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Final Summary

Rio Tinto Alcan Environmental Appeal Board (EAB) Hearings

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The Hearing

On June 30, 2015, the Environmental Appeal Board panel wrapped up its hearing into the Ministry of Environment Director's issuance of a permit for Rio Tinto Alcan to increase its sulphur dioxide emissions from 27 tonnes per day to 42 tonnes per day. The panel heard 21 days of evidence and submissions over a ten-week period in both Victoria and Kitimat.

The appeal was brought by two Kitimat residents, Emily Toews and Lis Stannus, who are concerned about the effects on residents' health as well as on the natural environment of the Terrace-Kitimat area. The other parties were the MOE Director and RTA.

The parties' final submissions were made to the panel on June 29 and 30. Both the MOE and RTA defended the decision-making process that saw RTA produce a voluminous technical report and a monitoring program said to trigger mitigation, including emissions reduction if harm to health or the environment could be shown. The MOE Director approved both reports.

The appellants raised legal issues of bias – as an MOE employee working on the permit was being paid by RTA – and of fettering – as memoranda of understanding between MOE and RTA constrained the Director from properly considering all issues around the permitting decision.

The thrust of the appellants' argument, however, involved harm to human health and to the environment. In both cases they said the Director had insufficient information to properly make his decision.

Harm to Health

Damage to Kitimat residents' health was the focus of the appellants' case. All parties to the hearing acknowledged that sulphur dioxide increases the risk of asthma attacks by sufferers. But the appellants' witness, Dr. Mark Chernaik, showed through a number of studies that there is also a positive correlation between sulphur dioxide and non-sufferers contracting asthma and prematurely dying, even though the research cannot yet ascribe a certain causal relationship.

That level of risk, the appellants argued, was sufficient to invoke the precautionary principle. This principle of law states that where there is a real threat of serious or irreversible harm, lack of full scientific certainty should not be a reason for postponing measures to prevent harm. The appellants said that the Director violated that principle by allowing RTA to increase its permitted sulphur dioxide emissions and by not taking into account potential risks of residents' contracting asthma because the science had not evolved to the point of establishing a causal link.

Referring to court cases from Australia and New Zealand, as well as Canada, the appellants told the EAB panel that the precautionary principle requires adequate baseline information, effective monitoring, and thresholds for remedial action before any harmful effects become irreversible. The evidence showed there was no public health baseline information specific to Kitimat. Further, the monitoring scheme proposed by RTA did not include human health monitoring. Such a health study was strongly advocated by officials from the Northern Health Authority and the BC Centre for Disease Control prior to the permit amendment being issued.

There was also clear evidence that RTA might not be able to remedy any harm even if monitored health effects did show harm. According to RTA's own expert, solutions such as procuring low-sulphur inputs to the smelting process or scrubbing the sulphur dioxide from the smokestacks were insufficiently developed to be feasible to protect human health.

Harm to the Environment

The appellants reviewed two main aspects of the harm that sulphur dioxide and its secondary compounds cause to the environment. These were soil acidification and effects on forest vegetation.

Soil acidification depends on how much sulphate – the acidifying secondary compound – is being deposited, and how much acid-neutralising capacity is in the receiving area's soil. The appellants submitted that the neutralising capacity of the land was largely unknown with any statistical accuracy because RTA's consultants took too few soil samples for testing and used inappropriate geological criteria to apply those test results over the landscape. For example, samples were taken only from sites with handy road access, leaving untested the upper elevation areas with thin soils that are considered particularly vulnerable to acidification. As well, the appellants showed that the threshold proposed to trigger remedial action were not protective of a number of deciduous trees or of long-term soil fertility.

The company's vegetation monitoring over the last 40 years was also called into question with evidence from a MOE employee. He found that cedar trees in the plume path up to 30 kilometres away from the smelter were growing in an unusual way – looking more like stunted garden ornamentals than the normal forest giants. Dying pine trees were also noted, although their correlation with smelter emissions was less clear. As the RTA's future vegetation monitoring proposed continuation of its historical program, different methods were clearly indicated.

Appellants' Remedies

The appellants asked the EAB panel to set aside or, alternatively, suspend the operation of the MOE Director's April, 2013 permit amendment that allows RTA to increase its sulphur dioxide emissions by 55 percent.

Before any new decision is made or any suspension lifted, the Director must comprehensively review the current literature on health effects associated with sulphur dioxide and quantitatively assess the increase in mortality and new asthma cases from the emissions at full production. As well, the Director must report on the type of public health study needed to provide baseline information for decision-making.

For vegetation, the appellants asked the panel to amend the monitoring program under the permit to include a survey of the geographic extent of the harm to the area's cedar and pine trees. Further the monitoring program should conduct experiments in an attempt to find any link between the distorted trees and the main smelter pollutants.

For soils, the appellants asked that the monitoring program map all soil parent-materials, including bedrock and surficial deposits, and that sufficient soil samples be taken in each such soil parent material unit to ensure reasonable data precision. Finally, that a threshold for emission reduction be used that will protect all forest species and future soil fertility.

The matter is now in the EAB panel's hands. There is no mandatory timeline for it to release its decision, but considering the technical and legal complexity of the case, it could well be later in the year before the outcome is known.

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