

Jacob Paget

From: Vanessa Hamm s 9(2)(a)
Sent: Tuesday, 11 April 2023 9:27 am
To: Stuart McDonnell; Jayne Marsh; Fast Track Consenting
Cc: Nicole Brewer; Bridgette Malcon
Subject: RE: NIWA report on Taheke Geothermal Project

MFE CYBER SECURITY WARNING

This email originated from outside our organisation. Please take extra care when clicking on any links or opening any attachments.

Jayne and others,

Thank you to the Rotorua Airport for providing the NIWA report with your email communication.

The Partnership has passed the NIWA report to its air quality consultant and will consider and revert, as the Partnership appreciates that the Airport will want to see this matter addressed. However a couple of immediate observations:

1. The report relies on observations from the 1970s / 1980s / 1990s - as the report itself notes, that probably does not account for newer technology. There is more recent information than this on steam plumes from geothermal plant which the Partnership will cover off in its technical response.
2. Well testing is mentioned as a concern – the project already holds consent for well testing and has carried well testing out.
3. Your email refers to effects on aircraft and people in aircraft. This is not raised in the technical NIWA report. Contaminant concentrations will be below guideline levels and the Partnership will cover this off in its technical response.

Ngā mihi,



Vanessa Hamm / Partner
s 9(2)(a)
hobec.co.nz

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From: Stuart McDonnell s 9(2)(a)
Sent: Tuesday, 28 March 2023 12:15 pm
To: Jayne Marsh s 9(2)(a) fasttrackconsenting@mfe.govt.nz
Cc: Nicole Brewer s 9(2)(a); Bridgette Malcon s 9(2)(a); Vanessa Hamm s 9(2)(a)
Subject: RE: NIWA report on Taheke Geothermal Project
Importance: High

Good afternoon, Jayne.

Thank you I acknowledge receipt and we will review and come back to you over the coming weeks.

Ngā mihi

Stuart



Stuart McDonnell
Reservoir & Projects Manager

s 9(2)(a)
95 Commerce Street, Whakatane 3120 | eastland.nz

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From: Jayne Marsh s 9(2)(a)
Sent: Tuesday, March 28, 2023 12:10 PM
To: Stuart McDonnell s 9(2)(a) fasttrackconsenting@mfe.govt.nz
Cc: Nicole Brewer s 9(2)(a)
Subject: NIWA report on Taheke Geothermal Project

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Dear Stuart and the Fast Track Consent Team,

As previously mentioned, Rotorua Airport has engaged Richard Turner from NIWA to assess possible effects of the Takeke Geothermal Project on aviation. This is particularly relevant given the plant proposed location is within our Airport Obstacle Limitation Surfaces footprint, directly in the Airport approach and departure flight path areas for aircraft. Please find attached this finalised report from NIWA. Please note, NIWA have requested their permission is sought if this report is shared further, to ensure any potentially confidential data is protected.

From the evidence in this report our concerns remain, that this plant could be a significant hazard to aircraft if a mechanical draft wet cooling tower design were used, and also during well testing. It is likely that aircraft will encounter the plume from this, and the associated vertical updrafts along with decrease in pilot visibility when flying into a discharge cloud would appear hazardous. It would not be possible for an aircraft following an instrument flight procedure to alter its flight path to fly around the cloud. A pilot flying visually may however try and avoid the cloud by going around it, which could also be highly undesirable as low-level manoeuvring of aircraft is to be avoided where possible, and the aircraft might be more likely to encounter other obstacles or terrain when off-track. A pilot flying visually who suddenly loses visual reference in a cloud of any significance is at high risk of spatial disorientation and possible crash, thus flying into a cloud under visual flight rules is not legal. This is potentially very problematic due to the location being on our direct approach / departure path to the North.

The effects on the people inside of an aircraft who would breathe a more concentrated form than the dispersed model when flying directly through a discharge cloud and any information on corrosion or other effects on the aircraft itself have not to date been provided by the project team, such that our concerns on those points remain unaddressed at this time.

We welcome further discussion on any of these matters, please contact myself in the first instance. Now we understand the effects on aviation may be significant we recommend a further aeronautical study be done with

consultation of all airport users and the wider aviation community if a wet cooling tower will be used. We also strongly reiterate that Air NZ is consulted as this may significantly affect their operation. The pathway appears much more straight forward if an air-cooled condenser design is used, although the impacts of well testing would still need to be addressed and other hazards associated with aircraft flying over that type of plant are currently unknown.

For clarity, as Requiring Authority in the Rotorua District Plan, Rotorua Airport does not consent to our Obstacle Limitation Surface being breached in excess of Civil Aviation Rules parameters for discharge at this time, which would appear likely to occur from the NIWA report.

Thanks again and wishing you a nice afternoon.

Ngā mihi

Jayne Marsh s 9(2)(a)

SMS and Aeronautical Manager

s 9(2)(a)

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