

Decision Summary RA16006XB

This document summarizes my reasons for issuing Registration RA16006XB under the *Agricultural Operation Practices Act* (AOPA). Additional reasons, as well as the full application, are in Technical Document RA16006XB. All decision documents and the full application are available on the Natural Resources Conservation Board (NRCB) website at www.nrcb.ca under Confined Feeding Operations (CFO)/CFO Search. My decision is based on the act and its regulations, the policies of the NRCB, the information contained in the application, and all other materials in the application file.

1. Background

On August 11, 2016, following a Board review (Board Decision 2016-1), the NRCB issued Registration RA16006XA to Jos and Dorthy Peters (the Peters'), which permitted a new 800 dairy goat confined feeding operation (CFO). The registration also permitted the construction of a goat barn.

On June 2, 2022, the Peters' applied to amend Registration RA16006XA by deleting permit condition #4, in regards to where they can apply their manure.

Condition #4 of Registration RA16006XA states that "The permit holders shall not spread manure on land located on SW 32-47-26 W4M"

The Peters' are applying for an amendment to remove condition #4 in order to allow them to apply manure from their goat dairy CFO onto their land. The land where the Peters' are proposing to apply their manure (SW 32-47-26 W4M) is where the CFO is located.

No construction or increase in animal numbers is proposed with this application.

Condition #4 was originally included under NRCB Registration RA16006 (the original permit issued to the Peters'), as committed by the applicants to address concerns from neighbours at the time of the application.

The Peters' have indicated that their goat manure is solid, very dry, and it can be used as organic fertilizer on their Saskatoon berries and their organic *Rhodiola Rosea* herb. They also say that by being able to apply their manure on their land it will result in a big financial relief for their operation.

Under AOPA, this type of application requires an amendment to a registration.

a. Location

The existing CFO is located at SW 32-47-26 W4M in the County of Wetaskiwin, roughly 19 km west of the Millet, Alberta. The terrain where the goat barns are located is undulating with a general slope to the south and southwest. The rest of the land slopes to the north towards a wetland (known as Lake A).

2. Notices to “Affected Parties”

Under section 21 of AOPA, the NRCB notifies (or directs the applicant to notify) all parties that are “affected” by a registration 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 municipality entitled to divert water from that body within 10 miles downstream
- the municipality where the CFO is located or is to be located
- any other municipality whose boundary is within a ½ mile (805 m) from the CFO
- all persons who own or reside on land within the greater of ½ mile (805 m) or the minimum distance separation for the land on which the CFO is located

The land zoning on which the CFO is located would require a minimum distance separation of 190 metres. Therefore, the notification distance is 805 metres (½ mile). (The NRCB refers to this distance as the “affected party radius.”)

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

The NRCB gave notice of the application by public advertisement in the Pipestone Flyer on June 23, 2022. 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, 7 letters were sent to people identified by the County of Wetaskiwin as owning or residing on land within the notification distance.

3. Notice to other persons or organizations

Under NRCB policy, the NRCB may also notify persons and organizations the approval officer considers appropriate. This includes sending applications to referral agencies which have a potential regulatory interest under their respective legislation.

Referral letters and a copy of the complete application were emailed to Alberta Health Services (AHS); Alberta Environment and Parks (AEP); and Alberta Agriculture, Forestry and Rural Economic Development (AFRED).

I received a response from AHS.

Sonam Khaira, a public health inspector / executive officer, responded on behalf of AHS. They included some comments regarding the impact on water quality from manure application on the SW 32-47-26 W4M (see appendix C for more details). The AHS response concluded that the NRCB is responsible for the final decision.

4. 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.” The County of Wetaskiwin is an affected party (and directly affected) because the CFO is located within its boundaries.

Mr. Jarvis Grant, a development officer, provided a written response on behalf of the County of Wetaskiwin. Mr. Grant stated that the county has no objections with the application, as the use of the land is agricultural in nature and consistent with the operation of a CFO. Mr. Grant further indicated that the county has no bylaws regulating the spreading of manure from a CFO. The application’s consistency with the County of Wetaskiwin’s MDP is addressed in Appendix A, attached.

Apart from municipalities, an owner or occupant of land within the notification distance may request to be considered “directly affected.” The NRCB received responses from three parties. Under our policy, because they are located within the notification distance and have submitted a timely response they are presumed to be directly affected. (See NRCB Operational Policy 2016-7: Approvals, part 6.2)

The directly affected parties raised concerns regarding:

- Past non-compliance with regulations and conditions
- Groundwater quality and potential for contamination
- Surface water quality - runoff
- Storage of solid manure
- Manure spreading agreement
- Additional animals on site
- Land base for manure application
- Liner and protective layer
- Organic crops

In the response letters, the directly affected parties (DAPs) raised some concerns related to the permitting of the original goat dairy CFO (permitted under Registration RA16006XA).

It is important to highlight that this amendment application deals only with deleting a permit condition from Registration RA16006XA, whereas the previous application (RA16006) dealt with the technical requirements under AOPA. In a recent decision (see Hutterian Brethren of Murray Lake. RFR 2020-09/LA20035 at p 3), the NRCB Board stated that “When making a permit decision on a new application, approval officers do not have the jurisdiction to re-visit previously issued permits”.

Therefore, I do not have the authority to address concerns that relate to the original application and do not relate to the proposed deletion of condition #4 from Registration RA16006XA. However, solely as a courtesy to the DAPs, I will discuss the concerns raised by them.

The concerns raised are addressed in Appendix B. Conditions have been attached to the registration to address relevant issues. (See section 8, below).

5. Environmental risk screening of existing and facilities

When reviewing permit applications for an existing CFO, NRCB approval officers normally assess the CFO’s existing buildings, structures, and other facilities, using the NRCB’s environmental risk screening tool, to determine the level of risk they pose to surface water and groundwater. This tool provides for a numeric scoring of risks, which can fall within either a low,

moderate or high risk range. (A complete description of this tool is available under CFO/Guides on the NRCB website at www.nrcb.ca.) However, if those risks have previously been assessed, the approval officer will not conduct a new assessment unless site changes are identified that require a new assessment, or the assessment was done with a previous version of the risk screening tool and requires updating.

In this case, the risks posed by the Peters' CFO facilities were assessed in 2016 and 2021. According to those assessments, all of the CFO facilities posed a low risk to surface water and groundwater.

As this application is only for the amendment of a manure application condition and does not involve anything to do with already permitted facilities, the prior risk assessment results for the facilities do not change.

6. Municipal Development Plan (MDP) consistency

I have determined that the proposed amendment is consistent with the land use provisions of the County of Wetaskiwin's municipal development plan. (See Appendix A for a more detailed discussion of the county's planning requirements.)

7. Factors Considered

NRCB Operational Policy 2016-7: Approvals, part 9.4.1, provides guidance to approvals officers on how to amend or delete a condition that resulted from an applicant's previous commitments to a more stringent standard than what is in AOPA. Under that policy, I therefore considered relevant factors, such as reasons why the commitment was originally made and if they are still applicable, practical challenges in meeting the commitment, compliance by the co-permit holders, and objections by directly affected parties.

At the time of application RA16006, the applicants committed to not apply manure on their home quarter in order to address concerns from neighbours ("to please the neighbours"). In Application RA16006XB, the Peters' have indicated that their goat manure is very dry, and it can be used as organic fertilizer on their Saskatoon berries and their organic Rhodiola Rosea herb. They state that they initially fenced their land around the wetland, planted the berry bushes away from the fence, and there is a space (road) between the fence and the closest Saskatoon berries. They also say that by being able to apply their manure on their land it will result in a big financial relief for their operation.

The county has not objected to the removal of condition #4, however, most of the neighbours that expressed concerns under Application RA16006, have objected to the removal of this condition. To address some of these concerns, and to reinforce the requirements under AOPA and its regulations to the Peters, I have included conditions in the registration requiring the co-permit holders to maintain record of manure application, to properly follow the short term solid manure storage regulation, and prohibiting them to apply manure within 60 m of the common body of water; which is a greater setback than required by the regulation, according to the slope of the land.

To date, the Peters' have followed condition #4 and have not applied manure on their home quarter; however, the condition has become impractical or unfair to the co-permit holders. They have now requested to amend and remove the condition so they can use their own organic manure and apply it on their organic herbs and berries, that way reducing cost of fertilizer and transportation.

On balance, having considered the relevant factors, and in particular given the specific rules about manure spreading in AOPA's regulations, the Peters' have shown why condition #4 should be deleted. Additionally, the terms and conditions summarized in section 8 include all of the terms and conditions from Registration RA16006XA, with the exception of condition #4.

8. Terms and Conditions

Rather than issuing a separate "amendment" to Registration RA16006XA, I am issuing a new Registration (RA16006XB) which includes that amendment. Registration RA16006XB therefore contains all of the terms and conditions in RA16006XA, with the exception of condition #4. Construction conditions from historical Registration RA16006XA that have been met are identified in the appendix to Registration RA16006XB.

In addition to the terms and conditions described above, Registration RA16006XB includes conditions that generally address manure application records, prohibiting the manure application within 60 m of the common body of water, and stipulates the short-term solid manure storage regulation which must be followed (see Appendix B).

For clarity, and pursuant to NRCB policy, I consolidated Authorization RA21018 (issued on November 5, 2021) with Registration RA16006XB (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.

9. Conclusion

Registration RA16006XB is issued, for the reasons provided above and in Technical Document RA16006XB.

Registration RA16006XA and Authorization RA21018 are therefore superseded and their content consolidated into Registration RA16006XB, unless Registration RA16006XB is held invalid following a review and decision by the NRCB's board members or by a court, in which case the previous permits will remain in effect.

October 31, 2022

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

Appendices:

- A. Consistency with the municipal development plan
- B. Concerns raised by directly affected parties
- C. Response from AHS.

APPENDIX A: Consistency with the municipal development plan

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

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

Conversely, “land use provisions” do not call for discretionary judgements relating to the acceptability of a given confined feeding operation (CFO) development. Similarly, section 22(2.1) of the act precludes approval officers from considering MDP provisions “respecting tests or conditions related to the construction of or the site” of a CFO or manure storage facility, or regarding the land application of manure. (These types of MDP provisions are commonly referred to as MDP “tests or conditions.” “Land use provisions” also do not impose procedural requirements on the NRCB. (See NRCB Operational Policy 2016-7: Approvals, part 8.2.5.)

The Peters’ CFO is located in Wetaskiwin County and is therefore subject to that county’s MDP. Wetaskiwin County adopted the latest revision to this plan in 2020 under Bylaw 2020/58.

As relevant here, Objective 1.4 of the MDP aims to “minimiz[e] ... land use conflict” between CFOs and “surrounding land uses.” Following this statement, the MDP notes that, while CFOs are under provincial jurisdiction, it is the county’s intent to “minimiz[e]” the “negative effect” of CFOs. The MDP also reports the county’s view that, the *Municipal Government Act* “requires” the county to identify where new CFOs may be located.

These statements are likely not “land use provisions” by themselves, but they provide context for considering five policies listed under Objective 1.4.

The first of five policies in Objective 1.4 states that the “minimum distance setback of Alberta Agriculture Code of Practice, as amended, should be maintained.”

The already permitted CFO met the MDS requirements under AOPA to all surrounding residences at the time of the application in 2016. The current application is to amend a permit condition.

The second policy in objective 1.4 does not apply to this application as it relates to “intensive livestock operations” that are still permitted by the county.

The third policy lists setbacks for new CFOs. This application is to amend a permit condition on an existing CFO.

Neither of the two remaining policies under Objective 1.4 apply to this application as 1.4.4 and 1.4.5 relate to the siting of new residences in the county and those near the Millet-Wetaskiwin Acreage Study Area. This application is to amend a permit condition, not a residence and these sections are not applicable to this application.

Additionally, section 22(2.1) of the act precludes me from considering MDP provisions regarding the land application of manure, which is the subject being considered and assessed under this application.

APPENDIX B: Concerns raised by directly affected parties

The following individuals qualify for directly affected party status because they submitted a timely response to the application and they own or reside on land within the “affected party radius,” as specified in section 5(c) of the Agricultural Operation, Part 2 Matters Regulation (See NRCB Operational Policy 2016:7 – Approvals, part 6.2.)

Scott and Sylvia Middleton

NE 31-47-26 W4

Reg and Cathy Minchau

SE 32-47-26 W4

Kim and Kirk Taylor

NE 32-47-26 W4

The directly affected parties (DAPs) raised the following concerns which are listed and summarized below, together with my analysis and conclusions:

- 1. Past non-compliance with regulations and conditions** – DAPs have indicated that the applicants have been unable or unwilling to follow government regulations, imposed conditions, and agreements to operate their CFO. Based on this experience there is low expectations that they will comply with the manure spreading regulations, or any other required conditions. The applicants have not followed waste management practices (illegal manure storage, did not follow conditions nor they were monitored or enforced). They have breached the county’s fire bans (illegal burning), AOPA, and conditions under the NRCB permit.

Approval officer’s response:

AOPA has strict and specific regulations for manure application with respect to setbacks to water bodies, water wells, and neighbouring residences. The Standards and Administration Regulation under AOPA also requires operators to follow the requirements for short term solid manure storage sites (an accumulated total of not more of 7 months over a period of 3 years).

The co-permit holders must adhere to all applicable requirements in AOPA and its regulations.

The NRCB has received three non-compliance complaints about the Peters since 2016. The complaints were related to an unauthorized construction, illegal stockpile of manure, algae in the water, and burning of a manure pile. The NRCB has responded to all of these complaints, and they have all been adequately resolved by the compliance department of the NRCB.

The Peters’ applied for an authorization to permit the unauthorized pole shed reported in one of the complaints. The NRCB issued Authorization RA21018 for a pole shed.

To address some of these concerns, conditions will be included in the registration requiring the co-permit holders to maintain record of manure application, and to properly follow the short-term solid manure storage regulation. These requirements already bind the applicants as they are set out in Sections 5 and 28 of the Standards and

Administration Regulation, but they will be repeated in a condition to bring the regulations closely to the applicants' attention.

AOPA has no jurisdiction over municipalities' fire bans and regulations.

Incidents of non-compliance can be reported to the NRCB's 24 hour complaint line: 1-866-383-6722. NRCB inspectors respond to all complaints.

2. **Groundwater quality and potential for contamination** – Some of the responses stated concerns related to the contamination risk to critical groundwater and water well structures, which, if contaminated are irreversible. The respondents indicated that allowing manure spreading on SW 32-47-26 W4 puts the groundwater at even greater risk of contamination. An engineering report, part of a previous application, stated that the general slope is to the north, and the upper groundwater flow direction is predicted to be to the northwest, towards Wizard Lake. Manure contaminants have already been spread into the groundwater for several years. Allowing manure spreading will only increase the contamination to the groundwater than the current requirement to truck it off site.

Approval officer's response:

Regulations under AOPA set nutrient application limits to prevent the soils from being overloaded with nitrogen and to minimize the potential for groundwater to be contaminated by manure. AOPA also requires soils on farmland to which manure is applied, must have been tested for salts and nitrogen within the last three years. These records must be available for inspection by the NRCB. In addition, AOPA has strict regulations for manure application with respect to setbacks to water wells and neighbouring residences.

The co-permit holders must adhere to all applicable manure spreading requirements in AOPA and its regulations.

To address some of these concerns a condition will be included in the registration requiring the co-permit holders to maintain record of manure application according to Section 28 of the Standards and Administration Regulation.

AHS addressed this concern by indicating that the soil lithology of the water well on the application site shows there is low risk for microbial contamination of the groundwater based on retention time. AHS is not aware of any instances of chemical contamination of the drinking water well associated with animal manure or agricultural operations of this site.

3. **Surface water quality (runoff)** – All the respondents were very concerned that allowing manure spreading on SW 32-47-26 W4 puts the Crown's wetlands at even greater risk of contamination. One respondent indicated that runoff from a manure pile fire led to contamination of the adjacent surface water (wetland). A couple of the letters claimed that part of the Peters' land, where some of the Saskatoon berries are planted, is owned by the Crown (wetland) making it an even higher concern concerning potential for contamination. Runoff water from the north ditch of Hwy 616 drains north-westerly down through the Peters' land where Saskatoon bushes are planted draining into the wetland. No manure can be spread on land with natural drainage into a wetland. An engineering report (part of a previous application) stated that the general slope is to the north, and surface water

flow is predicted to be in this direction. The “flow direction” is through the wetlands and neighbouring properties. Manure contaminants have already been spreading into the wetlands for several years. Allowing manure spreading will only increase the contamination to the wetlands than the current requirement to truck it off site.

Approval officer’s response:

Sections 24(10)(a), (b) and (c) of the Standards and Administration Regulation, Alberta Regulation 267/2001, define the setbacks for manure application based on the slope of the terrain to common bodies of water. To reinforce Sections 24 and 28 of the Standards and Administration Regulation, conditions will be included in the registration requiring the co-permit holders to maintain records relating to manure production and application and prohibiting them to apply manure within 60 m of the common body of water.

On October 7, 2022, the applicant addressed some of the concerns from the DAP. Ms. Peters stated that they have not planted Saskatoon berries on Crown land. More than 20 years ago they fenced their land around the wetland. She said they planted the berry bushes away from the fence, and there is a space (road) between the fence and the closest Saskatoon berries.

AHS indicated in their letter addressing this concern that as the site produces only solid manure, there will be less potential for offsite migration with surface application during the spreading process.

- 4. Storage of solid manure and liner and protective layer** – Most of the DAP indicated that manure has been stockpiled behind the barns and left for extended periods of time (for the past number of years), and without apparent composting practices. The respondents indicated that the applicants also have young goats in an additional shed, which means “more goats in more barns create more manure”. An engineering report, part of a previous application, stated in part that the naturally occurring material beneath the proposed compost pad (where manure has been stockpiled) does not meet the requirements for a natural barrier, and therefore a compacted clay or synthetic liner is recommended. Some of the DAPs suggested that as this recommendation has not been followed, manure contaminants have already been leaching into the soil and the wetlands, in violation of conditions.

Approval officer’s response:

The Peters’ do not have a permit for a stand alone solid manure storage facility (MSF). In 2021 an engineer tested the soils in the area of a proposed solid MSF; however, as the engineer’s report indicated, the naturally occurring material in the area did not meet the requirements for a natural barrier, therefore; the applicant did not apply for a permit for the MSF.

The Peters’ indicated that, instead, they use short-term solid manure storage as part of their manure storage and handling plan for their CFO.

Section 5 of the Standards and Administration Regulation specifies that a person who stores solid manure, composting material or compost for a short term is not the owner or operator of a manure storage facility because of that storage. Short-term solid manure storage does not require a permit. AOPA and its regulations have requirements that govern the storage of manure, including short-term solid manure storage. These regulations require operators to follow the requirements for short-term solid manure

storage sites (an accumulated total of not more of 7 months over a period of 3 years). The co-permit holders are reminded to be aware of all regulations pertaining to manure storage, and must demonstrate that they are able to meet them.

A condition will be included in the registration requiring the co-permit holders to properly follow the short-term solid manure storage regulation according to Section 5 of the Standards and Administration Regulation.

If a member of the public has concerns regarding a CFO's manure storage, they are invited to phone the NRCB toll free reporting line 1-866-383-6722. An NRCB inspector will respond.

- 5. Manure spreading, agreements, and land base for manure application** – Some of the DAPs indicated that the Peters' previous application (RA16006) included an agreement of purchase contract for the annual spring and fall manure removal. The Peters' broke this 'manure removal contract'. Another concern by a respondent was that the Peters' have a limited land base of only 114.03 assessed acres on the SW 32-47-26-W4. A common theme amongst the DAPs is that in application RA16006XA, the Peters' committed that they would not apply manure from their CFO on the SW 32-47-26-W4 to address concerns of potential contamination.

One of the DAPs indicated that the Peters' have not provided how they intend to apply the manure to their berries and Rhodiola.

Approval officer's response:

At the time of application RA16006, Section 24 of the Standards and Administration requires an applicant to demonstrate that they have access to sufficient land base to utilize their manure for the first year, following the granting of the application.

Decision Summary RA16006 stated that the proposal for 800 dairy goats (plus replacement animals) required 50 acres of land in the black soil zone for manure spreading. At that time, the applicants had secured 150 acres of land for manure spreading. The applicant demonstrated at the time of the application that these manure spreading lands were available, including a signed manure spreading agreement.

At the time of the current application (RA16006XB), the Peters' indicate that they own 100 acres of land available for manure application on their home quarter (SW 32-47-26 W4M). Additionally, they own 75 acres of cultivated land and 55 acres of pasture land (with a creek in the middle) on another piece of land in the area.

Manure spreading lands, as well as manure spreading agreements, may change over time and the operator must keep records to show where their manure has been spread or transferred.

Regarding the previous commitment by the co-permit holders to not apply manure on their home quarter, the Peters' have requested to amend and remove the condition included in the previous NRCB permit which prohibited them from applying manure on the SW 32-47-26 W4M. This request is the subject being considered and assessed under this application.

AOPA does not prescribe the method and equipment used for manure application to the land; however, on September 19, 2022, the applicant addressed some concerns in an

email (this email can be found on page 8 of 13 of TD RA16006XB). Ms. Peters included the following regarding application of manure to the berries and Rhodiola:

Manure can be added to the foot of the berry bushes in a healthy amount with different equipment, such as:

- a manure spreader without the spreader, but a side spout.
- a bucket with an auger on the side like the one for sawdust (with adjustments).

Ms. Peters also included a couple of photos of a manure spreader that can be used.

- 6. Additional animals on site** – A couple of the parties reported that the Peters' have young goats in an additional shed plus exercise pen/shelter areas, which results in "more goats in more barns" generating more manure.

Approval officer's conclusions

Registration RA16006XA allows a CFO with 800 dairy goats (plus replacement animals). The permit holders are not allowed to house more animals without obtaining another permit through an application.

The Peters' applied for an authorization in 2021 to permit additional housing for the existing replacement animals, included in Registration RA16006XA. The NRCB issued Authorization RA21018 for a pole shed. The authorization was only for a pole shed (barn), and not for additional animals; and therefore, the CFO is not generating more manure.

- 7. Organic crops** – One of the respondents questioned the Peters' need for chemical fertilizers and the resulting cost, since the Peters' would not be using such chemicals if they are growing "organic" Rhodiola. Spreading the manure wouldn't make a substantial financial difference.

Approval officer's conclusions

AOPA does not prescribe if a proposed change to a permit condition must be financially beneficial to the applicant.

On October 7, 2022, the applicants addressed this concern. Ms. Peters stated that the Rhodiola herb is organic certified; and therefore, they are only allowed to use organic fertilizers. They have been using an "organic foliar fertilizer spray", which they apply to the leaves of the herb.

The Peters' organic certifier has identified that the proposed matured (composted) goat manure, would meet the organic certification; and therefore, it could be used as an alternative organic nutrient amendment.

Ms. Peters stated that the prospect of using their goat manure would certainly reduce their financial burden.

- 8. Fire (burning of manure pile)** – Some of the DAPs expressed concern about the applicants burning a manure pile, which was stockpiled over the years. The fire put properties at risk, as well as causing smoke damage to homes and livestock feed.

Approval officer's conclusions

A complaint about this concern was received by the NRCB on June 29, 2021. The NRCB compliance department responded to this complaint, and it has been adequately resolved.

The applicant indicated at the time of the complaint that the pile on fire was not manure, but hay and feed rejected by the goats. Burning manure piles is not an appropriate way of disposing of manure.

APPENDIX C: Response from Alberta Health Services (AHS)

This application was referred to AHS as a courtesy and for their information as the referral agency may have a regulatory interest. Under AOPA referral agencies are not considered affected parties or directly affect parties for registration applications.

An AHS public health inspector / executive officer, responded on behalf of AHS and addressed some of the concerns regarding the impact on water quality from manure spreading.

Some of the conclusions of the letter include:

- As the Peters' farm is a goat dairy operation there would only be solid manure. The health concerns associated with volatile organic compounds, H₂S and methane are primarily of concern for occupational exposures. Solid manure has less potential for offsite migration with surface application during the spreading process.
- Soil lithology of the water well on the application site shows there is low risk for microbial contamination of the groundwater based on retention time. Retention time is how long it would take water from the ground's surface to reach the drinking water aquifer.
- AHS is not aware of any instances of chemical contamination of the drinking water wells associated with animal manure or agricultural operations of this site.

The complete letter is attached to Technical Document RA16006XB (page 12 of 13).