

## Decision Summary LA21024

This document summarizes my reasons for issuing Authorization LA21024 under the *Agricultural Operation Practices Act* (AOPA). Additional reasons are in Technical Document LA21024. 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 April 30, 2021, South Prairie Farms Ltd. (South Prairie) submitted a Part 1 application to the NRCB to construct a concrete manure storage facility (MSF) at an existing dairy CFO.

The Part 2 application was submitted on March 14, 2022 and included the construction of a concrete lined manure storage pit (7.3 m x 12.2 m x 2.4 m deep) attached to an already permitted, but not yet constructed, free stall barn extension and a lagoon, which I refer to as an earthen liquid manure storage (EMS, 86 m x 48 m x 4 m deep). The application also states that an old manure storage pit will be closed. On March 15, 2022, I deemed the application complete.

#### a. Location

The CFO is located at NE 32-9-17 W4M in the Municipal District (MD) of Taber, roughly 1.5 km north of the Village of Barnwell, AB. The terrain is gently undulating.

#### b. Existing permits

The CFO is currently permitted under Approval LA15046 as a 370 milking cow dairy (plus associated dry cows and replacements). Approval RA15046 includes a list of the CFO's permitted manure collection areas and manure storage facilities.

### 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 one mile from the CFO

A copy of the application was sent to MD of Taber, which is the municipality where the CFO is located. A copy of the application was also sent to the Village of Barnwell which owns land within the one mile notification distance. A copy of the application was not sent to other municipalities as no other ones are located within the notification distance and the CFO is not located within 100 m of the bank of a river, stream or canal.

### **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 Parks (AEP), Alberta Agriculture, Forestry and Rural Economic Development (AFRED), and Alberta Transportation.

Mr. Jeff Gutsell, a hydrogeologist with AEP, did not raise any concerns with this application.

Ms. Leah Olson, a development and planning technologist with Alberta Transportation, indicated that a permit from Alberta Transportation was not required. She did not raise any concerns with this application.

I did not receive responses from AHS or AFRED.

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

I have determined that the proposed construction is consistent with the land use provisions of the MD of Taber'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 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 water wells, 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 protective layers of manure storage facilities and manure collection areas

With the terms and conditions summarized in part eight, the application meets all relevant AOPA requirements.

### **6. Responses from municipalities**

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 MD of Taber is an affected party (and directly affected) because the CFO is located within its boundaries.

Mr. Brian Peers, the director of lands, planning and development with the MD of Taber, provided a written response on behalf of the MD. Mr. Peers stated that the application is located in a CFO restricted area in the MDP. Despite this, he noted how this existing CFO has an acceptable operating history and the proposed facilities will not adversely impact the surrounding land uses. He went on to state how there are no other planning type documents referenced by the MDP that apply to the application site. The application’s consistency with the MD of Taber’s municipal development plan is addressed in Appendix A, attached.

Mr. Peers also listed the setbacks required by the MD of Taber’s land use bylaw (LUB) and noted that the application meets the setbacks with an existing waiver (see page 17 of Technical Document LA21024).

The Village of Barnwell is also a directly affected party because it owns land within the one mile notification radius. Ms. Rachel Schortinghuis, the village administrator, provided a verbal response on behalf of the village. Ms. Schortinghuis noted how this application was for a change in manure management, not an increase in livestock or manure production. She questioned if the change in manure management may result in a change in odors, but did not otherwise raise concerns with the application.

## **7. Environmental risk of facilities**

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 South Prairie’s existing CFO facilities were assessed in 2011 and 2015 using the ERST. According to those assessments, the CFO’s manure collection areas and manure storage facilities pose 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.

I assessed the risks posed by the proposed concrete lined pit and EMS (with the construction recommendations laid out in the geotechnical report attached to Technical Document LA21024) using the ERST and determined that they both pose a low potential risk to surface water and groundwater.

## **8. Terms and conditions**

Authorization LA21024 permits the construction of the EMS and the new concrete lined pit.

Authorization LA21024 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 LA21024 includes conditions that generally address a construction deadline, document submission, construction inspection, and facility closure. For an explanation of the reasons for these conditions, see Appendix B.

## **9. Conclusion**

Authorization LA21024 is issued for the reasons provided above, in the attached appendices, and in Technical Document LA21024.

Authorization LA21024 must be read in conjunction with Approval LA15046 which remains in effect.

April 26, 2022

(Original signed)  
Jeff Froese  
Approval Officer

## **Appendices:**

- A. Consistency with the municipal development plan
- B. Explanation of conditions in Authorization LA21024

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

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

South Prairie’s CFO is located in the MD of Taber and is therefore subject to that county’s MDP. The MD of Taber adopted the latest revision to this plan on September 28, 2021 under Bylaw #1980.

Sections 5.1.13 – 5.1.15 of the MDP provide policies “related to confined feeding operations.” The stated purposes of these policies include providing the NRCB with “requirements that the council of the M.D. of Taber wish to have considered when applications for CFOs are evaluated for approval....”

The text in sections 5.1.13 – 5.1.15 is not clear as to whether these policies were intended to apply to applications for both new CFOs and for expansions or modifications to existing CFOs. However, a broad reading of these provisions suggests that they were meant to cover new CFOs as well as CFO expansions. Therefore, I presume these sections apply to this application. The applicable sections of 5.1.13 – 5.1.15 are discussed below.

Section 5.1.13 states that CFOs should be discouraged in the areas shown in Map 2 (dated January 2004) as “restricted”. This exclusion zone is a land use provision and South Prairie is located in the exclusion zone near the Village of Barnwell. This application is to change how manure is managed and stored at an existing CFO that has a deemed permit under AOPA in 2002, and does not involve any increase in livestock or manure production. Because of this I am of the opinion that this application does not conflict with this section of the MDP.

Sections 5.1.14(a)-(d) list setbacks for CFOs from roads and property lines. The proposed earthen liquid manure storage is located within the side/rear yard setback. Despite this, South Prairie already holds a waiver from the MD of Taber relaxing this setback to 6.1 m or 20’. The proposed concrete lined pit under the already permitted but not yet constructed free stall barn meets all of the applicable setbacks.

Section 5.1.15 requests that the NRCB consider four items:

- a) the proximity of the operation to open bodies of water and the topography of the surrounding lands in order to minimize any negative impacts to drinking water supplies;
- b) the cumulative effect of a new approval on any area near other existing confined feeding operations;
- c) environmentally sensitive areas shown in the report, Municipal District of Taber Environmentally Sensitive Areas in the Oldman River Region;
- d) give[ing] notice to adjacent landowners even in the case of applications for registration or authorization.

Neither subsection (a) or (b) are likely “land use provisions,” as they call for site-specific judgements about the acceptability of an individual operation in light of certain criteria (“proximity,” magnitude and nature of cumulative effect, effect on environmentally sensitive areas). As such, these two MDP policies are not relevant to my MDP consistency determination. (See Operational Policy 2016-7: Approvals, part 8.2.5).

Regardless, South Prairie meets the AOPA requirements (which are designed to prevent or minimize leakage from CFO facilities and thus to prevent manure from reaching and contaminating surface water and groundwater) related to item (a). Since the application meets the AOPA requirements, the proposed facilities will not pose a material risk to surface water or groundwater (and therefore potential drinking water supplies).

Subsection (b) refers to cumulative effects of CFOs. AOPA does not expressly require approval officers to consider the cumulative effects of proposed developments together with those of other existing CFOs or other activities in the area. Further, the NRCB’s Board members have directed approval officers not to consider cumulative effects in their permitting decisions. In a 2011 decision, the Board stated that consideration of cumulative effects is “not within the Board’s regulatory mandate. As a statutory decision maker, the Board takes its direction from the authorizing legislation. AOPA does not provide for cumulative effects assessment.” (Zealand Farms, RFR 2011-02 at 5.)

The CFO is not located in an environmentally sensitive area as indicated in item subsection (c) above.

Subsection (d) is a procedural requirement related to public notice so it is likely not a “land use provision.” Therefore it is not relevant to my MDP consistency determination. The notification requirements under AOPA have been met for this application.

For these reasons, I conclude that the proposed construction is consistent with the land use provisions of the Municipal District of Taber’s MDP.

## **APPENDIX B: Explanation of conditions in Authorization LA21024**

Authorization LA21024 includes several conditions, discussed below:

### **a. Closure of old pit**

South Prairie Farms has indicated that the old pit will be cleaned out and filled with dirt. I interpret this to be intent to close the pit in accordance with Technical Guideline Agdex 096-90, "Closure of Manure Storage Facilities and Manure Collection Areas". South Prairie Farms has not specified a timeline for this to occur, but has indicated that it would occur before construction of the newly proposed pit.

To ensure that the old pit is closed properly before construction of the new pit occurs, a condition will be placed in the permit requiring the old pit to be closed before starting construction of the new pit. The old pit must be closed in accordance with the requirements of Technical Guideline Agdex 096-90, for facility type 4, concrete and steel manure storage facilities. South Prairie Farms is to provide documentation to confirm the closure of the old pit.

### **b. Construction deadline**

South Prairie proposes to complete construction of the proposed new concrete lined manure storage and lagoon / earthen liquid manure storage (EMS) by November 1, 2025. This time-frame is considered to be reasonable for the proposed scope of work. The deadline of November 1, 2025 is included as a condition in Authorization LA21024.

### **c. Groundwater protection requirements**

South Prairie proposes to construct the new EMS with a 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.

South Prairie hired a consultant to measure 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 10 metre thick naturally occurring protective layer must not be more than  $1 \times 10^{-6}$  cm/sec.

In this case, the in situ measurement was  $4.7 \times 10^{-8}$  cm/sec. This value is below the maximum value in the regulations. Therefore, the proposed naturally occurring protective layer meets the hydraulic conductivity requirement in the regulations.

The geotechnical report attached to Technical Document LA21024 notes the presence of shallow sandy loam pockets. That report indicates that these pockets, if encountered during construction, need to be sub-excavated by one metre and replaced with compacted low permeable clay.

#### **d. 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 LA21024 includes conditions requiring:

- a. South Prairie to provide an engineer's completion report certifying that the EMS was constructed in accordance with the requirements specified in the Wood Environmental and Infrastructure Solutions report BX30711, dated March 2, 2022. The report must also specify that the inlet to the EMS was installed in the lower quarter of the facility.
- b. the concrete used to construct the liner of the manure collection and storage portion of the new concrete lined pit associated with the free stall barn extension to meet the specification for category B (liquid manure shallow pits) as in in Technical Guideline Agdex 096-93 "Non-Engineered Concrete Liners for Manure Collection and Storage Areas."

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 LA21024 includes a condition stating that South Prairie shall not allow manure in the new concrete lined pit or the new EMS until NRCB personnel have inspected these facilities and confirmed in writing that they meet the authorization requirements.