

Submission to the Foreign Affairs, Defence and Trade Select Committee on “INTERNATIONAL TREATY EXAMINATION OF THE MINAMATA CONVENTION ON MERCURY (JANUARY 2014)”

INTRODUCTION

1. Straterra¹ welcomes the invitation² to submit to the Foreign Affairs, Defence and Trade Select Committee on the “International treaty examination of the Minamata Convention on Mercury”.
2. Straterra wishes to be heard by the Select Committee.
3. We confine our submission to issues affecting the New Zealand minerals sector, and industrial users of coal. The management of mercury, where relevant, is taken seriously by these sectors. New Zealand’s intention to ratify this UN Convention is of significant interest.
4. In preparing this submission, Straterra has consulted with Newmont Waihi Gold, OceanaGold, the Coal Association of New Zealand, Minerals West Coast (on behalf of alluvial gold miners), Fonterra, and CRL Energy. We have also sought clarification on a number of matters from the Ministry for the Environment.

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¹ Straterra represents more than 90% by value of NZ minerals production, exploration, research, engineering and geotechnical services, industry suppliers, and legal, financial, environmental and other ancillary services.

² http://www.parliament.nz/en-nz/pb/sc/make-submission/50SCFDT_SCF_00DBSCH_ITR_12846_1/international-treaty-examination-of-the-minamata-convention

EXECUTIVE SUMMARY

5. Straterra supports New Zealand’s ratification of the UN Minamata Convention on Mercury. This is an appropriate initiative.
6. As a general statement, ratification would not impose an unfair or unreasonable burden on the minerals sector, or on the wide range of industrial and commercial users of coal in New Zealand. That is provided a logical and reasonable interpretation of the Minamata Convention is made when making any amendments to New Zealand’s legislative and regulatory regimes.
7. Straterra would welcome being consulted by the Government in relation to any proposed amendments, as above, and to ensure that the Minamata Convention is applied in a fair, reasonable and effective way in respect of minerals businesses, and coal users.
8. Mercury is used in “artisanal and small-scale gold mining”³ (ASGM) in New Zealand, to separate the gold from processed rock material. It is our contention that mercury in such gold mining operations can be, and is used safely and responsibly, and that such use of mercury should be able to continue. On that basis, thought should be given to ensuring ongoing supply of mercury to ASGM in New Zealand.
9. Mercury is not used in large-scale, hard rock gold or gold+silver mining, however, may occur in associated, mineralised rocks, which may be subject to earthworks during mining. Such mining is notionally a “source” of mercury, in which mercury can be “released”. The risk of any movement of mercury from disturbed rocks into air or water, or onto land, is managed under the Resource Management Act 1991.
10. Trace mercury “emissions” are among discharges to air from coal-fired boilers, and the Huntly power station. Providing air quality standards remain fit for purpose under the RMA, such coal users would be able to comply with conditions imposed to safeguard human health and the environment.
11. The Minamata Convention provides for the taking of reasonable and practicable steps when managing emissions and releases, to use the language of New Zealand policy and legislation. That is necessary to avoid the adoption of measures that would place unnecessary, unreasonable, or prohibitive costs on businesses.

³ Text in quotation marks is taken directly from the Minamata Convention, unless otherwise specified.

12. In relation to the above, Straterra would welcome an invitation from the Government to participate in the development of New Zealand's position on guidance on "best-available techniques" and "best environmental practices", as provided for in Article 8, paragraph 8 (a), and Article 9, paragraph 7 (a), of the Minamata Convention, ahead of the first Conference of the Parties under this Convention.
13. We observe that the context for mining in New Zealand differs greatly from those parts of the world where concerns have been raised in the Government's national interest analysis, particularly in the case of ASGM.
14. It is noted that allegations made in the media that gold exploration and mining in parts of New Zealand would not be in the spirit of the Minamata Convention are unfounded and incorrect. Small-scale gold miners, and any other sources, users, releasers or emitters of mercury, are required under existing legislation to manage mercury safely and responsibly, not least under the Hazardous Substances and New Organisms Act 1996 (HSNO Act) regime.

RECOMMENDATIONS

15. Straterra recommends the Foreign Affairs, Defence and Trade Select Committee to:

General

- a) Note Straterra's support for New Zealand's ratification of the Minamata Convention;
- b) Agree that any consequential amendments to New Zealand legislation and regulation that would follow ratification should be developed in consultation with minerals sector businesses, and industrial coal users, to achieve the objectives of the Minamata Convention while avoiding the imposition of unreasonable or prohibitive costs on these sectors;

Artisanal and small-scale gold mining (ASGM)

- c) Note that mercury is used in ASGM in New Zealand to separate gold flakes from processed rock material, and that this use is subject to existing health and safety, hazardous substances, and environmental legislation;
- d) In relation to Rec. (c), note Straterra's view that mercury can be, and is used safely and responsibly in ASGM in New Zealand;

- e) Agree that ASGM in New Zealand would fail to meet a definition of “more than insignificant”, as this term is used in Article 7, paragraph 3, of the Minamata Convention, on the basis that this source of gold is around 6% of total gold production in New Zealand;
- f) In relation to Rec. (e), agree that no national action plan will be necessary or required for ASGM in New Zealand;
- g) Agree that the requirements in the Minamata Convention to “reduce, and where feasible eliminate” the use of mercury in ASGM could materially affect a number of gold miners in New Zealand, and takes no account of the existing safe and responsible approach taken in New Zealand to using mercury in ASGM;
- h) If Recs. (d) and (g) are accepted, agree that thought should be given to ensuring ongoing supply of mercury for ASGM in New Zealand, and to promoting the safe and responsible use of this mercury;
- i) In relation to Rec. (h), note that Straterra would welcome being invited for input into the development of policy to facilitate safe, responsible and efficient ASGM in New Zealand;

Guidance under Articles 8 and 9 of the Minamata Convention

- j) Agree that the New Zealand approach to development of policy and legislation, in which the regulatory impacts, and the cost and benefits of new initiatives, are weighed and considered to achieve fair, reasonable and workable outcomes should be reflected in guidance to be developed on “best available techniques”, and “best environmental practices” (Article 8, paragraph 8 (a), and Article 9, paragraph 7 (a), of the Minamata Convention);
- k) In relation to Rec. (j), note that Straterra offers to the Government the co-ordination of subject matter expertise within the minerals and coal-user sectors as an input into the development of New Zealand’s position on guidance for implementation, ahead of the first Conference of the Parties under this Convention;

Reputational issues

- l) Agree to make a clear distinction between ASGM, as practised in many countries around the world, and its safe and responsible practice in New Zealand;

m) Note Straterra's view that gold exploration and mining in New Zealand, including in Northland, is in the spirit of the Minamata Convention, because these activities are already appropriately regulated and managed; and

New Zealand Government proposals

n) Note Straterra's view that proposals to ban new primary mercury mining, manufacturing processes specified in the Minamata Convention, and other proposals, would not adversely affect the New Zealand minerals sector, subject to the foregoing recommendations.

DISCUSSION

General

16. Straterra supports New Zealand's ratification of the UN Minamata Convention on Mercury⁴, which aims to reduce the threat to human health from mercury.

17. Any amendments to New Zealand legislation and regulation⁵ made in response to ratification, provided these reflect a logical and reasonable interpretation of the Minamata Convention, would not be expected to materially affect:

- Minerals sector businesses – gold mines, gold+silver mines, ironsands mines, aluminum smelter at Tiwai Pt, cement and burnt lime producers;
- Industrial and commercial coal users – Huntly power station, Glenbrook steel mill, large users of coal as a source of process heat (hothouse horticulture; dairy, meat, fish, and food processing; breweries; wool, leather, wood and timber processing), commercial users of coal as a source of heating for schools, hospitals, swimming pools and the like.

Mercury releases to land

18. The Government has prepared a national interest analysis⁶ which may be found on the Treasury web site. It is understood this is a Cabinet-approved document to inform the Select Committee and submitters. The Ministry for the Environment is the responsible agency.

⁴ <http://www.unep.org/hazardoussubstances/MercuryNot/MercuryNegotiations/tabid/3320/language/en-US/Default.aspx>

⁵ Chiefly the RMA, Health and Safety in Employment Act 1992, Hazardous Substances and New Organisms Act 1996, and Crown Minerals Act 1991 regimes

⁶ <http://www.treasury.govt.nz/publications/informationreleases/ris/pdfs/ris-mfe-nia-nov13.pdf>

19. The NIA says in para 15: “New Zealand’s most significant anthropogenic mercury sources are *industrial gold and silver production, geothermal energy, and wastewater treatment*. Other sources include *coal-fired power generation; industrial iron and steel production; importing products containing mercury; and mercury in the waste stream*” (emphasis added).
20. We understand the above to mean in the case of gold mining, and gold+silver mining, that rocks containing natural traces of mercury may be moved during mining, and managed as waste rock stacks, or in waste empoundments. In a strict sense, that is a “release” to land, managed to have limited or no implications for human health or the environment, under the RMA. That is appropriate.

Emissions to air from industrial boilers, and other major users of coal

21. The use of coal in industrial boilers, or at coal-fired power stations or blast furnaces for steel-making, can result in emissions to air of mercury (to the extent that the host coal/ash contains mercury). In such cases, mercury is present in trace concentrations, which are not sufficiently significant to be included in the current National Environmental Standards for Air Quality 2011, under the RMA. That is appropriate.

Guidance under Articles 8 and 9 of the Minamata Convention

22. There is a risk that, if a narrow interpretation is taken of the definitions of “best available techniques”, and “best environmental practices”, as set out in in Article 2, (b) and (c), of the Minamata Convention, coal users, for instance, could be forced to adopt cost-prohibitive measures, and could go out of business (refer to para. 17 of this submission for a list of potentially-affected businesses).
23. The issue is one of thresholds. In setting a *de minimis* level for mercury emissions to air from a point source, consideration needs to be given to the nature of the airshed, any cumulative effects from other point sources within that airshed, airshed boundary designation, effects on human health, and costs to the coal user. It is about striking the right balance to both safeguard human health, and provide for businesses to continue operating in a fair and reasonable way. Current legislation and regulation in New Zealand already provide for achieving this balance.
24. At a high level, the approach taken to policy development in New Zealand is one in which the regulatory impacts, and the costs and benefits⁷, are factored into the consideration of a policy proposal. This approach is supported by industry, and it has won recently at least one accolade.

⁷ e.g., section 32 of the RMA

25. In 2013 the Minerals Council of Australia and Straterra commissioned a scorecard⁸ of regulatory approval processes affecting the minerals sector for the States of Australia and New Zealand, in which our country scored top for policy design. New Zealand's regulatory impact statement, and cost-benefit analysis approach was highly commended by the contractor, URS Australia.
26. We understand that guidance is to be developed on “best available techniques” and “best environmental practices” under Article 8, paragraph 8 (a), and Article 9, paragraph 7 (a), of the Minamata Convention, to be resolved at the first Conference of the Parties under the Convention (to be held once the Convention enters into force, possibly in 2017 or 2018).
27. Straterra would welcome an invitation for participation in developing New Zealand's position on this guidance. As an industry body, we take a national-level, NZ Inc, approach to high-level policy issues. On the technical detail, we have access within our membership to the necessary subject matter expertise, or we can identify that among our extensive network of industry and other business contacts.

Artisanal and small-scale gold mining (ASGM)

28. Mercury is used in ASGM in New Zealand to separate gold particles/flakes from a gold “concentrate” produced from the physical processing of alluvium⁹. In addition to the RMA, such users would be subject to the Health and Safety in Employment Act 1992, and the HSNO Act. That is appropriate.
29. Article 7, paragraph 3, of the Minamata Convention requires a national action plan and other actions if ASGM is “more than insignificant”. That is not the case in New Zealand. Alluvial gold amounts to some 6% of total gold production in New Zealand¹⁰, or 50-60,000 oz a year from more than 100 operations¹¹, most of them located on the West Coast of the South Island.
30. Article 7, paragraph 2, of the Minamata Convention requires steps to be taken to “reduce, and where feasible eliminate” the use of mercury in mining and processing. For some or many ASGM mines around the world that may be a logical objective¹². But the New Zealand situation is very

⁸ URS Australia 2013. “Scorecard of mining project approval processes”. Minerals Council of Australia and Straterra

⁹ Pers. comm. Peter O'Sullivan, Minerals West Coast; and Glenys Perkins, Taylor Coal, 12 Dec 2013

¹⁰ Christie and Barker 2013. “Mineral, coal and petroleum resources: production, exploration and potential”. Chapter 2.3, pp. 300-329 in: Dymond, J.R. ed., Ecosystem services in New Zealand: conditions and trends. Landcare Research, Lincoln, Manaaki Whenua Press

¹¹ Source: Minerals West Coast

¹² UNEP 2012. “Reducing mercury use in artisanal and small-scale gold mining”

<http://www.unep.org/hazardoussubstances/Mercury/PrioritiesforAction/ArtisanalandSmallScaleGoldMining/tabid/3526/Default.aspx>

different from that portrayed on the United Nations Environment Programme web site, in that New Zealand miners are appropriately regulated, and are in any event highly motivated to use mercury in a safe and responsible way.

31. If it is accepted that there is a place for the safe and responsible use of mercury in ASGM in New Zealand, an issue arises in relation to the long-term supply of mercury to affected miners. The effect of the Minamata Convention will be, among other things, to reduce the mining of and international trade in mercury.
32. We suggest that further thought needs to be given by the Government to the merits or otherwise of mercury use in ASGM in New Zealand, and on how best to enable safe, responsible, and efficient and effective gold mining practices in this category. The offer made in para. 27 of this submission of Straterra participation in policy development is also extended here.

Reputational issues

33. While ASGM is identified in the NIA as the largest source of mercury emissions globally, that is not the case in New Zealand because of the practices used. It is important that a clear distinction is made between the New Zealand situation, and the global context.
34. To press the point, while mercury is apparently “heavily used in Sub-Saharan African, South and Southeast Asian, and South American regions” (para 11 of the NIA), we contend that it is not inappropriately used or managed, in New Zealand. On the contrary, the continued safe and responsible use of mercury in ASGM in New Zealand needs to be seen as consistent with the Minamata Convention.
35. Recent media coverage in relation to the Minamata Convention reveals a lack of understanding of gold exploration and mining in New Zealand, for example, this claim by Green Party list MP Catherine Delahunty¹³: “Opening up the old mercury mine sites up in Puhipuhi for gold mining and prospecting is not in the spirit of the Minamata Convention.”
36. Such statements are unhelpful. The facts in this case are that the rocks in the Puhipuhi area contain naturally relatively high traces of mercury, and not just at the former mercury mine. Much of this is in the form of cinnabar (mercury sulphide). Any gold exploration or mining would need to manage earthworks to do with the local rocks (paras. 19-20 of this submission refer). That is no different to a farmer using road metal made from these rocks to maintain cattle races

¹³ <https://www.greens.org.nz/press-releases/govt-must-protect-northland-mercury-contamination>

or farm tracks. Resource consents would be needed for discharges or “releases” to land, and, if any, to water or air. In our view, this is a straightforward matter.

37. As a general statement, mercury-bearing minerals are commonplace as trace components of many volcanic rocks in New Zealand. It is an indicator mineral for gold explorers – where there is mercury, gold deposits may not be far way¹⁴. This has to do with the geological processes of rock formation, and these processes continue today, e.g., in geothermal fields and hot springs, which contain naturally relatively high traces of mercury.
38. Natural erosion of these volcanic rocks, e.g., in the Coromandel, will release traces of mercury into the environment. It is a pathway for mercury entering the marine food chain, say, in the Hauraki Gulf. None of this has anything to do with minerals exploration or mining.
39. In conclusion, exploration and mining companies that comply with New Zealand legislation would be doing so in the spirit of the Minamata Convention.
40. Public concern on this issue is legitimate, as it is on any aspect of mining. Straterra is happy to provide information to inform these concerns.

New Zealand Government proposals

41. The proposal in the NIA (para 47) to “ban new mercury mining (likely in the RMA and CMA¹⁵) and specific manufacturing processes¹⁶ that use mercury (likely in the HSNO¹⁷ regime)” will not directly affect the New Zealand minerals sector, notwithstanding our views on ASGM. As stated in the NIA, mercury mining has not occurred in New Zealand since the 1940s, or earlier, and is not foreshadowed.
42. In relation to paras 48 and 49 of the NIA, the New Zealand minerals sector is already subject to several laws placing restrictions on various activities, including in relation to mercury emissions.

¹⁴ Mercury (Hg) sits alongside gold (Au) in the Periodic Table of Elements, a fact which may help explain the connection between mercury and gold in mineralised rocks.

¹⁵ Crown Minerals Act 1991

¹⁶ These processes are specified in Annex B of the Minamata Convention, and do not apply in New Zealand.

¹⁷ Hazardous Substances and New Organisms Act 1996