

General Description

No Operational Field Evaluation

Monitored Operational Field Evaluation

Limited Operational Field Evaluation

Full Operational Field Evaluation

General Description

A long term fire retardant undergoes 16 to 18 months of laboratory evaluation after submission to the Forest Service. Following a successful completion of the laboratory evaluation, an analysis shall be undertaken to determine whether an operational field evaluation is needed.

Whether or not a product must have a field evaluation, and the complexity of the evaluation will be determined on a case-by-case basis. The operational field evaluation may vary from a slight increase in sampling, to a detailed complex evaluation. This may include outside teams to study product effectiveness and/or visibility.

There are three general categories of operational field evaluation: full, limited, and monitor. Products in the same category will be tested in similar ways. In addition to the general categories identified, the field evaluation can focus on any potential problem areas identified during the laboratory evaluation. An example might be a liquid concentrate that increases viscosity significantly during storage. Although the liquid concentrate passed the laboratory tests, additional sampling and testing would be planned to monitor the viscosity increases in the bulk storage.

Without exception, the goal is to get a full fire season of use with a minimum of 200,000 gallons (757,000 liters) mixed and loaded. Ideally, this use would include periods of steady use and periods of intense activity.

Operational field evaluations involve sampling and testing the retardant received at the base; in storage during the season and over a winter; and pumped into airtankers. The Forest Service purchases all retardant used during an operational field evaluation. The manufacturer/supplier of the retardant covers all associated costs to include travel, materials, and time expended to perform the evaluation.

No Operational Field Evaluation

If a product contains a change in the amount or source of a minor ingredient, that product would not necessarily require a field evaluation.

There may be surveying of base personnel during the first fire season for possible problems and additional quality control type sampling to monitor for unexpected problems.

Monitored Operational Field Evaluation

A monitor operational field evaluation will be conducted for products similar to existing, fully or conditionally qualified and approved product. Formulations that contain alternate source of ingredient(s) but do not change the type or amount of the ingredient are considered to be similar.

The National Director, Fire and Aviation Management, USDA Forest Service, will identify products requiring a monitor field evaluation.

Products requiring a monitor field evaluation may be placed on the Qualified Products List as "conditionally qualified." The product will be included in the normal contracting process and the location for the field evaluation selected from the force account or full service contract bases where the test product is the low bid. It will be purchased at the contract price.

The operational field evaluation will be conducted in accordance with a brief written test plan. This typically involves use for one season with monitoring of the overall retardant characteristics and especially differences from the original formula. These might include variations in viscosity, foaming, or flowing of dry powders.

- a. There will be a slight increase in frequency of sampling and routine observation of use by field personnel. Results of all lot

acceptance and quality assurance testing will be monitored. Sampling of retardant in base storage and during loading operations will be done.

- b. Sampling on a schedule similar to that done for full-scale tests, that is either the batch-by-batch sampling or weekly storage samples should be analyzed.
- c. Over-winter storage may or may not be required. When over-winter storage tests are required, the remaining product may be flown off once spring sampling has been completed.

A simple letter report will be prepared.

At the successful conclusion of the operational evaluation the status of the product will be upgraded to “fully qualified” and listed on the Qualified Products List or Backup List as appropriate.

Limited Operational Field Evaluation

A limited operational evaluation will be conducted when there is a change in the color-enhancing system of a formulation.

The National Director, Fire and Aviation Management, USDA Forest Service, will identify products requiring a limited operational evaluation.

The test product will be substituted for a similar qualified product, from the same manufacturer, at the contract price at a force account location designated/selected by the Forest Service.

The Forest Service will prepare a written operational evaluation plan for review by the retardant supplier and other participants. In accordance with the evaluation plan, base and other support personnel will take increased sampling and special observations such as those required for color evaluation.

- a. Samples will be taken and tested from each shipment to the base. Samples will also be taken and tested as retardant is pumped into the airtankers. Laboratory tests may be performed on retained samples.
- b. Over-winter storage may or may not be required. When over-winter storage tests are required, the remaining product may be flown off, at Forest Service discretion, after spring sampling has been completed.
- c. Products containing a new colorant system require additional testing. For one season at one base, the color and visibility will be evaluated. This evaluation will include airtanker pilots, lead plane pilots, air observers, etc. to assure that the product has acceptable visibility, allowing all involved to do their jobs properly and safely. The product must be monitored for changes in characteristics that have been brought about by the color change.

The product will be listed as “conditionally approved” after the first fire season of successful use provided that results of the initial and end-of-season corrosion testing is acceptable.

At the conclusion of the evaluation, an informal written report will be prepared containing all significant observations and conclusion.

Following successful completion of the field evaluation, the status of the product will be upgraded to “fully qualified” and listed on the Qualified Products List or Backup List as appropriate.

Full Operational Field Evaluation

Full operational evaluations will be conducted for formulations that are determined by the Forest Service to be a completely new concept, a substantially new product, or a significant change of product type for the supplier. Formulations contain

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new types and amounts of ingredient(s) and may include new mixing, handling, and storage requirements.

The National Director, Fire and Aviation Management, USDA Forest Service, will identify products requiring a full operational field evaluation following successful completion of the laboratory evaluation.

The evaluation site will be a force account base, blacked out on the National Long-term Bulk and Full Service Retardant Contract. Product will be purchased at a price negotiated by the Contracting Officer. In accordance with a formal operational evaluation plan, written by the Forest Service and reviewed by the supplier and other participants, intensive sampling will be required as well as observations and recording of mixing, handling, and storage operations.

- a. Logistics from plant to field will be examined, including plant quality control, ability to sustain operations and supply material as needed.
- b. Time and equipment needed for mixing and handling operations will be determined.
- c. Sampling and testing will be performed during all phases of base operations to assess consistency of the mixed retardant, frequency and duration of recirculation during the season and following over-winter storage. Corrosion and other laboratory tests may be performed on retained samples.
- d. Operational effectiveness of the retardant may require the implementation of a special team to gather on-site data and present findings.
- e. Other product characteristics such as abnormal wear on pumps or other equipment, dustiness, irritation to mixing and loading personnel will be evaluated.

OPERATIONAL FIELD EVALUATION TEST

- f. Over-winter storage will be required. At the discretion of the Government, over-winter storage product may be used once spring sampling has been completed.

Status **may** be listed as “conditional” when first fire season of use, including initial and end-of-season corrosion, is completed satisfactorily.

The written evaluation report will contain a complete, detailed summary of findings. In the event of an extended evaluation, progress reports may be made.

At the successful conclusion of the operational field evaluation the status of the product will be upgraded to “fully qualified” and listed on the Qualified Products List or Backup List as appropriate.

United States Department of Agriculture, Forest Service
Standardization Document Improvement Proposal

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Document Number and Title: 0051 1807—SDTDC, Standard Test Procedures For the Evaluation of Wildland Fire Chemical Products

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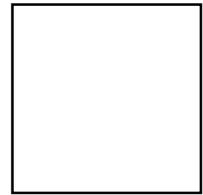
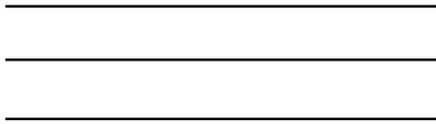
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