

Decision Summary RA20046

This document summarizes my reasons for issuing Authorization RA20046 under the *Agricultural Operation Practices Act* (AOPA). Additional reasons are in Technical Document RA20046. 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 November 18, 2020, Ben Rodenburg, on behalf of J.W. & Jolanda Rodenburg, operating as East Valley Ranch Ltd. (East Valley Ranch) submitted a Part 1 application to the NRCB to construct a manure collection pad (61 m x 30.5 m) at an existing sheep CFO. The Part 2 application was submitted on November 18, 2020. On November 20, 2020, I deemed the application complete.

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 sheep CFO is located at NW 26-42-24 W4M in Ponoka County, roughly 13.5 km southeast of Ponoka, Alberta. The terrain is slightly undulating with a general slope to the northeast towards an unnamed lake located 1.5 km from the proposed CFO.

b. Existing permitted facilities

The CFO is currently permitted under NRCB Approval RA20020. This approval allows the construction and operation of a sheep CFO with 3,500 ewes with lambs. The CFO’s existing permitted facilities are listed in an appendix of Approval RA20020.

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 Operational Policy 2016-7: *Approvals*, part 7.11.2.)

Ponoka County is both an affected and directly affected party because the proposed facility is located within its boundaries.

On November 20, 2020, the NRCB emailed referral letters and a copy of the application to Ponoka County, Alberta Environment and Parks (AEP), and Right of Way holder Chain Lakes Gas Coop Ltd.

3. Responses from the municipality and referral agencies

I received responses from the county and AEP. No response was received from Chain Lakes Gas Coop Ltd.

Mr. Tom Webber, the assistant chief administrative officer with Ponoka County, provided a written response on behalf of Ponoka County. As noted in section 2, Ponoka County is a directly affected party.

In his response, Mr. Webber indicated that there are no issues or concerns with the proposal. The application's consistency with the county's municipal development plan (MDP) is addressed in Appendix A, attached.

Ms. Laura Partridge, a water administrator technologist at AEP sent an email, to the applicant and the NRCB. Ms. Partridge indicated that the operator needs to submit an application for water licence under the *Water Act*. The applicant is reminded that they need to obtain and maintain a water license in accordance with the *Water Act*.

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 East Valley Ranch's existing CFO facilities were assessed in 2020. According to that assessment, the facilities posed a low 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.

I also assessed the proposed new manure collection pad, using the NRCB's risk screening tool, and determined that it poses 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 Ponoka County's municipal development plan and with its 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) with an exemption under Section 3(5)(c) of the Standard and Administration Regulation
- 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 manure collection pad is located within the required AOPA setback from an existing water well. However, as explained in Appendix B, this manure collection pad warrants an exemption from the 100 metre water well setback due to the well's construction and location upslope from the facility.

6. Terms and conditions

Authorization RA20046 permits the construction of the manure collection pad.

Authorization RA20046 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 RA20046 includes conditions that:

- Set a deadline of November 30, 2021 for the approved construction to be completed
- Prohibit East Valley Ranch from placing manure in the manure collection pad until the facility has been inspected by the NRCB following its construction
- Require East Valley Ranch to construct a berm around the manure collection pad.

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

7. Conclusion

Authorization RA20046 is issued for the reasons provided above, in the attached appendices, and in Technical Document RA20046.

Authorization RA20046 should be read in conjunction with previously issued Approval RA20020, which remains in effect.

February 5, 2021

(Original Signed)
Francisco Echegaray, P.Ag.
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 RA20046

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.”)

East Valley Ranch’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 on 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 expanded 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. East Valley Ranch’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 East Valley Ranch’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. This conclusion is supported by the county’s non-objection to the application.

In my view, under sections 1.4, 1.6, 4.10, 17.5 and in Appendix A, the MDP clearly intends to incorporate Ponoka County’s Land Use Bylaw (LUB) # 7-08 (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. CFOs are listed as a permitted land use within this land use zoning, provided that they hold the required authorization (or permit) under AOPA. As noted in part 1 of this decision summary, East Valley Ranch’s CFO has been permitted by the NRCB under Approval RA20020.

APPENDIX B: Exemption from water well setbacks

According to the application, one water well is located within 100 metres of the proposed manure collection pad. I have confirmed this information by site visit.

Because of this proximity, the applicant's proposed manure collection pad 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.

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

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

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

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.

In this case, water well ID# 93873 is located approximately 80 metres from the manure collection pad. The total depth of the well is 24.4 metres. The water well drilling report indicates that the well was drilled in 1979, has a driven seal from surface to a depth of 0.3 metres, and the depth to open interval starts at 13.7 metres. Information on the subsurface lithology of the well shows there is a 4.6 metres layer of clay covering a 9.1 metres layer of shale. The water well is located inside a shed, which includes a concrete floor.

I identified the uppermost groundwater resource to be at a depth of 13.7 metres.

For the risk screening process described above, the water well scored 18 and 10 in the first and second stages, respectively, of the risk screening process describe above. I am of the opinion, based on these risk scores, that an exemption from the 100 metre setback to the well, under the regulation, is warranted for the proposed manure collection pad.

APPENDIX C: Explanation of conditions in Authorization RA20046

Authorization RA20046 includes several conditions, discussed below:

a. Groundwater protection requirements

East Valley Ranch proposes to construct the manure collection pad with a 4.6 metre thick naturally occurring protective layer. Section 9 of AOPA's Standards and Administration Regulation specifies a maximum hydraulic conductivity for this type of protective layer in order to minimize leakage.

East Valley Ranch measured the hydraulic conductivity of the protective layer by installing a monitoring well (or water table well) at the time of borehole drilling. This approach provides an adequate representation of the protective layers proposed to be used to protect the groundwater resource.

The regulations provide that the actual hydraulic conductivity of a 2 metre thick naturally occurring protective layer must not be more than 1×10^{-6} cm/sec.

In this case, the in situ measurement was 9.08×10^{-7} cm/sec. This value is lower than the maximum value for hydraulic conductivity in the regulations. Therefore, the proposed naturally occurring protective layer provides equivalent or greater groundwater protection than the requirement in the regulations.

b. Construction Deadline

East Valley Ranch proposes to complete construction of the proposed new manure collection pad by May 2021. In my opinion, a construction schedule that allows at least a full construction season is more practical and realistic for the proposed development. Therefore, Authorization RA20046 includes a condition stating a deadline of November 30, 2021.

c. Post-construction inspection and review

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 RA20046 includes a condition stating that East Valley Ranch shall not place manure in the manure storage portions of the new manure collection pad until NRCB personnel have inspected it and confirmed in writing that it meets the authorization.

d. Berm

East Valley Ranch has proposed to build a berm around the manure collection pad to prevent runoff leaving the pad. I will include this commitment by the applicant in a condition in the authorization.