BC Oil & Gas COMMISSION

August 7, 2020 8120-2600-32640-02

Nicholas Haddow
Regulatory Specialist
AQT Water Management Inc.
700 – 1816 Crowchild Trail NW
Calgary, AB T2M 3Y7

Dear Mr. Haddow,

RE: EXTENDED INJECTIVITY TEST
AQT SUNRISE 7-24-78-27; WA# 35043
SUNRISE FIELD – BLUESKY FORMATION

Commission staff have reviewed the request from CG Engineering Ltd. on behalf of AQT Water Management Inc. (AQT) dated July 30th, 2020, requesting an extended injectivity test of 1,500 m^3 into the Bluesky formation of the subject well.

The subject well was drilled and completed into the Cadomin and Nikanassin formations in 2017. Approval for injectivity testing for the Cadomin formation was granted January 24, 2018 by Order 18-02-002 while the Nikanassin was found to be unsuitable for disposal and was suspended. Approval for continued disposal was granted by Amendment #1 on March 8, 2018. Amendment #2 was issued April 30, 2019 to add requirements for groundwater monitoring for AQT's voluntary groundwater monitoring wells. The subject well was active as a disposal well from March 2018 until November 2019 with a cumulative injection volume of 102,310 m^3. In early 2020, a pressure test showed that the Cadomin had reached its maximum allowed reservoir pressure and was zonally abandoned; Order 18-02-002 was cancelled on March 20, 2020. Subsequently, AQT planned to use the Nikanassin for disposal but they were unsuccessful in achieving the desired downhole equipment configuration and opted instead to abandon the Nikanassin. On June 8, 2020, AQT submitted a proposal for commingled disposal into the Gething and Bluesky formations. The Gething was perforated on July 1, 2020 and was found to be unsuitable for disposal and was abandoned. On July 4, 2020, the Bluesky was perforated and showed potential for disposal and was hydraulically fractured on July 27.

Attached please find **Order 20-02-007**, designating an area in the Sunrise field, Bluesky formation, as a Special Project under section 75 of the Oil and Gas Activities Act, for the temporary operation and use of a storage reservoir for the injection of produced water. This authorization does not warrant that a future disposal approval will be issued. Any future disposal approval will be subject to results of testing and logging as well as a hydrogeology review. AQT may exceed the MWHIP for the purpose of a step rate test, however injection pressure must remain below the MWHIP for the extended injection period following the step rate test.

Additional general information regarding disposal wells is available on the Commission's website at http://www.bcogc.ca/industry-zone/documentation/Subsurface-Disposal.

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

Sincerely,

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

Attachment

IN THE MATTER of the application from CG Engineering Ltd. on behalf of AQT Water Management Inc. to the Oil and Gas Commission (Commission) dated July 30, 2020 for an extended injectivity test:

ORDER 20-02-007

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

DLS Twp 78 Rge 17 W6M Section 24 – LSDs 1, 2, 7, and 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 AQT Sunrise 7-24-78-17; WA# 35043 Bluesky formation from 1,411.0 – 1,420.0 mKB MD.

b) Not exceed an injection pressure, measured at the wellhead on the subject well, of 12,200 kPag or the pressure required to fracture the formation, whichever is lesser.

c) If the fluid injected is not fresh water, inject only through tubing with a packer set as near as is practical above the injection interval.

d) The total volume of injected water must not exceed 1,500 m^3.

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

DATED AT the City of Victoria, in the Province of British Columbia, this 7th day of August, 2020.