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**CONDITION MONITORING SENSOR EVALUATION AND TEST PROTOCOL
DEVELOPMENT**

Kathleen M. Kennedy; Paul P. Wells

ExxonMobil Research and Engineering, 600 Billingsport Road, Paulsboro, NJ 08066

Over the past several decades, highly specified filtration systems have been used to provide clean jet fuel through the delivery process. Filters, when paired with conventional spot checks, have proved effective in providing fuel with acceptable dirt and water content. However, recent concerns with filter monitor media migration and reviews of aircraft refueling practices coupled with advances in sensor technology have highlighted the value of actively monitoring fuel cleanliness using real-time electronic sensors. This paper reports efforts to test several candidate sensors and develop testing protocols to understand the performance of condition monitoring systems to support implementation of the sensors in aircraft refueling. Some of the issues that must be addressed in implementation strategies will be discussed with some analysis of advantages and disadvantages of differing approaches.