

## Decision Summary RA20015

This document summarizes my reasons for issuing Approval RA20015 under the *Agricultural Operation Practices Act (AOPA)*. Additional reasons are in Technical Document RA20015. 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 approval. For additional information on NRCB permits please refer to [www.nrcb.ca](http://www.nrcb.ca).

### 1. Background

On March 6, 2020, Daystar Dairy Farm 1999 Inc. (Daystar Dairy) submitted a Part 1 application to the NRCB to expand an existing dairy CFO.

The Part 2 application was submitted on September 1, 2020. On February 3, 2021, I deemed the application complete.

The proposed CFO expansion involves:

- Increasing livestock numbers from 150 to 400 milking cows (plus associated dry cows and replacements)
- Constructing a new dairy barn (38 m x 62 m)
- Constructing a new manure transfer pit (3 m x 9 m) to connect the new barn to the existing dairy barn complex
- Constructing a new synthetically lined liquid manure storage (62 m x 56 m)
- Decommissioning the existing dry cow barn and converting it to a cold storage (not a manure collection area or manure storage facility)

#### a. Location

The CFO is located at SE 20-42-25 W4M in Ponoka County, roughly 2,700 m south of the Town of Ponoka. The terrain is relatively flat and the area generally slopes down to the west and northwest. The closest water body is a seasonal drainage located approximately 500 to the west of the CFO.

#### b. Existing permits

As the CFO existed on January 1, 2002, the CFO is grandfathered with a deemed registration under section 18.1 of AOPA. The deemed registration allows for the construction and operation of an 80 milking cow dairy CFO. The determination of the CFO's deemed permit status under section 18.1 of AOPA is explained in Decision Report RA03032.

To date, the NRCB has issued the CFO Registrations RA03032, RA08006 and Authorization RA17003. Collectively, the NRCB permits and the deemed registration allow Daystar Dairy to construct and operate a 150 milking cow (plus associated dry cows and replacements) dairy CFO. The CFO's existing permitted facilities are listed in the appendix to the Approval RA20015.

## **2. Notices to affected parties**

Under section 19 of AOPA, the NRCB notifies (or directs the applicant to notify) all parties that are “affected” by an approval 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 person or municipality entitled to divert water from that body within ten miles downstream
- the municipality where the CFO is located or is to be located
- any other municipality whose boundary is within a specified distance from the CFO, depending on the size of the CFO
- all persons who own or reside on land within a specified distance from the CFO, depending on the size of the CFO

For the size of this CFO the specified distance is one mile. (The NRCB refers to this distance as the “affected party radius.”)

A copy of the application was sent to Ponoka County, which is the municipality where the CFO is located.

The NRCB gave notice of the application by public advertisement in the Ponoka News on February 3, 2021. 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, Seventy nine letters were sent to people identified by Ponoka County as owning or residing on land within the affected party radius.

## **3. Notice to other persons or organizations and responses**

Under section 19 of AOPA, 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 and Forestry (AF).

I also sent a copy of the application to Ember Resources Ltd. (email) and Canadian Natural Resources Ltd. (mail).

Alberta Agriculture and Forestry, Ember Resources Ltd. and Canadian Natural Resources Ltd. Did not respond to the application.

Mr. Gordon Watt, an executive officer/public health inspector with AHS, recommended approval of the application. He also provided several comments related to the protection of water wells, he also indicated that any abandoned or un-used wells should be properly decommissioned, that appropriate control measures should be implemented to prevent potential nuisances from impacting nearby residences and businesses, and that deceased livestock should be disposed of in accordance with the Nuisance and General Sanitation Regulations 2003, and any other applicable legislation.

Ms. Laura Partridge, a senior water administration officer with AEP, indicated that additional

licensing is required for the proposed expansion. She did not raise concerns with this application.

#### **4. Alberta Land Stewardship Act (ALSA) regional plan**

Section 20(10) 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 CFO is located.

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

I have determined that the proposed CFO expansion is 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.)

#### **6. AOPA requirements**

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

- 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'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
- Meets the AOPA water table separation requirement with a condition (discussed in Appendix C and in Technical Document RA20015)

With the terms and conditions summarized in part 11, the application meets all relevant AOPA requirements with one exemption. The exemption is required to address the AOPA requirements for water well setbacks and is discussed in the following parts of this decision summary.

#### **7. Responses from the 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." Ponoka County is an affected party (and directly affected) because the proposed CFO is located within its boundaries.

Mr. Tom Webber, the assistant chief administrative officer with Ponoka County, provided a written document on behalf of Ponoka County. That response included excerpts from the County's Morning Side Area Structure Plan. It also stated that that the application falls within a referral boundary and that county council recognizes that the CFO may expand.

The application's consistency with Ponoka County's municipal development plan is addressed

in Appendix A, attached.

Apart from municipalities, any member of the public may request to be considered “directly affected.” In this case, the NRCB received a response from Mr. Craig Haan.

Mr. Haan owns or resides on land within the one mile notification radius for affected persons. Because of his location within this radius, and because he submitted a response, he qualifies for directly affected party status. (See NRCB Operational Policy 2016-7: Approvals, part 6.2) Mr. Haan’s response does request to be considered directly affected and is a letter of support for the application. Mr. Haan is considered to be a directly affected party.

## **8. Environmental risk of CFO facilities**

When reviewing a new approval 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 Daystar Dairy’s existing CFO facilities were assessed in 2017 using the ERST. According to that assessment, the facilities pose a low potential risk to surface water and groundwater.

Since the 2017 risk assessment was completed, the applicant has proposed to decommission an existing water well. For this reason, I reassessed the risks posed by the CFO’s existing facilities.

The manure storage tank (a Slurrystore), appears to be the highest risk exiting facility and poses a low potential risk to groundwater and surface water. Since my risk assessment found that this facility poses a low potential risk to groundwater and surface water, I presume that the CFO’s other existing facilities also pose a low potential risk to both groundwater and surface water.

The proposed barn and connector pit, including the existing liquid manure collection and storage portion of the dairy barn complex, and the proposed synthetically lined liquid manure storage all pose a low potential risk to groundwater and surface water. The results of the new risk assessment are documented in Technical Document RA21012.

## **9. Exemption**

The proposed barn and manure collection pit are to be connected to existing liquid manure collection system in the existing dairy barn. Under the NRCB’s Approval Policy (Operational Policy 2016-7, part 8.7.1) approval officers are to measure setback distances from the closest part of the structure, including the existing and proposed portions. In this case, a portion of the exiting dairy barn complex is located less than 100 m from the existing water wells.

Because of the above, I determined that the dairy barn complex, including the proposed barn and connector pit, are located within the required AOPA setback from existing water wells. As explained in Appendix B, an exemption to the 100 metre water well setback is warranted.

Despite the an exemption being warranted, the CFO already has an ongoing permit condition from Registration RA08006 which requires annual water well monitoring and sampling. The applicant has not requested to modify this condition, which will be carried forward with minor revisions (discussed in Appendix C) into the new permit. This condition provides additional protection to groundwater users.

The proposed barn is also to be constructed on top of an existing water well. Because of this, this water well must be decommissioned in accordance with AEP requirements before construction of the new barn begins. A condition requiring this is discussed below.

## 10. Other factors

The approval application is consistent with the MDP land use provisions, and meets the requirements of AOPA and its regulations, because of this I also considered other factors.

AOPA requires me to consider matters that would normally be considered if a development permit were being issued. The NRCB interprets this to include aspects such as property line and road setbacks related to the site of the CFO. (Grow North, RFR 2011-01 at page 2). Approval officers are limited to what matters they can consider though as their regulatory authority is limited.

Mr. Webber did not provide me with the zoning or the property line setbacks required by Ponoka County's land use bylaw (LUB). I reviewed the bylaw and note that the land where the CFO is sited is zone agricultural and that the application meets the LUB's setbacks to property lines.

The AOPA requires me to consider the effects a proposed CFO or CFO expansion has on natural resources administered by provincial departments. To this end I referred the application to AHS, AEP and AF and the right of way holders noted in part three above. I have received responses from AHS and AEP, neither of which were opposed to the proposed application.

The AEP representative whom I have corresponded with for this application has not advised me of any statements of concerns for this CFO that were submitted under section 73 of the *Environmental Protection and Enhancement Act* or section 109 of the *Water Act* in respect of the subject of this application.

I am not aware of any written decisions before the Environmental Appeals Board (<http://www.eab.gov.ab.ca/status.htm>, accessed February March 23, 2021). Further, I am not aware of any written decisions before a director under the Water Act based on my correspondence with representatives of AEP related to this application.

Finally, I considered the effects of the proposed CFO expansion on the environment, the economy, and the community, and the appropriate use of land.

Consistent with NRCB policy (Approvals Policy 8.7.3), I presumed that the effects on the environment are acceptable because the application meets all of AOPA's technical requirements, with exception to the setback to existing water wells which warrants an

exemption. In my view, my presumption is not rebutted.

Consistent with NRCB policy (Approvals Policy 8.7.3), if the application is consistent with the MDP then the proposed development is presumed to have an acceptable effect on the economy and community. In my view, this presumption is not rebutted.

I also presumed that the proposed CFO expansion is an appropriate use of land because the application is consistent with the land use provisions of the municipal development plan (See NRCB Operational Policy 2016-7: Approvals, part 8.7.3.). In my view, this presumption is not rebutted based on the county's response to the application.

## **11. Terms and conditions**

Approval RA20015 specifies the cumulative permitted livestock capacity as 400 milking cows (plus associated dry cows and replacements) and permits the construction of the new dairy barn, the pit connecting it to the existing dairy barn complex, and the synthetically lined liquid manure storage.

Approval RA20015 contains terms that the NRCB generally includes in all AOPA approvals, 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, Approval RA20015 includes conditions that generally address construction deadlines, monitoring, document submission and construction inspection. For an explanation of the reasons for these conditions, see Appendix C.

For clarity, and pursuant to NRCB policy, I consolidated the deemed registration and NRCB issued Registrations RA03032 and RA08006 and Authorization RA17003 with Approval RA20015 (see NRCB Operational Policy 2016-7: Approvals, part 10.5). Permit consolidation helps the permit holder, municipality, neighbours and other parties keep track of a CFO's requirements, by providing a single document that lists all the operating and construction requirements. Consolidating permits generally involves carrying forward all relevant terms and conditions in the existing permits into the new permit, with any necessary changes or deletions of those terms and conditions. This consolidation is carried out under section 23 of AOPA, which enables approval officers to amend AOPA permits on their own motion. Appendix C discusses which conditions from the historical permits are or are not carried forward into the new approval.

## **12. Conclusion**

Approval RA20015 is issued for the reasons provided above, in the attached appendices, and in Technical Document RA20015.

Daystar Dairy's deemed registration and NRCB-issued Registrations RA03032 and RA08006 and Authorization RA17003 are therefore cancelled, and their content consolidated into Approval RA20015, unless Approval RA20015 is held invalid following a review and decision by the NRCB's board members or by a court, in which case already existing permits will remain in effect.

April 9, 2021

(Original Signed)  
Jeff Froese  
Approval Officer

### **Appendices:**

- A. Consistency with the municipal development plan
- B. Exemptions from water and well setback
- C. Explanation of conditions in Approval RA20015

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

Under section 20 of AOPA, an approval officer may only approve an application for an approval or amendment of an approval 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 20(1.1) 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.)

Daystar Dairy’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.

Section 2 of the MDP contains 11 numbered “policies” relating to CFOs. Of these, policies 2.7, 2.9, 2.10 and 2.11 are not relevant to this application as they apply to matters under the County’s regulatory mandate not the NRCB under the AOPA. The remaining policies in section 2 are discussed below.

Under policy 2.1, the county “encourages” the development of CFOs to add value to crop production and provide “more employment and income per acre of land.” However, the policy also states that the environment and neighbours’ rights “must be protected.” This policy likely isn’t a relevant “land use provision” because it relates broadly to economic development, not CFO siting. Regardless, it provides a general context for interpreting and applying the other policies in section 2.

Policy 2.2 states that it’s the county’s belief that “very large CFOs are inappropriate in this part of Alberta, and requests the NRCB not to allow them here (in Ponoka County).” This policy defines “very large” as “more than ten times” the threshold for approvals in the Part 2 Matters Regulation under AOPA. In this case, the threshold for approvals for dairies are 200 milking cows, so a “very large” dairy CFO in Ponoka County would have at least 2,000 milking cows. This application proposes an increase in livestock from 150 to 400 milking cows (plus associated dry cows and replacements). This does not fit the definition of a “very large” CFO as set out in policy 2.2; the CFO is therefore consistent with this policy.

Policy 2.3 has two parts. The first part states that no *new* CFO shall be established within specified distances to itemised urban developments, watersheds and land within a CFO exclusion zone in an Area Structure Plan (ASP) that has been adopted by bylaw. This CFO is located within the specified two mile (3,200 m) setback to the Town of Ponoka, but it is not within the specified setback to water sheds. It is located within the Morningside ASP (adopted October 9, 2018; discussed below). Despite the above, the application is not for a new CFO, rather it is for an expansion to an existing one. For this reason, this part of this policy is not applicable to this existing CFO or this application to expand it.

The apparent intent of the ASP is to address conflicting land uses, largely residential and other uses. Section 17 of the ASP states that conflicting residential and “large-scale animal operations” (later referred to as intensive livestock operations which are regulated by the county and CFOs as defined by AOPA) can be avoided by preventing any new “operations” in the ASP area. This section also recognizes this CFO and states that this CFO and another one within the ASP “may expand in accordance with AOPA rules”.

The ASP also refers to section 618.2 of the land use bylaw, which relates to safety and suitability of building sites, and Map 8. Section 618.2 of the land use bylaw states that “a(sic) building site is deemed unsafe or unsuitable if it... (l) is situated closer to a confined feeding operation, intensive livestock operation, or manure storage facility than the minimum distance separation established in AOPA”. While Map 8 of the ASP indicates that the site of this particular CFO is in an area suitable for residential acreages. The ASP then states that the “protection afforded by the bylaw will over-ride any designation on Map 8”.

Based on the above, the CFO does not conflict with the Morningside ASP.

The second part of policy 2.3 of the MDP calls for “very strict” conditions on manure handling and storage in the Chain Lakes and Maskwa Creek watersheds. This CFO is not located within either of these watersheds. Further, this policy likely is not a “land use provision” because it calls for discretionary judgements about what conditions are “very strict.” In addition, section 20(1.1) of AOPA precludes me from considering MDP provisions “respecting tests or conditions related to the construction of or the site for a confined feeding operation or manure storage facility” and regarding the land application of manure. Even if I did consider this provision, the proposed barn and synthetically lined liquid manure storage meet AOPA’s technical requirements for manure handling and storage and, in my opinion, those requirements are considered to be “very strict.”

Policy 2.4 calls for the NRCB to “set strict rules for the timely incorporation of manure within a mile of any urban municipality or rural residence.” Section 20(1.1) of AOPA precludes me from considering this policy because it relates to the land application of manure. The regulations under AOPA regulate the manure application process, including timely incorporation in specified circumstances (see section 24 of the Standards and Administration Regulation which sets out the manure incorporation requirements under AOPA for different cropping methods).

Policy 2.5 requests the NRCB not to allow the siting of CFOs within two miles of “any lake” unless the “regulators” are “convinced” that the CFO’s manure management system is “fail-safe” and the CFO poses “no reasonable risk of contamination of the lake.” This policy is likely not a “land use provision” because its “fail-safe” and “reasonable risk” tests call for discretionary, CFO-specific judgements. The policy may also be a “test or condition,” which I am precluded from considering under AOPA’s section 20(1.1). Regardless, this is an existing CFO which is not located within two miles of a lake identified in the MDP.

Policy 2.6 states that CFOs “should not be established or expanded” where there is “any risk that runoff will contaminate domestic water supplies.” This policy likely is not a “land use provision” because it calls for discretionary judgements about acceptable risks. (The policy’s “any risk” test is a low risk threshold, but I read the threshold as more than “minor” or “insignificant.”) The proposed facility meets AOPA’s operational and design requirements, which

are designed to minimize the risks to surface water and groundwater. For this reason, this policy is not applicable to this application.

Policy 2.8 applies to new CFOs and uses, but essentially modifies, AOPA's MDS requirements by measuring the AOPA-derived minimum distance of separation to the edge of an adjacent landowner's property. This application is not for a new CFO and therefore policy 2.8 is not applicable to this application.

Based on the above, I conclude that the application is not inconsistent with the land use provisions of the Ponoka County's MDP. The county's response supports my conclusion.

In my view, the text of Ponoka County's MDP also provides a clear intent to incorporate the land use bylaw (LUB), in sections 1.4, 1.6, 4.10, 10.3, 12.1, 17.5 and in Appendix A. Following the NRCB Operational Policy 2016-7: *Approvals*, part 8.2.3, I also considered Ponoka County's LUB 7-08-LU. Under that bylaw, the subject land is currently zoned Agricultural (AG). 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 this decision summary, the CFO already holds registrations and an authorization under AOPA.

## APPENDIX B: Exemption from water well setback

There is an existing water well in the foot print of the proposed barn. The applicant has committed to decommission this water well. Because of this, I am including a condition in the permit where the applicant must decommission this third water well before beginning construction of the proposed barn.

The proposed dairy barn and connector pit, including the existing liquid manure collection and storage portion of the dairy barn complex, is to be located less than 100 m from water wells. I have confirmed during a site inspection that two water wells are located approximately 70 m from the proposed barn. Those same wells are located approximately 15 m from the existing barns liquid manure collection system. The liquid manure from the proposed barn will be directed to the existing barns manure system. Accordingly, I considered the existing barn complex and the proposed barn as a single facility.

This is in conflict with the section 7(1)(b) of the Standards and Administration Regulation (SAR). Section 7(2) 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), or if required by an approval officer a groundwater monitoring program is implemented.

Under the regulation, one basis for granting an exemption is if the approval officer implements a groundwater monitoring program of the water well(s) in question. This CFO currently has a permit condition which requires such a program and the applicant has not requested any changes to that program.

Section 7(2) of the SAR states that the 100 m setback to a water well does not apply if the barn (MSF/MCA) is not likely to contaminate the aquifer into which the water well is drilled and if required by an approval officer, 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 wells:

It is unknown which water well is associated with the drilling information on the AEP water well database. For this reason, I conservatively presumed that the two water wells

located approximately 15 m from the existing dairy barn liquid manure collection system were the worst case scenario of the information available for the water wells registered to SE 20-42-25 W4M in the AEP water well database.

Accordingly, the two water wells are presumed to have been installed prior to 1991 (based on well ID 157663) and have an unknown perforated or screened zone (assumed to start at ground surface, based on limited information from well IDs 94034 and 94035). The clay layer from 5.5 m to 13.7 m (from well ID 157663) will act as a protective layer while the wells draw water a saturated sandy gravel layer at 20.7 m (from well ID 94034). These wells are reported to be used for domestic and non-domestic purposes. The wells have a driven seal at an unspecified depth (from well IDs 94034 and 94035). The well appeared to be in good condition at the time of my site inspection, have casings that extend above the ground surface and are protected by posts around the wells.

Due to the wells' close proximity to the barn, I am working under the presumption that the wells are cross gradient to the 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.<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 RA20015.

Despite the above exemption, the CFO already has an ongoing permit condition from Registration RA08006 which requires annual water well monitoring and sampling. The applicant has not requested to modify this condition. For this reason, the condition will be carried forward, with minor revisions to match current AOPA permit conditions, into the new permit. That condition and its modifications are discussed in the following appendix.

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1. 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 Approval RA20015**

Approval RA20015 includes several conditions, discussed below, and carries forward a number of conditions from Registrations RA03032 and RA08006 and Authorization RA17003 (see sections 2 and 3 of this appendix). Construction conditions from those permits that have already been met are identified in the appendix to Approval RA20015.

### **1. New conditions in Approval RA20015**

#### **a. Decommissioning of water well under new barn**

As noted in Technical Document RA20015, the applicant has committed to decommission the water well under the new barn. To ensure that this water well is decommissioned in a timely manner, a condition will be added to the permit that requires the permit holder to decommission this water well before starting construction of the new barn.

The permit holder must provide the NRCB and Alberta Environment and Parks with proof that the water well has been reclaimed in accordance with the Water Wells and Ground Source Heat Exchange Systems Directive under the Water (Ministerial) Regulation (A.R. 205/98), and the *Water Act*.

#### **b. Construction above the water table**

Section 9(2) of the Standards and Administration Regulation (SAR) under the *Agricultural Operation Practices Act* (AOPA) requires the bottom of the liner of a manure storage facility or manure collection area to be not less than one metre above the water table of the site “at the time of construction.”

Based on construction completed at the CFO in 2017 the water table is likely deeper than 1.8 m below ground surface. The proposed barn and its transfer pit are proposed to be 2.5 m below ground surface while the proposed synthetically lined liquid manure storage is to be 3.5 m below ground surface.

Based on this information, the proposed facilities may meet the one metre requirement of section 9(3) of the SAR. However, because the height of the water table can vary over time, a condition is included requiring the permit holder to cease construction and notify the NRCB immediately if the water table is encountered during construction.

#### **c. Construction deadline**

Daystar Dairy proposes to complete construction of the proposed new synthetically lined liquid manure storage in one year and the new barn, including its associated connector pit, in six years. One construction season for the synthetically lined liquid manure storage might not be adequate as poor climatic conditions or a limited availability of contractors may delay construction. By comparison six building seasons for the barn is likely more than adequate for its construction when compared to other permits issued for similar structures. For these reasons, the deadline of November 29, 2024 is included as conditions in Approval RA20015.

#### **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, Approval RA20015 includes conditions requiring Daystar Dairy is to provide:

- a. a completion report, signed by a qualified third party, certifying that the synthetically lined liquid manure storage:
  1. has been constructed in accordance with the proposed design including the horizontal dimensions, vertical dimensions (including portions above and below ground) and side wall slopes;
  2. is constructed in the approved location;
  3. has its inlet located in the lower quarter;
  4. has the same liner material as what has been proposed, and;
  5. that the liner was installed in accordance with the liner manufacturer's requirements, including under membrane surface preparation and proper sealing at all seams.
- b. evidence or written confirmation from a qualified third party that the concrete used to construct the manure collection and storage portion of the new barn and its associated manure transfer pit is to be sulphate resistant and:
  1. have a minimum 56-day compressive strength of 30 MPa in scrape alleys, and;
  2. have a minimum 56-day compressive strength of 32 MPa in pits

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. Approval RA20015 includes conditions stating that Daystar Dairy shall not:

- a. place livestock or manure in the manure storage or collection portions of the new dairy barn, including its associated manure transfer pit,
- b. place manure in the new synthetically lined liquid manure storage,

until NRCB personnel have inspected these facilities and confirmed in writing that they meet the approval requirements.

## **2. Conditions carried forward from previous permits**

### From Registration RA03032

Pursuant to section 23 of AOPA (approval officer amendments), I have determined that the following conditions from old permits should be carried forward with modifications:

*General 1. The operator is to adhere to and follow the requirements of the Agricultural Operation Practices Act and the regulations passed pursuant to that Act, from time to time, including but not limited to Alberta Regulation 257/2001 Agricultural Operations, Part 2 Matters Regulation and Alberta Regulation 257/2001 Standards and Administration Regulation.*

*General 2. The operator is to adhere to the filed application, the accompanying decision report, including but not limited to, site plan, building plans, operating plan, manure management plan, engineering reports and other attached documents, unless otherwise noted in the following conditions.*

*General 3. For each instance where the applicant has committed to higher standards than required by AOPA, these commitments have been included as conditions.*

*General 4. The operator is responsible for all costs associated with monitoring, sampling, testing, recording and reporting requirements.*

These four general conditions are synonymous with the general terms included in all currently issued AOPA permits. For this reason, these conditions will be deleted and replaced with the currently used permit terms in all NRCB issued AOPA permits.

*Operating 1. The NRCB is to be notified immediately at 1-866-383-6722 if there is an overflow or leak from the manure storages.*

This condition will be carried forward without revisions into Approval RA20015.

*Operating 2. Manure Storage leakage detection system reporting; a. Operator must check the leak detection system monitoring pipe regularly and determine the liquid level and keep appropriate records. b. The NRCB is to be notified immediately if there is liquid in the monitoring pipe.*

*Operating 4. Water well testing; a. The three water wells located within 100 metres of the existing barn must be tested annually for drinking water quality and the results must be submitted to the NRCB on an annual basis by July 31.*

Registration RA08006 carried forward, reprinted and consolidated these two conditions but did not cancel Registration RA03032. In light of this, I am addressing them once only below as these conditions are effectively the same in RA08006 as they are in Registration RA03032.

*Operating 3. Nutrient Management Records; a. Manure application and soil nutrient records must be kept as required by the regulations.*

This condition is repetitious of but less specific than the requirements in section 28 of the Standards and Administration Regulation. For this reason, this condition will be deleted and will be replaced with the with the general statement included in all AOPA permits which states: *the permit holder shall comply with the requirements of the Agricultural Operation Practices Act (AOPA) and the regulations passed pursuant to that act.*

From Registration RA08006

*4. Water Well Testing Reporting; a. Drinking water quality tests for chlorides and nitrates must be conducted annually on all water well(s) located within 100 metres of the confined feeding operation facilities with the results submitted annually to the NRCB by July 31.*

More recently issued AOPA permits that include similar water well testing requirements are typically flexible and not rigid (the date of sampling can be shifted forward or backward provided that the annual testing requirements remain met). Further, the testing parameters and any related requirements are specified in a water well monitoring statement. To include a similar level of flexibility for the CFO operator and ensure continuity with other currently issued permits seems appropriate in my mind. For this reason, this condition will be carried forward but be reworded to state:

Water quality tests shall be conducted annually on water wells within 100 m of the confined feeding operation. The annual water well test results shall be submitted to the NRCB no later than July 31 of each year unless otherwise directed in writing by the NRCB.

*5. Manure Storage Leakage Detection System Reporting; a. The operator must check the leak detection system monitoring pipe regularly and determine the liquid level and keep appropriate records. b. The NRCB is to be notified immediately if there is liquid in the monitoring pipe.*

This condition will be carried forward, but it will be revised to provide clarity as “regularly” and to “keep appropriate records” are subjective in my opinion. The term *regularly* will be replaced with *annually* while I will add clarity so that the records are *to be kept for five calendar years*. In addition to this, I will add to the condition so that *the records must be made available to the NRCB upon request*.

### **3. Conditions not carried forward from old permits**

Pursuant to section 23 of AOPA (approval officer amendments), I have determined that the following conditions from old permits should be deleted and therefore are not carried forward to Approval RA20015.

#### From Registration RA03032

*General 5. Quota must be obtained as required before increasing animal numbers.*

Currently issued AOPA permits do not include conditions related to dairy quota as this activity is regulated under the Alberta Milk Marketing Regulation which is not associated with the AOPA. To avoid conflict with other regulatory authorities, I am deleting this permit condition.