



October 10, 2019

Pauline de Jong
Chief Conservation Officer
Office of the Regulator of Oil and Gas Operations
4th Floor, 5201-50 Avenue
Yellowknife, NT
X1A 3S9

**RE: Information Request No.9:
Canadian Natural Resources Ltd. Application for an
Operations Authorization for Well Abandonments (OA-2018-005)**

Dear Madam:

Canadian Natural Resources Limited (Canadian Natural) is responding to the Information Request letter dated October 3, 2019 from the Office of the Regulator of Oil and Gas Operations (OROGO) with the following information:

9.1 Preamble

In Information Request No. 8, CNRL was asked to provide the following:

"an estimate for the cost to a third party of cleaning up a spill as identified in CNRL's response to Information Request No. 5. The cost estimate should include costs for establishment of camp facilities, access roads and other infrastructure that would be required to complete clean-up operations, as well as the clean-up itself and disposal of any contaminated materials."

CNRL's response to Information Request No. 8 provided costs associated with hydrovac, environmental services, laboratory sampling, excavation, trucking and disposal of contaminated soil.

CNRL's response to Information Request No. 8 does not include the requested cost estimates for establishment of camp facilities and access roads.

Cost estimates for the establishment of camp facilities and access roads are necessary as it is possible that a third-party spill clean-up would take place during a different winter work season from when the spill occurred.

Request

Please provide a cost estimate for the establishment of camp facilities and access roads that would be necessary for a third-party clean-up and remediation of the spills as described in CNRL's response to Information Request No. 5.

Canadian Natural Resources Limited

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Response:

CNRL responded in IR#8 with the estimated cleanup cost, assuming cleanup activities occurred during the same work season as a spill, in the event one were to occur. In the unlikely event that a spill was not resolved in a single work season, below is an estimate of the one-off costs that could be expected for a 3rd party cleanup activity. This assumes it is not done in conjunction with reclamation activities of the site following well abandonment.

Due to the minimal number of crews that would be required, services would be staged out of Fort Liard. Activity on the Liard well would be done during summer months, via barge across the Liard River. Activity in the Arrowhead-Netla area would be done via winter access roads.

Activity	Estimated Cost (Liard)	Estimated Cost (Arrowhead-Netla)
Crew Mobilization & Accommodation	\$50,000	\$50,000
Access	\$100,000-\$400,000	\$100,000
Cleanup Cost (previous estimate)	\$40,300	\$40,300
TOTAL	\$190,300 - \$490,000	\$190,300

If you have any questions, please contact the undersigned at arly.castillo@cnrl.com or at (403) 514-7637.

Yours truly,
CANADIAN NATURAL RESOURCES LIMITED

Arly Castillo
Regulatory Coordinator