

ACTION PLAN FOR AER DECISION 2013-011

SHELL CANADA ENERGY (SHELL) APPLICATION TO AMEND APPROVAL NO. 9756, FORT MCMURRAY AREA

	ACTION ITEM	REQUIRED ACTION/COMMENTS	REFERENCE: D 2013-011	AER PROCESS TO ENSURE FOLLOW-UP	STATUS & EVIDENCE
1	Lease boundary cooperation	The Panel requires Shell to submit a lease boundary update five years before any disturbance along a particular common lease boundary, unless some other period is stipulated by the AER upon application by Shell.	Mine Planning and Resource Conservation section, page 28, paragraph 148	To be added as a condition of approval and tracked in the oil sands mining conditions management database for follow-up	<i>On-going</i>
2	Geotechnical stability of MRDC	The Panel requires Shell to provide, for AER approval, a geotechnical interaction assessment of the North OBDA, the MRDC, and the pit wall before any earth work begins at the interaction area of the North OBDA, the MRDC, and the pit wall.	Mine Planning and Resource Conservation section, page 28, paragraph 150	To be added as a condition of approval and tracked in the oil sands mining conditions management database for follow-up	<i>On-going</i>
3	Mining of PCA	The Panel requires Shell to provide an update on its plans for dewatering and mining through the PCA five years before mining operations reach the PCA. The update is to include a description of any changes that Shell intends to make when dewatering and mining the PCA as a result of Shell's experience at Phase 1.	Surficial Deposit Dewatering and Basal McMurray Aquifer Depressurization section, page 31, paragraph 167	To be added as a condition of approval and tracked in the oil sands mining conditions management database for follow-up	<i>On-going</i>
4	Geohazard Mgmt Plan	The Panel requires Shell to provide an updated geohazard management plan as a part of its annual mine plan submission, commencing with the expansion mining operations.	Devonian Geohazard section, page 33 paragraph 179	To be added as a condition of approval and tracked in the oil sands mining conditions management database for follow-up	<i>On-going</i>
5	Bitumen Recovery	The Panel requires Shell to provide a bitumen recovery improvement plan for AER approval two years before construction. This plan must include details of all bitumen recovery improvements Shell intends to incorporate into its expanded Jackpine Mine plant (i.e., Phase 1 and the Project) design and mine plan.	Bitumen Recovery and Operating Criteria section, page 34, paragraph 189	To be added as a condition of approval and tracked in the oil sands mining conditions management database for follow-up	<i>On-going</i>

6	Measurement Plan	The Panel requires Shell to provide measurement plans for AER approval one year before the expanded Jackpine Mine plant start-up. These plans must include process and instrumentation diagrams, metering, sampling methods, analytical methods, and material balance procedures that satisfy AER measurement requirements.	Bitumen Recovery and Operating Criteria section, page 34, paragraph 190	To be added as a condition of approval and tracked in the oil sands mining conditions management database for follow-up	<i>On-going</i>
7	Commissioning and Start-up Plan	The Panel requires Shell to provide a commissioning and start-up plan for AER approval one year before the expanded Jackpine Mine plant start-up.	Bitumen Recovery and Operating Criteria section, page 34, paragraph 191	To be added as a condition of approval and tracked in the oil sands mining conditions management database for follow-up	<i>On-going</i>
8	Annual Ashphaltene Rejection	The Panel requires that Shell must provide to the AER annually, on or before February 28, a calculation showing the amount of asphaltene rejection based on bitumen production, for the previous year of operation.	Asphaltene Rejection section, page 35, paragraph 196	To be added as a condition of approval and tracked in the oil sands mining conditions management database for follow-up	<i>On-going</i>
9	Ashphaltene Rejection Limit	The Panel requires that on an annual average basis, the amount of asphaltene rejection must be limited to 10 mass per cent based on bitumen production.	Asphaltene Rejection section, page 35, paragraph 196	To be added as a condition of approval and tracked in the oil sands mining conditions management database for follow-up	<i>On-going</i>
10	Solvent Losses Limit	The Panel requires as a condition of approval that on an annual average basis, Shell must limit site-wide solvent losses to not more than 4 volumes per 1000 volumes of bitumen production. This calculation must be based on site-wide losses and must include all solvent losses during all operating conditions.	Solvent Loss and Release of Untreated Froth Treatment Tailings section, page 36, paragraph 201	To be added as a condition of approval and tracked in the oil sands mining conditions management database for follow-up	<i>On-going</i>
11	Froth Treatment Tailings Discharge	The Panel requires as a condition of approval that Shell not discharge untreated froth treatment tailings to the tailings ponds or deposition locations.	Solvent Loss and Release of Untreated Froth Treatment Tailings section, page 36, paragraph 201	To be added as a condition of approval and tracked in the oil sands mining conditions management database for follow-up	<i>On-going</i>
12	Tailings Mgmt Plan	The Panel requires Shell to provide a tailings management plan for AER approval, two years before the expanded project start-up. The plan must indicate that Shell will be compliant with <i>Directive 074</i> from the time of start-up.	Tailings Management section, page 38, paragraph 213	To be added as a condition of approval and tracked in the oil sands mining conditions management database for follow-up	<i>On-going</i>
13	Fluid Tailings at end of mine life	The Panel requires Shell to have no fluid tailings at the end of the mine's life.	Tailings Management section, page 38, paragraph 216	To be added as a condition of approval and tracked in the oil sands mining conditions management database for follow-up	<i>On-going</i>

14	Noise Survey	The Panel requires Shell to provide, within one year after expansion operations start-up, a post-construction, comprehensive sound monitoring survey of the Project, including measurements of expansion equipment, to verify compliance with <i>Directive 038</i> .	Noise section, page 42, paragraph 238	To be added as a condition of approval and tracked in the oil sands mining conditions management database for follow-up	<i>On-going</i>
15	Update NIA	The Panel requires Shell to provide an update to its NIA or complete a comprehensive sound monitoring survey to demonstrate compliance with <i>Directive 038</i> after its selection of new tier IV haul trucks.	Noise section, page 42, paragraph 239	To be added as a condition of approval and tracked in the oil sands mining conditions management database for follow-up	<i>On-going</i>
16	Reduce PAW release	The Panel requires Shell to place low-permeability material against all waterbearing permeable zones exposed in the pits (including the PCA) to effectively reduce the potential for PAW to be released out of the backfill into those permeable zones.	Potential Effects on Groundwater from Process-Affected Water section, page 64, paragraph 375	To be added as a condition of approval and tracked in the oil sands mining conditions management database for follow-up	<i>On-going</i>
17	EPL Research	The Panel requires Shell to provide to the AER annual reports that describe: Shell's EPL research and development efforts for the proceeding year; Shell's plans and timelines to demonstrate the efficacy of EPLs within the next twenty years; and alternatives to passively treating water in EPLs. The report must include all of Shell's efforts and contributions toward collaborating to demonstrate a full-scale EPL. The first such report must be provided two years before the expanded Jackpine Mine plant start-up.	Use of End Pit Lakes section, page 76, paragraph 451	To be added as a condition of approval and tracked in the oil sands mining conditions management database for follow-up	<i>On-going</i>
18	Economic Assessment - EPL	The Panel requires Shell to provide, before beginning mining operations, a comprehensive economic assessment of feasible active water treatment options that Shell could implement to ensure that EPLs would meet water release criteria at closure.	Use of End Pit Lakes section, page 76, paragraph 452	To be added as a condition of approval and tracked in the oil sands mining conditions management database for follow-up	<i>On-going</i>
19	Wetlands reclamation	The Panel requires that Shell uses all necessary strategies, including watershed design, landscape contouring, and succession and revegetation planning to ensure the specified areas evolve into wetlands after closure.	Effects on Wetlands section, page 112, paragraph 661	To be added as a condition of approval and tracked in the oil sands mining conditions management database for follow-up	<i>On-going</i>
20	Wetland reclamation	The Panel requires Shell to provide a report on the status of all stages of wetland reclamation on Phase 1 and the Project as part of its annual closure and reclamation report. The Panel also	Effects on Wetlands section, page 112, paragraph 662	To be added as a condition of approval and tracked in the oil sands mining conditions management database for follow-up	<i>On-going</i>

		requires Shell to report any findings that makes or is aware of related to wetland reclamation research on disturbed oil sands mine sites.			
21	Final reclamation	The Panel requires Shell to remove all benching on mine discard structures before final reclamation.	Reclamation section, page 175, paragraph 1042	To be added as a condition of approval and tracked in the oil sands mining conditions management database for follow-up	<i>On-going</i>
22	Watershed design	The Panel requires that Shell provide, for AER approval, a detailed watershed design report for all mine structures one year before the final placement of reclamation material.	Reclamation section, page 176, paragraph 1043	To be added as a condition of approval and tracked in the oil sands mining conditions management database for follow-up	<i>On-going</i>

The conditions imposed in approvals/licence(s) are monitored by the Alberta Energy Regulator (AER). The AER has developed a process whereby an action plan is developed internally to ensure that AER staff monitor conditions arising from decision reports for compliance. For more information, please contact Fort McMurray Field Centre at (780)-743-7214.