

## Decision Summary RA19041

This document summarizes my reasons for issuing Approval RA19041 under the *Agricultural Operation Practices Act* (AOPA). Additional reasons are in Technical Document RA19041. 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.

### 1. Background

On July 16, 2019, Britestone Hutterian Brethren (Bristestone Colony) submitted a Part 1 application to the NRCB to construct a new multi-species CFO. The Part 2 application was submitted on November 28, 2019. On March 18, 2020, I deemed the application complete.

The proposed CFO includes the construction of the following manure collection and storage facilities to house associated livestock:

- Dairy barn (137 m x 46 m), to house 120 milking cows, including associated dry cows and replacements, and collect their manure.
- Compacted clay lined liquid manure storage lagoon (40 m x 80 m, 3.5 m deep and walls sloped at 4:1, I refer to this as the earthen liquid manure storage or EMS), to store liquid manure from the dairy barn.
- Feedlot (137 m x 49 m) to house 150 beef finishers, dairy livestock and collect their manure.
- Catch basin (39 m x 39 m, 1 m deep and walls sloped at 3:1) to collect and store manure impacted runoff from the feedlot.
- Layer barn (122 m x 46 m), to house 30,000 chicken layers and collect their manure
- Pullet barn (122 m x 24 m) to house 30,000 chicken pullets and collect their manure
- Mc Donald barn (61 m x 18 m), to house 6,000 chicken broilers, 300 turkey broilers, 300 geese, and 1,400 ducks and collect their manure
- Concrete lined solid manure storage pad (76 m x 61 m, with 1.2 m high walls) to store solid manure from the above facilities

Under AOPA, this type of application requires an approval. (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](http://www.nrcb.ca).)

#### a. Location

The proposed CFO is located at W1/2 25-28-23 W4M in Kneehill County, roughly six kilometres south of the Village of Carbon, Alberta. The proposed CFO is located near the top of a hill. The surrounding landscape is generally undulating. The nearest surface water body is an intermittent headwater of Kneehill Creek which is located approximately 500 m east of the proposed CFO.

### 2. Notices to affected parties

Under section 19 of AOPA, the NRCB is required to notify (or direct 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:

- the municipality where the CFO is 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 this application, the distance is one mile. (The NRCB refers to this distance as the “affected party radius.”)

Municipalities that are affected parties are defined by the act to be “directly affected” and are entitled to provide evidence and written submissions. Kneehill County is an affected party (and therefore also a directly affected party) because the proposed CFO is located within its boundaries.

All other parties who receive notice of the application may request to be considered “directly affected.” Under NRCB policy, all individuals who own or reside on land within the affected party radius are presumed to be “directly affected” if they submit a written response to the notice within the prescribed timeline. See NRCB Operational Policy 2016-7: *Approvals*, part 6.2.

Under section 20 of the act, all directly affected parties are entitled to a reasonable opportunity to provide evidence and written submissions regarding the application.

All directly affected parties are also entitled to request an NRCB board review of the approval officer’s decision on the approval application.

The NRCB published notice of the application in the Three Hills Capital on March 18, 2020 and posted the full application on the NRCB website for public viewing. The NRCB also emailed referral letters and a copy of the complete application to Kneehill County, Alberta Health Services (AHS), Alberta Environment and Parks (AEP), Alberta Agriculture and Forestry (AF), and Utility Right of Way interests – Nova Chemicals Corporation (formerly Alberta Gas Trunk Line Company Limited), Lynx Energy ULC, Nova Gas Transmission Ltd (sent to TC Energy who was identified to be the correct respondent). Nineteen courtesy letters were sent to people identified by Kneehill County as owning or residing on land within the affected party radius.

### **3. Responses from the municipality and referral agencies**

I received responses from the county, AHS, AEP, AF, AT and TC Energy. No response was received from Nova Chemicals Corporation or Lynx Energy ULC.

After deeming complete, I provided Alberta Transportation (AT) with a copy of the complete application as concerns were expressed (see Appendix D) related to the highway.

Ms. Barb Hazelton, the manager of planning and development with Kneehill County, provided a written response on behalf of Kneehill County. As noted in section 2, Kneehill County is a directly affected party.

Ms. Hazelton stated that the application does not conflict with any of the CFO restrictive areas within the county’s municipal development plan and that the municipal planning commission had no concerns with this application. The application’s consistency with Kneehill County’s municipal development plan is addressed in Appendix A, attached.

Ms. Hazelton also listed the setbacks required by Kneehill County's land use bylaw (LUB). Based on a drawing included with the application, all of the proposed facilities will meet the applicable front (30.5 m), side (7.6 m) and rear yard (7.6 m) setbacks.

Mr. Keith Lee, an executive officer/public health inspector, provided a response on behalf of AHS. Mr. Lee's response provided comments related to:

- how the proposed catch basin for the feedlot is considered to be an acceptable mitigation for feedlot runoff
- the storage facilities for solid and liquid manure appear to be sufficient, they meet the requirements of AEP with regards to hydraulic conductivity
- manure is to be disposed of on land owned by the applicant, this is acceptable to AHS provided that it is done in accordance with the applicable rules [AOPA] and that manure disposal does not result in contamination of surface water or groundwater sources [AOPA requirements], or create a public health nuisance
- how several [two] wells are at the site of the proposed CFO, two of which might be located within 100 m of the poultry barns. Despite this proximity, these facilities don't pose a significant risk due to how livestock and manure are handled in such facilities [as an added measure of protection to these two water wells, I have added conditions to the permit to reduce the risk posed to them by the poultry barns and to ensure that the poultry barns comply with the 100 m setback requirement under AOPA]
- that consideration should be given to installing a continuous water disinfection system if water should be used for domestic structures or facilities
- provided that deceased livestock are disposed of in accordance with the *Disposal of Dead Animals Regulation*, and do not create a public health nuisance, he had no concerns related to this matter at the time of his response.

Ms. Laura Partridge, a senior water administration technologist with AEP, provided a response on behalf of AEP. Ms. Partridge indicated in her response that AEP had received an application for water licensing under the *Water Act* and that no statements of concern had been received in response to that application. She went on to state that based on information included with the NRCB application and information in the *Water Act* application before her, additional water licensing would be required.

Mr. Tom Pack, an inspector with the Inspection and Investigation Section of the Animal Health and Assurance Branch of AF, provided a response on behalf of AF. Mr. Pack indicated that he had no concerns with the proposed building of the new facility [dairy] and that he would work with the applicant as they are building it.

Ms. Michele Buchwitz, a development planning technologist with AT, didn't foresee any problems with the proposed development.

Ms. Kayla McCarthy, a representative of TC Energy, stated in a written response that she had no concerns with the application. She recommended that the applicant follow ground disturbance and utility locate procedures. She also indicated that any permanent or temporary crossings of the right-of-way would require the consent of TC Energy.

A copy of the responses to this application were provided to the applicant for their information. Britestone Colony is reminded that they are required to comply with all applicable rules and regulations and any applicable agreements with right-of-way owners.

## 4. Responses from other parties

Twenty-three parties, consisting of 30 individuals and one representative of the Village of Carbon, submitted responses to the notice of the application (see Appendix B, below). I note that one of the parties submitted two responses to the application, which were materially the same but submitted in different methods to the NRCB.

Of the 23 parties who submitted responses, one owns or resides on land within the one mile radius for affected persons. Because of this party's location within this radius, they are presumed to be directly affected by the application.

The directly affected party raised concerns related to:

- impacts to air quality,
- groundwater contamination from both the proposed CFO and another existing oilfield source,
- lack of compensation for air and groundwater contamination,
- the location of the proposed CFO in proximity to Britestone Colony's existing CFO,
- negative impact on the quality of life for those residing next to a CFO.

The remaining 22 responding parties do not own or reside on land within the one mile radius for affected persons. I note that some of the responses to the notice of this application did not provide a full address or legal land location to confirm their location. None of these respondents are considered to be directly affected by the approval application. Appendix D sets out my reasons for determining why these respondents are not directly affected.

I provided copies of all of the responses to this application to Britestone Colony for their information and comment. Appendices C and D contain the colony's responses to the concerns expressed regarding their CFO application and my conclusions on those concerns. If the inclusion of a condition is warranted based on the expressed concerns, the condition is discussed below and in Appendix E.

## 5. Environmental risk screening of existing and proposed facilities

As part of my review of this application, I assessed the risk to surface water and groundwater posed by the CFO's proposed manure collection and storage facilities. I used the NRCB's environmental risk screening tool for this purpose (see NRCB Operational Policy 2016-7: *Approvals*, part 8.13). The 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](http://www.nrcb.ca).)

All of the CFO's proposed facilities pose a low potential risk to groundwater and surface water. This determination is based on the layer and pullet chicken barns being located more than 100 m from water wells (AEP water well IDs 9906136 and 9906136). To ensure that this is the case, two conditions will be added to the permit. These conditions are discussed in Appendix E, below.

## 6. Other factors considered

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

In addition, the proposed CFO is consistent with the land use provisions of Kneehill County's municipal development plan and 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 CFO:

- 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 (with a condition), 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 of manure collection and storage facilities

In addition, I assessed the effects of the proposed CFO expansion on the environment. Consistent with NRCB policy, I determined that these effects are presumed to be acceptable because the application meets all of AOPA's technical requirements and it is my opinion that the directly affected parties' concerns have been addressed. I also determined that the application's effects on the economy and community are presumed to be acceptable, and that the proposed CFO is an appropriate use of land. Under NRCB policy, these determinations are based on the application's consistency with the municipal development plan. (See NRCB Operational Policy 2016-7: *Approvals*, part 8.2.) None of the material I reviewed rebutted these presumptions.

## 7. Terms and conditions

Approval RA19041 specifies the new permitted livestock capacity as:

- 120 milking cows, including associated dry cows and replacements,
- 150 beef finishers,
- 30,000 chicken layers,
- 30,000 chicken pullets,
- 6,000 chicken broilers,
- 300 turkey broilers,
- 300 geese, and
- 1,400 ducks

The approval also permits the construction of the:

- Dairy barn (137 m x 46 m)
- EMS (40 m x 80 m, 3.5 m deep and walls sloped at 4:1)
- Feedlot (137 m x 49 m)
- Catch basin (39 m x 39 m, 1 m deep and walls sloped at 3:1)
- Layer barn (122 m x 46 m)
- Pullet barn (122 m x 24 m)
- Mc Donald barn (61 m x 18 m), and
- Concrete lined solid manure storage pad (76 m x 61 m, with 1.2 m high walls)

Approval RA19041 also 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 RA19041 includes conditions that:

- Set a deadline of November 23, 2027 for the approved construction to be completed
- Require submission of proof that the layer and pullet chicken barns are located more than 100 m from water wells
- Require submission of an engineer's completion report for the feedlot, catch basin and EMS
- Require submission of proof, prepared by a qualified third party, that the concrete used for the concrete lined manure collection and storage facilities meets the required specifications
- Require the construction and maintenance of structures that divert non-manure impacted run-on away from the concrete lined solid manure storage pad and the catch basin
- Prohibit Britestone Colony from placing manure or livestock in the facilities until they have been inspected by the NRCB following their construction

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

## **8. Conclusion**

Approval RA19041 is issued for the reasons provided above, in the attached appendices, and in Technical Document RA19041.

June 4, 2020

(Original Signed)  
Jeff Froese  
Approval Officer

## **Appendices:**

- A. Consistency with the municipal development plan
- B. Determining directly affected party status
- C. Concerns raised by directly affected individual
- D. Concerns raised by non-directly affected parties
- E. Explanation of conditions in Approval RA19041

## APPENDIX A: Consistency with the municipal development plan

Under section 20 of AOPA, an approval officer may approve an application for an approval 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 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.”)

Britestone Colony’s CFO is located in Kneehill County and is therefore subject to that county’s MDP. Kneehill County adopted the latest revision to this plan on July 18, 2017, under Bylaw #1735.

As relevant here, policy 11 of the MDP states that no new or expansions of existing confined feeding operations (CFOs) will be allowed in the following areas:

- (i) in hazard lands or environmentally sensitive lands as defined by the province,
- (ii) within 1.6 kilometres (1 mile) of any hamlet or grouped Country Residential development, or
- (iii) within 1.6 kilometres (1 mile) of an urban fringe area or an Inter-municipal Development Plan boundary

I discussed policy 11(i) of the MDP with Kneehill County’s manager of planning. She indicated that hazardous and environmentally sensitive lands are defined within the county’s geographic information system maps, not provincial legislation. She provided me with a map of the proposed CFO and surrounding lands; the W1/2 25-28-23 W4M is not identified as hazardous or environmentally sensitive land.

Britestone Colony’s proposed CFO is also not located within either of the setbacks or exclusion zones identified in policy 11(ii) or (iii).

For these reasons, I conclude that the application is consistent with the land use provisions of Kneehill County’s MDP. The county’s response, discussed in part 3 above, supports my conclusion.

In my view, under the sections for Agriculture, and for Plan Implementation and Monitoring, the MDP clearly intends to incorporate Kneehill County’s Land Use Bylaw (LUB) #1773 (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 agriculture district. CFOs are not specifically listed within the land use bylaw as permitted or discretionary use. Ordinarily, a land use that is not listed as either permitted or discretionary in a district is meant to be prohibited in that district.

However, I interpret this omission of CFOs in the agricultural district as reflecting the county’s intent not to address CFOs in its LUB (given the NRCB’s permitting role since AOPA came into

effect in 2002). This interpretation is supported by part 8.3 of NRCB's Operational Policy 2016-7: *Approvals* where CFOs are not considered to be precluded in a land use zoning district if they are not listed as a prohibited, permitted or discretionary land use. The county's response to this application does not oppose this interpretation as it defers jurisdiction over CFOs to the NRCB and AOPA.

## APPENDIX B: Determining directly affected party status

The following individual owns or resides on land within the “affected party radius,” as specified in section 5(c) of the *Agricultural Operation, Part 2 Matters Regulation* and submitted a statement of concern in response to the application:

### A. Fried

SW 30-28-23 W4M, NW 6-29-22 W4M and, SE 6-29-22 W4M

Therefore, under NRCB policy, this individual is presumed to be “directly affected” by the application. See NRCB Operational Policy 2016:7 – *Approvals*, part 6.2.

The following persons who submitted responses to the public notice either did not provide the location of their land holdings or residences, or are reported to own or reside on land outside of the affected party radius. However, they may still qualify as directly affected parties based on their “exposure to potential nuisances or risks” posed by the proposed CFO (*Board Decision (Ijtsma) RFR 2011-05/20011*, page 3):

### D. Furst

Wheatland County AB, location not specified

### L. Fyton

Swalwell AB, location not specified

### G. Perkins

SE 27-28-23 W4M

### K. & V. Bertram

SE 29-28-22 W4M

### K. Bramley

Part of SW 14-29-23 W4M

### M. Bertram

Carbon AB

### G. Piercy

NE 31-28-22 W4M

### H. & R. Furst

NW 16-28-22 W4M

### B. & M. Baldwin

NE 17-28-23 W4M

### K. & A. Merrill

Part of SE 14-29-23 W4M

### K. & C. Furst

SE 17-28-21 W4M

### R. Penner

NE 21-30-23 W4M

### K. & S. Cooper

Carbon AB

### Village of Carbon

Carbon AB

### K. & R. Chapman

SE 30-28-22 W4M

### C. Bertsch

Rockyford AB, location not specified

### S. Bertram

SW 7-29-22 W4M

### L. Bertram & C. Petersen

SW 7-29-22 W4M

### G. & S. Bertram

E1/2 5-29-22 W4M, SE 8-29-22 W4M,  
and SW 9-29-22 W4M

### R. R. Penner

SE 34-29-23 W4M

### D. & R. Stewart

Location not specified

### M. Bock

Carbon AB

Under NRCB policy, a person has the burden of demonstrating that they are directly affected by an application. In order to meet their burden of proof, the person has to demonstrate that:

- A plausible chain of causality exists between the proposed project and the effect asserted;
- The effect would probably occur;
- The effect could reasonably be expected to impact the party;
- The effect would not be trivial; and
- The effect falls within the NRCB regulatory mandate under AOPA. (NRCB Operational Policy 2016:7 – *Approvals*, part 6.3; see also *Board Decision (Ijtsma) RFR 2011-05/RA11001*, page 4.)

Some of the concerns raised by parties owning or residing on land beyond the affected party radius, or those who did not provide their residence or land holding locations, were the same as those raised by the directly affected individual. Those concerns are addressed in Appendix C.

The other concerns raised by those owning or residing on land beyond the affected party radius (and those who did not provide their residence or land holding locations) are summarized in common themes in Appendix D. The applicant's response to those concerns is also presented there. Based on my analysis and conclusions in Appendix D, I am of the opinion that none of the concerned parties who own or reside on land outside of the directly affected party radius, and those who did not provide the location of their land holdings or residences, met the requirements to be considered directly affected by this application.

## **APPENDIX C: Concerns raised by directly affected individual**

Mr. Fried raised a number of concerns in his written response to the application. His concerns are summarized below along with my analysis and conclusions on the expressed concerns. I note that the applicant's response to the statements of concern did not address these particular concerns.

### **Air quality**

Mr. Fried raised concerns related to air quality.

### **Approval officer's conclusion**

AOPA and its regulations do not specify allowable concentrations in the atmosphere for airborne substances. Further, I note that in the Alberta Health Services (AHS) response to this application, concerns were not raised related to air quality or airborne substances from the proposed CFO or need for a plan to prevent them.

Despite the above, the air quality concerns are relevant to my consideration of "effects on the community." As explained in part 6 of the decision summary, above, following NRCB policy, I presumed that the effects of the proposed CFO on the community are acceptable because the application meets the land use provisions of the municipal development plan, and the municipality does not specifically preclude CFOs from this area under its land use bylaw. As explained previously, the CFO meets the AOPA MDS requirements. MDS is a means for mitigating nuisance impacts such as air quality for neighbours from a CFO.

Despite the MDS requirement being met, it is possible that neighbouring residence(s) may experience odours and other potential airborne related nuisances from the CFO from time to time. Often, any issues that arise relating to the operation of a CFO, and other disagreements, can be resolved through good communication between neighbours and the CFO operator. However, if a member of the public has concerns regarding a CFO, including whether the operation is complying with AOPA, they may contact the NRCB through its toll free response line (1-866-383-6722). An NRCB inspector will follow up on the concern.

### **Groundwater contamination**

The statement of concern from Mr. Fried indicated that there is an already existing nitrogen groundwater contamination source from oil field related activities. This response went on to state that there were piezometers (monitoring wells) present due to this reported contamination. The response went on to state that if this CFO were to be permitted groundwater may be further impacted.

### **Approval officer's conclusion**

The NRCB is not the regulator of oil field remediation and reclamation activities, rather, the Alberta Energy Regulator (AER) is. The presence of monitoring wells is an indication that a person or persons have been directed, likely by the AER or possibly on their own motion, to understand (delineate and or monitor) any impacted soil and groundwater conditions.

As noted in this decision summary and in Technical Document RA19041, the proposed CFO's manure collection and storage facilities pose a low potential risk to groundwater when risk screened using the NRCB's environmental risk screening tool. While reviewing the application, I noted two facilities that warranted a non-typical permit condition to protect groundwater. These are the proposed layer and pullet chicken barns. These facilities are proposed to be located just outside of the AOPA required 100 m setback to water wells. To ensure that these facilities are

constructed in a location that respects the AOPA setback to water wells, I am requiring a condition to ensure that this setback is maintained for these facilities as they are constructed. Otherwise, in my opinion, I do not see need to include any other non-typical construction related conditions in the permit to protect groundwater from the proposed facilities. These permit conditions are further discussed in Appendix D, below.

Sections 24, 25, and 27 of the *Standards and Administration Regulation (SAR)* lay out the requirements for the land application of manure. In very general terms, a person cannot land apply manure so that it causes a risk to the environment, including surface water and groundwater. The regulation establishes required setbacks for manure spreading near water bodies, water wells, springs, and related features. These setbacks are often dependent on field conditions and must be assessed on a field by field basis. The regulation also includes nutrient loading limits to ensure that the soil is not overloaded with nutrients.

If a person or party has concerns regarding manure collection or storage facilities, spreading or other CFO-related issues, those concerns can be reported to the NRCB's 24 hour response line (1-866-383-6722). The call will be followed up on by an NRCB inspector. Neighbours and concerned parties can also call any NRCB office during regular business hours if they have questions about permit conditions or ongoing AOPA operational requirements.

#### **Compensation for contamination**

Mr. Fried questioned if the applicant was willing to compensate for contamination.

#### **Approval officer's conclusion**

As noted above, and in Appendix B, AOPA has requirements to prevent surface water and groundwater contamination from manure collection and storage facilities and from manure spreading. With conditions, this application meets those requirements.

#### **Location of the proposed CFO**

Mr. Fried questioned why Britestone Colony doesn't expand their existing CFO rather than construct a new one.

#### **Approval officer's conclusion:**

The applicant did not directly respond to this concern in their response to the statements of concern. Rather, they indicated that they intend to establish a new colony.

As an approval officer I can only consider the application at hand. Further, the NRCB's board members have directed approval officers to ignore cumulative effects in their permitting decisions. For example, 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." (*Board Decision (Zealand Farms), RFR 2011-02/RA10053* at 5.)

When reviewing AOPA applications, approval officers are required to review the applicable municipality's municipal development plan (MDP). Appendix A of this decision summary contains my determination that this application is consistent with Kneehill County's MDP.

#### **Quality of life for those near a CFO**

Mr. Fried questioned if anyone would like to live down wind (east) of a CFO and asked if it was fair to sacrifice the quality of life for those who are.

**Approval officer's conclusion:**

AOPA contains a requirement to address the nuisances and related matters that might affect the quality of life for those residing near a CFO. That factor is referred to as minimum distance separation (MDS). The MDS for a CFO is based on the livestock at the CFO and how the manure from the operation is to be managed along with related factors. MDS also takes into account the sensitivity of those residing near a CFO based on how their property is zoned by the local municipality. MDS does not account for wind patterns as wind directions and strength may vary hourly, daily and seasonally. Rather, MDS is measured outward in all directions from a CFO's manure collection and storage facilities.

As noted above in this decision summary, and in Technical Document RA19041, the proposed CFO meets these setback requirements.

Despite the MDS being met, it is possible that neighbouring residences may experience nuisances from the CFO from time to time that may impact their quality of life.

Often, any issues that arise relating to nuisances from the operation of a CFO can be resolved through good communication between neighbours and the CFO operator. However, if a member of the public has concerns regarding a CFO, including whether the operation is complying with AOPA, they may contact the NRCB through its toll free response line (1-866-383-6722). An NRCB inspector will follow up on the concern.

In light of the above, I am of the opinion that all of the directly affected individual's concerns are addressed.

## **APPENDIX D: Concerns raised by non-directly affected parties**

As noted in Appendix B, the concerns of the parties who are identified to not be directly affected by this application are summarized below:

### **The method of deceased livestock disposal is not stated in the application**

#### **Applicant's response:**

The current plan is to compost any deceased livestock.

#### **Approval officer's response:**

The disposal of deceased livestock in Alberta is not within the regulatory mandate of AOPA. Rather, it is regulated by Alberta Agriculture and Forestry (AF) under the *Animal Health Act*. Given AF's regulatory role, concurrent oversight of dead animal disposal by the NRCB would be inefficient and might lead to inconsistency with AF requirements.

For this reason, the concerned parties do not meet the requirements to be considered directly affected.

### **Impacts to wildlife and habitat loss**

- Is there a plan to minimize habitat loss
- Has a study been completed to consider risks to wildlife and habitat
- Noise from the CFO impacting wildlife

#### **Approval officer's response:**

Wildlife resources and the management of their habitat in Alberta are not within the regulatory mandate under AOPA. Rather, they are managed under the *Wildlife Act* by Alberta Environment and Parks. Habitat and other landscape related issues which may influence wildlife are covered under numerous other acts and regulations. For example, migratory birds are regulated in Canada under the *Migratory Birds Convention Act (MBCA)*.

It is possible that the proposed CFO could have an effect on local wildlife and their habitat. However, the concerned parties have not demonstrated in their expressed concerns how a change in wildlife or a change to wildlife habitat would reasonably be expected to impact them.

For these reasons, the concerned parties who expressed concerns related to wildlife and wildlife habitat do not meet the requirements to be considered directly affected parties.

### **Water source and demand**

- What are the water sources and demand for the CFO
- Impacts to other users of water

#### **Applicant's response:**

The applicant has applied to Alberta Environment and Parks (AEP) for a license to use groundwater for the proposed CFO. The applicant has also retained a professional geologist to evaluate if there is adequate groundwater supply for livestock and agricultural operations. Water will be tested periodically to ensure it remains safe to use.

#### **Approval officer's response:**

AEP, not the NRCB, is responsible for licencing the use of surface water and groundwater in the province. Therefore, for efficiency and to avoid inconsistent regulation, NRCB approval officers

generally do not consider water supply concerns when reviewing AOPA permit applications, other than ensuring that applicants sign one of the water licensing declarations listed in the Part 2 application form. (See also NRCB Operational Policy 2016-7: *Approvals*, part 8.10.) Britestone Colony's application includes a signed declaration indicating that they will be applying for a license under the *Water Act* independent of an AOPA permit (see page 3 of Technical Document RA19041).

An email from a representative of AEP in response to this application confirmed that an application under the *Water Act* for this proposed CFO was filed on November 6, 2019. No statements of concern were received by AEP to that application for a water license.

Further questions related to the *Water Act* should be directed to AEP. If a person has concerns related to water quality (outside of AOPA), they can contact the AEP response line at 1-800-222-6514.

Based on the above, I am of the opinion that the parties who raised concerns related to impacts to water sources and demand for the proposed CFO have not met the requirements to be considered directly affected parties.

#### **Surface water contamination**

- Surface water contamination to Kneehill Creek and its tributaries
- Impacts to livestock that consume surface water
- Is there a plan in place in event there is a leak or break

#### **Approval officer's response:**

As noted in this decision summary and in Technical Document RA19041, the proposed CFO and its manure collection and storage facilities pose a low potential risk to surface water. AOPA's *Standards and Administration Regulation (SAR)* addresses the protection of surface water and groundwater by stipulating requirements for manure spreading and the construction of manure storage facilities. This application meets the requirements for construction of new facilities.

Sections 24, 25, and 27 of the SAR lay out the requirements for the land application of manure. In very general terms, a person cannot land apply manure so that it causes a risk to the environment, including surface water and groundwater. The regulation establishes required setbacks for manure spreading near water bodies, water wells, springs, and related features. These setbacks are often dependent on field conditions and must be assessed on a field by field basis. The regulation also includes nutrient loading limits to ensure that the soil is not overloaded with nutrients.

If a person or party has concerns regarding manure storages, spreading or other CFO-related issues, those concerns can be reported to the NRCB's 24 hour complaint line (1-866-383-6722). The call will be followed up on by an NRCB inspector. Neighbours and concerned parties can also call any NRCB office during regular business hours if they have questions about permit conditions or ongoing AOPA operational requirements.

Since the concerned parties have not demonstrated how likely surface water is to be contaminated, or how likely impacted surface would impact them, I am of the opinion that they do not qualify as directly affected parties.

The parties who raised concerns related to leaks or breaks also did not demonstrate how likely a break or leak would occur or how that event would more than trivially affect them. For this

reason, the concerned parties who expressed these concerns do not meet the requirements to be considered directly affected parties.

### **Impacts from manure spreading**

- Is there a plan to deal with manure
- Odours from manure spreading
- Runoff from manure spreading
- Proposed manure spreading lands are too close to the Village of Carbon
- Will manure be injected
- Manure spreading along Highway 836
- Manure spreading resulting in health issues
- Manure spreading leading to air and water pollution

### **Applicant's response:**

The guidelines for manure handling and spreading under AOPA will be followed.

### **Approval officer's response:**

Alberta Health Services' response to this application did not raise any concerns related to manure storages or spreading, provided that it is conducted in accordance with all applicable regulations, standards, and codes of practice (AOPA), and does not result in contamination of surface water or groundwater resources, or the creation of a public health nuisance.

As noted above, there are requirements under AOPA and the SAR for manure spreading. The general rules under section 24 of the SAR are that manure, including compost, must be incorporated within 48 hour of application and manure may not be spread on land without permission. Despite this, manure does not need to be incorporated if it is spread on forage or directly seeded crops and manure may be spread (without incorporation) up to 150 metres from a residence or other structure occupied by people.

Section 24 of the SAR requires a permit applicant to satisfy an approval officer that they have access to sufficient land base to apply their manure for the first year following the granting of the application. Section 24 goes on to state that a CFO operator must have sufficient land for the spreading of manure so that the nitrate-nitrogen limits of the soil receiving manure are not exceeded.

For this application, 484 hectares of land in the brown soil zone is required for manure spreading. Britestone Colony has provided information in their application indicating that they have access to 1,400 hectares of land (in the black/brown soil group) for manure spreading. I reviewed the information available in Alberta Agriculture and Forestry's Alberta Soil Information Viewer website, and adjusted the available area for manure spreading due to setbacks to bodies of water and areas that did not appear to be suitable for manure spreading (i.e. areas that appeared to not be otherwise accessible). I also note that the Soil Information Viewer website indicated that all of the parcels of land appeared to be of the brown soil group. I identified 1,308 hectares of brown soil available for manure spreading as part of reviewing this application after setbacks to residences, proposed CFO facilities, and apparent non-farmable areas were subtracted. The application therefore meets the land base requirement in section 24 of the regulation.

All of these AOPA requirements provide protection to surface water and groundwater, and mitigate the nuisance effects of manure spreading on neighbours.

As noted previously, if a person or party has concerns regarding manure spreading or other CFO-related issues, those concerns can be reported to the NRCB's 24 hour complaint line (1-866-383-6722). The call will be followed up on by an NRCB inspector. Neighbours and concerned parties can also call any NRCB office during regular business hours if they have questions about permit conditions or ongoing AOPA operational requirements.

The concerns related to manure spreading do not indicate how the development of the proposed CFO would result in their occurrence or how the probability of them occurring. For these reasons, the concerned parties who expressed concerns related to manure spreading do not meet the requirements to be considered directly affected parties.

### **Road maintenance and changes in traffic**

- If new roads, or maintenance for existing ones are required, the CFO should have to pay for them
- Increased commercial traffic
- Highway and county road deterioration

### **Approval officer's response:**

The NRCB does not hold regulatory mandate over road maintenance or conditions. The proposed CFO is located one mile east of Highway 836 which is under the regulatory mandate of Alberta Transportation. Kneehill County has regulatory mandate over the management of the local (non-highway) roads.

Concerns related to the highway were forwarded to Alberta Transportation for their information and comment. Alberta Transportation did not raise concerns with the application. The county has not raised concerns over a potential increase in traffic or road maintenance in their response to this application. Based on this, I am of the opinion that the parties who raised concerns related to the highway or the local county roads have not meet the requirements to be considered a directly affected party.

### **Spread of diseases from livestock (cattle and poultry)**

#### **Approval officer's response:**

A statement of concern expressed concerns that there is a risk of diseases being spread to other cattle and poultry livestock from the proposed CFO. The statement of concern did not specify which diseases, or if and where the other livestock (possible disease receptors) are located.

It is possible that the proposed CFO's livestock and that possible livestock at other locations could be impacted by diseases. However, livestock disease controls are governed by the *Animal Health Act* and are monitored by Alberta Agriculture and Forestry, not by AOPA and the NRCB. (See, e.g. *Board Decision (Towle)*, RFR 2017-09 page 3.) If a party has concerns related to the transmission of livestock diseases, those concerns should be directed to Alberta Agriculture and Forestry at 310-FARM (3276).

Based on this, I am of the opinion that the parties who raised concerns related to the transmission of livestock diseases has not met the requirements to be considered a directly affected party.

### **Pollution**

- Introduction of noxious weeds

- Type not specified
- Noise and light

**Approval officer’s response:**

Noxious weeds

Approval officers are not required to consider noxious weed related concerns under AOPA applications as noxious weeds are regulated under the *Weed Control Regulation* under the *Weed Control Act*. Rules under the *Weed Control Regulation* are typically enforced by municipalities. Further to this, the concerned party has not specified how the introduction of noxious weeds due to a new CFO would directly impact them.

Unspecified pollution

The respondents who raised concerns related to unspecified pollution have not provided adequate information for me as approval officer to confirm the merits of their concerns or to further investigate. I am unable to determine if an unspecified pollution would be caused by the development of a CFO, how likely it would be to occur, how it would impact the concerned party.

Noise and light pollution

The noise and light nuisance concerns are relevant to my consideration of “effects on the community.” As explained in part 6 of the decision summary (above) following NRCB policy, I presumed that the effects of the proposed CFO on the community are acceptable because the application meets the land use provisions of the municipal development plan, and the municipality does not specifically preclude CFOs from this area under its land use bylaw. As explained previously, the CFO meets the AOPA MDS requirements. MDS is a means for mitigating nuisance impacts that neighboring residences may experience. Despite the MDS being met, it is possible that neighbouring residences may experience light and noise nuisances from the CFO from time to time.

Often, any issues that arise relating to the operation of a CFO, and other disagreements, can be resolved through good communication between neighbours and the CFO operator. However, if a member of the public has concerns regarding a CFO, including whether the operation is complying with AOPA, they may contact the NRCB through its toll free response line (1-866-383-6722). An NRCB inspector will follow up on the concern.

I am of the opinion that the parties concerned with pollution have either not indicated how the pollution effects would affect them (in a more than trivial way). For this reason, they do not meet the requirements to be considered directly affected parties.

**Application process and contents**

- The adequacy of the information in the application (berm around the concrete lined solid manure pad, berm heights not stated in application, inadequate liquid manure storage capacity)
- Failure to adequately notify the public and lack of public consultation
- Questions as to if an environmental assessment had been completed
- The potential for future applications (for a colony split, more or different livestock, residences to support CFO facilities)
- If plans are in place if there should be a failure (over flow, damage to manure collection or storage liners, etc.)

**Applicant’s response:**

We are working with an engineer and the NRCB to ensure that everything is adequately

sized. We have applied to the NRCB for all confined feeding operations and will apply for anything and everything else as required.

**Approval officer's response:**

These concerns do not relate to a claimed effect on the concerned parties. For this reason, I am of the opinion that the parties who expressed these concerns do not meet the requirement to be directly affected parties.

**Other impacts to the local area**

- Impact of proposed CFO on the future residences in the area
- Impacts to the Village of Carbon (local economy, tourism, swimming pool, camp grounds, etc.)
- Impacts to property values (lower for residential and higher for agricultural lands)
- Taxation rates
- Poor behavior (lack of colony involvement in local community, reported in-appropriate behavior, speeding, etc.)
- Increases in rural crime

**Approval Officer's response:**

Residential developments

The regulation of residential developments in Alberta is not within the regulatory mandate of AOPA. Rather, it is regulated by local municipalities.

Impacts to the Village of Carbon

It is entirely likely that the development of a CFO will have an impact on the local community and economy. What exact form those impacts will take is challenging to determine.

I note that the Village of Carbon's concerns largely relate to odours. However, the response from the village did not elaborate on how odours from the proposed CFO or its activities would more than trivially affect the village.

As noted elsewhere in this decision summary and Technical Document RA19041 the proposed CFO meets the requirements of AOPA. One of the considerations under AOPA in the application for a CFO (section 20(1)(b)(ix) of AOPA) is what the effects of the CFO development will have on the economy and community. As noted in Part 6 above, I determined that the application's effects on the economy and community are presumed to be acceptable. Under NRCB policy, this determination is based on the application's consistency with the municipal development plan. (See NRCB Operational Policy 2016-7: *Approvals*, part 8.2.)

Impacts to property values

In several review decisions, the NRCB's board members have consistently stated that concerns regarding effects on land or property values are "not a subject for [the board's] review under AOPA" or for approval officers' consideration of permit applications. According to the board, impacts on property values are a land use issue which is a "planning matter dealt with by municipalities in municipal development plans and land use bylaws." (See, *Board Decision (Pigs R Us) RFR 2017-11/BA17002*, page 6.)

Taxation rates

The NRCB is not the regulator of taxation rates, and taxation rates are not contemplated in AOPA. Municipalities and higher level governments (provincial and federal) are responsible for the establishment of taxation rates.

#### Poor behavior

Often, any issues that related to the behavior of the operator of a CFO can be resolved through good communication between concerned party and the CFO operator. However, if a member of the public has concerns regarding CFO, including whether the operation is complying with AOPA, they may contact the NRCB through its toll free response line (1-866-383-6722). An NRCB inspector will follow up on the concern.

#### Increases in rural crime

AOPA does not contemplate possible changes in crime rates, nor does it enforce or regulate such legislation. If a person observes suspicious persons or events in their community they should be in contact with the local police force.

Based on the above, I am of the opinion that the parties who raised concerns related to other impacts to the local area have not met at least one of the five requirements specified by the Board to be considered directly affected parties.

## APPENDIX E: Explanation of conditions in Approval RA19041

Approval RA19041 includes several conditions, discussed below:

### a. Groundwater protection requirements

#### i. Earthen liquid manure storage (EMS) liner

Britestone Colony proposes to construct the new EMS with a one metre thick compacted soil liner and to utilize a naturally occurring protective layer for the feedlot pens and catch basin. Section 9 of AOPA's *Standards and Administration Regulation* specifies a maximum hydraulic conductivity for these constructed liner and protective layer types to minimize leakage.

To demonstrate compliance with this standard, Britestone Colony 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.

Example:        Hydraulic conductivity = k  
                    Lab k =  $1 \times 10^{-9}$  cm/sec  
                    Expected field k =  $10 \times (1 \times 10^{-9}$  cm/sec) =  $1 \times 10^{-8}$  cm/sec

The regulations provide that the actual hydraulic conductivity of a one metre thick compacted soil liner must not be more than  $1 \times 10^{-7}$  cm/sec.

In this case, the lab measurement was  $2.9 \times 10^{-9}$  cm/sec. With the required ten-fold modification, the expected field value is  $2.9 \times 10^{-8}$  cm/sec. This expected value is below the maximum value in the regulations. Therefore, the proposed liner meets the hydraulic conductivity requirement in the regulations.

To provide additional assurance that the as-built EMS adequately protects groundwater, Approval RA19041 includes a condition requiring Britestone Colony to provide an engineer's completion report for it. The report must certify that the EMS was constructed according to the proposed procedures and design specifications including:

- that the inlet is located in the lower quarter of the facility
- that it was constructed with the same liner material as that used for hydraulic conductivity testing
- that rip-rap or an equivalent erosion mitigation measure has been installed in the area of the inlet
- the horizontal and vertical dimensions of the facility including elevations above and below grade, berm heights, and side slopes
- the location is the same as in the application
- confirm that the liner was constructed in accordance with the specifications stated in Almor's Shallow Subsoil and Groundwater Site Investigation report (042-07-19).

#### ii. Feedlot and catch basin protective layer

Britestone Colony has also measured the hydraulic conductivity of the proposed protective layer for the feedlot and catch basin by removing a relatively undisturbed soil sample during borehole drilling (using a Shelby tube) and testing the hydraulic conductivity of that sample in a lab.

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 protective layer materials and conditions that can reasonably be expected to be achieved in the field.

The regulations provide that for a catch basin, a naturally occurring protective layer must provide an equivalent protection as a five metre thick naturally occurring protective layer with a maximum hydraulic conductivity of  $1 \times 10^{-6}$  cm/sec. A naturally occurring protective layer for a feedlot pen (a solid manure collection and storage area) must be two metres thick and of the same hydraulic conductivity as a catch basin.

In this case, the lab measurement was  $1.0 \times 10^{-8}$  cm/sec. With the required ten-fold modification, the expected field value is  $1.0 \times 10^{-7}$  cm/sec. This expected value is below the maximum value in the regulations. Therefore, the proposed liner meets the hydraulic conductivity requirement in the regulations for both a catch basin and a solid manure storage and collection area.

To provide additional assurance that the as-built feedlot and catch basin adequately protects groundwater (and surface water), Approval RA19041 includes conditions requiring Britestone Colony to provide an engineer's completion report for these facilities. The report must certify that these facilities were constructed to the proposed predesign specifications including:

- the locations are the same as what was proposed
- the horizontal and vertical dimensions of the facility including elevations above and below grade, berm heights, and side slopes
- that they were constructed in accordance with all of the applicable permit conditions
- the catch basin has an energy dissipating device (erosion control) at the facility's inlet to prevent scouring and erosion damage.

### **iii. Setback to water wells**

To ensure that these facilities meet the 100 m setback requirement in AOPA from new manure collection and storage facilities to water wells, conditions will be added to the approval. The conditions will require the submission of proof that these barns' footings are located at least 100 m from existing water wells after the footings are poured and before further construction of these facilities occurs.

### **b. Surface water protection**

As noted in Technical Document RA19041, conditions are required to ensure that the proposed catch basin and concrete lined solid manure storage pad have run-on controls to protect these facilities from clean (non-manure impacted) surface water. In particular, Britestone Colony must construct structures that direct surface water away from the manure storage pad and catch basin. Accordingly, Approval RA19041 includes conditions requiring Britestone Colony to construct structures to control surface water near these facilities that directs non-manure impacted run-on away from them.

The NRCB routinely inspects newly constructed surface water control structures to assess whether they were constructed according to their required design specifications. To be effective, these inspections must occur before livestock or manure are placed in the facility requiring those surface water controls. Approval RA19041 includes conditions stating that Britestone Colony shall not place manure on the manure storage pad or allow manure impacted runoff to enter the

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

**c. Construction deadline**

Britestone Colony proposes to complete construction of the proposed new CFO facilities by November 23, 2027. This time-frame is considered to be reasonable for the proposed scope of work. The deadline of November 23, 2027 is included as a condition in Approval RA19041.

**d. Post-construction inspection and review**

The NRCB's general practice is to include conditions in new permits to ensure that the facilities are constructed according to the required design specifications. Accordingly, Approval RA19041 includes conditions requiring Britestone Colony to provide confirmation, prepared by a qualified third party, that the concrete used for the manure collection and storage areas meets the proposed specifications of being sulphate resistant, having a minimum 56-day compressive strength of 32 MPa, and having adequate sealants at joints and concrete penetrations.

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. Approval RA19041 includes conditions stating that Britestone Colony shall not place livestock or manure (including manure impacted runoff) in the manure storage or collection portions of the new facilities until NRCB personnel have inspected them following their construction and confirmed in writing that they meet the approval requirements.