

From: [REDACTED]
To: [Fingerboards Inquiry and Advisory Committee \(DELWP\)](#)
Cc: [REDACTED]
Subject: Request from the BDEC for the IAC to require that the proponent demonstrate a process for the safe storage and loading of HMC at the Port of Geelong.
Date: Thursday, 22 July 2021 9:55:07 AM

[REDACTED]

> Good Morning Tom,
>
> The BDEC understands that the IAC has completed the period allocated for submissions from the public. However on the 21st of July Mr. Morris introduced new evidence, that being Kalbar would bulk handle HMC at the Port of Geelong. If this bulk handling, as described, was permitted it would create a radiation exposure to Port staff and the local community well beyond any accepted protocol and create an immediate risk to human health and the risk of loss of lives.
> Would you therefore please place this correspondence before the IAC such that a public understanding and record can be established and so that the IAC might be
> provided with an opportunity to avoid harm.
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> The Chair and Panel.
> Fingerboards IAC.
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> Mr Wimbush,
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> On the 21st of July Mr. Morris placed new evidence before the IAC, that is the intent of the proponent to bulk handle HMC at the Port of Geelong. This was to be achieved by discharging HMC from half height shipping containers into a storage shed at the Port and then ultimately use augers to load the product into the open hulls of bulk carrier ships.
> Mr Morris described that these logistics were conceived from his knowledge gained from a past commercial role with the Port of Portland.
> The IAC should reasonably have expected that these logistics would have been developed as part of the Work Plan by the consultant Coffey with the co-operation of the consultancy SGS assisting the management of a radioactive HMC product.
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> The logistics as described are neither possible or practical and create an immediate risk to human health.
> The BDEC provide the following advice -
> a. The logistics described by Mr Morris at his penultimate appearance were that HMC
> would be railed to the Port of Geelong in half height shipping containers which would be stored outdoors until a container ship presented whereupon the containers would be direct loaded.
> b. The mineral sand shipped from Portland does not contain monazite, that it does not have a heightened level of uranium and thorium.
> c. There is no shed at the Port of Geelong scaled to store a suitable quantity of
> HMC for economic international shipping by bulk carrier.
> d. There is no facility at the Port of Geelong to decant from half height shipping containers.
> e. The stored stockpiles of HMC would have the opportunity to dry on the surface and be an immediate source source of dust to the operators of front end loaders working in a confined space. There is no obvious safe method to clear the floor of remnant HMC prior to new deliveries and this will dry and become an obvious source of dust.
> f. The operators of front end loaders would be positioned within a volume of HMC and constantly exposed to a radiation level which would considerably exceed the annual permitted level of 20 mSV. The operators of front end loaders would inhale dust from the HMC and would therefore be exposed to radiation internal to their body that would be damaging to health and life threatening.
> g. It is possible to estimate the direct radiation exposure to the operators of front end loaders from the geometry of the stockpiles and it is also possible to measure the uptake on individual workers from radiation “badges “. However, it is not possible to establish the exposure for individual workers from inhaled HMC dust and this exposure would be difficult to estimate even if a volumetric dust record was established within the shed.

- > g. Any persons entering the storage shed at any time could be exposed to a possible risk of death from the presence of radon gas.
- > h. The City of Geelong would not permit bulk handling in the open air of Kalbar's HMC.
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- > It is not acceptable for this current description by the proponent of the logistics for handling of HMC at the Port of Geelong to remain as the record with the IAC due to the
- > immediate risk this creates to life if these logistics were to come in to operation.
- > The IAC have a number of options before them to correct this situation, not limited to requiring the proponent to prepare a new section for the Work Plan to describe the logistics for the handling of HMC from the processing plant to the Port of Geelong and the extension of the public hearing period of the Panel to permit community comment on this Work Plan.
- > All parties to the IAC who could reasonably be expected to have an understanding of the risk to human health from the exposure of workers to radiation considerably in excess of permitted levels, and with the knowledge of the above information, now have an obligation under industrial Worksafe law to not allow the logistics as described above to be developed. This would include the proponent, the consultant SGS and the IAC itself.
- > I will write to Mr. Morris and suggest he should seek advice as to if the described logistics were placed in to practice could he be considered criminally negligent for the conduct of work place practices which threatened life and for which he should have reasonably understood he was not qualified to develop.
- > As a professional engineer (retired) I hold an ethical requirement to place
- > this matter of work place safety before an institution such as Worksafe if the
- > IAC find they are not in a position to be able to provide a resolution, so I seek your written advice when you have had the opportunity to consider the matter.
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- > Ian Magee for BDEC.