



Agricultural Operation Practices Act

Board Decision 04-05

**Erik Meinders and Meinders Farm
NRCB Application FA02001**

**Review Hearing
Grande Prairie, Alberta
May 31, June 1, 2, 3, 4, 29 & 30, 2004**

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1. INTRODUCTION

On April 19, 2002, Erik Meinders and Meinders Farm filed an application with the Natural Resources Conservation Board (NRCB or Board) for an Approval to construct and operate a 1200 sow farrow to wean facility, located at SW ¼ Section 3-73-7-W6 in the County of Grande Prairie No. 1 (County).

Mr. Vince Murray, an NRCB Approval Officer, denied the application in Decision Report FA02011 issued on January 16, 2004. Decision Report FA02011 stated that the proposed operation did not meet the requirements of the *Standards and Administration Regulation* passed pursuant to the *Agricultural Operation Practices Act (AOPA)* because it was not consistent with the Municipal Development Plan (MDP) of the County and the proposed compacted clay liner for the manure storage facility did not meet the requirements with respect to hydraulic conductivity.

Based on the deadlines established within *AOPA*, Decision Report FA02011 specified February 6, 2004 as the closing date for directly affected parties to submit a Request for Board Review of the Approval Officer's decision. Subsequently, the Board received Requests for Board Review from Erik Meinders and Meinders Farm; the County of Grande Prairie; Bear Lake Area Farmers and Residents (BLAFR); Gary Dixon; Mary Hanson; Douglas and Jean Thornton; Maureen Crerar; Mike and Florence Griko; Jim and Deb Polasek; Dennis and Alice Leggatt; Ed Bergen (Bear Lake Bible Camp); Randy Gorrie; Alec and Isabel Gorrie; Desmond Brown; and Jean Polasek.

On February 11, 2004, the Board met to consider the Requests for Board Review and decided that a review was warranted. A Division of the Board was established to determine whether the Approval Officer's decision should be confirmed, varied, amended, or rescinded. Dr. Gordon Atkins (Chair), Ms. Sheila Leggett, and Mr. Wayne Inkpen were designated as the Division of the Board for this review.

On March 15, 2004, the Board held a Pre-Hearing Meeting in Grande Prairie to address preliminary and procedural matters in order to streamline the hearing process. On March 30, 2004, the Board issued a *Pre-Hearing Meeting Report*, which identified the issues for review, submission deadlines, and the Board's decision respecting parties with standing to participate at the review.

The Board review took place in Grande Prairie over a period of seven hearing days: May 31, June 1, 2, 3, 4, 29 and 30, 2004. During the course of the review, the Board also conducted two site visits. This report briefly highlights the positions of the parties to the review and provides the Board's decision following the review of Application FA02011.

2. APPEARANCES

The following list identifies participants in the hearing:

Participant:

Representative:

NRCB Approvals & Technical support

- Vince Murray
 - Jim Fujikawa
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Bill Kennedy, Counsel

Erik Meinders and Meinders Farm

- Erik Meinders, Applicant
 - Elston Solberg
 - Rob Saik
 - Ron Ackroyd
 - Pat Maloney
 - Tom Dance
 - Mike Harbour
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Keith Wilson, Counsel

County of Grande Prairie No. 1

- Richard Harpe
 - John Simpson
 - Russell Bardak
 - Alan McCann
 - Ted Harrison
 - Cheryl Schindel
 - Dave Gourlay
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Bill Barclay, Counsel

Bear Lake Area Farmers and Residents (BLAFR) and Bear Lake Canuck Historical Society

- Garry Coy
- Douglas and Jean Thornton
- Phil and Maureen Crerar
- Harry Rowney
- Gary Dixon
- Arnie Meyer
- Florence Griko
- Dennis and Alice Leggatt
- Des Brown
- Alec Gorrie

Darryl Carter, Counsel
Jordan Crerar, Counsel

Bear Lake Bible Camp

- Walter McNaughton
 - Wendell Rice
 - Edward Bergen
 - Len Siebert
-

Wilf Tolway

Wilf Tolway

In addition, the Board was assisted by legal counsel: Kurt Stilwell (Counsel) and technical experts: Richard Stein (Senior Hydrogeologist), Ken Kelly (Municipal Planner), and David Chanasyk (Hydrologist). Additional staff support was provided by Rachel Stein (Review Officer) and Susan Schlemko (Manager, Board Reviews).

3. VIEWS OF THE PARTICIPATING PARTIES

Parties to the review provided a great deal of testimony and documentary evidence in support of their various positions. This portion of the Decision Report is meant to provide an overview of parties' positions with respect to the issues set for review; however, it does not purport to be inclusive of all of the testimony, opinions, and evidence advanced at the hearing.

Approval Officer and Technical Support

Mr. Vince Murray attended the hearing to advise of his considerations and steps taken in reaching his decision (Decision Report FA02011) to deny Mr. Meinders' application. Mr. Jim Fujikawa, NRCB Senior Soil Specialist, provided advice to the Approval Officer with respect to the application, and subsequently attended the hearing to explain the advice he provided in the technical review reports he prepared for the Approval Officer's consideration (Exhibit 6). Counsel for the Approval Officer further identified that the Approval Officer's participation at the review was limited in scope to the decision he reached which formed the basis for the review. The Approval Officer took no position with respect to an outcome of the Board review.

In Decision Report FA02011, the Approval Officer stated that he denied the application for two reasons. First, he determined the proposed facility was inconsistent with the Municipal Development Plan (MDP). Secondly, it did not meet the requirements of the regulations, in that the hydraulic conductivity of the proposed clay liner for the earthen manure storage did not provide the same or greater protection as required in the regulations.

In considering the application's consistency with the MDP, the Approval Officer submitted that he relied upon the County's advice with respect to its interpretation of the MDP. The Approval Officer advised his decision was based on the MDP amended February 20, 2001 ("old MDP"), rather than the current MDP amended January 5, 2004 ("amended MDP"). However, following a cursory review of the County's amended MDP, the Approval Officer agreed with the County's view that the application was inconsistent with this MDP.

With respect to the availability of water for the proposed facility, the Approval Officer advised that he relied on the advice of Alberta Environment (AENV) and believed that there would be an adequate water supply for the proposed operation. He stated that AENV had indicated it was prepared to issue a water license for the facility, having determined that the aquifer had sufficient capacity to support the current users and the proposed operation. To support this submission, he provided AENV's November 6, 2003 correspondence (Exhibit 7), which advised that it was prepared to issue the license if the application were approved and that:

“...review of the technical report submitted in support of the application shows that the well is capable of producing the requested volume of water (12,775 cubic metres per

annum) on a sustainable basis and it is anticipated that pumping this well will have very little to no impact on surrounding water well users or surface water bodies.”

In response to concerns raised that there was a discrepancy regarding the water requirements identified in the application compared to the actual water license application filed with AENV (the water license application asked for less water than was identified in the *AOPA* application), the Approval Officer advised that he did not take issue with this discrepancy, as he believed that management practices could easily account for up to a 20% variance. He further noted that if the operation required more water than the volume allocated in a licence, the operator would need to apply to AENV for a licence for the additional volume.

One of the reasons the Approval Officer denied the application was because it did not demonstrate that the materials to be used for the earthen manure storage (EMS) facility were sufficient to meet the hydraulic conductivity requirements of Section 9 of the *Standards and Administration Regulation*. At the hearing, the Approval Officer advised that following his review of the supplemental EBA Engineering report (submitted after Decision Report FA02011 was issued), he believed the soils would be suitable to adequately meet *AOPA*'s requirements for a compacted clay liner. He further agreed that had he received the supplemental EBA report prior to issuing his decision, this issue would not have been a reason for denying the application. The Approval Officer described his considerations in determining that there was a sufficient land base for spreading and incorporating manure, as required by the *Standards and Administration Regulation*. In Decision Report FA02011, he identified that a land base of 1400 acres was available for the facility, while 506 acres would meet the *AOPA* requirement. However, he identified two issues with respect to the land base: limitations of solonchic soils and the distance between the facility and some of the available spreading lands.

In his decision report and at the review, the Approval Officer reported that soil limitations existed at the proposed site. He identified that requiring a manure management plan (MMP) as a condition would be appropriate, were an Approval to be granted, and that such a plan should include a detailed assessment of the lands to be used. The Approval Officer further identified that an MMP should include:

“a detailed soil survey to identify the areas with solonchic soil and the characteristics of those soils, proposed manure application rates, timing of manure application, setbacks from common bodies of water etc. in addition to the other records required in the regulations.”

He also stated that an MMP should address runoff concerns and that the method of incorporation should minimize these concerns.

The Approval Officer advised that it was his interpretation that the standards in *AOPA* regarding requirements for manure spreading lands refer to a one time application for a three year period. He also submitted that the tables provided in *AOPA* are based on a one time application of manure on “average soils” with an “average crop”. He identified that for the Meinder's application, this referred to an “average barley crop on an average grey wooded soil.” He submitted his belief that the intent of the legislation was that after the first manure application, an operator would develop a nutrient management plan to address *AOPA*'s requirements. At the review, he indicated that although an MMP would be appropriate, he was not satisfied that the

identified lands would be sufficient to handle the manure produced by the facility after a full year of operation, and he was unable to quantify the sustainability of manure spreading on the proposed lands. He submitted that if an Approval were granted with conditions, the operation should not be populated until an MMP was submitted and approved. In his testimony, the Approval Officer advised that the Applicant had not yet provided sufficient information to constitute an MMP.

The Approval Officer also identified concerns with using the direct injection method for manure incorporation on the solonchic lands, stating that if the ground was dry and hard, it would be difficult to successfully employ this method. In Decision Report FA02011, the Approval Officer determined:

“Direct injection of the manure into the solonchic soils may not be possible and proper incorporation may be difficult to achieve on the proposed solonchic land base. If manure application does not occur under the right conditions, the manure and/or soil will be at risk during runoff. The method of application meets the requirements of the regulations but if the conditions are not suitable, manure application by direct injection or incorporation could result in a risk to the environment and a resulting enforcement action by the NRCB. If approved, the method of manure application will be included in the manure management plan provided to the NRCB.”

The Approval Officer also expressed some concern with the distance between the proposed facility and some of the spreading lands. He suggested that an operator’s costs would tend to increase in relation to the distance manure needs to be hauled, and this could be a deterrent for an operator utilizing the more distant spreading lands.

In his testimony, Mr. Jim Fujikawa provided an overview of the physical and chemical properties of the soils adjacent to the proposed facility and described how those properties could relate to manure application. He described that he had accessed the Agricultural Region of Alberta Soil Inventory Database (AGRASID) for information on soil classifications for the proposed manure spreading lands, and advised that the home quarters are all classified as either Rycroft or Kleskun. He reported that the presence of salts, particularly sodium, in these soils presented limitations to conventional agronomic practices. He also identified challenges with respect to incorporation and injection of manure and concerns regarding possible movement of excess salts or nutrients depending on manure application practices.

The NRCB’s Senior Soil Specialist expanded on his advice to the Approval Officer as submitted in Exhibit 6. This Exhibit includes his June 20, 2002 letter to the Approval Officer and a report dated December 12, 2003: “*Technical Review of Nutrient Management Plan: Soils*”. This report identified his findings following his review of the application and additional materials provided by consultants for both the Applicant (E. Solberg) and the BLAFR (G. Coy).

In his report, he discussed the physical and chemical properties of the Solonchic soils that were identified for manure spreading, noting:

“The specific properties of the Rycroft and, in particular, the Kleskun series of Solonchic soils adversely affect agronomic practices and productivity.”

He also stated:

“these soils exhibit poor internal drainage and poor soil structure, especially when wet. Consequently, these soils also pose limitations to conventional agronomic practices followed in the land application of manure. Site-specific Solonetzic (sic) soil characteristics may necessitate restricting manure application rates and manure application frequency to ensure manure constituents, especially salts, neither accumulate in the receiving soils nor migrate off-site.”

In recommendations to the Approval Officer he reported that, “Long-term swine manure application on saline-sodic affected Solonetzic soils such as the Kleskun series is not sustainable.”

Notwithstanding concerns with respect to soil limitations and the distance between the proposed facility and some of the spreading lands, the Approval Officer determined in Decision Report FA02011 that there was a sufficient land base to meet the requirements of the regulations. He stated his belief that the issues regarding soil limitations could be addressed through adopting an MMP.

With respect to economic effects of the project, in Decision Report FA02011, the Approval Officer stated that the County was concerned the proposed operation would impact growth in the Clairmont area. He also stated that:

“At the same time, the development of CFO’s in Alberta has been and continues to generate economic growth. Detailed projections of the economic effects associated with this project can only be assessed in general terms.”

He determined that since he found the application was inconsistent with the MDP and he would therefore be required to deny it, further assessment of the economic or community effects was not necessary.

At the review, the Approval Officer discussed his considerations with respect to odour impacts as identified in parties’ Statements of Concern (particularly odours at Bear Lake). He identified that the minimum distance separation from the proposed facility was greater than required for all of the neighbouring residences. The Approval Officer identified that the odours could be expected to vary depending on activities taking place at the site (manure spreading, lagoon agitation, etc.) and dependent on other factors including the method of application, and wind and weather conditions. However, he stated his belief that the expected odours would be acceptable according to AOPA. In Decision Report FA02011, the Approval Officer also noted that “Manure application must be done in accordance with the *Standards and Administration Regulation* and may not cause an inappropriate disturbance.” He also advised that the application proposed mitigative measures for odour production, such as including a cover for the liquid manure storage, using canola oil for dust control in the barn, and applying manure through direct injection.

In dealing with the traffic impact assessment, the Approval Officer identified that traffic concerns were raised and considered in processing the application. He advised that the traffic concerns were forwarded to the Applicant, who then provided a basic traffic impact assessment

which was also delivered to the County. With respect to expected traffic, the Approval Officer suggested that he expected travel impacts (types of vehicles and road usage) would be similar to that generally used for an average grain farm operation, except for during the construction phase of the project. He also advised that if an Approval were issued, he would expect the Applicant to deal directly with the County to reach a road use agreement.

Applicant (Erik Meinders / Meinders Farm)

On the issue of the appropriate MDP for the Board's consideration, the Applicant submitted that the Board should consider the MDP that was in place at the time the Approval Officer issued his decision report, namely MDP Bylaw 2360, amended January 5, 2004. The Applicant contended that the proposed project was consistent with this MDP in all respects, except that it did not meet the buffer requirement for the two mile radius around the Bear Lake municipal recreation area. The Applicant proposed that the Board should exercise its discretion under Section 25(4)(g) of *AOPA* to address this issue, noting that this section states that the Board must have regard for, but is not bound by, the MDP. The Applicant also advanced several arguments to support its position that the Board should approve the proposed project despite the restrictions imposed by the MDP.

The Applicant relied upon advice from Ms. Patricia Maloney, an expert planner, who reviewed the County's land use documents and submitted that the proposed facility was both appropriate for the area and compatible with the area's existing development.

The Applicant also suggested that the proposed project could be permitted as a discretionary use. Ms. Maloney (EBA Engineering Consultants Ltd.) submitted:

“...the appropriate approach for the NRCB to take in this situation is to assess the proposed CFO in the same manner that a municipality would assess a discretionary use application. When faced with a discretionary use application, a municipality will assess the compatibility of the proposed project with the existing adjoining uses and the unique characteristics of the application. Compatibility is a function of impacts. If impacts are minimal, then there is compatibility. Conversely, if the impacts of the proposed use will be significantly adverse to the existing uses, then the proposed use is not compatible and would not receive a discretionary use approval. Another option for discretionary use is approval with conditions to mitigate the potential adverse impacts.”

The Applicant advanced the view that the proposed operation's use of the lands for livestock production would be “...consistent with the general land use planning statements and vision principles set out in the MDP.” In addition the Applicant believed that most of the inconsistencies between the proposed project and the MDP were related to the County's technical standards, and that the requirements of *AOPA* rather than the requirements of the MDP provided the overriding legislation that the operation was required to meet. The Applicant submitted that the MDP's technical standards were inconsistent with *AOPA*'s regulations.

The Applicant argued that:

“...the foundation of the County's MDP restrictions on CFOs are fundamentally flawed, arbitrary, and implemented for the improper purpose of stopping the Meinders' project.”

The Applicant submitted that the amendments to the MDP imposed an excessive setback for the Bear Lake recreation area and that the County had not provided a “credible rationale” for what the Applicant considered to be “many extraordinary restrictions in its MDP.” In summary, the Applicant suggested that the Board should carefully assess the proposed project in the context of the adjoining land uses and override the MDP pursuant to Section 25(4)(g) of *AOPA*.

With respect to water related concerns, the Applicant provided assurances that the proposed operation would only use the volume of water as applied for, and reported that the water consumption for the operation would be monitored by a flow meter, the results of which would be forwarded to AENV. Further, the Applicant reported that the site currently has one well and that there are no plans to drill additional wells at this time.

The Applicant retained EBA Engineering Consultants Ltd. to assist in establishing that an adequate water supply existed for the proposed operation. EBA reported its findings that the pump test results demonstrated that a suitable safe yield was available to satisfy the requirements for the proposed operation.

The Applicant further submitted that the regulation of water in Alberta rests with AENV under the *Water Act*. The Applicant expressed disappointment that AENV chose not to participate in the hearing process and suggested that despite the NRCB’s review process, parties opposed to the project would not be precluded from appealing any decision issued by AENV, respecting the water license, through the Environmental Appeals Board.

The Applicant contended that existing water users’ rights would be protected under the *Water Act* and by AENV’s operational practices. During the hearing, the Applicant briefly described the priority scheme set out in the *Water Act* to protect licensees. The Applicant described the “first in time, first in right” provisions in which neighbours with licences automatically have priority with respect to water, and further explained that household users would have priority, if any licenced user interfered with a household user’s water rights.

In dealing with the adequacy of the materials proposed for the EMS liner, the Applicant indicated that the additional geotechnical testing and evaluation demonstrated that the materials proposed for the manure storage facility would satisfy the soil parameters required to meet the *Standards and Administration Regulation*. In support of this assertion, the Applicant submitted EBA’s May 2004 Report, “*Geotechnical Evaluation: Proposed Meinders Farm Hog Operation.*”

The Applicant provided reports to support the position that the land base was sufficient to accept and incorporate manure, and met the requirements of the *Standards and Administration Regulation*. These reports were prepared by Agri-Trend Agrology Ltd. (Elston Solberg). A Preliminary Report dated December 18, 2002 and a Supplementary Report dated January 17, 2003 both concluded that the proposed spreading lands could safely accept manure application through implementing a sound nutrient management system. A Supplementary Report dated May 24, 2004 was provided following review of other interveners submissions; this Supplemental Report reiterated the confidence that Agri-Trend had that:

“...manure can be effectively and safely managed, within the *AOPA* guidelines, to enhance soil and crop productivity of soils in the Grande Prairie area.”

It further suggested that the proposed manure spreading lands would:

“...benefit greatly from the judicious management of hog manure within an overall nutrient and crop production management process.”

In addressing potential economic and community impacts, the Applicant submitted that the proposed project would provide positive contributions to both the economy and the community. The Applicant asserted that the project would bring significant economic benefits to the area. The Applicant indicated that the estimated cost of the project was \$3.12 million, and that the construction phase over a period of 7 – 9 months would employ the equivalent of 16 persons at an estimated wage component of \$475,000. Further, when operating, the project would employ six full time employees and four part-time employees at a combined annual wage expense of \$273,000. The Applicant reported that the operation would use over 1,640 tonnes of grain annually at an estimated value of \$262,000 and that the feed grains would be locally sourced. The Applicant added that the proposed project was consistent with the economic development goals of both the County and the Province, as the Applicant identified it as a “local value-added enterprise.”

The Applicant submitted that the project would create additional local employment and that, “these employees and their families will become part of the community and contribute to the local community and economy.” The Applicant also tendered case law documents to refute other interveners’ submissions that neighbouring properties would be devalued by the presence of the proposed facility.

On the issue of odour, the Applicant identified a number of mitigative measures that would be implemented to address the odours associated with the facility (the barns, the EMS and the method for manure application). The Applicant identified a straw cover for the EMS, berming the site and planting trees, roof ventilation for the barn, misting in the barn to reduce dust and to reduce the need to run the fans in the summer, and other design features of the barn. The Applicant also advised that manure spreading would only occur in the fall, and that the appropriate equipment would be used to ensure manure would be direct injected successfully. In summary, the Applicant submitted that mitigative measures would be employed to ensure that the odours generated by the operation would not be greater than one would reasonably expect to occur in an agricultural area.

On the subject of the projected traffic that would be generated by the proposed project, the Applicant submitted that the operation would generate small traffic volumes in comparison to other agricultural operations like dairy barns or cattle feedlots. The Applicant asserted that the estimated traffic for the operation would not significantly add to the traffic volumes for the road. The Applicant also maintained that the proposed barn location is appropriate, providing access to the operation with minimal interference with residential development.

In connection with the public notification requirements being met for the Meinders water licence application, the Applicant submitted that the water licence application was locally advertised on two occasions. The Applicant submitted that this met the requirements as per the *Water Act*, and that the number of Statements of Concern filed with AENV demonstrated that affected parties were aware of the Meinders’ water licence application.

The County of Grande Prairie

The County argued that siting the Meinders facility at the proposed location was inappropriate. It also asserted that the filed application was deficient, stating that it was not based on sound science, and further advised that the Applicant's proposal was in direct conflict with the County's MDP.

The County stated that the amended MDP is appropriate for the Board's consideration. The County further reported that there was a clear inconsistency between the application and the MDP, as the proposed operation would fall within an area identified as an exclusion area for confined feeding operation (CFO) development. The County reported that the proposed site was inappropriate as Section 6.23(c) of the MDP stipulates that:

“...new CFOs will only be considered for approval if the site is not located within 3.2 kilometres of any lands zoned for intensive recreation (“IR”) uses.”

The County identified that both the Bear Lake Bible Camp and Bear Lake Campground are zoned as intensive recreation and are both located within 3.2 kilometres of the proposed operation.

The County also advised that under the amended MDP, CFOs are designated as an industrial use and are to be located within half a mile of a major, primary or secondary highway, and noted that the proposed site did not meet this criteria, as it would be located 1.5 miles from a highway. The County rejected the suggestion that the proposed project could be considered a discretionary use, noting that the categories for uses are identified as ‘permitted’, ‘discretionary’ or ‘excluded,’ and submitted that this use would clearly be deemed ‘excluded’.

The County asserted that it does not take a position against CFO developments in general, but maintained that the proposed location for this facility is inappropriate. The County advised that the amended MDP was based on sound land use planning principles and suggested that the Board should rely upon this MDP.

With respect to the issue of the water volume requested for Meinders Farm, the County submitted that the Applicant had applied for less water than would meet the anticipated consumption needs per sow, based on AFRD's estimated daily consumption of 6.5 gallons of water for a farrow to late wean sow. It noted that an EBA report submitted by the Applicant had concluded that the aquifer could sustain a yield of 12,775 m³ per year, while the license application was for 13,000 m³ per year. It further submitted that the Applicant had not disclosed specific details regarding expected usage for the entire project.

In its submission, the County stated that:

“...prior to any application being granted the Appellant must establish: a) The total water usage required for the proposed facility; b) That an adequate supply exists to meet the demands of the entire project; c) That the project will not unreasonably interfere with other water users; d) That the project will not negatively impact the aquifer or aquifer system; and e) That a bona fide, and verifiable, method to monitor water consumption will be put in place to ensure compliance.”

The County provided evidence with respect to the issue of whether or not the aquifer would be able to supply the amount of water the Applicant applied for, without compromising the water available to other users. Subsequently, the County advanced its view that the evidence demonstrated that the Applicant had not established the adequacy of water supply and had not provided estimates based on sound scientific principles.

On behalf of the County, Omni-McCann Consultants Ltd. (OMCL) reviewed the reports submitted by EBA and provided a hydrogeological assessment (Exhibit 17, Schedule A). In its assessment, OMCL concluded that the EBA report was erroneous, deficient, and not scientifically valid. OMCL submitted that the geological/hydrogeological setting had not been adequately addressed, that the aquifer test did not meet AENV's guidelines for information requirements for a water licence with respect to pumping rates and the use of an observation well, and that the aquifer test had not been properly interpreted. It further reported that the information provided by EBA was insufficient to assess and properly evaluate the potential impacts to the aquifer or other users. The County contended that the application could not be approved, and submitted that the aquifer was not adequate to supply the amount of water required for the proposed operation.

With respect to the materials proposed for the construction of the EMS, the County submitted that it believed the supplemental evidence provided by EBA had established that the soils were adequate to construct the EMS liner to meet the standards. It further recommended that the procedures recommended in the EBA report should be applied to ensure the construction would be completed properly, should the project be approved.

With respect to the sufficiency of the land base for spreading and incorporating manure, the County submitted that prior to determining an adequate land base, an acceptable MMP would need to be provided and evaluated. However, it advanced its view that the land base is insufficient. To support this view, the County provided a *Report on Soil Concerns* prepared by Mr. Russell Bardak of Riverview Consulting Ltd. (Exhibit 17, Schedule B). This report asserts that the lands designated for manure application are not suitable to receive hog manure. The County also expressed concern that the application of hog manure to the lands would lead to "...unacceptable run-off and erosion."

In the report summary Riverview Consulting Ltd. prepared for the County, Mr. Bardak states:

"The main limitation to suitability of the subject lands to receive applications of hog manure is the presence of the Kleskun soil series. Often the Kleskun soil series is closely and complexly associated with the Rycroft soil series. The solonetzic characteristics and the gleyed characteristics of these soils preclude the sustained application of hog manure in an environmentally responsible manner. Information presented indicates that elevated sodium levels already hamper these soils. Information gleaned from Meinders Farm pre-filed evidence indicates that the application of hog manure will increase the level of sodium. As such, it is concluded that it is not prudent nor environmentally responsible to apply hog manure to those subject lands with Kleskun or Kleskun/Rycroft soil map units."

This report further submitted that the Meinders application materials were incomplete and had employed incorrect methodologies.

The County asserted that the proposed project would have negative effects on both the economy and the community. The County stated:

“The project will have a detrimental effect upon the social fabric of the community, will create conflicting land uses and will impact upon a bible camp of popular and long standing use.”

With respect to economic effects, the County asserted that “CFOs and other odour related developments, have had a negative impact upon assessed values of land in other communities.”

The County submitted that the information provided by the Applicant with respect to a traffic impact assessment was very deficient. It further submitted that the County’s MDP requires that a traffic impact analysis be prepared by a qualified engineer “...to assess potential traffic impact, the suitability of available road services and provide recommendations for upgrading to County’s roads, if required.” It also submitted that developers are to enter into development agreements with the County.

The County also tendered a report prepared by EXH Engineering Services Ltd., which provided information regarding one of the roads designated for manure-hauling. The report recommended that Range Road 73 (as investigated from SH 672 south for 2.5 km) along the east boundaries of NE ¼ Sec 04 and East ½ Sec 09-73-07-W6 would require rebuilding or upgrading to accommodate an increase in traffic volume and axle-weights.

In connection with the issue of public notification of the Meinders Water Licence application, the County submitted that it felt that it was not adequately informed of the application or the process.

Bear Lake Area Farmers and Residents (BLAFR), Bear Lake Canuck Historical Society & Bear Lake Bible Camp

The BLAFR recommended that the Board uphold the decision to deny Application FA02011.

On the MDP issue, the BLAFR submitted that the Meinders Application is inconsistent with the County’s MDP and that the County’s amended MDP was the appropriate plan for the Board’s consideration. The BLAFR further submitted that the County’s finding of the Application’s inconsistency with its MDP “... should be awarded great deference.” It further submitted that the intent of AOPA “...was to grant municipalities an opportunity to deny an Approval if it did not comply with its land use planning considerations.”

The BLAFR submitted that there were no assurances that the Applicant would only use the amount of water as applied for under the *Water Act*. Further, it identified that it did not believe that the NRCB’s compliance staff could be relied upon to ensure the protection of the water supply, as it asserted that the NRCB had an inadequate number of compliance staff to enforce conditions placed by the Board.

The BLAFR submitted that the aquifer did not have an adequate supply of water to support the proposed operation. It further supported the findings of the hydrogeologist retained by the

County [Mr. Alan McCann, OMCL] and referenced a letter from Dr. G.G. Andreiuk to AENV, which indicated that the amount of water applied for by the Applicant would not be sustainable.

The BLAFR submitted that drilling new wells once others have been depleted by the operation would not resolve concerns with the aquifer, and submitted that the aquifer was already being negatively influenced and was showing signs of stress. Several community members advised that their wells had already been negatively impacted and expressed concerns that their water supplies would be compromised by the proposed project.

With respect to the adequacy of the materials proposed for the EMS, the BLAFR submitted that it understood the Applicant was able to achieve the necessary standards. Mr. Garry Coy, a soils expert representing the BLAFR, agreed that the hydraulic conductivity of the soils was very low.

The BLAFR submitted that the soil characteristics of the lands designated for manure application were not adequate or suitable for accepting manure. It further submitted that it could not be established that the lands designated for manure spreading for the existing facility were not already saturated with manure, as soil testing for those lands had not been provided. The BLAFR also raised a concern that the distance between the proposed operation and some of the manure spreading lands would not be practical or economical and that spring road bans would prevent hauling manure on these roads when the manure lagoons would require emptying. The BLAFR supported the opinion of the Soil Specialist advising the Approval Officer, that spreading manure on the lands would not be sustainable.

Mr. Coy stated that the lands designated for manure spreading were not suitable to accept hog manure. He described the properties of the solonetzic soils and described the limitations they possess and associated risks of applying hog manure to the proposed lands. He advised that the solonetzic soils pose several challenges for farming, and noted that injecting manure into these soils would be difficult, due to the soils' hardness and density. He stated that it is difficult to till the soil and that water easily erodes the soil by sliding apart the clay particles. He emphasized that adding hog manure would add significant quantities of additional soluble salts which would in turn increase the electrical conductivity. In his opinion:

“...the existing crop restrictive properties of the solonetzic soils north of Bear Lake will be further heightened by the addition of hog manure.”

He expressed concerns that adding water with a high sodium adsorption ratio (SAR) to the manure, and subsequently applying it to the land, would increase SAR values for the manure so applied and negatively impact crop growth by further deteriorating the soils.

The soils expert representing BLAFR also expressed concern that the west lands proposed for spreading contained an erosion channel that would likely carry runoff to Bear Lake in the event of a high input of water, such as could be expected following a rapid snow melt or a rainstorm. Several members of the BLAFR testified that the soils in the area and the proposed spreading lands were very difficult to work and that they were not appropriate for the application of hog manure. The BLAFR submitted that it would be impossible for the Applicant to properly inject manure into the proposed lands, and provided testimony as to their own experiences with the hard pan soils. They also asserted that the nature of the soils would prevent successful growth of

the trees proposed by the Applicant and would increase the possibility of runoff and contamination of nearby lakes or their own water supplies.

Community members asserted that they were not opposed to CFO developments in general, but believed the proposed operation was not well suited to their area. Several community members provided testimony with respect to the negative community impacts they believed would occur, if the proposed project were approved. The BLAFR advised the Board that other residents in the area supported them in their opposition to the project. The BLAFR submitted that the application would "...have devastating effects on the local community and will provide little, if any, lasting economic advantage to the local area." They also submitted that economic harm and negative community impacts would be experienced by the Bear Lake Bible Camp, Bear Lake Canuck Historical Society and the City of Grande Prairie. The BLAFR also advanced its view that the economic benefits projected by the Applicant (such as employment) would be counterbalanced by the devaluation of surrounding real estate.

The BLAFR noted that the MDS was meant to create an odour buffer between the proposed operation and their residences, but submitted that the community around Bear Lake includes many non-agricultural residences and recreational facilities for the use of the community and the City of Grande Prairie. They submitted that the presence of a CFO in close proximity to the Bible Camp would be a deterrent to children going to the camp, which would result in overall decreased attendance. They also submitted that the expected odours from the operation would greatly impact their quality of life and ability to enjoy the outdoors.

One of the residents, who owns a facility for processing fruit, submitted that the application of liquid manure on lands adjacent to his facility has the potential to cause economic impacts to his business. Mr. Arnie Meyer expressed concerns that this could cause fly infestations, dust problems due to the increased traffic and odours that could affect the quality of fruit produced. He also suggested that the odours could cause negative economic impacts to the "U-pick" portion of his business. He advised that two orchards (one in production and one slated for production the following year) represented yearly sales over \$100,000. He expressed concern that the business could fail, if it lost its federal license due to odour and insect problems.

With respect to the traffic impact assessment for the proposed project, the BLAFR advised that it supported the findings and evidence submitted by the County. Community members also expressed concern that the proposed traffic routes could cause a safety concern, as traffic for the operation would be travelling along a school bus route.

Regarding the issue of the adequacy of public notification for the Meinders water licence application, although the BLAFR initially took the position that the public notification requirements had not been adequately met, it noted that parties who filed late submissions were still granted directly affected status. Subsequently, the BLAFR was able to address its concerns regarding water issues at the hearing.

Mr. Wilf Tolway

Mr. Tolway submitted his position that he did not support the Meinders' proposal and asked the Board to uphold the decision to deny it. In his final arguments, he suggested the Applicant had

failed to provide enough credible information to persuade him to believe that the facility was appropriate for the area.

Mr. Tolway submitted a number of concerns with the proposed location for the facility. He identified concerns that some of the lands designated for manure spreading were susceptible to wind erosion. He also submitted that negative odour impacts could be experienced by many people travelling by the manure spreading lands. He suggested that a daily average of 8500 vehicles pass by lands designated for manure spreading and suggested that people travelling by could be exposed to hog manure odours and drifting manure-laden soil particles, which he believed could cause detrimental health impacts. He also expressed concerns that wind-blown contaminated particles could reach the railroad and have the potential to affect transported goods. He submitted that this could cause “loss of returns to the agricultural sector as well as clean-up problems.”

Mr. Tolway submitted that the proposed location for the facility was not appropriate for a hog farming operation, and suggested the naturally occurring soils in the area were not conducive to animal or mixed farming, which he submitted had led to the area becoming predominantly used for grain farming. He expressed concern that the soils in the area would not be able to sustainably accept the manure generated from the operation. This intervener also expressed concerns with the location, stating that he believed that if a flood were to occur, Bear Lake would be susceptible to contamination.

Mr. Tolway submitted that the equipment the Applicant planned to use for injecting manure would not be able to work properly on the hardpan soils, he therefore suggested that manure would be broadcast on top of the land, rather than properly incorporated. He also expressed concern with overloading the soils with salts, which he suggested would be an improper environmental practice.

Mr. Tolway also advanced his view that there would not be enough water to satisfy the requirements for the animals in the proposed operation.

4. VIEWS OF THE BOARD

Municipal Development Plan

Two MDPs of the County of Grande Prairie No. 1 (“the County”) were relevant to the treatment of Application FA02011 made by Erik Meinders and Meinders Farm. The Approval Officer considered the consistency of the application with Bylaw No. 2360 adopted on April 22, 1998 and amended February 20, 2001 in arriving at his decision of January 16, 2004 (Decision Report FA02011). The second amendment of Bylaw No. 2360 was passed January 5, 2004 and is referred to as the amended MDP. Although the Approval Officer evaluated the application on the basis of the MDP, as it existed prior to January 5, 2004, the amended MDP was approved eleven days prior to the release of the Approval Officer’s decision on January 16, 2004. Inconsistency with the superseded MDP was one of the reasons for the Approval Officer’s denial of the application, and he indicated that the County’s assessment of incompatibility also applied to the amended MDP. Although the Approval Officer considered this inconsistency to be related to the *Standards and Administration Regulations*, the Board agrees with Counsel for the BLAFR

that the inconsistency is with Section 20(1)(a) of *AOPA*. Since all parties agreed that the amended MDP was the law in force at the time the Board Review took place, the Board focused its attention on the compatibility of the application with the January 5, 2004 amended MDP.

The County is a municipality with a population greater than 3500, and pursuant to Section 632 of the *Municipal Government Act*, the County was required to pass an MDP. It is a municipality's statutory duty to develop and adopt a statutory plan that best addresses the long-term land planning needs of the municipality. It is also the ongoing duty of the municipality to update and amend its MDP at any time it determines necessary. Section 20(1)(a) of *AOPA* requires that an Approval Officer deny an application, if there is an inconsistency between the application and an MDP. The Board has a wider jurisdiction than the Approval Officer. Pursuant to Section 25(4)(g) of *AOPA*, upon review of an Approval Officer's decision, the Board must have regard for, but is not bound by, an MDP.

The Board understands that the purchase of property and the filing of an application for a proposed development do not, in themselves, create any vested rights for the purchaser to develop a CFO. In addition, there is no assurance that the MDP in place at the time the application is submitted will be the same MDP in place when the decision is made. The only crystallized entitlement granted by *AOPA* at the date of filing the application is the establishment of the required minimum distance separation for the proposed CFO.

The Applicant made a reasonable effort to determine whether his proposed development was consistent with the old MDP. He was apparently advised by his realtor that no inconsistency existed and the County agreed it would have been difficult for a producer to have reached any other conclusion based on a review of the old MDP.

Because of the complexities of this application, deficiencies it contained as originally presented, and the resulting time it took to complete, the amended MDP was adopted before the decision on the application was rendered. The possibility of an MDP amendment during the NRCB approval process is one of the potential consequences for a proposed CFO development; however, the Board recognizes that substantial time is necessary to properly conduct all of the required procedures to amend an MDP. Applicants are well served by providing thorough and complete applications to the NRCB that can be processed efficiently. The Board also recognizes that this is not an issue that is unique to agriculture or CFO development. It is common to land development generally, in both the urban and rural setting.

With the introduction of *AOPA*, Alberta Municipal Affairs, Alberta Agriculture Food and Rural Development (AAFRD) and the NRCB all encouraged municipalities to update their MDPs to identify future land use plans.

In a December 2002 document from Alberta Municipal Affairs entitled "*Confined Feeding Operations and Municipal Planning*" (Exhibit 17, Tab 3) it was suggested that municipal agricultural land use policies might include: "A description of the areas and locations where confined feeding operations are generally an acceptable land use,..." and:

"A description of the areas and locations where the presence of confined feeding operations are likely to have negative impacts and therefore would not be a suitable land use."

The Board notes, in the same document, that Alberta Municipal Affairs intended that MDP provisions were to be "...strategic in nature, and should not resemble the traditional detailed regulatory contents of a land use bylaw..." nor were they to focus on specific development standards. The Board notes that municipalities were given direction that MDP policies should not conflict with matters within NRCB jurisdiction.

Many of the requirements contained in Section 6 of the County's amended MDP are clearly in conflict with matters within NRCB jurisdiction. In that respect, the County did not comply with the directions given by Alberta Municipal Affairs, AAFRD, and NRCB to avoid conflict between the requirements of *AOPA* and its requirements in connection with technical issues under the NRCB's jurisdiction.

The Board rejects the notion that it should feel obligated to impose the complex technical restrictions listed in the amended MDP, such as the requirement that CFO developers submit an environmental impact assessment or that a qualified consultant conduct a surface and groundwater impact assessment. In reviewing the June 2004 amendments to *AOPA*, the Board notes that in Section 20(1.1) and Section 22(2.1), there is clear direction that in considering whether an application is consistent with the MDP land use provisions:

"...an approval officer shall not consider any provisions respecting tests or conditions related to the construction of or the site for a confined feeding operation or manure storage facility nor any provisions respecting the application of manure, composting materials or compost."

It is also significant that CFOs approved under *AOPA* are exempt from Part 17 of the *Municipal Government Act* by the operation of Section 618.1 of that Act which provides:

"This Part and the regulations and bylaws under this Part respecting development permits do not apply to a confined feeding operation or manure storage facility within the meaning of the *Agricultural Operation Practices Act* if the confined feeding operation or manure storage facility is the subject of an approval, registration or authorization under Part 2 of the *Agricultural Operation Practices Act*."

The Board finds that the technical requirements in *AOPA* supersede those in the amended MDP. It also finds that requirements of a County which duplicate, overlap or conflict with *AOPA*'s technical requirements cause unnecessary confusion for proponents making CFO applications and for affected parties trying to constructively advance their positions.

In evaluating the evidence, the Board assessed whether the County had demonstrated that it had a clear plan for assigning future land use within the County and that the planning process to update the MDP had proceeded in a transparent and fair manner. The amended MDP differed from its predecessor in that it identified CFOs as a separate land use category distinct from "extensive agriculture". In addition, it identified specific areas where CFOs were prohibited, outlined extensive technical requirements for CFOs to meet, and established required zoning changes following NRCB approval.

The Board has discretion to override the provisions of an MDP in the face of an inconsistency. While it must have regard for an MDP, it is not bound by it (Section 25(4)(g) of *AOPA*). In

exercising this discretion, the Board will evaluate the merits of a proposed CFO development against the provisions of an MDP in the context of the particular location, the specific development proposal, the particular terms of the applicable MDP, and other relevant factors such as the potential difficulties associated with “spot zoning.”

In order to exercise this discretion, the Board finds that it must evaluate the rationale for the designation of a zone or area where CFOs are excluded by the terms of an MDP. In this case, the Board examined the appropriateness or rationale for the circular exclusion zone with the Bear Lake Campground and Bible Camp at its centre.

The Board finds that the appropriate areal extent of a buffer is a matter of judgment. There was evidence that at the January 13, 2003 County Council Meeting, Ms. Crerar, Counsel for the BLAFR, recommended that the MDP include a one mile buffer zone around environmentally sensitive areas. In addition, the Mistahia Health Region, in a January 2003 letter to the Approval Officer, also recommended a one mile buffer between Bear Lake and any lands used for manure disposal.

The Board notes that in *AOPA* the maximum MDS for a 1200 sow farrow-to-wean facility for a town or village with no buffer (category 4) would be 1677 metres (1.04 miles). However, the Board finds that the County buffer zone is not variable according to CFO facility size and recognizes that large CFOs can have an MDS of two miles. This serves to show the difficulties in trying to establish an appropriate sized buffer from recreational and environmentally sensitive sites. It is a matter of judgment and not a pure matter of science.

The County, with its planning personnel and via a public consultation process, determined that the circular zone, around the intensive recreation area, should have a two mile radius. The Applicant felt the exclusion zone should not be absolute and that insufficient rationale had been presented to justify it. Part of the justification for the exclusion zone presented by the County included consistency with the standard buffer applied to urban areas, with specific reference to minimizing odour impacts and the potential for runoff. The Board also notes that the intent to avoid land use conflicts was another reason presented by the County to justify the two mile buffer between CFOs and intensive recreational areas. The Board finds that it was unusual that the prohibited zone only extended north of Bear Lake and did not surround Bear Lake. However, there was no evidence that the MDP amendment process was conducted in a manner inconsistent with acceptable procedure.

The Applicant proposed that the NRCB should evaluate the impacts and compatibility of the proposed project with neighbouring land use and assess it as though it were a discretionary use application. Conversely, the County testified that under the amended MDP, the proposed CFO land use was neither discretionary nor permitted but was simply disallowed in the proposed area. The Board rejects the County’s arguments that clearly imply that the Board should somehow be bound by the municipality’s prohibition of CFOs in this, and certain other areas of the municipality.

The Legislature has empowered the Board to override the provisions of the MDP. Section 25(4)(g) of *AOPA* provides the Board with discretion which is analogous to a municipality’s assessment of discretionary uses. While it must have regard for the wishes of the community, as

expressed in long term municipal planning documents, it clearly cannot simply accept the municipal prohibition of CFOs in a certain area.

The Board finds that the credibility of the amended MDP will be enhanced if the County applies it on a consistent basis when dealing with all CFO development in the County. Questions were raised regarding the County's inconsistent application of all parts of the amended MDP in its treatment of an application for a feedlot, elsewhere in the County, which is presently before the NRCB. The Board suggests that the County should demonstrate that it applies the policies set forth in the amended MDP consistently to all CFOs within its jurisdiction.

In dealing with inconsistency with the amended MDP, the Board has listened to the evidence presented by all parties and has made several findings. These findings are subject to the comments set out above regarding the amended MDP's technical requirements for CFOs being superseded by the technical application requirements established pursuant to *AOPA*. The Board's findings are as follows:

- The Board has decided that the amended MDP applies to the Meinders' Application.
- The proposed development is within the CFO exclusion zone of the amended MDP.
- There was inconsistency between the proposed development application and the amended MDP.
- The Board has jurisdiction to override the amended MDP.
- There are prospects of land use conflict between the proposed development and country residential and/or recreational use.

In reaching a decision with regard to exercising its discretion over the amended MDP, the Board considered the Applicant's supporting evidence of due diligence in land purchase, facility design for nuisance mitigation, limited rationale for the exclusion area boundaries, and the suggestion of applying a discretionary land use provision. On the other hand, the Board also considered the County and BLAFR's evidence including the appropriateness of amending the MDP, the fairness of the amendment process, the role of the amended MDP in mitigating potential land use conflicts, and the exercising of County responsibility for long-range land use planning, including identification of CFO exclusion zones.

The Board is therefore faced with the difficult challenge of passing judgment on the magnitude of an appropriate buffer zone. It is clear that, for the proposed facility, there is discrepancy between the MDS in *AOPA* and the two mile buffer proposed by the County. The Board is also cognizant of the fact that a significant portion of the manure spreading lands are located closer to the recreation center than the proposed facility. Also the Board notes that manure spreading lands are included in the exclusion zone for the County's amended MDP, but are not considered in *AOPA*'s MDS calculation. While the Board places a high priority on science-based decisions consistent with the regulations in *AOPA*, it recognizes that good planning judgment, supported by a transparent public process, must also be respected in the regulatory process.

On the balance of evidence regarding the inconsistency of Application FA02011 with the land use provisions in the amended MDP, in this specific case, the Board is not prepared to override the 3.2 km CFO buffer zone in the amended MDP. The Board finds that, as it relates to planning for future land use, the amended MDP was developed through a fair and transparent process that reflected the wishes of the County residents with regard to preserving this particular recreational

area, mitigating land use conflicts, and directing the future land use according to the wishes of the elected representatives and their constituents.

Earthen Manure Storage (EMS) Liner

Section 9 of the *Standards and Administration Regulation* specifies the construction standards for manure storage facilities. The Board received and heard evidence from the Applicant's engineering consultant (EBA) that the original engineering report was deficient with respect to demonstrating the suitability of the available clay till to construct a lagoon liner that would meet the *AOPA* standard.

In the original report, the engineering consultant specified that the hydraulic conductivity measured in the laboratory was 3.1×10^{-10} m/sec., which the Approval Officer confirmed would translate to a field value of 3.1×10^{-9} m/sec. When the Approval Officer made his decision, the *AOPA* standard for re-compacted clay liners was that the liner would have to be at least 1 metre thick and have a seepage rate equal to or less than 10 metres of naturally occurring material with a hydraulic conductivity of 1×10^{-8} m/sec. EBA agreed with the Approval Officer's decision, that based on the information provided in the application, the proposed liner design would not meet the previous *AOPA* standard.

EBA provided evidence that the optimum moisture content for re-compaction of the clay till was 19.5% moisture not 17%, as was used in the tests conducted by the original engineering consultant. At 19.5% moisture, the average laboratory permeability for the clay till was 2.7×10^{-11} m/sec, which would be equivalent to 2.7×10^{-10} m/sec in the field. EBA testified that based on its tests, a 0.27 metre thick liner constructed with the clays at the building site would meet the June 1, 2004 revised *AOPA* seepage rate equal to 10 metres of naturally occurring material with a hydraulic conductivity of 1×10^{-8} m/sec. In order to achieve a safety margin, the Applicant's engineer recommended that a 1 metre liner with a hydraulic conductivity of 2.7×10^{-10} m/sec be constructed.

The Board did not receive evidence to dispute the above findings or recommendations. The Approval Officer testified that he had reviewed the new test results and agreed with EBA's conclusions. The BLAFR's soil consultant also testified that the hydraulic conductivity of the soils in the area is very low.

EBA provided evidence that it had drilled additional boreholes to determine if there was 10 metres of undisturbed material below the proposed base of the EMS liner. Based on the drilling results, they concluded that the clay soils would also meet the *AOPA* standards for non-compacted naturally occurring material.

EBA also provided evidence that a quality control program could be implemented during the construction of the liner to ensure that it would meet the engineering specifications. The Board finds that the clay till at the Applicant's proposed building site could be used to construct a liner for the EMS that would meet the requirements in the *Standards and Administration Regulation*. The Board also finds that the quality control program put forward by the Applicant's engineering consultant (EBA) would be appropriate for the construction of the liner.

Water Adequacy and Notification

Section 25(4)(j) of *AOPA* empowers the Board to consider concerns forwarded to AENV related to applications for a water licence. The Board received and heard evidence on a number of matters related to water use, supply, and the notification process for a water licence.

The application indicated that the proposed project would require 29.5 litres per day/sow or 12,921 m³ per year of water for the farrow-to-wean operation. Several parties opposed to the application stated that the Applicant had underestimated the water use at the proposed facility. These interveners submitted that the operation would use 85.5 litres/day or 37,449 m³ per year. These assumptions were based on estimates for farrow-to-finish operations, as identified in a paper entitled “*Water Usage and Manure Production Rates in Today’s Pig Industry*” presented by Clarence Froese at the 4th Annual Swine Technology Workshop in 2002.

The Board also received evidence that the Applicant revised the *Water Act* licence application from 13,000 to 12,775 m³ per year, when the hydrogeological consultant indicated that the aquifer could only sustain withdrawal of 12,775 m³ per year.

The Approval Officer calculated that for a farrow-to-wean operation the water requirements would be 29.5 litres per day/sow or 12,921 m³ per year, accounting for all uses. He also testified that there could be a 20% variance in water use between hog operations, thereby justifying the reduced volume requested in the licence application. The Board notes that the Froese paper reported that a farrow-to-finish operation used on average 89.5 litres per sow per day with a range from 71.1 to 110 litres per sow per day. Sixty four percent of this water use was from the “grow/finish production stage.” Therefore, the Board finds that the farrow-to-wean stage would use, on average, 32.2 litres of water per sow per day.

The Board finds that the water requirements identified by the Applicant for a 1200 sow farrow-to-wean hog operation are adequate for the proposed operation. The volume of water requested (12,775 m³ per year) is consistent with the range of water use identified by both the Approval Officer and in the report by Mr. Froese for a farrow-to-wean operation. The Board heard that the Applicant applied for and is still only planning to use one water supply well for the facility.

The Board received evidence from numerous parties with respect to how the Applicant could monitor water usage. AENV advised, in its letter dated May 25, 2004, that if a water licence was issued, it could include a condition requiring the licensee to install a cumulative flow totalizer on the well and to provide annual water use reports prepared by a hydrogeologist. The Applicant’s hydrogeologist indicated that this type of condition was more typical of an industrial user than a farmer, but that it would be a reliable means of monitoring water withdrawal from the aquifer. The County’s hydrogeologist also indicated that he had previously observed AENV’s application of this type of condition.

The Board heard Mr. Tolway’s evidence that a choke or restrictor could be placed on the well to restrict the well’s flow. The Applicant advised that they were not in favor of placing a restrictor on the well as varying water demands existed at different times of the day. A restrictor could result in periodic water shortages, and the placement of a restrictor on the well would incur costs for the construction of additional water storage to meet surges in demand.

Based on AENV's May 25, 2004 letter, and the testimony, the Board finds that water withdrawal from the aquifer for the proposed operation could be monitored in accordance with the condition suggested by AENV. The Board recommends that, if a water licence were to be issued for this operation, it would be appropriate to include this condition.

The Board accepts the evidence provided by the Applicant outlining the priority that the *Water Act* places on water use and assurance of supply to water users. The Board also accepts the Applicant's evidence that the *Water Act* ensures that agricultural and industrial users, with licences and registrations, have priority over one another to the water supply, based on the date that they received their licence or registration ("first in time, first in right").

The Board finds that through the *Water Act*, there is a means of ensuring that claims respecting the impact on the aquifer by licenced water users can be investigated. The Board also finds that the province has a means of directing water licensees to remediate the effect their wells have on the other well users. The Board recommends that if a water licence is issued for this facility, it would be appropriate for AENV to consider including the conditions listed in its' letter of May 25, 2004.

The Board reviewed the evidence regarding the ability of the production zone of the well, which is between 54.9 and 58.5 metres, to supply the Applicant's water requirements without adversely affecting the water supply of other residents in the area who obtain their water from the same aquifer. The Applicant's hydrogeologist suggested that the production zone could supply 57 m³ of water per day and the Applicant only required 35 m³ per day. The Approval Officer indicated in his decision report that AENV was prepared to issue the Applicant a licence for 35 m³ per day. However, AENV did not have a representative at the review to present evidence to substantiate its reasons for this commitment.

The County's hydrogeologist outlined several deficiencies in the water supply assessment reports submitted by the Applicant's consultant. The Board finds that the key deficiencies the County's consultant established were:

1. The pump test data were flawed in that a constant pumping rate (within a 5% variance), as required in Alberta Environment's *Groundwater Evaluation Guidelines* was not maintained during the test.
2. The method used to analyze the pump test data was not suitable. The analysis methodology was intended for data collected from an observation well.
3. The Applicant did not use an observation well to collect data, even though AENV's guidelines specify that one should be used for wells that are intended to supply 35 m³ per day.
4. The absence of an observation well also meant that no reasonable values for storativity could be obtained from the pump test data. As a result, the amount of drawdown over distance could not be accurately predicted.

The Board finds that these are potential deficiencies to be evaluated by AENV. They raise doubt with regard to conclusively establishing that an adequate water supply exists within the well's production zone to supply 35 m³ of water per day. The Board recommends that AENV require the Applicant to provide revised estimates on the ability of the aquifer to supply 35 m³ of water per day and to reassess the potential impact of this level of withdrawal on the other wells within

a six kilometre radius of the Applicant's well. The Board further recommends that the Applicant should obtain AENV's approval of its revised protocol.

The Board also asked parties to respond to concerns that were raised about the public notification process for the Applicant's water licence. The Board received evidence from Alberta Environment in a letter dated May 25, 2004 indicating that the licence application was advertised on two occasions: on October 30, 2002 in the *Sexsmith Sentinel* which has a monthly circulation and on July 31, 2003 in the *Daily Herald Tribune* which has a daily circulation. AENV concluded that the advertising requirements under the *Water Act*, and its associated regulations for a water licence, had been met as they had received letters from all residents living within two kilometres of the Applicant's proposed facility. The hydrogeologists for the Applicant and the County testified that they were familiar with AENV's notice requirements for water licences. They did not believe that the advertisements or the process used for this application differed from their previous experiences.

The Board has reviewed the notice provisions in Section 13 of the *Water Act (Ministerial) Regulation, Alberta Regulation 205/98*. The Board finds that the July 31, 2003 advertisement in the *Daily Herald Tribune* satisfied the provisions in Section 13 that requires the notice to be published in a newspaper with daily or weekly circulation.

In summary, the Board finds that:

- The 35 m³ of water per day requested by the Applicant would be sufficient to meet the needs of a 1,200 head farrow-to-wean hog operation.
- The Applicant applied to AENV to licence only one water well.
- Although the Applicant provided evidence that the production zone could supply 35 m³ of water per day, the potential testing deficiencies identified by the County raise some doubt as to the well's ability to meet the needs of the proposed facility without affecting other users of the aquifer. The Board recommends that AENV evaluate the evidence introduced at this review and take appropriate action.
- Conditions could be placed on any Water Licence issued by AENV to ensure that the Applicant monitors the water use and responds to supply concerns of other well owners.
- The process that was followed to notify parties with respect to the Applicant's Water Licence application was consistent with the *Water Act Ministerial Regulation*.

Sufficiency of Land for Manure Spreading

Section 2(1)(j) of AOPA's *Board Administration Procedures Regulation* requires that an application for an Approval include, "the legal description of the land where manure, composting materials and compost are to be spread for the first 3 years of the operation."

Table 10 of the *Standards and Administration Regulation* indicates that a land base of 205 ha is required for a 1200 swine farrow to wean operation involving liquid manure, assuming that the manure will be spread on a grey wooded soil. The selection of a grey wooded soil type is the closest soil match provided within *AOPA* for the subject lands. As part of its application, the Applicant proposed a land base of 1400 acres or 567 ha. Therefore, based on a one-time application, the Board finds that the Applicant has 2.8 times more land than required by *AOPA* on which to apply liquid manure from the operation.

The Approval Officer presented a thorough discussion of the nature of the proposed soils and their suitability to sustain long-term manure applications in Decision Report FA02011. The Board concurs with the Approval Officer's assessment that although the application has more than enough land base, according to the tables provided in the *Standards and Administration Regulation*, "the information provided shows that the conditions used to determine the land base tables may not be applicable to some of this land base." The Board also concurs with the Approval Officer's assessment that the manure application rate and frequency may be lower than the average values used to determine the land base in the calculations.

The Board heard two other key issues with respect to the sufficiency of land for manure spreading in this application. They were the potential for salts and sodicity from the liquid manure to increase the salt concentrations and sodicity in the soils proposed for spreading and the potential for the proposed equipment to be unable to successfully inject the liquid manure below the soil surface. Combined with the potential for unsuccessful injection, the Board also heard evidence describing the potential for runoff of liquid manure from the spreading lands and the impact of the runoff on surrounding lands and water bodies.

In any operation where there is addition of materials to soils, there is the potential to not only increase salt content, but also to alter numerous soil chemical and physical properties. The use of agricultural land for crop production almost always requires soil amelioration, through the addition of physical and/or chemical agents, to sustain and optimize crop growth. In this specific case, the Board believes that the concern about the potential salt loading and sodicity of the proposed soils is the result of the soil types included in the land base and the sodicity level of the source water.

The Board believes that the report prepared by Riverview Consulting and presented into evidence by the County provided a thorough overview of the soil types encountered in the proposed spreading lands. Unfortunately, it did not provide details such as topsoil depth and adequate surface soil chemistry that would allow the Board to better understand the capabilities of these soils to accept liquid hog manure on a sustainable basis.

According to information presented by the soil specialist who advised the Approval Officer, the properties of both the Rycroft series, but more specifically the Kleskun series, pose limitations to conventional manure application practices. He further stated that it may be necessary to restrict manure application rates and frequency to ensure that salts neither accumulate in the receiving soils nor migrate off-site.

The Board finds that all of the soil experts agreed that these soils need, at a minimum, to be carefully managed, regardless of the agronomic practice for which they are used. Experts from Riverview Consulting Ltd., Coy Consulting Inc., and the NRCB indicated that they would not

recommend these soils for the receipt of liquid hog manure. Theoretical information presented indicated that *AOPA* salinity regulations could not be met, however, no data predicting the salt concentration and sodicity levels from the manure slurry were available. The Board recognizes that theoretical calculations must be ground truthed and validated in order for the predictions to be relied upon.

The expert from Agri-Trend Agrology Ltd. indicated that, based on their corporate knowledge of the agronomic use of a wide variety of soils, they believed that the proposed soils could be used on a sustained basis for the receipt of liquid hog manure and the growth of crops. Agri-Trend Agrology committed that *AOPA* salinity regulations would be met and that mitigative options existed to ensure that sodium adsorption ratio from the manure slurry were managed. Again, the Board was disappointed that no specific data such as hog manure chemical composition, receiving soils chemistry, application frequency, or targeted application rates were presented which would allow the Board to make specific findings.

The Board notes, however, that *AOPA* is designed to be largely “self-regulating.” Therefore, the onus is on the producer to ensure that the operation, including manure application, is managed so that all relevant regulations are met. In order to ensure that regulations are met, Section 28(5) of the *Standards and Administration Regulation* requires that owners or operators of CFOs keep soil test records for five years. These records must be made available to an Inspector and an Approval Officer can specify in an approval that the records must be submitted to the NRCB on a periodic basis.

The Board is not satisfied that that these soils could not be used for application of liquid hog manure. However, it agrees with all of the experts that these soils types, particularly the Kleskun soils, would need to be carefully managed in order to maintain their agronomic potential. The Board notes that the Applicant has applied liquid hog manure on the east land, which is primarily composed of Solonetzic soils and that the Applicant’s west lands and surrounding lands are also being successfully cropped.

Further, the Board is not convinced that the proposed equipment for spreading the liquid manure would not be suitable. However, given the nature of the proposed soils, the Board recognizes that injection may be difficult and it is disappointed that the Applicant did not provide evidence that the proposed equipment had been successfully tested on the Head and west lands. Given that the Applicant owned the land and had access to liquid hog manure from the existing operation, a trial on the west lands would have provided useful knowledge for all parties.

The Board does not accept that there is a reasonable probability that large quantities of liquid manure being injected into the proposed lands will subsequently enter the drainage channel and ultimately Bear Lake. Based on the evidence provided and its own scientific expertise, the Board does not believe that the injected liquid hog manure from the west lands, applied at the maximum loading rates set out in *AOPA*, would be a significant contributor to the eutrophication of Bear Lake. The Board notes that these same lands adjacent to streams feeding Bear Lake are being fertilized with manufactured fertilizes and no concerns were raised about these materials entering the drainage channel and subsequently entering Bear Lake.

The Board notes that the Approval Officer stated in Decision Report FA02011 that if he had approved the project, he would have included a condition stipulating that a detailed MMP,

including “a detailed soil survey to identify areas with solonchic soils and that characteristics of those soils, proposed manure application rates, timing of manure application, setbacks from common bodies of water etc...” be submitted to the NRCB prior to manure application. The Board concurs with the Approval Officer that an MMP would be necessary in order to fully assess the suitability of the proposed lands for liquid manure application. The Board believes that it should specifically address the feasibility of the proposed injection equipment to deliver the liquid manure as planned and the calculation of proposed salt loading, based on best estimates of salt inputs into the liquid manure.

The Board concurs with the Approval Officer that there are situations where additional steps are required beyond evaluating the land base outlined in the regulations to ensure that the project will be sustainable. The Board finds, in cases like this, where the proposed manure spreading lands are recognized as having agronomically limiting characteristics, that it would be prudent to consider requesting an MMP as part of the application process. This would allow the Approval Officer to fully evaluate whether the manure spreading lands are compatible with the proposed activities, prior to reaching a decision.

The Board is of the view that these soils could be used for application of liquid hog manure, and that there was a sufficient land base available to meet the requirements of the regulations, assuming that the Applicant implemented an appropriate MMP.

Effects on the Economy and Community

Section 25(4)(k) of *AOPA* requires the Board, upon a review, to consider the effects of the proposed confined feeding operation on the environment, economy, community, and the appropriate use of land. The Board believes that it fulfilled its *AOPA* mandate of assessing the environmental impact of the application by addressing the outstanding issues related to manure spreading, as well as the water issues. The Board also believes that by considering the compatibility of the MDP with the proposed project, that the appropriate use of land component of Section 25(4)(k) is addressed. Therefore, the only additional area where the Board asked the parties to provide evidence on the potential impacts of this proposed project was on the economy and the community.

Prior to determining the effect of the proposed hog barn on the community and the economy, the Board needed to establish the community affected by the proposed project. The Board concluded there were two communities to consider, including:

1. The farmers and landowners immediately adjacent to the proposed hog barn and manure spreading lands (local community).
2. Other county residents and citizens of the City of Grande Prairie using the recreational facilities (regional community).

The County provided evidence that two goals of their amended MDP were:

1. To limit the potential for conflict between provincially approved CFOs and other land uses in the County, including extensive agriculture operations.

2. To provide for policies that would allow the County to develop as an agricultural, commercial, industrial, and residential community.

The County, with the assistance of the City of Grande Prairie, testified that they see significant growth occurring in the County and the City. The Board accepts the growth predictions of the County and the City. The Board also accepts that the County must consider the long-term needs of all residents for recreation, residential, and economic development. The Board also accepts the evidence put forward by the County and the BLAFR that non-agricultural developments, such as country residential, and historic parks, are occurring in the vicinity of Bear Lake and that these other types of developments are likely to increase in the future, due to the proximity of the lake to the City of Grande Prairie and the Town of Clairmont. The Board finds that if the proposed project were approved, it could affect future recreational and residential development. The Board finds that the County, through its amended MDP, is attempting to ensure that the regional community will continue to have these opportunities.

The Board heard many concerns from the BLAFR, County, and Bible Camp about the odours that they believed would be generated by the proposed barn and manure spreading. The Board feels that this is the major issue the community has with this proposal. The Board is aware that the Applicant intends to minimize the odours by incorporating the manure in the fall, placing a straw cover over the lagoon, venting the barn with chimney fans, minimizing the amount of manure storage in the barn, and employing an oil dust suppression system. The Board is also aware of the evidence submitted by the County in the paper, "*Some Ideas on Water Usage, Odor Control and Nutrient Balance*" where 77% of the neighbors living adjacent to hog operations indicated that odour from the operations did not significantly impact their lifestyles. The Board finds that the Applicant proposes to use odour and manure management techniques that were referenced in the report as being effective techniques to reduce odour from hog operations. However, the Board also finds that the residents were not convinced that these measures would be effective.

The Board finds that the BLAFR considers their community to be made up of extensive agriculture and acreage ownership. However, the Board heard that some of the farmers and landowners have previously raised livestock, including hogs.

The Board heard that the Applicant believed that the proposed facility would be appropriate in this agricultural area. The Applicant advised the Board that because of his experiences in the Netherlands, he knew that construction and management design to mitigate odours was important to maintain a good relationship with neighbors. The Board also heard that the Applicant hired a consultant to help contact residents in the vicinity of the proposed project to provide them with information and to determine if they had any concerns. The Board heard that the Applicant did not complete the residents' consultation program due to their unfavorable responses and their failure to return calls.

The Board finds that the Applicant was aware of the impact this project could have on the local community, since he had firsthand experience in the Netherlands and with his current operation at the east lands. The Board finds that the Applicant tried to meet with the neighbouring landowners to provide them with details about the project, to become aware of their concerns,

and to identify how he might address them. The Board finds that these actions by the Applicant were appropriate and are consistent with good operating practices for CFO developers.

The Applicant provided evidence that the proposed facility would be built in an agricultural community. The Applicant submitted that due to the economic situation facing the agricultural industry, diversification of agricultural industry within the County should be regarded as a benefit to the community. Experts also suggested that the MDS provisions in *AOPA* and odour reduction features of the barn design would minimize the impact of the operation on the neighbouring farms.

The Board accepts the argument of the Applicant's planning expert that the Applicant was proposing to locate the project within an agricultural community. It was not until the recent amendments to the MDP that the County specifically identified a CFO as not being an agricultural operation and that CFOs should not be located on lower quality agricultural land.

The Board noted that the County provided evidence that it considers CFOs as different than other forms of agriculture in the County and that it currently has only 10 CFOs. It advanced its view that it believes that CFOs are most similar to heavy industry and has, therefore, excluded CFOs from the definition of an agricultural operation.

According to the definition of an agricultural operation in *AOPA*, a CFO is an agricultural operation. The Board accepts the reasons provided by the Applicant's planner that CFO's could locate in areas designated for agriculture. The Board does not accept the premise that because a CFO is not defined as an agricultural activity in a county's MDP, the CFO should not be located in an agricultural community where extensive agriculture is the primary agricultural activity. The Board believes that Part 1 of *AOPA* includes provisions for landowners to resolve disputes related to nuisances and that this approach, as opposed to excluding CFOs from agricultural areas, is the appropriate means of addressing nuisance issues between landowners.

The Board accepts that the County has determined that the most productive agricultural lands should be retained for agriculture and that other developments should be directed to the less productive agricultural lands. The Board also accepts that by directing CFOs away from lands with lower productivity, there may be fewer conflicts between the different developments, if it attracts more intense uses along the lines of country residential or recreational use as opposed to extensive agriculture. The Board finds that the County has identified the lands adjacent to Bear Lake in the vicinity of the proposed project as being lower quality agricultural lands and as being suitable for recreational and country residential development. The Board acknowledges that, in this particular case, it is a realistic expectation that other non-agricultural developments are likely to locate there.

The Applicant supplied economic information about both the construction and operational phases of the project. The Board finds that the proposed project would create jobs and contribute to the diversification of the agricultural industry in the Grande Prairie area. However, limited evidence was provided to explain the economic impact of the project. Although an *AAFRD Economic Livestock Impact Calculator* was submitted (Exhibit 8), no details were provided. Therefore, the Board finds that although the investment dollars required for this facility were presented, it cannot make definitive findings on the economic impact of this project.

With respect to the impact this project would have on the property values of the BLAFR, the Board finds there is no evidence to conclude that there would be an automatic reduction in property values, if the project were to proceed. The County entered into evidence a decision of the Municipal Government Board (“MGB”) where it upheld the decision of the County of Lamont’s assessor to increase the assessed value of properties adjacent to a CFO. The Board agrees with the Applicant that the MGB did not find reasons to substantiate the original reduction in assessed property values. The Board also notes that while the County contends that CFOs can reduce adjacent property values, the County did not enter into evidence any property assessments it had issued for properties adjacent to the 10 CFOs in the County (which includes a hog operation owned by the Applicant) where it had reduced the assessment values because of the CFOs.

The Board concludes that, based on the evidence submitted, this project would likely have a positive economic impact for the County’s agriculture industry. However, in light of the current and projected rate of development in the region, the economic impact of the project would likely have a very minimal impact on the overall regional economy.

The Board believes that the proposed project, as designed, would be compatible with other activities in most agricultural communities. However, in this instance, the presence of the intensive recreational area creates a unique circumstance. The Board finds the County identified the uniqueness of the recreational area and proactively ensured that future development is controlled to prevent future land use conflicts.

Traffic Impact Assessment

When the Board granted a review of Decision Report FA02011, it did not specifically identify traffic impact as an issue to be addressed. However, at the Pre-Hearing Meeting, the County felt the Board should hear evidence on the traffic impact assessment that had been prepared for the proposed project. Since Section 25(4)(h) of *AOPA* directs the Board to consider items that would normally have been considered by the County if a development permit were being issued, the Board agreed to expand the issues to include, “Does the traffic impact assessment provide additional information that should be included in the evaluation of this proposed project.”

Since the County felt the traffic impact submissions from the Applicant were inadequate, it engaged the services of EXH Engineering to prepare a traffic impact assessment. The Board acknowledged the County’s concern for the infrastructure impact of new developments, but agreed with the Applicant that only 1.5 miles of R.R. 73 would be impacted. Although EXH Engineering indicated that this road had only been constructed to 1940 standards and was vulnerable to damage in wet weather, the Board finds that the traffic impact of the proposed facility would be low following construction. This finding was supported by the fact that much of the manure was to be transported across the fields, thereby avoiding the roads.

The Board concluded that with a provincially maintained highway so close and with the farm truck traffic already present from neighbouring farms, the County road infrastructure impact from this proposed operation would be minimal.

Review Process

The quasi-judicial tribunal process is well established within Alberta and has been successfully used in many areas including worker compensation, the regulation of the oil and gas industry and human rights issues. Although processes may differ between the different tribunals, the fundamentals of fair, open and transparent reviews or hearings underlay the processes, regardless of the issue under consideration. The application of this process to the regulation of CFOs is new, but is based on a successful history of the process.

In order for the Board to make the best decision in the interest of Albertans, the onus is on all parties of a review to participate in an open manner that facilitates getting accurate information on the record. The Board expects all parties to be respectful of both the process and all parties involved. The Board's goal in conducting a review is to ensure that it has the evidence required to make a decision on the issue in front of it and that the review proceeds in a respectful and timely manner.

The Board is very conscious of the financial implications of the review process to all parties. To that end, the Board expects all parties to meet submission deadlines, to participate in all aspects of the review including any preliminary meetings and to limit verbal presentations to the Board to only the key points that they wish to raise. Panel members have reviewed all of the written submissions filed before the review begins and do not need to have the content of the written materials repeated to them verbally during the review. At the review hearing the emphasis during direct examination should be on clarification only.

The Board's mandate is to make decisions of public interest in a fair, open and transparent manner. It takes this mandate very seriously and the organization has been structured to ensure that all proceedings are fair, open and transparent. In order to deliver its mandate in the area of confined feeding operations, numerous arms of the NRCB are involved in the process. The Board members, from whom the Chair draws up the Panels, are not involved in any operational aspects of the organization and only become involved in specific files, once a request for review has been filed. Attendance at the Board discussion to determine if a review should be granted is limited to the Board members, General Counsel, Manager of Board Reviews, and the Secretary to the Board. In making its determination, the Board only considers information specific to the file that is on the public record.

Approval Officers, Inspectors, and any other NRCB staff who have been involved in a review file do not have access to the Board members concerning the file. There is a Science and Technology group within the NRCB's organization, which is composed of technical specialists who provide expert advice to all parts of the organization. In order to ensure fairness, the Board never uses in-house experts, who have already been consulted by either the Approvals or the Compliance and Enforcement Divisions, when dealing with a file. If the Board identifies the need for an expert and one is not available internally, it retains an external consultant who works exclusively for the Board.

Counsel working for the Board meets with any experts engaged by the Board to ensure that any procedural questions of the Board are answered as well as to ensure that the experts provide the Board with any technical background information requested by the Board. Board Members have diverse technical backgrounds and often conduct reviews without any expert assistance. In the

interests of ensuring that the evidentiary record is complete, Board Counsel will often ask questions of the parties. These questions may have originated from the Board or experts advising the Board. In addition, Board members may choose to ask questions themselves.

The NRCB has followed this type of questioning process throughout its history and believes that the public interest is well served. The Board believes that this format meets the tests of natural justice and ensures that a thorough record is obtained. The Board does not agree that questions from Board Counsel should be restricted to only points of clarification.

The Board would like to address the process used to define or narrow the issues of a review before the review begins. As noted earlier, the Board recognizes the financial costs of a review for all parties and believes that everyone is well served by clearly defining the issues that the Board will review. It has been the Board's experience that all parties are better able to prepare when the issues are well defined. In some cases, the Board completes this step during its deliberations granting the review. In other cases, the Board decides that the information in front of it during its deliberations is not sufficient to allow it to fully determine all of the issues that will be heard. In those cases, the Board may decide to hold a Pre-Hearing Meeting to hear parties' views on the issues to be considered. After a Pre-Hearing Meeting, the Board will issue a report that outlines what issues it will hear based on the input received during the Pre-Hearing Meeting.

There are circumstances when new issues arise during the evidentiary portion of a review. When this occurs, the Board will hear evidence from parties as to the relevance of the issues to the file under review, and then it will make a ruling as to whether it believes that the issue is relevant. The Board may make these rulings as the review proceeds or alternatively during its deliberations as it weighs the evidence. If, during the Board's deliberations, it determines that there are additional matters that it needs to hear about, it always has the option to re-open a review and call for new evidence.

Additionally, the Board would like to clarify what it believes is the role of experts brought to the review by parties. It is not helpful to the Board if the experts advocate the position of whomever they are representing. Rather, the role of experts is to present their own professional opinions in the areas where the Board has accepted them as expert. Providing evidence in areas where an expert has not been qualified takes up valuable hearing time and does not assist the Board. The Board typically attaches very low weight, if any, to evidence provided in this manner.

The Board continues to develop its mandate of the delivery of *AOPA* and has made changes to its process throughout the last 2 ½ years, when it has identified the need to do so. These changes have been implemented on a go forward basis, which means that there is often a time lag before the change has been fully integrated into our process. One such change is that General Counsel now acts exclusively for the Board, while our second Counsel acts on behalf of the rest of the organization including the Approvals and Compliance and Enforcement divisions. This particular application came through our process before we made this change and that was why General Counsel represented the Approval Officer during this review. The Board hopes that those involved with *AOPA* reviews will contact the NRCB Law and Reviews group before the review to ensure that they understand the process and are able to fully and effectively participate.

5. BOARD SUMMARY

- The Board finds that the technical requirements in *AOPA* supersede those in the amended MDP and many of the County's requirements duplicate, overlap or conflict with *AOPA*'s requirements. It is the *AOPA* technical requirements that will be applied. In addition to science based decisions consistent with the regulations in *AOPA*, the Board recognizes that good municipal land use planning judgment, supported by a transparent public process, must also be respected in the regulatory process. The Board finds that the amended MDP was developed through a fair and transparent process that reflected the wishes of the County. Based on the unique circumstances of this specific case, the Board has decided to uphold the amended MDP's 3.2 km CFO buffer zone centered at Bear Lake Campground and Bear Lake Bible Camp.
- The Board believes that this project, as designed, would have a positive economic impact and that it would be compatible with other activities in most agricultural communities. However, in this instance, the presence of the intensive recreational area creates a unique circumstance. The Board finds the County identified the unique features of the recreational area and proactively ensured that future conflict in land use development is controlled.
- The Board is of the view that these soils could be used for application of liquid hog manure, and that there was a sufficient land base available to meet the requirements of the regulations, assuming that the Applicant implemented an appropriate MMP.
- The Board finds that the evidence confirmed that the materials proposed to be used to construct the EMS liner would meet Section 9 of the *Standards and Administration Regulation*.
- Although it does not have jurisdiction to issue a water licence, the Board determined that there were potential deficiencies identified with the analysis of the aquifer capacity completed by the Applicant. The Board finds that these potential deficiencies raise enough doubt regarding the sufficiency of water, that it recommends that AENV evaluate the evidence introduced at this review hearing and take appropriate action.

6. BOARD DECISION

Following consideration of all of the evidence, the Board hereby denies Application FA02011.

DATED at CALGARY, ALBERTA, this 17th day of August 2004.

Original signed by:

Gordon Atkins
Division Chair

Sheila Leggett
Board Member

Wayne Inkpen
Board Member