

## Decision Summary RA23019

This document summarizes my reasons for issuing Authorization RA23019 under the *Agricultural Operation Practices Act* (AOPA). Additional reasons are in Technical Document RA23019. All decision documents and the full application are available on the Natural Resources Conservation Board (NRCB) website at [www.nrcb.ca](http://www.nrcb.ca) under Confined Feeding Operations (CFO)/CFO Search. My decision is based on the act and its regulations, the policies of the NRCB, the information contained in the application, and all other materials in the application file.

Under AOPA this type of application requires an authorization. For additional information on NRCB permits please refer to [www.nrcb.ca](http://www.nrcb.ca).

### 1. Background

On June 6, 2023, Curtis McKelvie (McKelvie) submitted a Part 1 application to the NRCB to construct a beef feedlot pen and two runoff control catch basins at an existing beef CFO. The new feedlot pen will be built in the previous location of an existing catch basin, which will be filled in. One of the new catch basins will be built in the previous location of an existing pen.

The Part 2 application was submitted on June 6, 2023. On June 13, 2023, I deemed the application complete.

The proposed construction involves:

- Constructing a feedlot pen (54 m x 42 m)
- Constructing two runoff control catch basins (108 m x 20 m x 1.5 m and 70 m x 30 m x 1.5 m)

#### a. Location

The existing CFO is located in the W ½ 1-44-25 W4M in Ponoka County, roughly 8.5 km north of the Town of Ponoka. The CFO is located on a plateau located approximately 170 m from the Battle River.

#### b. Existing permits

The CFO is already permitted under Approval RA21030.

### 2. Notices to affected parties

Under section 21 of AOPA, the NRCB notifies all parties that are “affected” by an authorization application. Section 5 of AOPA’s Part 2 Matters Regulation defines “affected parties” as:

- the municipality where the CFO is located or is to be located
- in the case where part of a CFO is located, or is to be located, within 100 m of a bank of a river, stream or canal, a municipality entitled to divert water from that body within 10 miles downstream
- any other municipality whose boundary is within a notification distance. In this case, the

notification distance is 1.5 mile(s) from the CFO

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

A copy of the application was also sent to Samson Cree First Nation and Montana First Nation which both have lands within the 1.5 mile of the existing CFO.

### **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) and Alberta Environment and Protected Areas (EPA).

I also sent a copy of the application to Telus and ATCO Gas and Pipelines Ltd.

I only received a response from AHS.

Mr. Gordon Watt, an AHS executive officer, indicated that AHS has no concerns with this application and included some comments under the *Public Health Act* and its regulations.

### **4. Municipal Development Plan (MDP) consistency**

I have determined that the proposed modifications to the existing CFO are consistent with the land use provisions of Ponoka County's municipal development plan. (See Appendix A for a more detailed discussion of the county's planning requirements.)

### **5. AOPA requirements**

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

- Meets the required AOPA setbacks from all nearby residences (AOPA setbacks are known as the "minimum distance separation" requirements, or MDS) with an exemption under Section 3(5)(c) of the Standard and Administration Regulation (The proposed pen and catch basins are located within the footprint of the existing CFO and away from the closest neighboring residences).
- 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 and manure collection areas

With the terms and conditions summarized in part 9, the application meets all relevant AOPA requirements. The exemptions that are required to address the AOPA requirements around the 100 m setback to a water well are discussed in the part 8 and Appendix B of this decision summary.

## **6. Responses from municipality and First Nations**

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." Ponoka County is an affected party (and directly affected) because the existing CFO is located within its boundaries.

Mr. Peter Hall, the assistant CAO with Ponoka County, provided a written response on behalf of the county. Mr. Hall stated that the application is consistent with the land use provisions of Ponoka County's MDP. The application's consistency with Ponoka County's MDP is addressed in Appendix A, attached.

Mr. Hall indicated that the application meets the setbacks required by Ponoka County's land use bylaw (LUB).

No responses were received from Samson Cree First Nation or Montana First Nation.

## **7. Environmental risk of 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 surface or groundwater monitoring for the facility. In this case a determination was made, and monitoring is not required.

When reviewing a new authorization application for an existing CFO, NRCB approval officers assess the CFO's existing buildings, structures, and other facilities. In doing so, the approval officer considers information related to the site and the facilities, as well as results from the NRCB's environmental risk screening tool (ERST). The assessment of environmental risk focuses on surface water and groundwater. The ERST 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](http://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 supported 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 McKelvie's existing CFO facilities were assessed in 2022 using the ERST. According to that assessment, the facilities posed a low potential risk to surface water and groundwater.

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.

## **8. Exemptions**

I determined that the proposed feedlot pen and one of the runoff control catch basins are 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 construction and location

of the water well upslope from the proposed pen and catch basin.

## **9. Terms and conditions**

Authorization RA23019 permits the construction of a feedlot pen and two runoff control catch basins.

Authorization RA23019 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 RA23019 includes conditions that generally address construction deadlines, document submission and construction inspections. For an explanation of the reasons for these conditions, see Appendix C.

## **10. Conclusion**

Authorization RA23019 is issued for the reasons provided above, in the attached appendices, and in Technical Document RA23019.

Authorization RA23019 must be read in conjunction with previously issued Approval RA21030 which remains in effect.

July 21, 2023

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

## **Appendices:**

- A. Consistency with the municipal development plan
- B. Exemptions from a water well setback
- C. Explanation of conditions in Authorization RA23019

## **APPENDIX A: Consistency with the municipal development plan**

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

This does not mean consistency with the entire MDP. In general, “land use provisions” cover MDP policies that provide generic directions about the acceptability of various land uses in specific areas.

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.)

McKelvie’s CFO is located in Ponoka County and is therefore subject to that county’s MDP. Ponoka County adopted the latest revision to this plan in October 2018, under Bylaw #6-08 MDP.

Sections 2.1 to 2.8 of the MDP deal with CFOs. I have reviewed these sections and find that these provisions generally apply to new or expanding CFOs. The MDP does not define “expansion,” so I will use the definition in the Part 2 Matters Regulation under AOPA. Section 1(1)(d)(i) of that regulation defines an “expansion” as the construction of additional facilities to confine more livestock. McKelvie’s application does not involve confining more livestock, so I conclude that it is not an “expansion” under this definition. Therefore, the MDP policies relating to CFO “expansions” do not apply to McKelvie’s application. Irrespective, the application meets the policies for expanded CFOs.

For these reasons, I conclude that the application is consistent with the land use provisions of Ponoka County’s MDP. The county’s response supports this conclusion.

## **APPENDIX B: Exemption from a water well setback**

### **1. Water Well Considerations**

The proposed feedlot pen and one of the runoff control catch basins are to be located less than 100 m from a water well. During a site visit, I confirmed that one water well is located approximately 40 m and 80 m from the proposed catch basin and feedlot pen, respectively. 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 40 m and 80 m southwest of the proposed catch basin and pen, respectively, is likely EPA water well ID # 2088326. This well is reported to have been installed in 2009 with an above ground casing and has a perforated or screened zone from 61 m to 67.1 m below ground level across grey sandstone. The sandstone is reported to produce more than 450 L/minute and is used for non-domestic purposes. The well's log identifies protective clay layers from ground surface to 16.5 m below ground level. The well has a bentonite seal from ground surface to 56.4 m (across the clay layers). The well appeared to be in good condition at the time of my site inspection and is located up-gradient of the pens and catch basin (with regards to surface water flow).

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.<sup>1</sup>

In this case, the results of the water well exemption screening tool suggest that an exemption is likely as seen in Technical Document RA23019.

Based on the above, I am prepared to grant an exemption to the 100 m water well setback requirement for the proposed feedlot pen and runoff control catch basin.

---

<sup>1</sup> A complete description of this tool is available under CFO/Groundwater and Surface Water Protection on the NRCB website at [www.nrcb.ca](http://www.nrcb.ca).

## **APPENDIX C: Explanation of conditions in Authorization RA23019**

Authorization RA23019 includes several conditions, discussed below:

### **a. Groundwater protection requirements**

McKelvie proposes to construct the new feedlot pen with a 0.7-metre-thick compacted soil liner. Section 9 of AOPA's Standards and Administration Regulation specifies a maximum hydraulic conductivity for this type of line in order to minimize leakage.

To demonstrate compliance with this standard, McKelvie 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 0.5-metre-thick compacted soil liner must not be more than  $5 \times 10^{-7}$  cm/sec.

In this case, the lab measurement was  $7 \times 10^{-8}$  cm/sec. With the required ten-fold modification, the expected field value is  $7 \times 10^{-7}$  cm/sec. This expected value is above (faster than) the maximum value in the regulations. Despite this, the applicant has proposed a 0.7 m thick liner for the feedlot pen, which provides an equivalent protection as required in the regulations.

To provide additional assurance that the as-built feedlot pen adequately protects groundwater, Authorization RA23019 includes a condition requiring McKelvie to provide an engineer's completion report certifying that the feedlot pen was constructed with the same liner material as that used for hydraulic conductivity testing, and that the pen was constructed according to the proposed procedures and design specifications.

### **b. Construction Deadline**

McKelvie proposes to complete construction of the proposed feedlot pen and catch basins by November 30, 2026. This time-frame is considered to be reasonable for the proposed scope of work. The deadline of November 30, 2026 is included as a condition in Authorization RA23019.

### **c. 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 RA23019 includes conditions requiring a completion report, signed by a qualified third party, certifying that the synthetically lined catch basins:

- have been constructed in accordance with the proposed design including the size, depth and dimensions;
- constructed in the approved locations;
- have the same liner material as what has been proposed; and
- have a liner installed in accordance with the liner manufacturer's requirements, including under membrane surface preparation and proper sealing at all seams.

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



constructed facilities. Authorization RA23019 includes conditions stating that McKelvie shall not place livestock or manure in the manure storage or collection portions of the new feedlot pen, or manure impacted runoff in the new runoff control catch basins, until NRCB personnel have inspected the facilities and confirmed in writing that they meet the authorization requirements.