

SUBMISSION FORM

For Hazardous Substance and New Organism Applications

Once you have completed this form

Send by post to: Environmental Protection Authority, Private Bag 63002, Wellington 6140

OR email to: submissions@epa.govt.nz

Once your submission has been received the submission becomes a public document and may be made publicly available to anyone who requests it. You may request that your contact details be kept confidential, but your name, organisation and your submission itself will become a public document.

Submission on application number:	APP203660
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I wish to keep my contact details confidential

The EPA will deal with any personal information you supply in your submission in accordance with the Privacy Act 1993. We will use your contact details for the purposes of processing the application that it relates to (or in exceptional situations for other reasons permitted under the Privacy Act 1993). Where your submission is made publicly available, your contact details will be removed only if you have indicated this as your preference in the tick box above. We may also use your contact details for the purpose of requesting your participation in customer surveys.

The EPA is likely to post your submission on its website at www.epa.govt.nz. We also may make your submission available in response to a request under the Official Information Act 1982.

- I support the application
- I oppose the application
- I neither support or oppose the application

The reasons for making my submission are¹: (further information can be appended to your submission, see footnote).

Key points

1. Methyl bromide is an ozone-depleting substance under the Montreal Protocol (UNEP, 1996).
2. Signatories are encouraged to use alternatives to methyl bromide when they become available,
3. EDN a proven alternative phytosanitary treatment for forest products is an alternative to methyl bromide. It does not destroy ozone, nor is it a greenhouse gas. EDN requires similar application technology; has a similar cost, dose rate, and treatment time; and has proven efficacy against target organisms.
4. EDN can also be used as a soil fumigant to kill soil-borne pathogens, soil-borne insects, nematodes and weeds prior to planting vegetable and fruit crops.

1. Methyl bromide as Ozone-depleting Substance

The Montreal Protocol was signed in 1987 by a large number of countries, "to take appropriate measures to protect human health and the environment against adverse effects resulting or likely to result from human activities which modify or are likely to modify the ozone layer". A number of chemicals, including methyl bromide, were classified as "Ozone Depleting substance" (ODSs) and were responsible for significant thinning/damaging the ozone layer. As a result a number of countries including the EU have banned the use of methyl bromide for all applications including QPS. Others are considering banning its use for QPS uses

2. Alternatives to methyl bromide

In 2004, parties of the Montreal protocol stressed their commitment to the reduction of methyl bromide and requested the Ozone Secretariat to the United Nations Environment Program to make contact with the International Plant Protection Convention (IPPC) Secretariat. The parties also stated the importance of finding the alternatives to methyl bromide for wood packaging materials (International Standard for Phytosanitary Measures (ISPM) No.15) currently managed by the IPPC. In 2005, IPPC members agreed with the decision and the importance of cooperation with the Montreal Protocol to find an alternative to methyl bromide. Several IPPC members requested that the work on the development of alternatives to methyl bromide be accelerated. They also encouraged countries to liaise with their appropriate research organizations and to stress the importance and urgency in developing alternatives to methyl bromide for use for quarantine purposes

The Methyl Bromide Technical Options Committee (MBTOC), which advises the Technology and Economic Assessment Panel estimated in 2018 that between 30-40 per cent present QPS uses of MB could be replaced with alternatives that are currently available, and this would have a positive impact on the protection of the ozone layer. We are therefore concerned that having offered the one viable alternative treatment for forest protects for registration in New Zealand Ethanedinitrile (EDN) is still not approved for use in New Zealand.

¹ Further information can be appended to your submission, if you are sending this submission electronically and attaching a file we accept the following formats – Microsoft Word, Text, PDF, ZIP, JPEG and JPG. The file must be not more than 8Mb.

New Zealand research undertaken by the Stakeholders in Methyl Bromide Reduction (STIMBR) reviewed 15 significant chemical candidates and 18 minor chemicals as a possible alternative for methyl bromide before embarking on extensive research to test EDN efficacy. This work was complemented by extensive toxicity and ecotoxicity studies commissioned by Draslovka and undertaken in independent laboratories.

Plant and Food Research has developed efficacy data which shows that EDN was very effective against three pests most commonly associated with pine logs and has recommended EDN as a suitable alternative to methyl bromide.

Similarly efficacy studies conducted in China, South Korea, the Czech Republic, Australia and in the USA on the most wanted quarantine pests such as Asian long horn beetle (*Anoplophora glabripennis*); European House Borer (EHB) *Hylotrupes bajulus*; Pinewood nematode *Bursaphelenchus xylophilus*; Pine sawyer *Monochamus galloprovincialis*, Termites *Cryptotermes acinaciformis*, *Cryptotermes brevis* and *Mastotermes darwiniensis* (Dowsett and Ren, 2007; Ren et al., 2006; Emery et al., 2014; Lee et al., 2017) have concluded that EDN is efficacious. Comparative efficacy studies showed that EDN was highly toxic to *Arhopalus ferus*; European House Borer (EHB) *Hylotrupes bajulus* and required low dose rate and treatment time than methyl bromide (Najar-Rodriguez et al., 2015; Emery et al., 2014)

Methyl bromide and EDN have different physical, chemical properties and break down pathways. Methyl bromide used to fumigate the logs does not break down during fumigation or immediately after it is released into the environment. Methyl bromide is sorbed into the wood during fumigation and is then released over time following fumigation. The released methyl bromide from fumigation moves into the atmosphere, eventually finding its way to and breaking down in the ozone layer. However, EDN breaks down rapidly during fumigation of logs and only a small portion of that applied remaining in the treated space after 16 hours. EDN is a self-scrubbing fumigant which does not require a recapture or destruction at the end of the fumigation.

If we use MPI treatment data and Hall et al., 2016 study about 50% of the applied methyl bromide remains at the end of the fumigation, we can assume that about 300 tonnes of the MB (2016 data) finds its way into the atmosphere in New Zealand. It is difficult to comprehend why EDN is taking so long to be registered in New Zealand when even with the application of the liquid scrubbers being developed for log stacks assuming about 80% recovery of the remaining MB 60 tonnes of MB will still be released into the atmosphere. Moreover we believe technology is not available to scrub large size fumigation volume like ship-inhold

We do not believe that there is a scrubbing technology available to recapture / destroy MB to the levels required by the EPA in the current controls.

In conclusion; Ethanedinitrile (EDN™) has been shown to be very effective on insect pests and pathogens of forest products; and, importantly is a sustainable alternative to methyl bromide.

Our submission

1. We understand the reasons for the industry taking this action.
2. However, we ask that the New Zealand government moves quickly to meet its international and domestic obligations regarding the use of methyl bromide when an alternative EDN is available which has similar application technology similar cost, dose rate, and treatment time; and has proven efficacy against target organisms.

All submissions are taken into account by the decision makers. In addition, please indicate whether or not you also wish to speak at a hearing if one is held.

I wish to be heard in support of my submission (this means that you can speak at the hearing)

I do not wish to be heard in support of my submission (this means that you cannot speak at the hearing)

If neither box is ticked, it will be assumed you do not wish to appear at a hearing.

I wish for the EPA to make the following decision:

Reject the re-assessment of methyl bromide application (APP203660) submitted by STIMBR
