



2800, 421 7th Avenue SW, Calgary, AB T2P 4K9
Phone (403) 290-3600

June 13, 2018

Bijaya Adhikari
Science and Regulatory Coordinator
Inuvialuit Water Board

Dear Mr. Adihikari:

Re: N7LI-1787 Chevron Canada Limited - Langley K-30 Drilling Sump

In response to your letter to Chevron Canada Resources dated June 6, 2018; MGM Energy is aware of the subsidence issues and is currently assessing potential remedial options. Ground disturbance generated through sump construction activities at K-30 resulted in localized permafrost degradation. This same process has similarly affected the functionality of numerous sumps throughout the Mackenzie Delta, where ice-rich permafrost has begun to melt causing subsidence (ESRF 2004). The permafrost degradation process observed at the K-30 is complex and appears related to numerous interconnected factors (e.g., local terrain and permafrost conditions, subsurface material properties, climate regime, sump waste properties, etc.). Remedial activities that could stabilize the permafrost are limited. Backfilling the depressions with clean fill material appears to be the most rapid way to address the issue of subsidence, water ponding, and thaw degradation around the sump. This remediation activity was conducted at Kumak I-25 in the winter of 2008 (KAVIK-AXYS 2009); however, the operation was unsuccessful at stopping the subsidence process. The technique of backfilling may provide long-term results only if it allows for the permafrost to aggrade into newly added material, creating a buffer zone between the base of the active layer and the upper limit of the massive ice. Because of the complexity encountered at the K-30 sump, MGM feels the most effective mitigation has not yet been determined. Additional information is required before any physical works activities occur. This additional information will provide a more viable and long-term remediation solution.

Should you have any questions please contact me at larry.yoon@paramountres.com



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Sincerely,

Larry Yoon, P.Biol
Environmental Coordinator

cc: John Hawkins, Director Asset Retirement – MGM Energy
Terence Hughes, Regulatory and Community Affairs Representative – MGM Energy
Sheldon Scyrup, Team Lead, Environment & Regulatory – Chevron Canada Resources