereby putting the pilots in a difficult position to decide if they are sufficiently rested to accept the additional workload. Studies have shown that sleep-deprived individuals tend to be a poor judge of their level of fatigue. Hence, the use of work schedules that still puts the onus on the pilot to decide if he/she is sufficiently rested to work would be prone to fatigue-related errors in judgement. This is a similar concern to that previously expressed by the Board in support of its recommendation.

However, in consideration of the additional initiatives explained in TC's response to the Board's second recommendation (see M96-18), fatigue awareness programs could enable pilots to make more knowledgeable decisions with respect to their work-rest schedules, including those provisions under the new clause. Therefore, the response to Recommendation M96-17 is considered as being **Satisfactory in Part**.

TSB reassessment of Transport Canada's response to Recommendation M96-17 (November 1999)

The Great Lakes Pilotage Authority has developed a training package on BRM and fatigue and delivered it to all 65 of its pilots. A *Fatigue Management Guide for Marine Pilots* has been developed for use by marine pilots and trainees in the six-hour Marine Pilot Fatigue Workshop.

Therefore, the response to Recommendation M96-17 is considered **Fully Satisfactory**.

Next TSB action

This deficiency file is **Closed**.