Pursuant to section 16 of the Environmental Management Act, I hereby amend Rio Tinto Alcan Inc.'s Permit P2-00001 (November 9, 2007 version) as follows:

... Changing section 4.2.2 to the following:

4.2.2 Total smelter emissions of SO2 shall not exceed the following:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>SO2</td>
<td>42 Mg/d</td>
</tr>
</tbody>
</table>

4.2.3 The works include, but are not limited to, the pyroscrubber, gas treatment centres, potline ventilators, anode paste plant stacks, anode bake furnace, fume treatment centre, and related appurtenances.

And by adding the following requirements:

4.2.4 SO2 Emissions Discharge Calculation Method

The Permittee shall detail the method by which the daily average SO2 emissions from the smelter (post-Kitimat Modernization Project configuration) are estimated. The method shall be submitted for review and approval by the Director on or before March 31, 2014. Once approved by the Director, the method shall be used for emissions reporting.

4.2.5 Environmental Effects Monitoring Plan

The Permittee shall submit an Environmental Effects Monitoring (EEM) plan for review and approval by the Director on or before December 30, 2013 and shall implement the EEM plan upon approval. The EEM plan shall, at a minimum, include effects monitoring methods and actions along four lines-of-evidence: human health; vegetation; terrestrial and aquatic environments. The EEM plan shall also include impact threshold criteria either for emission reduction or other mitigations that, when exceeded, would trigger emission reduction and/or other mitigation.

4.2.6 Comprehensive EEM and SO2 Discharge Limit Review

On or before October 31, 2019, the Permittee shall submit to the Director, a comprehensive review of EEM program results from 2012 to 2019. If any unacceptable impacts are determined through the use of the impact threshold criteria pertaining to emission reduction, then the maximum SO2 daily discharge limit shall revert back to 27 Mg/d, unless the Director otherwise amends the discharge limit.