

Technical Document RA24042



NRCB Natural Resources
Conservation Board

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 RA24042	Legal land description SW 22-40-27 W4M
<input checked="" type="checkbox"/> Approval <input type="checkbox"/> Registration <input 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.

Jan, 6, 2025

Date of signing

Thornspyc Dairy Ltd

Corporate name (if applicable)

Signature

Jan van de Brake

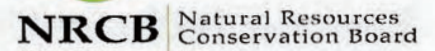
Print name

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)
1. New solid bedding pack barn (Lactating & Dry)		110m, 40m, 0
2. Youngstock #2, Replacement and addition to youngstock shed		125m, 16m, 0
3. Youngstock #3, Addition to youngstock pack shed (1 continuous shed)		125m, 16m, 0
AO note: the proposed expansion (+150 milking cows) will be managed on a solid manure system only. The freestall dairy barn only has capacity for the current 150 milking cows. There will be no expansion to scrape alleys or liquid manure systems.		AO note: 125 m x 50 m = final dimensions. The current youngstock 3 is made up of 2 smaller facilities which will be extended and widened to form one continuous shed.

Existing facilities: list ALL existing confined feeding operation facilities and their dimensions			
Existing facilities		Dimensions (m) (length, width, and depth)	NRCB USE ONLY
Calf Hutch Barn		28m, 9m, 0	Existing facilities confirmed
Youngstock #2 Pack Shed with concrete alley		53m, 13m, 0 (to be decommissioned and rebuilt)	
Youngstock #3 (pack shed w/ Concrete)		120m, 25m, 0	
NRCB USE ONLY		125 m x 16 m (to be extended)	
This operation does not have any NRCB-issued permits.			

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Storage facility(ies)

(to be decommissioned and rebuilt)

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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

The old facility will be disposed of before building

AO note: youngstock shed #2 will be replaced and expanded

Construction completion date for proposed facilities Winter 2026

Additional information

Facilities will be built in stages with hopes of starting the first as soon as we have the permit in place.

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
Lactating dairy cattle (plus dries and replacements)	150	150	300
AO note: applicant has also requested a grandfathering for 150 lactating cows			

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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

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) No 21968, File 80315

Signed this 16 day of December, 2024. _____ 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 _____ day of _____, 20____. _____ 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

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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: Existing

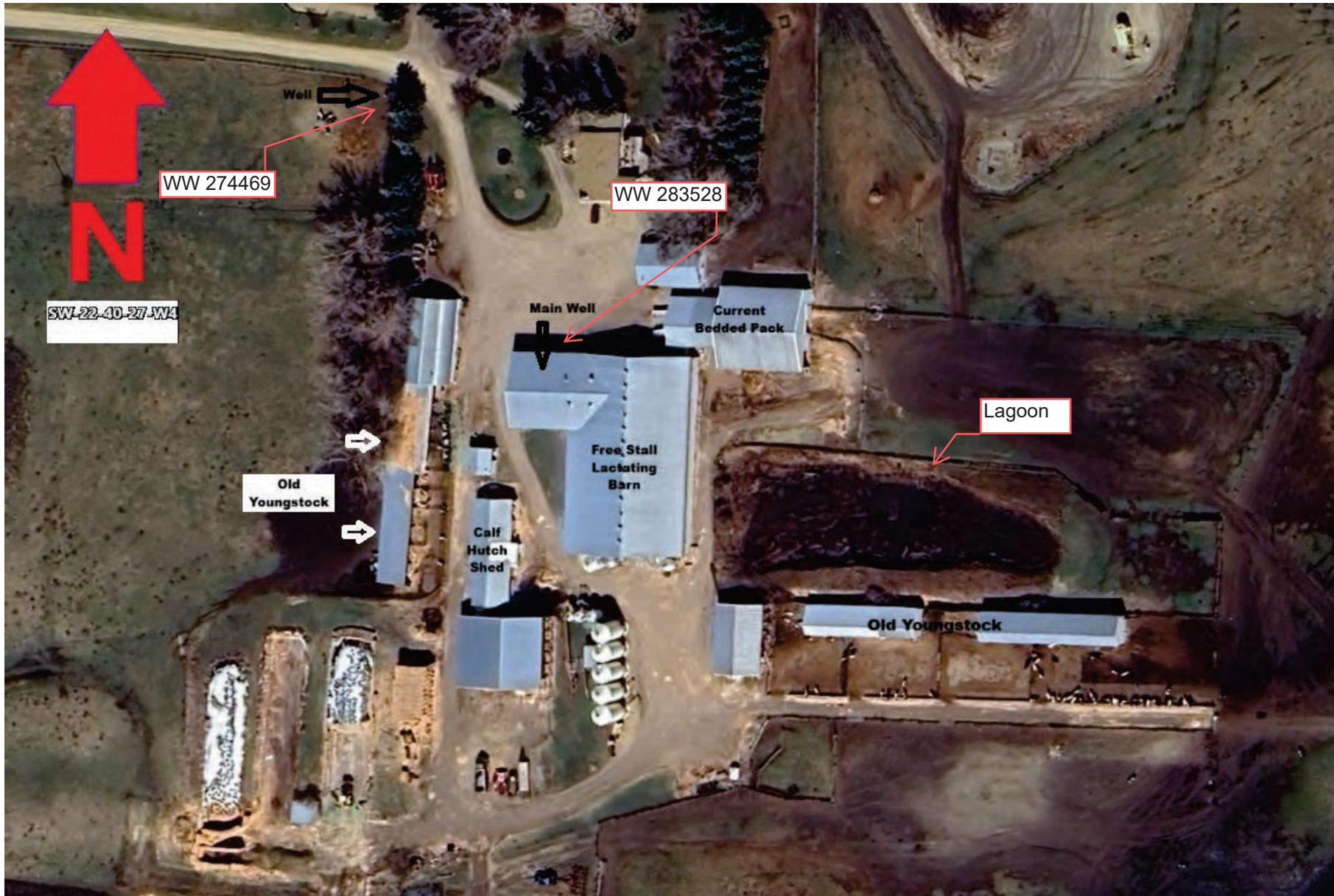
Proposed 1: Proposed pack barn

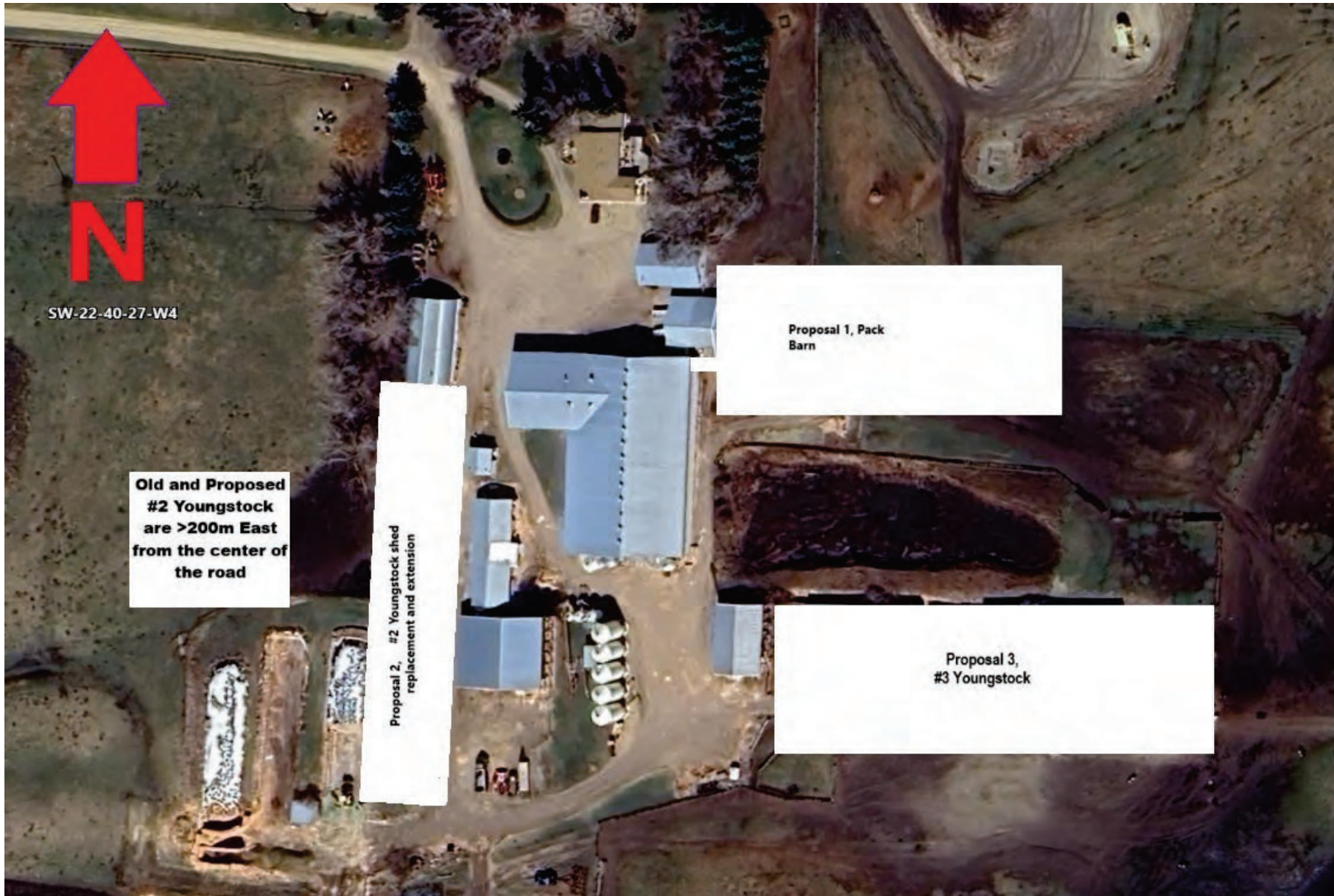
Proposed 2: #2 youngstock

Proposed 3: #3 youngstock

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 checked="" type="checkbox"/> >1 m <input type="checkbox"/> ≤ 1 m	<input checked="" type="checkbox"/> > 1 m <input type="checkbox"/> ≤ 1 m	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES with exemption	Confirmed
Surface water information	How many springs are within 100 m of the manure storage facility or manure collection area?	0	0	0	0	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES with exemption	None; confirmed on site
	How many water wells are within 100 m of the manure storage facility or manure collection area?	1	1	0	0	<input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> YES with exemption	2 wells within 100 meters of proposed youngstock shed #2
	What is the shortest distance from the manure collection or storage facility to a surface water body? (e.g., lake, creek, slough, seasonal)	275m	345m	370m	225m	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES with exemption	Proposed youngstock shed #3 ~50 m from slough
Groundwater information	What is the depth to the water table?	17.6m 11.5m				<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES with exemption	~10 m from drilling logs
	What is the depth to the groundwater resource/aquifer you draw water from?	45m and 29m				<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES with exemption	32 m from WWID 283528

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





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NRCB USE ONLY

WATER WELL AND SURFACE WATER INFORMATION

Well IDs: 283528 274469

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
283528	33 = Action required; continue to next section	8 = exemption more likely	Pack barn, youngstock shed 2, youngstock shed 3
274469	18 = continue to next section	8 = exemption more likely	Pack barn, youngstock shed 2

Groundwater or surface water related comments:

An exemption to the 100 m setback for both water wells will be granted. A water well monitoring condition for WWID 283528 will be included in the permit due to the construction of the well, and the proximity of the well to manure storage and collection areas.

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NRCB USE ONLY

ENVIRONMENTAL RISK SCREENING INFORMATION

ERST for **proposed** facilities

Facility	Groundwater score	Surface water score	File number
Solid bedding pack barn	Low	Low	RA24042
Youngstock shed #2	Low	Low	RA24042
Youngstock shed #3	Low	Low	RA24042

ERST for **existing** facilities

Facility	Groundwater score	Surface water score	File number
Lagoon	Low	Low	RA24042
Freestall dairy barn	Low	Low	RA24042

ERST related comments:

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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
Kassies Dairy	NW-15-40-27-W4	470m	Agriculture	1	475 m	N/A	Yes to all
Reuben Krazy (Krazy Family Farm)	SE-21-40-27-W4	620m	Ag	1	612 m		
Kassies Dairy	NE-16-40-27-W4	440m	Ag	1	465 m		

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

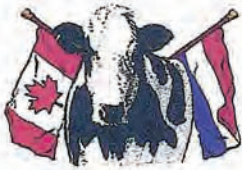
Name of land owner(s)*	Legal land description	Usable area** (ha)	Soil zone ***	NRCB USE ONLY	
				Usable area (ha)	Agreement attached (if required)
Thornspyc Dairy	SW-22-40-27-W4 SE-22-40-27-W4 NE-30-39-27-W4	60 58 44.5	Black Black Black		
Kevin Debuik	SE-09-40-27-W4	41	Black		Yes
Duane Fairhurst	NW-20-39-27-W4	53	Black		Yes
Garry Devnes	SW-09-40-27-W4 NW-33-39-27-W4	52 44.5	Black Black		Yes
			Total	353 ha	

* 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)



Land Application Agreement for Receiving Manure from Thornspyc Dairy Ltd. on Cropland

The undersigned landowner agrees to allow manure from Thornspyc Dairy Ltd. to be spread on 130 acres of his/her land. The land is located in the SL one quarter of Section 09, in 40 Township, of 27 County. The undersigned landowner is the holder of Permit Number (none).

If the land indicated above received manure from livestock in addition to that from Thornspyc Dairy Ltd., please list the number and types of livestock below (if none, please indicate none):


Signature of Landowner

This Agreement is Good Until End of Lease

Garry de Vries
Name of Landowner


Phone Number


Address

City

T4L 2N1
Postal Code

Dec 20, 2024
Date



Land Application Agreement for Receiving Manure from Thornspyc Dairy Ltd. on Cropland

The undersigned landowner agrees to allow manure from Thornspyc Dairy Ltd. to be spread on 110 acres of his/her land. The land is located in the NW one quarter of Section 33, in 39 Township, of 27 County. The undersigned landowner is the holder of Permit Number (none).

If the land indicated above received manure from livestock in addition to that from Thornspyc Dairy Ltd., please list the number and types of livestock below (if none, please indicate none):


Signature of Landowner

This Agreement is Good Until end of lease

Gary de Vries
Name of Landowner


Phone Number


Address

La Crosse
City

T4L 2M1
Postal Code

Dec 20, 2017
Date



Land Application Agreement for Receiving Manure from Thornspyc Dairy Ltd. on Cropland

The undersigned landowner agrees to allow manure from Thornspyc Dairy Ltd. to be spread on 120⁺ acres of his/her land. The land is located in the NW one quarter of Section 20, in 39 Township, of 27 County. The undersigned landowner is the holder of Permit Number (none).

If the land indicated above received manure from livestock in addition to that from Thornspyc Dairy Ltd., please list the number and types of livestock below (if none, please indicate none):

Signature of Landowner

This Agreement is Good Until end of land rental agreement

Duane Fairhurst

Name of Landowner

Phone Number

Address

Bentley AB

City

T0C 1S0

Postal Code

15-Jan-2018

Date



Land Application Agreement for Receiving Manure from Thornspyc Dairy Ltd. on Cropland

The undersigned landowner agrees to allow manure from Thornspyc Dairy Ltd. to be spread on 100 acres of his/her land. The land is located in the SE one quarter of Section 09, in 40 Township, of 27. W4 County. The undersigned landowner is the holder of Permit Number (none).

If the land indicated above received manure from livestock in addition to that from Thornspyc Dairy Ltd., please list the number and types of livestock below (if none, please indicate none):

[Redacted Signature]

Signature of Landowner

This Agreement is Good Until END OF RENTAL AGREEMENT

K. Debuc

Name of Landowner

[Redacted Phone Number]

Phone Number

[Redacted Address]

Address

LA COMBE

City

T4L-1X3

Postal Code

DEC 27/24

Date

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NRCB USE ONLY

MINIMUM DISTANCE SEPARATION

Methods used to determine distance (if applicable): Google Earth

Margin of error (if applicable): +/- 3 m

Requirements (m): Category 1: 405 m Category 2: 539 m Category 3: 674 m Category 4: 1,079 m

Technology factor: ☐ YES ☒ NO

Expansion factor: ☐ YES ☒ NO

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

LAND BASE FOR MANURE AND COMPOST APPLICATION

Land base required: 278.4 ha

Land base listed: 353 ha

Area not suitable: N/A

Available area: 353 ha

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 _____

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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. Pack Barn
2. #2 Young Stock and #3 Youngstock

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.	110	36 40 m	<1m	
2.	125 and 125	16 and not less than 16m	<1m for both	
TOTAL CAPACITY				Adequate storage

AO note: facilities will not be constructed below grade. Final dimensions of youngstock #3 are 125 m x 50 m

☒ 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
N/A All Facilities are enclosed

Liner protection

Describe how the physical integrity of the liner will be maintained
Crack checking and filling

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 6 inches or greater as required	Method of sulphate protection: Type 50
Concrete strength 30Mpa	Concrete reinforcement size and spacing As per requirement <i>AO note: re-bar separation required to be 18"</i>

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: ~10 m Requirements met: ☒ YES ☐ NO

Depth to Uppermost groundwater resource: 32 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 included requiring the concrete liner of the barn and youngstock sheds to meet the requirements for category D (solid manure - dry) in Technical Guideline Agdex 096-93 "Non-Engineered Concrete Liners for Manure Collection and Storage Areas".

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

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NRCB USE ONLY

ALL SIGNATURES IN FILE

☒ YES ☐ NO

DATES OF APPROVAL OFFICER SITE VISITS

October 23, 2024	

CORRESPONDENCE WITH MUNICIPALITIES AND REFERRAL AGENCIES

Date deeming letters sent: January 30, 2025

Municipality: Lacombe 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: Atco Gas and Pipelines Ltd. and Vesta Energy Ltd. ☐ N/A

☒ letter sent ☐ response received ☐ written/email ☐ verbal ☒ no comments received

Other: City of Lacombe ☐ N/A

☒ letter sent ☒ response received ☒ written/email ☐ verbal ☐ no comments received



Appendix A: Lacombe County Letter



Lacombe County

July 12, 1999

Hans Eggink
RR1
Lacombe AB
T0C 1S0

Transmitted by Fax to (403) 782-6735

Dear Mr. Eggink:

**RE: Construction of New Dairy Barn
Hanmon Dairies Ltd. (formerly Eggink Dairies)
SW 22-40-27-W4M, southwest of Lacombe**

This is to advise that no development permit will be required from the County for the construction of a dairy barn, provided the "replacement" building is designed and used for not more than 150 milking cows.

No expansion or other changes to the dairy will be permitted, unless prior approval is received from County. An application to expand the dairy will be reviewed for compliance with standards contained provincial code of practice for responsible livestock development and manure management, as well as County's own policies and regulations. A copy of the procedure followed by the County is enclosed.

Please note that permission is also required from the County to build a new manure storage facility or site, or to expand or modify the existing earthen storage lagoon. The County directs that all storage facilities be properly engineered by a licensed professional engineer, including design, construction supervision and final certification of the facility.

If you need more information or if you have any further questions, please do not hesitate to call me.

Yours truly,
LACOMBE COUNTY

Allan Williams, ACP, MCIP
Planner/Development Officer

Enclosure

5432 - 56 AVENUE
LACOMBE, ALBERTA T4L 1E9
TELEPHONE (403) 782-6601 • FAX (403) 782-3820



Appendix B: 2002 Aerial Imagery