

## Assessing Adaptive Management in Alberta's Energy Resource Sector

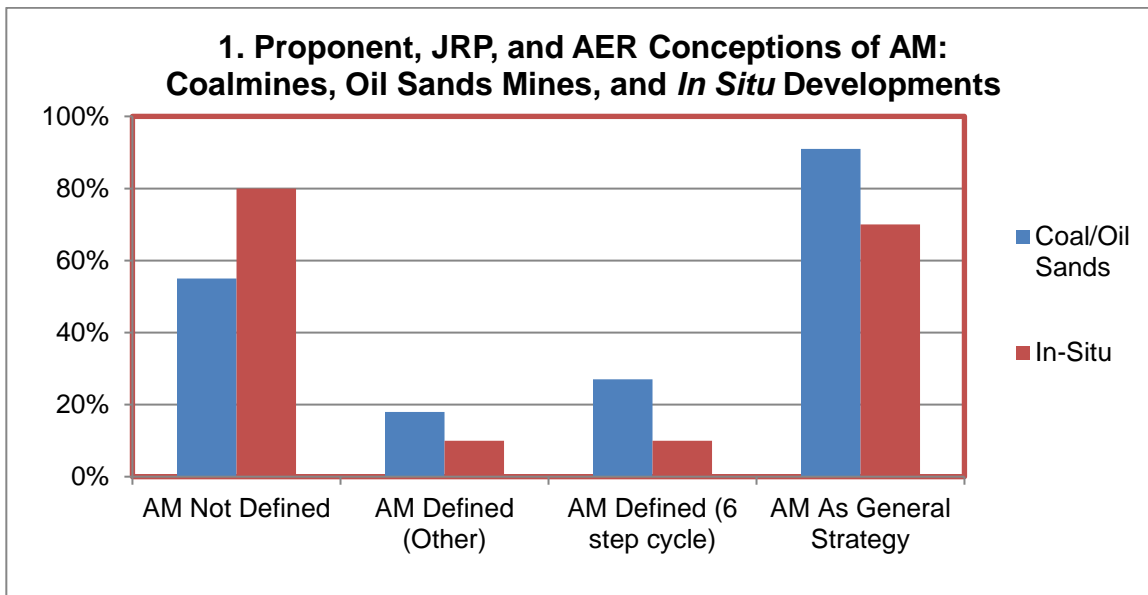
By: Martin Olszynski

**Case Commented On:** [“Failed Experiments: An Empirical Assessment of Adaptive Management in Alberta's Energy Resources Sector” \(UBC L Rev\) \(Forthcoming\)](#)

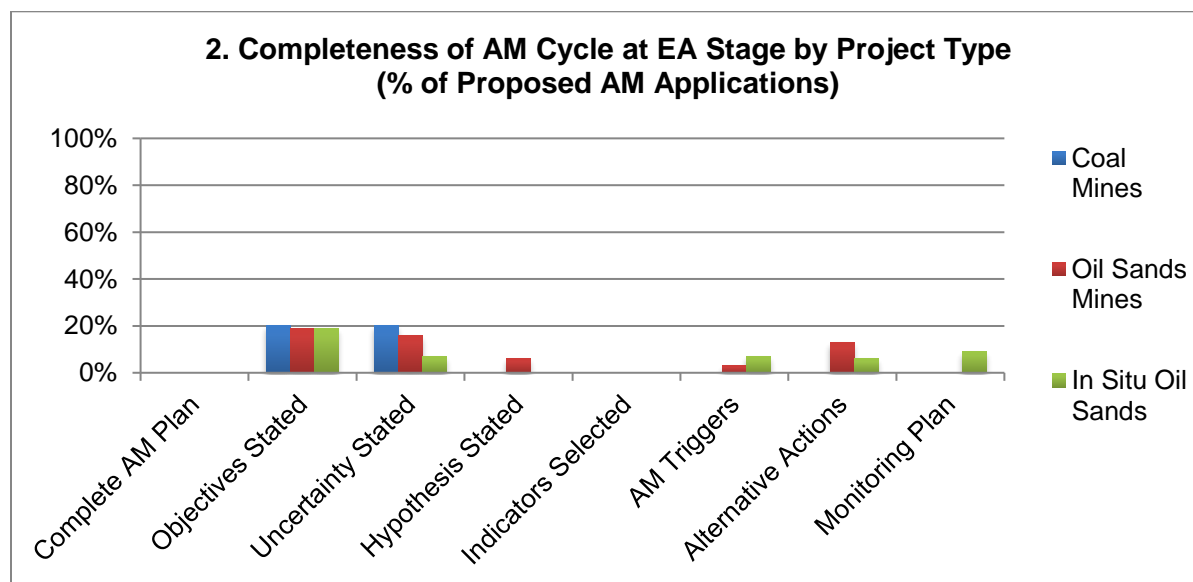
It was three years and six months ago – almost to the day – that I published my first ABlawg post. The Joint Review Panel (JRP) assigned to conduct the environmental assessment of Shell's then-proposed Jackpine oil sands mine expansion project had just released its [report](#). That report was notable for several reasons, including that it was the first to conclude that an oil sands mine was likely to result in “significant adverse environmental effects” pursuant to the *Canadian Environmental Assessment Act 2012*, SC 2012, c 19 (CEAA, 2012). In [Shell Jackpine JRP Report: Would the Real “Adaptive Management” Please Stand Up?](#), however, I focused on the role that adaptive management had played in the Joint Review Panel's determination of the project's environmental effects. Briefly, adaptive management is [defined](#) by the Canadian Environmental Assessment Agency as “a planned and systematic process for continuously improving environmental management practices by learning about their outcomes.” The concern that I have expressed over the past few years is that, as practiced in Canada, adaptive management appears to be seldom planned or systematic. The problem was that I couldn't show this to be the case – until now.

In a recent [paper](#), I examine the implementation and effectiveness of adaptive management in Alberta's energy resources sector. Using freedom of information processes, publicly available documents, and communication with the relevant regulator, I collected the environmental impact statements, environmental assessment reports (*e.g.* the Shell Jackpine JRP Report), statutory approvals and required follow-up reports for thirteen energy projects in Alberta: two coal mines, three oil sands mines, and eight *in situ* oil sands operations. In each case, the proponent proposed adaptive management for at least one environmental issue or problem. I then analyzed these various documents to determine the conception, implementation, and, to the extent possible, effectiveness of adaptive management with respect to each project throughout the regulatory cycle (*i.e.* from the proposal stage through to approval and reporting). Simply put, I set out to determine how adaptive management was actually being applied in this context.

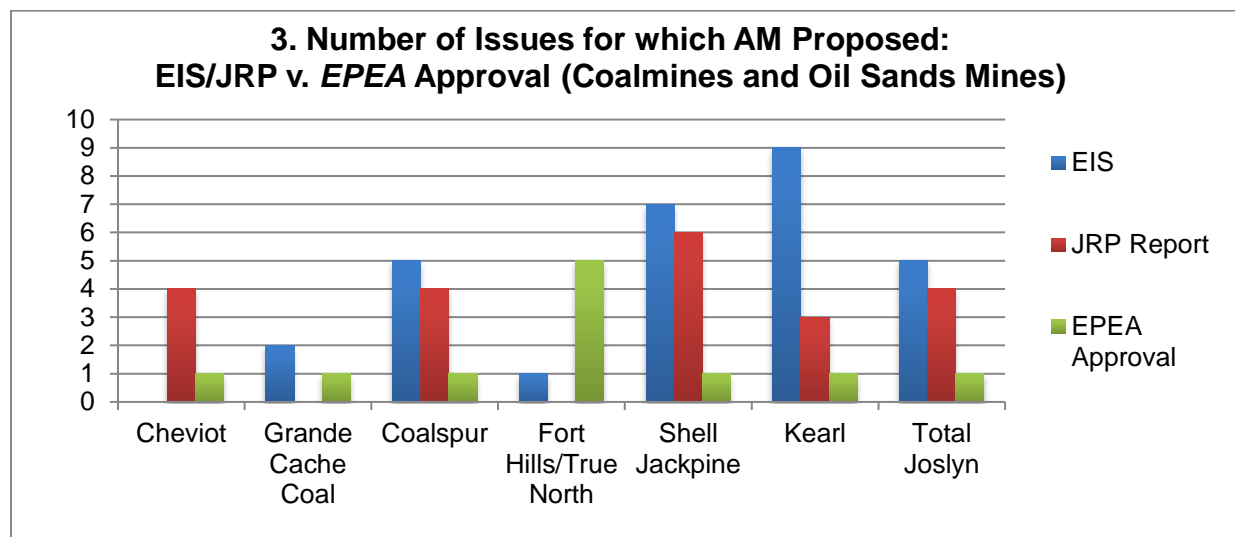
Unfortunately, the results confirm longstanding concerns about the implementation of adaptive management in natural resources development. Conceptions of adaptive management vary, with most proponents erroneously invoking it as a routine strategy that guarantees effective mitigation (see Figure 1, below).



At the same time, little or no attention is being paid to experimental design, especially at the environmental assessment stage. Whereas genuine adaptive management involves a six step cycle of (i) defining the problem (ii) plan design, (iii) plan implementation, (iv) monitoring, (v) evaluation, and (vi) revision and adaptation, each of which consists of several sub-steps (*e.g.* defining the problem includes identifying management objectives and indicators of success), almost all of these steps were missing or incomplete for the projects considered (Figure 2, below).



There is also often a yawning gap between the number and type of issues for which proponents propose adaptive management and what is ultimately required per the terms of their regulatory approval (Figure 3, below) (the one exception being Suncor's Fort Hills project). Moreover, where adaptive management has been required, the relevant approval terms have generally been vague and seemingly unenforceable. At the reporting stage, implementation is either non-existent or barely distinguishable from basic compliance monitoring (*e.g.* whether noise levels comply with regulatory standards). Not surprisingly, then, none of the projects assessed had much to show in terms of actual learning.



These results are concerning. With respect to Alberta’s oil sands, adaptive management has been – and continues to be – invoked in dealing with a number of significant environmental problems, from the restoration of peatlands and the protection of caribou to the creation of end-pit lakes (which are expected to number around thirty by the middle of this century). With respect to Canada more broadly, roughly 90% of the projects currently listed on the [Canadian Environmental Assessment Registry](#) make at least one reference to adaptive management in the context of effects mitigation. In my paper, I make several recommendations for law and policy reform, especially the need for additional legislative guidance and increased transparency and accountability.

---

This post may be cited as: Martin Olszynski “Assessing Adaptive Management in Alberta’s Energy Resource Sector” (2 February, 2017), online: ABlawg, [http://ablawg.ca/wp-content/uploads/2017/02/Blog\\_MO\\_Adaptive\\_Management.pdf](http://ablawg.ca/wp-content/uploads/2017/02/Blog_MO_Adaptive_Management.pdf)

To subscribe to ABlawg by email or RSS feed, please go to <http://ablawg.ca>  
Follow us on Twitter [@ABlawg](#)