



Technology & Development Status Report

Aviation Program

FY 2002



Date Last Edited: 12-27-2002

PROJECT: **Aerial Deliver (Airtanker Tank and Gating Systems)** **CENTER:** **SDTDC**

Number: 0E01P06 **PROGRAM LEADER:** Carl Bambarger

SPONSOR: WO **Project Leader:** Carl Bambarger

Proposer:

PROJECT OBJECTIVES

This project provides the continuing technical support to the Interagency Airtanker Board in the requirements, development, and testing of the Forest Service's Fleet of contracted retardant delivery systems (airtankers, helitankers, and helicopters with buckets).

The project also supports the field with prompt technical assistance and services. Also, coordination with the Airtanker Industry, Cooperators, other US agencies and International Governments and Operators is provided.

WO aviation is supported with airtanker technical information as needed.

This program was transferred to SDTDC and is being re-engineered to provide better tools, information, and service at a lower cost. A three year plan is being executed. The expected result will be a 25% reduction in cost from the initial budget from this re-engineering.

Changes to objectives:

SIGNIFICANT ACCOMPLISHMENTS

- Completed documenting the following process:
- – How to prepare for and conduct a drop test. This documents all of the needs to consider in preparing for a drop test, and then discusses the organization conducting a drop test with specific guidance on tasks.
- – How to conduct a static test. This document the material needed from the vendor, the equipment needed for the test, and the process for conducting a static test. General guidance on trouble shooting for problems will be added next year.
- – How to determine airtanker line length. Over the years of drop testing line length determination has been different. This documents the various processes and provides recommendation for the best method.
- Provided training to the Intermediate Air Operations class in Spokane, WA for airtanker safe drop heights.
- Integrated a line length calculation program with the drop test weighing software. This allows for real time quick look information on the airtanker's line length performance during the test.
- Documented the error sources that exist in collecting the data from a drop test to determine the airtanker's line length performance. This report only names the errors. The process of determining a contributing amount of error for each source is seen as a very costly and long process. Determination of these error to develop an error budget will begin next year, but only as funding is

available.

- Support to the AFFS (Airborne Fire Fighting System – replacement for the aging MAFFS):
- – Analyzed and documented the results of the Mini-Me test.
- – Prepared for the AFFS drop test (equipment, coordination, etc.)
- – Acquired new demonstration technology (LIDAR and Disdrometers) viewing
- the retardant drop

Output:

Planned: 2rd Qtr - Integrate line length calculation in software

3rd Qtr - How to prepare for and conduct a drop test

4th Qtr - How to conduct a static test

4th Qtr - How to determine airtanker line length

Actual: 3rd Qtr - Integrate line length calculation in software

3rd Qtr - How to prepare for and conduct a drop test

4th Qtr - How to conduct a static test

4th Qtr - How to determine airtanker line length