

## Decision Summary BA21022

This document summarizes my reasons for issuing Registration BA21022 under the *Agricultural Operation Practices Act* (AOPA). Additional reasons are in Technical Document BA21022. 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 a registration. For additional information on NRCB permits please refer to [www.nrcb.ca](http://www.nrcb.ca).

### 1. Background

On December 14, 2021, Glesman Farms Ltd. (Glesman) submitted a Part 1 application to the NRCB to expand an existing dairy CFO.

The Part 2 application was submitted on August 3, 2022. On September 7, 2022, I deemed the application complete.

The proposed expansion involves:

- Increasing livestock numbers from 60 to 120 milking (plus associated dries and replacements)
- Constructing:
  - new dairy barn – 60 m x 37 m
  - new earthen liquid manure storage – 50 m x 50 m x 4.5 m
- Decommissioning the existing earthen liquid manure storage
- Constructing a milk house – 12 m x 12 m (ancillary structure)

The application also notified the NRCB of the proposed construction of a milk house. 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.

#### a. Location

The existing CFO is located at NW 10-49-24 W4M in Leduc County, roughly 5 km southeast of Leduc Alberta. The terrain is relatively flat sloping to the south east.

#### b. Existing permits

To date, the CFO has been permitted under NRCB Authorization BA02004. That permit allowed the construction and operation of a 60 milking cows (plus associated dries and replacements) CFO. The CFO’s existing permitted facilities are listed in the appendix to the Registration BA21022.

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

Under section 21 of AOPA, the NRCB notifies (or directs the applicant to notify) all parties that are “affected” by a registration application. Section 5 of AOPA’s Part 2 Matters Regulation defines “affected parties” as:

- 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
- the municipality where the CFO is located or is to be located
- any other municipality whose boundary is within a ½ mile (805 m) from the CFO
- all persons who own or reside on land within the greater of ½ mile (805 m) or the minimum distance separation for the land on which the CFO is located

The land zoning on which the CFO is located would require a minimum distance separation of 290 metres. Therefore, the notification distance is 0.5 miles. (The NRCB refers to this distance as the “affected party radius.”)

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

The NRCB gave notice of the application by public advertisement in a weekly newspaper in circulation in the community affected by the application. In this case, public advertisement was in the Leduc Wetaskiwin County Market on September 7, 2022. The full application was made available for viewing during regular business hours and was posted on the NRCB website for public viewing. As a courtesy, 13 letters were sent to people identified by Leduc County as owning or residing on land within the notification distance.

## **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), Alberta Environment and Parks (AEP), and Alberta Agriculture, Forestry and Rural Economic Development (AFRED).

Ms. Anderson, an environmental health officer at AHS, sent a response raising questions regarding whether the NRCB is assessing the wells on site for potential contamination. The existing water wells are not located 100 m from the proposed but are within 100 m of the existing grandfathered facilities. As explained above in section 7, risk screening of the entire site has been completed and all of the CFO’s existing and proposed facilities score low risk to both groundwater and surface water.

Kim Berscheid, an inspector, replied on behalf of AF. Ms. Kim stated they had no concerns with the application and requested that Glesman Farms communicate with AF prior to and during construction of the proposed dairy barn. Glesman Farms has been made aware of this request.

#### **4. Alberta Land Stewardship Act (ALSA) regional plan**

Section 22(9) of AOPA requires that an approval officer must ensure the application complies with any applicable ALSA regional plan.

There is no ALSA regional plan for the area where the proposed expansion is to be located.

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

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

#### **6. AOPA requirements**

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

- 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 water wells, 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 and liners/protective layers of manure storage facilities and manure collection areas

With the terms and conditions summarized in part 9, the application meets all relevant AOPA requirements.

#### **7. Responses from municipality and other directly affected parties**

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." Leduc County is an affected party (and directly affected) because the proposed expansion is located within its boundaries.

Mr. Dave Desimone, a Senior Planner with Development Services, provided a written response on behalf of Leduc County. Mr. Desimone stated that the application is consistent with Leduc County's land use provisions of the municipal development plan. The application's consistency with Leduc County's municipal development plan, is addressed in Appendix A, attached.

Mr. Desimone also noted that the setbacks required by Leduc County's land use bylaw (LUB) are met.

No other responses were received.

## **8. Environmental risk of CFO facilities**

New CFO facilities which clearly meet or exceed AOPA requirements are automatically assumed to pose a low risk to surface and groundwater. However, there may be circumstances where, because of the proximity of a shallow aquifer, or porous subsurface materials, an approval officer may require groundwater and surface or construction supervision monitoring for the facility. In this case a determination was made, and monitoring is not required.

As part of my review of this application, I assessed the risk to the environment posed by the CFO's existing manure storage facilities and manure collection areas. I used the NRCB's environmental risk screening tool (ERST) to assist in my assessment of risk to surface water and groundwater (see NRCB Operational Policy 2016-7: Approvals, part 8.13). The tool provides for a numeric scoring of risks, which can fall within 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).)

For the sake of efficiency, I first assessed the CFO's existing facilities using the ERST. The assessment found that these facilities pose a low potential risk to groundwater and surface water. From a review of other information gathered in the course of this application, I am satisfied that the screening provided by the ERST is adequate and that the presumption is not rebutted.

## **9. Terms and conditions**

Registration BA21022 specifies the cumulative permitted livestock capacity as 120 milking cows (plus associated dries and replacements) and permits the construction of the new dairy barn and EMS.

Registration BA21022 contains terms that the NRCB generally includes in all AOPA registrations, 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, Registration BA21022 includes conditions that generally address construction deadlines, document submission and construction inspection, decommissioning. For an explanation of the reasons for these conditions, see Appendix B.

For clarity, and pursuant to NRCB policy, I consolidated the following permits with Registration BA21022: Authorization BA02004 (see NRCB Operational Policy 2016-7: Approvals, part 10.5). Permit consolidation helps the permit holder, municipality, neighbours and other parties keep track of a CFO's requirements, by providing a single document that lists all the operating and construction requirements. 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. This consolidation is carried out under section 23 of AOPA, which enables approval officers to amend AOPA permits on their own motion. Appendix B discusses which conditions from the historical permits are or are not carried forward into the new registration.

## **10. Conclusion**

Registration BA21022 is issued for the reasons provided above, in the attached appendices, and in Technical Document BA21022.

Glesman's deemed registration, including NRCB-issued Authorization BA02004 are therefore superseded, and their content consolidated into this Registration BA21022, unless Registration BA21022 is held invalid following a review and decision by the NRCB's board members or by a court, in which case the deemed registration and Authorization BA02004 will remain in effect.

October 19, 2022

(Original signed)

Nathan Shirley  
Approval Officer

**Appendices:**

- A. Consistency with the municipal development plan
- B. Explanation of conditions in Registration BA21022

## APPENDIX A: Consistency with the municipal development plan

Under section 22 of AOPA, an approval officer may only approve an application for a registration or amendment of a registration 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.)

Glesman’s CFO is located in Leduc County and is therefore subject to that county’s MDP. The county adopted the latest revision to this plan on June 23, 2019, under Bylaw #08-19.

Section 4.3.0.2 of the MDP lists planning objectives and policies for the county’s four agricultural areas. (The locations of these areas are shown on Map 4 of the MDP.) The existing CFO is in Area South Central/East. The MDP provisions applicable to Glesman’s CFO are discussed below.

Section 4.3.0.2(c) states that the purpose of Agricultural Area South Central/East is “to provide for a broad range of agriculture including confined feeding operations. This area currently has a number of dairy operations that will be adversely impacted by significant increases in population and/or development.” This is likely a general guiding principle and is not considered a valid land use provision, therefore it’s not relevant to my decision.

Section 4.3.2 states that the county supports the development and expansion of CFOs provided the operation is compatible with the surrounding land uses. More specifically, section 4.3.2.1 states support for new or expanded CFOs provided the operation:

- a. *does not create adverse impacts on environmentally significant lands;*
- b. *has a satisfactory access;*
- c. *is located within Agricultural Areas A, B or C,*
- d. *is carried out in accordance with generally accepted farming practices regarding the storage, disposal and spreading of manure and the disposal of animal carcasses; and*
- e. *meets the minimum setback distances to urban communities and residential development as regulated by the Agricultural Operation Practices Act.*

Section 4.3.2.1 (a) 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(1) of AOPA. At any rate, the application meets the “technical and locational” requirements of AOPA.

Section 4.3.2.1 (b) it is considered outside the mandate of AOPA. Additionally, the county did not raise concern regarding this matter and the application was sent to Alberta Transportation for their review and follow-up. The applicant is reminded that they must comply with applicable Alberta Transportation requirements.

Section 4.3.2.1 (c) is met as the CFO and the application are located in Agricultural area C.

Section 4.3.2.1 (d) This part is likely not considered a “land use provisions,” as it is likely a CFO-related “test” under section 22(2.1) of AOPA. At any rate, the applicant has provided adequate spreading lands for manure management. The applicant must also adhere to all AOPA requirements.

Section 4.3.2.1 (e) the application meets the required minimum distance separation as set out by AOPA.

For these reasons, I conclude that the application is consistent with the land use provisions of Leduc County’s MDP that I may consider.

## **APPENDIX B: Explanation of conditions in Registration BA21022**

Registration BA21022 includes several conditions, discussed below, and carries forward and updates one condition from Authorization BA02004, also deletes one condition from the previous authorization (see section 2 of this appendix). Construction conditions from historical Authorization BA02004 that have been met are identified in the appendix to Registration BA21022.

### **1. New conditions in Registration BA21022**

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

Glesman's 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  $1 \times 10^{-6}$  cm/sec.

In this case, the in situ measurement was  $1 \times 10^{-8}$  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 above the water table**

Sections 9(3) of the *Standards and Administration Regulation* under the *Agricultural Operation Practices Act* (AOPA) requires the bottom of the manure storage facility or manure collection area to be not less than one metre above the water table of the site "at the time of construction."

Based on this information, the proposed EMS meets the one metre requirement of section 9(3) for protective layer. However, because the height of the water table can vary over time, a condition is included requiring Glesman to cease construction and notify the NRCB immediately if the water table is encountered during construction.

#### **c. Construction Deadline**

Glesman proposes to complete construction of the proposed new dairy barn and EMS by March 20, 2024. This time-frame is considered to be reasonable for the proposed scope of work however an additional construction season would allow for unforeseen issues that may arise. Therefore the deadline of December 1, 2024 is included as a condition in Registration BA21022.

#### **d. 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, Registration BA21022 includes conditions requiring:

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

- b. Glesman to provide documentation to confirm the specifications of the concrete used to construct the manure storage and collection portions of the dairy barn.

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. Registration BA21022 includes a condition stating that Glesman shall not place livestock or manure in the manure storage or collection portions of the new facilities until NRCB personnel have inspected each facility and confirmed in writing that they meet the registration requirements.

#### **e. Decommissioning**

Glesman has proposed to decommission the existing EMS. Therefore, a condition will be included requiring this be completed. This decommissioning must be completed in accordance with Technical Guideline Agdex 096-90, "Closure of Manure Storage Facilities and Manure Collection Areas."

#### **f. Conditions carried forward from BA02004**

The following conditions from Approval BA02004 will be carried forward and revised to reflect current NRCB terminology.

#### **6. Water Well Testing Reporting**

- a. The operator must test (for drinking water quality) the water well located within 100 metres of the existing dairy barn and have the results submitted to the NRCB on an annual basis by June 30th. The first results will be submitted by June 30, 2004.

### **2. Conditions not carried forward from Authorization BA02004**

Registration BA21022 includes the terms and conditions in Authorization BA02004, except those noted below.

#### **5. Earthen Manure Storage (EMS) Leakage Detection System Reporting**

- a. Reporting of leakage detection results from the existing monitoring well must be done every 12 months. The first report will be submitted by June 30, 2004. The report will 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
- Laboratory reports as follows:

Comprehensive report to be done initially:

- PH, Total Dissolved Solids, Electrical Conductivity, SAR
- Major Ions: Calcium, Magnesium, Sodium, Potassium, Bicarbonate, Carbonate, Sulfate, Chloride
- Nitrogen Species: Ammonia, Nitrate Nitrogen, Total Kjeldahl Nitrogen

- Other: Orthophosphate (total dissolved Phosphate), DOC
- Cation/Anion Balance
- Bacteriological: E-Coli

Indicators to be done 12 months after initial testing and every 12 months thereafter:

- pH, Total Dissolved Solids, Electrical Conductivity
- Chloride, Potassium, Orthophosphates, DOC
- Nitrogen Species: Ammonia, Nitrate Nitrogen, Total Kjeldahl Nitrogen
- Bacterial: E-Coli
- Discussion and explanation of the results including a trend analysis
- Recommendations

b. The reports are to be submitted to the NRCB until such time as the NRCB adjusts the monitoring frequency, test parameters and/or report contents.

Pursuant to section 23 of AOPA (approval officer amendments), I have determined that condition 5 (a and b) from Authorization BA02004 should be deleted and therefore are not carried forward to Registration BA21022. This condition was associated with the previously permitted EMS. As this facility is being decommissioned then this condition is no longer valid.