

Decision Summary BA25017

This document summarizes my reasons for issuing Authorization BA25017 under the *Agricultural Operation Practices Act* (AOPA). Additional reasons are in Technical Document BA25017. All decision documents and the full application are available on the Natural Resources Conservation Board (NRCB) website at 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.

1. Background

On July 10, 2025, Jan Otten on behalf of Linqunda Dairy Ltd. submitted a Part 1 application to the NRCB to construct a manure storage facility and a manure collection area (MCA/MSF) at an existing dairy CFO.

The Part 2 application was submitted and deemed complete on July 21, 2025.

The proposed construction involves:

- Constructing a dairy barn addition – 61 m x 9 m x 1 m deep cross over pit
- Expanding the existing EMS – by adding 20 m to the length for total dimensions of 75 m x 42 m x 5 m deep

a. Location

The existing CFO is located at NW 27-60-3 W5M in the County of Barrhead, roughly 10 km south of Neerlandia, AB. The terrain is relatively flat sloping to the south and east with the nearest common body of water being a seasonal drainage approximately 245 m to the north.

b. Existing permits

The CFO is already permitted under Approval BA25011.

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 one mile from the CFO

None of the CFO facilities are located within 100 m of a bank of a river, stream or canal.

A copy of the application was sent to the County of Barrhead, which is the municipality where the CFO is located.

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 Alberta Environment and Protected Areas (EPA), Alberta Agriculture and Irrigation (AGI), and Alberta Transportation and Economic Corridors (TEC).

In a response EPA, it was indicated they have no concerns with the application.

After a discussion with a representative from AGI, the operator is reminded they need to inform the inspector during planning and construction of the milking area within the addition.

I also sent a copy of the application to Axiom Oil and Gas as they have a right of way on the legal land.

Authorization BA25017 does not relieve the permit holder from complying with other applicable laws, such as safety codes, other municipal bylaws, provincial legislation (e.g. Historical Resources Act), and federal legislation (e.g. Migratory Birds Convention Act).

4. MDP

I have determined that the proposed 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.). There is no applicable intermunicipal development plan (IDP).

5. AOPA requirements

With respect to the technical requirements set out in the regulations, the proposed construction:

- Meets the required AOPA setbacks from all nearby residences (AOPA setbacks are known as the "minimum distance separation" requirements, or MDS) with the exception of one residence. However, the proposed dairy barn addition and EMS expansion is to be located further away than existing CFO facilities relative to the residence and qualifies for an exemption (see section 9 below)
- Meets the required AOPA setbacks from springs and common bodies of water
- 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, liners, and protective layers of manure storage facilities and manure collection areas

With the terms and conditions summarized in part 10 and in Appendix C, the application meets all relevant AOPA requirements. The exemptions that are required to address the AOPA requirements around 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.

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.

Layne Mullen, a development officer with the County of Barrhead, provided a written response on behalf of the County of Barrhead. Ms. Mullen stated that the application is consistent with the County of Barrhead's land use provisions of the municipal development plan (MDP). The application's consistency with the land use provisions of the County of Barrhead's MDP is addressed in Appendix A, attached.

Ms. Mullen also listed the setbacks required by the County of Barrhead's land use bylaw (LUB) and noted that 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.) 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 9.17.

In this case, the risks posed by Linqenda Dairy's existing CFO facilities were previously assessed in 2025 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.

I also assessed the proposed dairy barn addition and expanded EMS, using the NRCB's risk screening tool, and determined that they pose a low risk to groundwater and surface water.

8. Exemptions

I determined that the proposed dairy barn addition is located within the required AOPA setback from two water wells. As explained in Appendix B, an exemption to the 100 m water well setback is warranted due to the construction details of the facilities and construction details of the water wells, and location of the wells relative to the proposed facilities.

9. MDS

I determined that the currently existing CFO is located within the minimum distance separation from one residence. Under the Standards Administration Regulation 3(5)(c)(ii) an approval officer can issue an authorization despite MDS if the application is to build an additional facility on the site of the CFO when the total annual manure production will not be increased. The proposed CFO facilities are not moving closer to the residences (than the existing CFO facilities) and the CFO not increasing permitting livestock numbers or manure production.

10. Terms and conditions

Authorization BA25017 permits the construction of the dairy barn addition and expanded EMS.

Authorization BA25017 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 BA25017 includes conditions that generally address construction deadlines, document submission and construction inspection. For an explanation of the reasons for these conditions, see Appendix C.

11. Conclusion

Authorization BA25017 is issued for the reasons provided above, in the attached appendices, and in Technical Document BA25017.

Authorization BA25017 must be read in conjunction with Linquenda Dairy's Approval BA25011, which remains in effect.

August 21, 2025

(Original signed)

Nathan Shirley
Approval Officer

Appendices:

- A. Consistency with municipal land use planning
- B. Exemptions from water well setbacks
- C. Explanation of conditions in Authorization BA25011

APPENDIX A: Consistency with municipal land use planning

Under section 22 of AOPA, an approval officer may only approve an application for an authorization or amendment of 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) and any applicable intermunicipal development plan (IDP). In this case, there is no applicable IDP.

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

“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 provisions are commonly referred to as “tests or conditions.”) “Land use provisions” also do not impose procedural requirements on the NRCB. (See NRCB Operational Policy 2016-7: *Approvals*, part 9.2.7.)

Municipal Development Plan (MDP)

Linquenda Dairy’s 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 policies 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 9.9). That said, the CFO meets the MDS requirements using an exemption.

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

APPENDIX B: Exemption from water well setbacks

1. Water Well Considerations

The proposed dairy barn addition is to be located less than 100 m from two water wells. I have confirmed that the two water wells are located approximately 46 m and 15 m from the proposed barn during a site visit and using google earth. 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 collection area (MCA), and, if required, a groundwater monitoring program is implemented.

The potential risks of direct aquifer contamination from the MCA are presumed to be low if the applicant's proposed 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 MCA
- d. Whether the well is up- or down-gradient from the 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 9.10.2.

The water wells:

ID 394393

Based on information provided by the applicant and from the Alberta Environment and Protected Areas (EPA) water well database, the water well located approximately 15 m south of the proposed dairy barn is likely EPA water well ID # 394393. This well is reported to have been installed in 1990 and has a perforated or screened zone from 21.34 m to 36.58 m below ground level across shale and coal stratigraphy. The well is installed below ground surface and is located in an existing building. It is covered with a steel plate and surround by mounded concrete. This well is used for non-domestic purposes. The well's log identifies protective layer or layers from ground surface to 9.14 m below ground level. The well has a driven shoe seal from ground surface to 12.8 m below ground level (across a shale layer). The well appeared to be in good condition at the time of my site inspection.

ID 354623:

Based on information provided by the applicant and from the Alberta Environment and Protected Areas (EPA) water well database, the water well located approximately 46 m west of the proposed dairy barn is likely EPA water well ID # 354623. This well is reported to have been installed in 1993 and has a perforated or screened zone from 12.19 m to 41.15 m below ground level across shale, sandstone, and coal stratigraphy. The well is located next to the house and

is above grade and mounded at ground surface. This well is used for 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 shoe seal from ground surface to 9.14 m below ground level (across a shale layer). The well appeared to be in good condition at the time of my site inspection and is protected from the CFO facilities by the house.

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.¹

In this case, the results of the water well exemption screening tool suggest that an exemption is more likely as seen in Technical Document BA25017.

Under the regulation, an approval officer may require a groundwater monitoring program of the water wells in question. In my view, given that the proposed facilities meet AOPA technical requirements and are low risk, monitoring is not required.

¹ A complete description of this tool is available under CFO/Groundwater and Surface Water Protection on the NRCB website at www.nrcb.ca.

APPENDIX C: Explanation of conditions in Authorization BA25017

a. Groundwater protection requirements

Linquenda Dairy proposes to construct the expansion to the earthen liquid manure storage (EMS) with a 4.5 m metre naturally occurring protective layer. Section 9 of AOPA's Standards and Administration Regulation specifies a maximum hydraulic conductivity for this type of protective layer in order to minimize leakage.

Linquenda Dairy measured the hydraulic conductivity of the protective layer by installing a monitoring well (or water table well) at the time of borehole drilling. This approach provides an adequate representation of the protective layers proposed to be used to protect the groundwater resource.

The regulations provide that the actual hydraulic conductivity of a 10 metre thick naturally occurring protective layer must not be more than 1×10^{-6} cm/sec.

In this case, the in-situ measurement was 1.26×10^{-9} cm/sec. This value is below the maximum value in the regulations. Therefore, the proposed naturally occurring protective layer meets the hydraulic conductivity requirement in the regulations.

b. Construction deadline

Linquenda Dairy proposes to complete construction of the proposed dairy barn addition and expanded EMS 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 BA25017.

c. Post-construction inspection and review delete the plural if only one condition applies

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 BA25017 includes conditions requiring:

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

The NRCB routinely inspects newly constructed facilities to assess whether the facilities were constructed in accordance with the permit requirements. To be effective, these inspections must occur before livestock or manure are placed in the newly constructed facilities. Authorization BA25017 includes a condition stating that BA25017 shall not place livestock or manure in the manure storage or collection portions of the new expansion to the barn until NRCB personnel have inspected the facility and confirmed in writing that it meets the authorization requirements.