

Report of the Joint Review Panel

Shell Canada Energy Jackpine Mine Expansion Project

**Application to Amend Approval 9756
Fort McMurray Area**

July 9, 2013

**Joint Review Panel Established by the Federal Minister of the
Environment and the Energy Resources Conservation Board**

[5] The Panel conducted a hearing that began in Fort McMurray, Alberta on October 23, 2012, and concluded in Edmonton, Alberta on November 21, 2012.

[6] On June 17, 2013, the *Responsible Energy Development Act (REDA)* came into force in Alberta. The *REDA* repealed the *ERCA* (which established the ERCB) and created the Alberta Energy Regulator (AER). In accordance with the terms of the *REDA*, the AER assumed all of the ERCB's powers, duties, and functions under Alberta's energy resource enactments, which include the *OSCA*. Under the terms of the *REDA* and its *Transition Regulation*, the AER assumed the position of the ERCB under the Agreement, and it completed the ERCB's responsibilities under the Agreement. Throughout this transition from the ERCB to the AER, the authority of the Panel members continued without interruption in accordance with the *Transition Regulation*.

[7] Section 3 of the *ERCA* required the Panel to consider whether the Project was in the public interest when the Panel conducted the hearing. The Panel has therefore included findings about the public interest in this report to indicate how it considered the public interest when it conducted the hearing. The Panel is also aware of its responsibilities under section 15 of the *REDA* and section 3 of the *REDA General Regulation* and is satisfied that throughout this proceeding and in this decision report it has considered the factors that are identified in those provisions. This includes a consideration of the social and economic effects of the Project and of the effects of the Project on the environment.

Decision

[8] Having regard for its responsibilities under the *REDA*, *ERCA*, *OSCA*, and *CEAA, 2012*, the Panel has carefully considered all of the evidence pertaining to Shell's application. The Panel notes that the Project is in an area that is nearly surrounded by other oil sands mines and in which the government of Alberta has identified bitumen extraction as a priority use. The Panel further notes that Shell's application is for an expansion of an existing oil sands mine project. The Project would provide significant economic benefits for the region, Alberta, and Canada. Although the Panel finds that there would be significant adverse project effects on certain wildlife and vegetation, under its authority as the AER, the Panel considers these effects to be justified and that the Project is in the public interest. The Panel has decided to approve AER Application No. 1554388 and to amend AER Approval 9756, subject to the conditions in appendix 5. The Panel expects Shell to adhere to all of the commitments it made to the extent that those commitments do not conflict with the terms of its AER approval, any other approval or licence affecting the Project, or any law, regulation, or similar requirement that Shell is bound to observe.

[9] The Panel finds that the Project would likely have significant adverse environmental effects on wetlands, traditional plant potential areas, wetland-reliant species at risk, migratory birds that are wetland-reliant or species at risk, and biodiversity. There is also a lack of proposed mitigation measures that have been proven to be effective. The Panel also concludes that the Project, in combination with other existing, approved, and planned projects, would likely have significant adverse cumulative environmental effects on wetlands; traditional plant potential areas; old-growth forests; wetland-reliant species at risk and migratory birds; old-growth forest-reliant species at risk and migratory birds; caribou; biodiversity; and Aboriginal traditional land use (TLU), rights, and culture. Further, there is a lack of proposed mitigation measures that have

environmentally responsible development of the oil sands resource, and this initiative will help promote a better understanding of cumulative effects in the Lower Athabasca region.

[16] The Panel has made 88 recommendations to the federal and provincial governments (appendix 6). The Panel believes that these recommendations are important for the successful implementation of the Project and for the future development of the oil sands area. The Panel also sets out 22 conditions for Shell (appendix 5).

Summary of Key Findings

[17] While some uncertainties continue at the project level, particularly with groundwater modelling, bitumen recovery, tailings management, and reclamation, Shell stated that it will continue to use an adaptive management strategy and will work with regulators to address the uncertainties and site-specific issues associated with the mining and processing of oil sands in its lease areas.

[18] The Panel has concluded that the Project would provide significant economic benefits for the region, the province, and Canada. The Project is an expansion of an existing project and is in an area where the government of Alberta has identified bitumen extraction as a priority use. Shell stated that the Project will result in the recovery of about 325 million cubic metres of dry bitumen over its approximately 40-year life. The municipal, provincial, and federal governments will all receive significant financial benefits as a result of the Project. The Project will provide major and long-term economic opportunities to individuals in Alberta and throughout Canada, and will generate a large number of construction and operational jobs.

[19] The Panel finds that diversion of the Muskeg River is in the public interest, considering that approximately 23 to 65 million cubic metres of resource would be sterilized if the river is not diverted, and considering the low level of predicted environmental effects on water quality and quantity in the lower reaches of the river. The upper reaches of the Muskeg River to be diverted have low fisheries habitat value, and the evidence indicated only limited Aboriginal use of the area. The Panel recognizes that the relevant provincial agencies were not at the hearing to address questions about why the Project is not included in the *Muskeg River Interim Management Framework for Water Quantity and Quality*. The Panel believes that there will be significant and unacceptable sterilization of bitumen if the diversion does not occur.

[20] The Panel recognizes that Shell's proposal to eliminate mature fine tailings (MFT) from the Project's end pit lakes (EPLs) will improve current tailings management practices and could reduce potential toxicity in receiving water bodies and potential fish tainting risks. The Panel agrees with the adaptive management concept and concludes that with the implementation of Shell's proposed mitigation measures and commitments and with the Panel's conditions, expectations, and recommendations, significant adverse environmental effects are unlikely to result from the use of MFT-free EPLs. However, the Panel requires that Shell report on alternatives to treating EPLs passively and provide a comprehensive economic and technical assessment of feasible active water treatment options to ensure that EPLs will meet water quality release criteria at closure.

[21] Although the Panel has concluded that the Project is in the public interest, project and cumulative effects for key environmental parameters and socioeconomic impacts in the region have weighed heavily in the Panel's assessment. In approving this Project, the Panel has set new

adverse cumulative effects. The Panel recognizes that disturbed areas will eventually be reclaimed, but this will not occur for many years, some types of habitat cannot be reclaimed, the landscape will be significantly altered, and some species loss may be irreversible. The long-term and possibly irreversible nature of these effects has significant implications for the sustainability of traditional ecological knowledge, TLU practices, Aboriginal and treaty rights, and culture.

[35] The Panel believes that determining the significance of project and cumulative effects on TLU and on Aboriginal and treaty rights and culture is a complex exercise that cannot be done simply by looking at the availability of the required resources and access to them. A thorough and proper assessment requires an understanding and integration of a host of issues, including effects on the availability of and access to the resources important to Aboriginal people and the combined effects of noise, odours, barriers to access, perceived contamination of resources, socioeconomic effects, cultural practices, and other factors that influence the choices of people about whether to engage in TLU activities. In addition, the number and variety of projects and activities occurring in the oil sands region, the multiplicity of TLU, rights, and cultural practices associated with the various Aboriginal groups, and a lack of consensus on the appropriate methodology and thresholds for determining when significant adverse effects on Aboriginal TLU, rights, and culture might be occurring make it challenging for individual project proponents, as well as panels such as this one, to complete these assessments. The Panel agrees with Shell and the Aboriginal groups participating in this review that completing cumulative effects assessments on a regional basis, rather than on a project-by-project basis, would be more effective and would reduce the potential for individual project cumulative effects assessments to produce inconsistent results.

[36] It is apparent to the Panel that the mitigations being proposed by individual project proponents are not effective at avoiding significant adverse cumulative effects on TLU in the Project region. The Panel acknowledges that the intent of the *LARP* is to take more of a cumulative-effects-based approach to managing environmental effects in the Lower Athabasca Region, but notes that the *LARP* does not specifically address TLU issues. Instead, the *LARP* provides for continued consultation and engagement with Aboriginal peoples to help inform land and natural resource planning in the region. Several of the Aboriginal groups expressed concern that the *LARP* does not address their concerns and does nothing to ensure ongoing traditional use of the land or to protect their Aboriginal or treaty rights. The absence of a management framework and associated thresholds for TLU makes it very difficult for Aboriginal groups, industry, and panels such as this one to evaluate the impact of individual projects on TLU. The Panel believes that to inform land use planning and allow better assessment of both project and cumulative effects on Aboriginal TLU, rights, and culture, a TLU management framework should be developed for the Lower Athabasca Region. The Panel recommends that Alberta develop and implement a TLU management framework for the Lower Athabasca region as a component of the *LARP*. The Panel recommends that the government of Alberta develop this framework with the involvement of all of the Aboriginal peoples who practise their rights in the oil sands region and who are affected by industrial development.

[37] All of the Aboriginal groups that participated in the hearing raised concerns about the adequacy of consultation by Canada and Alberta, particularly with respect to the management of cumulative effects in the oil sands region and the impact of these effects on their Aboriginal and treaty rights. In its submissions to the Panel on the questions of constitutional law, Canada and Alberta both advised the Panel that Crown consultation with Aboriginal groups was not complete

and that the Panel's report would inform the Crown's subsequent decisions about Aboriginal consultation. The Panel notes that it has determined that the Project may affect Aboriginal TLU, rights, and culture and that the cumulative effects of existing, approved, and planned development on Aboriginal TLU, rights, and culture are likely to be significant. The Panel recommends that Canada and Alberta each consider the Panel's findings in this report when it assesses the adequacy of Crown consultation that has occurred to date in relation to the Project, and when it considers what further consultation may be needed or desirable in order to complete their respective consultation obligations to affected Aboriginal groups.

Section 5 of *CEAA, 2012*

[38] Conclusions, mitigation measures, and recommendations related to section 5(1) of the *CEAA, 2012* in this report can be found in the following sections: No Net Loss Plan; Effects of Tailings Ponds on Migratory Birds; Diversion of the Muskeg River; Effects on Wetlands; Effects on Old-growth Forests; Effects on Traditional Plant Potential Areas; Effects on Wildlife and Their Habitat; Human Health; Physical and Cultural Heritage Resources; Capacity of Renewable Resources; and Effects on Aboriginal Traditional Land Use, Rights, and Culture. These sections provide the Panel's findings on

- the effects on fish and fish habitat, and migratory birds; and
- with respect to Aboriginal peoples, the effects in Canada of any change to the environment in health and socioeconomic conditions, physical and cultural heritage, or the current use of lands and resources for traditional purposes, and to any structure, site, or thing that is of historical, archaeological, paleontological, or architectural significance.

[39] Conclusions, mitigation measures, and recommendations related to section 5(2) of the *CEAA, 2012* in this report can be found in the following sections: No Net Loss Plan; Water Withdrawal from the Athabasca River; and Diversion of the Muskeg River. These sections provide the Panel's findings on the effects that may be caused to the environment and are directly linked or are necessarily incidental to a federal authority's exercise of a power or performance of a duty or function that would permit the carrying out of the project. For this Project, the federal regulatory approvals that may be issued are those required by the Department of Fisheries and Oceans and Transport Canada.

biodiversity, and wetland- and old-growth-dependant migratory birds and species at risk, including caribou.

[1475] Shell's updated CEA concluded that the total amount of disturbance for the application case and PDC amounted to 11 per cent and 13 per cent of ACFN's total traditional territory, respectively. The Panel notes, however, that if only the portion of ACFN's traditional territory that occurs within the RSA is considered, the amount of disturbance increases significantly to 35 per cent and 41 per cent of the territory for the application case and PDC, respectively.

[1476] The Panel is of the opinion that ACFN has provided evidence of existing cumulative effects on its TLU activities leading to loss and avoidance of use and that traditional users are finding it increasingly difficult to relocate and find lands of equivalent value. The Panel, therefore, finds that the Project effects, in combination with the effects of other existing, approved, and planned projects, are likely to have a significant adverse effect on ACFN's TLU and Aboriginal and treaty rights in the broader region surrounding the Project.

[1477] The Panel agrees with ACFN that assessing the effects of individual projects on the TLU and Aboriginal and treaty rights of ACFN and the other Aboriginal groups is not efficient or effective and that *LARP* does not specifically address the issues of Aboriginal TLU or rights. The Panel has therefore included a recommendation that Alberta develop, in collaboration with Canada, the Aboriginal groups, and other stakeholders, a TLU management framework as part of the *LARP*.

[1478] The Panel acknowledges and understands the traditional and cultural importance of caribou, wood bison, and moose to ACFN. The Panel notes that the clearing of the land for the Project will reduce habitat availability for all three species and result in increased difficulties accessing the species by ACFN members. Although the Panel has determined that Project and cumulative effects to wood bison and moose were adverse, but not likely to be significant (see the Effects on Wildlife and Their Habitat section), the Panel has included several recommendations to Canada and Alberta regarding the management of these species. The Panel has also included recommendations to the Governments of Canada and Alberta concerning the management of caribou.

Navigation

[1479] The Panel notes ACFN's concerns about low water levels in the Athabasca River and the PAD and the impact these low levels have on navigation, TLU, and the exercise of Aboriginal and treaty rights. The Panel acknowledges that changes in navigation may be occurring but believes the reasons for the observed changes are not clearly understood and are likely the result of a combination of factors, including the discontinuation of dredging, the construction and operation of the Bennett dam, variation in water flows due to natural wet-dry cycles or climate change, and water withdrawals by oil sands operations and other upstream water users.

[1480] The Panel also notes ACFN's concerns about the delay in finalizing the *Phase 2 – Lower Athabasca River Water Management Framework* and that the absence of a commitment to a level which ensures protection of Aboriginal use (ABF) in the draft Phase 2 Framework. The Panel recognizes that federal and provincial agencies have already established what they consider to be acceptable low-flow restrictions within the Framework based in part on consultation with Aboriginal stakeholders. The Panel also understands that the *Water*

Water Quality

[1486] The Panel notes ACFN's concerns related to water quality in the region. Based on the modelling and mitigation proposed by Shell, the Panel concluded that the Project will not result in significant adverse effects to water quality in the Athabasca River, downstream reaches of the Muskeg River, or PAD. The Panel therefore also concluded that the Project would not likely result in significant adverse effects to TLU or aboriginal or treaty rights as a result of water quality issues.

[1487] The Panel acknowledges that ACFN and the other Aboriginal groups raised concerns about the quality of data and assumptions used in Shell's water quantity and quality models and that the modelling is only as reliable as the data and assumptions used to generate and populate the models. Although models will always be subject to some uncertainty, the Panel believes that when fully implemented, the surface water quality management framework under *LARP* and the new *Joint Canada-Alberta Implementation Plan for Oil Sands Monitoring* are appropriate mechanisms to confirm the accuracy of assessment model predictions and to identify any adverse cumulative effects to water quality.

Social, Economic, and Cultural Effects

[1488] The Panel notes ACFN's concerns about the methodology employed by Shell in its CEA. The Panel has similar concerns as summarized in the Shell's Assessment of Effects on Aboriginal Traditional Land Use, Rights, and Culture section.

[1489] The Panel found Shell's cultural assessment of limited value in understanding the effects of the Project on ACFN culture because Shell's assessment was done at a very high level and did not provide an assessment of the potential cultural effects of the Project on each First Nation or Aboriginal group as requested by the Panel. Shell's cultural assessment also relied heavily on Shell's determination of the significance of Project effects to the resources of importance to Aboriginal people, some of which the Panel did not agree with.

[1490] The Panel found the information provided by ACFN with respect to the effects of encroachment on its rights and interests and the social, economic, and cultural effects of the Project and PRM on ACFN to be very helpful in developing the Panel's understanding of the effects of the Project as well as development more generally, on ACFN culture. The Panel finds that ACFN provided extensive evidence of impacts to its TLU and explained how these impacts to its TLU result in impacts to ACFN culture.

[1491] Based on the evidence provided by Shell and ACFN, the Panel believes that oil sands activity and other development and activities within the RMWB have already contributed to significant socioeconomic and cultural change for ACFN. Some of the effects, such as increased employment and income levels, have been positive while others, such as loss of opportunities for TLU activities and migration out of the community, have been negative. The Panel finds that the cumulative effects on some elements of ACFN's culture are already adverse, long-term, likely irreversible, and significant and that these effects are likely to increase in the future if the projects identified in the application case and PDC proceed as planned.

[1492] The Panel is of the opinion that people's cultures are naturally evolving and that the adverse aspects of the cultural changes can be mitigated when people have control over the