### Aircraft Ground Icing General and Exploratory Research Activities for the 2003-04 Winter

**1. Title and Subtitle**

Aircraft Ground Icing General and Exploratory Research Activities for the 2003-04 Winter

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**5. Abstract**

This report documents the exploratory research and general activities completed by APS related to aircraft ground deicing research in the winter of 2003-04. The activities documented in this report were carried out in addition to the eight main research projects completed in the winter of 2003-04 and documented in separate reports.

The six activities included in this report are described below.

1. **Surface Temperature Profiles: Day versus Night:** Research was conducted to document the temperature differential between plate and air temperatures during the day and night.

2. **Wetting Properties of Type I Fluids:** To better understand the wetting phenomenon of Type I fluids, APS carried out a series of preliminary tests to study the effect of test plate surface roughness on adhesion of Type I fluids to test surfaces.

3. **Endurance Times in Fluctuating Conditions:** Tests were conducted to determine whether the “holdover time clock” can be stopped when precipitation stops and restarted when precipitation starts again.

4. **Video Documentation of Snowfall Intensities:** APS undertook a project to document the four snowfall intensity categories – very light snow, light snow, moderate snow and heavy snow – on video.

5. **Holdover Time Guidelines Website:** APS developed and implemented a website for the official TC 2004-05 Holdover Time Table Guidelines.

6. **Test procedures and Presentations:** An account of the test procedures and presentations that were produced for the 2003-04 program of activities is included in this report.

**6. Distribution Statement**

Limited number of copies available from the Transportation Development Centre