

## Decision Summary RA20019

This document summarizes my reasons for issuing Approval RA20019 under the *Agricultural Operation Practices Act* (AOPA). Additional reasons are in Technical Document RA20019. All decision documents and the full application are available on the Natural Resources Conservation Board (NRCB) website at [www.nrcb.ca](http://www.nrcb.ca) under Confined Feeding Operations (CFO)/CFO Search. My decision is based on the act and its regulations, the policies of the NRCB, the information contained in the application, and all other materials in the application file.

### 1. Background

On March 18, 2020, Brando Holsteins Inc. and Wim and Sylvia Schakel (Brando Holsteins) submitted a Part 1 application to the NRCB to expand an existing dairy CFO. The Part 2 application was submitted on June 17, 2020. On August 20, 2020, I deemed the application complete.

The proposed CFO expansion involves:

- Increasing livestock numbers from 350 to 700 milking cows (plus associated dry cows and replacements)
- Constructing a heifer barn 180.7 m x 34.6 m
- Constructing a manure storage pad for the heifer barn 15 m x 15 m
- Expanding the existing earthen liquid manure storage (EMS) from 62 m x 78 m to 125 m x 55 m (8 m deep)

The application also includes the construction of a 16 m x 16 m milking parlor extension. This facility is an “ancillary structure,” under section 1(1)(a.1) of the Agricultural Operations, Part 2 Matters Regulation, because it will not be used to store or collect manure or to confine livestock. Therefore, under section 4.1 of that regulation, this structure does not need to be permitted under the act.

Under AOPA, this type of application requires an approval. (This is one of several types of “permits” issued under AOPA. For an explanation of the different types and when each one applies, see [www.nrcb.ca](http://www.nrcb.ca).)

#### a. Location

The CFO is located at SW 18-39-25 W4M in Lacombe County, roughly 12 km southeast of Blackfalds. The terrain is rolling with a gentle slope towards Jones Creek which is located approximately 2.5 km to the east. There is also an un-named intermittent tributary to Jones Creek (a common body of water) located approximately 25 m from the CFO’s EMS.

#### b. Existing permitted facilities

The CFO is grandfathered with a deemed registration under section 18.1 of AOPA which includes Lacombe County issued development permit 87/96, issued July 15, 1996. The deemed registration allows the construction and operation of a 150 cow dairy CFO.

Since AOPA came into effect on January 1, 2002, the NRCB has issued the CFO Approval RA06010 and Authorizations RA11024 and RA15052 on May 31, 2006, August 22, 2011 and

February 16, 2016, respectively. Collectively, these NRCB permits and the CFO's deemed registration allow Brando Holsteins to construct and operate a 350 milking cow (plus associated dry cows and replacements onsite) dairy CFO. The CFO's deemed facilities are listed in the appendix to Approval RA20019. The CFO's grandfathered status is explained in Decision Report RA06010.

## **2. Notices to affected parties**

Under section 19 of AOPA, the NRCB is required to notify (or direct the applicant to notify) all parties that are "affected" by an approval application. Section 5 of AOPA's Part 2 Matters Regulation defines "affected parties" as:

- the municipality where the CFO is or is to be located
- any other municipality whose boundary is within a specified distance from the CFO, depending on the size of the CFO
- all persons who own or reside on land within a specified distance from the CFO, depending on the size of the CFO

For this application, the distance is 1.5 miles. (The NRCB refers to this distance as the "affected party radius.")

Municipalities that are affected parties are defined by the act to be "directly affected" and are entitled to provide evidence and written submissions. Lacombe County is an affected party (and therefore also a directly affected party) because the CFO is located within its boundaries.

All other parties who receive notice of the application may request to be considered "directly affected." Under NRCB policy, all individuals who own or reside on land within the affected party radius are presumed to be "directly affected" if they submit a written response to the notice within the prescribed timeline. See NRCB Operational Policy 2016-7: *Approvals*, part 6.2.

Under section 20 of the act, all directly affected parties are entitled to a reasonable opportunity to provide evidence and written submissions regarding the application.

All directly affected parties are also entitled to request an NRCB board review of the approval officer's decision on the approval application.

The NRCB published notice of the application in the Lacombe Express on August 20, 2020 and posted the full application on the NRCB website for public viewing. The NRCB also emailed referral letters and a copy of the complete application to Lacombe County, Alberta Health Services (AHS), Alberta Environment and Parks (AEP), Alberta Agriculture and Forestry (AF), Alberta Transportation (AT) and right of way holders: Lynx Energy, Nova Chemicals and Chain Lake Gas Coop Ltd. Seventy-four courtesy letters were sent to people identified by Lacombe County as owning or residing on land within the affected party radius.

## **3. Responses from the municipality and referral agencies**

I received responses from Lacombe County, AHS, AEP, AF, and AT. No response was received from the above noted right of way holders.

Ms. Allison Noonan, a planning services administrative assistant with Lacombe County, provided a written response on behalf of Lacombe County. As noted in section 2, Lacombe

County is a directly affected party.

Ms. Noonan stated that the application is consistent with Lacombe County's municipal development plan and land use bylaw. The application's consistency with Lacombe County's municipal development plan and land use bylaw are addressed in Appendix A, attached.

Ms. Pamela Kutuadu, a public health inspector/executive officer with AHS, recommended that the CFO follow the setback distances in the Nuisance and General Sanitation Regulation (under the *Public Health Act*). She also discussed the protection afforded to groundwater provided by the soil under the CFO, fly control measures, dead animal disposal and dust control. Her response concluded that AHS has no objections to the proposed development.

Ms. Laura Partridge, a senior water administration officer with AEP, indicated that applications were filed under the *Water Act* for additional licensing and did not raise concerns with this application.

Mr. Al Spink, a member of the inspection and investigation section of AF's animal health and assurance branch, discussed the application with me; he did not raise any concerns with the application.

Ms. Carly Cowles, a representative of AT, provided the CFO with a roadside development permit and did not raise concerns with the proposed CFO expansion.

#### **4. Responses from other parties**

The NRCB received responses from two parties in relation to this application. One response was a statement of support for the application from Darcy Kroetsch of South Shore Enterprises Ltd. The other response to the application was from Jack and Danielle Bruning and expressed concerns related to groundwater supply. These concerns are addressed in Appendix B.

Both of the parties who submitted responses own or reside on land within the one and a half mile radius for affected persons. Because of their location within this radius, they are presumed to be directly affected by the application.

In addition to these two parties, Ted and Ingrid Vander Meulen provided Brando Holsteins with a minimum distance separation waiver as part of the application. As per NRCB policy, since the Vander Muelen's provided the waiver, they are also considered to be a directly affected party.

#### **5. Environmental risk screening of existing and proposed facilities**

When reviewing new approval applications for an existing CFO, NRCB approval officers normally assess the CFO's existing buildings, structures, and other facilities, using the NRCB's environmental risk screening tool (ERST) to determine the level of risk they pose to surface water and groundwater. This tool provides for a numeric scoring of risks, within either a low, moderate, or high risk range. (A complete description of this tool is available under CFO/Groundwater and Surface Water Protection on the NRCB website at [www.nrcb.ca](http://www.nrcb.ca).) However, if those risks have previously been assessed, the approval officer will not conduct a new assessment, unless site changes are identified that require a new assessment, or the assessment was done with a previous version of the risk screening tool and requires updating. See NRCB Operational Policy 2016-7: *Approvals*, part 8.13.

In this case, in 2015 the risks posed by Brando Holsteins' then proposed and its assumed worst case scenario manure collection areas and manure storage facilities were assessed. That assessment indicated that the potential risks to surface water and groundwater posed by the calf barn, hospital barn and EMS were low to groundwater; the EMS posed moderate potential risk to surface water.

In this case, the EMS is located approximately 25 m from an intermittent tributary to Jones Creek (as identified by Alberta Environment and Parks). Based on this distance, the ERST's surface water risk assessment result is in the moderate risk potential category. The "Response to Surface Water Risk Levels From ERST Scoring" flow chart directs me to consider if there are risk factors that warrant taking action to reduce the apparent potential risk.

I considered how the defined channel of Jones Creek is located approximately 2,500 m from the CFO (based on a straight line measurement along the approximate apparent surface water flow path). As the land rolls between the Creek and the CFO, there are approximately 1,700 m of across arable land owned by the CFO. Based on this, if an overflow or similar EMS problem should occur, there should be ample time to contain and control the leaked or spilled manure. In light of this, I am of the opinion that additional actions are not required at this time to reduce the ERST's potential moderate risk to surface water.

Although the site specific conditions have not changed since the 2015 risk assessment was completed (which would warrant a new ERST for all of the facilities to be completed), I completed a new one to ensure that all of the existing and proposed manure collection areas and manure storage facilities were risk screened the same. The new risk screening results indicate that all of the existing and proposed manure collection areas and manure storage facilities pose a low potential risk to surface water and groundwater. An exception to this is the EMS (including the proposed expansion) that still poses a low potential risk to groundwater and a moderate risk to surface water. In light of the above, I am still of the opinion that the EMS's potential risk posed to surface water does not warrant actions being taken based on existing conditions at the site.

## **6. Other factors considered**

The application meets all relevant AOPA requirements, with the terms and conditions summarized in part 7.

In addition, the proposed CFO expansion is consistent with the land use provisions of Lacombe County's municipal development plan and land use bylaw. (See Appendix A for a more detailed discussion of the county's planning requirements.)

With respect to the act's technical requirements, the proposed CFO expansion:

- Through use of the expansion factor, meets the required AOPA setbacks from all nearby residences, with one exception (AOPA setbacks are known as the "minimum distance separation" requirements, or MDS). The owner of that residence has signed a written waiver of the MDS requirement to their residence
- Meets the required AOPA setbacks from springs
- Has sufficient means to control surface runoff of manure
- Meets AOPA's nutrient management requirements regarding the land application of manure
- Meets AOPA groundwater protection requirements for the design of floors and liners of

manure collection and storage facilities

I also determined that the EMS including its proposed expansion is located within the 30 m required AOPA setback to common bodies of water. In addition to this, the proposed heifer barn is to be located within the 100 m required AOPA setback from existing water wells. However, as explained in Appendix C, these facilities warrant exemptions from the setback distances due to conditions specific to this CFO.

In addition, I assessed the effects of the proposed CFO expansion on the environment. Consistent with NRCB policy, I presumed that these effects are acceptable because the majority of the requirements are met, and those that are not met warrant exemptions (noted above and in Appendix C). The application also meets all of AOPA's technical requirements and the directly affected parties' concerns have been adequately addressed. I also presumed that the application's effects on the economy and community are acceptable, and that the proposed CFO expansion is an appropriate use of land. Under NRCB policy, these presumptions are based on the application's consistency with the municipal development plan and land use bylaw. (See NRCB Operational Policy 2016-7: *Approvals*, part 8.7.3.) Given the information in the application, from site visits and gathered from responses to the application, these presumptions have not been disputed.

## 7. Terms and conditions

Approval RA20019 specifies the new permitted livestock capacity as 700 milking cows (plus associated dry cows and replacements allowed on site). Approval RA20019 also permits the construction of the EMS expansion, heifer barn and manure storage pad.

Approval RA20019 also contains terms that the NRCB generally includes in all AOPA approvals, including terms stating that the applicant must follow AOPA requirements and must adhere to the project descriptions in their application and accompanying materials.

In addition to the terms described above, Approval RA20019 includes conditions that:

- Sets deadlines for the approved construction to be completed:
  - EMS expansion by November 30, 2021
  - Heifer barn (including its associated manure storage pad) by November 30, 2022
- Require water well monitoring and reporting
- Require the concrete used to construct the liner of the manure collection and storage portion of the heifer barn, including its associated manure storage pad, to be sulphate resistant and have a minimum 28-day compressive strength of 25 MPa
- Require submission of a completion report, stamped by a qualified engineer, certifying that the EMS expansion was constructed as proposed
- Prohibit the permit holder from allowing manure into the expanded portions of the EMS until the expanded EMS has been inspected by the NRCB following its expansion
- Prohibit the permit holder from allowing livestock or manure into the heifer barn and its associated manure storage pad until they have been inspected by the NRCB following their construction

For an explanation of the reasons for these conditions, see Appendix D.

**a. Conditions carried forward from previously issued permits**

For clarity, and pursuant to NRCB policy, I consolidated the deemed registration, including Lacombe County issued development permit 87/96, and NRCB issued Approval RA06010 and Authorizations RA11024 and RA15052 with Approval RA20019 (see NRCB Operational Policy 2016-7: *Approvals*, part 10.5). Consolidating permits generally involves carrying forward all relevant terms and conditions in the existing permits into the new permit, with any necessary changes or deletions of those terms and conditions, and then cancelling all existing permits once the new permit is issued. This consolidation is carried out under section 23 of AOPA, which enables approval officers to amend AOPA permits on their own motion.

Therefore, in addition to containing the new terms and conditions summarized above, Approval RA20019 includes all existing terms and conditions in Lacombe County issued development permit 87/96 and NRCB issued Approval RA06010 and Authorizations RA11024 and RA15052, except the terms and conditions noted in Appendix D. Construction conditions that are being carried forward and that have been met are identified and included in an appendix to the new approval.

Pursuant to section 23 of AOPA (approval officer amendments), I have determined that several conditions from the existing permits should either be modified or deleted and therefore are not carried forward to Approval RA20019. My reasons for deleting these conditions are provided in Appendix D.

**8. Conclusion**

Approval RA20019 is issued for the reasons provided above, in the attached appendices, and in Technical Document RA20019.

Brando Holsteins' deemed registration, including municipal development permit 87/96, and NRCB-issued Approval RA06010 and Authorizations RA11024 and RA15052 are therefore cancelled, unless Approval RA20019 is held invalid following a review and decision by the NRCB's board members or by a court, in which case the old permits listed above will remain in effect.

October 30, 2020

(Original Signed)  
Jeff Froese  
Approval Officer

**Appendices:**

- A. Consistency with the municipal development plan
- B. Concerns raised by directly affected party
- C. Exemptions from setbacks
- D. Explanation of conditions in Approval RA20019

## APPENDIX A: Consistency with the municipal development plan

Under section 20 of AOPA, an approval officer may approve an application for an approval only if the approval officer finds that the application is consistent with the “land use provisions” of the applicable municipal development plan (MDP).

The NRCB interprets the term “land use provisions” as covering MDP policies that provide generic directions about the acceptability of various land uses in specific areas and that do not call for discretionary judgements relating to the acceptability of a given confined feeding operation (CFO) development. (See NRCB Operational Policy 2016-7: *Approvals*, part 8.2.5.) Under this interpretation, the term “land use provisions” also excludes MDP policies that impose procedural requirements. In addition, section 20(1.1) of the act precludes approval officers from considering MDP provisions “respecting tests or conditions related to the construction of or the site” of a CFO or manure storage facility, or regarding the land application of manure. (These types of MDP provisions are commonly referred to as MDP “tests or conditions.”)

Brando Holsteins’ CFO is located in Lacombe County and is therefore subject to that county’s MDP. Lacombe County adopted the latest revision to this plan on July 9, 2020, under Bylaw 1238/17. As relevant here:

Section 3.3.1 states that “All lands in the County shall be deemed to be agricultural lands unless otherwise designated by the Municipal Development Plan, an approved statutory or non-statutory, the Land Use Bylaw, or provincial legislation.”

I consider this section to be a source of insight for the interpretation of the remaining portions of the MDP and land use bylaw (LUB). The county’s LUB is discussed further below.

Section 3.9.1 of the county’s MDP states that the “County shall provide input on applications for confined feeding operations to the Natural Resources Conservation Board (NRCB) under the *Agricultural Operation Practices Act*. The county’s support is subject to the following:

- a) No new confined feeding operation shall be permitted less than 1.6 kilometres (1 mile) from the boundary of:
  - i) a town, village, summer village or hamlet;
  - ii) an area developed or designated for multi-lot residential use; or
  - iii) a provincial or municipal park or recreation area, or other area used or intended to be used for a recreational facility development,except that where provincial regulations require a larger setback distance, that distance shall apply.

Further restrictions on the development of confined feeding operations may apply as directed by an Intermunicipal Development Plan or other local plan approved by Council.”

This application is to expand an existing CFO by increasing the amount of permitted livestock and to construct new manure storage facilities and manure collection areas and to expand an existing manure storage facility, not for the development of a new CFO, therefore the above 1.6 km setbacks are not relevant to my MDP consistency determination.

As for section 3.9.1’s reference to intermunicipal development plans (IDP) or other plans approved by the county’s council, this CFO is not located within land identified as part an IDP or any other plans.

For these reasons, I conclude that the application is consistent with the land use provisions of Lacombe County's MDP. This conclusion is supported by the county's response to the application.

In my view, under sections 1.3.4 and 3.3, the MDP clearly intends to incorporate Lacombe County's LUB #1237/17 (see NRCB Operational Policy 2016-7: *Approvals*, part 8.2.3). Accordingly, I considered the LUB.

Under that bylaw, the subject land is currently zoned as Agricultural "A" District. CFOs are not listed as either a permitted or discretionary use within that zoning category. However, section 3.2(2)(j) of the LUB states that CFOs do not require a development permit. I interpret this provision as meaning either that the county intended CFOs to have the same effective status as listed permitted uses, or that the county simply does not intend to address CFOs in its LUB (given that the NRCB's permitting role since AOPA came into effect in 2002). Under either interpretation, the proposed barn does not conflict with the LUB.

## APPENDIX B: Concerns raised by directly affected party

Jack and Danielle Bruning, from NW 6-39-25 W4M, expressed concerns related to groundwater supply for this dairy and themselves. They requested that a water assessment be completed to make sure that there is enough water present for the dairy expansion and for the Bruning family.

### Applicant's response

A representative of Brando Holsteins indicated that representatives of the CFO had already been in contact with Alberta Environment and Parks (AEP) to discuss the AEP response to this application. In addition an application for additional water licensing had been filed with AEP. I was informed that a representative of Brando Holsteins would be speaking with the Brunings to relay this information.

### Approval officer's conclusion

Part 8.10 of the of the NRCB's operational Policy 2016-7: Approvals, states that approval officers will not consider water supply concerns when reviewing AOPA permit applications, other than ensuring that applicants sign one of the water licensing declarations in the Part 2 application form.

I note that in the Part 2 Application RA20019 a *Water Act* declaration (option four, uncertain if additional water licensing is needed) was signed. Condition two of that declaration option indicates that the applicant requests the NRCB process the AOPA application independent of an application for water licensing if a water license or licenses are required.

In addition to the above, this concern was forwarded to Alberta Environment and Parks for comment in accordance with part 8.10 of the NRCB's operational Policy 2016-7: Approvals. I received a response from a representative of Alberta Environment and Parks confirming that Brando Holsteins had submitted two applications for additional water licensing under the *Water Act*.

Brando Holsteins is reminded that they are required to be in compliance with all applicable rules, regulations and legislation, including those under the *Water Act*, that apply to their CFO.

For these reasons, I am of the opinion that the concerns related to groundwater supply are addressed.

## APPENDIX C: Exemption from setbacks

According to the application, two water wells are located within 100 m of the proposed heifer barn and earthen liquid manure storage (including the proposed expansion to the EMS). The application also states that there are no surface water bodies within 2,000 m of the proposed barn or EMS. I have confirmed through a review of available applicable maps and through a site visit that there are no water wells located within 100 m of the EMS, but three are located within 100 m of the heifer barn. In addition to this, a map from Alberta Environment and Parks indicates that an intermittent headwater to Jones Creek is located approximately 25 m from the EMS.

Because of this proximity, the applicant's proposed facilities conflict with regulations under AOPA, which prohibit the construction of manure storage facilities (MSFs) and manure collection areas (MCAs) within 100 metres of water wells and within 30 m of a common body of water (CBW, the intermittent head water to Jones Creek is considered to be a CBW).<sup>1</sup> However, the regulation allows approval officers to grant an exemption from these prohibitions. I must therefore consider whether exemptions are appropriate in this instance.

### 1. Water well considerations

Under the regulation, the test for granting an exemption is whether the "aquifer into which the well is drilled is not likely to be contaminated" by the proposed MSF/MCA. (According to the regulation, when granting an exemption, an approval officer may require the applicant to implement a "groundwater monitoring program.")

The regulation also makes it clear that the applicant has the burden of proving that an exemption is warranted.

In considering whether an applicant has met that burden, approval officers presume that the risks of direct aquifer contamination from the MSF/MCA are low if the applicant's proposed MSF/MCA meets AOPA's technical requirements to control runoff and leakage. However, when determining whether an MSF/MCA that meets AOPA's technical requirements should be exempted from the 100 metre water well setback requirement, approval officers also assess whether water wells that are less than 100 metres from the MSF/MCA could act as conduits for aquifer contamination.

Approval officers assess the following factors to determine the risk of aquifer contamination via the water wells:

- i. How the wells are constructed
- ii. Whether the wells are being properly maintained
- iii. The distance between the wells and the proposed MSF/MCA
- iv. Whether the well is up- or down-gradient from the MSF/MCA and whether this gradient is a reasonable indication of the direction of surface and groundwater flow between the two structures

These presumptions and considerations are based on NRCB Operational Policy 2016-7: *Approvals*, part 8.7.1.

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<sup>1</sup> Standards and Administration Regulation, Alta. Reg. 267/2001, sections 7(1)(b) and 7(1)(c).

The water wells:

Based on information provided by the applicant and from the Alberta Environment and Parks (AEP) water well database, the water wells within 100 m of the proposed barn are AEP IDs 1590118, 1590119 and 1590120, from west to east, respectively. Water well 1590118 is located approximately 5 m north of the proposed barn while 1590119 and 1590120 are located approximately 45 m north of it.

All three wells are cross gradient to the proposed barn, were completed in 2011 with casings above ground (that appeared to be in good condition), are used for domestic and non-domestic purposes and were marked with flags to indicate their location.

Water well ID 1590118

This well is reported to have a perforated or screened zone from 19 m to 22 m below ground level across sandstone and shale. The well's log identifies protective layers of clay from ground surface or 10.7 m and shale under the clay to 15.2 m below ground level. The well has a cement seal from ground surface to 18.9 m below ground level.

Water well ID 1590119

This well is reported to have a perforated or screened zone from 21.3 m to 24.4 m below ground level across sandstone and shale. The well's log identifies a protective layer of clay from grade to 10.7 m underlain by shale layers to 16.8 m below ground level. The well has a cement seal from ground surface to 19.8 m below ground level.

Water well ID 1590120

This well is reported to have a perforated or screened zone from 35.1 m to 42.7 m below ground level across shale and sandstone layers. The well's log identifies protective layers of clay from ground surface to 9.1 m underlain by shale layers to 15.2 m. The well has a bentonite seal from ground surface to 30.5 m below ground level.

In addition to the above considerations, the NRCB has developed a "water well exemption screening tool," based on the factors listed above, to help approval officers assess the groundwater risks associated with a nearby water well and to decide whether an exemption from the 100 metre setback to a well is warranted.<sup>2</sup> This tool consists of a two-stage risk screening process; each stage provides a numeric risk "score" based on the information inputted into the tool. The first stage focuses on the well's construction. If the well scores less than 10 at this stage, the tool suggests granting a setback exemption for the subject facility. If the well scores above 28, the tool recommends denying the exemption. Scores between 10 and 28 require applying the second stage of the screening process, which focuses on the gradient and other factors bearing on the risk of manure runoff or leachate reaching the water well. If the risk score at this stage is over 20, the tool suggests denying the setback exemption to the subject well.

In this case, the results of the water well exemption screening tool suggest that an exemption is likely. Despite this, Approval RA06010 has an ongoing condition which requires water wells at the CFO to be tested annually for nitrates and chlorides. Brando Holsteins has not requested to relax or omit this condition from their permit. For this reason, I am granting an exemption to the

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<sup>2</sup> A complete description of this tool is available under CFO/Groundwater and Surface Water Protection on the NRCB website at [www.nrcb.ca](http://www.nrcb.ca).

100 m setback on the basis that the ongoing monitoring requirements from Approval RA06010 continue or are carried forward into the new approval.

## **2. Water body considerations**

Brando Holsteins proposes to expand their EMS that is presently located approximately 25 m from an intermittent tributary to Jones Creek (a common body of water). The proposed expansion will not be any closer to the intermittent tributary than the existing portion of the EMS. I note how the land around the EMS (including existing and proposed portions) slopes towards the intermittent tributary to the creek.

Normally, an exemption is warranted if the land slopes away from the common body of water or if a berm or other secondary protection is constructed to protect the water body from contamination.

Part five of this decision summary notes how the intermittent headwater to the creek “flows” across approximately 1,700 m of arable land before it leaves property owned by the CFO. I also note how Approval RA06010 has a condition (which will be carried forward into the new permit) which states “The NRCB is to be notified immediately if there is an overflow or leak from any of the manure storages”.

In this case, I am of the opinion that the above two parameters will provide the same effective protection as a “secondary protection” required by the Standards and Administration Regulation and that an exemption from the 30 m setback to a common body of water is warranted in this case.

## **APPENDIX D: Explanation of conditions in Approval RA20019**

Approval RA20019 includes several conditions, discussed below, and carries forward and deletes a number of conditions from existing permits (see sections 2 and 3 of this appendix).

### **1. New conditions in Approval RA20019**

#### **a. Groundwater protection requirements**

Brando Holsteins proposes to construct an extension on to the existing earthen liquid manure storage (EMS). The EMS and its extension will utilize a naturally occurring protective layer.

As noted in Technical Document RA20019 Brando Holsteins has demonstrated that there is a naturally occurring protective layer around and below the proposed EMS extension that meets the requirements of section 9 of the Standards and Administration Regulation (SAR). Despite this, Brando Holsteins has also provided evidence that there is a sand layer (ranging in thickness from 0 m to 1.5 m) starting at ground surface in the area of the proposed EMS extension.

Brando Holsteins' engineer has indicated that the sand layer noted above needs to be removed and replaced with adequately hydrated and compacted clay till material in order to minimize leakage.

To provide assurance that the as-built EMS adequately protects groundwater, Approval RA20019 includes a condition requiring Brando Holsteins' to provide an engineer's completion report (see discussion of that report's requirements below).

#### **b. Construction Deadline**

Brando Holsteins has proposed staged construction completion deadlines of December 2020 for the EMS and December 2021 for the heifer barn and associated manure storage pad.

This time-frame is not considered to be reasonable for the proposed scope of work as it only allows for approximately a month to complete the EMS extension. Further, Brando Holsteins has indicated that it intends to use material from the proposed EMS extension to construct a pad for the heifer barn (and its associated manure storage pad).

For this reason, I am extending the proposed construction completion deadlines by one year to November 30, 2021 for the EMS extension and November 30, 2022 for the heifer barn (and its associated manure storage pad). These deadlines will be included as conditions in Approval RA20019.

#### **c. Post-construction inspection and review**

The NRCB's general practice is to include conditions in new permits to ensure that the new or expanded facilities are constructed according to the required design specifications. Accordingly, Approval RA20019 includes conditions requiring:

- i. the concrete used to construct the liner of the manure collection and storage portion of the heifer barn and its associated manure storage pad to be sulphate resistant and have a minimum 28-day compressive strength of 25 MPa
- ii. a completion report, stamped by a qualified engineer, certifying that the manure storage portions of the EMS extension have been constructed in accordance with the proposed design including the:

- horizontal and vertical dimensions, along with elevations above and below grade and side wall slopes,
- specifications of and thickness (horizontal and vertical) of the compacted clay till used to replace the shallow sand layer and any other sand lenses or layers, if observed.

The NRCB routinely inspects newly constructed facilities to assess whether the facilities were constructed according to their required design specifications. To be effective, these inspections must occur before livestock or manure are placed in the newly constructed facilities. Approval RA20019 includes conditions stating that the permit holder shall not place livestock or manure in the manure storage portions of the EMS extension and that the permit holder shall not place livestock or manure in the manure collection or storage portions of the new heifer barn and its associated manure storage pad until NRCB personnel have inspected these facilities and confirmed in writing that they meet the approval requirements.

## **2. Conditions carried forward from old permits**

### **a. Construction conditions that are met or are effectively met**

Conditions 1\*-3 from Lacombe County issued development permit 87-96, 1 (a-c), 2 (a-b), 4a, 5 (a-b) from Approval RA06010, 1-3 from Authorization RA11024 and 1 (a-b), 2, 3 and 5 of Authorization RA15052 are construction conditions that are met or are considered to be effectively met. These conditions will be carried forward as is and are identified in the appendix to Approval RA20019.

\* I note how parts of condition 1 from Lacombe County issued development permit 87-96 are both construction related and of an ongoing nature. That condition states [letters added]:

The owner/operator of this dairy is to [A] ensure that the manure storage facilities are designed and constructed to avoid contamination of groundwater, prevent contaminated surface water from leaving the property, and [B] not contribute to undue odour nuisance.

The portion of the condition (A) that is considered to be construction condition is met and is identified in the appendix to Approval RA20019. The remaining portions of the condition are discussed below.

### **b. Ongoing operating conditions**

#### **From Lacombe County issued development permit 87-96:**

4. The owner/operator shall ensure that any manure contaminated run-off is kept on the property and not allowed to enter the watercourse to the north of the building site. Alberta Agriculture, Food and Rural Development has advised that the outside pens should be located on land that slopes to south and east so that any small amount of run-off would then go onto the field on the site instead of into the water course on the north side of the building site.

I interpret the water course referred to above to be the intermittent tributary to Jones Creek and will revise the condition accordingly. This condition refers to Alberta Agriculture, Food and Rural Development who now exists as Alberta Agriculture and Forestry. Their recommendations are for pens that no longer exist. Despite this, the recommendations of protecting the intermittent tributary remain applicable. For these reasons, this condition will

be carried forward, but with modifications to reflect the above and with changes to match currently used permit condition phrasing.

5. All manure that is stockpiled or land spread is to be done in a manner so as not to cause contamination of surface waters. A copy of the guidelines contained in the said Code of Practice for the land application of animal manure is attached. These guidelines are intended to reduce the potential for odour nuisance or run-off problems.

This condition is equivalent to sections 5, 24(9) and portions section of 24(10) of the SAR. Further, the Code of Practice it references was replaced by the AOPA. For this reason, it will be replacing this condition with the same general permit term noted above.

#### **From Approval RA06010:**

- 6a. The NRCB is to be notified immediately if there is an overflow or leak from any of the manure storages.

This condition will be carried forward as is into Approval RA20019.

- 8a. Drinking water quality tests for chlorides and nitrates must be conducted annually on the water well(s) within 100 metres of the confined feeding operation with the results submitted annually to the NRCB by October 31, beginning in 2006.

This condition will be carried forward as is into Approval RA20019.

- 09a. Records as identified in AOPA and its associated regulations must be maintained.

Akin to the conditions discussed from the county issued permit noted above, this condition is equivalent to several sections of the SAR. For this reason, it will be replaced with the general permit term noted above.

- 10a. Manure must not be spread on frozen or snow covered ground.

This condition is more stringent than section 24 of the SAR and will be carried forward as is.

- 10b. Liquid manure must be incorporated within 48 hours of spreading as proposed by the applicant.

This condition is equivalent to section 24(1) of the SAR. For the same reasons as noted above, this condition will not be carried forward into the new permit and will be replaced with the above noted general permit term.

#### **From Authorization RA15052:**

4. Unless otherwise directed by the NRCB in writing, the permit holder shall maintain and make available to the NRCB, upon request, an ongoing quarterly record of the number of milking dairy cows at Brando Holsteins, to demonstrate that the number of milking cows remains at or below 350 for the CFO.

This condition will be carried forward but will be amended to reflect the new amount of permitted livestock allowed onsite.

### 3. Conditions not carried forward from old permits

From Lacombe County issued development permit 87-96

1B. The owner/operator of this dairy is to ... not contribute to undue odour nuisance.

This condition is very similar to the requirements of condition six from the same permit which is discussed below.

6. The owner/operator shall maintain at all times a high degree of cleanliness in and around the livestock facilities to minimize odour nuisances for neighbouring residents.

NRCB-issued permits generally do not include or carry forward conditions that are difficult to enforce as written. A “high degree of cleanliness ... to minimize odour nuisances” is a subjective requirement and is impractical to enforce as written. Under section 2.2.1 of the NRCB’s *Amending Municipal Permit Conditions* policy (Operational Policy 2016-1), permit conditions that are unenforceable on their face value can be removed. I am therefore not carrying this condition forward.

Often, any odour related nuisances can be resolved through good communication between the *concerned* party and the CFO operator. However, if a member of the public has concerns related to a CFO, including whether the operation is complying with AOPA, they may contact the NRCB through its toll free response line (1-866-383-6722). An NRCB inspector will follow up on the concern.

#### From Approval RA06010

3a. Signs warning of the nature and danger of the facility are to be posted at each access to the manure storage.

The above condition was formerly a requirement of the SAR (which was amended out in *September 2006*). Since the above noted warning signs are no longer required under the SAR or the AOPA, I am not going to carry this condition forward.

7a. Leakage detection well results must be submitted to the NRCB in report format until such time as the NRCB adjusts the monitoring frequency, test parameters and/or report contents. All reports (comprehensive and/or indicator) must include, but will not be limited to:

- Background information – site description, soil logs, diagrams
- Water level elevations
- Elevation of liquid manure in the EMS at the time of water sampling
- Dates when the EMS was emptied
- Inspection of the surface well casing for its integrity
- Explanation of the water sampling collection technique
- Field and laboratory work
- Discussion and explanation of the results including a trend analysis
- Recommendations

7b. A Comprehensive report must be done at the time the wells are installed and 6 months after the wells are installed. The Comprehensive report must include laboratory analysis of the

baseline and indicator parameters outlined in the most recent NRCB Technical Guideline 'Leak Detection and CFO's'.

- 7c. An Indicator report must be done 12 months after the wells are installed and every 12 months thereafter. The Indicator report must include laboratory analysis of the indicator parameters outlined in the most recent NRCB Technical Guideline 'Leak Detection and CFO's'.

Condition 07a was suspended by the NRCB on August 11, 2010 based on an environmental risk screening completed for the EMS. In addition to this, proof has been submitted as part of Application RA20019 which indicates that the EMS meets the groundwater protection requirements of AOPA. For this reason, I will not be carrying this condition forward.