

Use of chemicals in bushfire control and prescribed burning



FUNDAMENTAL

POSITION

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Review period

This position should be reviewed by the doctrine owner come 2028.

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About AFAC and AFAC Doctrine

AFAC

The Australasian Fire and Emergency Service Authorities Council (AFAC) is the Australian and New Zealand National Council for fire, emergency services and land management. It is a collaborative network of fire, emergency services and land management agencies that supports the sector to make communities safer and more resilient.

AFAC Doctrine

AFAC develops doctrine to support the practice of emergency management. The information in doctrine publications is evidence-based and drawn from academic research and the collective expert knowledge of member agencies. Doctrine is regularly reviewed and represents the official AFAC view on a range of topics.

Doctrine does not mandate action; rather, it sets aspirational measures. Publishing nationally agreed views, shared approaches and common terminology enhances cooperation and collaboration within and between agencies and jurisdictions.

Types of AFAC Doctrine

AFAC Doctrine is classified as follows:

Capstone doctrine – includes publications, such as 'strategic intents', that are high-level accounts of the concepts of emergency management operations and service delivery. They describe the principles of what is practical, realistic and possible in terms of protecting life, property and the environment.

Fundamental doctrine – includes 'positions', which AFAC members are expected to support, as well as 'approaches' and some 'frameworks'. Fundamental doctrine may become agency or jurisdictional policy on a matter if adopted by individual services or jurisdictions.

Procedural doctrine – includes 'guidelines', some 'frameworks', and 'specifications'. AFAC members are expected to be aware of procedural doctrine. A guideline is an advisable course of action, a framework provides a linking of elements to create a supporting structure to a system, and specifications are a detailed description of a precise requirement to do something or build something.

Technical doctrine – includes 'technical notes', 'training material' and the *Australasian Inter-Service Incident Management System* (AIIMS). Technical doctrine provides guidance of a technical nature: the how to do something, or the technical meaning relative to a situation.

About this document

This publication is a fundamental position.

Purpose

This position provides advice to AFAC member agencies on chemicals – and their use – that can be considered as supported for use in Australia and New Zealand for bushfire control and prescribed burning.

Scope

This position supports the long-held view that – in the absence of Australian or New Zealand standards for chemical effectiveness – health and safety and environmental performance, a system of endorsement of chemicals for bushfire control and prescribed burning is required.

Statement of engagement

This position was developed by the AFAC Rural and Land Management Group. This version has been developed in consultation with Rural and Land Management Group. The previous iteration was developed in conjunction with the Fire and Emergency Aviation Technical Group.

Audience

This position is intended for use by all fire personnel who propose to use chemicals for bushfire control and prescribed burning.

Definitions, acronyms and key terms

In this position, the following terms have specific meanings.

QPL: Qualified products list

USDA: United States Department of Agriculture

USFS: United States Forest Service

WFCS: Wildland Fire Chemical Systems

Introduction

There are a number of complexities associated with the use of chemicals to assist with bushfire control and prescribed burning. While chemical products offer a range of opportunities to greatly improve the efficacy and efficiency of operations, fire and land management agencies have an obligation to ensure that any risks associated with the use of such products are carefully managed. Chemicals must be used responsibly and carefully, and in accordance with a range of legal obligations.

To assist with managing risks, AFAC's member agencies have developed a long-standing position – re-stated in 2005, 2007 and 2015 – of only using chemicals that have been approved by the United States Department of Agriculture (USDA). The USDA maintains a highly specialised, comprehensive laboratory and field testing program, the Wildland Fire Chemical Systems (WFCS, USDA 2023).

AFAC's position

AFAC supports the use of chemicals in bushfire control and prescribed burning that have been qualified under the USDA's WFCS, or equivalent, subject to the three provisions below.

This position should only be adopted for chemicals used in bushfire control and prescribed burning activities; any other use falls outside of the scope of this position. Whilst this position supports the use of chemicals that have been qualified under the USDA's WFCS, it is recognised that there may be additional local requirements imposed by the relevant jurisdictional environmental protection agencies or similar.

Products fully qualified through the USDA WFCS

These chemicals may be used, subject to:

- national or state regulations for the import, manufacture or management of chemical products or their ingredients (e.g. packaging, labelling, safety data sheets etc.)
- any local requirements, including those imposed by jurisdictional environmental protection agencies or similar (e.g. national, state, territory or agency requirements regarding use of chemicals)
- the same (or locally equivalent) conditions that are applied in the US (e.g. the requirement to conform with a work plan, if specified).

Products granted administrative approval through the USDA WFCS

These chemicals may be used, subject to:

- national or state regulations for the import, manufacture or management of chemical products or their ingredients (e.g. packaging, labelling, safety data sheets etc.)
- any local requirements, including those imposed by jurisdictional environmental protection agencies or similar (e.g. national, state, territory or agency requirements regarding use of chemicals)
- the same (or locally equivalent) conditions that are applied in the US (which will normally limit use to field evaluations and trials)
- the use is in accordance with an agency product evaluation program which provides for the use to be recorded and evaluated.

Products granted conditional approval through the USDA WFCS

These chemicals may be used, subject to:

- any local requirements, including those imposed by jurisdictional environmental protection agencies or similar (e.g. national, state, territory or agency requirements regarding use of chemicals)
- the same (or locally equivalent) conditions that are applied in the US (which will normally limit use to field evaluations and trials).

For the purposes of this position, chemicals that were previously qualified – but are no longer approved under the USDA WFCS solely on the basis that they are no longer commercially available in the USA or Canada – may remain available for use in Australia and New Zealand provided that the formulation remains identical to the most recent WFCS qualified version of that product. Similarly qualified products that are marketed under different product names in Australia or New Zealand may be considered for use provided that the formulation remains identical to the qualified product.

Although this position is not compulsory, its adoption is strongly recommended for the management of risks associated with chemical use where the consequences are high. Given the additional risks associated with the use of chemicals in aircraft, this position must be followed for aviation operations.

Supporting discussion

The USFS maintains a QPL of fire chemical products that meet USFS requirements. These products are evaluated, qualified and approved for use only at the specified mix ratio and with the indicated application equipment. The USFS process is considered comprehensive and applicable to Australian fire and land management requirements. In addition, there are no current testing facilities available in Australia to support a local testing regime, and the establishment of a separate local evaluation and certification system is considered unwarranted.

References

USDA, 2023, Wildland Fire Chemical Systems, <https://www.fs.usda.gov/rm/fire/wfcs/index.php> (accessed 04 September 2023).

