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Australian Department of the Environment

**Re: Comment on 2015/7539: Big Island Mining Pty Ltd/Mining/Majors Creek Road,
Majors Creek/NSW/Dargues Gold Mine Third Modification**

Thank you for the opportunity to comment on this referral. This submission addresses five points:

1. Threatened species and ecosystems occur within the mine site and in the downstream catchment have been incompletely documented in the modification proposal.
2. Independent advice confirms that the proposal has inadequate controls and is likely to result in releases of toxic materials downstream.
3. A full environmental impact statement has not been undertaken which adequately supports this proposed modification. In particular, the ecotoxicology of releases associated with cyanide processing have not been considered.
4. The poor evaluation of threatened species and ecosystems, coupled with the likelihood of toxic releases downstream mean that this modification is likely to have a significant negative impact on matters of national environmental significance. This proposal appears to breach the EPBC Act and should be rejected.

I trust that this will be a worthwhile contribution and wish you all the best with your deliberations.

Yours Sincerely



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Comment on 2015/7539: Big Island Mining Pty

Ltd/Mining/Majors Creek Road, Majors Creek/NSW/Dargues

Gold Mine Third Modification

1. Threatened species and ecosystems occur within the mine site and in the downstream catchment have been incompletely documented in the modification proposal.

The modification documentation lists the following threatened species and ecological communities as occurring within or near the mine site.

EPBC-listed threatened bird species

- Satin Flycatcher
- Black-faced Monarch
- Latham's Snipe

EPBC-listed threatened mammal species

- Koala
- Spotted Tail Quoll (also recorded during previous surveys)

EPBC-listed threatened flora species

- Monaro Golden Daisy
- Hoary Sunray
- Black Gum
- Araluen Gum

EPBC-listed Threatened Ecological Community

- Natural Temperate Grassland of the Southern Tablelands of NSW and the ACT

Discussions with local experts have confirmed that that this species list is out of date and inadequate. For instance, a recent NSW Department of Environment species survey done on a downstream property identified several additional threatened species which are not listed in the list above.

Many earlier surveys of the site and catchment area have been completed, and would be referred to in a thorough environmental impact assessment. The ten days allocated for this referral period are insufficient to gather or collate them or to try to contact the authors, but such work is necessary for due diligence to be achieved in relation to this referral.

Within the Modification proposal is a mention that Spring Creek is largely modified. This fails to take account that much of the creek downstream of the mine site is in a near-pristine condition. Much of the creek is extremely low in sedimentation, with rocky beds and wildlife areas which provide good habitat for several of the listed threatened species and more. These sections, a short way downstream of the mine are highly vulnerable to any pollution incidents. Indeed, they have suffered environmental harm already from several significant sedimentation events for which the mine operators were prosecuted.

A thorough review of available local studies, and up-to-date site surveys both on-site and in the downstream catchment are needed before the modification documentation claims of a low threatened species impacts can be confirmed.

3. Independent advice confirms that the proposal has inadequate controls and is likely to result in releases of toxic materials downstream.

Independent research into the hydrological and physical elements of this modification proposal has recently been undertaken by Dr Beck (from GHD), Dr O'Loughlin (previously from CSIRO) as well as local weatherman Roger Hoskingt. These reports clearly show that the hydrological modelling undertaken for the proposed modification is based on incorrect rainfall data, and other incorrect inputs. The reports referred to here are in the public domain, as they were submitted to the NSW modification process. I have attached them for completeness.

Together these reports confirm that the proposed containment facilities will not be sufficient to prevent releases into the downstream environment (see p.9 of the GHD report by Dr Beck). Hence the impact on matters of national environmental significance must take account of the downstream catchment area in addition to the mine site area itself.

4. A full environmental impact statement has not been undertaken which adequately supports this proposed modification. In particular, the eco-toxicology of releases associated with cyanide processing have not been considered.

The original ecotoxicology work which underpins the current referral was undertaken prior to the proposal to include cyanide at the site. This modelling has not been updated now that there is a proposal to add cyanide into the mix. As such, the complex interactions between substances associated with cyanide have not yet been modelled.

Full modelling of the potential effects of cyanide is required for a genuine analysis of the potential impacts on the ecology of national environmental significance on and downstream of the mine site.

5. 4. The poor evaluation of threatened species and ecosystems, coupled with the likelihood of toxic releases downstream mean that this modification is likely to have a significant negative impact on matters of

national environmental significance. This proposal appears to breach the EPBC Act and should be rejected.

In summary, the combination of the above points suggest that it is likely that this proposal will result in significant negative impacts on matters of national environmental significance.

In particular, known threatened species and endangered ecosystems, including several that have not yet been identified in the project documentation will likely impacted from releases of toxic substances from the tailings dams.

I urge you to reject this modification proposal and insist on a complete environmental impact assessment, including:

- a literature review of ecological site surveys undertaken both on the mine site and in the downstream catchment,
- an ecotoxicology report which models the full impact of cyanide in the system,
- correct rainfall data to be used in the modelling of rainfall and the adequacy of the proposed tailings dam protection. This is needed to establish the true likelihood of breaches due to predictable rainfall events.