

ACTION PLAN FOR AER DECISION 2018-004

CANADIAN NATURAL RESOURCES LIMITED

APPLICATION FOR A SINGLE-WELL BITUMEN BATTERY WASECA FORMATION, COLD LAKE AREA,

ACTION ITEM	REQUIRED ACTION/COMMENTS	DECISION: 2018-004	AER PROCESS TO ENSURE FOLLOW-UP	STATUS & EVIDENCE
1 Leaning Tree	<p>To reduce risks to the leaning tree, the following mitigation measures must be implemented:</p> <ul style="list-style-type: none"> · Canadian Natural must leave a 19 m no-construction zone along the east edge of the lease area, plus a 10 m radial buffer from the base of the leaning tree, in order to leave a minimum 13 m buffer between the tree and construction and operation activities. · Before starting construction, Canadian Natural must hire a professional arborist to assess whether the leaning tree is still alive and share the arborist's findings with the landowners. If the arborist recommends more mitigation measures to protect the tree during construction, such as temporary supports for the tree, Canadian Natural can consider those recommendations before starting construction, but it will not be required to implement them to satisfy this condition. · If the tree is still alive when construction begins, rather than stripping the topsoil and levelling the site, Canadian Natural must install a permeable geotextile liner and clay over the grass and topsoil to limit ground vibrations and avoid topsoil disturbance, and contour the site so water flows away from the tree. If the landowners do not want the liner and clay to be installed or the site to be contoured, as proposed, Canadian Natural will not be required to implement these measures. 	<p>Section: Paragraph 50 P. 10</p>	<p>Canadian Natural will submit a letter to the AER confirming that the requirement has been met.</p> <p>Canadian Natural will provide updates to the AER field staff as necessary during regular inspection activities.</p>	<p>Completed - The AER conducted a field inspection at the site on September 4, 2018.</p> <p>On May 17, 2019 CNRL submitted a letter to the AER confirming that the requirement has been met.</p>

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2 Noise Control	Canadian Natural must install a quiet-style hydraulic drive head on the well and noise-attenuation buildings over all engines on site. In addition, if Canadian Natural installs a compressor, it must implement the noise control recommendations identified in the NIA report, which include keeping the door closed on the compressor building, installing an acoustic silencer on the engine radiator ventilation opening on the compressor building, and installing a noise-attenuation building ventilation system on the compressor building.	Section: Paragraph 70 P. 13	Canadian Natural will submit a letter to the AER confirming that the requirement has been met. Canadian Natural will provide updates to the AER field staff as necessary during regular inspection activities.	Completed - The AER conducted a field inspection at the site on September 4, 2018. On May 17, 2019 CNRL submitted a letter to the AER confirming that the requirement has been met.
3 Pressure Test	Canadian Natural must pressure test the well casing at the level set out in Directive 013 for medium-risk wells before recompletion activities begin.	Section: Paragraph 103 P. 19	Canadian Natural will submit a letter to the AER confirming that the requirement has been met.	Completed - The AER conducted a field inspection at the site on September 4, 2018. On May 17, 2019 CNRL submitted a letter to the AER confirming that the requirement has been met.

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. The conditions are managed in an action plan that is updated quarterly with statuses of conditions. The action plan defines the action required, timeframes for completion, and a summary of the evidence provided to confirm a condition was met. For more information, please contact the Action Plan Administrator at (403) 297-4289.