

6 May 2016

Chemicals and Biotechnology Assessments Section  
Environment Standards Division  
Department of the Environment  
GPO Box 787  
Canberra ACT 2601

The Australian Sustainable Business Group (ASBG) has prepared this submission on [National Standard for Environmental Risk Management of Industrial Chemicals Discussion Paper](#) (National Standard).

ASBG is a leading environment and energy business representative body that specializes in providing the latest information, including changes to environmental legislation, regulations and policy that may impact industry, business and other organisations. We operate in NSW and Queensland and have over 120 members comprising of many of Australia's largest manufacturing companies. Members were fully involved in the development of this submission and ASBG thanks them for their contribution.

ASBG strives to assist Government to prepare more efficient regulatory process, with the outcome of achieving practical, efficient, low cost solutions to achieve high environmental outcomes consistent with sound business practices.

ASBG has summarised its key issues on the National Standard:

- Acceptance of the need for a National Standard on Environmental Risk
- Overlap with other Environment standards and limit setting documentation
- Risk assessment to also include benefit considerations

## 1 Need for the Standard

ASBG accepts the general thrust of the National Standard for Environmental Risk Management of Industrial Chemicals. Identification of environmental risks of industrial chemicals prior to them being used and disposed of in various forms, including its prescribed use, should provide users of such chemicals assistance in avoiding longer term environmental risks. Such long term risks may include contamination of land and or waterways or affect products especially foods. However, it is very important to properly and rigorously assess the chemicals appropriate level of risk and consequent control practice. Without a clear and appropriately balanced risk and control process in place uncertainty will prevail. Uncertainty tends to generate an overly conservative approach in dealing with the consequences of pollution and contamination. Uncertainty by regulators tends to covert to an emotional response from the public which invariably will only accept a zero threshold.

An example of such is the use of PFOS in fire fighting foam. In past use and practice it was rare to collect and properly dispose of fire fighting foams. As a result large areas of land are contaminated with PFOS which is a slippery pollutant and able spread considerably in groundwater. However, there is still no formal lower concentration limits of acceptable risks being provided by Governments, so the community and media tend to assume no amount is acceptable. As a result, with the Williamstown contamination, the fear associated with this uncertainty has led to business and community stress. Compensation by the Government to stressed businesses due to contamination of products from PFOS will continue as there has been no guidance on safe levels. Some of this stress and costs could have been avoided if acceptable limits were in place.

In contrast, there has been a long established limits for pesticides in foods, which are publically accepted in general as a reasonable risk level. Hence, a major task of the National Standard to provide the public with confidence that a high degree of scientific rigour has been used in setting standards and recommended risk control methods.

One of the problems with the National Scheme is that it will in some cases be in a reactive mode, trying to deal with complex science and lack of research in on the next chemical or chemical group of concern. Being proactive is in part possible, but needs to look over the horizon to predict environment risk or even perceived environmental risks before they become a community and media reactionary process. However, this pro-activeness must be done in consideration of international measures such as the Stockholm Convention.

Above this the risk levels and control methods generated must be scientifically based. To provide the best value of environmental protection vs cost of management the risk assessment should be thorough and accurate, but not default to an overly cautious position due to lack of rigor or knowledge.

## 2 Overlap with other Standards and Documents

ASBG is mindful that many of the risk control methods and potential limits that will be generated from the proposed National Standard will impact on many other existing environmental standard documents. Examples include:

- ANZECCs Fresh and Marine Water Quality Guidelines (which is undergoing a review)
- Other water acceptance standard and limits as set by jurisdictional environmental agencies
- National Environment Protection Measures (NEPMs) and their supporting documentation, especially the Assessment of Contaminated Sites NEPM
- Sewer acceptance standards as issued by most sewer operators
- Landfill acceptance criteria as set by jurisdictional environmental agencies or individual companies

If there is a difference between two environmental standards in general the more conservative approach is used. In many cases a National Standard limit will not directly apply to a specific use, application or environment.

The National Standard's risk approach is formed from the Globally Harmonized System for Classification and Labelling of Chemical's aquatic ecotoxic assessment process. However, use of the GHS dead tree and fish symbol is not required in Australia. The reason for this is that there is no need

as environmental law generally defines pollution as to change or not remove contaminants regardless of their risk level or harm.

A major exception to this is for contamination of land where the ASC NEPM criteria is used. Even then it is a set of investigations based on risks. However, application of risk at a site specific location is a far more surgical approach than setting one unilateral limit. Setting of unilateral limits tends to pick a tighter standard as it must consider all environments including the most sensitive.

However, if the National Standard sets a much tighter limit this may result in a major cost shock if improperly used. Conflicts between the National Standard and other more surgically derived risk levels will need to be considered or at least provided for. Hence, the National Standard by its nature will set generic blunt limits and risk management advice. As such the National Standard should provide contextual information as to alternative more site or use specific risk assessments which derive less stringent limits and or conditions.

***ASBG recommends that if more surgical such as site and use specific risk assessments are used they can replace the more conservative unilateral limits provided for in the National Standard.***

It may be a better approach to provide advisory risk control advice rather than to set hard concentration limits.

### 3 Risks and Benefits

Use of a risk assessment process is well founded as a starting point for the assessment of industrial chemicals, but it lacks broader considerations placing environmental concerns above safety or other issues.

In Appendix B 'Question 7 Does the substance contain any perfluorinated functionality?' and 'Question 11 Is the substance perfluorinated AND/OR persistent OR bioaccumulative?' look at the environmental impact only. Additionally, ASBG questions why fluorine is the only halogen targeted in this assessment?

There is an issue with for example fire fighting foams. Use of fluorine free foams as a replacement raises the safety risk of much reduced fire fighting performance. At ASBG's Contaminated Land Conference in December 2015, Mike Willson, Willson Consulting listed his concerns with fluorine free fire fighting foams:

- Liable to sudden unpredictable flashbacks exposing users to fire
- Can quickly breakdown - unexpected escalation risks
- Fire test results may not consistently replicate
- No film forming capability to create rapid vapour seal
- No fuel shedding additives, necessary for volatile fuels, e.g. gasoline
- Effectively limited to quite gentle aspirated applications
- 10 times more aquatically toxic than fluorinated foams
- May need larger quantities and longer applications = more run-off
- Thicker concentrates can give proportioning and storage issues
- Not mixable across brands... could cause shortages in emergencies

While PFOS and PFOA are listed under the Stockholm Convention, there is long list of other poly-fluorinated compounds that have not been listed, but are suspect under the Appendix B approach. Mr Willson went on to describe C6 fluorotelomers as being a much better choice as they do meet a good level of fire fighting performance, but are much lower in impact on the environment. Similar research<sup>1</sup> also support this view.

Care needs to be exercised when undertaking the risk assessment process as in Appendix B. Not only should the environmental risks be considered, but also the beneficial use of the industrial chemical. if there are no substitutes for it then special risk controls need to be developed to enable use but limit environmental harm.

***ASBG recommends that:***

- ***The beneficial uses of an industrial chemical are also considered where there are no practical cost effective substitutes available.***
- ***Special practical risk control measures provided to cater for the usage of such chemicals.***

Should you require additional information on the content and issues raised in this submission please contact me.

Yours sincerely



ANDREW DOIG  
CEO  
Australian Sustainable Business Group  
02 9453 3348  
[andrew@asbg.net.au](mailto:andrew@asbg.net.au)

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<sup>1</sup> [Assessment of POP Criteria for Specific Perfluorinated Alkyl Substances Short-Chain, FluoroCouncil Jan 2014](#)