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Janpeter Lennie-Misgeld
Senior Advisor, Legislation and Policy
Office of the Regulator of Oil and Gas Operations
PO Box 1320
Yellowknife, NT, X1A 2L9

Via Email: OROGO@gov.nt.ca

**RE: Information Request No. 1 Imperial Oil Limited
Proof of Financial Responsibility - Additional Information Required (OA-2021-004-IMP)**

Dear Mr. Lennie-Misgeld,

Imperial Oil Limited (Imperial) received Information Request No. 1 - Proof of Financial Responsibility - Additional Information Required (OA-2021-004-IMP) from OROGO on August 13, 2021.

OROGO has requested more information including a description of any potential impacts of the worst case scenario on Indigenous and other land use, an estimate of the amount of loss or damage that would occur if the spill or debris were not cleaned up to the Regulator's satisfaction, including information on how this estimate was developed and who was involved in its development, and lastly, an estimate on third party clean-up costs.

Imperial trusts that the information included in this response meets OROGO's expectations. If any additional information is required, please contact the undersigned at 587-476-1493 or esther.choi@esso.ca.

Regards,

Esther Choi

Esther Choi, E.I.T.
Project Manager

Below is Imperial's response to OROGO's request for additional information for OA-2021-004-IMP for the following:

- *A description of any potential impacts of the worst case scenario on Indigenous and other land use; and*
 - The likelihood of occurrence of the worst case scenario is very low and consists of fluid release from the well due to a well control problem on site. The potential impacts on Indigenous and other land use would be a result of temporary loss of use of a small (estimated to be 1 to 2 hectare) area of land immediately surrounding the well site. The most likely size of the land affected by a release during winter months is considerably smaller than this, however, some area will be required for equipment staging and movement during the remediation phase.
 - The loss of access would likely be limited to one to two years. Containment and removal of the released fluid would occur almost immediately to take advantage of frozen ground and access conditions. All affected snow and ice would be removed within days of the initial release, where possible. Initial sampling of frozen ground would be conducted. The site would be secured and monitored with soil sampling taking place over the next year. If sampling indicates further remediation is required a second phase of remediation would be planned for the following year.
 - Upon final remediation the affected land would be accessible however the return of traditional use would ideally be delayed allowing regrowth of the native vegetation.
 - Due to the remote location of the site, current and potential stakeholders are not expected to be affected by the worst case scenario and as such, impacts on land use would be minimal.

- *An estimate of the amount of loss or damage that would occur if the spill or debris were not cleaned up to the Regulator's satisfaction, including information on how this estimate was developed and who was involved in its development.*
 - A spill during the winter season, when the work will be executed, will be constrained in the affected area as Imperial's construction practice on locations such as this is to apply a layer of ice to the location prior to setting up the rig and equipment. The layer of ice serves as a barrier to ensure released fluids do not contact the native soil. Rigorous release reporting ensures that all but the very smallest (liter size) releases are immediately recovered.
 - In the unlikely event a release is not cleaned up to the Regulator's satisfaction, it is possible that some area of land, likely less than a hectare, could become unproductive for an extended period of time until further remediation work is completed.
 - As noted in the response to impacts on land use above, the amount of loss or damage that would occur if the spill or debris were not cleaned up to the Regulator's satisfaction would be minimal.
 - Professional Engineers from Remedy Energy Services Inc. and Imperial were involved in the development of this estimate, individuals with 20-30 years of well engineering and well abandonment experience.

- *An estimate for a third party to clean-up the worst case scenario that could occur from a spill or debris during the operation*

Item/Resource	QTY	Unit	\$/unit/day	\$ Total
Camp mobilization and demobilization	2	each	\$200,000	\$400,000
Crew, additional personnel 25 people for 30 days	750	person days	\$275	\$206,250
Travel, amortized over daily basis	750	person days	\$200	\$150,000
Equipment mobilization and demobilization	2	each	\$75,000	\$150,000
Onsite heavy equipment, 6 pieces, excavator, backhoe, hydrovac, steamer	180	machine days	\$2,500	\$450,000
Offsite heavy equipment 6 pieces, semi-vac and tank trucks	180	machine days	\$3,000	\$540,000
Disposal fees	500	m3	\$130	\$65,000
Sampling costs including collection and analysis	100	samples	\$1,500	\$150,000
Cost to maintain winter access (~3.23km)	30	days	\$3,000	\$90,000
Supervision	30	days	\$4,000	\$120,000
Engineering and reporting	40	days	\$4,000	\$160,000
Project management and admin, IOL internal	60	days	\$3,000	\$180,000
Project management and admin, external, third party	60	days	\$1,500	\$90,000
Regulatory applications and reporting	1	each	\$100,000	\$100,000
Follow up and ongoing monitoring	4	trips	\$50,000	\$200,000
Miscellaneous local support services	1	each	\$300,000	\$300,000
Remediation and reclamation	1	each	\$150,000	\$150,000
Contingency	1	each	\$800,000	\$800,000
			TOTAL	\$4,301,250