

APP203827 Proposal to amend the Fire Fighting Chemicals Group Standard 2017

Submission Reference no: 27

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Submitter Type: Not specified

Source: Email

Overall Position: I support some of the proposals

Clause

What is the reason for making the submission?

Notes

NZ Airports is the industry association for New Zealand's airports and related businesses. Civil Aviation Authority (CAA) rules require airports to have minimum usable amounts of extinguishing agents, which are related to the size of the airport. As a result, NZ Airports members actively use firefighting foams in fire trucks and store foam product on their sites. In addition such foams may also be present in aircraft hangars, fuel terminals and other associated industries on airport land. NZ Airports members have actively been engaged in managing PFAS foam issues, specifically as a result of recent work by the EPA involving PFOS-based foams. Our members have tried to navigate the existing legislation and be proactive in the management, removal and decontamination of PFOS foam impacted assets. This work has led to close engagement with the EPA. This has resulted in some good, practical outcomes, specifically around the disposal of treated low-level PFAS impacted wash water to trade waste. Various airports have completed phased, documented processes to demonstrate to the EPA that appropriate decontamination and validation has occurred. As one of the industries for which firefighting foam is vital to safe and compliant operations, this submission is of the utmost importance in presenting our view on the EPA consultation.

Clause

Do you wish to speak at a hearing?

Position

Yes

Notes

Yes, NZ Airports would like to speak to a hearing. We feel that several of the points made in our submission would benefit from being discussed with the hearing committee directly.

Clause

What is your preferred outcome of this consultation?

Notes

NZ Airports would like to see clarity on a number of the proposed changes. The foremost of these is in reference to decontamination of firefighting systems and the definition surrounding cleaning "as far as reasonably practicable". The definition of this is crucial as it provides the threshold decontamination is measured against. The setting of these thresholds will drive the level of effort required and ultimately costs and resources involved and is therefore directly related to a number of the questions posed by the EPA in the consultation document. The association would like to see the publication of a clear guidance document on how the 'reasonably practicable' text will be applied prior to the revised Group Standard's enactment. The proposals appear to imply that there will be an assessment of risk to determine this level as opposed to a zero tolerance approach to PFAS. Such a risk assessment would need to be site specific. We would like to see clarity on this issue.

Clause

Do you consider there are any applications for which fluorine-free foams are not suitable or do not have relevant approvals? If yes, please specify.

Notes

NZ Airports members are end-users and not experts on the foams themselves, however there are conflicting accounts of the effectiveness of fluorine free foam. These include the time taken to put out fires, and the inability to do a simple 'switch-over' for some of these foams due to differences in physical properties of the foams. If the fire fighting industry is being required to switch to fluorine free foams then several fundamental questions must be answered, as listed below: * Is the EPA satisfied that

fluorine free foams are suitable for controlling aircraft fires, despite the various uncertainties, yet C6 AFFF foams (with the proven ability to fight fires effectively) are to be removed? * What advice is being provided by the fire protection industry (e.g. technical/professional bodies - not foam manufacturers) with regard to switching to fluorine free foam? *As part of the development of the proposed new Group Standard, has the EPA consulted with the Civil Aviation Authority and Fire & Emergency New Zealand (FENZ) and have fluorine free foams been assessed as fit for purpose? * Have the fluorine free foams undergone a robust environmental assessment so that airports can be confident of the longevity of the replacement products and their effects on the environment?

Clause

What do you think of the practicality of these disposal provisions, in terms of the resources and costs involved?

Notes

[b]What do you think of the practicality of these disposal provisions in terms of the resources and costs involved? [/b]Our response is similar to the previous question. Whilst we acknowledge that the current disposal options are limited and appreciate that the proposed wording indicates that other methods may be approved as long as they are approved under the Basel Convention, we have the same issues in relation to resources and cost. These cannot be determined until EPA defines clean-up requirement thresholds for the substances concerned. We note that as C6 foams have been the favoured product class for some time, there will be large amounts of foam requiring disposal, far in excess of what has been disposed of in terms of PFOS-foams. As there are limited options for disposal, we are concerned that the exclusion of modern fluorotelomer AFFF-containing C6 from firefighting use is premature and not a sustainable approach. The lack of PFOS, PFHxS and PFOA in these foams means these are not Persistent Organic Pollutants and we have concerns about how the removal of these foams from firefighting systems could be validated given the lack of published human health/environmental thresholds around fluorotelomers. The cost of disposal and replacement will be significant, especially in fixed fire systems. Is there a plan to provide some financial assistance in terms of a buy-back by the Government, or the development of a disposal facility here in NZ to reduce the need to send it overseas?

Clause

Would your business be able to contain all foam wastes?

Position

No

Notes

No, airports would not be able to contain all foam wastes. Airports do not have specific foam capture areas.

Clause

If not, is this due to cost or practical difficulties?

Position

Practical difficulties - please specify

Notes

The proposals would mean that airports would need to build some form of capture facility. The EPA should provide advice on what the expectations will be. Will there be an EPA approved system design for the capture of foams? This would have a significant cost in terms of the construction itself but also in terms of consenting requirements associated with such a structure and any associated discharges from such as system. Rather than being an EPA function, such consents would fall under the Resource Management Act and therefore require regional councils to regulate them. In practical terms this proposal may be difficult as some airports may not have the space to build such a facility in the place they need it. Smaller regional airports will struggle with the cost burden associated with the requirement to contain all foam wastes.

Clause

Do you have any concerns about fluorine-free foams potentially containing other persistent, toxic and/or bioaccumulative compounds?

Notes

NZ Airports would look to the EPA for advice on such matters as the organisation charged with making decisions about such substances in New Zealand. Robust testing of any replacement foam product should be undertaken at a government level to provide the necessary commercial and environmental assurances. The assessment should give consideration to various environmental receptors and site-specific sensitivities. Not all fluorine free foams are alike, and a 'one size fits all' approach may not be relevant for all locations and/or situations. Our members understand that fluorine free foams are relatively less persistent in the environment than certain AFFF foams and tend to break down faster. Whilst there may be a more acute short term effect on the environment, our understanding is that the longer terms issues associated with certain AFFF foams (bioaccumulation and persistence) are not seen in fluorine free foams. We would like to see what research has been undertaken by the EPA or other government agencies in understanding the risks from fluorine free foams. Of note is that one of our members has local council approval for fluorine-free foams to be discharged to sewer via a separator but not to stormwater.

Clause

Do you agree with phasing out C6 AFFF at the same timeframe as C8 AFFF?

Position

Yes

Notes

NZ Airports agrees with a coincident phase out, however given the high cost and uncertainty around decontamination of more

complex fixed systems, this agreement is subject to EPA having satisfied itself via consultation with appropriate bodies (e.g. CAA and FENZ) of the effectiveness of the fluorine free replacements.

Clause

Which is your preferred option?

Position

Phase out C6 and C8 firefighting foams at the same time

Notes

Clause

What are your reasons?

Notes

Some of our members have already switched to fluorine free foams. Airports that have switched have indicated that the fluorine free foams have already met the required International Civil Aviation Organisation (ICAO) tests for effectiveness. Some of our members have not yet switched and have acquired C6 products instead, prior to these proposals being published. We would encourage testing and approvals be issued by the appropriate fire protection agencies in New Zealand to provide certainty to foams users such as airports before an enforced switch to fluorine free is made law.

Clause

Can you estimate the cost to your business of phasing out C6 AFFF?

Position

Yes - please specify

Notes

As stated above this is difficult to judge for the reasons listed in Question 5 and 6. However some of our members have provided estimated costs which are in the region of \$500,000-\$750,000 per airport based on fire truck decontamination and product disposal. Costs for fixed systems would be substantially higher.

Clause

Do you have any other comments to make about the proposed amendments?

Notes

[b][i]Phase Out Concerns [/i]/b]The NZ Airports understands the potential risks posed by PFAS chemicals and has been supportive in the removal of PFOS foams from airport sites over the last 2 years. We support moves to safer chemicals that protect the environment and are safer for our firefighters. Some of our members have already switched to fluorine free foams and are satisfied as to their effectiveness. Others feel that confirmation of the effectiveness of fluorine free foam via appropriate government assessment and approvals should be undertaken before industry is forced down the fluorine free route. The cost may be significant for certain fixed fire systems to be switched to fluorine free foams. [b][i]Essential Uses & Training [/i]/b]Page 8 on Page 14 of the consultation document indicates that essential uses and emergency incidents where there are direct releases are tolerable provided reasonable and practicable measures are taken to minimise environmental harm. We consider that testing of fire truck foam systems to ensure operational functionality is an 'essential use'. The clauses in the proposal Standard however appear silent on the phrase 'essential use'. Clause 5 of the proposed Standard appears to indicate that testing is allowed, if it is part of a documented programme to test the operation of the system, falls under the transitional uses in Clause 3 and 4, and reasonable steps are taken to prevent discharge of the foam. NZ Airports would like to see confirmation that testing of fire truck foam equipment would be allowed under Clause 5. [b][i]Benefits vs. Economic Costs [/i]/b]Page 21 of the proposal discusses matters to be considered under s96c HSNO Act - 96C(1)(d). This requires EPA to be satisfied that benefits outweigh the economic costs associated with compliance. This economic cost is potentially quantifiable for fire trucks with airports spending six-figure sums to drain, decontaminate and replace their existing PFOS foams - but this cost will be higher where C6 foams are concerned due to the greater amount of C6 stocks held at airports. Furthermore, the costs in relation to a fixed building suppression system may be prohibitive. Many systems are inside the building fabric and parts which may contain small amounts of product may not be accessible, meaning that system decontamination is impractical in some cases. NZ Airports would like to understand what cost-benefit analysis has been undertaken. The discussion on page 21 of the consultation document appears reliant on the Nordic Council of Ministers report 'cost of inaction' approach, quoting this cost as being in the billions of Euros. Whilst the argument has merits in that context, especially in the area of C8 related foams, the issues around C6 foams are less clear. NZ Airports would like to see a New Zealand approach taken and for the EPA to develop estimates of the 'cost of action'. Clarification of clean-up thresholds by the EPA would allow affected parties to provide EPA with meaningful cost estimates for decontamination and disposal.

Clause

Do you have any comments about the workability of the draft amendments shown in the revised Group Standard in the Appendix? Please include the relevant clause and sub clause number in providing any feedback.

Notes

Schedule 1, Part 3, Other Matters * Clause 8 relates to the requirement to display fluorine content on firefighting foams. This requires greater clarity as to what is expected of manufacturers so that end-users such as airports can check their products in the event of a future EPA-recall. For example if manufacturers attempt to comply with this by adding phrases to their labels such as 'fluorine free - contains only PFAS at trace levels' or 'less than 1% PFAS' this will not be sufficient. Manufacturers tend to work at percentage levels of concentration (e.g. 1% = 10,000 parts per million), whereas environmental legislation is at parts per trillion level. We would also recommend that all products are independently tested for PFAS content as part of any application by

manufacturers for EPA approvals in New Zealand. EPA should then publish a list of foams that it considers to be fluorine free. * Clause 9, relating to the requirement to contain foams, references discharge to the environment. As this is a Resource Management Act issue, this sits outside the Group Standard remit. NZ Airports suggests this be reconsidered. Schedule 2, Clause 6 (1) (a) * In terms of transitioning to new foams, "as far as reasonably practicable" needs to be clearly defined. The immediate question posed by our members was "to what level of decontamination is reasonably practicable?" Although thresholds have been determined in some jurisdictions for PFOS, PFOA and PFHxS, there are no threshold concentrations available for a number of other PFAS compounds to be compared against. Many modern fluorotelomer foams do not contain these three compounds and only contain fluorotelomers. As they are fluorinated, they are required to be removed before the end of the transition period and systems cleaned and decontaminated as far as reasonably practical. However, we cannot see how a successful clean up can be ascertained without a guideline/threshold for such foams. We recommend that EPA provides guidance on how this will be achieved in advance of the Group Standard being enacted.

Proposal to amend the Fire Fighting Chemicals Group Standard 2017

New Zealand Airports Association Submission

The New Zealand Airports Association (NZ Airports)

NZ Airports is the industry association for New Zealand's airports and related businesses. Its members¹ operate 41 airports across the country including the international gateways to New Zealand. This infrastructure network is essential to a well-functioning economy which enables critical transport and freight links between each region of New Zealand and between New Zealand and the world.

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1 Introduction

Thank you for the opportunity to comment on the Proposal to amend the Fire Fighting Chemicals Group Standard 2017. This submission has been prepared in consultation with a working group of our member airports, with external technical assistance. Individual airports may also respond separately, in which case our submission should be read in conjunction with other airport feedback.

This submission follows the order of questions asked by the EPA in the consultation document.

2 NZ Airports Responses

2.1 Question 1: What is the reason for making the submission?

NZ Airports is the industry association for New Zealand's airports and related businesses.

Civil Aviation Authority (CAA) rules require airports to have minimum usable amounts of extinguishing agents, which are related to the size of the airport. As a result, NZ Airports members actively use

¹ Our member airports include Ardmore Airport, Ashburton Airport, Auckland Airport, Chatham Islands Airport, Christchurch Airport, Dunedin Airport, Gisborne Airport, Hamilton Airport, Hawke's Bay Airport, Hokitika Airport, Invercargill Airport, Kapiti Coast Airport, Kaikohe Airport, Katikati Airport, Kerikeri Airport, Marlborough Airport, Masterton Airport, Matamata Airport, Motueka Airport, Nelson Airport, New Plymouth Airport, Oamaru Airport, Palmerston North Airport, Queenstown Airport, Rangiora Airport, Timaru Airport, Rotorua Airport, Takaka Airport, Taupo Airport, Tauranga Airport, Wairoa Airport, Wanaka Airport, Whanganui Airport, Wellington Airport, West Auckland Airport, Westport Airport, Whakatane Airport, and Whangarei Airport.

firefighting foams in fire trucks and store foam product on their sites. In addition such foams may also be present in aircraft hangars, fuel terminals and other associated industries on airport land.

NZ Airports members have actively been engaged in managing PFAS foam issues, specifically as a result of recent work by the EPA involving PFOS-based foams. Our members have tried to navigate the existing legislation and be proactive in the management, removal and decontamination of PFOS foam impacted assets. This work has led to close engagement with the EPA. This has resulted in some good, practical outcomes, specifically around the disposal of treated low-level PFAS impacted wash water to trade waste. Various airports have completed phased, documented processes to demonstrate to the EPA that appropriate decontamination and validation has occurred.

As one of the industries for which firefighting foam is vital to safe and compliant operations, this submission is of the utmost importance in presenting our view on the EPA consultation.

2.2 Question 2: Do you wish to speak in a hearing?

Yes, NZ Airports would like to speak to a hearing. We feel that several of the points made in our submission would benefit from being discussed with the hearing committee directly.

2.3 Question 3: What is your preferred outcome of this consultation?

NZ Airports would like to see clarity on a number of the proposed changes. The foremost of these is in reference to decontamination of firefighting systems and the definition surrounding cleaning “as far as reasonably practicable”. The definition of this is crucial as it provides the threshold decontamination is measured against. The setting of these thresholds will drive the level of effort required and ultimately costs and resources involved and is therefore directly related to a number of the questions posed by the EPA in the consultation document.

The association would like to see the publication of a clear guidance document on how the ‘reasonably practicable’ text will be applied prior to the revised Group Standard’s enactment. The proposals appear to imply that there will be an assessment of risk to determine this level as opposed to a zero tolerance approach to PFAS. Such a risk assessment would need to be site specific. We would like to see clarity on this issue.

2.4 Question 4: Do you consider there are any applications for which fluorine-free foams are not suitable or do not have relevant approvals?

NZ Airports members are end-users and not experts on the foams themselves, however there are conflicting accounts of the effectiveness of fluorine free foam. These include the time taken to put out fires, and the inability to do a simple ‘switch-over’ for some of these foams due to differences in physical properties of the foams.

If the fire fighting industry is being required to switch to fluorine free foams then several fundamental questions must be answered, as listed below:

- Is the EPA satisfied that fluorine free foams are suitable for controlling aircraft fires, despite the various uncertainties, yet C6 AFFF foams (with the proven ability to fight fires effectively) are to be removed?
- What advice is being provided by the fire protection industry (e.g. technical/professional bodies - not foam manufacturers) with regard to switching to fluorine free foam?
- As part of the development of the proposed new Group Standard, has the EPA consulted with the Civil Aviation Authority and Fire & Emergency New Zealand (FENZ) and have fluorine free foams been assessed as fit for purpose?

- Have the fluorine free foams undergone a robust environmental assessment so that airports can be confident of the longevity of the replacement products and their effects on the environment?

2.5 Question 5: What do you think of the practicality of these cleaning requirements in terms of the resources and costs involved?

We cannot answer the question on resources and cost until the EPA provides clear and specific guidance on the clean-up levels required. The level of effort is entirely dependent on the clean-up goal to be achieved. Without a definition of “reasonably practicable” - and such a definition must contain either specific threshold concentrations for the contaminants involved or a consistent means of deriving them – we cannot provide estimates of resources and costs involved.

Several of our members have been able to decontaminate fire trucks, however we have serious concerns about the ability to clean fixed suppression systems in buildings such as aircraft hangars, which have many small and intricate parts which cannot be as easily cleaned. Switching to a fluorine free foam in such systems may require complete system overhauls and cost millions of dollars.

We note that on page 13 of the proposals that the EPA intends to provide guidance on what is considered to be “as far as reasonably practicable”. It is NZ Airports member’s view that this guidance should be in place well before the date of enactment of the legislation.

We have concerns regarding the availability of the specialists required to undertake future decontamination works, especially in the 2-year phase out period. Many of our members are already waiting in a queue with specialist waste management subcontractors just for the PFOS containing foam issues currently being dealt with. The removal of all other PFAS foams and decontamination of affected systems within 2 years does not appear realistic based on the number of sites likely to be affected and the limited number of service providers.

2.6 Question 6: What do you think of the practicality of these disposal provisions in terms of the resources and costs involved?

Our response is similar to the previous question. Whilst we acknowledge that the current disposal options are limited and appreciate that the proposed wording indicates that other methods may be approved as long as they are approved under the Basel Convention, we have the same issues in relation to resources and cost. These cannot be determined until EPA defines clean-up requirement thresholds for the substances concerned.

We note that as C6 foams have been the favoured product class for some time, there will be large amounts of foam requiring disposal, far in excess of what has been disposed of in terms of PFOS-foams.

As there are limited options for disposal, we are concerned that the exclusion of modern fluorotelomer AFFF-containing C6 from firefighting use is premature and not a sustainable approach. The lack of PFOS, PFHxS and PFOA in these foams means these are not Persistent Organic Pollutants and we have concerns about how the removal of these foams from firefighting systems could be validated given the lack of published human health/environmental thresholds around fluorotelomers.

The cost of disposal and replacement will be significant, especially in fixed fire systems. Is there a plan to provide some financial assistance in terms of a buy-back by the Government, or the development of a disposal facility here in NZ to reduce the need to send it overseas?

2.7 Question 7: Would your business be able to contain all foam wastes?

No, airports would not be able to contain all foam wastes. Airports do not have specific foam capture areas.

2.8 Question 8: If not, is this due to cost or practical difficulties?

The proposals would mean that airports would need to build some form of capture facility. The EPA should provide advice on what the expectations will be. Will there be an EPA approved system design for the capture of foams? This would have a significant cost in terms of the construction itself but also in terms of consenting requirements associated with such a structure and any associated discharges from such as system. Rather than being an EPA function, such consents would fall under the Resource Management Act and therefore require regional councils to regulate them.

In practical terms this proposal may be difficult as some airports may not have the space to build such a facility in the place they need it. Smaller regional airports will struggle with the cost burden associated with the requirement to contain all foam wastes.

2.9 Question 9: Do you have concerns about fluorine-free foams potentially containing other persistent, toxic and/or bioaccumulative compounds?

NZ Airports would look to the EPA for advice on such matters as the organisation charged with making decisions about such substances in New Zealand.

Robust testing of any replacement foam product should be undertaken at a government level to provide the necessary commercial and environmental assurances. The assessment should give consideration to various environmental receptors and site-specific sensitivities. Not all fluorine free foams are alike, and a 'one size fits all' approach may not be relevant for all locations and/or situations.

Our members understand that fluorine free foams are relatively less persistent in the environment than certain AFFF foams and tend to break down faster. Whilst there may be a more acute short term effect on the environment, our understanding is that the longer terms issues associated with certain AFFF foams (bioaccumulation and persistence) are not seen in fluorine free foams. We would like to see what research has been undertaken by the EPA or other government agencies in understanding the risks from fluorine free foams.

Of note is that one of our members has local council approval for fluorine-free foams to be discharged to sewer via a separator but not to stormwater.

2.10 Question 10: Which option for addressing these concerns do you prefer and why?

Option 2 would appear the more sensible route as it requires the supplier to provide the full composition of the substance and allows better record keeping of what is entering the country.

NZ Airports is supportive of such a move to provide more rigour around what is allowed to be used in New Zealand. However, such moves are dependent on improved communication from EPA to the wider industry around changes in substance approvals. NZ Airports strongly feels that the prohibition of PFOS foam use was not well communicated to its members and would like to see clear recall obligations set out by the EPA in the event of a future recall of a POP-type substance.

Tracking of such chemicals should be routine because it is not always clear from the outset whether a chemical is environmentally suitable or the next emerging contaminant.

2.11 Question 11: Do you agree with phasing out C6 AFFF at the same time as C8 AFFF?

NZ Airports agrees with a coincident phase out, however given the high cost and uncertainty around decontamination of more complex fixed systems, this agreement is subject to EPA having satisfied itself via consultation with appropriate bodies (e.g. CAA and FENZ) of the effectiveness of the fluorine free replacements.

2.12 Question 12: Which is your preferred option?

Option 1.

2.13 Question 13: What are your reasons?

Some of our members have already switched to fluorine free foams. Airports that have switched have indicated that the fluorine free foams have already met the required International Civil Aviation Organisation (ICAO) tests for effectiveness. Some of our members have not yet switched and have acquired C6 products instead, prior to these proposals being published.

We would encourage testing and approvals be issued by the appropriate fire protection agencies in New Zealand to provide certainty to foams users such as airports before an enforced switch to fluorine free is made law.

2.14 Question 14: Can you estimate the cost to your business of phasing out C6 AFFF?

As stated above this is difficult to judge for the reasons listed in Question 5 and 6. However some of our members have provided estimated costs which are in the region of \$500,000-\$750,000 per airport based on fire truck decontamination and product disposal. Costs for fixed systems would be substantially higher.

2.15 Question 15: Do you have any other comments to make about the proposed amendments?

2.15.1 Phase Out Concerns

The NZ Airports understands the potential risks posed by PFAS chemicals and has been supportive in the removal of PFOS foams from airport sites over the last 2 years. We support moves to safer chemicals that protect the environment and are safer for our firefighters. Some of our members have already switched to fluorine free foams and are satisfied as to their effectiveness. Others feel that confirmation of the effectiveness of fluorine free foam via appropriate government assessment and approvals should be undertaken before industry is forced down the fluorine free route. The cost may be significant for certain fixed fire systems to be switched to fluorine free foams.

2.15.2 Essential Uses & Training

Point 8 on Page 14 of the consultation document indicates that essential uses and emergency incidents where there are direct releases are tolerable provided reasonable and practicable measures are taken to minimise environmental harm. We consider that testing of fire truck foam systems to ensure operational functionality is an 'essential use'. The clauses in the proposal Standard however appear silent on the phrase 'essential use'. Clause 5 of the proposed Standard appears to indicate that testing is allowed, if it is part of a documented programme to test the operation of the system, falls under the transitional uses in Clause 3 and 4, and reasonable steps are taken to prevent discharge of the foam. NZ Airports would like to see confirmation that testing of fire truck foam equipment would be allowed under Clause 5.

2.15.3 Benefits vs. Economic Costs

Page 21 of the proposal discusses matters to be considered under s96c HSNO Act - 96C(1)(d). This requires EPA to be satisfied that benefits outweigh the economic costs associated with compliance. This economic cost is potentially quantifiable for fire trucks with airports spending six-figure sums to drain, decontaminate and replace their existing PFOS foams – but this cost will be higher where C6 foams are concerned due to the greater amount of C6 stocks held at airports. Furthermore, the costs in relation to a fixed building suppression system may be prohibitive. Many systems are inside the building fabric and parts which may contain small amounts of product may not be accessible, meaning that system decontamination is impractical in some cases.

NZ Airports would like to understand what cost-benefit analysis has been undertaken. The discussion on page 21 of the consultation document appears reliant on the Nordic Council of Ministers report 'cost of inaction' approach, quoting this cost as being in the billions of Euros. Whilst the argument has merits in that context, especially in the area of C8 related foams, the issues around C6 foams are less clear. NZ Airports would like to see a New Zealand approach taken and for the EPA to develop estimates of the 'cost of action'. Clarification of clean-up thresholds by the EPA would allow affected parties to provide EPA with meaningful cost estimates for decontamination and disposal.

2.16 Question 16: Do you have any comments about the workability of the draft amendments shown in the revised Group Standard in the Appendix?

Schedule 1, Part 3, Other Matters

- Clause 8 relates to the requirement to display fluorine content on firefighting foams. This requires greater clarity as to what is expected of manufacturers so that end-users such as airports can check their products in the event of a future EPA-recall. For example if manufacturers attempt to comply with this by adding phrases to their labels such as 'fluorine free – contains only PFAS at trace levels' or 'less than 1% PFAS' this will not be sufficient. Manufacturers tend to work at percentage levels of concentration (e.g. 1% = 10,000 parts per million), whereas environmental legislation is at parts per trillion level. We would also recommend that all products are independently tested for PFAS content as part of any application by manufacturers for EPA approvals in New Zealand. EPA should then publish a list of foams that it considers to be fluorine free.
- Clause 9, relating to the requirement to contain foams, references discharge to the environment. As this is a Resource Management Act issue, this sits outside the Group Standard remit. NZ Airports suggests this be reconsidered.

Schedule 2, Clause 6 (1) (a)

- In terms of transitioning to new foams, "as far as reasonably practicable" needs to be clearly defined. The immediate question posed by our members was "to what level of decontamination is reasonably practicable?" Although thresholds have been determined in some jurisdictions for PFOS, PFOA and PFHxS, there are no threshold concentrations available for a number of other PFAS compounds to be compared against. Many modern fluorotelomer foams do not contain these three compounds and only contain fluorotelomers. As they are fluorinated, they are required to be removed before the end of the transition period and systems cleaned and decontaminated as far as reasonably practical. However, we cannot see how a successful clean up can be ascertained without a guideline/threshold for such foams. We recommend that EPA provides guidance on how this will be achieved in advance of the Group Standard being enacted.

NZ Airports
2 December 2019