

May 21, 2024

Enforcement File: 2024-0049-01

Chad Temple, C.E.T.
Regulatory Coordinator
Reg., Stkhldr. & Env.
Canadian Natural Resources Limited
2100 – 855 2nd Street SW
Calgary, AB T2P 4J8

RE: Warning: Overpressure CNRL BIRCH A-85-H/94-A-13 WA 07392

Mr. Temple,

On April 9, 2024, Canadian Natural Resources Limited (CNRL) reported to the British Columbia Energy Regulator (BCER) that CNRL's injection well A-85-H/94-A-13 WA 7392 (the well) had experienced an overpressure event and had lost hydraulic isolation as of April 8, 2024. CNRL noted that it believed the loss of hydraulic isolation began on Thursday April 4, 2024. When operators were at the well on April 8, 2024, to investigate they found the tubing pressure transmitter isolation valve closed. Ultimately CNRL would explain this error as a human factor.

On November 19, 2016, the well was designated a Special Project under Sec 75 of the *Oil and Gas Activities Act* (OGAA). On September 1, 2023, the OGAA became the *Energy Resource Activities Act* (ERAA). Order 16-02-006 dated November 17, 2016, (the Order) allowed CNRL to conduct injection operations at the well under certain conditions contained in the Order. On April 2, 2024, CNRL was granted an amendment (the Amendment) to the Order under Sec 75 ERAA. The Amendment included the conditions from the Order and included additional conditions. Specific to this event are three conditions of the Amendment;

b) Not exceed an injection pressure, measured at the wellhead on the subject well, of 8,100 kPag or the pressure required to fracture the formation, whichever is lesser.

d) Continually measure and record the wellhead casing and tubing pressures electronically.

h) Cease injection and notify the Regulator at Reservoir@bc-er.ca immediately if there are any indications that hydraulic isolation is lost in the wellbore or formation.

CNRL noted the Maximum Well Head Injection Pressure (MWHIP) peaked over the weekend of April 6 & 7, 2024, at 10 818 kPaa. Condition 2(b) of the Amendment specifies the MWHIP is not to exceed 8 100 kPag.

CNRL noted the tubing pressure transmitter isolation valve was closed on April 8, 2024. The cause of the closed valve was human error. This means that for an underdetermined period of time CNRL was not in compliance with Condition 2(d) of the Amendment to continually monitor the tubing pressure electronically.

CNRL reported a loss of hydraulic isolation at the well on April 9, 2024. However, on April 8, 2024, there were CNRL personal at the well to confirm SCADA information who would have noted the loss of hydraulic isolation. CNRL further stated in its April 9, 2024, notice to the BCER that CNRL believed the loss of isolation began on April 4, 2024. Condition 2(h) of the Amendment instructed CNRL to notify the BCER immediately if there are any indications of a loss of hydraulic isolation.

Given the circumstances, CNRL is hereby issued a warning for the following:

1. On or about April 6 & 7, 2024, at or near Fort St. John in the Province of British Columbia, did fail to comply with Condition 2(b) of Order 16-02-006 Amendment 1 by allowing the MWHIP to exceed 8 100 kPag at the well and did thereby contravene Section 75(l)(c.l) of the *Energy Resources Activities Act*.
2. On or about April 8, 2024, at or near Fort St. John in the Province of British Columbia, did fail to comply with Condition 2(d) of Order 16-02-006 Amendment 1 by failing to continually monitor the tubing pressure of the well and did thereby contravene Section 75(l)(c.l) of the *Energy Resources Activities Act*.
3. On or about April 8, 2024, at or near Fort St. John in the Province of British Columbia, did fail to comply with Condition 2(h) of Order 16-02-006 Amendment 1 by failing to immediately notify the BCER of a loss of hydraulic isolation at the well and did thereby contravene Section 82 of the *Energy Resources Activities Act*.

If you have any questions about this matter, please feel free to contact the undersigned.

Sincerely,

<original signed by>

Compliance & Enforcement Officer
BC Energy Regulator