### Research to Assess the Need for Remote On-Ground Ice Detection Systems (ROGIDS) at End-of-Runway

**Flight Crew Survey:** A survey of Canadian, American, and international pilots was carried out to gather information from pilots on pre-takeoff contamination checks, to determine if pilots would accept/want a ROGIDS at the departure end of the runway and to gather anecdotal information on frequency of deicing-related turnbacks. 756 responses were received. The responses illustrated general support from pilots for ROGIDS use at the end of the runway. They also revealed that many pilots do not receive adequate training to identify fluid failure and that several obstacles prevent pilots from being able to conduct the needed contamination checks adequately.

**Analysis of Incident Reporting Data:** Two incident reporting databases (CADORS and ASRS) were investigated with the objective of determining if ROGIDS could have prevented any reported incidents from occurring. One of the databases (CADORS) did not provide sufficient detail in each report to make this assessment. The ASRS database was filtered to select 42 relevant reports spanning a ten year period. It was determined that a ROGIDS could have a significant impact on the number of aircraft ground icing safety incidents, especially if located at the departure end of the runway (which could likely have prevented half of the incidents reviewed).

As a result of the information gathered in these two research projects, it is recommended that resources be allocated to advance the use of ROGIDS technology for the end-of-runway application.