

# Part 2 – Technical Requirements



Application under the *Agricultural Operation Practices Act* for a confined feeding operation, manure collection area, and/or manure storage facility(ies)

<b>NRCB USE ONLY</b> <input type="checkbox"/> Approval <input checked="" type="checkbox"/> Registration <input type="checkbox"/> Authorization <input type="checkbox"/> Amendment	Application number <u>BA24017</u>	Legal land description <u>SE 21-62-3 W5M</u>
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## APPLICATION DISCLOSURE

This information is collected under the authority of the *Agricultural Operation Practices Act (AOPA)*, and is subject to the provisions of the *Freedom of Information and Protection of Privacy Act*. This information is public unless the NRCB grants a written request that certain sections remain private.

**Any construction prior to obtaining an NRCB permit is an offence and is subject to enforcement action, including prosecution.**

I, the applicant, or applicant's agent, have read and understand the statements above, and I acknowledge that the information provided in this application is true to the best of my knowledge.

Jan 20 /25  
 Date of signing  
Arn El Farm Ltd  
 Corporate name (if applicable)

Signature  
Bruce Van Dijk  
 Print name

## GENERAL INFORMATION REQUIREMENTS

**Proposed facilities:** list all proposed confined feeding operation facilities and their dimensions. Indicate whether any of the proposed facilities are additions to existing facilities. (attach additional pages if needed)

Proposed facilities	Dimensions (m) (length, width, and depth)
46x 180 layer barn	180' x 46'
aux. room (cooler, office etc)	30' x 46'

**Existing facilities:** list ALL existing confined feeding operation facilities and their dimensions

Existing facilities	Dimensions (m) (length, width, and depth)	NRCB USE ONLY
hogbarn 1	40' x 120'	
2	54' x 84'	
3	40' x 200'	

**NRCB USE ONLY**



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Existing facilities continued	Dimensions (m) (length, width, and depth)	NRCB USE ONLY
6 tarp shed.	30' x 72'	
manure pad for shelters	180' x 70'	

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If a new facility is replacing an old facility, please explain what will happen to the old facility and when.  N/A

Construction completion date for proposed facilities November 2025

**Additional information**

Would like to start April with dirtwork.

**Livestock numbers:** Complete only if livestock numbers are different from what was identified in the Part 1 application. Note: if livestock numbers increase in your Part 2 application, a new Part 1 application must be submitted which may result in a loss of priority for minimum distance separation (MDS).

Livestock category and type (Available in the Schedule 2 of the Part 2 Matters Regulation)	Permitted number	Proposed increase or decrease in number (if applicable)	Total
layer hens. (plus associated pallets)		+ 20 000	20 000
hogs (F to F)			0

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### **DECLARATION AND ACKNOWLEDGMENT OF APPLICANT CONCERNING WATER ACT LICENCE** issued by Alberta Environment and Protected Areas (EPA) for a confined feeding operation (CFO)

Date and sign one of the following four options

#### **OPTION 1: Applying through the NRCB for both the AOPA permit and the Water Act licence**

I **DO** want my water licence application coupled to my AOPA permit application.

Signed this \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

\_\_\_\_\_  
*Signature of Applicant or Agent*

#### **OPTION 2: Processing the AOPA permit and Water Act licence separately**

1. I (we) acknowledge that the CFO will need a new water licence from EPA under the *Water Act* for the development or activity proposed in this AOPA application.
2. I (we) request that the NRCB process the AOPA application **independently** of EPA's processing of the CFO's application for a water licence.
3. In making this request, I (we) recognize that, if this AOPA application is granted by the NRCB, the NRCB's decision will not be considered by EPA as improving or enhancing the CFO's eligibility for a water licence under the *Water Act*.
4. I (we) acknowledge that any construction or actions to populate the CFO with livestock pursuant to an AOPA permit in the absence of a *Water Act* licence will **not** be relevant to EPA's consideration of whether to grant the *Water Act* licence application.
5. I (we) acknowledge that any such construction or livestock populating will be at the CFO's sole risk if the *Water Act* licence application is denied or if the operation of the CFO is otherwise deemed to be in violation of the *Water Act*. This risk includes being required to depopulate the CFO and/or to cease further construction, or to remove "works" or "undertakings" (as defined in the *Water Act*).
6. **AS RELEVANT:** I (we) acknowledge that the CFO is located in the South Saskatchewan River Basin and that, pursuant to the *Bow, Oldman and South Saskatchewan River Basin Water Allocation Order* [Alta. Reg. 171/2007], this basin is currently closed to new surface water allocations.
7. **Provide:** Water licence application number(s) \_\_\_\_\_

Signed this \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

\_\_\_\_\_  
*Signature of Applicant or Agent*

#### **OPTION 3: Additional water licence not required**

1. I (we) declare that the CFO will not need a new licence from EPA under the *Water Act* for the development or activity proposed in this AOPA application.
2. **Provide:** Water license number(s) or water conveyance agreement details \_\_\_\_\_

Signed this 20 day of January, 2025.

\_\_\_\_\_  
*Signature of Applicant or Agent*

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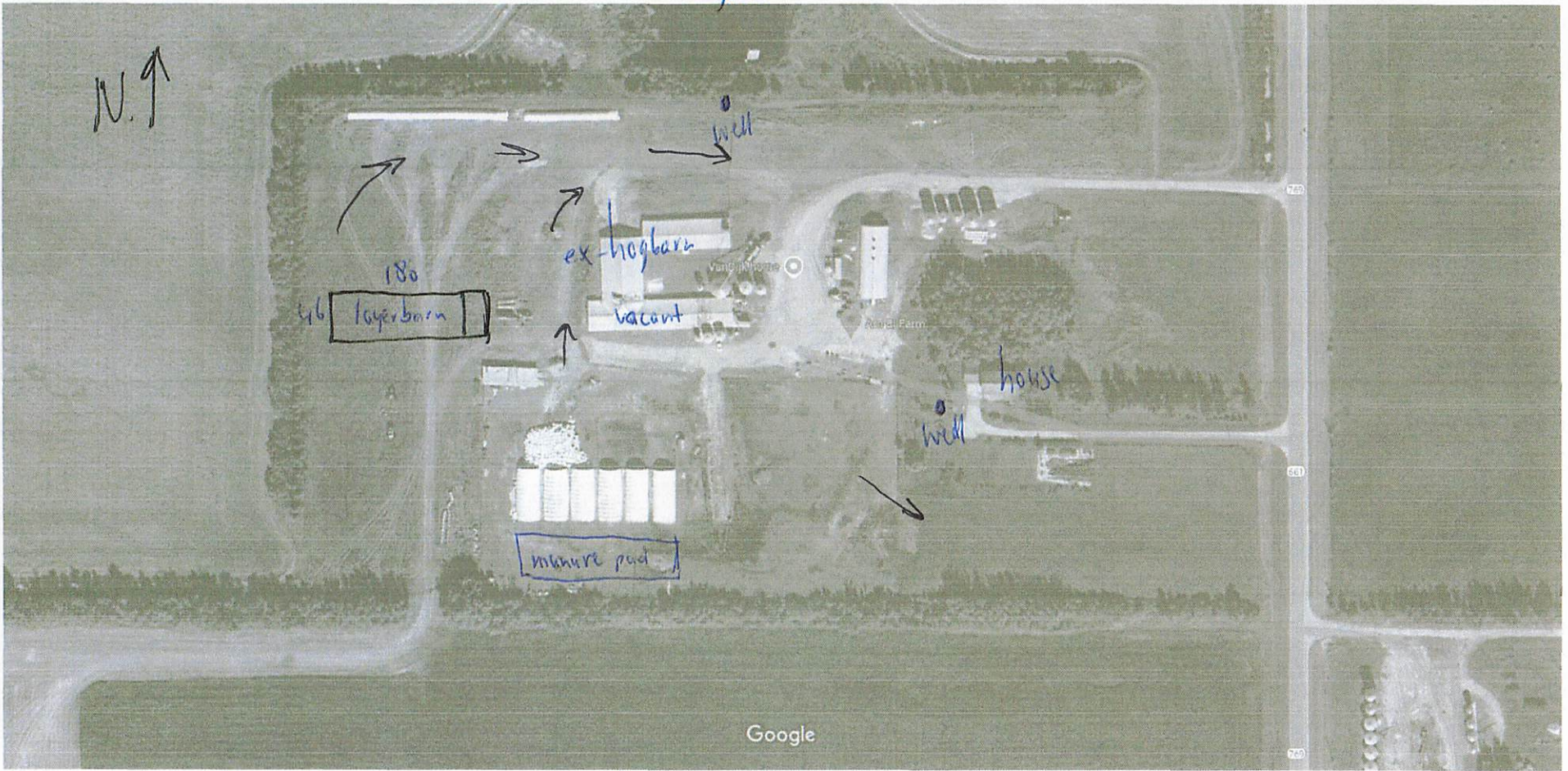
### **OPTION 4: Uncertain if *Water Act* licence is needed; acknowledgement of risk (for existing CFOs only)**

1. At this time, I (we) do not know whether a new water licence is needed from EPA under the *Water Act* for the development or activity proposed in this AOPA application.
2. If a new *Water Act* licence is needed, I (we) request that the NRCB process the AOPA application **independently of** EPA's processing of the CFO's application for a water licence.
3. In making this request, I (we) recognize that, if this AOPA application is granted by the NRCB, the NRCB's decision will not be considered by EPA as improving or enhancing the CFO's eligibility for a water licence under the *Water Act*.
4. I (we) acknowledge that any construction or actions to populate the CFO with additional livestock pursuant to an AOPA permit in the absence of a *Water Act* licence will **not** be relevant to EPA's consideration of whether to grant my *Water Act* licence application, if a new water licence is needed.
5. I (we) acknowledge that any such construction or livestock increase will be at the CFO's sole risk if the *Water Act* licence application is denied or if the operation of the CFO is otherwise deemed to be in violation of the *Water Act*. This risk includes being required to depopulate the CFO and/or to cease further construction, or to remove "works" or "undertakings" (as defined in the *Water Act*).
6. **AS RELEVANT:** I (we) acknowledge that the CFO is located in the South Saskatchewan River Basin and that, pursuant to the *Bow, Oldman and South Saskatchewan River Basin Water Allocation Order* [Alta. Reg. 171/2007], this basin is currently closed to new surface water allocations.
7. **Provide:** Water license number(s) or water conveyance agreement details \_\_\_\_\_

Signed this \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

\_\_\_\_\_  
*Signature of Applicant or Agent*

dugout.



SE 21 - 62 - 3 WS.

Yard



# Water Well Drilling Report

[View in Imperial](#) [Export to Excel](#)

GIC Well ID 499087

GoA Well Tag No.

Drilling Company Well ID

Date Report Received 2001/07/31

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

Well Identification and Location										Measurement in Metric	
Owner Name	Address				Town	Province			Country	Postal Code	
NANNINGA, ARNOLD	NEERLANDIA										
Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description		
	SE	21	62	3	5						
Measured from Boundary of					GPS Coordinates in Decimal Degrees (NAD 83)					Elevation _____ m	
_____ m from					Latitude <u>54.374062</u> Longitude <u>-114.383304</u>					How Elevation Obtained	
_____ m from					Map					Not Obtained	

Drilling Information	
<b>Method of Drilling</b> Rotary	<b>Type of Work</b> New Well
<b>Proposed Well Use</b> Domestic & Stock	

Formation Log			Measurement in Metric
Depth from ground level (m)	Water Bearing	Lithology Description	
4.88		Soft Clay	
63.40		Shale	
76.50		Sandstone	
110.34		Shale	
147.83		Sandstone	
152.40		Shale	

Yield Test Summary			Measurement in Metric
Recommended Pump Rate	<u>13.64 L/min</u>		
Test Date	Water Removal Rate (L/min)	Static Water Level (m)	
2001/05/08	17.28	56.69	

Well Completion				Measurement in Metric
Total Depth Drilled	Finished Well Depth	Start Date	End Date	
152.40 m		2001/05/07	2001/05/08	
<b>Borehole</b>				
Diameter (cm)	From (m)	To (m)		
0.00	0.00	152.40		
<b>Surface Casing (if applicable)</b>		<b>Well Casing/Liner</b>		
Steel		Plastic		
Size OD : <u>14.12 cm</u>		Size OD : <u>11.43 cm</u>		
Wall Thickness : <u>0.478 cm</u>		Wall Thickness : <u>0.635 cm</u>		
Bottom at : <u>12.19 m</u>		Top at : <u>4.88 m</u>		
		Bottom at : <u>152.40 m</u>		
<b>Perforations</b>				
From (m)	To (m)	Diameter or Slot Width (cm)	Slot Length (cm)	Hole or Slot Interval (cm)
110.34	147.83	0.318		7.62
Perforated by Machine				
<b>Annular Seal Driven</b>				
Placed from <u>0.00 m</u> to <u>109.73 m</u>				
Amount _____				
<b>Other Seals</b>				
Type _____				At (m) _____
<b>Screen Type</b>				
Size OD : <u>0.00 cm</u>				
From (m)	To (m)	Slot Size (cm)		
Attachment _____				
Top Fittings _____		Bottom Fittings _____		
<b>Pack</b>				
Type _____		Grain Size _____		
Amount _____				

Contractor Certification	
Name of Journeyman responsible for drilling/construction of well UNKNOWN NA DRILLER	Certification No 1
Company Name MAHAR, VERN DRILLING SERVICES	Copy of Well report provided to owner Date approval holder signed



# Water Well Drilling Report

[View in Imperial](#) [Export to Excel](#)

GIC Well ID 499067

GoA Well Tag No.

Drilling Company Well ID

Date Report Received 2001/07/31

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GOWN ID

Well Identification and Location										Measurement in Metric	
Owner Name	Address				Town	Province	Country				Postal Code
NANNINGA, ARNOLD	NEERLANDIA										
Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description		
	SE	21	62	3	5						
Measured from Boundary of					GPS Coordinates in Decimal Degrees (NAD 83)					Elevation _____ m	
_____ m from					Latitude <u>54.374062</u> Longitude <u>-114.383304</u>					How Elevation Obtained	
_____ m from					Map					Not Obtained	

Additional Information										Measurement in Metric	
Distance From Top of Casing to Ground Level _____ cm					Is Flow Control Installed _____						
Is Artesian Flow _____					Rate _____ L/min Describe _____						
Recommended Pump Rate _____ 13.64 L/min					Pump Installed Yes _____		Depth _____ m				
Recommended Pump Intake Depth (From TOC) _____ 137.16 m					Type SUB _____		Make _____		H.P. 1 _____		
					Model (Output Rating) _____						
Did you Encounter Saline Water (>4000 ppm TDS) _____					Depth _____ m		Well Disinfected Upon Completion _____				
Remedial Action Taker. _____					Gas _____		Depth _____ m		Geophysical Log Taken _____		
					Submitted to ESRD _____						
Additional Comments on Well					Sample Collected for Potability _____				Submitted to ESRD _____		
DRILLER REPORTS DISTANCE FROM TOP OF CASING TO GROUND LEVEL: 30".											

Yield Test			Taken From Ground Level			Measurement in Metric	
Test Date	Start Time	Static Water Level	Depth to water level				
2001/05/08	12:00 AM	56.69 m	Pumping (m)	Elapsed Time	Recovery (m)		
				Minutes:Sec			
<b>Method of Water Removal</b>				0:00	152.40		
Type Air _____				35:00	91.44		
Removal Rate _____ 17.28 L/min				40:00	83.82		
Depth Withdrawn From _____ 152.40 m				50:00	68.58		
				60:00	59.44		
				75:00	56.69		
If water removal period was < 2 hours, explain why							

Water Diverted for Drilling		
Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification	
Name of Journeyman responsible for drilling/construction of well	Certification No
UNKNOWN NA DRILLER	1
Company Name	Copy of Well report provided to owner Date approval holder signed
MAHAR, VERN DRILLING SERVICES	





house

# Water Well Drilling Report

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GIC Well ID 364867  
GoA Well Tag No.  
Drilling Company Well ID  
Date Report Received 1988/08/10

GOWN ID

Well Identification and Location										Measurement in Metric		
Owner Name NANNINGA, ARNOLD		Address RR1 BARRHEAD			Town		Province		Country		Postal Code TOG 0E0	
Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description			
	SE	21	62	3	5							
Measured from Boundary of					GPS Coordinates in Decimal Degrees (NAD 83)					Elevation _____ m		
_____ m from					Latitude <u>54.374062</u> Longitude <u>-114.383304</u>					How Elevation Obtained		
_____ m from					How Location Obtained					Not Obtained		
					Map							

Drilling Information	
Method of Drilling Rotary	Type of Work New Well
Proposed Well Use Domestic & Stock	

Formation Log			Measurement in Metric
Depth from ground level (m)	Water Bearing	Lithology Description	
20.73		Soft Clay	
74.07		Hard Clay	
78.03	Yes	Water Bearing Sandstone	
86.87		Shale	
97.54	Yes	Water Bearing Sandstone	
133.50		Shale	
146.30	Yes	Water Bearing Sandstone	

Yield Test Summary			Measurement in Metric
Recommended Pump Rate	<u>31.82 L/min</u>		
Test Date	Water Removal Rate (L/min)	Static Water Level (m)	
1988/07/19	31.82	43.28	

Well Completion				Measurement in Metric
Total Depth Drilled	Finished Well Depth	Start Date	End Date	
146.30 m		1988/07/18	1988/07/19	
<b>Borehole</b>				
Diameter (cm)	From (m)	To (m)		
0.00	0.00	146.30		
<b>Surface Casing (if applicable)</b>		<b>Well Casing/Liner</b>		
Steel		Plastic		
Size OD :	<u>14.12 cm</u>	Size OD :	<u>11.43 cm</u>	
Wall Thickness :	<u>0.478 cm</u>	Wall Thickness :	<u>0.635 cm</u>	
Bottom at :	<u>29.26 m</u>	Top at :	<u>24.38 m</u>	
		Bottom at :	<u>146.30 m</u>	
<b>Perforations</b>				
From (m)	To (m)	Diameter or Slot Width (cm)	Slot Length (cm)	Hole or Slot Interval (cm)
73.15	146.30	0.318		7.62
Perforated by Machine				
<b>Annular Seal</b> Driven & Welded Ring				
Placed from <u>0.00 m</u> to <u>29.26 m</u>				
Amount _____				
<b>Other Seals</b>				
Type				At (m)
<b>Screen Type</b>				
Size OD : <u>0.00 cm</u>				
From (m)	To (m)	Slot Size (cm)		
Attachment _____				
Top Fittings _____		Bottom Fittings _____		
<b>Pack</b>				
Type _____		Grain Size _____		
Amount <u>0.00</u>				

Contractor Certification	
Name of Journeyman responsible for drilling/construction of well UNKNOWN NA DRILLER	Certification No 1
Company Name MAHAR, VERN DRILLING SERVICES	Copy of Well report provided to owner Date approval holder signed



# Water Well Drilling Report

**View in Imperial**   **Export to Excel**

GIC Well ID                      364867

GoA Well Tag No.

Drilling Company Well ID

Date Report Received            1988/08/10

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GOWN ID

Well Identification and Location										Measurement in Metric	
Owner Name NANNINGA, ARNOLD		Address RR1 BARRHEAD			Town		Province		Country		Postal Code T0G 0E0
Location	1/4 or LSD SE	SEC 21	TWP 62	RGE 3	W of MER 5	Lot	Block	Plan	Additional Description		
Measured from Boundary of					GPS Coordinates in Decimal Degrees (NAD 83)				Elevation _____ m		
_____ m from					Latitude <u>54.374062</u> Longitude <u>-114.383304</u>				How Elevation Obtained		
_____ m from					Map				Not Obtained		

Additional Information										Measurement in Metric
Distance From Top of Casing to Ground Level _____ cm										
Is Artesian Flow _____					Is Flow Control Installed _____					
Rate _____ L/min					Describe _____					
Recommended Pump Rate _____ 31.82 L/min					Pump Installed _____		Depth _____ m			
Recommended Pump Intake Depth (From TOC) _____ 0.00 m					Type _____		Make _____		H.P. _____	
										Model (Output Rating) _____
Did you Encounter Saline Water (>4000 ppm TDS) _____					Depth _____ m		Well Disinfected Upon Completion _____			
Gas _____					Depth _____ m		Geophysical Log Taken _____			
Remedial Action Taken:					Submitted to ESRD					
										Sample Collected for Potability _____
										Submitted to ESRD _____
Additional Comments on Well										

Yield Test			Taken From Ground Level			Measurement in Metric
			Depth to water level			
Test Date 1988/07/19	Start Time 12:00 AM	Static Water Level 43.28 m	Pumping (m)	Elapsed Time Minutes:Sec	Recovery (m)	
<b>Method of Water Removal</b>						
Type Pump _____						
Removal Rate _____ 31.82 L/min						
Depth Withdrawn From _____ 91.44 m						
If water removal period was < 2 hours, explain why						

Water Diverted for Drilling		
Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification	
Name of Journeyman responsible for drilling/construction of well UNKNOWN NA DRILLER	Certification No 1
Company Name MAHAR, VERN DRILLING SERVICES	Copy of Well report provided to owner    Date approval holder signed

## Part 2 – Technical Requirements

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### GENERAL ENVIRONMENTAL INFORMATION

(complete this section for the worst case of the existing facility which is the closest to water bodies or water wells and for each of the proposed facilities)

Facility description / name (as indicated on site plan)

Existing: hog barn

Proposed 1: layer barn

Proposed 2: \_\_\_\_\_

Proposed 3: \_\_\_\_\_

Facility and environmental risk information		Facilities				NRCB USE ONLY	
		Existing	Proposed 1	Proposed 2	Proposed 3	Meets requirements	Comments
Flood plain information	What is the elevation of the floor of the lowest manure storage or collection facility above the 1:25 year flood plain or the highest known flood level?	<input checked="" type="checkbox"/> >1 m <input type="checkbox"/> ≤ 1 m	<input checked="" type="checkbox"/> >1 m <input type="checkbox"/> ≤ 1 m	<input type="checkbox"/> >1 m <input type="checkbox"/> ≤ 1 m	<input type="checkbox"/> > 1 m <input type="checkbox"/> ≤ 1 m	<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES with exemption	
	Surface water information	How many springs are within 100 m of the manure storage facility or manure collection area?	0	no			<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES with exemption
	How many water wells are within 100 m of the manure storage facility or manure collection area?	1	0			<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES with exemption	
	What is the shortest distance from the manure collection or storage facility to a surface water body? (e.g., lake, creek, slough, seasonal)	>500	>500			<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES with exemption	
Groundwater information	What is the depth to the water table?		>5			<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES with exemption	
	What is the depth to the groundwater resource/aquifer you draw water from?	200'	300'			<input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES with exemption	

Additional information (attach supporting information, e.g. borehole logs, records, etc. you consider relevant to your application)



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# Part 2 – Technical Requirements

Application under the Agricultural Operation Practices Act for a confined feeding operation, manure collection area and/or manure storage facility(ies)

## SOLID MANURE, COMPOST, & COMPOSTING MATERIALS: Barns, feedlots, & storage facilities - Concrete liner

(complete a copy of this section for EACH barn, feedlot, and storage facility for solid manure, composting materials, or compost with a concrete liner)

Facility description / name (as indicated on site plan) 1. layer barn  
 2. \_\_\_\_\_

### Manure storage capacity

	Length (m)	Width (m)	Depth below grade to the bottom of the liner (m)	NRCB USE ONLY Estimated storage capacity (m <sup>3</sup> )
1.	180'	46'	liner is above grade.	
2.				
TOTAL CAPACITY				

I plan to use a short-term solid manure storage (STMS) as part of my manure storage and handling plan for this CFO. The AOPA requirements for STMS are set out in the NRCB [Short-Term Solid Manure Storage Requirements Fact Sheet](#).

### Surface water control systems

Describe the run-on and runoff control system

manure storage is in the barn, under a roof

### Liner protection

Describe how the physical integrity of the liner will be maintained

liner is concrete.

#### NRCB USE ONLY

Requirements met:  YES  NO

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## SOLID MANURE, COMPOST, & COMPOSTING MATERIALS: Barns, feedlots, & storage facilities - Concrete liner (cont.)

### Concrete liner details

Concrete thickness <p style="text-align: center;">5"</p>	Method of sulphate protection: <p style="text-align: center;">T50 or similar</p>
Concrete strength <p style="text-align: center;">25 mpa</p>	Concrete reinforcement size and spacing <p style="text-align: center;">10 mm rebar @ 16" spacing</p>

Concrete requirements can be found in Technical Guideline Agdex 096-93

Guideline minimums:  
 Solid manure: 25MPa (D)  
 Solid manure (wet): 30MPa (C)  
 Method of sulphate protection:  
 Type 50 or Type 10 with fly ash or equivalent

### NRCB USE ONLY

Requirements met:  YES  NO  
 Condition required:  YES  NO  
 Report attached:  YES  NO

### Additional information *(attach as required)*

#### NRCB USE ONLY

Nine month manure storage volume requirements met  YES  YES With STMS  NO

Depth to water table: \_\_\_\_\_ Requirements met:  YES  NO

Depth to Uppermost groundwater resource: \_\_\_\_\_ Requirements met:  YES  NO

ERST completed:  see ERST page for details

#### Surface water control systems

Requirements met:  YES  NO Details/comments:

#### Concrete liner details

Leakage detection system required:  YES  NO If yes, please explain why.