



INDUSTRY BULLETIN

2015-21

August 6, 2015



Drilling and Production Regulation Amended

The BC Oil and Gas Commission (Commission) recently approved amendments to the Drilling and Production Regulation. The changes strengthen existing regulations and streamline definitions. Highlights include:

- A requirement listing actions to be taken in the event of a seismic event occurring within a three-kilometre radius of a disposal or fracturing operation. Previously a permit condition, this has been put into regulation.
- The concept of “daily gas allowable” was made consistent with “daily oil allowable,” enabling a minimum allowable to be available for every well.
- Enhanced testing and analysis requirements, including isotope data sampling on exploratory wildcat and exploratory outpost wells.
- Fire prevention requirements establishing a safety distance between flares/incinerators and roads, buildings, and assorted other features. The amendment establishes distances appropriate to any given feature.
- Waste storage regulations were upgraded, in particular to account for the use of above ground, lined structures that store fluids for hydraulic fracturing operations.
- Reservoir storage provisions have been extended to carbon dioxide storage.

A full list of amendments to the Drilling and Production Regulation is attached to this bulletin.

If you have any questions regarding this bulletin, please contact:

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PROVINCE OF BRITISH COLUMBIA
REGULATION OF THE BOARD OF THE OIL AND GAS COMMISSION

Oil and Gas Activities Act

The board of the Oil and Gas Commission orders that the Drilling and Production Regulation, B C Reg 282/2010, is amended as set out in the attached Schedule.

DEPOSITED

July 30, 2015

B.C. REG. 159/2015

July 29, 2015
Date


Chair, BOARD OF DIRECTORS

(This part is for administrative purposes only and is not part of the Order)

Authority under which Order is made:

Act and section Oil and Gas Activities Act, S.B.C. 2008, c. 36, ss 106, 111 and 112

Other _____

July 13, 2015

R/351/2015/96

SCHEDULE

1 Section 1 of the Drilling and Production Regulation, B.C. Reg. 282/2010, is amended

- (a) by repealing the definition of “API”,*
- (b) in the definition of “daily gas allowable” or “DGA” by adding “in accordance with section 7 (7) or as otherwise specified in writing in a permit or a designation” after “factors”,*
- (c) in the definition of “gas processing plant” by repealing paragraph (a) and substituting the following:*
 - (a) uses, for the exclusive purpose of processing low-volume fuel gas,*
 - (i) a regenerative system for the removal of hydrogen sulphide or carbon dioxide and emits less than 2 tonnes/day of sulphur, or*
 - (ii) a liquid extraction process such as refrigeration to extract hydrocarbon liquids from a gas stream, or,*
- (d) in the definition of “unadjusted daily oil allowable” by striking out “or UDOA means” and substituting “or “UDOA” means”, and*
- (e) by adding the following definitions:*
 - “ASME Standard B31.3” means ASME Standard B31.3, Process Piping, as amended from time to time,*
 - “CSA Standard Z341” means CSA Standard Z341, Storage of hydrocarbons in underground formations, as amended from time to time,*
 - “CSA Standard Z662” means CSA Standard Z662, Oil and gas pipeline systems, as amended from time to time,*
 - “CSA Standard Z741” means CSA Standard Z741, Geological storage of carbon dioxide, as amended from time to time,*
 - “oil and gas road” has the same meaning as in the Oil and Gas Road Regulation,*
 - “unadjusted daily gas allowable” or “UDGA” means the greater of*
 - (a) 60 000 m³, and*
 - (b) the volume of gas determined from reservoir parameters and approved by an official,*
 - except in the case of concurrent producers, in which case paragraph (b) applies,*
 - “unused equipment” means equipment, at an oil and gas activity site, that*
 - (a) is related to a decommissioned activity,*
 - (b) is dismantled or partially dismantled to render the equipment inadequate for use,*
 - (c) is in a derelict condition, or*
 - (d) has been inactive for 10 years or longer, .*

2 *Section 4 (1) is amended*

- (a) *in paragraph (k) by adding “, (6.1)” after “(2 1)”, and*
- (b) *in paragraph (m) by adding “(4) and” after “section 41”.*

3 *Section 7 is amended by adding the following subsection:*

- (7) For the purposes of the definition of “daily gas allowable” in section 1, daily gas allowable is.

$$DGA = UDGA \times F_{OTP}$$

where

- DGA = daily gas allowable,
- UDGA = unadjusted daily gas allowable,
- F_{OTP} = off-target penalty factor

4 *Section 16 is amended*

- (a) *in subsection (1) (a) by striking out “tools or equipment” and substituting “tools and equipment” and by striking out “and accepted industry practices”,*
- (b) *in subsection (2) (b) by adding “and frost” after “corrosion”, and*
- (c) *by repealing subsection (3) (b) and substituting the following:*
 - (b) submit a report of the annual segregation test and any repairs completed under paragraph (a) to the commission within 30 days of completing the test

5 *The following section is added:*

Induced seismicity

- 21.1** (1) During fracturing or disposal operations on a well, the well permit holder must immediately report to the commission any seismic event within a 3 km radius of the drilling pad that is recorded by the well permit holder or reported to the well permit holder by any source available, if
- (a) the seismic event has a magnitude of 4.0 or greater, or
 - (b) a ground motion is felt on the surface by any individual within the 3 km radius.
- (2) If a well is identified by the well permit holder or the commission as being responsible for a seismic event that has a magnitude of 4.0 or greater, the well permit holder must suspend fracturing and disposal operations on the well immediately
- (3) Fracturing and disposal operations suspended under subsection (2) may continue once the well permit holder has implemented operational changes satisfactory to the commission to reduce or eliminate the initiation of additional induced seismic events

6 Section 26 (c) is amended by striking out "in duplicate" after "the commission".

7 Section 34 is amended

 (a) by repealing subsection (5) and substituting the following:

- (5) A well permit holder must submit the following to the commission within 30 days of analysis completion
 - (a) if tests from a well allow good sampling, a report of all analyses made of any oil, gas, hydrocarbon liquid or formation water recovered from each formation,
 - (b) if performed, a report of all isotopic analyses of mud gas, headspace gas, produced gas, surface casing flow gas, or any other gas associated with a well, and

 (b) by adding the following subsection:

- (6.1) A well permit holder of an exploratory outpost well or an exploratory wildcat well must
 - (a) capture a minimum of 15 mud gas isotope data samples per 1 000 m interval between the base of the surface casing and either
 - (i) the total depth in a vertical well, or
 - (ii) the point where deviation exceeds 80° from the vertical in a horizontal well, and
 - (b) submit an analysis of the isotope data samples captured under paragraph (a) to the commission within 30 days of analysis completion.

8 Section 39 (7) is repealed and the following substituted:

- (7) If a well is equipped with an artificial lift after October 4, 2010, and the hydrogen sulphide content of the gas exceeds 100 ppm, the permit holder must,
 - (a) if a pumpjack is the method of artificial lift,
 - (i) install on the stuffing box a device that will seal off the well in the event of a polish rod failure, and
 - (ii) install an automatic vibration shutdown system that will safely shut down the pumpjack, or
 - (b) if paragraph (a) does not apply, maintain a system that will shut down the artificial lift if a leak is detected.

9 Section 41 is amended

- (a) in subsection (3) by striking out "or an occurrence of gas migration",
- (b) in subsection (3) (a) by striking out "or gas migration",
- (c) in subsection (4) (b) by adding "a surface casing vent flow report" after "submit" and by striking out "a record of the test" and substituting "of the surface casing vent flow.", and

(d) by adding the following subsection:

- (4 1) On discovery of an occurrence of gas migration, a permit holder must
 - (a) immediately notify the commission of the gas migration,
 - (b) evaluate the cause and source of the gas migration and complete a risk assessment of the gas migration, and
 - (c) submit to the commission without delay a report respecting the evaluation and risk assessment completed under paragraph (b).

10 *Section 42 is amended*

- (a) in subsection (2) by striking out “subsections (3) to (5)” and substituting “subsections (3) and (5)”, and*
- (b) by repealing subsection (4).*

11 *Section 44 is amended by adding the following paragraph:*

- (c.1) that a flare pit is constructed only if the construction is specifically authorized in the well or facility permit, .

12 *Section 47 (c) is repealed and the following substituted:*

- (c) flares and incinerators are located at least
 - (i) a safe distance from any oil and gas road or resource road,
 - (ii) 80 m from any other public road,
 - (iii) 100 m from any permanent building, installation or works that is not associated with an oil and gas activity, and
 - (iv) 100 m from any place of public concourse, .

13 *Section 48 is repealed and the following substituted:*

Position of tanks and production equipment

- 48** A permit holder must ensure that any petroleum storage tanks and production equipment for a well or facility for which the permit holder is responsible are located at least
 - (a) a safe distance from any oil and gas road or resource road,
 - (b) 80 m from any other public road,
 - (c) 100 m from any permanent building, installation or works that is not associated with an oil and gas activity, and
 - (d) 100 m from any place of public concourse

14 *Section 49 is amended*

- (a) by renumbering the section as section 49 (1), and*

(b) *by adding the following subsection:*

- (2) Subject to subsection (1), a permit holder must lock or cap seal any valve or device that can bypass or disable a pressure relieving valve or device, or an emergency shutdown device, at a producing well or facility

15 *Section 51 is amended by adding the following subsections:*

- (5) A well permit holder who uses an earthen pit to store water-based fluids that have a concentration of total dissolved solids greater than 4 000 ppm must
 - (a) obtain a facility permit that authorizes the earthen pit, and
 - (b) ensure that the earthen pit is designed by and installed under the supervision of a professional engineer licensed or registered under the *Engineers and Geoscientists Act*.
- (6) A well permit holder who uses an above ground structure with a liner as the primary means of containment to store water-based fluids with a concentration of total dissolved solids greater than 4 000 ppm must ensure that
 - (a) the fluids have been generated from or are being stored for the purpose of hydraulic fracturing operations,
 - (b) the structure is not located within 100 m of the natural boundary of a water body unless the structure is on a permitted well location,
 - (c) the capacity of each structure is not greater than 6 600 m³,
 - (d) the structure is located and constructed in a place and manner that ensures the contained fluids will not migrate beyond the lease boundary in the event of a containment failure,
 - (e) the commission is satisfied that the retaining walls of the structure are capable of withstanding the hydraulic pressure of the contents at full capacity,
 - (f) the installation of the liner system is completed to the satisfaction of the commission,
 - (g) the ground surface has been prepared to the satisfaction of the commission,
 - (h) the structure is filled to not more than 50 cm below the point of overflow at any given time,
 - (i) the structure is equipped with measures to prevent waterfowl from coming in contact with the fluids,
 - (j) when the structure contains fluid, it is inspected daily for leaks and a record of inspection is maintained until the site is decommissioned,
 - (k) any sign of leakage is reported to the commission within 24 hours of discovery, and
 - (l) the structure is decommissioned and removed from the site within one year from the date of first use unless there exists an engineered, lined or otherwise impermeable secondary containment system designed and maintained to be capable of holding a minimum of 110% of the fluid in the structure

16 *Section 53 is amended*

- (a) *in paragraph (e) by adding "that" after "a well or facility,"*
- (b) *in paragraphs (e), (f) and (g) by striking out "natural gas liquids or natural gas byproducts" and substituting "natural gas liquids, natural gas byproducts or water" and by adding "or injected into" after "are produced from", and*
- (c) *in paragraph (g) by striking out "EFM" and substituting "electronic flow measurement (EFM)".*

17 *Section 65 (2) (d) is amended by adding "as set out in section 7 (3) of this regulation" after "applies".*

18 *Section 67 is amended by adding the following subsection:*

- (3) If any other natural gas sampling and analysis is performed on a well, the well permit holder must submit to the commission a report of the component analyses of the natural gas and liquids within 60 days of the sampling.

19 *Section 74 is amended by adding "and that the injection pressure at the wellhead is measured" after "metered".*

20 *Section 75 is amended by adding "the maximum wellhead injection or disposal pressure and the total monthly operating hours," after "or disposed of,".*

21 *Section 78 is amended*

(a) *by adding the following subsection:*

- (1.1) A facility permit holder must ensure that all tools and equipment used in facility operations are installed and operated in accordance with the manufacturer's specifications or sound engineering practices.

(b) *in subsection (2) by striking out "as amended from time to time,"*

(c) *in subsection (3) (a) and (b) by striking out "as amended from time to time",*

(d) *in subsection (3.1) by striking out "subsection (1)" and substituting "subsection (3)", and*

(e) *by adding the following subsection:*

- (6) A facility permit holder must ensure that
 - (a) the facility is maintained in a condition that minimizes hazards, including hazards associated with pits, holes, equipment and storage of materials, and
 - (b) the facility site is clean and free of garbage, debris and unused equipment

22 *Section 80 is amended*

(a) *in subsections (1) and (2) by striking out "as amended from time to time", and*

(b) by adding the following subsection:

- (3) A well permit holder of a well that is part of a special project for carbon dioxide storage designated under section 75 of the Act must construct and operate the well in accordance with CSA Standard Z741