

Technical Document RA23032

Part 2 – Technical Requirements



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

NRCB USE ONLY	Application number	Legal land description
<input type="checkbox"/> Approval <input type="checkbox"/> Registration <input checked="" type="checkbox"/> Authorization <input type="checkbox"/> Amendment	RA23032	SE-29-37-1-W5

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.

Date of signing: DEC, 14, 2023 Signature: [Redacted]
 Corporate name (if applicable): PRINSE FARMS AB Print name: JASON PRINSE

GENERAL INFORMATION REQUIREMENTS

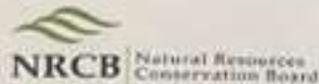
Proposed facilities: list all proposed confined feeding operation facilities and their dimensions. Indicate whether any of the proposed facilities are additions to existing facilities. (attach additional pages if needed)	
Proposed facilities	Dimensions (m) (length, width, and depth)
Heifer Pens to create adequate space for youngstock	39M by 18M

Existing facilities: list ALL existing confined feeding operation facilities and their dimensions		
Existing facilities	Dimensions (m) (length, width, and depth)	NRCB USE ONLY
See RA 12014 next page		Confirmed

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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 14 day of DECEMBER, 2023

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 #1066203

Signed this 14 day of DECEMBER, 2023

Signature of Applicant or Agent

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AO Note: The applicant is not proposing to make any changes to livestock numbers; therefore an additional water license is not required.

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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: Dairy barn (existing) Proposed 1: Proposed heifer pens

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 type="checkbox"/> >1 m <input checked="" 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	Site is not located in a known flood plain
Surface water information	How many springs are within 100 m of the manure storage facility or manure collection area?	None	None		<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES with exemption	No springs observed
	How many water wells are within 100 m of the manure storage facility or manure collection area?	1	0		<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES with exemption	1 ww w/i 100 m of CFO facilities, not w/i 100 m of proposed facility
	What is the shortest distance from the manure collection or storage facility to a surface water body? (e.g. lake, creek, slough, seasonal)	175m Intermittent Creek	175m			<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES with exemption
Groundwater information	What is the depth to the water table?	5.5m	5.5 m		<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES with exemption	Confirmed
	What is the depth to the groundwater resource/aquifer you draw water from?	7.01m	7.01 m		<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES with exemption	Possible UGR at 4.6 m WW 1066208

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

AO note: The applicant estimated that near the CFO facilities, the water table is 5.5 m below grade. The closest well has the potential for a UGR at 4.6 m below grade; however, since the well is >200 m from the proposed facility, site slope and elevation changes may result in a different depth to the UGR under the proposed facility. Regardless, the proposed facility will be built at grade.

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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. Heifer Barn (AO Note, the app is not proposing to have a roof over the pens at this time)
 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 ³)
1.	27m	21m	0	few months
2.				
TOTAL CAPACITY				

Dimensions listed are are MSF/MCA; larger dimensions listed on page 1 include pony wall thickness

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
 The barn is all concrete lined with a concrete curb system to contain material. All natural rain water runoff and snow melt water will be directed between ditches and a inground drainage pipe sytem installed.

AO Note: The site already has culverts and ditches in place to manage run on. The proposed pens will utilize the existing infrastructure.

Liner protection

Describe how the physical integrity of the liner will be maintained
 See concrete specs on next page showing specs.

NRCB USE ONLY
Requirements met: <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO

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

Concrete liner details

Concrete thickness 5" min	Method of sulphate protection: Type 50
Concrete strength 25 mpa	Concrete reinforcement size and spacing 24" on center each way, 10mm bar

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)*

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Nine month manure storage volume requirements met YES YES With STMS NO
 Depth to water table: 5.5 m Requirements met: YES NO
 Depth to Uppermost groundwater resource: 4.6 m Requirements met: YES NO
 ERST completed: see ERST page for details

Surface water control systems

Requirements met: YES NO Details/comments:

Concrete liner details

A condition will be added requiring that the applicant provide proof that the concrete liner meets NRCB's technical guidelines.

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

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NRCB USE ONLY
ENVIRONMENTAL RISK SCREENING INFORMATION

ERST for **proposed** facilities

Facility	Groundwater score	Surface water score	File number
Heifer pen	low	low	RA23032

ERST for **existing** facilities

Facility	Groundwater score	Surface water score	File number
calving, maternity, young stock barn, barn addition			
	low	low	RA22017
EMS	moderate	low	RA22017

ERST related comments:

A water well monitoring condition was added in RA22017 to address the moderate potential risk to groundwater.

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WATER WELL AND SURFACE WATER INFORMATION

Well IDs: 1066208 Additional residential well (possibly 436868?)

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 **> 100 m from facility**

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

Groundwater or surface water related comments:

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MINIMUM DISTANCE SEPARATION

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

Margin of error (if applicable): _____

Requirements (m): Category 1: N/A Category 2: _____ Category 3: _____ Category 4: _____

Technology factor: YES NO

Expansion factor: YES NO

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

The proposed heifer pen is located at the centre of the CFO; other facilities are closer to neighbours. Under AOPA's Standards and admin regulation 3(5)(c)(ii), MDS does not apply as the applicant is building a new facility, and not increasing the amount of manure produced, and is not building closer to existing neighbours

LAND BASE FOR MANURE AND COMPOST APPLICATION

Land base required: _____ N/A

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 RA12014

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NRCB USE ONLY

ALL SIGNATURES IN FILE YES NO

DATES OF APPROVAL OFFICER SITE VISITS

February 5, 2024	

CORRESPONDENCE WITH MUNICIPALITIES AND REFERRAL AGENCIES

December 15, 2023

Date deeming letters sent: _____

Municipality: Red Deer County

letter sent response received written/email verbal no comments received

Alberta Health Services:

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: Burnt Lake Gas Coop, Vesta Energy, Cenovus Energy 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