Richard H.

National Transportation Safety Board

Washington, D.C. 20594

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JUN 28 2002

Office of the Chairman

Honorable Ellen G. Engleman
Administrator
Research and Special Programs Administration
Washington, D.C. 20590

Dear Ms. Engleman:

Thank you for your April 24, 2002, letter updating the status of action being taken to implement Safety Recommendations P-98-30 and P-99-12, stated below. Safety Recommendation P-98-30 was issued to the Research and Special Programs Administration (RSPA) as a result of the Safety Board's investigation of the June 26, 1996, pipeline rupture and release of fuel oil at Fork Shoals, South Carolina. Safety Recommendation P-99-12 was issued as a result of the Board's 1999 report *Evaluation of U.S. Department of Transportation Efforts in the 1990s to Address Operator Fatigue.* Both recommendations are on the Safety Board's "Most Wanted" list of transportation safety improvements.

P-98-30

> Assess the potential safety risks associated with rotating pipeline controller shifts and establish industry guidelines for the development and implementation of pipeline controller work schedules that reduce the likelihood of accidents attributable to controller fatigue.

P-99-12

> Establish within 2 years scientifically based hours-of-service regulations that set limits on hours of service, provide predictable work and rest schedules, and consider circadian rhythms and human sleep rest requirements.

RSPA reports that it has been participating in the U.S. Department of Transportation's Human Factors Coordinating Committee (HFCC) to assess approaches to the control of human fatigue in transportation. Specifically, RSPA engineers and pipeline industry representatives have made presentations at the HFCC-sponsored research studies and conferences on pipeline transportation fatigue issues. RSPA advises it will evaluate how rotating controller schedules in the pipeline industry may be related to human fatigue and safety outcomes in the pipeline industry. RSPA indicates that it recognizes that fatigue and work-rest patterns are a problem in all modes of transportation, with fatigue being a particular issue given the preponderance of night work, concentrated/compressed schedules, overtime, and rotating work. Additional concerns include job-critical, safety-related performance, workers' safety during their commute, and general health effects of fatigue.

To address problems associated with fatigue, RSPA reports that it has tasked the Volpe National Transportation Systems Center to develop information about work-rest cycles, fatigue measurement, and fatigue management for pipeline controllers; this information will be reviewed and, if warranted, RSPA will provide industry and labor with tools and techniques to manage the problem, examining the actual scope of

the fatigue problem and applying the new *Organizational Fatigue Management* technologies and procedures developed by the HFCC. The initial step in the study is to collect pipeline operator work and other fatigue-related scheduling data from selected companies and unions. This data will be used to identify existing and potential fatigue problems and to develop a comprehensive work plan to address them. The resulting plan will be provided as an initial report and will be used to chart a course of work focused on conducting the planned research and providing the pipeline industry with fatigue management tools tailored to its needs.

Also, RSPA advises that it will issue a second Broad Agency Announcement (BAA) to invite proposals for pipeline safety research, including research on fatigue-related problems, fatigue measurement, and fatigue management. RSPA's BAA is a two-step process: step one is the submission of a "white paper/pre-proposal" by interested parties, which will be evaluated by a technical panel; step two will be the submission of full proposals by those parties deemed to have the most technically promising projects.

Following these actions, RSPA will evaluate the need for further development and application of guidelines to reduce the threat of pipeline incidents attributable to operator fatigue. RSPA believes these efforts will provide the necessary information for an assessment of the need for further regulatory action.

Although RSPA has not committed to establishing scientifically based hours-of-service regulations, because RSPA continues to make progress on assessing the fatigue issue in pipeline safety, both Safety Recommendations P-98-30 and P-99-12 remain classified "Open—Acceptable Response." We would appreciate another update on these initiatives as they near completion.

Thank you for your commitment to pipeline safety. We appreciate your detailed response to these recommendations.

Sincerely,

Marion Blakey

Marion C. Blakey
Chairman

cc: Mr. Robert Clarke, Safety and Health Team Leader
Office of Transportation Policy Development