IN THE MATTER OF The Resource Management Act 1991

AND

IN THE MATTER OF Application for resource consent under sections 88 and 124 of the Act, in relation to the proposed reconsenting of the discharge of contaminants into air from fumigation at the Port of Tauranga.

BY GENERA LIMITED

Applicant

STATEMENT OF EVIDENCE OF Don Hammond
ON BEHALF OF Phytos (formerly known as STIMBR) (SUBMITTER)

29 May 2023

INTRODUCTION

1. My full name is Donald Robert Hammond.

2. I am presenting this submission as the Independent Chair of Phytos on behalf of Phytos, (formerly known as STIMBR). I am based in the Bay of Plenty and, on behalf of Phytos stakeholders, contributed to a submission in support of the Genera application dated 16 November 2020.

3. My witness statement relates to the submission made by STIMBR (dated 16 November 2020).

4. I am authorised to give this evidence on behalf of the Phytos Board

Qualifications and experience

5. I have the following qualifications:

   (a) Bachelor of Forestry Science with Honours,

   (b) Post Grad Diploma in Business Studies,

   (c) Governance Development Programme (Fonterra and Massey University).

   (d) Member of the Institute of Directors,

   (e) Registered Member of the NZ Institute of Forestry.

6. I have over 45 years' experience in the forestry industry. My experience has included all aspects of forest management in NZ and various offshore activities including over 25 years as a Registered Forestry Consultant.

7. I am the Independent Chairman of Phytos (previously STIMBR).

Scope of evidence

8. I provide evidence in relation to the following matters:

   (a) The role of Phytos;

   (b) Previous work with the EPA

   (c) The effect of the EPA methyl bromide decision on the fumigation and log export industry

   (d) Support for Genera's consent application including their proposed changes to conditions

   (e) The effect on the forest export Industry of not being able to fumigate at the Port of Tauranga; and

(f) Alternatives to the use of fumigation.

THE ROLE OF PHYTOS

9. Phytos is an incorporated society formed in 2008 by stakeholders whose purpose was to find alternatives to and means of reducing methyl bromide emissions created through the use of this fumigant for treating export logs to the standards required by our trading partners.

10. During its 15-year history, Phytos has provided scientific research, advocacy and trade support that has enhanced New Zealand's ability to protect itself from biosecurity risks and allow the export of goods through the availability of effective phytosanitary treatments such as Methyl Bromide, Phosphine, EDN and debarking.

11. Phytos' members have included forest owners, forest product exporters, the horticultural sector and a range of other exporters and importers who have also required phytosanitary and biosecurity solutions and support. The organisation continues to have strong relationships with ports, fumigation providers, research bodies and Government agencies (eg, MPI).

12. Phytos is an evidence-based organisation. It wishes to ensure that regulatory decision-making processes are made based on high-quality scientific data informed by robust research. Over the past 15 years Phytos, with support from co-funders including the New Zealand Government, has overseen the investment of over $30 million in the research and support programme. This has delivered a significant body of high-quality scientific information about Methyl bromide, EDN, Phosphine and alternatives, some of which is referenced in Genera's application and in this statement. Of particular note is a report produced in 2014[1] that considered every known phytosanitary treatment globally and is still considered the most comprehensive global work on the subject.

13. Phytos supports Genera's resource consent application. In summary this is because;

14. Scientific air dispersion modelling and toxicology assessments provided as part of the comprehensive reassessment of Methyl bromide and the

[1] [1] Armstrong JW, Brash DW, Waddell BC. 2014. 'Comprehensive literature review of fumigants and disinfestation strategies, methods and techniques pertinent to potential use as quarantine treatments for New Zealand export logs'

assessment of EDN, which resulted in the EPA decisions and the subsequent controls, demonstrate that there are not likely to be any adverse human health effects from the use of fumigants at the Port of Tauranga, and any residual risk to human health will be sufficiently avoided or mitigated to an acceptable level with the conditions proposed by Genera;

15. The use of fumigants at the Port of Tauranga for the purposes of biosecurity (for imports) and pre-shipment treatment of logs and other products for export, is a fundamental condition for the continuance of effective trade and represents significant economic value to the regional and national economy, for example,

    (i) MPI estimate that a significant amount of the $26.7 billion of products imported per year relies on an effective phytosanitary treatment being available to mitigate biosecurity risk

    (ii) Mr Murray estimates that approximately 80% (or $888 million per year) of the logs exported from the Port of Tauranga require the use of fumigants, which without the use of fumigants could not be exported or sold domestically as there is no additional processing capacity in NZ

16. The approach outlined in Genera's application represents the best practicable option in relation to the discharge of fumigants.

17. There are significant regional and national benefits from the continued allowance for fumigation at the Port of Tauranga

PREVIOUS WORK WITH THE EPA

18. Aligned with its purpose to find alternatives to and means of reducing methyl bromide emissions, Phytos has spent significant amounts of time and money invested in two significant EPA processes, that is, the Methyl bromide reassessment (decided in 2021) and the EDN approval (of 2022).

19. Throughout those comprehensive processes, Phytos provided the EPA (through the Decision Making Committees – (DMC)) with high-quality scientific data informed by robust research including expert witness statements.

20. Phytos regards the outcomes of the Methyl bromide reassessment (decided in 2021) and the EDN approval (of 2022) as being extremely robust, evidence based, comprehensive and as providing national controls for the

management of fumigant discharge to air, in a way that reduces the impact to the environment and protects the public from adverse health and safety effects.

21. While Phytos may not be entirely satisfied with some aspects of the decision, in particular the ban on using methyl bromide in ship holds which in itself ended New Zealand's log trade with India, Phytos cannot say the process was not rigorous.

22. Phytos notes that the very conservative controls imposed by the EPA and WorkSafe (which are also referenced in Genera's application) were primarily based on air modelling conducted at the Port of Tauranga.

23. Phytos would be concerned if the very comprehensive work completed by both the EPA and WorkSafe were allowed to be usurped by arbitrary rules imposed at a localised level with a considerably lower level of scientific rigour and evidence to support them.

THE EFFECT OF THE EPA METHYL BROMIDE DECISION ON THE FUMIGATION AND LOG EXPORT INDUSTRY

24. The 2021 EPA Methyl bromide reassessment decision has had a significant effect on the fumigant's use throughout New Zealand, including at the Port of Tauranga.

25. Log trade to India, which relied on ship hold Methyl bromide fumigations, ceased following the 2021 decision that, effectively, prohibited ship hold Methyl bromide fumigations by January 2023.

26. Phytos notes that the significant work required to restart the Indian bulk log market (estimated to be worth $300-$400 million p.a) will now rely on phytosanitary treatments such as Phosphine and/or EDN and the associated trading partner approvals.

27. Furthermore, because of the cessation of the log trade with India, approximately 90% of all logs exported from NZ are now bound for China which, as demonstrated in the present market downturn, can make the ability to trade volatile with impacts felt within both the NZ and regional economy.

28. As illustrated by Mr Baker (refer table following paragraph 74), the number of log rows fumigated in 2022 (after the EPA decision) compared to 2021 has reduced by 89.59%, with an associated reduction in total Methyl bromide emissions of 99.56%.

29. The DMC agreed that “there are economic and societal benefits to maintaining the use of methyl bromide, at least until a viable and accepted alternative is available. “With the revised controls framework in place, the Committee considered that the benefits associated with methyl bromide use outweigh the adverse effects.” (Para. 4.59)

SUPPORT FOR GENERA’S CONSENT APPLICATION INCLUDING THEIR PROPOSED CHANGES TO CONDITIONS

30. Phytos supports the resource consent being sought by Genera’s application

31. The proposal has significant positive effects, namely the ability to maintain export trade and to protect New Zealand’s biosecurity.

32. Phytos relies on the evidence of Mr.Cressey in determining that these proposed conditions appear entirely appropriate for the protection of public health from exposures associated with fumigation activities at POT.

33. On behalf of its stakeholders, Phytos would like to thank Tonkin and Taylor for their technical peer review and to the planning experts (David Greaves, Marlene Bosch and Keith Frentz) for their preparation of the JWS.

34. Phytos have reviewed the relevant material and supports the proposed changes suggested in Mr Frentz’s evidence, Table 1. Assessment of JWS conditions (page 71) and Appendix A. Proposed Conditions (Page 87).

THE EFFECT ON THE FOREST EXPORT INDUSTRY OF NOT BEING ABLE TO FUMIGATE AT THE PORT OF TAURANGA

35. It is not hyperbole to say that the effect of not being able to fumigate at the Port of Tauranga would be catastrophic to the forestry sector in terms of;

    (a) our region and nation’s ability to protect itself from pest incursions and;

    (b) the effective export of sustainably produced wood fibre

    (c) our combined regional and national economic interest

    (d) widespread economic and social disruption through the harvest and transport supply chains in the wider BOP and Waikato regions.

36. Phytos agrees with the submission of the New Zealand Forest Owners Association that stated, “The availability of effective phytosanitary treatments is critical for ensuring, maintaining, and protecting the ongoing international trade in wood and wood products from New Zealand and for mitigating and preventing the introduction of biosecurity threats”

37. Mr Murray has provided economic evidence for the Applicant to this Hearing and, in particular, the potential economic effects should fumigation be constrained by inappropriate or unworkable consent conditions or cease if consent is declined. In summary, Mr Murray concludes that the economic cost if fumigation is no longer feasible at POT over 10 years would be in the order of $3.24 billion, whereas if conditions constrained, (or increased the costs associated with fumigation significantly) then the economic cost would be in the range of $294.9 to $686.7 million over 10 years.

38. As many other submitters such as MPI have stressed, New Zealand's primary industries rely on fumigation to protect us from biosecurity pest incursions. MPI stated that, some 1,200 consignments where identified as being fumigated at the Port of Tauranga in 2019.

39. Phytos notes the evidence of Mr Frentz (paragraph 195-201) which refers to the Regional pest management plan and the BOPRC's responsibilities to provide regional leadership in pest management.

40. Phytos observes that many submitters have stressed the risks and costs of not providing appropriate regional leadership in relation to pest management. More specifically, Phytos refers to the submission of KVH in relation to the Brown Marmorated Stink Bug (BSMB) alone where KVH states that: "A report on the likely economic impact of BMSB on the New Zealand economy (NZIER 2017) found that BMSB would significantly reduce horticultural yields and impose surveillance and treatment costs on orchard owners. The study estimated horticulture export values would fall by between NZ$1.4 and $3.0 billion in 2028 and between NZ$2.0 billion and $4.2 billion in 2038 because of the presence and impact of BMSB. KVH concludes that there are "over 100 organisms that could have significant impacts to our industry and fumigation can play a key role in reducing the risk of many of these".

41. It is clear that the effects of not being able to fumigate at the Port of Tauranga would have catastrophic effects for the regions ability to effectively trade and protect its biosecurity. It should also be understood that if this resource consent is not granted, or is granted with conditions that are deemed unworkable, that the likelihood of another application from the incumbent or another treatment provider remains very low. Even if another application were forthcoming, we would point to this application as an example of how long the process can take.

ALTERNATIVES

42. As referred to above, in 2014 STIMBR commissioned a comprehensive literature review[2] to determine whether any fumigants, or disinfestation strategies, methods or techniques presented viable alternatives to methyl bromide fumigation for New Zealand log exports. The viability of alternatives focused on considerations of currency in the literature, economic and regulatory feasibility, environmental and human health concerns, efficacy against target pests, utility for log exports, and commercial application aspects based on current and historical literature.

43. Over 30 fumigants, including 15 major fumigants and 18 minor fumigants, were reviewed as were a significant range of non-chemical treatments and methods.

44. Apart from Phosphine, that was already in use as a Methyl bromide alternative (albeit for the treatment of bulk logs in ship holds to China only), the comprehensive review found that only EDN, Sulfuryl fluoride and reduced rates of Methyl bromide were fumigant alternatives worth pursuing for log exports.

45. After consideration, Phytos prioritised work to approve EDN (completed in 2022) and reduced Methyl bromide rates. Sulfuryl fluoride was not prioritised due to it being a greenhouse gas with a potential lack of efficacy against certain life stages of pest insects.

46. The 2014 review also took an in-depth look at non-chemical treatments and methods. It recommended further work into heat and modified atmosphere and in-forest debarking.

47. After consideration, Phytos prioritised work to support the industries development of debarking capacity and a lab based joule heating prototype.

48. Phytos has subsequently found that, at this current time, joule heating is not a practical or cost effective phytosanitary option for the current export log supply chain. Further work on this option would require a pilot plant which is beyond the means of Phytos.

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[2] Armstrong JW, Brash DW, Waddell BC. 2014. 'Comprehensive literature review of fumigants and disinfestation strategies, methods and techniques pertinent to potential use as quarantine treatments for New Zealand export logs'

49. The industry's debarking capacity has increased steadily since 2019. Currently debarked logs are accepted into China but not India. Debarked logs are usually loaded as the top stow with the bulk of the cargo in the ships holds being fumigated with Phosphine.

50. Phytos supports the continued use of debarking as a phytosanitary tool, however, it is important to understand that all phytosanitary options come with the potential risk that our trading partners change their requirements. In terms of prudent risk management and continued market access, the industry is best served by having the widest possible range of effective phytosanitary options. That currently includes Methyl bromide, Phosphine, EDN and debarking.

CONCLUSION

51. In my opinion, and subject to the proposed changes in Appendix A of Mr.Frentz's evidence, any adverse environmental effects of the proposal are adequately avoided, remedied or mitigated, so that they are acceptable and accord with the objectives and policies of the relevant national and regional planning documents.

52. The proposal has significant positive effects, namely the ability to maintain trade (eg, log exports) and to protect New Zealand's biosecurity.

53. Consideration of the benefits of the proposal should be given weight when assessing it.

54. Accordingly, in my opinion, the resource consent sought in Genera's application is able to be granted.

Donald Robert Hammond

29 May 2023