

DECISION TO AMEND THE FIRE FIGHTING CHEMICALS GROUP STANDARD 2017

Item	Detail
Application code	APP203989
Applicant	Environmental Protection Authority (EPA)
Application type	To amend the Fire Fighting Chemicals Group Standard 2017 (Group Standard) as provided by section 96B of the Hazardous Substances and New Organisms Act 1996 ('HSNO Act' or 'the Act')
Consultation period	30 September 2019 – 16 December 2019
Number of submissions received	21 during public consultation
Consideration Date	6 November 2020 to 4 December 2020
Considered by	Decision Making Committee of the EPA (the Committee), composed of: Dr Ngaire Phillips (Chair); Dr Derek Belton, Dr Kerry Laing.
Decision	The amendments to the Fire Fighting Chemicals Group Standard 2017 are approved.
Group standard code	HSR002573

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1. Background

PFAS and regulatory history

- 1.1. Perfluoroalkyl and polyfluoroalkyl substances (PFAS) are a large group of fluorinated chemical compounds. These compounds have been used since the 1940s in a wide variety of applications, including fire fighting foams.
- 1.2. Particular PFAS compounds of interest include:
 - perfluorooctanesulfonic acid (PFOS)
 - perfluorooctanoic acid (PFOA)
 - perfluorohexanesulfonic acid (PFHxS).
- 1.3. Many variations of these compounds exist.
- 1.4. Both PFOS and PFOA were specifically prohibited from the original Fire Fighting Chemicals Group Standard (Group Standard) when it was first issued in 2006.
- 1.5. PFOS is classified as a persistent organic pollutant (POP) under the Stockholm Convention and is regulated as such, under the Hazardous Substances and New Organisms Act 1996 (HSNO Act). In May 2019, the Conference of the Parties (COP) of the Stockholm Convention decided that PFOA and its related compounds should also be listed as persistent organic pollutants (decision SC-9/12), with the listing coming into effect on 3 December 2020. The COP also decided on a time-limited exemption for PFOA and related compounds in fire fighting foams that will allow for a staged phase-out of these products.
- 1.6. The COP recommended that, during the time-limited exemption, all Parties to the Convention use alternatives to PFOA and its related compounds in fire fighting foams where alternatives are available, feasible and efficient. When considering alternatives, the COP advised Parties to be aware that fluorine-based fire fighting foams could have negative environmental, human health and socioeconomic impacts.
- 1.7. To meet these Stockholm Convention requirements, amendments to Schedule 2A of the HSNO Act have recently been approved to list PFOA and PFOA-related compounds as POPs, following a drafting process led by the Ministry for the Environment. These amendments are set out in the Hazardous Substances and New Organisms (Schedule 1AA and 2A) Order 2020.
- 1.8. Furthermore, following the discovery by the New Zealand Defence Force of soil and water contamination from PFAS containing fire fighting foam at the Ohakea and Woodbourne airbases in late 2017, the EPA began a national investigation into whether certain fire fighting foams were present at airports and other locations in New Zealand. The investigation identified some non-compliant fire fighting foam containing PFOS at some airports and other sites around the country. The EPA report covering this compliance investigation stated that the Group Standard would be updated to ensure rules around fire fighting foams are clear and reflect best practice.
- 1.9. In light of both the changes to the Stockholm Convention and EPA compliance activities, the EPA initiated a review of the Fire Fighting Chemicals Group Standard to ensure that the fire fighting chemicals used in New Zealand meet the requirements of the HSNO Act and that the Group Standard is adequately managing the risks to public health and the environment posed by these chemicals.

2. Public consultation

- 2.1. A document was released for public consultation on 30 September 2019. The submission period closed on Monday 16 December 2019.
- 2.2. The consultation document was made available on the EPA website, as required by section 53(1A) of the HSNO Act, and sent to relevant stakeholders and other interested parties.
- 2.3. New Zealand is party to the Technical Barriers to Trade Agreement, overseen by the World Trade Organisation (WTO). This consultation was accordingly notified to the WTO. No member states submitted a return on the consultation document.

Summary of Original Proposals

- 2.4. The following 10 changes were proposed to the Group Standard in the consultation document:
 - **Proposal 1: Training.** Prohibit the use of fire fighting foam products that contain PFAS compounds for training purposes from the date the revised Group Standard is enacted.
 - **Proposal 2: Testing.** Prohibit the use of fire fighting foam products that contain PFAS compounds for testing unless all releases of foam can be fully contained on site.
 - **Proposal 3: Uncontained fire fighting systems.** Allow the use of fire fighting foam products that contain PFAS compounds that are already installed in systems and where the use cannot be fully contained (i.e. fire trucks) for a period of two years.
 - **Proposal 4: Contained fire fighting systems.** Allow the fire fighting foam products that contain PFAS compounds to be used where they are already installed in fixed systems and where their use can be fully contained on site for a period of five years.
 - **Proposal 5: Cleaning.** Require thorough cleaning of all fire fighting systems so as to remove, as far as reasonably practicable, any residual PFAS compounds when transitioning to a non-fluorinated fire fighting foam product.
 - **Proposal 6: Disposal.** Require that all fire fighting foam products containing PFAS compounds and all PFAS containing wastes (e.g. firewater, wastewater, run-off, foam, and other wastes contaminated with PFAS compounds) be safely disposed of by an approved method.
 - **Proposal 7: Labelling.** Suppliers of any fire fighting foam product must ensure that the producer's certification of its fluorine content (or absence of) is clearly displayed on a label or document provided with the product.
 - **Proposal 8: Foam containment.** All fire fighting foam wastes, including fluorine-free foam, must be contained where possible (there are exceptions for essential uses and emergency incidents provided that all reasonable and practicable measures are taken to minimise environmental harm).
 - **Proposal 9: Composition notification.** Require all importers and/or manufacturers to notify the EPA of the composition of any fire fighting foam product upon its first import/manufacture.
 - **Proposal 10: Removal of PFOS and PFOA references.** Two types of PFAS, perfluorooctanesulfonic acid (PFOS) and perfluorooctanoic acid (PFOA) were excluded from the scope of the Group Standard. This specific exclusion is no longer necessary because they are listed as persistent organic pollutants (POPs) under Schedule 2A of the HSNO Act (or have been shown to have met the criteria to be listed as a POP). However, fire fighting foam products

containing PFOA-related compounds will remain within the scope of the Group Standard for the duration of the transitional period specified.

- 2.5. More detail can be found in the consultation document publicly available on the EPA website.

3. Submissions and EPA Update

- 3.1. A total of 21 submissions were received. The full submissions are publicly available on the EPA website.
- 3.2. An EPA Staff Update Report was produced on 22 October 2020 (the EPA Staff Update Report) which includes a more detailed summary of the submissions than the summary included below. The document also included updated proposals as a result of feedback in the submissions. It is publicly available on the EPA website.
- 3.3. Overall, submitters supported the proposals to prohibit and phase out fire fighting foams containing PFAS compounds. However key issues raised included:
- Most submitters did not agree that the modern C6 fluorotelomer (containing predominantly a 6-carbon perfluorinated chain length) PFAS fire fighting foams (C6 fire fighting foams) should be fully phased out at the same time as the legacy FAS fire fighting foams containing PFOA related compounds, citing ongoing doubts about the effectiveness of alternative fluorine-free foams for certain uses (comments relevant to **Proposals 3 and 4**).
 - The majority of submitters supported the EPA implementing a permissions mechanism under section 95A of the HSNO Act, for companies to apply for an exemption to use C6 fire fighting foams after the scheduled phase out period is completed. This possibility of a permissions mechanism was raised in a prompted question in the consultation document regarding preferred options (comments relevant to **Proposal 4**).
 - Regarding the cleaning of equipment on transition to fluorine-free fire fighting foams, the proposed approach of 'as far as reasonably practicable' with supporting guidance was generally favoured. Some submitters stated that 'as far as reasonably practicable' needs to be better defined in guidance from the EPA and that the guidance should outline acceptable levels of residual PFAS in the final washwater. Some favoured a more prescriptive methodological approach to guidance on cleaning equipment (commenting on **Proposal 5**).
 - A number of submitters expressed concerns around the disposal of PFAS containing fire fighting foams and associated wastes. These included the high costs of disposal, tight time constraints, the current lack of availability of suitable disposal facilities in New Zealand (including for low level contaminated wastes) requiring the export of wastes for disposal, and a shortage of specialist contractors to undertake the clean-out and disposal work (commenting on **Proposal 6**).

EPA changes to proposals

- 3.4. The EPA Staff Update Report detailed the updates to proposals based on feedback from submissions. A brief summary of key changes is outlined below:

- Allow a transition period of **five years** (previously proposed as two years in the consultation document) in respect of C6 fluorotelomer fire fighting foam for uses that cannot be fully contained (change to **Proposal 3**).
 - Provide for an extension of the continued contained use of C6 fire fighting foams on a case-by-case basis, subject to a permission granted under section 95A of the Act (change to **Proposal 4**).
 - Place limits on the purity of imported C6 fire fighting foams with respect to C8 impurities (additional proposal in line with best international practice and necessary in view of the extended phase out of C6 fire fighting foams compared with the original proposals).
 - Require composition information be sent to the EPA upon a change of formulation in addition to the requirement for notification of this composition information upon first import/manufacture (**Proposal 9**).
- 3.5. While not intended to be included as part of the Group Standard, in the EPA Staff Update Report the EPA expressed a commitment to providing further guidance after the amendments were made. This would include details of expected maximum levels of residual PFAS after cleaning systems when transitioning to fluorine-free fire fighting foams and further detail around disposal.

4. Hearing

- 4.1. A hearing was scheduled after a number of submitters stated they wished to speak to their submissions at a hearing.
- 4.2. The hearing was conducted on Thursday 5 November 2020 and Friday 6 November 2020 in Wellington. Zoom functionality allowed submitters to present and ask questions remotely if desired.
- 4.3. Transcripts of the hearing are publicly available on the EPA website along with any PowerPoint presentations.
- 4.4. There were 11 presentations from submitters:
- Rodney John Rutledge – Ampol (formerly Caltex Australia) (remote)
 - Mike Willson – Willson Consulting (remote)
 - R.P. (Dick) Gillespie – Fire Engineering Solutions (in person)
 - David le Marquand (4Sight Consulting Limited) and James Court (BP Oil New Zealand Limited) – 4Sight Consulting Limited for Z Energy Limited, BP Oil New Zealand Limited and Mobil Oil New Zealand Limited (remote)
 - Guy Roper, Kevin Lehrke – Port Taranaki Limited (remote)
 - Mitch Hubert and Thomas Cortina – Fire Fighting Foam Coalition (FFFC) (remote)
 - Wayne Andrews-Paul – New Zealand Defence Force (in person)
 - Kevin Ward and Nicola Cordner – New Zealand Airports Association (in person)
 - Paul Turner and Victor Lenting – Fire and Emergency New Zealand (in person)
 - Phil Lacey – Fire Protection Association NZ (in person)
 - Sarah Lloyd – Air New Zealand (remote)
- 4.5. The EPA staff presentation reiterated the key points from the EPA Staff Update Report and went into further detail around international regulation of fire fighting foams.

- 4.6. Nigel Holmes of Queensland Department of Environment and Science was a contributor to the EPA presentation. Mr Holmes spoke about the properties and environmental effects of different fire fighting foams, Queensland's experience in transitioning to non-persistent foams, management of fire fighting foams generally, and the possibility of disposing of PFAS fire fighting foams by incorporation into cement kilns.

Submitter Presentation Summary by topic

Training and testing

- 4.7. There was broad support for the prohibition on training and testing of PFAS-containing fire fighting foams in uncontained systems.

Labelling

- 4.8. There was no objection in submissions or at the hearing to the proposal to require suppliers of any fire fighting foam product to ensure that the producer's certification of its fluorine content (or absence of) is clearly displayed on a label or document provided with the product.

Cleaning

- 4.9. Many presenters stated that the approach to cleaning needed to be practical and risk-based. They claimed costs of cleaning 'to the last molecule' were disproportionate to the additional benefit gained.
- 4.10. Many presenters stated that the EPA needs to commit to further guidance on cleaning. Some reiterated this should be in a timely manner.
- 4.11. Some presenters considered that this guidance should specify concentration levels of residual PFAS that would be deemed acceptable.
- 4.12. Some presenters considered that the guidance should be fairly prescriptive and method-based and that this may come in the form of a code of practice that might be endorsed by EPA.
- 4.13. Phil Lacey from Fire Protection Association NZ sought clarification that in the guidance residual PFAS would be averaged across the total volume of fire fighting foam solution.
- 4.14. Nicola Cordner from New Zealand Airports Association considered that the Group Standard should reference forthcoming guidance material.
- 4.15. EPA staff clarified that the intent was to keep the 'reasonably practicable' wording in the Group Standard. Guidance would include more detailed targets. EPA staff reasoned that indicative acceptable concentration levels as referenced in the EPA Staff Update Report were likely to represent a practical and achievable standard.
- 4.16. EPA staff clarified that the intent would be for guidance to contain an allowance for residues in difficult to clean components to be apportioned across the total replacement volume.
- 4.17. EPA staff expressed a reluctance to champion a more prescriptive method-based approach to guidance but remained open to additionally reviewing and endorsing a separate initiative provided it was largely industry driven.

Disposal

- 4.18. There was broad support for the proposal to allow alternative disposal methods to high temperature incineration for low concentration waste.

- 4.19. R.P. (Dick) Gillespie from Fire Engineering Solutions expressed support for incorporation of PFAS into cement kilns as a disposal method as presented by Nigel Holmes of Queensland Department of Environment and Science. Dr Kerry Laing (DMC member) offered that kiln operators may well be reluctant to try this approach due to Resource Management Act 1991 (RMA) obligations and regulatory uncertainty.
- 4.20. Nicola Cordner of New Zealand Airports Association argued that landfill operators may not feel they can take waste at levels approved by the EPA due to RMA obligations. She stated EPA should make rules around what is acceptable for waste disposal particularly for solid waste to landfill.
- 4.21. A number of presenters noted that there is currently no high temperature incineration facility suitable for POPs waste operating in New Zealand. David le Marquand from 4Sight Consulting Limited stated that National Environmental Standards for Air Quality regulations prohibit use of such incineration facilities in future and that this may apply to cement kilns also.
- 4.22. Phil Lacey of Fire Protection Association NZ stated he believed trade waste prescriptions for Watercare (part of Auckland Council) currently have daily intake limits of certain PFAS chemicals that are too low to be practical.
- 4.23. EPA staff clarified that proposals do leave the door open for future alternative disposal solutions. EPA indicated a willingness to cooperate further with the Ministry for the Environment on some of these broader issues of disposal but that it was outside the scope of what would be considered for the Group Standard amendment.

Removal of PFOS and PFOA references

- 4.24. There was no objection to the removal of specific references to PFOS and PFOA from the Group Standard due to them being already included, or imminently included (at time of hearing) in HSNO Act Schedule 2A as POPs.

Definition of a system

- 4.25. Paul Turner and Victor Lenting of Fire and Emergency New Zealand sought clarification on whether, in the proposals, fire fighting appliances supplemented by additional stock were considered a 'system' in regards to proposals for time-limited use of PFAS fire fighting foams.
- 4.26. EPA staff clarified that the intent was that this set-up would be considered a system and would be covered by the relevant clause in the updated proposal:

“stored in containers that are designated as being part of the fire fighting system for use in refilling the fire fighting system with fire fighting foam (except where the fire fighting system is a small fire extinguisher).”

Composition and assignment notification

- 4.27. There was general support for the proposal to require an importer or manufacturer to provide the EPA with a copy of the record of assignment along with full composition of the fire fighting foam upon first import/manufacture or change of composition.
- 4.28. Some presenters stated that manufacturers shouldn't have to give commercially sensitive composition information to importers.
- 4.29. Paul Turner and Victor Lenting of Fire and Emergency New Zealand considered this requirement did not go far enough. In order to assure end users that their foam is compliant, they suggested that:

- EPA should provide evidence of acceptance of assignment to the Group Standard to end users;
- EPA should maintain an approved products register; and
- That the requirements be applied retrospectively to fire fighting foams already present in the country

4.30. EPA staff clarified that they are experienced in handling confidential composition information and it would be possible for this information to be provided to EPA by the manufacturer and not require the manufacturer to divulge this to an importer or end user.

Suitability of fluorine-free foams

4.31. The lack of efficacy testing of fluorine-free foams for certain uses was a key theme from many presenters.

4.32. In particular, sites with large amounts of potentially mixed solvents such as large fuel tanks, terminals for flammable liquids, ships, aircraft, and large chemical plants/storage facilities were cited as places where there is insufficient evidence of the efficacy of fluorine-free foams for fire fighting.

4.33. Some submitters stated that the fuel-shedding characteristics of PFAS foams make them uniquely suited to combating fires of polar solvents.

4.34. Mike Willson of Willson Consulting stated that large fires often release PFAS and other toxins and therefore quick control with C6 fire fighting foams may result in less environmental harm, compared with the use of fluorine-free fire-fighting foams in some cases.

4.35. Some presenters also considered that quick control of large fires should be paramount for safety reasons and that this was best achieved currently with C6 fire fighting foams.

4.36. Some presenters raised concerns about possible ecotoxic properties of the fluorine-free fire fighting foams.

4.37. Some presenters noted that the likely need to apply fluorine-free fire fighting foams at a higher rate increases the risk of foam not being fully contained.

4.38. R.P. (Dick) Gillespie of Fire Engineering Solutions argued that large scale tests show fluorine-free fire fighting foams can be appropriate for large scale fires but different delivery mechanisms (eg higher expansion technology) would need to be employed.

4.39. Some presenters argued the difference in physical properties meant that fluorine-free fire fighting foams were not suitable as drop-in replacements for some systems and that significant engineering changes would need to be made to current systems.

4.40. Some presenters considered that New Zealand should not be early adopters of fluorine-free fire fighting foams as further developments in efficacy and suitability as drop-in replacements would be made in the coming years.

4.41. The conclusion drawn from some presenters was that C6 fire fighting foams should be retained for a longer period than the five years proposed.

Foam containment

4.42. The issue of containment was raised in the context of the general proposal for containment of fire fighting foams and the specific proposals surrounding PFAS foams.

4.43. David le Marquand of 4Sight Consulting Limited, on behalf of Z Energy Limited, BP Oil New Zealand Limited and Mobil Oil New Zealand Limited, requested clarification on what procedures and methods

would meet a reasonable care test for general fire fighting foam containment. He also requested further clarification on the definition of a 'contained fire fighting system' in Schedule 2 of the Group Standard.

4.44. There was general support for the proposal to extend uncontained uses for C6 fire fighting foams to five years.

4.45. The issue of containment is also discussed in the 'permissions' section below.

Permissions

4.46. Many presenters stated that they supported a permissions mechanism to allow industry to apply to EPA for specific exemptions after the five year phase out ends. This was due to concerns about:

- Current lack of efficacy testing for fluorine-free fire fighting foams for specific high hazard uses
- Lack of suitability of fluorine-free fire fighting foams as drop-in replacements
- Uncertainty around the timeframes required to remedy these concerns

4.47. Some presenters argued that the proposal for only contained use of PFAS fire fighting foam to be considered was too restrictive in terms of cost or feasibility and that uncontained uses ought to be considered also.

4.48. Phil Lacey of the Fire Protection Association NZ warned of a risk of a potential 'wait and see' approach by industry in the expectation that more fluorine-free fire fighting foams would be developed as drop-in replacements for certain uses, with a flood in permissions applications if this did not materialise.

4.49. Wayne Andrews-Paul of New Zealand Defence Force urged EPA to release clear and timely information about timeframes and cost should a permissions process be implemented.

5. Consideration of amendments

5.1. A tracked changes version of the full amended Group Standard is attached as Appendix A for clarity. Schedule 2 contains interpretations of some of the terms used in this section.

Amendments to Part 4

5.2. The Committee considered the following amendments (displayed in red) be added as Part 4 (Fire Fighting Foams) of Schedule 1: Conditions of the Group Standard. The condition numbers are as they appear in the Group Standard.

8 Record of assignment to be provided before supplying

- (1) An importer or manufacturer of a fire fighting foam must, as soon as practicable after its first importation or manufacture and before supplying it to any other person, provide to the EPA a copy of the record of assignment described in condition 7(2)(b), along with the full composition of the fire fighting foam, on a form approved by the EPA.
- (2) An importer or manufacturer of a fire fighting foam must, as soon as practicable after changing the composition of a fire fighting foam after first importation or manufacture and before supplying it to any other person, update the record of assignment described in condition 7(2)(b) and provide it to the EPA, along with the full updated composition of the fire fighting foam, on a form approved by the EPA.

5.3. The Committee considered that the obligation on importers or manufacturers to provide this information as an appropriate condition to allow EPA knowledge of components in future fire fighting foams to better inform future policy. The Committee was confident the EPA is able to handle

confidential composition information direct from the manufacturers. The Committee believed that further measures such as an approved products register proposed by submitters is not required as part of the Group Standard.

9 Requirement to display certification of fluorine content of fire fighting foams

A person must not supply a fire fighting foam to any other person unless the manufacturer's certification of its fluorine content (including 0% if applicable) is clearly displayed on a label or document provided with the fire fighting foam.

- 5.4. The Committee considered this an appropriate condition to ensure clarity of risk and compliance for end users.

10 Requirement to contain fire fighting foams

- (1) Subject to conditions 11-16, 19, 20 and 21, a person who uses a fire fighting foam must take reasonable care to contain it within its intended application area.
- (2) For the purposes of subclause (1), a person who uses a fire fighting foam meets a reasonable standard of care if—
 - (a) the fire fighting foam is discharged to the environment as a consequence of responding to an emergency; and
 - (b) the person takes all reasonable and practicable measures to minimise environmental harm.

- 5.5. The Committee considered this amendment an appropriate condition to ensure reasonable care when using fire fighting foams.

11 Restrictions on use of legacy PFAS fire fighting foams

A person must not use a legacy PFAS fire fighting foam other than in accordance with conditions 12 to 16.

- 5.6. The Committee considered this amendment (in accordance with condition 12 to 16) appropriate as it is a requirement of the Stockholm Convention.

12 Training and testing of legacy PFAS fire fighting foams

- (1) A person must not use a legacy PFAS foam for training.
- (2) During the applicable transitional period set out in clause 4(3) of this Group Standard, a person may use a legacy PFAS fire fighting foam for the purpose of testing the operation of a fire fighting system provided that all releases are contained so that the fire fighting foam is not released to the environment.

- 5.7. The Committee considered this amendment appropriate as it is a requirement of the Stockholm Convention.

13 Use of legacy PFAS fire fighting foams in contained fire fighting systems

During the applicable transitional period set out in clause 4(3) of this Group Standard, a person may use a legacy PFAS fire fighting foam for the purpose of operating or maintaining a contained fire fighting system if the PFAS fire fighting foam is—

- (a) contained within the fire fighting system; or
- (b) stored in containers that are designated as being part of the fire fighting system for use in refilling the fire fighting system with fire fighting foam (except where the fire fighting system is a small fire extinguisher).

- 5.8. The Committee considered this amendment appropriate as it is a requirement of the Stockholm Convention.
- 5.9. Note: the transitional period is defined as being until **3 December 2025** for legacy PFAS fire fighting foams that are currently part of a **contained** fire fighting system.

14 Use of legacy PFAS fire fighting foams in uncontained fire fighting systems

During the applicable transitional period set out in clause 4(3) of this Group Standard, a person may use a legacy PFAS fire fighting foam for the purpose of operating or maintaining an uncontained fire fighting system if the fire fighting foam is—

- (c) contained within the fire fighting system; or
 - (d) contained in storage containers that are designated as being part of the fire fighting system for use in refilling the fire fighting system with fire fighting foam (except where the fire fighting system is a small fire extinguisher); or
 - (e) discharged from the fire fighting system for the purpose of responding to an emergency in accordance with the purpose and design of the fire fighting system while taking all reasonably practicable measures to minimise environmental harm.
- 5.10. The Committee considered this amendment appropriate as it is a requirement of the Stockholm Convention
- 5.11. Note: the transitional period is defined as being until **31 December 2022** for legacy PFAS fire fighting foams that are currently part of an **uncontained** fire fighting system.

15 Disposal of legacy PFAS fire fighting foams and associated waste products

- (1) Subject to condition 16, a person must not dispose of a legacy PFAS fire fighting foam or a legacy PFAS fire fighting foam waste product other than by one of the following methods, to the extent permitted by the laws of New Zealand, —
- (a) high-temperature incineration; or
 - (b) any other method that conforms with section IV.G.2 of the Basel Convention General Technical Guidelines on Persistent Organic Pollutant Wastes; or
 - (c) export from New Zealand for the purpose of disposal by a method that conforms with section IV.G.2 of the Basel Convention General Technical Guidelines on Persistent Organic Pollutant Wastes.
- (2) The methods described in subclause (1) do not include dilution.
- 5.12. The Committee considered it appropriate to state the disposal requirements for legacy PFAS fire fighting foams. The Committee acknowledged that, although no high temperature incineration is currently available, the wording above leaves room for development of disposal methods in New Zealand. Although largely covered by the EPA's Hazardous Substances (Disposal) Notice, the Committee deemed it appropriate to state, in the Group Standard, that dilution is not an acceptable method of 'disposal' for legacy PFAS fire fighting foams.

16 Exception in relation to disposal of certain legacy PFAS fire fighting foam waste products

Condition 15 does not apply to a legacy PFAS fire fighting foam waste product that is:

- (a) a liquid waste product disposed of in accordance with an applicable trade waste bylaw if the bylaw expressly permits the discharge of the trade waste containing a PFAS component or

components because the component or components are present below a specified concentration; or

- (b) a solid waste product that is disposed of to landfill subject to:
 - (i) meeting the HEPA Landfill Acceptance Criteria; and
 - (ii) the total concentration for PFOA, its salts and PFOA-related compounds does not exceed 50 mg/kg (determined as fluorine).

5.13. The Committee considered it appropriate to allow avenues of domestic disposal for low concentration waste as defined above. The Committee acknowledged the EPA's stated commitment on production of further guidance on these matters to help parties better understand their disposal obligations. The Committee recognised that there are significant challenges involved with disposal of low concentration waste of this nature. The Committee acknowledged the EPA's willingness to cooperate further with various stakeholders in this regard but considered this to be outside the scope of the Group Standard amendment process.

17 Prohibition on import or manufacture of certain C6 fluorotelomer fire fighting foams

A person must not import or manufacture a C6 fluorotelomer fire fighting foam if it has more than:

- (a) 0.025 mg/kg of PFOA or any of its salts; or
- (b) 1 mg/kg of any individual PFOA-related compound; or
- (c) 1 mg/kg of a combination of PFOA-related compounds.

5.14. The Committee considered this condition necessary to manage risks due to potential impurities within C6 fluorotelomer fire fighting foams. The Committee considered that this condition and the specific impurity limits align with international best practice.

18 Transitional period for use of C6 fluorotelomer fire fighting foams

For the purposes of conditions 19-21, the transitional period for the use of C6 fluorotelomer fire fighting foams ends on 3 December 2025.

Advisory note: At the end of the transitional period, C6 fluorotelomer fire fighting foam will only be able to be used in a fire fighting system, subject to a permission being granted in accordance with condition 21 of this Schedule, but may still be imported or manufactured for this use in accordance with this Group Standard.

5.15. The Committee considered the transitional period appropriate. Further discussion on this can be found below under conditions 19-21.

19 Training and testing of C6 fluorotelomer foams

- (1) A person must not use a C6 fluorotelomer fire fighting foam for training.
- (2) During the transitional period, a person may use a C6 fluorotelomer fire fighting foam for the purpose of testing the operation of a fire fighting system if all releases are contained so that the fire fighting foam is not released to the environment.

5.16. To manage environmental risks, the Committee considered it appropriate to restrict testing of C6 fire fighting foams to those systems that do not release foam into the environment.

20 Use of C6 fluorotelomer fire fighting foams in fire fighting systems

During the transitional period, a person may use a C6 fluorotelomer fire fighting foam for the purpose of operating or maintaining a fire fighting system if the fire fighting foam is—

- (a) contained within the fire fighting system; or
- (b) contained in storage containers that are designated as being part of the fire fighting system for use in refilling the fire fighting system with fire fighting foam; or
- (c) for uncontained fire fighting systems, discharged from the fire fighting systems fire fighting system for the purpose of responding to an emergency in accordance with the purpose and design of the system while taking all reasonably practicable measures to minimise environmental harm.

5.17. The Committee considered the five year transitional period expiring on 3 December 2025 to be appropriate for C6 fire fighting foams. It aligns with the transition period (for contained uses) for legacy PFAS fire fighting foams and thus provides a level of clarity for industry as to when all PFAS foams are required to be phased out. In the original consultation, the EPA proposed to only allow uncontained use of C6 fire fighting foams for two years (the same period as the uncontained use of legacy PFAS fire fighting foams). This proposal was changed so that both contained and uncontained use of C6 fire fighting foams have the same transition period. This was in response to industry concerns that transition to fluorine-free fire fighting foams for some uncontained uses would not be practical within two years.

21 Requirement for permission to use C6 fluorotelomer fire fighting foams after the transitional period

- (1) After the transitional period, a person cannot use a C6 fluorotelomer fire fighting foam in a fire fighting system except subject to this Group Standard and in accordance with a permission under section 95A of the Act granted by the EPA.
 - (2) The EPA may require the applicant to provide a management plan addressing some or all of the matters set out in subclause (3) prior to the permission referred to in subclause (1) being considered.
 - (3) The EPA may impose conditions under the permission referred to in subclause (1) including to address the following matters:
 - (a) the adverse effects of the use of C6 fluorotelomer fire fighting foam in a fire fighting system;
 - (b) the containment of the C6 fluorotelomer fire fighting foam in the fire fighting system;
 - (c) the risks of adverse effects from discharge to the environment as a result of the fire fighting system's use in an emergency;
 - (d) a timeline for the appropriate removal of the C6 fluorotelomer fire fighting foam from the fire fighting system and the appropriate disposal of the C6 fluorotelomer fire fighting foam and any C6 fluorotelomer fire fighting foam waste.
 - (4) The permission referred to in subclause (1) may include a condition that the holder of the permission notify the EPA of any change in relation to any matter in subclause (3) above.
 - (5) Where there is any inconsistency between the provisions of this Group Standard and the conditions in a permission referred to in subclause (1), the provisions of this Group Standard will prevail over those conditions to the extent of any inconsistency.
- 5.18. The Committee considered it appropriate that there would be a mechanism for industry to apply for case-specific exemptions for use of C6 fire fighting foams after the transition period. This condition provides for uncertainties around future development of fluorine-free fire fighting foams for certain uses. In the EPA Staff Update Report, it was proposed that applications for permissions would only be considered for contained uses. Some submitters argued that applications relating to partially contained and uncontained uses should also be allowed. The Committee agreed to allow applications to the EPA for permissions relating to uncontained uses, and acknowledged that the level of containment would

be a crucial consideration in the EPA evaluation of any such applications. The Committee acknowledged the EPA commitment to providing guidance on the permission process well in advance of the end of the transition phase.

22 Disposal of C6 fluorotelomer fire fighting foams and associated waste products

- (1) Subject to condition 23, a person must not dispose of a C6 fluorotelomer fire fighting foam or a C6 fluorotelomer fire fighting foam waste product other than by one of the following methods, to the extent permitted by the laws of New Zealand, —
 - (a) high-temperature incineration; or
 - (b) any other method that, if the foam or waste product were or contained PFOA-related compounds, would conform with section IV.G.2 of the Basel Convention General Technical Guidelines on Persistent Organic Pollutant Wastes; or
 - (c) export from New Zealand for the purpose of disposal by a method that, if the foam or waste product were or contained PFOA related compounds, would conform with section IV.G.2 of the Basel Convention General Technical Guidelines on Persistent Organic Pollutant Wastes.
- (2) The methods described in subclause (1) do not include dilution.

5.19. The Committee considered it appropriate to state the disposal requirements for C6 fire fighting foams. The Committee acknowledged that although no high temperature incineration is currently available, the wording above leaves room for development of disposal methods in New Zealand. Although largely covered by the EPA disposal notice, the Committee deemed it appropriate to state, in the Group Standard, that dilution is not an acceptable method of 'disposal' for C6 fire fighting foams.

23 Exception in relation to disposal of C6 fluorotelomer fire fighting foam waste products

Condition 22 does not apply to a C6 fluorotelomer fire fighting foam waste product that is—

- (a) a liquid waste product that is disposed of in accordance with an applicable trade waste bylaw if the bylaw expressly permits the discharge of the trade waste containing a PFAS component or components because the component or components are present below a specified concentration; or
- (b) a solid waste product that is disposed of to landfill:
 - (i) in accordance with any applicable landfill acceptance criteria, and
 - (ii) where the leachable concentration for PFAS does not exceed 0.05 mg/kg (determined as fluorine) and the total concentration for PFAS does not exceed 50 mg/kg (determined as fluorine).

5.20. The Committee considered it appropriate to allow avenues of domestic disposal for low concentration waste as defined within these guidelines. The Committee acknowledged the EPA's stated commitment on production of further guidance on these matters to help parties better understand their disposal obligations. The Committee recognised that there are significant challenges involved with disposal of low concentration waste of this nature. The Committee acknowledged the EPA's willingness to cooperate further with various stakeholders in this regard, but considered this to be outside the scope of the Group Standard amendment.

24 Requirements relating to transitioning fire fighting systems to PFAS free fire fighting foams

- (1) This condition applies where a person who operates a fire fighting system intends to transition it to a fire fighting system that uses PFAS-free fire fighting foam.

- (2) An operator of the fire fighting system, before transitioning the fire fighting system, must ensure that—
 - (a) the fire fighting system is thoroughly cleaned so as to remove, as far as reasonably practicable, any residual fire fighting foam or waste product; and
 - (b) any fire fighting foam or waste products that have been removed from the fire fighting system or generated directly or indirectly as a result of the cleaning process are collected and securely contained for disposal.
- (3) A person who treats, collects or transports a fire fighting foam or waste product for disposal must take all reasonably practicable steps to prevent its discharge to the environment.
- (4) In this condition, **fire fighting foam or waste product** means any of the following:
 - (a) legacy PFAS fire fighting foam
 - (b) legacy PFAS fire fighting foam waste product
 - (c) C6 fluorotelomer fire fighting foam
 - (d) C6 fluorotelomer fire fighting foam waste product.

5.21. The Committee considered this condition necessary to ensure risks due to potential contamination of systems would be managed. The Committee considered this condition specifies an appropriate level of outcome-based instruction for the Group Standard. The Committee acknowledged the EPA's stated commitment to further work with vested parties to produce accompanying guidance material. Such guidance would assist users of the Group Standard with its interpretation, and inform users of their obligations and requirements, especially regarding cleaning of equipment and disposal of PFAS fire fighting foams. The Committee considered the indicative values for residues stated in the EPA Staff Update Report in relation to the 'as far as reasonably practicable' level of cleaning are likely to represent a practical and achievable level.

5.22. In addition to the conditions discussed above, and due to feedback from submitters, the Committee agreed that the definition of a 'contained fire fighting system' in Schedule 2 of the Group Standard be amended to the following wording to remove an impractical absolute wording in the proposals:

***contained fire fighting system** means a system made up of a fire fighting system and equipment, structures or mechanisms that is designed to collect or contain fire fighting foam when it is discharged so that the foam is prevented from being released to the environment*

Other amendments

5.23. The following subclauses are inserted as (3) and (4) to the Scope of the Group Standard (clause 4)

- (3) Notwithstanding subclauses (2) and 6(b), this Group Standard applies to the use of legacy PFAS fire fighting foams only for the following applicable transitional periods—
 - (a) in relation to use in contained fire fighting systems, until 3 December 2025; and
 - (b) in relation to use in uncontained fire fighting systems, until 31 December 2022.
- (4) This Group Standard applies to the following waste products—
 - (a) legacy PFAS fire fighting foam waste products, only until 3 December 2025; and
 - (b) C6 fluorotelomer fire fighting foam waste products.

5.24. The Committee considered this amendment necessary to ensure clarity and consistency surrounding the exemptions for POPs that may be considered in scope of the Group Standard and for the corresponding timeframes that apply.

- 5.25. Furthermore, the Committee considered it appropriate to remove specific references on the exclusion of PFOS and PFOA from the Group Standard as they have been added to Schedule 2A of the Act which restricts persistent organic pollutants. The amended Group Standard omits these specific exclusions.
- 5.26. Finally, there are a small number of wording changes implemented for clarity and legal consistency in other parts of the document. The Committee considered these appropriate and aligned with the intended effect of those parts.
- 5.27. The full amendments, including interpretation of terms and explanatory note, can be viewed in the tracked-changes full amended Group Standard attached as Appendix A.

6. General matters considered

- 6.1. The Committee considered the following relevant matters set out in Section 4, Section 7 and Section 96C of the Act.

Achieving the purpose of the Act

- 6.2. As set out in section 4 of the Act, the purpose of the Act is to *“protect the environment, and the health and safety of people and communities, by preventing or managing the adverse effects of hazardous substances and new organisms”*.
- 6.3. In order to achieve the purpose of the Act, when considering this application the Committee recognised and provided for the following principles (as set out in section 5 of the Act):
- the safeguarding of the life-supporting capacity of air, water, soil and ecosystems; and
 - the maintenance and enhancement of the capacity of people and communities to provide for their own economic, social and cultural well-being and for the reasonably foreseeable needs of future generations.
- 6.4. Pursuant to sections 6 to 8 of the Act, the Committee also took into account the following matters when considering this application in order to achieve the purpose of the Act:
- The sustainability of all native and valued introduced flora and fauna;
 - The intrinsic value of ecosystems;
 - Public health;
 - The relationship of Māori and their culture and traditions with their ancestral lands, water, sites, wāhi tapu, valued flora and fauna, and other taonga;
 - The economic and related benefits and costs of using a particular hazardous substance or new organism;
 - New Zealand’s international obligations;
 - The need for caution in managing adverse effects where there is scientific and technical uncertainty about those effects; and
 - The principles of the Treaty of Waitangi (Te Tiriti o Waitangi).
- 6.5. The Committee was satisfied that this decision is consistent with the purpose of the Act and the above principles and matters. Any substantive issues arising from the legislative criteria and issues raised by submitters have been discussed in the preceding sections of this decision.

Need for caution

- 6.6. Section 7 of the Act requires all persons exercising functions, powers and duties under the Act to take into account the need for caution in managing adverse effects where there is scientific and technical uncertainty about those effects.
- 6.7. The Committee was satisfied that the conditions placed on the Group Standard discussed above are consistent with taking a cautious approach to uncertainty about the adverse environmental and human-health effects of PFAS substances used in fire fighting foams. The Committee was satisfied that the more general conditions such as those surrounding fire fighting foam containment and notification of assignment and composition information represent a cautious approach to the management of adverse effects of fire fighting foams. The Committee considered any remaining uncertainties about the efficacy of fluorine-free foams for certain uses after the transition period are able to be addressed within the permissions mechanism

Efficiency and effectiveness

- 6.8. Section 96C(1)(a) of the Act requires that the EPA be satisfied that amending the Group Standard is a more efficient and effective way of managing the risks of all the hazardous substances in the identified group than the approval process under Part 5 of the Act.
- 6.9. The efficiency and effectiveness of regulating fire fighting chemicals under the Group Standard was initially established by the Environmental Risk Management Authority (ERMA) in 2006. It was the Committee's view that, following the proposed amendments, the Group Standard will continue to represent a more efficient and effective way of managing the risks posed by fire fighting chemicals covered by the Group Standard than the approval process under Part 5 of the Act.

Similar nature, type, circumstance of use/one set of conditions

- 6.10. Section 96C(1)(e)(ii) of the Act requires that the EPA is satisfied that all the hazardous substances or products in the identified group have a similar nature, are of a similar type, or have similar circumstances of use, such that the risks of the group of hazardous substances or products can be effectively managed by one set of conditions.
- 6.11. The Committee was satisfied that as the amendments to phase out PFAS containing foams reduces the scope of allowed substances, and circumstances of use are not likely to change; ERMA's conclusion in 2006 that substances in the Group Standard are of a similar nature, are of a similar type, or have similar circumstances of use remains valid.

Best international practices and standards

- 6.12. According to section 96C(1)(f) of the Act, the EPA must consider the best international practices and standards for the safe management of hazardous substances.
- 6.13. The Committee has considered information provided by EPA staff and submitters on best international practice and standards on the safe management of fire fighting foams. It believed that these amendments are consistent with best international practice and standards.

Conditions

- 6.14. Section 96C(1)(g) of the Act requires the Committee to consider the types of controls appropriate for the substances covered by this Group Standard in accordance with sections 77 to 77B of the Act.

- 6.15. The Committee considered that the conditions of the Group Standard discussed above (as amended following this decision) are consistent with the types of controls appropriate for the group of substances under sections 77, 77A and 77B of the Act.

Notice of Amendment

- 6.16. A formal notice of the amendments to the Group Standard will be published in the New Zealand Gazette.
- 6.17. Pursuant to section 96B(6) of the Act, as soon as practicable after issuing or amending a Group Standard, the EPA must:
- publish the amendment in a publication relevant to the affected persons; and
 - make the amendment available to be inspected free of charge and purchased at a reasonable price; and
 - give public notice of where the amendment can be inspected or purchased.
- 6.18. These requirements will be met by making available the amended Group Standard, showing the amendments approved, directly from the EPA and also on the EPA website.

7. Decision

- 7.1. The Committee, in accordance with sections 96B and 96C of the Act, and taking into account the relevant matters in Part 2 of the Act, approved the amendments to the Fire Fighting Chemicals Group Standard as set out in Appendix A and directed that this decision be issued by notice in the New Zealand Gazette as required under the Act.
- 7.2. The Committee considered it appropriate that these amendments come into force immediately upon publication in the Gazette.



Signed by: **Dr Ngaire Phillips**

Date: 14 December 2020

Chair, Decision Making Committee
Environmental Protection Authority

8. Appendix A: Amended Fire Fighting Foams Group Standard

Note! : *The attached tracked-changes amended Group Standard starts on the following page and is for informational purposes for ease-of-use within this document. It contains minor formatting differences to allow easy incorporation as an appendix. The official Group Standard will be published on the EPA website following publication of this decision document.*

Fire Fighting Chemicals Group Standard 2017 – HSR002573

Pursuant to clause 5 of Schedule 7 of the Hazardous Substances and New Organisms Act 1996 (the Act), the Environmental Protection Authority has reviewed and, for the purpose of updating, reissues this Group Standard.

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1 Name of Group Standard

Fire Fighting Chemicals Group Standard 2017.

HSNO Approval Number

The HSNO Approval Number for this Group Standard is HSR002573.

2 Commencement

This Group Standard comes into force on 1 December 2017.

3 Interpretation

- (1) In this Group Standard, unless the context otherwise requires, words and phrases shall have the meanings given to them in Schedule 2. Any words or phrases that are used but not defined in this Group Standard but that are defined in the Act have the same meaning as the Act.
- (2) In this Group Standard, references to a hazardous property of a substance being equivalent to a specified HSNO hazard classification, means a reference to the specified hazard classification as set out in the Hazardous Substances (Classification) Notice 2017.

4 Scope of Group Standard

Substances covered by Group Standard

- (1) This Group Standard applies to hazardous substances and waste products under section 96B(2)(a), (b), ~~and (c)~~ and (d) of the Act.
 - ~~(2)~~ This Group Standard applies to solid or liquid substances that are imported or manufactured for use as a fire fighting chemical.
 - ~~(3)~~ Notwithstanding subclauses (2) and 6(b), this Group Standard applies to the use of legacy PFAS fire fighting foams only for the following applicable transitional periods—
 - (a) in relation to use in contained fire fighting systems, until 3 December 2025; and
 - (b) in relation to use in uncontained fire fighting systems, until 31 December 2022.
 - ~~(4)~~ This Group Standard applies to the following waste products—
 - (a) legacy PFAS fire fighting foam waste products, only until 3 December 2025; and
 - (b) C6 fluorotelomer fire fighting foam waste products.
- ~~(2)(5)~~ A substance referred to in subclause (2) must have one or more of the following (but only the following) hazards:
- (a) acute toxicity, HSNO 6.1D or 6.1E classification;
 - (b) HSNO 6.1E (aspiration hazard) classification;
 - (c) skin irritancy, HSNO 6.3A or 6.3B classification;
 - (d) eye corrosivity, HSNO 8.3A classification;
 - (e) eye irritancy, HSNO 6.4A classification;
 - (f) respiratory sensitisation, HSNO 6.5A classification;
 - (g) contact sensitisation, HSNO 6.5B classification;

- (h) mutagenicity, HSNO 6.6A or 6.6B classification;
- (i) reproductive toxicity, HSNO 6.8A, 6.8B or 6.8C classification;
- (j) target organ toxicity, HSNO 6.9A or 6.9B classification;
- (k) ecotoxicity, HSNO class 9.

Substances excluded from Group Standard

~~(3)~~(6) This Group Standard excludes any substance if it contains—

- (a) asbestos; or
- (b) [subject to subclauses \(3\) and \(4\)\(a\) which relate to use and waste products](#), a chemical that:
 - (i) is a persistent organic pollutant within the definition in section 2 of the Act; or
 - (ii) exhibits the characteristics of a persistent organic pollutant as set out in paragraph 1 of Annex D to Schedule 1AA of the Act.

~~(4)~~ This Group Standard excludes any substance that is or contains—

- ~~(a)~~ [perfluoroalkyl sulfonate](#); or
- ~~(b)~~ [perfluorooctanoic acid](#).

~~(5)~~(7) This Group Standard excludes any substance that contains a chemical that is a mutagen or reproductive toxicant that is not listed on the Inventory of Chemicals, unless—

- (a) the new mutagen or reproductive toxicant is used to completely replace an existing mutagen or reproductive toxicant in the substance; and
- (b) the new mutagen or reproductive toxicant has a lower hazard classification than the existing mutagen or reproductive toxicant.

~~(6)~~(8) This Group Standard excludes any substance that is a hazardous chemical not listed on the Inventory of Chemicals.

(9) For the purposes of subclause ~~(8)~~(7), “chemical” means any element or compound in its natural state or obtained by any production process, including any impurities and any additive necessary to preserve the stability of the chemical but excluding any solvent which may be separated without affecting the stability of the chemical or changing its composition.

5 Conditions of Group Standard

The conditions that specify the obligations and restrictions for substances [and waste products](#) covered by this Group Standard are set out in Schedule 1.

Advisory Note: In addition to requirements specified in this document, people who are undertaking work in a workplace involving hazardous substances [or waste products](#) covered by this Group Standard have obligations under the Health and Safety at Work Act 2015.

Schedule 1: Conditions of Group Standard

Part 1– Compliance with EPA Notices

1 Labelling and advertising

Substances covered by this Group Standard [under clause 4 \(Scope of Group Standard\)](#) must comply with the relevant provisions of the Hazardous Substances (Labelling) Notice 2017.

2 Safety data sheets

Substances covered by this Group Standard [under clause 4 \(Scope of Group Standard\)](#) must comply with the relevant provisions of the Hazardous Substances (Safety Data Sheet) Notice 2017.

3 Packaging

Substances covered by this Group Standard [under clause 4 \(Scope of Group Standard\)](#) must comply with the relevant provisions of the Hazardous Substances (Packaging) Notice 2017.

4 Disposal

[Subject to conditions 22 and 23](#), substances covered by this Group Standard [under clause 4 \(Scope of Group Standard\)](#) must comply with the relevant provisions of the Hazardous Substances (Disposal) Notice 2017.

5 Restriction on supply, storage and use

Substances covered by this Group Standard [under clause 4 \(Scope of Group Standard\)](#) must comply with the relevant provisions of the Hazardous Substances (Hazardous Property Controls) Notice 2017.

Part 2 – Notification to the Authority

6 Inventory of Chemicals

- (1) When a substance is imported into, or manufactured in, New Zealand after 30 June 2006, the importer or manufacturer must ensure that all hazardous chemicals contained in the substance are listed on the Inventory of Chemicals.
- (2) If that substance contains a hazardous chemical that is not listed on the Inventory of Chemicals, then the importer or manufacturer of the substance must at the time they first import or manufacture the substance, notify the Authority in writing of—
 - (a) the name of the substance; and
 - (b) the HSNO approval number and/or title of the group standard under which the substance is deemed to have been approved; and
 - (c) the name and CAS number of the chemical not listed on the Inventory of Chemicals that is present in the substance; and

- (d) the concentration of that chemical in the substance; and
 - (e) the hazardous properties of the chemical, including the provision of the relevant hazard data used to assign the substance to the group standard; and
 - (f) the proposed use of the substance.
- (3) Subclause (2) applies subject to clause 4(~~67~~) – (~~98~~) of this Group Standard (Scope of Group Standard).

Part 3 – Other Matters

7 Assigning a substance to a group standard

- (1) If an importer or manufacturer considers that this Group Standard applies to the importation or manufacture of a substance, then the importer or manufacturer is responsible for assigning the substance to this Group Standard.
- (2) In order to assign the substance to this Group Standard, the importer or manufacturer must—
 - (a) ensure that the substance complies with clause 4 of this Group Standard (Scope of Group Standard); and
 - (b) keep a record of how it was determined the substance complies with clause 4 of this Group Standard ([Scope of Group Standard](#)).
- (3) The importer or manufacturer must—
 - (a) ensure that the record contains sufficient information to allow for independent verification that the substance complies with clause 4 of this Group Standard (Scope of Group Standard); and
 - (b) have that record available for inspection.

Part 4 – Fire Fighting Foams

8 Record of assignment to be provided before supplying

- (1) An importer or manufacturer of a fire fighting foam must, as soon as practicable after its first importation or manufacture and before supplying it to any other person, provide to the EPA a copy of the record of assignment described in condition 7(2)(b), along with the full composition of the fire fighting foam, on a form approved by the EPA.
- (2) An importer or manufacturer of a fire fighting foam must, as soon as practicable after changing the composition of a fire fighting foam after first importation or manufacture and before supplying it to any other person, update the record of assignment described in conditions 7(2)(b) and provide it to the EPA, along with the full updated composition of the fire fighting foam, on a form approved by the EPA.

9 Requirement to display certification of fluorine content of fire fighting foams

A person must not supply a fire fighting foam to any other person unless the manufacturer's certification of its fluorine content (including 0% if applicable) is clearly displayed on a label or document provided with the fire fighting foam.

10 Requirement to contain fire fighting foams

- (1) Subject to conditions 11-16, 19, 20 and 21, a person who uses a fire fighting foam must take reasonable care to contain it within its intended application area.
- (2) For the purposes of subclause (1), a person who uses a fire fighting foam meets a reasonable standard of care if—
 - (a) the fire fighting foam is discharged to the environment as a consequence of responding to an emergency; and
 - (b) the person takes all reasonable and practicable measures to minimise environmental harm.

Legacy PFAS fire fighting foams

11 Restrictions on use of legacy PFAS fire fighting foams

A person must not use a legacy PFAS fire fighting foam other than in accordance with conditions 12 to 16.

12 Training and testing of legacy PFAS fire fighting foams

- (1) A person must not use a legacy PFAS foam for training.
- (2) During the applicable transitional period set out in clause 4(3) of this Group Standard, a person may use a legacy PFAS fire fighting foam for the purpose of testing the operation of a fire fighting system provided that all releases are contained so that the fire fighting foam is not released to the environment.

13 Use of legacy PFAS fire fighting foams in contained fire fighting systems

During the applicable transitional period set out in clause 4(3) of this Group Standard, a person may use a legacy PFAS fire fighting foam for the purpose of operating or maintaining a contained fire fighting system if the PFAS fire fighting foam is—

- (a) contained within the fire fighting system; or
- (b) stored in containers that are designated as being part of the fire fighting system for use in refilling the fire fighting system with fire fighting foam (except where the fire fighting system is a small fire extinguisher).

14 Use of legacy PFAS fire fighting foams in uncontained fire fighting systems

During the applicable transitional period set out in clause 4(3) of this Group Standard, a person may use a legacy PFAS fire fighting foam for the purpose of operating or maintaining an uncontained fire fighting system if the fire fighting foam is—

- (a) contained within the fire fighting system; or

- (b) contained in storage containers that are designated as being part of the fire fighting system for use in refilling the fire fighting system with fire fighting foam (except where the fire fighting system is a small fire extinguisher); or
- (c) discharged from the fire fighting system for the purpose of responding to an emergency in accordance with the purpose and design of the fire fighting system while taking all reasonably practicable measures to minimise environmental harm.

15 Disposal of legacy PFAS fire fighting foams and associated waste products

- (1) Subject to condition 16, a person must not dispose of a legacy PFAS fire fighting foam or a legacy PFAS fire fighting foam waste product other than by one of the following methods, to the extent permitted by the laws of New Zealand, —
 - (a) high-temperature incineration; or
 - (b) any other method that conforms with section IV.G.2 of the Basel Convention General Technical Guidelines on Persistent Organic Pollutant Wastes; or
 - (c) export from New Zealand for the purpose of disposal by a method that conforms with section IV.G.2 of the Basel Convention General Technical Guidelines on Persistent Organic Pollutant Wastes.
- (2) The methods described in subclause (1) do not include dilution.

16 Exception in relation to disposal of certain legacy PFAS fire fighting foam waste products

Condition 15 does not apply to a legacy PFAS fire fighting foam waste product that is:

- (a) a liquid waste product disposed of in accordance with an applicable trade waste bylaw if the bylaw expressly permits the discharge of the trade waste containing a PFAS component or components because the component or components are present below a specified concentration; or
- (b) a solid waste product that is disposed of to landfill subject to:
 - (i) meeting the HEPA Landfill Acceptance Criteria; and
 - (ii) the total concentration for PFOA, its salts and PFOA-related compounds does not exceed 50 mg/kg (determined as fluorine).

C6 fluorotelomer fire fighting foams and C6 fluorotelomer fire fighting foam waste products

17 Prohibition on import or manufacture of certain C6 fluorotelomer fire fighting foams

A person must not import or manufacture a C6 fluorotelomer fire fighting foam if it has more than:

- (a) 0.025 mg/kg of PFOA or any of its salts; or
- (b) 1 mg/kg of any individual PFOA-related compound; or
- (c) 1 mg/kg of a combination of PFOA-related compounds.

18 Transitional period for use of C6 fluorotelomer fire fighting foams

For the purposes of conditions 19-21, the transitional period for the use of C6 fluorotelomer fire fighting foams ends on 3 December 2025.

Advisory note: At the end of the transitional period, C6 fluorotelomer fire fighting foam will only be able to be used in a fire fighting system, subject to a permission being granted in accordance with condition 21 of this Schedule, but may still be imported or manufactured for this use in accordance with this Group Standard.

19 Training and testing of C6 fluorotelomer foams

- (1) A person must not use a C6 fluorotelomer fire fighting foam for training.
- (2) During the transitional period, a person may use a C6 fluorotelomer fire fighting foam for the purpose of testing the operation of a fire fighting system if all releases are contained so that the fire fighting foam is not released to the environment.

20 Use of C6 fluorotelomer fire fighting foams in fire fighting systems

During the transitional period, a person may use a C6 fluorotelomer fire fighting foam for the purpose of operating or maintaining a fire fighting system if the fire fighting foam is—

- (a) contained within the fire fighting system; or
- (b) contained in storage containers that are designated as being part of the fire fighting system for use in refilling the fire fighting system with fire fighting foam; or
- (c) for uncontained fire fighting systems, discharged from the fire fighting system for the purpose of responding to an emergency in accordance with the purpose and design of the system while taking all reasonably practicable measures to minimise environmental harm.

21 Requirement for permission to use C6 fluorotelomer fire fighting foams after the transitional period

- (1) After the transitional period, a person cannot use a C6 fluorotelomer fire fighting foam in a fire fighting system except subject to this Group Standard and in accordance with a permission under section 95A of the Act granted by the EPA.
- (2) The EPA may require the applicant to provide a management plan addressing some or all of the matters set out in subclause (3) prior to the permission referred to in subclause (1) being considered.
- (3) The EPA may impose conditions under the permission referred to in subclause (1) including to address the following matters:
 - (a) the adverse effects of the use of C6 fluorotelomer fire fighting foam in a fire fighting system;
 - (b) the containment of the C6 fluorotelomer fire fighting foam in the fire fighting system;
 - (c) the risks of adverse effects from discharge to the environment as a result of the fire fighting system's use in an emergency;
 - (d) a timeline for the appropriate removal of the C6 fluorotelomer fire fighting foam from the fire fighting system and the appropriate disposal of the C6 fluorotelomer fire fighting foam and any C6 fluorotelomer fire fighting foam waste.

- (4) The permission referred to in subclause (1) may include a condition that the holder of the permission notify the EPA of any change in relation to any matter in subclause (3) above.
- (5) Where there is any inconsistency between the provisions of this Group Standard and the conditions in a permission referred to in subclause (1), the provisions of this Group Standard will prevail over those conditions to the extent of any inconsistency.

22 Disposal of C6 fluorotelomer fire fighting foams and associated waste products

- (1) Subject to condition 23, a person must not dispose of a C6 fluorotelomer fire fighting foam or a C6 fluorotelomer fire fighting foam waste product other than by one of the following methods, to the extent permitted by the laws of New Zealand, —
 - (a) high-temperature incineration; or
 - (b) any other method that, if the foam or waste product were or contained PFOA-related compounds, would conform with section IV.G.2 of the Basel Convention General Technical Guidelines on Persistent Organic Pollutant Wastes; or
 - (c) export from New Zealand for the purpose of disposal by a method that, if the foam or waste product were or contained PFOA related compounds, would conform with section IV.G.2 of the Basel Convention General Technical Guidelines on Persistent Organic Pollutant Wastes.
- (2) The methods described in subclause (1) do not include dilution.

23 Exception in relation to disposal of C6 fluorotelomer fire fighting foam waste products

Condition 22 does not apply to a C6 fluorotelomer fire fighting foam waste product that is—

- (a) a liquid waste product that is disposed of in accordance with an applicable trade waste bylaw if the bylaw expressly permits the discharge of the trade waste containing a PFAS component or components because the component or components are present below a specified concentration; or
- (b) a solid waste product that is disposed of to landfill:
 - (i) in accordance with any applicable landfill acceptance criteria, and
 - (ii) where the leachable concentration for PFAS does not exceed 0.05 mg/kg (determined as fluorine) and the total concentration for PFAS does not exceed 50 mg/kg (determined as fluorine).

Transitioning fire fighting systems to PFAS-free foam

24 Requirements relating to transitioning fire fighting systems to PFAS free fire fighting foams

- (1) This condition applies where a person who operates a fire fighting system intends to transition it to a fire fighting system that uses PFAS-free fire fighting foam.
- (2) An operator of the fire fighting system, before transitioning the fire fighting system, must ensure that—

- (a) the fire fighting system is thoroughly cleaned so as to remove, as far as reasonably practicable, any residual fire fighting foam or waste product; and
 - (b) any fire fighting foam or waste products that have been removed from the fire fighting system or generated directly or indirectly as a result of the cleaning process are collected and securely contained for disposal.
- (3) A person who treats, collects or transports a fire fighting foam or waste product for disposal must take all reasonably practicable steps to prevent its discharge to the environment.
- (4) In this condition, **fire fighting foam or waste product** means any of the following:
 - (a) legacy PFAS fire fighting foam
 - (b) legacy PFAS fire fighting foam waste product
 - (c) C6 fluorotelomer fire fighting foam
 - (d) C6 fluorotelomer fire fighting foam waste product.

Schedule 2: Interpretation

Act means the Hazardous Substances and New Organisms Act 1996

applicable trade waste bylaw includes a trade waste agreement or trade waste consent made or recognised under the applicable trade waste bylaw

asbestos has the same meaning as in [regulation 3\(1\) of the Health and Safety at Work \(Asbestos\) Regulations 2016](#), but does not include substances that contain naturally occurring traces of asbestos

Basel Convention means the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, adopted on 22 March 1989

Basel Convention General Technical Guidelines on Persistent Organic Pollutant Wastes means the General technical guidelines on the environmentally sound management of wastes consisting of, containing or contaminated with persistent organic pollutants adopted by decision BC-14/4 at the Conference of the Parties to the Basel Convention in 2019, version UNEP/CHW.14/7/Add.1/Rev.1

C6 fluorotelomer fire fighting foam means a fire fighting foam that—

(a) [contains fluorinated organic compounds predominantly of a perfluorinated 6-carbon chain length or shorter; and](#)

(b) [in its concentrated form does not contain more than a total of 50 mg/kg of compounds where the perfluorinated part of the carbon chain is longer than 6 carbon atoms, but excluding PFOS and PFHxS which have a separate total limit of 10 mg/kg](#)

C6 fluorotelomer fire fighting foam waste product means a waste product generated either directly or indirectly from the use of C6 fluorotelomer fire fighting foam in a fire fighting system including storage for use in a fire fighting system, or the cleaning out of a fire fighting system which has contained C6 fluorotelomer fire fighting foam

CAS number means Chemical Abstract Services Registry number

condition means any obligation or restriction imposed upon a substance by a group standard

contained fire fighting system means a system made up of a fire fighting system and equipment, structures or mechanisms that is designed to collect or contain fire fighting foam when it is discharged so that the foam is able to be prevented from being released to the environment

emergency means an emergency as defined in section 6 of the Fire and Emergency New Zealand Act 2017, or an emergency declared under Part 9 of the Act

fire fighting chemical means any chemical that is used to prevent, suppress or extinguish a fire and includes ~~any suppressant that reduces the surface tension of water and/or produces a foam which is applied directly on to the flame of a fire to extinguish the fire. It also~~ [and](#) includes fire

retardants that are mixed with water and applied to unburnt vegetation so that combustion is not supported

fire fighting foam means a fire fighting chemical that includes a foam, and both a foam concentrate and an aqueous solution for use in the production of fire fighting foam

fire fighting system—

- (a) means a system for preventing, suppressing or extinguishing a fire and includes:
- (i) a fire extinguishing system on a fire vehicle or appliance;
 - (ii) an on-site fixed fire extinguishing system;
 - (iii) any pumps, pipes, hoses, nozzles, sprinklers, and other equipment associated with the system; or
 - (iv) a small fire extinguisher

HEPA Landfill Acceptance Criteria means the landfill acceptance criteria, for both leachable and total concentrations, detailed in Table 7, Chapter 14, of the PFAS National Environmental Management Plan Version 2.0 prepared by the National Chemicals Working Group of the Heads of EPAs Australia and New Zealand, dated January 2020

Inventory of Chemicals means an inventory kept and maintained by the Authority of chemicals known to be present in New Zealand

legacy PFAS fire fighting foam means a fire fighting foam that contains PFOA-related compounds

legacy PFAS fire fighting foam waste product means a waste product generated directly or indirectly from the use of legacy PFAS fire fighting foam in a fire fighting system including storage for use in the fire fighting system, or the cleaning out of a fire fighting system that has contained legacy PFAS fire fighting foam.

perfluoroalkyl sulfonate is a generic term used to describe any fully fluorinated carbon chain sulfonate, and includes any higher and lower homologues as well as perfluorooctane sulfonate

perfluorooctane sulfonate (PFOS) means the parent acid (CAS number 1763-23-1) and any salts thereof, including the potassium (CAS number 2795-39-3), lithium (CAS number 29457-72-5), ammonium (CAS number 29081-56-9) and diethanolamine (CAS number 70225-14-8) salts

perfluorooctanoic acid (PFOA) is a fully fluorinated eight-carbon chain carboxylic acid (CAS number 335-67-1)

PFAS (perfluoroalkyl and polyfluoroalkyl substances) means a class of fluorinated organic compounds containing at least one fully fluorinated carbon atom

PFAS fire fighting foam means a fire fighting foam that contains PFAS, and includes legacy PFAS fire fighting foam and C6 fluorotelomer fire fighting foam

PFAS free fire fighting foam means a fire fighting foam that does not contain PFAS

PFHxS means perfluorohexane sulfonate

PFOA (perfluorooctanoic acid) is a fully fluorinated eight-carbon chain carboxylic acid (CAS number 335-67-1), including any of its branched isomers

PFOA-related compounds mean any substances that degrade to PFOA, including any substances (including salts and polymers) having a linear or branched perfluoroheptyl group with the moiety (C₇F₁₅)C as one of the structural elements

PFOS (perfluorooctane sulfonate) means the parent acid (CAS number 1763-23-1), its salts, and any derivatives of the formula C₈F₁₇SO₂X, where X = halide, amide, esters, and other derivatives including polymers

small fire extinguisher means a fire extinguisher with a capacity of less than 90L and includes a hand-held or mobile fire extinguisher

solid waste product means a waste product generated as a solid or converted to a solid for disposal, where the waste was generated or converted in connection with the use or cleaning out of a fire fighting system, or the cleaning of fire fighting foam out of a fire fighting system

substance means any solid or liquid fire fighting chemical that is within the scope of clause 4 of this Group Standard (Scope of Group Standard)

supply includes supply (or resupply) by way of sale, exchange, lease, hire, hire purchase or gift; and occurs on the passing of possession to the person, or agent of the person, to be supplied

uncontained fire fighting system means a fire fighting system other than a contained fire fighting system

use includes storage for use in an emergency

workplace has the same meaning as in [section 20 of](#) the Health and Safety at Work Act 2015

Explanatory note

This note is not part of the group standard but is intended to provide guidance to users of the group standard.

- (1) Under the Act, section 96E(3) provides that a hazardous substance to which section 96B(2)(a) applies is deemed to have been approved by the Authority under section 29.
- (2) Any transitional measures that were in this Group Standard immediately prior to 1 December 2017 but have expired have not been included in this reissued Group Standard.
- (3) All amendments made under section 96B to the Group Standard since it was first issued that are still in force have been incorporated into this reissued Group Standard.
- (4) In addition to requirements specified in this document, people who are undertaking work in a workplace involving hazardous substances covered by this Group Standard have obligations under the Health and Safety at Work Act 2015.
- (5) A person relying on this Group Standard will have four years (until 1 December 2021) to comply with the Labelling, Safety Data Sheet and Packaging Notices. Within that time, a person may comply with the equivalent conditions in the Group Standard in force immediately before 1 December 2017. All other aspects of this Group Standard apply from 1 December 2017.

(6) This Group Standard:

- (a) does not authorise the importation or manufacture of any fire fighting foam that falls within a listing as a persistent organic pollutant in Schedule 2A of the Act; and
- (b) is not intended to provide for conditions for the storage and disposal of any fire fighting foams that fall within the description of a persistent organic pollutant listed in Schedule 2A of the Act after the date on which any exemption for a specified use described in that Schedule expires.

~~(6)~~(7) This Group Standard authorises the use of legacy PFAS fire fighting foams for a transitional period strictly in accordance with the provisions of the Group Standard. The duration of any use authorised by this Group Standard is intended to align with the listing of PFOA, its salts and PFOA-related compounds as a persistent organic pollutant and the specified use exemption for fire fighting foams containing PFOA-related compounds under the Stockholm Convention, once that listing and exemption is included in Schedule 2A of the Act.

(8) The transitional periods for PFAS fire fighting foams are aimed at phasing out their use, as a measure to manage the risks of:

- (a) PFAS fire fighting foams as hazardous substances and
- (b) PFAS fire fighting foam waste products as waste products that contain hazardous substances.

(9) This Group Standard imposes disposal requirements in relation to PFAS fire fighting foam as a hazardous substance and PFAS fire fighting foam waste products as waste products that contain hazardous substances.

(10) After the transitional period has ended for legacy PFAS fire fighting foams, the Hazardous Substances (Storage and Disposal of Persistent Organic Pollutants Notice 2004 (Gazette

Notice) or its successor instrument(s) will apply to fire fighting foams containing PFOA-related compounds.

- (11) After the transitional period has ended, although fire fighting foams containing PFOA-related compounds will no longer be authorised for use or regulated as hazardous substances under this Group Standard, storage and disposal requirements under the Gazette Notice will apply on the basis of their status as persistent organic pollutants.
- (12) This Group Standard continues the exclusion of perfluoroalkyl sulfonate and perfluorooctanoic acid from its scope by excluding all persistent organic pollutants from its scope.