

June 16<sup>th</sup>, 2022

8120-2010-32640-02

Nadia Monaghan  
Senior Water Development Engineer  
Ovintiv Canada ULC  
500 Centre Street SE, PO Box 2850  
Calgary, Alberta T2P 2S5

Dear Ms. Monaghan,

**RE: PRODUCED WATER DISPOSAL SPECIAL PROJECT APPROVAL  
OVV CRP HZ SUNRISE A8-31-78-16; WA# 30818  
SUNRISE FIELD – PADDY-CADOTTE FORMATION**

The Commission has reviewed the application submitted by Ovintiv Canada ULC (Ovintiv) dated August 4<sup>th</sup>, 2021 requesting approval for produce water disposal in the Paddy-Cadotte formation of the subject.

The subject well was purpose drilled horizontally and completed into the Paddy-Cadotte formation for disposal in July of 2021. The formation was completed using a 15-stage open hole packer frac-sleeve system. This well is intended to supplement Ovintiv's existing water resource hub in the Sunrise Paddy-Cadotte.

Attached please find **Order 22-02-001**, designating an area in the Sunrise field, Paddy-Cadotte formation, as a Special Project under section 75 of the Oil and Gas Activities Act, for the operation and use of a storage reservoir for the injection of produced water. This Order includes a number of detailed operational, measurement and reporting conditions. Disposal wells are subject to regular field inspection and audit. Contravention of a condition of this Order may be subject to enforcement under section 62 of OGAA, or suspension or cancellation of the Order under section 75(2)(b). The maximum storage pressure set in condition 2i) shall be interpreted as described in the Commission's letter to Ovintiv, dated June 22<sup>nd</sup>, 2021.

For the inspection requirement of Order condition 2l), please arrange via email to [OGCPipelines.Facilities@bcogc.ca](mailto:OGCPipelines.Facilities@bcogc.ca).

Disposal of fluid with high total dissolved solids content requires adjustment of the wellhead injection pressure to remain below formation fracture pressure. It is the responsibility of the permit holder make adjustments to wellhead injection pressure.

Should you have any questions, please contact Logan Gray at (250) 419-4465 or the undersigned at (250) 419-4430.

Sincerely,



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

Attachment



IN THE MATTER of the application from Oviniv Canada ULC to the Oil and Gas Commission dated August 4<sup>th</sup>, 2021 requesting disposal approval:

**ORDER 22-02-001**

1. Under Section 75(1)(d) of the *Oil and Gas Activities Act*, the Commission designates the operation and use of a storage reservoir for produced water, including flowback from fracturing operations, in the Sunrise field – Paddy-Cadotte as a special project in the following area:

DLS          Twp 78 Rge 16 W6M Section 32 – LDSs 1 - 8

2. Under section 75(2) of the *Oil and Gas Activities Act*, the special project designation in this Order is subject to the following conditions. The Permit Holder shall:
  - a) Inject water into the well OVV CRP HZ Sunrise A8-31-78-16; WA# 30818 Paddy-Cadotte formation from 1,031.5 – 2,615.0 mKB MD.
  - b) Not exceed an injection pressure, measured at the wellhead on the subject well, of 9,775 kPag or the pressure required to fracture the formation, whichever is lesser.
  - c) Inject only through tubing with a packer set as near as is practical above the injection interval.
  - d) Continually measure and record the wellhead casing and tubing pressures electronically.
  - e) Include the disposal operating hours and the maximum injection pressure value on the monthly Petrinex disposal report.
  - f) Cease injection and notify the Commission at Reservoir@bcogc.ca immediately if there are any indications that hydraulic isolation is lost in the wellbore or formation.
  - g) Conduct and submit an annual Surface Casing Vent Flow test to the Commission within 30 days of the completion of the test.
  - h)
    - i) Conduct a reservoir pressure test on the formation in the subject well at least once every two calendar years, with a shut-in period of sufficient length to provide data for calculation of the reservoir pressure, and submit a report of the test within 60 days of the end of the test.
    - ii) Once a month, report to the Commission the reservoir pressure obtained from the bottom hole recorders in each of the following water source wells:

OVV CRP HZ Sunrise A13-33-78-17 WA 26471  
OVV CRP HZ Sunrise 9-34-78-17    WA 28495  
OVV CRP HZ Sunrise A9-34-78-17    WA 28496  
OVV CRP HZ Sunrise A5-29-78-16    WA 29717  
OVV CRP HZ Sunrise A4-28-78-17    WA 29726  
OVV CRP HZ Sunrise B1-27-78-17    WA 29740  
OVV CRP HZ Sunrise 8-31-78-16    WA 30817

- i) Cease injection upon reaching a maximum formation pressure of 8,550 kPaa, measured at 954.8 mKB TVD.
  - j)
    - i) Perform a casing inspection log on the subject well and submit results to the Commission within 30 days of the completion of logging, at an interval of not more than every 10 years, commencing from the date of initial disposal.

- ii) Perform a hydraulic isolation temperature log on the subject well and submit results to the Commission within 30 days of the completion of logging, at an interval of not more than every 5 years, commencing from the date of initial disposal.
- k) Not conduct a hydraulic fracture stimulation on any formation in the subject well without prior Commission approval.
- l) Complete an inspection, satisfactory to the Commission, within 4 weeks of initial disposal operations.



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

DATED AT the City of Victoria, in the Province of British Columbia, this 16<sup>th</sup> day of June 2022.

#### **Advisory Guidance for Order 22-02-001**

- I. A production packer must be set above the injection interval and the space between the tubing and casing filled with corrosion and frost inhibiting fluids, as per section 16(2) of the Drilling and Production Regulation.
- II. Annual packer isolation tests are required to be conducted and the associated report must be submitted to the Commission within 30 days of test completion, as per section 16(3) of the Drilling and Production Regulation.
- III. Injected fluids must be metered and the injection pressure measured at the wellhead, as per section 74 of the Drilling and Production Regulation.
- IV. A monthly disposal statement must be submitted to the Commission via Petrinex not later than the 20<sup>th</sup> day of the month following the reported month, as per section 75 of the Drilling and Production Regulation.
- V. Seismic events must be reported and disposal operations suspended as per section 21.1 of the Drilling and Production Regulation.