



November 29, 2019

6400-4800-59240-16

Joshua Smith
Exploitation Engineer
Storm Resources Ltd.
Suite 600, 215 - 2 Street SW
Calgary, AB T2P 1M4

Dear Joshua Smith:

RE: ACID GAS DISPOSAL APPROVAL
SRL HZ NIG c-38-G/94-H-4; WA# 37395
NIG CREEK FIELD – HALFWAY FORMATION

The Commission has reviewed the application, submitted by Storm Resources Ltd. (Storm), dated October 17th, 2019 requesting approval to operate the subject well for acid gas disposal into the Halfway formation. Storm intends to use this location to dispose of by-product acid gas from a sour gas processing plant at b-48-G/94-H-4. The subject well was purpose-drilled horizontally in the Halfway formation for acid gas disposal in July of 2019. The well was hydraulically stimulated using a multistage, sliding sleeve casing liner. 16 stages were planned, however the toe stage was not completed as the coiled tubing was not able to open the port. Information and test results indicate that the subject well and reservoir are suitable for acid gas disposal operation.

Attached please find **Order 19-16-001**, designating an area in the Nig Creek field – Halfway 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 disposal of acid gas. This Order includes a number of detailed operational conditions including: continuous tubing and casing pressure measurements, a maximum wellhead injection pressure, an ultimate reservoir pressure limit, as well as wellbore integrity monitoring and reporting requirements. 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).

For the inspection requirement of Order condition 2h), please arrange via email to OGCPipelines.Facilities@bcogc.ca.

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

Sincerely,

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

Ron Stefik, EngL
Supervisor, Reservoir Engineering
Oil and Gas Commission

Wellbore Integrity

- m) Ensure a Wellhead Emergency Shut-Off Device and Subsurface Safety Valve (SSSV) are installed to operate "fail-safe" and are linked to H₂S detector heads at the wellhead.
- n) Implement appropriate corrosion and freeze protection measures in the casing-tubing annulus.
- o) Conduct function testing of SSSV at least annually, or as recommended by API 14B or the manufacturers - whichever requires more rigorous function testing.
- p) Conduct SSSV retrieval and inspection as per API 14B or the manufacturers recommended practice – whichever is more rigorous.
- q) Annually confirm the Subsurface Safety Valve is capable of activation remote from the wellhead.
- r) Immediately suspended all injection operations if any injection equipment, monitoring equipment or safety devices considered necessary for safe operation should fail.
- s) Cease injection and notify the Commission immediately if hydraulic isolation is lost in the wellbore or formation.
- t)
 - i) Perform 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 10 years, commencing from the date of initial disposal. Through tubing logging is acceptable.
 - 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 5 years, commencing from the date of initial disposal.
- u) Install a barricade around the wellhead that is capable of withstanding vehicle collision.
- v) Not conduct a hydraulic fracture stimulation on any formation in the subject well without prior Commission approval.
- w) Submit a Progress Report to the Commission for each six month period the project is in operation. The Progress Report must be filed within 60 days after the end of each period and must contain the information specified in the Acid Gas Progress Report Requirements document found on the OGC website here: <http://www.bcogc.ca/industry-zone/documentation/Subsurface-Disposal>.
- x) Prior to abandonment of the disposal zone or well, conduct a reservoir pressure test on the formation in the subject well, 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.
- y) Do not remove the packer in the subject well unless approved to do so by the Commission.



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

Advisory Guidance for Order 19-16-001

- 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 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 20th day of the month following the reported month, as per section 75 of the Drilling and Production Regulation.
- V. All fluid analyses must be submitted with 30 days of tests as per section 34(5)(a) of the Drilling and Production Regulation.
- VI. Seismic events must be reported and disposal operations suspended as per section 21.1 of the Drilling and Production Regulation.