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170314 2AM-DOH1323 Submission of Management Plans Distribution Review and Comment Request TMAC Resources Inc. Kitikmeot Region-OAAE

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Fri, Mar 17, 2017 at 5:11 PM

To: "licensing@nwb-oen.ca" licensing@nwb-oen.ca>

Cc: "D'Amours-Gauthier, Veronique" < Veronique. DAmours-Gauthier@dfo-mpo.gc.ca>

Dear NWB,

I have reviewed the request below on behalf of Fisheries and Oceans Canada (DFO) and have 4 comments.

1. Quarry Management and Monitoring Plan Page 16, last paragraph entitled Blast Vibration Monitoring:

Blast Vibration Monitoring

Shock waves from blasting in close proximity to fish bearing water can lead to potential for causing detrimental shock wave effects on fish. Guidelines for the use of explosives in or near Canadian fisheries waters (Wright and Hopky 1998) indicate that "no explosive shall be detonated in or near fish habitat that produces, or is likely to produce, an instantaneous pressure change (i.e., overpressure) greater than 100 kPa (14.5 psi) in the swimbladder of a fish". The guidelines also provide specific methods for calculating the setback distance required to stay below this threshold based on different amounts of explosive and the type of substrate. To ensure that there are no detrimental effects on fish from quarry activities, these guidelines will be used to establish final setback distances for each of the quarries. Additionally, blast vibration monitoring will be undertaken to avoid potential effects when detonation

QUARRY MANAGEMENT AND MONITORING PLAN

16

In the above excerpt, the TMAC cites DFO's Guidelines for the use of Explosives in or near Canadian Water (Wright & Hopky 1998) in setting a blasting threshold limit of 100 kPa for the purposes of mitigating effects of blasting on fish. However, Northwest Territories testing and monitoring results indicate the limit of 100 kPa was not protective to fish. Fisheries and Oceans Canada recommends that Developers use a threshold limit of 50 kPa for instantaneous pressure change in order to more appropriately mitigate the effects of blasting on fish (Cott & Hanna, 2005). This may affect the setback distance calculations to avoid impacts to fish and fish habitat. A recalculation of required setback distances may also require revisions to blasting mitigation plans to allow for change in charge size, location, timing and the use of fish deterrents. Fisheries and Oceans Canada recommends that TMAC revise their instantaneous pressure threshold limit of 100 kPa to 50 kPa, and recalculate the appropriate setback distances, in order to develop adequate mitigation measures to address the effects of blasting on fish and reduce the risk of serious harm to fish as a result of the Hope Bay Phase 2 Project. This will apply to any reference in the Quarry Management and Monitoring Plan, DEIS, and any other management plans regarding blasting.

2. In reviewing the Spill Contingency Plan, DFO is unclear if section 2.3.10.1 Mitigation of Impacts to Wildlife includes marine mammals. If so, DFO recommends that the TMAC add "In an event that wildlife does come in contact with a spilled material, TMAC will contact the DFO in the case of marine mammals". If the impact of spills to marine mammals is located in another section other than 2.3.10.1, please advise.

- 3. Similarly, in reviewing the Spill Contingency Plan, DFO is unclear why there are specific sections for mitigation of impacts to wildlife and birds but not fish (pgs. 10 &11).
- 4. This is a minor comment: In reviewing the Spill Contingency Plan, DFO is not listed in the Glossary and Acronyms on page ix; however "DFO" is referenced throughout (like other departments listed in the glossary and acronyms page) three times throughout the document. Fisheries and Oceans suggests for a matter of consistency that DFO to be added to the Glossary and Acronyms page (ix) of the Spill Contingency Plan.

Thanks for your time and if you have any questions regarding these comments, please feel free to contact me.

Thanks,

Angie

Angie McLellan

Fisheries Protection Biologist | Biologiste Protection des Pêches

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From: Ida Porter [mailto:ida.porter@nwb-oen.ca]

Sent: March-14-17 1:18 PM

To: John Roberts

Cc: Licensing Department

Subject: 170314 2AM-DOH1323 Submission of Management Plans Distribution Review and Comment Request TMAC Resources Inc.

Kitikmeot Region-OAAE

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