

Decision Summary RA21047

This document summarizes my reasons for issuing Approval RA21047 under the *Agricultural Operation Practices Act* (AOPA). Additional reasons are in Technical Document RA21047. 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 approval. For additional information on NRCB permits please refer to www.nrcb.ca.

1. Background

On December 7, 2021, Tim and Kara Steenbergen (Steenbergen) submitted a Part 1 application to the NRCB to construct a new 4,000 head swine finishers CFO with the construction of a new finisher barn (107.2 m x 31 m x 0.7 m) and an earthen manure storage (EMS) (54 m x 54 m x 4.25 m deep). The site is currently owned by Harold and Mary Solick. The Solicks have provided written permission for the Steenbergens to apply for a permit.

On July 7, 2022, the applicant emailed to modify the dimensions of the EMS to 45 m x 65 m x 4.25 m.

On September 16, the applicant emailed me to modify the dimensions of the barn to be 131 m x 25 m x 0.7 m.

The Part 2 application was submitted on July 14, 2022. On July 28, 2022, I deemed the application complete.

The proposed CFO involves:

- Permitting 4,000 swine finishers
- Constructing a swine barn (131 m x 25 m x 0.7 m)
- Constructing an EMS (45 m x 65 m x 4.25 m deep)

a. Location

The proposed CFO is located at NW 10-39-26 W4M in Lacombe County, roughly 9.2 km southeast of Blackfalds, AB. The terrain is generally level, and slopes to the north. A seasonal drainage water course exists approximately 41 m east of the proposed EMS. The Red Deer River is located approximately 1.1 km west of the proposed facilities.

2. Notices to affected parties

Under section 19 of AOPA, the NRCB notifies (or directs 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:

- 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 person or 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 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

The proposed site is not located within 100 m of a bank of a river, stream or canal.

For the size of this CFO the specified distance is one mile. (The NRCB refers to this distance as the “affected party radius.”)

A copy of the application was sent to Lacombe County, which is the municipality where the CFO is to be 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 Lacombe Express on July 28, 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, 28 letters were sent to people identified by Lacombe County as owning or residing on land within the affected party radius.

3. Notice to other persons or organizations

Under section 19 of AOPA, 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 Parks (AEP).

I also sent a copy of the application to Chain Lakes Gas Co-op Ltd. and Canadian Natural Resources Ltd.

Ms. Laura Partridge, a senior water administration officer, replied on behalf of AEP. Ms. Partridge provided a general response indicating how the applicant could determine if they require a water license; and if needed, how to apply for one.

4. Alberta Land Stewardship Act (ALSA) regional plan

Section 20(10) 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 CFO is to be located.

5. Municipal Development Plan (MDP) consistency

I have determined that the proposed CFO 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.)

6. AOPA requirements

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

- 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 10, 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.” Lacombe County is an affected party (and directly affected) because the proposed CFO is located within its boundaries.

Ms. Cajun Paradis, a Senior Planner with Lacombe County, provided a written response on behalf of Lacombe County. Ms. Paradis stated that the application is consistent with Lacombe County’s land use provisions of the municipal development plan. She further added that no planning-type documents apply to the proposed CFO area. The application’s consistency with Lacombe County’s municipal development plan is addressed in Appendix A, attached.

Apart from municipalities, any member of the public may request to be considered “directly affected.” The NRCB received a response from one party.

The party that submitted the response owns or resides on land within the 1.0 mile notification radius for affected persons. Because of their location within this radius, and because they submitted a response, they qualify for directly affected party status. (See NRCB Operational Policy 2016-7: Approvals, part 6.2) The party’s concerns are discussed in Appendix B.

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 monitoring for the facility. In this case a determination was made, and groundwater monitoring is not required.

9. Other factors

Because the approval application is consistent with the MDP land use provisions, and meets the requirements of AOPA and its regulations, I also considered other factors.

AOPA requires me to consider matters that would normally be considered if a development permit were being issued. The NRCB interprets this to include aspects such as property line and road setbacks related to the site of the CFO. (Grow North, RFR 2011-01 at page 2). Approval officers are limited to what matters they can consider though as their regulatory authority is limited.

Ms. Paradis also listed the setbacks required by Lacombe County's land use bylaw (LUB) and noted that the application meets these setbacks.

I have considered the effects the proposed CFO may have on natural resources administered by provincial departments. AEP has not made me aware of statements of concern submitted under section 73 of the *Environmental Protection and Enhancement Act* / section 109 of the *Water Act* in respect of the subject of this application. Furthermore, the application meets AOPAs technical requirements. I am not aware of any written decision of the Environmental Appeals Board for this location (<https://www.eab.gov.ab.ca/status.htm>, accessed October 14, 2022).

Finally, I considered the effects of the proposed CFO on the environment, the economy, and the community, and the appropriate use of land.

Consistent with NRCB policy (Approvals Policy 8.7.3), I presumed that the effects in the environment are acceptable because the application meets all of AOPA's technical requirements. In my view, this presumption is not rebutted and the directly affected parties' concerns have been addressed.

Consistent with NRCB policy (Approvals Policy 8.7.3), if the application is consistent with the MDP then the proposed development is presumed to have an acceptable effect on the economy and community. In my view, this presumption is not rebutted.

I also presumed that the proposed CFO is an appropriate use of land because the application is consistent with the land use provisions of the municipal development plan (See NRCB Operational Policy 2016-7: Approvals, part 8.7.3.). In my view, this presumption is not rebutted.

10. Terms and conditions

Approval RA21047 specifies the permitted livestock capacity as 4,000 swine finishers and permits the construction of the swine barn and earthen manure storage.

Approval RA21047 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 RA21047 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

Approval RA21047 is issued for the reasons provided above, in the attached appendices, and in Technical Document RA21047.

October 25, 2022

(Original signed)
Lynn Stone
Approval Officer

Appendices:

- A. Consistency with the municipal development plan
- B. Concerns raised by directly affected parties
- C. Explanation of conditions in Approval RA21047

APPENDIX A: Consistency with the municipal development plan

Under section 20 of AOPA, an approval officer may only approve an application for an approval or amendment of an approval 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 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.”) “Land use provisions” also do not impose procedural requirements on the NRCB. (See NRCB Operational Policy 2016-7: Approvals, part 8.2.5.)

Steenbergen’s proposed 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 April 14, 2022, under Bylaw #1238/17.

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.”

The Steengergens’ application is for a CFO that 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 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 that I may consider.

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: Concerns raised by directly affected party

Rashelle and Christian Dubrule, (NW 11-39-26 W4) qualify for directly affected party status because they submitted a response to the application and they own or reside on land within the “affected party radius,” as specified in section 5(c) of the Agricultural Operation, Part 2 Matters Regulation. (NRCB Operational Policy 2016:7 – Approvals, part 6.2.)

Concerns from directly affected parties

The directly affected parties raised the following concerns: odour, property value, proximity to ravine, physical/social toll, and if the Steenbergens will be living on the site.

Odour

The Dubrules raised concern about how odour will be mitigated, and if there is a way to monitor how much odour is released.

Approval Officer’s comments:

AOPA’s minimum distance separation (MDS) is a means for mitigating odour and other nuisance impacts from CFOs. The Dubrule’s residence falls well outside of the required MDS from Steenbergen’s CFO. They may experience some odours and other nuisance impacts from the CFO. However, the frequency of these exposures will likely be limited and of short duration.

Odour is challenging to monitor. Odour is made up of various chemical compounds at different concentrations; there is no single “odour” to monitor. The NRCB relies on its team of inspectors to assess odour, and to determine if further action is required to mitigate it.

If a member of the public has concerns regarding a CFO, including whether or not the operation is complying with AOPA, they may contact the NRCB through its toll free reporting line (1-866-383-6722). An NRCB inspector will follow up on the concern.

Property Value

The Dubrules raised concern about how a pig barn will reduce property values.

Approval Officer’s comments:

In previous board decisions, the NRCB’s board members have consistently stated that concerns regarding effects on land or property values are “not a subject for [the board’s] review under AOPA or for approval officers’ consideration.” According to the board, impacts on property values are a “planning matter dealt with by municipalities in municipal development plans and land use bylaws.” (See Pigs R Us Inc., RFR 2017-11/BA170025 at 6).

Location near ravine

The Dubrules raised concern about manure seeping into the ravine and contaminating it.

Approval Officer's comments:

During my site visit, I assessed the ravine and the potential risks the proposed facilities may have to it.

My observations were that the ravine is seasonal in nature, and likely flows during periods of spring melt/high rainfall events. The ravine did not contain standing nor flowing water at the time of my visit. Nevertheless, I assessed it as a water body as it has the potential to carry water.

I note that the proposed facilities will be located more than the required 30 m setback from the ravine. I also note that the proposed barn and EMS meet all technical requirements under AOPA. These include protecting both surface and groundwater. The proposed facilities will also have more than the required 9 month storage capacity.

My risk assessment of the facilities concluded that the potential risk to groundwater and surface water from this CFO is low.

Based on the above, I believe this concern has been addressed.

Social and physical toll

The Debrules stated that they have been researching the social and physical toll (of being located by) a pig barn. They added that there will be a loss of enjoyment of their property due to odour. They also inquired if there has been an investigation into the potential cancer risk caused by pigs and their odours. They also stated that they are at high risk of being "contaminated" by the odours.

Approval Officer's comments

This concern is difficult to assess without further details.

The Debrules did not provide me with any research studies to support their claim of potential cancer risks. They also did not expand on what they feel that they would specifically be "contaminated" by.

Consistent with Approvals Policy 8.7.3, if the application is consistent with the MDP then the proposed development is presumed to have an acceptable effect on the community. The proposed CFO is an appropriate use of land because the application is consistent with the land use provisions of the MDP stated previously in Appendix A.

The Debrule's residence is approximately three times the minimum required setback for a CFO of this size in Agriculture land. MDS is the measure under AOPA to mitigate odour and nuisance effects; as the Steenbergen's application meets these setbacks, I conclude that this concern has been adequately addressed.

Where the Steenbergens' will be living?

The Dubrules questioned where the Steenbergens' will be living—on the CFO, or at another location.

Approval Officer's Comments

AOPA does not require an applicant to live at a CFO site. However, when I discussed this concern with the Steenbergens, they stated that they plan on moving to the site at a later date.

APPENDIX C: Explanation of conditions in Approval RA21047

Approval RA21047 includes several conditions, discussed below:

a. Construction above the water table

Section 9(2) of the *Standards and Administration Regulation* under the *Agricultural Operation Practices Act* (AOPA) requires the bottom of the liner of a 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.”

The Steenbergens’ have provided an engineering report stating that a saturated water table was encountered during their soils investigation.

Based on this information, the proposed EMS meets the one metre requirement of section 9(2). However, because the height of the water table can vary over time, a condition is included requiring the Steenbergens to cease construction and notify the NRCB immediately if the water table is encountered during construction.

b. Groundwater protection requirements

Steenbergen proposes to construct the new earthen liquid manure storage (EMS) with a 2.2 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, Steenbergen 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 2.2×10^{-8} cm/sec. With the required ten-fold modification, the expected field value is 2.2×10^{-7} cm/sec. In order to account for this, the applicant has correctly proposed to construct a liner 2.2 m thick, in order to meet the hydraulic conductivity requirement in the regulations.

To provide additional assurance that the as-built EMS adequately protects groundwater, Approval RA21047 includes a condition requiring the Steenbergens to provide an engineer’s completion report certifying that the EMS was constructed with the protective layer material as that used for hydraulic conductivity testing and that the EMS was constructed according to the proposed procedures and design specifications, including a maximum depth below grade of 1.55 m.

c. Construction Deadline

The Steenbergens did not provide an expected construction completion date of the proposed new swine barn and earthen manure storage. In my experience, allowing for three full

construction seasons is considered to be reasonable for a new CFO. The deadline of November 30, 2025 is included as a condition in Approval RA21047.

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, Approval RA21047 includes conditions requiring:

- a. Steenbergen 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. the concrete used to construct the liner of the manure collection and storage portion of the swine barn 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."
- c. Steenbergen to provide documentation to confirm the specifications of the concrete used to construct the manure storage and collection portions of the swine 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. Approval RA21047 includes conditions stating that the Steenbergens shall not place livestock or manure in the manure storage or collection portions of the new swine barn, or manure in the earthen manure storage until NRCB personnel have inspected the swine barn and earthen manure storage and confirmed in writing that they meet the approval requirements.