

TACTICAL USE OF LONG-TERM RETARDANTS **8416**
(September 2003)

**AERIAL APPLICATION PATTERNS
AND COVERAGE LEVELS** **8416.1**
(September 2003)

When water or retardant is dropped from an aircraft, the coverage pattern created and the amount of product covering a given area depends on many factors. These include the quantity of water or retardant dropped, the aircraft speed at the time of the drop (“drop speed”), the number and size of tank doors, the height of the drop, cross-winds, humidity, and the weight and viscosity of the water or retardant. In order to standardize the terminology used to describe the amount of water or retardant to be dropped on a fire, the aerial firefighting agencies in the USA have agreed to describe the desired result in terms of “load fraction” and “coverage level.”

DROP PATTERN DESCRIPTIONS **8416.1.1**
(September 2003)

Drop patterns are described using two parameters: load fraction and coverage level. Load fraction is that portion of the load that the air tactical group supervisor wants the pilot to drop. “Half a load” and “the whole load” are load fraction descriptions.

Coverage level is an expression of the number of gallons of retardant applied per 100 square feet. A “coverage level 6” drop would mean that 6 gallons of retardant would be applied to a 10 ft. by 10 ft. (100 sq. ft.) area.

These two descriptions are used together to describe to the pilot the amount of retardant to be dropped. For an S2T, “Half a load at coverage level 6” would result in a 600 gallon drop distributed over 10,000 square feet.

TANKERS SITTING LOADED FOR INITIAL ATTACK **8416.1.2**
(September 2003)

When awaiting dispatch, CDF airtankers will sit loaded with retardant to the maximum safe takeoff level, as determined by the pilot. Exceptions to this policy are permitted on a case-by-case basis as determined by the condition of the aircraft or by specific operational need.

**OFFLOADING AND RE-USE
OF OFFLOADED RETARDANT**
(September 2003)

8416.1.3

At times it may be necessary to off-load retardant that has been loaded into an airtanker. Each air attack base should have the capacity to off-load up to 3,000 gallons of retardant at a rate of at least 200 gpm.

Off-loaded retardant will be pumped into one or more separate storage tanks. To prevent retardant contamination and spoilage, off-loaded retardant will not be returned to the mixed retardant storage tanks.

Offloaded retardant may be re-loaded into airtankers if it is tested prior to loading and found to be within specification limits.

JETTISON OF RETARDANT
(September 2003)

8416.1.4

Very often airtanker pilots will need to jettison a portion of their retardant load in order to reduce the gross weight of the airtanker to an acceptable landing weight. When this is necessary the pilot will jettison the retardant in a pre-identified jettison area. CDF will only utilize jettison areas that are covered by a use agreement between CDF and the property owner.

**APPLICATION OF LONG-TERM RETARDANT
USING GROUND APPARATUS**
(September 2003)

8416.2

(to be written)

(see next section)

(see HB Table of Contents)

(see Forms or Forms Samples)