

Joint Oil Sands Monitoring: 3-year external expert peer review
Panel Mandate

The Joint Canada-Alberta Implementation Plan for Oil Sands Monitoring (2012) states that, in addition to an annual report, the monitoring system will undergo external expert peer review after three years to ensure that scientific integrity is maintained.

Key considerations in scoping the external expert peer review

1. The external expert peer review (hereafter referred to as the external review) would assess scientific integrity in the Joint Canada-Alberta Oil Sands Monitoring (JOSM) and recommend improvements as necessary.
2. The external review would evaluate the extent to which the implementation of JOSM has improved scientific integrity (as defined below), relative to the environmental monitoring that existed prior to JOSM implementation in 2012. The external review would not revisit the original JOSM scientific design, which has already been subject to a separate expert peer review.
3. The external review would not duplicate the audit of Environmental Monitoring of Oil Sands management practices released in the 2014 fall reports of the Commissioner of the Environment and Sustainable Development and the Alberta Auditor General.
4. The scope, operations and cost of JOSM (2012-2015) would be outside the scope of the external review.

Scope of the external review

Scientific integrity is defined by rigour, transparency, and the use of internationally recognized quality-assured and quality-controlled standards and protocols. Taking implementation constraints into account, the external review would compare the current state of scientific integrity compared to April 2012.

EXPERT REVIEW QUESTION: What progress has JOSM implementation made in improving the <i>scientific integrity</i> of environmental monitoring of the impacts of oil sands development, and can it be demonstrated? For this review, scientific integrity has the following dimensions:	
Rigour	<ul style="list-style-type: none"> • Relevant questions are addressed through the scientific method using appropriate and consistent methodology. • Monitoring approach incorporates all essential components and results in the gathering of scientifically valid data that is objective, reliable, verifiable and comparable. • Results are analyzed and interpreted in an integrated manner, free from bias; • Any new and innovative methodologies are developed in a scientific manner that ensures validity of the data collected.
Transparency	<ul style="list-style-type: none"> • Data is reported in a manner that is easily accessible to others, allowing independent analysis and conclusions to be drawn. • Field and laboratory protocols, standard operating procedures, analytical standards, data analysis and evaluation techniques are openly available to allow for accurate interpretation and replication of the results.
Standards and protocols	<ul style="list-style-type: none"> • Adoption and implementation of internationally recognized standards and protocols, where applicable.