

Decision Summary RA23006

This document summarizes my reasons for issuing Registration RA23006 under the *Agricultural Operation Practices Act* (AOPA). Additional reasons are in Technical Document RA23006. 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 a registration. For additional information on NRCB permits please refer to www.nrcb.ca.

1. Background

On February 3, 2023, Harmen and Peggy Hondebrink (the Hondebrinks) submitted a Part 1 application to the NRCB to expand an existing dairy operation into a dairy confined feeding operation (CFO). The existing 49 cow dairy operation was built in 2011, under the jurisdiction of Clearwater County, below the AOPA's threshold of 50 milking cows (plus associated dries and replacements).

The Part 2 application was submitted on February 16, 2023. On March 1, 2023, I deemed the application complete. The applicant is proposing to expand an existing dairy operation; however, AOPA looks at this as a "new" CFO.

The proposed dairy expansion into a CFO involves:

- Increasing livestock numbers from 49 to 80 milking cows (plus associated dries and replacements)
- Constructing a new dry cow barn (20 m x 18 m)
- Permitting the existing dairy facilities to be used as a CFO facilities:
 - dairy barn (total 80 m x 18 m)
 - calf barn/milking parlour (18 m x 13.5 m)
 - heifer barn (total 28 m x 18.5 m)
 - heifer shed (26.5 m x 10 m)
- Installing concrete floors in the clay areas of the existing dairy barn (15 m x 12 m) and heifer barn (25 m x 9 m)

The applicant also requested a variance under section 17 of AOPA of the AOPA requirement to locate manure storage facilities and manure collection areas at least 100 metres away from water wells. That variance request is discussed in Appendix B and section 9, below.

a. Location

The existing dairy operation is located at SW 8-40-5 W5M in Clearwater County, roughly 7 km northwest of Leslieville, Alberta. The terrain is slightly undulating with a general slope towards the southeast.

b. Existing permits

The 49 cow dairy operation was originally constructed in 2011 under the municipal jurisdiction of Clearwater County. The dairy operation includes a dairy barn, a milking parlour/calf barn, a

heifer barn, and a heifer shed.

On June 11, 2021, the NRCB issued Authorization RA21020; which allows the construction of a synthetically lined liquid manure storage. The authorization was issued for a liquid manure storage facility, for which an AOPA permit is required.

There is a concrete pad with walls that the applicant used to store solid manure; however, after constructing the synthetically lined liquid manure storage, the Hondebrinks stopped using it as a manure storage facility. A condition will be included in the registration prohibiting the co-permit holders from using the concrete pad to store manure.

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 250 metres. Therefore, the notification distance is 805 metres (½ mile). (The NRCB refers to this distance as the “affected party radius.”)

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

The NRCB gave notice of the application by public advertisement in The Western Star on March 1, 2023. 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, 11 letters were sent to people identified by Clearwater 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 Protected Areas (EPA), and Alberta Agriculture and Irrigation (AGI).

I also sent a copy of the application to right of way holders Obsidian Energy (formerly Penn West Petroleum Ltd.), Plains Midstream Canada ULC., Diamond Valley Gas Co-op Ltd., and

Prairie Storm Energy Corp.

I only received a response from EPA. Ms. Laura Partridge, a senior water administration officer responded on behalf of EPA. Ms. Partridge indicated that there are no existing water licences for this operation, and therefore, a *Water Act* licence application is required.

The applicants are reminded that they are responsible for obtaining licences under the *Water Act*.

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 CFO is to be located.

5. Municipal Development Plan (MDP) consistency

I have determined that the proposed expansion of the existing dairy operation into an AOPA-permitted dairy CFO (the applicant is proposing to expand an existing dairy operation; however, AOPA looks at this as a “new” CFO) is consistent with the land use provisions of Clearwater 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 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 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 variance that is required to address the AOPA requirements around the 100 metre setback to a water well from the already built dairy barn is discussed in the following parts of this decision summary.

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.” Clearwater County is an affected party (and directly affected) because the proposed CFO is located within its boundaries.

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

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

Apart from municipalities, an owner or occupant of land within the notification distance may request to be considered "directly affected." The NRCB received a response from Arnold and Alida Van Ginkel (NW 5-40-5 W5M). Under our policy, because they are located within the notification distance and have submitted a timely response they are presumed to be directly affected. (See NRCB Operational Policy 2016-7: Approvals, part 6.2)

The directly affected party supported the application and did not have any concerns.

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 construction supervision or 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 surface water and groundwater posed by the CFO's proposed manure storage facilities (which include the existing dairy operation's facilities). I used the NRCB's environmental risk screening tool for this purpose (see NRCB Operational Policy 2016-7: *Approvals*, part 8.13). The tool 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.)

All of the CFO's proposed facilities (including the existing dairy operation's facilities) pose a low potential risk to groundwater and surface water.

9. Variances

The applicant applied for a variance of the requirement for a water well to be at least 100 m away from a manure storage facility/manure collection area. I determined that the existing dairy barn, which was constructed under Clearwater County's jurisdiction, is located within the required AOPA setback from an existing water well. As explained in Appendix B, I am prepared to issue a variance to the 100 metre water well setback due to the construction and location upslope from the dairy barn.

10. Terms and conditions

Registration RA23006 specifies the cumulative permitted livestock capacity as 80 milking cows (plus associated dries and replacements), and permits:

- the construction of a dry cow barn,
- installing concrete floors on parts of the existing dairy and heifer barns, and
- the use of the existing dairy barn, calf barn/milking parlour, heifer barn, and heifer shed as CFO facilities.

Registration RA23006 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 RA23006 includes conditions that generally address construction deadlines, document submission, prohibiting from using a concrete pad to store manure, and construction inspections. For an explanation of the reasons for these conditions, see Appendix C.

For clarity, and pursuant to NRCB policy, I consolidated Authorization RA21020 with Registration RA23006 (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 C discusses which conditions from the historical permits are or are not carried forward into the new registration.

11. Conclusion

Registration RA23006 is issued for the reasons provided above, in the attached appendices, and in Technical Document RA23006.

Authorization RA21020 is therefore superseded, and its content consolidated into this Registration RA23006, unless Registration RA23006 is held invalid following a review and decision by the NRCB's board members or by a court, in which case Authorization RA21020 will remain in effect.

April 21, 2023

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

Appendices:

- A. Consistency with the municipal development plan
- B. Variances
- C. Explanation of conditions in Registration RA23006

APPENDIX A: Consistency with the municipal development plan

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

The Hondebrinks’ proposed CFO is located in Clearwater County and is therefore subject to that county’s MDP. Clearwater County adopted the latest revision to this plan on July 13, 2010, under Bylaw 923/10.

Section 8.2.4 states that CFOs for which an approval, authorization, or registration is required under AOPA are not regulated by this Plan. However, subsequent sections of the MDP indicate that the county shall provide guidance on the location of CFOs.

Section 8.2.5 of the MDP states that within specified exclusion zones, the county shall indicate its opposition to an application for a new operation and may indicate its opposition to an application to expand a confined feeding operation. This application is not located in any of these exclusion zones. Therefore, this section is not applicable to this application.

Section 8.2.6 states that the county may identify further CFO exclusion zones (in addition to those in section 8.2.5) in additional planning documents. The county’s response to this application indicates that the CFO is not subject to any additional planning documents.

Section 8.2.7 indicates that in its response to the NRCB, the county will consider the location, scale of operation, surrounding land uses, and provisions in the MDP and other applicable plans. This is a procedural provision which provides discretion to the county regarding how the county can respond to the NRCB. Since this provision is procedural and calls for site specific information, it is not considered to be a land use provision and therefore is not relevant to my MDP consistency determination. Regardless, the county’s response indicates that the proposed construction fully conforms to the requirements of the MDP.

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

APPENDIX B: Variances

The dairy barn is located less than 100 m from a water well. I have confirmed during a site visit that one water well is located approximately 48 m from it. This is in conflict with section 7(1)(b) of the Standards and Administration Regulation (SAR).

Because the barn has already been constructed (under the county's jurisdiction), an exemption under section 7(2) of SAR is not possible. For an exemption, the applicant must demonstrate protection before construction. Accordingly, only a variance is possible, upon request of the applicant.

Approval officers must not grant variances or exemptions lightly or in the absence of substantive evidence they will produce equivalent levels of protection (see Decision 03-04, *AAA Cattle Ltd.* p 24). I will consider whether a variance is warranted to the water well separately below.

On April 17, 2023, the Hondebrinks requested a variance to the water well setback requirement on the grounds that the roof, walls and concrete floor of the dairy barn provide protection.

In this case, the facility has already been constructed but may cause a risk to the environment. 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.

As noted above, approval officers must not grant variances lightly or in the absence of substantive evidence. 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 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 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

The water well:

Based on information provided by the applicant and from the Alberta Environment and Protected Areas (EPA) water well database, the water well located approximately 48 m south of the dairy barn is likely EPA water well ID #1430243. This well is reported to have been installed in 2021 and has a perforated or screened zone from 24.4 m to 29 m below ground level across stratigraphy. The well has an above ground casing. This well is reported to be used for domestic and non-domestic purposes. The well's log identifies a protective layer from ground surface to 4.9 m below ground level. The well has a driven seal at 24 m below ground level. The well appeared to be in good condition at the time of my site inspection and its casing was protected by a welded steel cage. The well is up-gradient of the CFO and MSF.

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 well¹. This tool is useful in gauging the level of protection of groundwater.

Approval officers use the water well exemption screening tool to determine if a water well is going to be impacted when an exemption is considered. 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 well provides an equivalent level of protection if an exemption was considered.

Based on the above, I am prepared to grant a variance to the 100 m water well setback requirement from the dairy barn to the water well.

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 Registration RA23006

Registration RA23006 includes several conditions, discussed below. Construction conditions from Authorization RA21020 that have been met are identified in the appendix to Registration RA23006.

Registration RA23006 includes several conditions, discussed below:

a. Construction Deadline

The Hondebrinks propose to complete construction of the proposed new dry cow barn and installing a concrete floor on parts of the dairy barn and heifer barn by October 2023, within the same construction season as when the registration is issued. It is my opinion that a longer construction deadline is more reasonable for the proposed scope of work. The deadline of November 30, 2026 is included as a condition in Registration RA23006.

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, Registration RA23006 includes conditions requiring:

- a. the concrete used to construct the liner of the manure collection and storage portions of the new dry cow barn, and areas of the dairy barn and heifer barn must meet the specification for category C (solid manure – wet) in Technical Guideline Agdex 096-93 "Non-Engineered Concrete Liners for Manure Collection and Storage Areas." The Hondebrinks shall provide evidence or written confirmation from a qualified third party that the concrete used for the manure collection and storage area meets the required specifications.

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 RA23006 includes conditions stating that the Hondebrinks shall not place livestock or manure in the manure storage or collection portions of the new dry cow barn, and the new concrete liner on parts of the existing dairy and heifer barns until NRCB personnel have inspected them and confirmed in writing that they meet the registration requirements.

c. Concrete pad with walls

There is a concrete pad with walls that the applicant used to store solid manure; however, after constructing the synthetically lined liquid manure storage, the Hondebrinks stopped using it as a manure storage facility. A condition will be included in the registration stating that the co-permit holders shall not place manure on the concrete pad.