



# National Transportation Safety Board

Washington, D.C. 20594

## Safety Recommendation

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Date: September 18, 1990

In reply refer to: M-90-48 and -49

Captain Donald E. Bodron, U.S.C.G.  
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About 0009, on March 24, 1989, the U.S. tankship EXXON VALDEZ, loaded with about 1,263,000 barrels of crude oil, grounded on Bligh Reef in Prince William Sound, near Valdez, Alaska. At the time of the grounding, the vessel was under the navigational control of the third mate. There were no injuries, but about 258,000 barrels of cargo were spilled when eight cargo tanks ruptured, resulting in catastrophic damage to the environment. Damage to the vessel was estimated at \$25 million, the cost of the lost cargo was estimated at \$3.4 million, and the cost of the cleanup of the spilled oil during 1989 was about \$1.85 billion.<sup>1</sup>

The Alaska Regional Oil and Hazardous Substances Pollution Contingency Plan (RCP) addresses the use of oil dispersants in the State. It provides a decision matrix and a description of the biological effects of dispersants in the water but no guidance or information about the conditions under which the application of dispersants is effective. Wind and sea conditions and the length of time that the oil has been on the water when dispersants are applied alter their effectiveness. Such information about dispersant application should be included in the Alaska RCP and other contingency plans so that proper dispersant procedures are readily available. An On-Scene Coordinator (OSC) would then know when to use dispersants and would not waste time using them when they would not be effective. On the afternoon of the spill, a test was conducted using dispersants when the sea was calm. However, calm sea conditions are not conducive to the effective use of dispersants, which must mix with the oil in order to cause it to break into droplets and disperse into the water column. If the OSC had had guidelines in the RCP that described the wind and sea conditions necessary for effective use of dispersants, a test application would have been unnecessary.

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<sup>1</sup>For more detailed information, read Marine Accident Report--"Grounding of the U.S. Tankship EXXON VALDEZ on Bligh Reef, Prince William Sound Near Valdez, Alaska, March 24, 1989" (NTSB/MAR-90/04).

The Alaska RCP and the Alyeska plans also mention in-situ burning of oil as an approved alternative to mechanical cleanup, but the plans provide no guidance about how to proceed with in-situ burning or about possible results of burning, such as smoke or oil and tar residue. The use of in-situ burning is at the discretion of the OSC, with guidance from the RRT. Thus, the OSC is in the difficult position of being able to authorize certain methods--dispersant use and in-situ burning--but only after consulting and seeking advice from the RRT. The RRT may provide some information and agree to the use of a particular method, but the final decision is the OSC's. At times, the OSC may not be able to contact the RRT, or the RRT may not provide clear guidance. Such problems may result in delays that could render the application of dispersants useless and in-situ burning ineffectual. The OSC could also make an incorrect decision because of the lack of sufficient guidance or information, but incorrect action probably would not be as harmful as no action while awaiting a consensus from the RRT. In any case, the OSC's decisions will probably be second guessed during and after the cleanup because the results may not be acceptable to all parties. The cleanup party may think there was a delay in authorizing a certain procedure; the environmentalists may believe the physical environment was damaged or fish and wildlife were destroyed; fishermen may think their livelihood was threatened; the State may regard the impact on its environment, revenue, or tourism as negative; or the RRT may think its guidance was interpreted incorrectly. OSCs need more than advice from a committee. They need guidance in writing, before a spill occurs, from the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) and the RCP about the use of dispersant chemicals and in-situ burning so that their decisions can be based on accepted procedures.

Therefore, the National Transportation Safety Board recommends that the Alaska Regional Response Team:

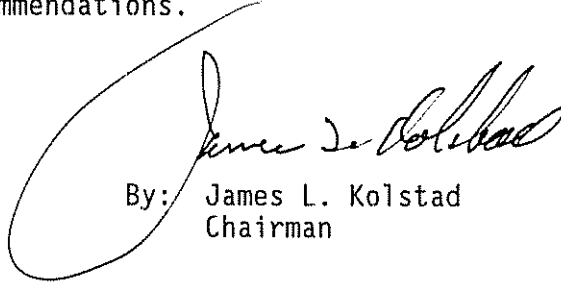
Develop clearer guidance for dispersant use in order to eliminate the need for a dispersant test before dispersants are used on an oil spill and include that information in the Alaska Regional Contingency Plan. (Class II, Priority Action) (M-90-48)

Develop guidelines and procedures for in-situ burning of oil, identify the range of wind and sea conditions for which in-situ burning of oil can be used effectively, and incorporate that information into the Alaska Regional Contingency Plan. (Class II, Priority Action) (M-90-49)

Also, the Safety Board issued Safety Recommendations M-90-26 through -31 to the Exxon Shipping Company and all companies operating in Prince William Sound; M-90-32 through -43 to the U.S. Coast Guard; M-90-44 through -47 to the Environmental Protection Agency; M-90-50 through 52 to the State of Alaska; M-90-53 through -58 to the Alyeska Pipeline Service Company; and M-89-59 to the U.S. Geological Survey. The Safety Board also reiterated Safety Recommendation M-88-1 to the U.S. Coast Guard and Safety Recommendations I-89-1 through -12 to the Department of Transportation.

The National Transportation Safety Board is an independent Federal agency with the statutory responsibility "to promote transportation safety by conducting independent accident investigations and by formulating safety improvement recommendations" (Public Law 93-633). The Safety Board is vitally interested in any action taken as a result of its safety recommendations. Therefore, it would appreciate a response from you regarding action taken or contemplated with respect to the recommendations in this letter. Please refer to Safety Recommendations M-90-48 and -49 in your reply.

KOLSTAD, Chairman, COUGHLIN, Vice Chairman, and LAUBER and BURNETT, Members, concurred in these recommendations.



By: James L. Kolstad  
Chairman