

## New AER Standards for In Situ Oil Sands Project Applications and Their Potential Effect on Geoscientists

Brad S. Gilmour B.Sc., M.Sc. E.S., LL.B  
Partner, Bennett Jones LLP

Neil W. Stalport, P.Geol., J.D.  
Senior Regulatory Advisor, Statoil Canada Ltd.

### Summary

The new Alberta Energy Regulator (AER) is in the process of finalizing a new version of *Directive 023: Oil Sands Project Applications* for scheduled release in 2014. Alberta Environment and Sustainable Resource Development (ESRD) had issued in August 2013 a new version of the *Guide to Content for Industrial Approval Applications*, which also applies to oil sands project applications. This presentation will look at the implications of these new standards for obtaining approval of oil sands scheme applications, and how consolidating the mandates of the former Alberta Energy Resources Conservation Board (“ERCB”) with those of ESRD as they relate to the approval of in-situ oil sands projects could potentially affect that process. Important geological issues, such as those relating to caprock and wellbore integrity, will also be discussed in the context of the new requirements.

### Introduction

The former ERCB issued the original version of Directive 023 in “draft” form in 1991. With the significantly increased activity relating to in situ oil sands projects in the last decade, as well as the need to create regulatory efficiencies, a D-23 revision was due. The new AER has made the requirements within D-23 more comprehensive and prescriptive in an effort to avoid delays relating to deficient applications. The current draft of D-23 gives the AER more power to close and/or deny deficient applications. The draft D-23 recognizes that applicants may be required to complete environmental impacts assessments (EIA) and seek other approvals under provincial legislation such as the *Environmental Protection and Enhancement Act* and the *Water Act*. Applicants are expected to ensure that D-23 applications are consistent with other regulatory application and EIA requirements. As the AER assumes more jurisdiction from ESRD concerning the review and approval of oil sands applications, it will be necessary to further assess the degree of overlap between the new proposed D-23 and other regulatory requirements such as those set out under ESRD's new guide for industrial approvals. Opportunities for reducing the degree of repetition and overlap of environmental and other information required under D-23, EPEA and environmental impact assessment applications will be explored.

In response to incidents of thermal project steam release and bitumen emulsion release to surface, as well as wellbore casing and cement bond failures, the AER is proposing additional D-23 requirements relating to:

- Abandonment status of pre-existing vertical wellbores as compatible with in situ operations;
- Mapping of potential thief zones and proposed operating strategies to deal with them;
- Mapping of overburden reduction and channelling related to Quaternary-aged strata;
- Documentation of the history of vertical fracturing, faulting, salt dissolution and karsting in the project area; and
- Determination of effective maximum operating pressures (MOPs).

The proposed D-23 requirements also include additional mapping requirements for specified subsurface geological units within and beyond the proposed project area, as well as minimum oil sands exploration (OSE) well delineation guidelines. These new requirements will be discussed.

## **Conclusions**

The recent changes to legislation and regulations governing in situ oil sands project applications in Alberta are significant. Additional changes are expected to be made and implemented during 2014. These changes create legal and regulatory risks and opportunities. It is imperative for those who work in the energy industry, including geoscientists, to understand the new rules and how they apply.