

Brief Review of the
Cumulative Effects Assessment
for
Strateco Resources'
Matoush Underground Uranium
Exploration Program, Québec

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Introduction

In early December 2009, the authors (the “reviewers”) were asked to submit a brief overview of the quality of the cumulative effects assessment (CEA) included in Strateco Resources’ Environmental Impact Assessment (EIA) for the Matoush Underground Exploration Program. The objective was to indicate major gaps or weaknesses. In conducting the review, the following Proponent’s documents were examined at a preliminary level:

- Strateco/Matoush EIA Vol. 1
- Strateco/Matoush EIA Vol. 3 (volumes 2 and 4 make no reference to CEA)
- COMEV Directives document of February 2009

In addition, the reviewers referred to the following reports:

- Canadian Environmental Assessment Agency Cumulative Effects Practitioners Guide
- Assessing Cumulative Effects of Saskatchewan Uranium Mines Development (1992)

To What Standard?

Any review of EIA and particularly CEA should be referenced against a standard protocol or document of regulatory guidance. However, this reference point does not always exist in practice, and reviewers fall back on established professional practice as the basis for review. For the field of CEA, the EIA for the Matoush Exploration Project makes no reference to a standard protocol or regulatory guidelines commonly used in Canada (e.g., CEAA). The EIA would benefit from more complete discussion of how the cumulative effects are analyzed, thus being able to explain the results more effectively.

Comments from the Review:

1. Volume 1

- a.** References to cumulative effects in the Executive Summary and the Introduction are not borne out by what is contained in the main text of the chapters. The Executive Summary (p.6 of 271) lists projects for which the potential effects “have been evaluated, but more attention was given to those who [sic] could have a cumulative effect on surface water quality”. No more attention is given to surface water quality than to groundwater or terrestrial components.
- b. Chapter 7, Cumulative Impacts pp. 233-235.**
 - i.** In this chapter, spatial and temporal boundaries for CEA are briefly mentioned, but are not related to the VECs selected. Reference is made to Chapter 5 regarding spatial and temporal boundaries. Review of Chapter 5 would be necessary in order to determine suitability of the boundaries; however, without

description of them in the CEA chapter, the CEA lacks integrity, and the conclusions cannot be readily supported.

- ii. VECs selected are vegetation, wildlife and surface water. Review of Chapter 5 would be necessary in order to determine suitability of the VECs selected, rationalization for which is not provided in Chapter 7. Grouped thus, these VECs are generalized and broad. Without sub-division, they allow little analytical specificity for the CEA. For example, such generalized VECs are unlikely to be comparable to a threshold (should such a benchmark condition be available for reference) that could be used to assess the significance of cumulative effects on a more specifically-defined VEC.
- iii. Projects in the area selected for inclusion in the CEA were those identified within a 100 km radius of the Project “during consultations and inventories completed in the scope of this study” (p.233 of 271). In order to support the selection of projects for inclusion, as well as the comprehensiveness of the research and analysis leading to the selection, chapters providing detail on the nature of consultations and inventories undertaken would have to be reviewed. This has not been done as yet.
- iv. In order to support the assessments of cumulative impact on vegetation, wildlife and surface water made on p. 235 of 271, perspective should be supplied. Without review of other chapters, these assessments, while necessarily speculative, consist of generalized and unsupported statements. For example:
 1. Without knowing the species involved, it is unsupportable to assess a combined effect on vegetation and wildlife habitat as “negligible”. Further, the “four seasons road” is described as being separated by 7 km from the Project (less than the 35 km distance noted for the other listed projects). Without description in the CEA of how the 7 km separation of the four seasons road relates to the Project, it is unclear how the assessment of “negligible” cumulative effect can be supported, particularly when the cumulative effect of introducing access to a formerly inaccessible region is widely acknowledged to be significant for some species of wildlife.
 2. Without some description of the ground and surface water quality in the vicinity of (a) the landfill, (b) the exploration projects listed, and (c) the Project itself, assessments that “the increased impact ...is likely to be marginal” or “no additional impact is expected” are not supported, especially when the quality of the released mine and surface water from the Stornoway/SOQUEM exploration project is described as “not known”.

- v. To substantiate its conclusions, the rationale for the CEA needs improvement. If the CEA were to briefly reference key corroborating statistics, and point the reader back to supporting information elsewhere in the EIA, this issue of “supportability” might be at least partially overcome.

2. Volume 3

- a. Chapter 37.0 Impact Assessment Methodology: 37.6 Cumulative Impacts (pp. 92-93).
 - i. Although listed as a “Methodology” chapter, this chapter does not provide the methodology adopted for CEA. It lists the projects considered as potentially interacting with the subject Project. It mentions “the project area” (not defined at this point in the text), and indicates that planned projects considered as potentially interacting with the Project “need to be in the near future of about one to five yearsas this project is of short duration”. “Short duration” is not defined, but may be defined in other parts of the EA not reviewed.
 - ii. The Otish Mountain Access Road is described (this road is not named thus in Vol. 2, but is assumed to be “the extension of Highway 167 towards the former Eastmain mine” mentioned therein) as being at the pre-feasibility stage. It is suggested that completion of the subject Project is not dependent on the approval of the Otish Mountain Access Road as, in the absence of this Road’s approval, the Proponent would proceed to the refection [sic] of the former Eastmain Mine winter road by upgrading it “to make it accessible year round”, an EIA addressing such upgrade having been submitted to MDDEP in 2009. The importance of access in a cumulative effects landscape, and the role of the Otish Mountain Access Road or its substitute (i.e., the upgrade of the winter road to year-round access) should be critical elements of the CEA. The need for new access appears to be critically important for the development of the mine, and thus would be an integral part of the subject Project, not a “reasonably foreseeable” separate project. From this brief review, the access options do not appear to have been appropriately categorized for CEA, nor accorded the critical status they merit in CEA, creating a gap and weakness.
 - iii. From brief overview, it is unclear whether the landfill built by Strateco was built to service the mining operation, and would continue to be thus used. If it is an integral component of the mine’s infrastructure, it should be considered as part of the overall mine, not a separate project eligible for assessment of cumulative effects in combination with the subject Project. If it is an integral component of the subject Project, the integrity of the CEA methodology adopted is questionable.

- b. Chapter 38.0 Impact Assessment: 38.7 Cumulative Impacts (p. 110)
 - i. This chapter repeats the text provided in Chapter 7 of Volume 1, and thus does not add information to the CEA.
 - ii. Page 110 indicates that: “The environmental components that are within Golder’s mandate and susceptible to an impact when considering the interaction of the Project in conjunction with past, present or future, neighbouring projects are: vegetation, wildlife and water quality”. This statement suggests that other components that could be considered in CEA have not been addressed, thus questioning the scoping, completeness and integrity of the CEA.
 - iii. Appendix 1, Impact Assessment Sheets (16 of them) have a compartment of the form used entitled “Cumulative Impact”. Inserted in this compartment are the expression “None” (12 times), “Landfill site and exploration projects” (2 times), “Tree clearing for all-weather access road and at Matoush site” (once) and “All-weather access road” (once). The intent of this compartment and the expressions inserted is unclear and, from brief review, it does not appear to have been described or cross-referenced in the main text.

3. Over-arching Comments

- a. Greater rationale for the CEA approach needs to be provided, using the Project description and the scoping of issues as the starting point. For example, if accumulation of metals and radionuclides in plant and animal tissue is not an issue for CEA, the rationale for its exclusion from the CEA should be discussed and reasonably demonstrated. Page 20 of Volume 3 mentions CCME guidelines for water quality intended to protect against cumulative exposure to radiological characteristics, but offers no discussion as to their applicability to Project CEA in the CEA chapters.
- b. From this brief overview, the methodology used for CEA lacks clarity, and what has been described appears inadequate and in need of substantial upgrading and rationalization.
- c. For CEA, the critical concluding assessment to be made is whether the Matoush Project contributes to cumulative effects on the landscape as they exist, and whether this contribution is significant, as determined by reference to guidelines for assessing significance (e.g., as published by CEAA). Thus far, we have found no such assessment.
- d. The current 130 km. access road to the exploration site has a winter use constraint. A 12 km road was built to link the camp with the existing winter road, an extension of provincial road 167. Upgrading the road to all-weather gravel has been proposed by the Quebec government and the Strateco EIA states that an EIA for the road upgrade was submitted to MDDEP in February 2009. Road upgrades of this nature

can have several effects on the regional society and regional wildlife. Wildlife effects are discounted in the Golder document (EIA Vol. 3).

- e. While considering the operation of a construction and operations infrastructure, the applicant predicts that the 45 persons (current) camp will expand to accommodate 180 direct jobs during the exploration phase, to 300 direct jobs in the production phase. Strateco also predicts that for every direct job, approximately two indirect jobs will be created. The impact of this workforce expansion is not detailed in a cumulative manner.
- f. There is discrepancy between the definitions of CEA used in the EIA and those used in CEA guidance documents:
 - i. “cumulative impacts assessment consists of establishing if the interaction of the project with past, present, or future neighbouring projects are susceptible to have an additional effect on the identified residual impacts” (Vol. 1, chapter 7 p.233).
 - ii. “Cumulative impacts are the impacts of the project in conjunction with other past or existing projects, or planned projects that offer a certain degree of feasibility, in the project area. As this project is of short duration, the planned projects need to be in the near future of about one (1) to five (5) years” (Vol. 3, section 37.6, p.92).
 - iii. “The proponent must identify and put into perspective the potential cumulative environmental and human impacts of the project combined with the effects of other work or activities currently being carried out or that can be reasonably foreseen in the same area as the project, taking into consideration natural phenomena such as burn sites, prescribed burning, etc.” (COMEV Directive February 2009).
 - iv. “...any cumulative environmental effects that are likely to result from the project in combination with other projects or activities that have been or will be carried out” (Canadian Environmental Assessment Act section 16(1)).

While these variations in definition could be down-played as unimportant, it is key to the proponent’s application that the existing legal requirements are met, even for a definition. Doing otherwise could lead to legal challenge of future approvals and panel decisions. It would thus be in the best interests of the process and, potentially, Strateco, if the EIA and its CEA were to cite and then use the COMEV and CEAA definitions as the basis for analysis.

- g. It is important that cumulative effects mitigation programs and regional effects predicted be monitored for some time after the project commences operation. The

Strateco documents include a Surveillance and Monitoring Program (Vol. 1, Chapter 9, p. 246) that is based on federal and provincial requirements. The reviewers take no issue with this aspect of the EIA. However, as a CEA addresses other activities that affect the chosen VECs, a monitoring program for cumulative effects should include some discussion of the regional context required and how the proponent perceives its regional responsibilities. Current practice in other parts of Canada (e.g., NWT diamond developments) would see the building of regional monitoring programs created by regulatory authorities or by a partnership of industrial developers (sometimes both). Such a program would address regional effects if they were to appear, but also provides more security for the developers if they were to be accused of creating environmental or human health effects. Some discussion of this concept would assist the discussion of cumulative effects.

Summary of Findings:

This brief review presents a critique of the CEA for the Strateco Matoush proposal. A number of gaps and weaknesses in the CEA are described. The reviewers believe that, with some changes in the CEA approach, this EIA would become more “robust”; that is, less prone to legal and technical challenges, but also contributing to the panel review in a positive manner. The field of cumulative effects assessment has made significant progress since the first introduction of CEA provincially and federally in the mid-1990s. By taking advantage of the advances in EIA/CEA practice since that time, this panel review and the proponent’s business proposal will be better served.