

Decision Summary RA21024

This document summarizes my reasons for issuing Authorization RA21024 under the *Agricultural Operation Practices Act* (AOPA). Additional reasons are in Technical Document RA21024. 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 May 7, 2021, Johannes Philipsen on behalf of Arie and Dirkje (Dineke) Philipsen operating as Philipsen Farm Ltd. (Philipsen Farm) submitted a Part 1 application to the NRCB to construct an earthen liquid manure storage facility (EMS) measuring 63 m x 63 m x 7 m deep, at a new site. A permit is issued because the proposed EMS has a capacity to contain 500 tonnes or more of manure which requires a permit under the Matters Part 2 regulation Section 4(1). Only the EMS will hold an AOPA permit.

Philipsen Farm has indicated that they will store only liquid manure from dairy CFOs in the EMS.

The Part 2 application was submitted on July 2, 2021. On July 14, 2021, I deemed the application complete.

a. Location

The proposed EMS is located at NW 29-40-25 W4M in Lacombe County, roughly 8.5 km east of Lacombe. The terrain is undulating with a general slope to the northeast.

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 1 mile (1600 m) from the CFO

A copy of the application was sent to Lacombe County, which is the municipality where the CFO is to be 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 to Alberta Health Services (AHS), Alberta Environment and Parks (AEP), and Alberta Agriculture and Forestry (AF).

I received responses from AHS, AEP, and AF.

Ms. Pamela Kutuadu, an AHS environmental health officer/executive officer, indicated that AHS has no concerns with this application.

Ms. Laura Partridge, a senior water administration officer with AEP, indicated that since there is no animals associated with this application no water licensing is required at this time.

Mr. Al Spink, an inspector, responded on behalf of AF acknowledging receipt of the application, and provided the name of the inspector assigned to the CFO. AF did not provide any other comments.

4. Municipal Development Plan (MDP) consistency

I have determined that the proposed EMS construction is consistent with the land use provisions of Lacombe County'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 EMS 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 water wells, 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 of manure storage facilities and manure collection areas

With the terms and conditions summarized in part 8, the application meets all relevant AOPA requirements.

6. Responses from the 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." Lacombe County is an affected party (and directly affected) because the proposed facility is located within its boundaries.

Ms. Allison Noonan, a planning services administrative assistant with Lacombe County, provided a written response on behalf of Lacombe County. Ms. Noonan stated that the application is consistent with Lacombe County's land use provisions of the municipal development plan. The application's consistency with Lacombe County's municipal development plan is addressed in Appendix A, attached.

Ms. Noonan also indicated that the application meets the setbacks required by Lacombe County's land use bylaw (LUB).

7. Environmental risk of facilities

New manure storage 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 monitoring for the facility. In this case a determination was made and monitoring is not required.

8. Terms and conditions

Authorization RA21024 permits the construction of the EMS.

Authorization RA21024 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 RA21024 includes conditions that generally address a construction deadline, document submission, a construction inspection, limiting only dairy manure to be stored in the EMS, and a survey. For an explanation of the reasons for these conditions, see Appendix B.

9. Conclusion

Authorization RA21024 is issued for the reasons provided above, in the attached appendices, and in Technical Document RA21024.

September 24, 2021

(Original Signed)
Francisco Echegaray, P.Ag.
Approval Officer

Appendices:

- A. Consistency with the municipal development plan
- B. Explanation of conditions in Authorization RA21024

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.

Philipsen Farm’s proposed EMS is located in Lacombe County and is therefore subject to that county’s MDP. Lacombe County adopted the latest revision to this plan on April 8, 2021, 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 plan, the Land Use Bylaw, or provincial legislation.”

I consider this section to be a procedural in nature and not a valid land use provision. However, it does provide insight for the interpretation of the remaining portions of the MDP and land use bylaw (LUB).

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

Philipsen Farm’s proposed EMS is located outside any of these 1.6 km setbacks.

As for section 3.9.1’s reference to intermunicipal development plans (IDP) or other plans approved by the county’s council, this proposed EMS 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 consistent with the county’s written 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 CFO does not conflict with the LUB.

APPENDIX B: Explanation of conditions in Authorization RA21024

Authorization RA21024 includes several conditions, discussed below:

a. Groundwater protection requirements

Philipsen Farm proposes to construct the new earthen liquid manure storage (EMS) with a 0.5 metre thick compacted soil liner. Section 9 of AOPA's Standards and Administration Regulation specifies a maximum hydraulic conductivity for this type of liner in order to minimize leakage.

To demonstrate compliance with this standard, Philipsen Farm provided lab measurements of the hydraulic conductivity of the materials that will be used to construct the compacted soil liner. Lab measurements of hydraulic conductivity are made in a precisely controlled setting and are typically based on a small soil sample. Therefore, the NRCB generally multiplies lab-measured hydraulic conductivity values by a factor of 10 to reflect the potential variability in actual liner materials and conditions that can reasonably be expected to be achieved in the field.

The regulations provide that the actual hydraulic conductivity of a one metre thick compacted soil liner must not be more than 1×10^{-7} cm/sec.

In this case, the lab measurement was 7.24×10^{-11} cm/sec. With the required ten-fold modification, the expected field value is 7.24×10^{-10} cm/sec. This expected value is below (better than) the maximum value in the regulations. Therefore, the proposed liner meets the hydraulic conductivity requirement in the regulations.

To provide additional assurance that the as-built EMS adequately protects groundwater, Authorization RA21024 includes a condition requiring Philipsen Farm to provide an engineer's completion report certifying that the EMS was constructed with the same liner material as that used for hydraulic conductivity testing and that the EMS was constructed according to the proposed procedures and design specifications.

b. Construction Deadline

Philipsen Farm proposes to complete construction of the proposed new EMS by October 2022. This time-frame may not be reasonable for the proposed scope of work. Allowing an additional construction season is more reasonable, therefore a deadline of November 30, 2023 is included as a condition in Authorization RA21024.

c. Post-construction inspection and review

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 RA21024 includes a condition stating that Philipsen Farm shall not place manure in the manure storage or collection portions of the new EMS until NRCB personnel have inspected the facility and confirmed in writing that it meets the authorization requirements.

d. Distance to neighboring residences

Philipsen Farm is constructing a new EMS on a piece of land that has no constructed buildings. In order to ensure that Philipsen Farm builds the EMS while maintaining the distance to neighboring residences, a condition will be included in the authorization requiring Philipsen Farm to provide documentation, from a qualified third party, of the distance from the EMS to the nearest neighbouring residence.

e. Only dairy manure in the EMS

Philipsen Farm has indicated that they will only store liquid manure from dairy CFOs in the EMS. This commitment will be included as a condition in the authorization.