

Decision Summary RA22022

This document summarizes my reasons for issuing Registration RA22022 under the *Agricultural Operation Practices Act* (AOPA). Additional reasons are in Technical Document RA22022. 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 July 4, 2022, Tim and Connie Knull (Knull) submitted a Part 1 application to the NRCB to expand an existing dairy CFO.

The Part 2 application was submitted on November 10, 2022. On November 17, 2022, I deemed the application complete.

The proposed expansion involves:

- Increasing livestock numbers from 51 to 120 milking cows (plus associated dries and replacements)
- Constructing a dairy barn – 61.0 m x 42.7 m (200 ft. x 140 ft.)
- Constructing a synthetic liquid manure storage facility – 65 m x 65 m x 4.5 m

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 SW 28-47-25 W4M in the County of Wetaskiwin, roughly 9.5 kilometers southwest of Millet, Alberta. The terrain is generally flat, with an overall slope to the south. A seasonal water course exists approximately 125 metres south of the site.

b. Existing permits

The site is not covered by any municipal development permits. As the CFO existed on January 1, 2002, the CFO is grandfathered with a deemed registration under section 18.1 of AOPA. This deemed registration allows for the construction and operation of a 51 milking cow dairy CFO. The determination of the CFO’s deemed permit status under section 18.1 of AOPA is explained in Appendix D attached. The deemed facilities are listed in the appendix to the Registration RA22022.

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 CFO site is not located within 100 metres of a bank of a river, stream, or canal.

The land use zoning for the land on which the CFO is located would require a minimum distance separation of 290 metres. Therefore, the notification distance is ½ mile (The NRCB refers to this distance as the “affected party radius.”)

A copy of the application was sent to the County of Wetaskiwin, 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 Pipestone Flyer on November 17, 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, seven letters were sent to people identified by the County of Wetaskiwin 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), Alberta Agriculture and Irrigation (AGI), Alberta Transportation and Economic Corridors (TRAN).

I also sent a copy of the application to AltaGas Utilities Inc.

Ms. Sonam Khaira, a public health inspector, responded on behalf of AHS. Ms. Khaira provided some general comments with regards to best management practices for water wells and nuisances.

Ms. Cheryl Marcyniuk, a development and planning technologist, responded on behalf of TRAN. Ms. Marcyniuk stated that TRAN has no objections to this application.

No other responses were received.

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 existing CFO 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 the County of Wetaskiwin'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 nearby residences, with one exception (AOPA setbacks are known as the "minimum distance separation" requirements, or MDS). The owner of that residence has signed a written waiver of the MDS requirement to their residence
- 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/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. The exemptions that are required to address the AOPA requirements around the setback to a water well are 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." The County of Wetaskiwin is an affected party (and directly affected) because the proposed CFO expansion is located within its boundaries.

Mr. Jarvis Grant, a development officer with the County of Wetaskiwin, provided a written response on behalf of the County of Wetaskiwin. Mr. Grant stated that the application is consistent with the County of Wetaskiwin's land use provisions of the municipal development plan as it is an existing CFO. The application's consistency with the County of Wetaskiwin's municipal development plan, are addressed in Appendix A, attached.

Mr. Grant also stated that the application meets the setbacks required by the County of Wetaskiwin's land use bylaw (LUB).

No other responses were received.

The NRCB considers a person who owns a residence within the MDS of the CFO, and who waives the MDS requirements in writing to be automatically considered a directly affected (See NRCB Operational Policy 2016-7: Approvals, part 6.2). George, Colleen, and Christie Heslup provided an MDS waiver and are directly affected parties.

8. Environmental risk of CFO facilities

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.)

For the sake of efficiency, I first assessed the CFO's existing pens using the ERST. These appear to be the CFO's highest risk facilities, as they are outdoor facilities. The assessment found that these facilities pose a low potential risk to groundwater and surface water. Because these are the CFO's highest risk facilities, I presume that the CFO's other existing facilities also pose a low potential risk to both 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. A further assessment of the risks posed by these other facilities, using the ERST, is not necessary.

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. Exemptions

I determined that the proposed dairy barn is located within the required AOPA setback from a water well. As explained in Appendix B, an exemption to the 100 metre water well setback is warranted due to the well's location in a shed, the existing protective layer, and the indoor nature of the dairy barn.

10. Terms and conditions

Registration RA22022 specifies the cumulative permitted livestock capacity as 120 milking cows (plus associated dries and replacements) and permits the construction of the proposed dairy barn, milkhouse, and synthetically lined liquid manure storage facility.

Registration RA22022 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 RA22022 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

Registration RA22022 is issued for the reasons provided above, in the attached appendices, and in Technical Document RA22022.

Knulls' deemed registration is therefore superseded, and replaced by Registration RA22022, unless Registration RA22022 is held invalid following a review and decision by the NRCB's board members or by a court, in which case the deemed registration will remain in effect.

February 1, 2023

(Original signed)
Lynn Stone
Approval Officer

Appendices:

- A. Consistency with the municipal development plan
- B. Exemptions from water and well setback
- C. Explanation of conditions in Registration RA22022
- D. Determination of deemed permit status

APPENDIX A: Consistency with the municipal development plan and area structure 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.)

Knulls’ CFO is located in the County of Wetaskiwin and is therefore subject to that county’s MDP. The County of Wetaskiwin adopted the latest revision to this plan in 2016, under Bylaw #2016/55.

Objective 1.4 of the MDP is to “[minimize the land use conflict with Confined Feeding Operations and surrounding land uses.]” As relevant here, policy 1.4.3 provides specific setbacks for new CFOs from population centres and named lakes, and requires setbacks as defined by AOPA from other unspecified environmental features. The Knulls’ application is not for a new CFO, but rather an expansion to an existing site. Therefore, these policies are not applicable to the Knulls’ application. Regardless, the CFO is not located within any of the setbacks under this policy and would therefore be consistent with this section, if it was applicable.

For these reasons, I conclude that the application is consistent with the land use provisions of the County of Wetaskiwin’s MDP that I may consider. The county’s response to the proposed expansion supports this conclusion.

The County of Wetaskiwin’s response also referred to an Area Structure Plan under Bylaw 2015/11 for the creation of a multi-lot industrial park. The ASP was placed for a potential sale of NW 28-47-25 W4M from the Knulls to a developer on April 9, 2015. Currently, this quarter section is still owned by the Knulls. The land is currently crop land and does not appear to have any developments. While the quarter is adjacent to the dairy, it does not contain any of the CFO facilities. Therefore, it is not a part of my consistency determination.

APPENDIX B: Exemption from natural water and well(s) setbacks

1. Water Well Considerations

The proposed dairy barn is to be located less than 100 m from a water well or water wells. I have confirmed that one water well is located approximately 65 m from it during a site visit. 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 storage facility (MSF)/manure collection area (MCA), and, if required, a groundwater monitoring program is implemented.

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 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 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

These presumptions and considerations are based on NRCB Operational Policy 2016-7: Approvals, part 8.7.1.

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 65 m southwest of the proposed dairy barn is likely EPA water well ID #236994. This well is reported to have been installed in 1983, with an unknown perforated zone. The well has above ground construction. This well is used for domestic and stock purposes. The well's log identifies protective layer or layers from ground surface to 19.8 m below ground level. The well has a driven seal. The well appeared to be in good condition at the time of my site inspection and is located indoors in a well shack. The well appears to be level or slightly down gradient from the proposed dairy barn.

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

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

In this case, the results of the water well exemption screening tool suggest that an exemption is likely as seen in Technical Document RA22022.

APPENDIX C: Explanation of conditions in Registration RA22022

Registration RA22022 includes several conditions, discussed below:

a. Construction Deadline

Knolls propose to complete construction of the proposed new dairy barn and synthetically lined liquid manure storage facility by late 2023 or early 2024. In my opinion, a timeframe allowing for two full construction seasons is more appropriate, as it allows for unexpected construction delays. The deadline of December 31, 2024 is included as a condition in Registration RA22022.

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 RA22022 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 (solid manure – wet) in Technical Guideline Agdex 096-93 “Non-Engineered Concrete Liners for Manure Collection and Storage Areas.”
- b. Knolls are to provide documentation to confirm the specifications of the concrete used to construct the manure storage and collection portions of the dairy barn.
- c. A construction completion report, issued by a qualified professional, certifying that the manure collection portions of the new synthetic lined liquid manure storage facility were constructed as per their application and the manufacturer's requirements. The report shall verify:
 - the liner type;
 - the liner thickness;
 - that the synthetic liner was installed in accordance with the liner supplier's requirements;
 - provide seam test results;
 - provide repair details during construction, if any;
 - that the facility is located according to the approved site plan;
 - the facility size, including depths below and above grade;
 - the facility side slopes; and,
 - the proper subgrade preparation.

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 RA22022 includes conditions stating that the Knolls shall not place livestock or manure in the manure storage or collection portions of the new dairy barn, or manure in the liquid manure storage facility until NRCB personnel have inspected the dairy barn and liquid manure storage facility, and confirmed in writing that they meet the registration requirements.

APPENDIX D: Determination of deemed permit status

The Knulls claim that the CFO is grandfathered (that is, it has a “deemed” permit) under section 18.1 of AOPA. I am treating that as a request for a determination of deemed permit status. Under section 11(1) of the Administrative Procedures Regulation under AOPA, because I am cross-appointed as an NRCB inspector, I conducted an investigation into the deemed permit status of the CFO.

The investigation was to determine the capacity of the CFO that was in place on January 1, 2002.

The CFO is not covered by a municipal development permit (or permit issued under the *Public Health Act*) issued before AOPA came into effect on January 1, 2002. However, under section 18.1(1)(a) of AOPA, the CFO may still hold a deemed permit if:

- a. the CFO “existed” on January 1, 2002; and,
- b. the CFO facilities were at a size that was at or greater than the permit threshold sizes under AOPA. (See NRCB Operational Policy 2016-6: *Public Notice on Grandfathering Decisions*, part 1.)

To determine whether the CFO meets these two criteria, the NRCB must consider, among other things:

- a. What facilities existed at the site on January 1, 2002, including their dimensions, types of physical structures and other physical characteristics
- b. How each of those facilities was being used on January 1, 2002

As required under section 11(2) of the Administrative Procedures Regulation, I provided notice to those parties who would be entitled to notice if this were an application for a new registration. In this case, that included the County of Wetaskiwin, and the landowners within a half mile radius.

The NRCB published notice of the deemed permit determination as part of the notice for the proposed dairy barn and liquid manure storage facility application, in the Pipestone Flyer on November 17, 2022.

No responses were received in response to the grandfathering claim.

During my site visit, I assessed the existing facilities, and their dimensions. My assessment of the facilities matched aerial photography from 1999-2003.

I found that the main milking barn consisted of 40 tie stalls. The operator claims they often had approximately 15 fresh cows or new heifers in what is now referred to as the heifer barn. The placement of the doors between the two barns, and the visible pathway between the barns on historical aerial photography support this claim. Based on my livestock knowledge, I find that the claimed management system is consistent with tie stall practices and fresh cow management.

Under section 18.1(2)(a) of AOPA, if a CFO existed on January 1, 2002, the CFO’s deemed capacity is its physical capacity to confine livestock on January 1, 2002.

I consulted the NRCB's Technical Guideline Agdex 096-81 "Calculator for Determining Livestock Capacity of Operations as They Existed on January 1, 2002". For dairy operations with tie stall barns, the following calculation is provided:

Calculated animal # = 1.1 animals per stall, multiplied by the # of stalls

For the Knulls' dairy, (1.1 animals per stall) * (40 stalls) = 44 milking cows.

The same technical guideline provides a calculation for loose housing for dairy cows. The calculator provides 150 ft²/animal.

The heifer barn is approximately 2152 ft².

Calculated animal # (loose housing) = (2152 ft²) / (150 ft²/animal) = 14 milking cows.

In using the calculator, I found that the two barns had the combined capacity for 58 milking cows. This is consistent with the operators' claim of 51 milking cows.

Based on these findings, the CFO is considered to have a deemed registration and a deemed capacity of 51 milking cows (plus associated dries and replacements).