

Decision Summary RA20003

This document summarizes my reasons for issuing Authorization RA20003 under the *Agricultural Operation Practices Act* (AOPA). Additional reasons are in Technical Document RA20003. 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.

1. Background

On January 20, 2020, Adrianus VandenBroek (VandenBroek Farm) submitted a Part 1 application to the NRCB to construct a new maternity barn with manure pit at an existing dairy CFO. The Part 2 application was submitted on April 21, 2020. On April 22, 2020, I deemed the application complete.

The proposed construction involves:

- Constructing a maternity barn (68.6 m x 53.3 m) with manure pit (67 m x 4.6 m x 2.5 m deep)

The application also includes construction of a drive-through area attached to the maternity barn. 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.

There is no proposed increase in livestock.

Under AOPA, this type of application requires an authorization. (This is one of several types of “permits” issued under AOPA. For an explanation of the different types and when each one applies, see www.nrcb.ca.)

a. Location

The existing CFO is located at NE 18-32-27 W4M in Mountain View County, roughly 20 km east of the Town of Olds. The terrain is relatively flat with a gentle slope to the southwest towards an intermittent drainage located about 635 m southwest of the CFO.

b. Existing permitted facilities

The CFO is currently permitted under NRCB Approval RA11051. This approval allows the construction and operation of a 500 milking cow (plus associated dries and replacements) CFO. The CFO’s existing permitted facilities are listed in the Decision Summary RA11051 and Approval RA11051.

2. Notices to affected parties

Under section 21 of AOPA, notice of an authorization application must be provided to municipalities that are “affected” by the application. Section 5 of AOPA’s Part 2 Matters Regulation lists the categories of municipalities that are affected parties. These categories include the municipality where the existing CFO is located. Under section 21(2) of the act, all affected municipalities are automatically also “directly affected” parties. The NRCB interprets section 21(3) as allowing affected municipalities to provide written submissions regarding whether the application meets the requirements of the regulations under the act. (See NRCB Operational Policy 2016-7: *Approvals*, part 7.11.2.)

Mountain View County is both an affected and directly affected party because the proposed facilities are located within its boundaries.

On April 22, 2020, the NRCB emailed referral letters and a copy of the application to Mountain View County, Alberta Health Services (AHS), Alberta Environment and Parks (AEP), and Alberta Agriculture and Forestry (AF). On May 22, 2020, the NRCB also emailed a referral letter to Alberta Transportation (AT) which was missed due to an administrative error.

3. Responses from the municipality and referral agencies

I received responses from Mountain View County, AHS, AEP, AF and AT.

Ms. Peggy Grochmal, a permitting and development officer with planning and development services, provided a written response on behalf of Mountain View County. As noted in section 2, Mountain View County is a directly affected party.

Ms. Grochmal stated that the application to construct a maternity barn with no increase in animal numbers was brought to, and accepted by, the Municipal Planning Commission. Her response indicated that the application is consistent with the county’s municipal development plan (MDP). The application’s consistency with Mountain View County’s MDP is addressed in Appendix A, attached.

Ms. Grochmal also listed the setbacks required by Mountain View County’s land use bylaw (LUB) and noted that the application appears to meet these setbacks.

Ms. Carol Britton, a public health inspector and land use specialist, provided a written response on behalf of Alberta Health Services. Ms. Britton recommended that VandenBroek Farm conducts a full assessment of all water wells on the property and, where necessary, appropriate mitigation measures are put in place to protect the groundwater from contamination. I forwarded this response to the applicant for their information.

Ms. Laura Partridge, a senior water administration officer with AEP, responded indicating that no additional licensing is required at this time.

Mr. Tom Pack responded on behalf of AF. He stated that he was in communication with the applicant and determined that no changes will be made to the milking area or milk house and therefore, his department has no concerns with the application.

Ms. Carly Cowles, an assistant develop and planning technician, provided a written response on behalf of Alberta Transportation. Ms. Cowles issued a permit to VandenBroek on May 22, 2020 for the construction of their proposed maternity barn.

4. Environmental risk screening of existing and proposed facilities

When reviewing a new authorization application for an existing CFO, NRCB approval officers normally assess the CFO's existing buildings, structures, and other facilities, using the NRCB's environmental risk screening tool to determine the level of risk they pose to surface water and groundwater. This 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.) However, if those risks have previously been assessed, the approval officer will not conduct a new assessment unless site changes are identified that require a new assessment, or the assessment was done with a previous version of the risk screening tool and requires updating. See NRCB Operational Policy 2016-7: *Approvals*, part 8.13.

In this case, the risks posed by VandenBroek Farm's existing CFO facilities were assessed in 2011. According to that assessment, the facilities posed a low risk to surface water and groundwater except the EMS posed moderate risk to groundwater. Approval RA11051 addressed the risk posed by the EMS by requiring annual reporting through a leakage detection system and water well testing.

The circumstances have not changed since that assessment was done. As a result, a new assessment of the risks posed by the CFO's existing facilities is not required.

I also assessed the proposed new maternity barn with manure pit, using the NRCB's risk screening tool, and determined that they pose a low risk to groundwater and surface water.

5. Other factors considered

The application meets all relevant AOPA requirements, with the terms and conditions summarized in part 6.

In addition, the proposed construction is consistent with the land use provisions of Mountain View County's municipal development plan and with Mountain View County's land use bylaw. (See Appendix A for a more detailed discussion of the county's planning requirements.)

With respect to the act's technical requirements, the proposed 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 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

I also determined that the proposed maternity barn with manure pit is located within the required AOPA setback from an existing water well. However, as explained in Appendix B, this maternity barn with manure pit warrants an exemption from the 100 metre water well setback due to the well's construction.

6. Terms and conditions

Authorization RA20003 specifies the new permitted livestock capacity as 500 milking cows (plus associated dries and replacements) and permits the construction of the maternity barn with manure pit.

Authorization RA20003 also 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 RA20003 includes conditions that:

- Set a deadline of December 31, 2022 for the approved construction to be completed
- Require the concrete used to construct the liner of the manure collection and storage portion of the maternity barn to meet the specification for category D (solid manure – dry) in Technical Guideline Agdex 096-93 “Non-Engineered Concrete Liners for Manure Collection and Storage Areas”
- Require the concrete used to construct the liner of the manure collection and storage portion of the manure pit and scrape alleys of the maternity 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”
- Require documentation that the concrete used for the manure collection and storage areas meets the required specifications
- Prohibit VandenBroek Farm from placing manure or livestock in the maternity barn with manure pit until the facility has been inspected by the NRCB following its construction

For an explanation of the reasons for these conditions, see Appendix C.

7. Conclusion

Authorization RA20003 is issued for the reasons provided above, in the attached appendices, and in Technical Document RA20003.

Authorization RA20003 should be read in conjunction with previously issued NRCB Approval RA11051, which remains in effect.

June 10, 2020

(Original signed)

Julie Wright
Approval Officer

Appendices:

- A. Consistency with the municipal development plan
- B. Exemptions from water well setbacks and monitoring requirements
- C. Explanation of conditions in Authorization RA20003

APPENDIX A: Consistency with the municipal development plan

Under section 22 of AOPA, an approval officer may approve an application for an authorization only if the approval officer finds that the application is consistent with the “land use provisions” of the applicable municipal development plan (MDP).

The NRCB interprets the term “land use provisions” as covering MDP policies that provide generic directions about the acceptability of various land uses in specific areas and that do not call for discretionary judgements relating to the acceptability of a given confined feeding operation (CFO) development. (See NRCB Operational Policy 2016-7: *Approvals*, part 8.2.5.) Under this interpretation, the term “land use provisions” also excludes MDP policies that impose procedural requirements. In addition, 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.”).

VandenBroek Farm's CFO is located in Mountain View County and is therefore subject to that county's MDP. Mountain View County adopted the latest revision to this plan on August 22, 2018, under Bylaw #09/12.

As relevant here, section 2.0 of the MDP provides a “growth management strategy” that is reflected in the land use map in Figure 3 of the MDP. The discussion in this section emphasizes that this strategy is “conceptual in nature” for purposes of determining “where certain types of development should and should not occur” within the county. However, this section explains that the land use designations on this map are just a “baseline”; development applications must still be reviewed on a “case by case, site-specific basis.”

Because the land use designations in Figure 3 are not meant to be definitive, the MDP's “growth management strategy” based on these designations is not considered to be a “land use provision” and therefore is not relevant to my MDP consistency determination.

At any rate, VandenBroek Farm's CFO is within the “Agricultural Preservation Area” marked on Figure 3. Section 2 of the MDP explains that the “majority” of this area is subject to the “applicable Land Use Policies outlined in section 3.0 of the MDP...” (Figure 3 identifies a sub-part of this area as a “concentrated confined feeding operation” area. VandenBroek Farm's CFO is not in this concentrated CFO area. However, the MDP does not require that all CFOs be located in this concentrated CFO area.)

As relevant here, sub-section 3.3.15 precludes new CFOs within 1.6 km (1 mile) of any identified residential growth centre or urban centre shown in Figure 3. VandenBroek Farm's site is not for a new CFO. At any rate, the site of the CFO is not within this 1.6 km setback.

Sub-section 3.3.16 specifies that the setback for a new CFO from a business park will not be required. VandenBroek Farm's application is not near a setback for a business park nor for a new CFO.

Sub-section 3.3.17 states that applications for new or expanding CFOs “shall meet all Provincial standards.” This sub-section likely isn't a “land use provision” and therefore is not relevant to my MDP consistency determination. Regardless, VandenBroek Farm's application meets AOPA requirements, as discussed in part 6 above.

No other policies in section 3.0 preclude VandenBroek Farm's application. Therefore, their proposed CFO is an acceptable land use within the Agricultural Preservation Area of the MDP. Thus, the CFO is consistent with the MDP.

For these reasons, I conclude that the application is not inconsistent with the land use provisions of Mountain View County's MDP.

In my view, under sections 3.3.5, 3.3.14, 13.3.1 and 13.3.2, amongst others, Mountain View County's MDP provides a clear intent to adopt provisions from the land use bylaw # 16/18 (LUB). Following the NRCB Operational Policy 2016-7: *Approvals*, part 8.2.3, I also considered Mountain View County's LUB. Under that bylaw, the subject land is currently zoned as Agriculture. CFOs are not listed as permitted or discretionary use in this district. Section 9.5 of the LUB states that CFOs are regulated by the NRCB under provincial regulations, and are therefore exempt from municipal control under the land use bylaw.

Notwithstanding this statement, section 9.5.1 of the LUB lists several requirements for siting CFOs. Notably, sub-section 9.5.1 (a) states that CFO developments "shall be consistent with the land use provisions of the MDP." This CFO is not inconsistent with Mountain View County's MDP.

Section 9.5.1 (b)(i) of the LUB relates to required CFO (new and expanding) setbacks (0.5 miles) from multi-parcel residential development, any urban centre, school, or hospital. This CFO is not located near any of these and meets this setback requirement. Section 9.5.1 (b)(ii) relates to MDS requirements in AOPA. As noted in Part 5 of this Decision Summary, the CFO meets the MDS requirements.

APPENDIX B: Exemption from water well setbacks

According to the application, one water well is located within 100 metres of the proposed maternity barn with manure pit. I have confirmed this information by a site visit completed on October 4, 2019 and through a review of satellite imagery.

Because of this proximity, the applicant's proposed maternity barn with manure pit conflicts with a regulation under AOPA, which prohibits the construction of manure storage facilities (MSFs) within 100 metres of water wells.¹ However, the regulation allows approval officers to grant an exemption from this prohibition. I must therefore consider whether an exemption is appropriate in this instance.

Under the regulation, the test for granting an exemption is whether the "aquifer into which the well is drilled is not likely to be contaminated" by the proposed MSF. (According to the regulation, when granting an exemption, an approval officer may require the applicant to implement a "groundwater monitoring program.")

The regulation also makes it clear that the applicant has the burden of proving that an exemption is warranted.

In considering whether an applicant has met that burden, approval officers presume that the risks of direct aquifer contamination from the MSF are low if the applicant's proposed MSF meets AOPA's technical requirements to control runoff and leakage. However, when determining whether an MSF that meets AOPA's technical requirements should be exempted from the 100 metre water well setback requirement, approval officers also assess whether water wells that are less than 100 metres from the MSF could act as conduits for aquifer contamination.

Approval officers assess the following factors to determine the risk of aquifer contamination via the water well:

- How the well was constructed
- Whether the well is being properly maintained
- The distance between the well and the proposed MSF
- The estimated water well pumping rate
- Whether the well is up- or down-gradient from the MSF 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.

Water well #294914 is cross-gradient from the proposed maternity barn with manure pit. The well is drilled to a depth of 62.5 metres below ground surface (bgs) with a protective sandy clay & boulders layer from surface to a depth of 53 metres. The well also has a driven seal from surface to a depth of 54 metres. The well is perforated from 56.4 metres to 62.5 metres bgs within a gray shale layer. The pump sits around 57.9 metres bgs with a pumping rate around 77.3 L/min determined during a test conducted on September 5, 2000.

¹ Standards and Administration Regulation, Alta. Reg. 267/2001, section 7(1)(b).

In addition, 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 and to decide whether an exemption from the 100 metre setback to a well is warranted.² This tool consists of a two-stage risk screening process; each stage provides a numeric risk “score” based on the information inputted into the tool.

The first stage focuses on the well’s construction. If the well scores less than 10 at this stage, the tool suggests granting a setback exemption for the subject facility. If the well scores above 28, the tool recommends denying the exemption. Scores between 10 and 28 require applying the second stage of the screening process, which focuses on the gradient and other factors bearing on the risk of manure runoff or leachate reaching the water well. If the risk score at this stage is over 20, the tool suggests denying the setback exemption to the subject well.

For the process described above, water well ID #294914 scored 13 in the first risk screening stage and 19 in the second stage. Based on these risk scores, an exemption from the 100 metre setback to water well is warranted for the proposed maternity barn with manure pit.

While an exemption from the 100 metre water well setback is warranted, to provide further protection for users, the water well monitoring condition from previously issued NRCB Approval RA11051 is still valid as this authorization is read in conjunction with the approval.

² 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 Authorization RA20003

Authorization RA20003 includes several conditions, discussed below:

a. Construction Deadline

VandenBroek Farm proposes to complete construction of the proposed new maternity barn with manure pit by December 31, 2022. This time-frame is considered to be reasonable for the proposed scope of work. The deadline of December 31, 2022 is included as a condition in Authorization RA20003.

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, Authorization RA20003 includes conditions requiring:

- the concrete used to construct the liner of the manure collection and storage portion of the maternity barn to meet the specification for category D (solid manure – dry) in Technical Guideline Agdex 096-93 “Non-Engineered Concrete Liners for Manure Collection and Storage Areas.”
- the concrete used to construct the liner of the manure collection and storage portion of the manure pit and scrape alleys of the maternity barn to meet the specification for category B (liquid manure shallow pits); category C (solid manure – wet) in Technical Guideline Agdex 096-93 “Non-Engineered Concrete Liners for Manure Collection and Storage Areas.”
- VandenBroek Farm to provide documentation to confirm the specifications of the concrete used to construct the manure collection and storage portion of the maternity barn with manure pit.

The NRCB routinely inspects newly constructed facilities to assess whether the facilities were constructed according to their required design specifications. To be effective, these inspections must occur before livestock or manure are placed in the newly constructed facilities.

Authorization RA20003 includes a condition stating that VandenBroek Farm shall not place livestock or manure in the manure storage portions of the new maternity barn with manure pit until NRCB personnel have inspected the maternity barn with manure pit and confirmed in writing that it meets the authorization requirements.