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Reply Opinion – Bilcon White's Point Quarry Permitting

I am writing this brief reply report to comment on issues Canada raises in its Counter Memorial and its expert reports regarding differences between a proponent's EIS and the project's ultimate design and cost to build and operate.

In my first expert report I set out typical conditions attached to an EA Approval, which consists primarily of a proponent's commitments in the EIS's Commitments, Mitigation and Monitoring Tables.[1] Beyond these commitments, however, proponents are not required to adhere strictly to the description of an undertaking in EA documents. Projects routinely vary it in ways which are immaterial from a regulatory perspective.

An EIS is fundamentally a planning document that forms the basis for a project and is by its very nature, conceptual and envisions variations in how a project is ultimately built. Nova Scotia Environment's "Proponents Guide for Environmental Assessment" states that "EA approval is based upon the review of the conceptual design, environmental baseline information, impact predictions and any mitigation presented in the EA report."[2] The *Canadian Environmental Assessment Act* also states:

> 5(2) Notwithstanding any other provision of this Act,
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> (*a*) an environmental assessment of a project is required before the Governor in Council, under a provision prescribed pursuant to regulations made under paragraph 59(g), issues a

[1] Expert Report of Peter Oram, December 6, 2016, p.7

[2] Nova Scotia Environment Proponents Guide to Environmental Assessment, para. 2, p. 28 (R-163)

permit or licence, grants an approval or takes any other action for the purpose of enabling the project to be carried out in whole or in part; and

> (i) shall ensure that an environmental assessment of the project is conducted as early as is practicable in the planning stages of the project and before irrevocable decisions are made,[3]

Regulators, therefore, are aware and expect that variations will occur in the ordinary course between the project described in EA documents and its final design and indeed through its lifespan. This is particularly true with aggregate operations, due to such factors as weather, market demands and equipment issues. For example, the Pioneer Coal Project in Nova Scotia, that I consulted on, there were variations between the EA description and the operation phase for moving soil and rock. While the EIS specified the use of mobile equipment (excavators and haul trucks), the proponent ultimately used conveyors to move the materials. This variation did not concern the regulators and we implemented them at the site without the need for further approvals or modification of any permits.

There are necessarily cost variations between the description in the EIS and the final design of the project at the permitting stage. As additional technical work is completed more accurate numbers are determined as the project is closer to development. Costing presented in an EIS are typically estimates of a proponent's anticipated cost to complete the project as conceptualized based on data available at the time of the EIS. The EIS process rarely takes capital expenditures into consideration except to get a rough idea of local benefits. Variations are typical and expected.

I, therefore, disagree with SC Market Analytics' assumption that the figures in a proponent's EIS should be preferred to a project's final design.[4] As I noted, cost estimates in the EIS frequently differ from the ultimate cost to build or operate the undertaking and I have never encountered a federal or provincial regulator question these differences.

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[3] Canadian Environmental Assessment Act, SC 1992, c 37 (C 255)

[4] Expert Report of SC Market Analytics, June 9, 2017, para. 2.

I also disagree with the implication that a proponent is limited to shipping product to the destination described in the EIS.[5] Whether crushed stone is shipped to New York City or New Jersey is irrelevant to the CEAA and the Environment Act. The transport routes are effectively identical, employ essentially the same vessel, travel along an approved route in the Bay of Fundy and Gulf of Maine and have only slight variations on the final portion of the transport route to one State or the other. I also disagree that minor differences in Bilcon's tonnage per voyage, annual shipments or whether the project operates for 50 years or 48.5 years would be relevant to regulators.[6]

I disagree with Canada's suggestion that the volume of aggregate estimated at the quarry is fixed and tied to the description of the undertaking in its EIS.[7] In my experience, because EA's are conducted so early in a project, aggregate operations will not always precisely quantify reserves in EA documents and are instead often based on limited drilling, sufficient to confirm there is adequate material available to justify developing the project. What is relevant is that the volume of the estimated and proven reserves is based on the same parameters or "footprint," being all lands directly disturbed by a project that are associated with its development, operation and reclamation.

Finally, Mr. Chodorow comments on inconsistencies in the annual environmental monitoring costs between my first expert report and the Mr. Rosen Report.[8]. My costing is based on the environmental monitoring identified in Appendix 2, which included terrestrial environmental monitoring programs such as surface water, groundwater, air, and ecology. These costs amounted to approximately $60,000 per year.

The balance of the costs were composed of the remaining monitoring commitments that Bilcon made in the JRP process, which are outlined in the commitments table attached to my first report

[5] Expert Report of the Darrell Chodorow , Brattle Group, June 9, 2017, para. 43.

[6] Expert Report of Darrell Chodorow, Brattle Group, June 9, 2017, para. 18

[7] Counter Memorial of Canada, para 142.

[8] Expert Report of Darrell Chodorow, Brattle Group, June 9, 2017, paras. 151 and 152.

at Exhibit 2. These costs were estimated based on my experience in developing monitoring plans for similar mining projects, of similar scale and intensity, including the Tusket Mining Gypsum Project in Elderbank, Nova Scotia, ScoZinc Mine Project in Sheet Harbour, Nova Scotia.

My opinion remains that the total environmental monitoring costs are approximately $100,000 per year to comply with EA Conditions and $80,000 per year for IA Conditions as outlined in Appendix 2 of my first report.

GHD

Peter Oram, P.Geo.

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