

December 2, 2019

7750-4800-32640-02

Stephen Penner, P.L. (Eng) Exploitation Engineering Technologist Canadian Natural Resources Ltd. Calgary, AB T2P 4J8

Dear Mr. Penner,

RE: TEMPORARY PRODUCED WATER DISPOSAL APPROVAL, AMENDMENT #1 MAXIMUM CUMULATIVE INJECTION VOLUME LIMIT REACHED CNRL SEPTIMUS 13-9-81-18; WA# 25459 SEPTIMUS FIELD - HALFWAY FORMATION

Order 14-02-008 Amendment #1, for temporary disposal, was granted for the subject well on February 11, 2015. The approval required injection to cease upon reaching either a maximum cumulative injection volume of 30,000 m³ or a maximum formation pressure of 20,577 kPaa; whichever occurred first. BC Oil and Gas Commission (Commission) records indicate that the subject well was active in February, March and September of this year and that a cumulative volume of 30,000 m³ was reached in March. The cumulative disposal volume for the subject well, as of September 30, 2019, is 39,865 m³.

Order 14-02-008 Amendment #1, Condition 2g) requires that a pressure fall-off test be conducted immediately upon the conclusion of the temporary injection period. Please provide the Commission with the test start date and an estimated date for the submission of the results.

Condition 2j) requires that a report of seismic events be submitted to the Commission when the temporary injection period has concluded. The report must include event magnitude, frequency, and proposed mitigation plans should seismic events be connected to disposal operation. Please submit the report to <u>reservoir@bcogc.ca</u> at your earliest convenience.

Further disposal operations are not permitted to occur in CNRL Septimus 13-9-81-18 (WA# 25459) under the current approval. The subject well may be re-evaluated as a candidate for continuous disposal if an application for disposal is made to the Commission.

Should you have any questions, please contact Ron Stefik at (250) 419-4430 or Kathryn Archibald at (250) 419-4406.

Sincerely,

Ron Stefik, Eng.L. Supervisor, Reservoir Engineering Oil and Gas Commission

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