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<tr>
<th>Submission on application number:</th>
<th>APP202804</th>
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<tbody>
<tr>
<td>Name of submitter or contact for joint submission:</td>
<td>Barry Wards</td>
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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.
MPI supports this application

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

Please see attached information.

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.

MPI wishes to be heard in support of its submission, if a hearing is held

I wish for the EPA to make the following decision:

Approve the application, taking into account MPI’s submission.

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.
Environmental Protection Authority  
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WELLINGTON 6140

<table>
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<tr>
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<th>Application APP202804</th>
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<tbody>
<tr>
<td>Applicant Name:</td>
<td>Lučební závody Draslovka a.s. Kolin</td>
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<td>Application Category:</td>
<td>Approval to import or manufacture a pesticide</td>
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<tr>
<td>Application Title(s):</td>
<td>Approval to import and use EDN containing 950g/kg ethanedinitrile as a phytosanitary treatment of wood products (including logs) to control a wide range of insects, nematodes and fungi.</td>
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<tr>
<td>MPI Response Coordinator:</td>
<td>Barry Wards (Specialist Adviser Biosecurity HSNO)</td>
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**Basis of submission**

MPI makes this submission to the EPA on the following bases:

- Clarity of information;
- Information that MPI considers should be taken into consideration by the EPA;
- Proposed controls; and/or
- Whether it supports or does not support the application.

**Submission**

**Ministry for Primary Industries**

The Ministry for Primary Industries (MPI) is focused on growing and protecting New Zealand. It works right across the sector from primary producers through to retailers and consumers. Key functions include:

- Providing policy advice and programmes that support the sustainable development of New Zealand's primary industries;
- Being the Government's principal adviser on fisheries and aquaculture management;
- Providing "whole-of-system" leadership of New Zealand's biosecurity system;
- Managing forestry assets for the Crown;
- Providing or purchasing services to maintain the effective management of New Zealand's fisheries;
- Protecting consumers of New Zealand food, whether here or overseas; and
- Providing effective food regulation for food produced or consumed in New Zealand, including imported and exported food products.
MPIs main areas of interest in submitting on this application are:

- The ability of EDN to effectively control insects, nematodes and fungi associated with logs and timber, particularly under covered sheet log stacks;
- The use of EDN as a phytosanitary treatment compared to methyl bromide;
- Additional positive/beneficial effects of EDN;
- Protecting New Zealand's biosecurity;
- Maintaining New Zealand's export log and timber trade to trade partners and increasing forestry exports particularly since the release of methyl bromide into the atmosphere after fumigation will be restricted in New Zealand from October 2020; and
- Meeting New Zealand's obligations under the Montreal Protocol on Substances that Deplete the Ozone Layer (1987),

While the EPA must also consider other effects, such as human health and physical hazards, MPI's interest in commenting on these is secondary to the interests identified above.

**Statement of Position**

MPI strongly supports the application by Lučební závody Draslovka a.s. Kolin to import and use ethanedinitrile (EDN) as a phytosanitary treatment of wood products (including logs) to control a wide range of insects, nematodes and fungi. EDN is considered an effective phytosanitary treatment in some circumstances. For example, MPI, in consultation with Australia, has approved EDN as a fumigant for the management of adult *Arhopalus ferus* beetles hitch-hiking on timber exports to Australia. Malaysia has also approved EDN as a treatment for imported logs and timber. Because it is not an ozone-depleting chemical, having the ability to use EDN will assist New Zealand in meeting its obligations under the Montreal protocol and be timely (if China and/or India approve) when all methyl bromide fumigations must use recapture technology beyond 2020. EDN could be a useful additional 'tool in the phytosanitary toolbox' and registration would enable discussions to advance with New Zealand's trading partners around acceptance of EDN as a phytosanitary treatment.

**Application**

MPI understands that the applicant is applying to import ethanedinitrile (EDN), as a gas containing 950 g/kg ethanedinitrile, for use as a phytosanitary treatment for wood (logs and timber) to control a range of insects, nematodes and fungi. In 2012, EDN was registered in Australia as Sterigas 1000™ for use on timber, and EDN (syn. Cyanogen) fumigation is an officially recognised treatment option for timber and logs imported into Malaysia. It is intended that EDN is to be used by professional users (approved handlers) in compliance with HSNOCOP31 – *The Control and Safe Use of Fumigants*.

The applicant has identified that the intended use of EDN will include fumigation of logs and timber under sheet, in shipping containers, in fumigation chambers (or similar structures) and in ships holds (Application Form, Table 5.1). However, in the Appendix (section 5.1, pg. 47), the applicant states that registration is initially being sought for log stack fumigations and that once ship fumigation data is available, a request will be sought for an extension of controls to allow ship fumigations. MPI understands from this that even though the application identifies a range of intended uses, only log stack fumigations are the subject of the current application.

In consultation with the Australian Department of Agriculture and Water Resources, MPI has approved EDN as a fumigant for the management of adult *Arhopalus ferus* beetles hitch-hiking on timber exports to Australia.
Areas of interest

1. **EDN as a phytosanitary agent**

   The applicant has provided peer-reviewed data indicating the effectiveness of EDN as a phytosanitary agent against a range of organisms affecting export timber species, notably *Pinus radiata*. Some of this data is the result of work carried out in New Zealand\(^2\),\(^3\).

2. **Comparison to methyl bromide**

   MPI considers methyl bromide to be a very effective phytosanitary treatment of logs and sawn timber and advocated strongly for its continued use during the reassessment application process in 2011 (HRC08002). Methyl bromide treatment is often mandated by importing countries as an importation pre-requisite. However, MPI acknowledges the issues related to the continued use of methyl bromide, including it being an ozone-depleting gas and risks to human health.

   Whereas methyl bromide is an odourless gas, EDN has a characteristic almond-like odour, which is pungent in lethal concentrations, thus making it easier to detect leakages.

   MPI agrees with the applicant’s assessment of EDN as an alternative phytosanitary tool to methyl bromide and while there are still a number of risks associated with its use, by its very nature, many of these risks are inherent because of the purpose(s) it is being used for.

   **Imported risk goods:** Some risk goods entering New Zealand have such a high likelihood of harbouring unwanted organisms or are very difficult to visually inspect, that they require mandatory fumigated with methyl bromide in a transitional facility prior to receiving biosecurity clearance (e.g. bamboo and scrap metal). In addition, there are situations where goods that have already been treated and certified offshore require retreatment on arrival due to detection of quarantine pests. Currently, the most effective treatment available is methyl bromide. About 2% of the 360,000 containers of imported goods are fumigated each year. Some of these, such as those with wooden packaging, used equipment, used tyres, parts and machinery, could potentially be treated with EDN, further reducing New Zealand’s reliance on methyl bromide.

   **Post border incursions:** Methyl bromide is often used by MPI as an immediate and effective measure to eradicate organisms that are the subject of post-border incursion events. Such measures need to be applied quickly to prevent establishment and spread of the organism. Potential applications include fumigation of wooden material, domestic household goods, and industrial machinery to soil fumigation for introduced soil pathogens. In the majority of cases, methyl bromide is the only or most effective treatment. Ethanedinitrile has the potential to replace the use of methyl bromide in such post-border incursion responses.

   MPI is committed to finding technically and economically viable alternatives to Quarantine and Pre-shipment (QPS) methyl bromide and is actively working with industry and trading partners to progress this. However, this is proving difficult and, currently, there is no suitable accepted economical alternatives to methyl bromide as an official quarantine treatment for the major uses in New Zealand. Finding viable alternatives is an international dilemma and not one solely encountered by New Zealand. Of all alternatives considered, EDN has shown great potential to replace methyl bromide, particularly for logs and timber treatment.

   Taking into account the information supplied by the applicant and the information above, MPI cannot provide further information that the EPA should take into account with respect to comparison of EDN to methyl bromide.

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3. **Additional positive/beneficial effects of EDN**

Having EDN in the ‘phytosanitary toolbox’ will provide more options. If further data becomes available on the use of EDN in ships holds and for the other intended uses in the application, registration may need to be provided in a way to enable expansion of its use into these areas. In addition, there has been substantial work in using EDN as a soil fumigant as a replacement for methyl bromide. EDN could potentially replace methyl bromide for more phytosanitary treatments, such as seed devitalisation.

About 90% of the 592 tonnes of methyl bromide used in New Zealand in 2016 is estimated to be used for log fumigations. The use of methyl bromide for this purpose could potentially be replaced with EDN. In 2017, about 16,000 m$^3$ of timber exports to Malaysia were treated with methyl bromide. Presently, this can be replaced with EDN immediately, if registration is successful, since Malaysia already accepts EDN as a phytosanitary treatment.

The volume of export logs has increased significantly (ca. tenfold) in the last 10 years and will continue to increase. In 2016/17, 4.48 million m$^3$ of logs were treated with methyl bromide, principally to China and India; ten years ago this volume was 1.7 million m$^3$ of logs.

In 2016, New Zealand was the 7th largest user of methyl bromide in the world. If EDN was registered for use as a phytosanitary treatment, it is likely that New Zealand’s use of methyl bromide will significantly reduce in time, as trading partners accept it as a phytosanitary treatment.

4. **Maintaining New Zealand’s export log and timber trade to trade partners and increasing forestry and timber exports**

Forestry is a significant part of New Zealand’s primary production and export sector, forming 14% of total export revenue for the year ended June 2017 (~$5.5 billion), with China being the largest export market. Primary industry export revenue is forecast to increase by 10.8% to $42.2 billion in the year ending June 2018, the largest annual increase since 2014. Part of this forecast reflects high log prices driving record forestry harvest volumes and will likely result in log exports increasing to ~$6.1 billion, over 11% higher than in 2017$^4$.

The landscape of New Zealand’s primary industries continues to change. For forestry, the government’s One Billion Trees Programme will create change in primary sector land use, increased planting rates and further increases in logs and timber available for forest exports.

Registration of EDN is needed in New Zealand so that discussions with countries can continue to ensure acceptance of EDN as a phytosanitary treatment of logs and timber. EDN is already an approved treatment option against the burnt pine longhorn beetle for timber to Australia and timber and logs to Malaysia.

MPI has a phytosanitary treatments for logs working group with China. This group has met several times in recent years and preliminary EDN research results have been shared and discussed in preparation for EDN being approved for use. Similar activities are planned to be undertaken with India. MPI cannot predict how long it will take to convince our trading partners to accept EDN as a methyl bromide alternative but having EDN registered is essential to progressing these discussions.

5. **Risks associated with recapture of methyl bromide**

New Zealand’s continued use of methyl bromide after October 2020 depends on the availability of an effective recapture technology being available.

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Currently, methyl bromide fumigation is the main phytosanitary treatment option for above deck log exported to China and the only treatment option for log exports accepted by India. Trade in logs to such key markets could be reduced significantly without an alternative treatment or recapture technology being in place. Availability to an alternative treatment would allow exports to continue

Genera Limited, a leading New Zealand fumigation company, has invested heavily in undertaking work on methyl bromide recapture technology. While the technology exists for recapturing methyl bromide emissions from cargo in containers, there are significant physical-chemical challenges in recapturing all available methyl bromide from bulk log stacks and ships holds at ports. Dealing with the waste product has been another issue to solve.

6. **Risks of EDN**

As noted by the applicant, EDN is toxic to humans and animals on inhalation. It is also very toxic to aquatic organisms and may cause long term adverse effects in the aquatic environment\(^5\). Exposure can lead to cyanide poisoning and even death. It is a highly flammable and reactive chemical and a dangerous fire and explosive hazard\(^6\). However, the data provided by the applicant indicates that EDN would be an ideal log fumigant by being adsorbed into the log, reducing emissions and environmental exposure. The proposed controls appear to manage the risk to an acceptable level and MPI is comfortable with these. There are no compelling reasons why recapture technology would be needed for EDN use.

MPI requires all official export and import treatments to be carried out by an MPI approved organisation to provide assurance that the treatment has been applied correctly to meet the relevant biosecurity parameters. Treatment technicians are required to have the relevant HSNO approvals to handle chemicals. The organisations are audited on a regular basis to ensure they comply with MPI standards, this ensures a high level of compliance.

**Summary**

As noted above, MPI supports the application to register EDN as a phytosanitary treatment of wood products (including logs) to control a wide range of insects, nematodes and fungi. The applicant has provided a wealth of information about the chemical and its risks and benefits. From MPI’s perspective, there are significant advantages in having EDN available, particularly from a regulatory (Montreal Protocol) and environmental perspective, but also having it as a useful option and a possible addition to the phytosanitary treatment toolbox. While the proposed uses in the application are currently relatively limited, there is considerable scope to broaden that use to other treatment situations, further reducing New Zealand’s reliance on methyl bromide.

Registration of EDN would enable discussions to advance with New Zealand’s trading partners around acceptance of it as a phytosanitary treatment. This would provide further assurances of continued export trade with key markets, particularly noting the increases in the forestry sector in recent years and forecasted to increase further.

MPI requests that the EPA take all its submission points into account and requests an opportunity to speak to these if a hearing is scheduled.

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