

## Decision Summary BA22007

This document summarizes my reasons for issuing Authorization BA22007 under the *Agricultural Operation Practices Act* (AOPA). Additional reasons are in Technical Document BA22007. 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.

Under AOPA this type of application requires an authorization. For additional information on NRCB permits please refer to [www.nrcb.ca](http://www.nrcb.ca).

### 1. Background

On November 17, 2022, Peetoom Dairies Ltd. submitted a Part 1 application to the NRCB to permit new manure collection areas (MCA) at an existing dairy CFO.

The operator contacted the NRCB as they were concerned that unauthorized construction had occurred. In my research I found that the already-constructed dry cow addition to the existing dairy cow barn was unauthorized and required a permit in order to operate. Through my investigation I found that the newly constructed commodity barn (to be converted/constructed to a youngstock barn) is being used for commodity storage and concrete floors have not been installed. The operators also advised that they do not intend to complete the conversion for at least 2 years. As such, I do not consider this facility to be unauthorized however I recommended permitting it prior to construction to avoid future confusion, and the operators agreed to include the youngstock barn in their application.

The Part 2 application was submitted on November 29, 2022. On December 13, 2022, I deemed the application complete.

The proposed construction involves:

- Converting/constructing a commodity storage barn into a youngstock barn – 68 m x 17 m x 1.8 m deep
- Permitting an already constructed dry cow addition to the existing dairy barn – 24 m x 20 m x 1.8 m deep
- The applicant also requested a variance under section 17 of AOPA of the prohibition against manure storage facilities and manure collection areas less than 100 metres away from water wells. That variance request is discussed in Appendix C and section 8, below.

#### a. Location

The proposed MCA is located at NE 2-59-4 W5M in the County of Barrhead, roughly 6.5 km south-west of the Town of Barrhead. The terrain is relatively flat sloping to the south with the nearest water body being a seasonal slough approximately 500 m to the west of the CFO.

## **b. Existing permits**

As the CFO existed on January 1, 2002, the CFO is grandfathered with a deemed registration under section 18.1 of AOPA. That deemed permit includes development permit 41-98 issued August 18, 1998. This deemed registration allows for the construction and operation of a 100 milking cow dairy CFO. The determination of the CFO's deemed permit status under section 18.1 of AOPA is explained in Appendix E attached. The deemed facilities are listed in the appendix to the Authorization BA22007.

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

Under section 21 of AOPA, the NRCB notifies all parties that are "affected" by an authorization application. Section 5 of AOPA's Part 2 Matters Regulation defines "affected parties" as:

- the municipality where the CFO is located or is to be located
- in the case where part of a CFO is located, or is to be located, within 100 m of a bank of a river, stream or canal, a municipality entitled to divert water from that body within 10 miles downstream
- any other municipality whose boundary is within a notification distance. In this case, the notification distance is 0.5 mile(s) from the CFO

A copy of the application was sent to the County of Barrhead, which is the municipality where the CFO is located. The CFO is not within 100 m of a bank of a river, stream or canal.

## **3. Notice to other persons or organizations**

Under NRCB policy, the NRCB may also notify persons and organizations the approval officer considers appropriate. This includes sending applications to referral agencies which have a potential regulatory interest under their respective legislation.

Referral letters and a copy of the complete application were emailed to Alberta Health Services (AHS), and Alberta Environment and Protected Areas (AEP).

Mr. Hammer, a public health officer at AHS, sent a response to the application stating he had no opposition to the application.

No response was received from EPA.

## **4. Municipal Development Plan (MDP) consistency**

I have determined that the proposed permitting and construction is consistent with the land use provisions of the County of Barrhead's municipal development plan. (See Appendix A for a more detailed discussion of the county's planning requirements.)

## **5. AOPA requirements**

With respect to the technical requirements set out in the regulations, the proposed permitting and conversion/construction:

- Meets the required AOPA setbacks from all nearby residences (AOPA setbacks are known as the "minimum distance separation" requirements, or MDS)
- Meets the required AOPA setbacks from springs, and common bodies of water
- Has sufficient means to control surface runoff of manure

- Meets AOPA groundwater protection requirements for the design of floors and liners/protective layers of manure storage facilities and manure collection areas

With the terms and conditions summarized in part 10, the application meets all relevant AOPA requirements. The exemptions and variances that are required to address the AOPA requirements around the setback to water wells are discussed in the following parts of this decision summary.

## **6. Responses from municipality**

Directly affected parties are entitled to a reasonable opportunity to provide evidence and written submissions relevant to the application, and are entitled to request an NRCB Board review of the approval officer's decision. Not all affected parties are "directly affected" under AOPA.

Municipalities that are affected parties are identified by the act as "directly affected." The County of Barrhead is an affected party (and directly affected) because the proposed facilities are located within its boundaries.

Ms. Jenny Bruns, a development officer with the County of Barrhead, provided a written response on behalf of the county. Ms. Bruns stated that the application is consistent with the county's land use provisions in their municipal development plan. The application's consistency with the county's municipal development plan is addressed in Appendix A, attached.

Ms. Bruns also listed the setbacks required by the county's land use bylaw (LUB). The application meets these setbacks.

## **7. Environmental risk of facilities**

When reviewing a new authorization application for an existing CFO, NRCB approval officers assess the CFO's existing buildings, structures, and other facilities. In doing so, the approval officer considers information related to the site and the facilities, as well as results from the NRCB's environmental risk screening tool (ERST). The assessment of environmental risk focuses on surface water and groundwater. The ERST provides for a numeric scoring of risks, which can fall 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 supported 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, the risks posed by Peetoom's existing CFO highest risk facilities (dairy barn and EMS) were assessed in 2013 using the ERST. According to that assessment, the facilities posed a low potential risk to surface water and groundwater.

The circumstances have not changed since that assessment was done. As a result, a new assessment of the risks posed by the CFO's existing facilities is not required.

The ERST score for the youngstock barn and dry cow addition also suggested low potential risk to surface water and groundwater.

## 8. Variance

The applicant applied for a variance of the requirement for a water well to be at least 100 m away from a MSF/MCA. I determined that the dry cow addition to the existing dairy barn, which was constructed without a permit, is located within the required AOPA setback from two existing water wells. As explained in Appendix C, I am prepared to issue a variance to the 100 metre water well setback due to the wells' construction, location, and construction of the facilities.

## 9. Exemption

I determined that the proposed youngstock barn will be located within the required AOPA setback from two water wells. As explained in Appendix B, an exemption to the 100 metre water well setback is warranted due to the wells' construction, location, and construction of the facilities.

## 10. Terms and conditions

Authorization BA22007 permits the already-constructed dry cow addition to the dairy barn and the conversion/construction of the youngstock barn.

Authorization BA22007 contains terms that the NRCB generally includes in all AOPA authorizations, 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, Authorization BA22007 includes conditions that generally address construction deadlines, document submission, and construction inspection. For an explanation of the reasons for these conditions, see Appendix D.

## 11. Conclusion

Authorization BA22007 is issued for the reasons provided above, in the attached appendices, and in Technical Document BA22007.

Authorization BA22007 must be read in conjunction with Peetoom Dairy's deemed registration, including municipal development permit 41-98.

February 1, 2023

(Original signed)

Nathan Shirley  
Approval Officer

## Appendices:

- A. Consistency with the municipal development plan
- B. Exemption from water well setback
- C. Variance
- D. Explanation of conditions in Authorization BA22007
- E. Determination of deemed permit status and capacity

## **APPENDIX A: Consistency with the municipal development plan**

Under section 22 of AOPA, an approval officer may only approve an application for an authorization if the approval officer holds the opinion that the application is consistent with the “land use provisions” of the applicable municipal development plan (MDP).

This does not mean consistency with the entire MDP. In general, “land use provisions” cover MDP policies that provide generic directions about the acceptability of various land uses in specific areas.

Conversely, “land use provisions” do not call for discretionary judgements relating to the acceptability of a given confined feeding operation (CFO) development. Similarly, section 22(2.1) 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.”) “Land use provisions” also do not impose procedural requirements on the NRCB. (See NRCB Operational Policy 2016-7: Approvals, part 8.2.5.)

Peetoom Dairies’ CFO is located in the County of Barrhead and is therefore subject to that county’s MDP. The county adopted the latest revision to this plan on August 17, 2010, under Bylaw No. 4-2010.

Part 3.1.3 of the MDP lists 14 agricultural development policies and includes CFOs as among “primary use[s]” in agricultural use area. The first policy recognizes agriculture as the priority land use in rural areas, supports agricultural diversification, encourages siting agricultural industries in agricultural areas, and discourages non-agricultural land uses in intensive agricultural areas. Of the remaining 13 policies, only 10 and 11 relate specifically to CFOs.

Policy 10 states “input shall be provided to the NRCB in responding to applications for new or expanded CFOs based on the technical and locational merits of each application.” This policy is likely not a land use provision because it requires site-specific, discretionary determinations (see NRCB Operational Policy 2016-7, Approvals 8.2.4). Therefore, this policy is not relevant to the MDP consistency determination required by section 22(2.1) of AOPA. At any rate, the application meets the “technical and locational” requirements of AOPA.

Policy 11 states that “minimum distance separations shall conform to standards set out in the Agricultural Operation Practices Act.” “Minimum distance separations” appears to be a reference to the minimum distance separation (MDS) requirement in section 3 of the Standards and Administration Regulation under AOPA. MDP policy 11 is not relevant to my MDP consistency determination because it is based on AOPA’s MDS requirements. (See NRCB Operational Policy 2016-7, Approvals, part 8.2.5). That said, the CFO meets the MDS requirements under AOPA and is therefore consistent with this MDP policy.

I conclude that the application is consistent with the relevant land use provisions of the County of Barrhead’s MDP.

## APPENDIX B: Exemption from water well setbacks

The proposed converted/constructed youngstock barn is to be located less than 100 m from water wells. I have confirmed that 2 water wells are located approximately 10 m and 35 m from it during a site visit and satellite imagery. This is in conflict with the section 7(1)(b) of the *Standards and Administration Regulation (SAR)* under AOPA.

Section 7(2), however, allows for exemptions if, before construction, the applicant can demonstrate that the aquifer into which the water well is drilled is not likely to be contaminated by the manure storage facility (MSF)/manure collection area (MCA), and, if required, a groundwater monitoring program is implemented. In this case, I consider relevant “construction” to be the floor and liner (manure storage and collection portions), which have not yet been constructed.

The potential risks of direct aquifer contamination from the MSF/MCA are presumed to be low if the applicant’s proposed MSF/MCA meets AOPA’s technical requirements to control runoff and leakage. Approval officers also assess whether the water well itself could act as a conduit for aquifer contamination.

In this case, I felt the following factors were relevant to determine the risk of aquifer contamination via the water well:

- a. How the well was constructed
- b. Whether the well is being properly maintained
- c. The distance between the well and the proposed MSF/MCA
- d. 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.

Based on information provided by the applicant and from the Alberta Environment and Protected Areas (EPA) water well database, the water well located approximately 10 m W of the youngstock barn is likely EPA water well ID #492458. This well is reported to have been installed in 1998 and has a perforated or screened zone from 30.48 m to 39.62 m below ground level across stratigraphy. This well is used for domestic or non-domestic purposes. I note that in my conversations with the applicant, the water well is only used presently for non-domestic purposes. The well’s log identifies protective layer or layers from ground surface to 7.62 m below ground level. The well has a driven seal from ground surface to 27.43 m below ground level. The well appeared to be in good condition at the time of my site inspection and was protected. The well is cross-gradient of the CFO.

Based on information provided by the applicant and from the EPA water well database, the water well located approximately 35 m N of the youngstock barn is likely EPA water well ID #4498122. This well is reported to have been installed in 2001 and has a perforated or screened zone from 25.91 m to 50.29 m below ground level across stratigraphy. This well is used for domestic or non-domestic purposes. I note that in my conversations with the applicant, the water well is only used presently for non-domestic purposes. The well’s log identifies protective layer or layers from ground surface to 10.06 m below ground level. The well has a driven seal from ground surface to 12.19 m below

ground level. The well appeared to be in good condition at the time of my site inspection and was protected. The well is cross-gradient of the CFO.

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.<sup>1</sup>

In this case, the results of the water well exemption screening tool suggest that an exemption from the 100m setback for the proposed youngstock barn is likely as seen in Technical Document BA22007.

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<sup>1</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).

## APPENDIX C: Variance

The dry cow addition to the dairy barn is located less than 100 m from water wells. I have confirmed that 2 water wells are located adjacent to and approximately 5 m and 40 m from the dairy barn during a site visit and using satellite imagery. This is in conflict with section 7(1)(b) of the Standards and Administration Regulation (SAR).

Because the dry cow addition has already been constructed (unauthorized), an exemption under section 7(2) of the SAR is not available.

Approval officers must not grant variances lightly or in the absence of substantive evidence they will produce equivalent levels of protection (see Decision 03-04, *AAA Cattle Ltd.* p 24).

### 1. Water Well Considerations

On December 13, 2022 the CFO operator requested a variance to the water well setback requirement on the grounds that the dairy barn was there prior to the dry cow barn addition, proper construction and completion of the well and the wells location and protection.

In this case, the dry cow addition is connected to the grandfathered (deemed to have a permit) dairy barn but extends beyond the grandfathered footprint of the dairy barn. As it is unauthorized, I therefore need to either deny the application or alternatively consider if a variance is warranted under AOPA's section 17(1). It is my opinion that considering a variance is appropriate in this case.

In this case, I have used the same tools that I would normally use to determine if an exemption is warranted. I consider the water well exemption framework as useful for assessing the degree of protection for the water well in relation to a manure storage facility (MSF) / manure collection area (MCA). In this case I presume that the risks of direct aquifer contamination from the MSF/MCA are low if the MSF meets (or otherwise meets) AOPA's technical requirements to control runoff and leakage. However, when determining whether a MSF/MCA that otherwise meets AOPA's technical requirements provides the same or greater protection and safety as provided for by the regulations, I also assess whether the water wells themselves could act as conduits for aquifer contamination.

One indicator that a variance provides the same or greater protection and safety is if the aquifer into which the well is drilled is not likely to be contaminated by the proposed MSF or MCA.

The potential risks of direct aquifer contamination from the MSF/MCA are presumed to be low if the applicant's proposed MSF/MCA meets AOPA's technical requirements to control runoff and leakage. Approval officers may also assess whether the water well itself could act as a conduit for aquifer contamination.

In this case, I felt the following factors were relevant to determine the protection of the aquifer in relation to the water wells:

- a. How the wells were constructed
- b. Whether the wells are being properly maintained
- c. The distance between each well and the proposed MSF/MCA
- d. Whether the wells are 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



The water wells:

Based on information provided by the applicant and from the Alberta Environment and Protected Areas (EPA) water well database, the water well located approximately 5 m E of the dairy barn is likely EPA water well ID #492458. This well is reported to have been installed in 1998 and has a perforated or screened zone from 30.48 m to 39.62 m below ground level across stratigraphy. This well may be used for domestic or non-domestic purposes. I note that in my conversations with the applicant, the water well is only used presently for non-domestic purposes. The well's log identifies protective layer or layers from ground surface to 7.62 m below ground level. The well has a driven seal from ground surface to 27.43 m below ground level. The well appeared to be in good condition at the time of my site inspection and was protected. The well is cross-gradient of the CFO.

Based on information provided by the applicant and from the EPA water well database, the water well located approximately 40 m N of the dairy barn is likely EPA water well ID #4498122. This well is reported to have been installed in 2001 and has a perforated or screened zone from 25.91 m to 50.29 m below ground level across stratigraphy. This well may be used for domestic or non-domestic purposes. I note that in my conversations with the applicant, the water well is only used presently for non-domestic purposes. The well's log identifies protective layer or layers from ground surface to 10.06 m below ground level. The well has a driven seal from ground surface to 12.19 m below ground level. The well appeared to be in good condition at the time of my site inspection and was protected. The well is cross-gradient of the CFO.

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<sup>2</sup>. This tool is useful in gauging the level of protection of groundwater when considering whether to grant a variance.

The water well exemption screening tool indicates that there is a low potential for groundwater to be impacted by the MSF/MCA. It is my opinion that in this case, the water wells provide an equivalent level of protection if an exemption was considered.

Based on the above information it is my assessment that varying the 100 m setback rule for the dry cow addition to the dairy barn would offer the same degree of protection and safety as that provided for by the regulations for the following reasons:

1. The wells are properly completed and protected from physical damage
2. The facility in question is concrete liner with walls and roof
3. The lithology of the wells protective layers
4. The depth of the wells to perforation zones and seal depth.

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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).

## **APPENDIX D: Explanation of conditions in Authorization BA22007**

Authorization BA22007 includes several conditions, discussed below:

### **a. Construction Deadline**

Peetoom Dairies proposes to complete construction/conversion of the proposed new youngstock barn by the end of 2026. This time-frame is considered to be reasonable for the proposed scope of work. The deadline of December 1, 2026 is included as a condition in Authorization BA22007.

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

The NRCB's general practice is to include conditions in new or amended permits to ensure that the new or expanded facilities are constructed according to the required design specifications. Accordingly, Authorization BA22007 includes conditions requiring:

- a. the concrete used to construct the liner of the manure collection and storage portion of the youngstock barn to meet the specification for category B (liquid manure shallow pits); category C (solid manure – wet) in Technical Guideline Agdex 096-93 “Non-Engineered Concrete Liners for Manure Collection and Storage Areas.”
- b. Peetoom Dairies to provide documentation to confirm the specifications of the concrete used to construct the manure storage and collection portions of the facility.

The NRCB routinely inspects newly constructed facilities to assess whether the facilities were constructed according to their required design specifications. To be effective, and to reduce risk to the operator, these inspections must occur before livestock or manure are placed in the newly constructed facilities. Authorization BA22007 includes a condition stating that Peetoom Dairies shall not place livestock or manure in the manure storage or collection portions of the youngstock barn until NRCB personnel have inspected the facility and confirmed in writing that it meets the authorization requirements.

## **APPENDIX E: Determination of deemed permit status and capacity**

The CFO was originally permitted by the County of Barrhead on August 18, 1998 under development permit # 41-98. This permit allowed the construction and operation of a dairy CFO with 100 milking cows. Because it was issued before, and was in effect on, January 1, 2002, the 100 milking cow dairy holds a deemed (i.e. grandfathered) registration under section 18.1(1)(b) of AOPA. The CFO's deemed facilities are listed in the appendix of Authorization BA22007. There are also facilities on site to house dries and replacements present on site indicating that the deemed permit is for milking cows plus associated dries and replacements.

Through the use of air photos and conversation with the operator I am satisfied that all deemed facilities (including the youngstock pens, solid manure storage pad, and calf shed) existed on January 1, 2002.

Under section 11 of the Administrative Procedures Regulation, notice of a deemed permit determination is not required if the CFO was constructed pursuant to a development permit issued before January 1, 2002.

Under section 18.1(2)(b), the CFO's deemed capacity is the capacity stated in the CFO's development permit. Therefore, the CFO has a deemed livestock capacity of 100 milking cows (plus associated dries and replacements).