

**Manufacturer Submission Procedures for  
Qualification Testing of  
Wildland Fire Chemical Products**

**USDA Forest Service  
Missoula Technology and Development Center  
Wildland Fire Chemical Systems**

**Revised March 2021**

# **Manufacturer Submission Procedures for Qualification Testing of**

## **Wildland Fire Chemical Products**

### **Policy**

USDA Forest Service policy (Forest Service Manual 5162.03) requires that the agency “Use only evaluated, approved and qualified chemicals.”

The Director, Fire and Aviation Management, Washington Office, has the responsibility to approve chemicals for Forest Service operations and to administer the fire chemical products qualification and evaluation program.

### **Confidentiality**

All information, including the fact that the Forest Service has an agreement with a company or is evaluating a product is confidential until a product is listed on the qualified product list.

The formulation disclosure and other product information provided to the Forest Service as a part of the submission process will be maintained within the Wildland Fire Chemical Systems (WFCS) Program for use during the evaluation process.

All proprietary or sensitive information is kept in a secure location and is accessible only to the Program and Project Leader of WFCS. Occasionally information will be provided to the Director of Fire and Aviation, the Branch Chief for Equipment and Chemicals, their staffs, and other governmental regulatory agencies as necessary to address specific issues as they arise.

Results of testing, progress through the evaluation process, numbers of products being evaluated, and product failures are not discussed except with the submitter’s representatives, identified during the submission process.

Once the product is included in the list of qualified and approved products, the Forest Service will respond to specific questions related to effectiveness, corrosion, toxicity, and environmental impact, based on the results of the product evaluation.

### **Ownership of Evaluation Results**

The entity submitting the product and paying the costs of the evaluation is the only entity that may benefit directly from the results of the evaluation.

Information developed during the course of the evaluation will not be transferred to other parties except at the direct request of the submitter. In fact, the Forest Service will not acknowledge that a submitted formulation is similar to or the same as a product submitted by another. Testing of each product will proceed independently of products submitted by any other company.

The submitting entity may transfer the rights to the evaluation and listing on the qualified products list at its discretion; however, the Forest Service should be notified of such transfer to assure legitimate access to information on file.

## **Freedom of Information Act (FOIA)**

Information provided to the Forest Service as part of the product submission is subject to the Freedom of Information Act (FOIA), 5 U.S.C., Section 552. Confidential and trade secret information will not be disclosed; however, the results of the testing performed by the Forest Service may be disclosed under some circumstances.

## **Definitions**

**Long-term retardant products** contain retardant salts (typically fertilizers) that alter the way the fire burns, decreasing the fire intensity and slowing the advance of the fire, even after the water they originally contained has evaporated.

They continue to work until they are removed by rain or erosion. The water they contain serves primarily to aid in uniform dispersal of the chemical over the target area.

**Foam fire suppressants** contain foaming and wetting agents. The foaming agents affect how fast the water drains from the foam, how well the product clings to the fuel surfaces, and the accuracy of an aerial drop. The wetting agents increase the ability of the drained water to penetrate fuels. Foams depend on the water that they contain to suppress the fire.

Appropriate selection of concentrate dilution and application equipment will yield a range of suppressants from wetting agent for mop-up through fluid foam for wet line to dry foam for exposure protection.

**Water enhancers** contain ingredients designed to alter the physical characteristics of water to increase effectiveness, accuracy of the drop, or adhesion to fuels. They also improve the ability of water to cling to vertical and smooth surfaces.

They depend on the water that they contain to suppress the fire.

## **Evaluation Requirements**

Prior to being placed on the qualified products list, all wildland fire chemical products must be evaluated and meet the requirements found in the current applicable Forest Service Specification:

- Long-Term Retardant for Wildland Firefighting (5100-304c)
- Class A Foams for Wildland Firefighting (5100-307a)
- Water Enhancers for Wildland Firefighting (5100-306b)

These specifications are reviewed and updated periodically. Updates are designated by change to the letter designation ending the specification number or by amendment.

The revision in effect on the date of submission for evaluation will be followed. To ensure that the submitter has the most recent revision of the specification, contact the Program Leader or Project Leader at the addresses shown below.

Communication directly with the Program Leader or Project Leader at WFCS is strongly encouraged prior to beginning the submission process.

The submitter should be sufficiently familiar with the specification to be comfortable that the formulation can meet those requirements. Third-party labs may be useful for performing preliminary testing; however, the only test results that will be considered by the Forest Service to determine that a formulation meets its requirements are those performed in the laboratory at WFCS or in third-party laboratories approved by WFCS on samples provided by WFCS. All reports must be sent directly from the third-party laboratory to WFCS. WFCS will inform the submitter of all findings from third-party laboratories in a progress report.

## **Communication**

Communication regarding the evaluation process and any required information is normally done by email. The submitter is welcome to call directly or arrange for personal visits. Primary communication may be by hard-copy mail if requested.

## **Request for Evaluation**

Requests for evaluation should be made in a letter to the Branch Chief, Fire Equipment and Chemicals. The letter should include general information about the potential product and other specifics that may be of interest.

Copies of the letter should be sent to the Program Leader and Project Leader, Fire Chemicals. These people can be contacted at the addresses shown below.

Dave Haston  
Branch Chief, Fire Equipment  
and Chemicals  
Fire & Aviation Management  
National Interagency Fire Center  
USDA Forest Service  
3833 S. Development Ave.  
Boise, ID 83705  
Phone: (208) 387-5642  
Fax: (208) 387-5398  
david.haston@usda.gov

Shirley Zylstra  
Program Leader, Fire  
Chemicals  
MTDC-Wildland Fire  
Chemical Systems  
USDA Forest Service  
5785 Highway 10 West  
Missoula, MT 59808  
Phone: (406) 329-4859  
Fax: (406) 329-4763  
shirley.zylstra@usda.gov

Hunter Jones  
Project Leader,  
Chemist  
MTDC-Wildland Fire  
Chemical Systems  
USDA Forest Service  
5785 Highway 10 West  
Missoula, MT 59808  
Phone: (406) 829-6810  
Fax: (406) 329-4763  
hunter.jones@usda.gov

## **Collection Agreement**

Upon receipt of the request for submission, a Collection Agreement between the Forest Service, Missoula Technology and Development Center (MDTC), WFCS and the submitter will be prepared.

This document describes the roles and responsibilities of the Forest Service, WFCS laboratory personnel, and the submitter.

Follow-up discussions may be required to assure that the Forest Service has all of the necessary information to complete the agreement. Specific information in the agreement includes a list of authorized contacts for the Forest Service and for the submitter as well as an estimate of the cost and time required for the evaluation.

The agreement will be sent to the submitter. A cover letter containing instructions will accompany the agreement. Following these instructions relative to authorizing signatures, tax identification, and return of the signed agreement will allow the process to proceed in a timely manner.

## **Test Fees**

The cost of the evaluation is the responsibility of the submitter and will require a deposit of funds to cover the estimated costs. Some specialized tests are conducted by approved third-party laboratories on samples provided by the Forest Service. Cost for these services is the responsibility of the submitter. A more specific cost for the evaluation will be determined by the Program Leader, based on the specific information provided about the product.

Following receipt of the signed collection agreement, the Forest Service will issue a Bill for Collection to the submitter. This bill will be for the amount determined during discussions between WFCS and the submitter and shown in the agreement. A cover letter of instructions will be included with the bill and will provide the mailing address for the deposit of funds.

A copy of the Bill for Collection should be returned with a check for the specific amount shown in the collection agreement, and marked with the number shown on the bill for collection.

## **Submission Documents and Formulation Disclosure**

Once the deposit of funds has been made, the Fire Chemicals Program Leader will contact the submitter directly to request the required product formulation and technical documentation. All of the data forms for the submission of required information are available on the WFCS web site or they may be requested directly from the Fire Chemicals Program Leader or Project Leader. They may be printed and submitted as hard copies or the information may be submitted electronically.

The primary document required is a Confidential Formulation Disclosure Sheet (Table 1), containing information on all ingredients contained in the formulation. Full disclosure of the types and amounts of each chemical in the product, the Chemical Abstract Services (CAS) number, quality or grade, manufacturer, and manufacturing site and process must be made for each ingredient. While multiple CAS numbers are acceptable for an individual ingredient there shall only be listed one manufacturer per ingredient.

Other required information includes a Safety Data Sheet (SDS) for the product, a SDS for each ingredient included on the confidential formulation disclosure sheet, and the technical data sheets (Tables 2 and 3).

Copies of patents covering any aspect of the formulation or its application in wildland fire operations should also be included.

## **Formulation Change**

The Forest Service Branch Chief, Fire Equipment and Chemicals must be notified of formulation changes. Any change to the formulation, including but not limited to changes in the type, quantity, quality, processing, supplier, manufacturer, or manufacturing site of individual ingredients is considered a formulation change. Qualification testing may be required for any formulation change.

## **Document Review**

The Fire Chemicals Program Leader will review the documentation package for completeness and consistency. Any questions that may arise will be resolved at that time. A review of environmental regulations as they apply to the formulation and the ingredients of the formulation will be completed at the same time.

If any of the ingredients trigger concern, a basic chemical profile and/or a risk assessment may be required before further action is taken on the formulation evaluation. The Forest Service will make a written notification to the submitter of these concerns and include the acceptable remedies and the associated costs. The submitter has the choice to continue or not at this point, and will be asked to notify the Forest Service in writing of that decision.

If required, this risk assessment will be performed by the Forest Service or an approved third-party selected by the Forest Service, using accepted methodology. All costs associated with the additional work will be the responsibility of the submitter.

## **Product Shipment and Receipt**

When the review is complete, WFCS will notify the submitter to ship the product for evaluation.

The submitter is responsible for shipping the product to WFCS, including any costs as well as needed customs paperwork and arrangements to deliver the product to the laboratory for testing.

Product concentrate definitions, and the amount required for testing are outlined in the applicable base specification.

When the product is ready to ship, the submitter should notify the Fire Chemicals Project Leader by email or letter.

Ship the product to:           Project Leader, WFCS  
  USDA Forest Service, MTDC  
  5785 Highway 10 West  
  Missoula, MT 59808

The Project Leader will notify the submitter by email that the product has been received.

## **Evaluation**

The evaluation will normally be started within one week of receipt of the formulation. The Project Leader will notify the submitter if there is a delay.

The laboratory evaluation will normally take 18 to 24 months to complete following the receipt of the formulation.

The submitter will be provided with progress reports as specific tests are completed. Reports will be sent via email unless the submitter specifically requests a hard copy.

## **Final Report**

When all of the required testing is completed, WFCS will send the submitter a final report summarizing the results of all of the individual tests performed. Recommendations will be made to the Director of Fire and Aviation Management regarding the specific classifications and application methods for which the formulation should be approved.

## **Acceptance and Notification**

The Director of Fire and Aviation Management will notify the submitter in writing of successful completion of the formulation evaluation.

## **QPL Listing**

Following formal acceptance of the evaluation, the formulation will be added to the list of qualified products with the approved classifications and application methods.

No use of the Forest Service shield is permitted. The logo is a protected image under Title 36, Code of Federal Regulations, Part 264. Use includes but is not limited to portrayal on product brochures, advertising, presentations, web sites, or other promotional items.

No statements implying endorsement by the Forest Service are permitted.

Following the laboratory evaluation of a product and listing on the QPL, the following statement may be used on product brochures or other similar informational material. "This product has been evaluated by the USDA Forest Service and meets the requirements of Forest Service Specification 5100-306a for applications as determined during the product evaluation and shown on the QPL."

## **Procurement**

Long-term retardant products are purchased through national contracts. Information on these contracts is available through the contracting office at the National Interagency Fire Center in Boise, Idaho. The phone number is (208) 387-5512.

Class A Foams and Water enhancers are generally procured through regional or local contracts.

## **Required Submission Forms**

### **Long-term Retardant**

- Formulation Disclosure (FS-5100-37)

- Technical Data Sheet - Part 1 (FS-5100-38)
- Technical Data Sheet – Part 2 (FS-5100-39)

### **Class A Foam**

- Formulation Disclosure (FS-5100-35)
- Technical Data Sheet (FS-5100-36)

### **Water Enhancers**

- Formulation Disclosure (FS-5100-32)
- Technical Data Sheet – Part 1 (FS-5100-33)
- Technical Data Sheet – Part 2 (FS-5100-34)