Technology & Development Status Report
Aviation Program
FY 2009

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PROJECT:	**Airtanker Base Blending**	**CENTER:**	**SDTDC**
Number:	4E41P09	**PROGRAM LEADER:**	Bambarger
SPONSOR:		**Project Leader:**	Becker
Proposer:	Ed Gililland		

PROJECT OBJECTIVES

The mix ratio of retardant loaded onto airtankers is currently adjusted manually. This requires the mixmaster's close attention. Many options for automatically controlling this ratio exist. This project will investigate the options, identify those most appropriate for retardant mixing, test them, and report the relevant information for retrofitting bases to such a technology. Retardant quality control and pilot safety will both improve as a result of implementing such a system.

Changes to objectives:

SIGNIFICANT ACCOMPLISHMENTS

- The prototype blending system has been tested at SDTDC and was able to perform proper blending to the correct water/retardant ratio with FireTrol LCA-R. The system was installed at an air tanker base in Durango, Colorado on August 28th, 2006 for field testing. Testing period is completed due to the end Region 2 fire season.
- The blending system was able to load twelve aircraft successfully. A problem with the Micro Motion transmitter prevented further testing. SDTDC has identified the problems and a software upgrade will need to be installed into the Micro Motion unit and the blending controller. Testing will resume in the early portion of the 2008 fire season to validate any upgrades to the system.

Output:

Planned: Working prototype blending system by January 2006.

Production unit will be available by mid 2008.

Tech tip to inform system availability and ordering information available by mid 2008.

Actual: One company has developed a prototype system. The unit has been installed at Durango ATB for field testing. Twelve aircraft were successfully load with the retardant blending system during the 2007 fire season. A problem with the Micro Motion transmitter prevented further testing.

• TechTip: (available mid-2008)

• Drawing F156-01 [Draft]: PDF (53k) DWG (170k)

• Density Controller User Manual: PDF (665k)