

Technical Document RA24025



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)

NRCB USE ONLY	Application number RA24025	Legal land description SE 26-37-28 W4M
<input type="checkbox"/> Approval <input type="checkbox"/> Registration <input checked="" type="checkbox"/> Authorization <input type="checkbox"/> Amendment		

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.

23-05-2024

Date of signing

Spruit Farms Ltd

Corporate name (if applicable)

Signature

Edwin Spruit

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)
new pit in existing barn	13x2.55x1.25
new pit in existing barn attached to above	3x8.5x1.25
AO note: applicant is proposing the renovation of two pits within the existing "dry sow barn 2"	

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

Existing facilities	Dimensions (m) (length, width, and depth)	NRCB USE ONLY
west barn	35x49	
middle	18x19	
east south	23x23	
NRCB USE ONLY		
Existing facilities confirmed		

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)

Existing facilities continued	Dimensions (m) (length, width, and depth)	NRCB USE ONLY
EAST NORTH	18 x 54	
LAGOON	37 x 55	
WEST SIDE (SOW BARN)	30 x 90 x 1.85	
EXTENSION WEST BARN	35 x 42 x 0.9	
CENTRE NORTH	26 x 6.4 x 1.25	
ANY OTHER PERMITTED		
PITS IN PERMITS:		
RA 14007		
RA 14007 B		
RA 06028		
NOT EXCLUDING ANY ^{OTHER} PERMITTED		
PITS ON THIS LOCATION		
NOT MENTIONED HERE		
<p>AO note: The "dry sow 2" barn is 35 m wide and includes two portions: the older northern portion of the barn is 49 m long and the newer southern extension is 42 m long. In RA14007 these are referred to as the "old west barn" and the "new weaner barn", respectively.</p>		
<p>Not stated above, Authorization RA16036 permitted the construction of a manure storage pump pit. That pit was constructed to be 3.6 m x 3.6 m x 4 m deep. Additionally, Authorization RA21022 permitted a new pit (26 m x 6.4 m x 1.25 m) inside dry sow barn 2 (referred to as dry sow barn 3 in RA21022)</p>		

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)

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

solid flooring will be taken out.
existing pit walls will be used as walls of new pit.

Construction completion date for proposed facilities June 2025

Additional information

some increase in manure storage, however, not significant
pits will not get closer to water wells than existing pits already are
pits will not get closer to neighbours than existing pits already are
pits will be shallower than other recently permitted pits on same farm

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
no changes			
AO note: The CFO is currently permitted for 2,068 farrowing sows; no proposed increase in livestock			

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)

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 _____

00191164-00-00 and 371615-00-00

Signed this 23 day of May, 2024.

Signature of Applicant or Agent

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)

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

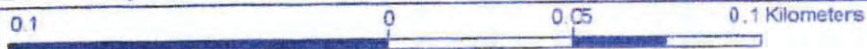
Red Deer County Map (2020 image)



Legend

- Municipal Address**
 - Residence
 - Business
 - Industry
 - Community and Recreation
 - Mobile Park
- Quarter Section Labels**
- Section Labels**
- Municipal**
- Highways**
- Road Network**
 - Municipal Roads
 - Subdivision Roads
 - SERVICE RD
 - Alleys
- Township**
- Waterbodies**
- Parcels**
- County**
- Neighbouring MDs**
- X = WATER WELLS**

1:2,000



NAD_1983_10TM_AEP_Resource
© Latitude Geographics Group Ltd

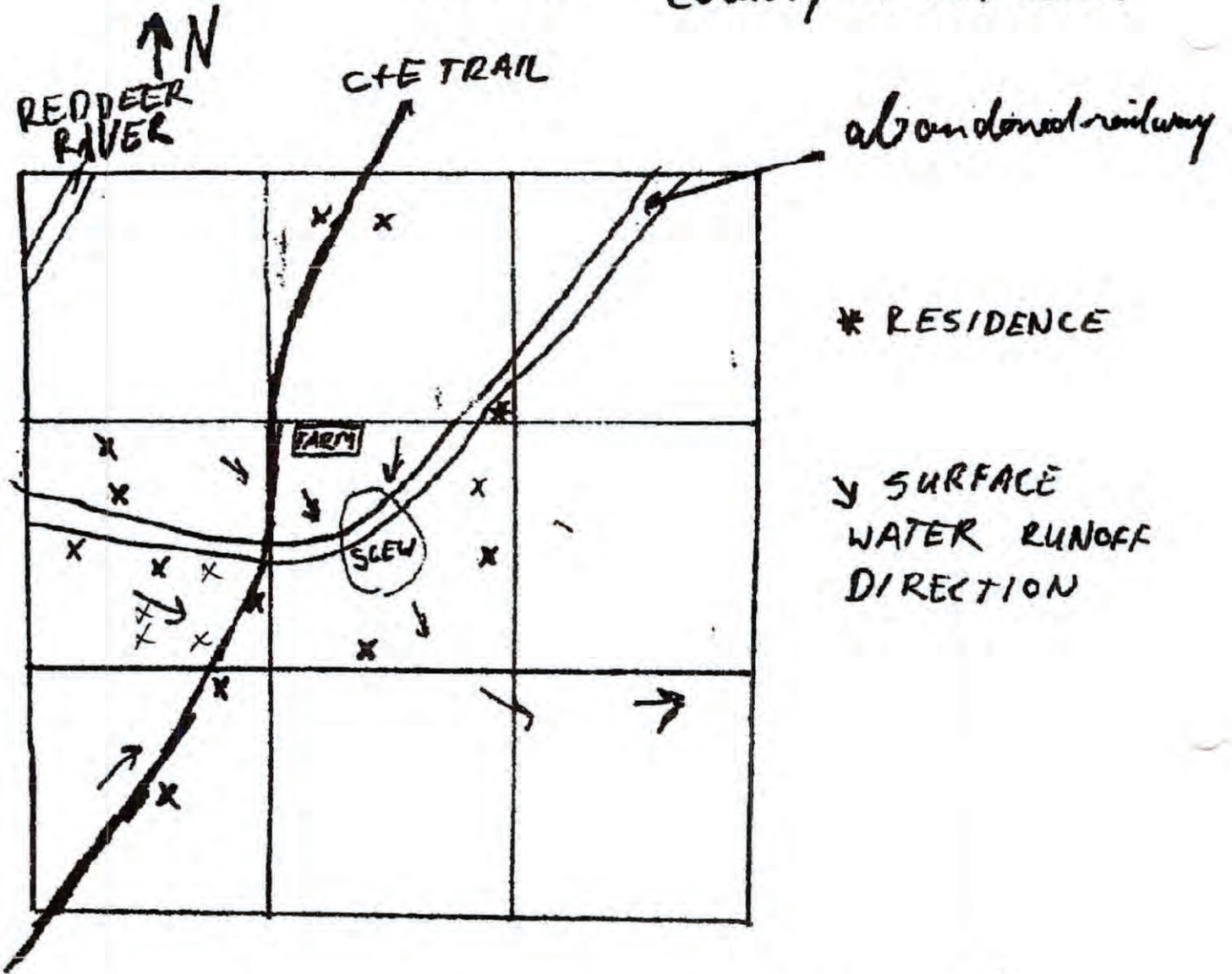
This map is a user generated static output from an internet mapping site and is for reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable.
THIS MAP IS NOT TO BE USED FOR NAVIGATION

Notes

RA21022 Page 7 of 12

1:20000

COUNTY OF RED DEER



Farm is on north west corner of
SE - 26 - 37 - 28 - W4

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)

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: all existing facilities Proposed 1: new pit in Dryslow barn 2

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 checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES with exemption	Not located in a known flood plain
	How many springs are within 100 m of the manure storage facility or manure collection area?	0	0			<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES with exemption	None observed or reported
Surface water information	How many water wells are within 100 m of the manure storage facility or manure collection area?	2	1			<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> YES with exemption	3 water wells within 100m of dry sow barn 2
	What is the shortest distance from the manure collection or storage facility to a surface water body? (e.g., lake, creek, slough, seasonal)	100	130			<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES with exemption	155 m EMS to slough; 175 m dry sow barn 2 to slough
Groundwater information	What is the depth to the water table?	2	2			<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES with exemption	>3 m based on previous construction
	What is the depth to the groundwater resource/aquifer you draw water from?	22.5 m				<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES with exemption	21.3 m based on AEP WWID #1470607

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

Water wells within 100 meter of proposed pit in Drysow barn 2

One water well is located approximately 35 m from the proposed pit.

It is upstream.

The proposed pit for Drysow barn 2 will not be closer to the well than the existing pits currently are.

We have closed off one well that was within 100 meter of manure storage. There used to be 3 wells as indicated on permit RA14007 of 2015.

Since this permit we have added a well south of the barn at 100+ meters from any manure storage.

The water from the well in use is sampled and submitted every year as per NRCB conditions.

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)

NRCB USE ONLY

WATER WELL AND SURFACE WATER INFORMATION

Well IDs: 1470607 102577 261980

Surface water related concerns from directly affected parties or referral agencies: YES NO

Groundwater related concerns from directly affected parties or referral agencies: YES NO

Water wells N/A

If applicable, exemption for 100 m distance requirements applied: YES NO Condition required: YES NO

Surface water N/A

If applicable, exemption for 30 m distance requirements applied: YES NO Condition required: YES NO

Water Well Exemption Screening Tool N/A

Water Well ID	Preliminary Screening Score	Secondary Screening Score	Facility
1470607	25	7	Dry sow barn 2
102577	21	9	Dry sow barn 2
261980	14	7	Dry sow barn 2

Groundwater or surface water related comments:

Preliminary screening score 10-28: Continue to next section
 Secondary screening score 4-19: Exemption more likely

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)

NRCB USE ONLY
ENVIRONMENTAL RISK SCREENING INFORMATION

ERST for proposed facilities

Facility	Groundwater score	Surface water score	File number
Renovated pits	Low	Low	RA24025

ERST for existing facilities

Facility	Groundwater score	Surface water score	File number
EMS	Low	Low	RA14007
Old middle barn	Low	Low	RA14007
Old east barn	Low	Low	RA14007
Sow (new west) barn	Low	Low	RA14007
Finisher barn	Low	Low	RA14007
Manure storage pump pit	Low	Low	RA16036

ERST related comments:

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)

DISTANCE OF ANY MANURE STORAGE FACILITY (EXISTING OR PROPOSED) TO NEIGHBOURING RESIDENCES

Neighbour name(s)	Legal land description	Distance (m)	NRCB USE ONLY				
			Zoning (LUB) category	MDS category (1-4)	Distance (m)	Waiver attached (if required)	Meets regulations
S+S Anderson	SE-26-37-28	450	Ag	1	430		Yes with exemption
Mullarney	SE-26-37-28	400	Ag	1	350		Yes with exemption
Frenette	SE-26-37-28	500	Ag	1	500		Yes with exemption

LAND BASE FOR MANURE AND COMPOST APPLICATION (complete only if an increase in livestock or manure production will occur)

Name of land owner(s)*	Legal land description	Usable area** (ha)	Soil zone ***	NRCB USE ONLY	
				Usable area (ha)	Agreement attached (if required)
N/A					
				N/A	
Total					

* If you are **not** the registered landowner, you must attach copies of land use agreements signed by all landowners.

** Available manure spreading area (excluding setback areas from residences, common bodies of water, water wells, etc. as identified in Agdex 096-5 [Manure Spreading Regulations](#))

*** Brown, dark brown, black, grey wooded, or irrigated

Additional information (attach any additional information as required)

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)

NRCB USE ONLY

MINIMUM DISTANCE SEPARATION

Methods used to determine distance (if applicable): Aerial photography

Margin of error (if applicable): +/- 5 m

Requirements (m): Category 1: 704 Category 2: 939 Category 3: 1174 Category 4: 1878

Technology factor: YES NO

Expansion factor: YES NO

MDS related concerns from directly affected parties or referral agencies: YES NO

Under section 3(5)(c) of the Standards and Administration Regulation the MDS requirement is considered to be met.

LAND BASE FOR MANURE AND COMPOST APPLICATION

Land base required: _____

N/A for authorization applications

Land base listed: _____

Area not suitable: _____

Available area: _____

Requirement met: YES NO

Land spreading agreements required: YES NO

Manure management plan: YES NO

If yes, plan is attached:

PLANS

Submitted and attached construction plans: YES NO

Submitted aerial photos: YES NO

Submitted photos: YES NO

GRANDFATHERING

Already completed: YES NO N/A

If already completed, see DS RA14007

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)

LIQUID MANURE COLLECTION AND/OR STORAGE: In-barn - Concrete liner

(complete a copy of this section for **EACH** proposed in-barn liquid manure storage facility with a concrete liner)

- Facility description / name (as indicated on site plan)
1. pit D2 (dry sow barn 2)
 2. Attached pit (dry sow barn 2)
 3. _____

Manure storage capacity (use one row in the table for **EACH** in-barn storage. Attach additional pages if you require more rows)

	Length (m)	Width (m)	Total depth (m)	Depth below ground level (m)	NRCB USE ONLY	
					Calculated storage capacity (m ³)	
1.	13	2.55	1.25	1.25	41.4 m ³	
2.	3	8.5	1.25	1.25	31.9 m ³	
3.						
TOTAL CAPACITY					73.3 m ³	

Concrete liner details

Scrape alleys or unslatted portions of barn floors (if applicable)	Concrete thickness n/a		Method of sulphate protection	
	Concrete strength		Concrete reinforcement size and spacing	
In-barn manure pit floors	Concrete thickness 4"		Method of sulphate protection HS, HSB or equivalent Gub	
	Concrete strength 30 mpa @ 56 days 32 MPa		Concrete reinforcement size and spacing 10 mil 44" o/c 12"	
In-barn manure pit walls	Concrete thickness 6"		Method of sulphate protection HS, HSB or equivalent Gub	
	Concrete strength 30 MPa @56 days 32 MPa	Horizontal reinforcement size and spacing 18"	Vertical reinforcement size and spacing 12'	



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)

LIQUID MANURE COLLECTION AND/OR STORAGE: In-barn - Concrete liner (cont.)

Describe how the joints at the junction of the pit walls, pit floors and any other joints will be sealed
water stop in centre of wall (expanding)

Describe sealing practices for piping, etc. that penetrates the liner
butyl caulking around pipes

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

Guideline minimums:

Solid manure: 25MPa (D)

Solid manure (wet): 30MPa (C)

Liquid manure: 32MPa (B)

Category A is required to be engineered

Method of sulphate protection:

Type 30 or Type 10 with fly ash or equivalent

NRCB USE ONLY

Requirements met: YES NO

Condition required: YES NO

Additional information

NRCB USE ONLY

Liquid manure storage volume calculator attached: YES NO

Depth to water table: > 3m

Requirements met: YES NO

Depth to uppermost groundwater resource: 21.3 m

Requirements met: YES NO

As water table depths can fluctuate seasonally and over the years, a condition will be added to the permit requiring construction to stop if the water table is observed to be less than one metre from the base of the proposed pit at the time of construction. A condition will also be added requiring submission of proof that the pit liner meets the requirements in technical guideline Agdex 096-93 Non-engineered concrete liners for manure collection and storage areas

ERST completed: see ERST page for details

Concrete liner requirements

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

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)

NRCB USE ONLY

ALL SIGNATURES IN FILE YES NO

DATES OF APPROVAL OFFICER SITE VISITS

June 17, 2024	

CORRESPONDENCE WITH MUNICIPALITIES AND REFERRAL AGENCIES

Date deeming letters sent: May 24, 2024

Municipality: Red Deer County

letter sent response received written/email verbal no comments received

Alberta Health Services: N/A

letter sent response received written/email verbal no comments received

Alberta Environment and Parks: N/A

letter sent response received written/email verbal no comments received

Alberta Transportation: N/A

letter sent response received written/email verbal no comments received

Alberta Regulatory Services: N/A

letter sent response received written/email verbal no comments received

Other: Cross Roads Gas Co-op Ltd., Alta Link Management Ltd. N/A

letter sent response received written/email verbal no comments received

Other: _____ N/A

letter sent response received written/email verbal no comments received