



November 21, 2014

9000-2600-32640-02

Greg Dickie
Director Regulatory Affairs and Corporate Safety
Secure Energy Services
#3600, 205 5th Avenue SW
Calgary, AB
T2P 2V7

Dear Mr. Dickie,

**RE: NON-HAZARDOUS WASTE AND PRODUCED WATER DISPOSAL
SPECIAL PROJECT; AMENDMENT #1
SECURE DAWSON CREEK A11-4-79-14; WA# 24497
BLUESKY FORMATION**

Approval for disposal of non-hazardous waste and produced water, Order 09-02-001, was issued for the subject well, Bluesky formation, on March 31, 2009. The Commission is presently amending disposal well approvals to conform to current requirements.

The subject well was drilled in October 2008 and commenced disposal in July 2010. Injection performance, both monthly wellhead injection pressures and rates, has since declined. The amended approval includes a wellhead injection pressure limit based on current calculation methodology, as well as a stipulation on the maximum reservoir pressure. As a reservoir pressure test has not occurred since disposal commenced, it is the expectation of the Commission that a test be performed as soon as practicable.

Attached please find **Order 09-02-001 Amendment #1** designating an area in the Dawson Creek field – Bluesky formation as a Special Project under section 75 of the *Oil and Gas Activities Act*, for the use of a storage reservoir for the disposal of non-hazardous waste and produced water. This Order contains a number of detailed operational conditions. Additional general information regarding disposal wells is available on the Commission's website at <http://www.bcogc.ca/industry-zone/documentation/Subsurface-Disposal>.

The Ministry of Environment identifies the type of effluent approved for injection in the separate Waste Discharge Permit, granted under the Environmental Management Act.

In certain circumstances, disposal well operation may induce seismicity. The Commission advises that disposal well permit holders monitor seismic events in proximity to the well and be prepared to modify operations to mitigate induced seismicity. Permit holders may monitor seismic events through the Natural Resources Canada seismic monitoring network at <http://www.earthquakescanada.nrcan.gc.ca/recent/index-eng.php>.

Should you have any questions, please contact the undersigned at (250) 419-4430 or Michelle Harding at (250) 419-4493.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Ron Stefik', is written over a horizontal line.

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


Attachment

ORDER 09-02-001 Amendment #1

- 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 the disposal of non-hazardous waste and produced water, into the Bluesky formation – Dawson Creek field as a special project in the following area:

DLS Twp 79 Rge 14 W6M Section 4- Lsds 11, 12, 13, 14

- 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 non-hazardous waste and produced water only into the well Secure Dawson Creek A11-4-79-14; WA# 24497 – Bluesky formation (perforations from 1291 mKB to 1296 mKB).
 - b) Hold a valid Permit under the Environmental Management Act for the disposal of non-hazardous waste.
 - c) Not exceed an injection pressure, measured at the wellhead on the subject well, of 16,320 kPag or the pressure required to fracture the formation, whichever is lesser.
 - d) Inject only through tubing with a packer set as near as is practical above the injection interval.
 - e) Continually measure and record the wellhead casing and tubing pressures electronically.
 - f) Cease injection and notify the Commission immediately if hydraulic isolation is lost in the wellbore or formation.
 - g) Submit the annual packer isolation test report to the Commission within 30 days of the completion of the test.
 - h) Include the disposal operating hours and the maximum injection pressure value on the monthly BC-S18 disposal statement.
 - i) Conduct a reservoir pressure test on the formation in the subject well, within 90 days of the date of this order and annually thereafter, 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.
 - j) Cease injection upon reaching a maximum formation pressure of 13,900 kPaa.
 - k) 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 initial disposal operation.
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 operation.
 - l) Not conduct a hydraulic fracture stimulation on any formation in the subject well without prior Commission approval.



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

DATED AT the City of Victoria, in the Province of British Columbia, this 21st day of November 2014

Advisory Guidance for Order 09-02-001 Amendment #1

- I. A production packer must be set above the injection interval and the space between the tubing and casing filled with corrosion inhibiting fluids, as per section 16(2) of the Drilling and Production Regulation.
- II. Annual packer isolation tests are required, as per section 16(3) of the Drilling and Production Regulation.
- III. Injected fluids must be metered, as per section 74 of the Drilling and Production Regulation.
- IV. A monthly disposal statement must be submitted to the Commission not later than the 25th day of the month following the reported month, as per section 75 of the Drilling and Production Regulation.