

Technical Document RA24026

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	Legal land description
	RA24026	NE corner of SE 2-54-4 W4M
<input type="checkbox"/> Approval	<input checked="" 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.

Dec 5 2024
Date of signing

Corporate name (if applicable)


Signature
Courtney Unruh
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)
Egg layer chicken barn	280'x60' 85 m x 18 m
Manure pad	50'x50' 15 m x 15 m
Egg handling	50'x60' 15 m x 18 m

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

Existing facilities	Dimensions (m) (length, width, and depth)	NRCB USE ONLY

NRCB USE ONLY

Not an existing CFO

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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 ____ 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 3rd day of December, 2024.



Signature of Applicant or Agent



Well
>30' from N property line

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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: _____ Proposed 1: Chicken barn with manure shed
 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 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 in flood plain
	How many springs are within 100 m of the manure storage facility or manure collection area?		0			<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES with exemption	None known
Surface water information	How many water wells are within 100 m of the manure storage facility or manure collection area?		0			<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES with exemption	None within 100 m
	What is the shortest distance from the manure collection or storage facility to a surface water body? (e.g., lake, creek, slough, seasonal)		approx. 300 m			<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES with exemption	180 m to seasonal creek
Groundwater information	What is the depth to the water table?		> 5			<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES with exemption	Meets requirements
	What is the depth to the groundwater resource/aquifer you draw water from?		15m			<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES with exemption	10.97 m ID142759

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

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NRCB USE ONLY
ENVIRONMENTAL RISK SCREENING INFORMATION

ERST for **proposed** facilities

Facility	Groundwater score	Surface water score	File number
See Decision Summary RA24026 regarding ERST for proposed barn and manure pad			

ERST for **existing** facilities

Facility	Groundwater score	Surface water score	File number
N/A			

ERST related comments:

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NRCB USE ONLY

WATER WELL AND SURFACE WATER INFORMATION

Well IDs: ID142759 _____

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

Groundwater or surface water related comments:



Water Well Drilling Report

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

GIC Well ID 142759
 GoA Well Tag No.
 Drilling Company Well ID
 Date Report Received 1986/07/07

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 ANDERSON, MARY		Address RR1, DEWBERRY			Town		Province		Country		Postal Code T0B 1G0	
Location	1/4 or LSD SE	SEC 2	TWP 54	RGE 4	W of MER 4	Lot	Block	Plan	Additional Description			
Measured from Boundary of					GPS Coordinates in Decimal Degrees (NAD 83)					Elevation _____ m		
_____ m from					Latitude <u>53.631833</u> Longitude <u>-110.478965</u>					How Elevation Obtained		
_____ m from					How Location Obtained					Not Obtained		
					Not Verified							

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
3.66		Yellow Sand
5.49		Yellow Clay
10.97		Blue Clay
17.37		Fine Grained Sand & Gravel

Yield Test Summary			Measurement in Metric
Recommended Pump Rate	<u>36.37 L/min</u>		
Test Date	Water Removal Rate (L/min)	Static Water Level (m)	
1986/06/06	90.92	9.14	

Well Completion				Measurement in Metric
Total Depth Drilled	Finished Well Depth	Start Date	End Date	
17.37 m		1986/06/06	1986/06/06	
Borehole				
Diameter (cm)	From (m)	To (m)		
0.00	0.00	17.37		
Surface Casing (if applicable)		Well Casing/Liner		
Plastic				
Size OD :	<u>12.70 cm</u>	Size OD : <u>0.00 cm</u>		
Wall Thickness :	<u>0.711 cm</u>	Wall Thickness : <u>0.000 cm</u>		
Bottom at :	<u>15.85 m</u>	Top at : <u>0.00 m</u>		
Bottom at : <u>0.00 m</u>				
Perforations				
From (m)	To (m)	Diameter or Slot Width (cm)	Slot Length (cm)	Hole or Slot Interval(cm)
Performed by				
Annular Seal Puddled Clay				
Placed from <u>0.00 m</u> to <u>0.00 m</u>				
Amount _____				
Other Seals				
Type				At (m)
Screen Type Stainless Steel				
Size OD : <u>10.16 cm</u>				
From (m)	To (m)	Slot Size (cm)		
15.85	17.37	0.038		
Attachment <u>Attached To Casing</u>				
Top Fittings <u>Coupler</u>		Bottom Fittings <u>Plug</u>		
Pack				
Type <u>Artificial</u>		Grain Size <u>16-20</u>		
Amount <u>300.00 Pounds</u>				

Contractor Certification	
Name of Journeyman responsible for drilling/construction of well UNKNOWN NA DRILLER	Certification No. 1
Company Name MORTON'S WATER WELL DRILLING LTD.	Copy of Well report provided to owner _____ Date approval holder signed _____



Water Well Drilling Report

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

GIC Well ID 142759
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1986/07/07

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 ANDERSON, MARY		Address RR1, DEWBERRY			Town		Province		Country		Postal Code T0B 1G0	
Location	1/4 or LSD SE	SEC 2	TWP 54	RGE 4	W of MER 4	Lot	Block	Plan	Additional Description			
Measured from Boundary of					GPS Coordinates in Decimal Degrees (NAD 83)					Elevation _____ m		
_____ m from					Latitude <u>53.631833</u> Longitude <u>-110.478965</u>					How Elevation Obtained		
_____ m from					How Location Obtained					Not Obtained		
					Not Verified							

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 _____ 36.37 L/min					Pump Installed Yes _____					Depth _____ m	
Recommended Pump Intake Depth (From TOC) _____ 15.24 m					Type SUB _____					Make _____ H.P. .5	
										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 _____						
Additional Comments on Well _____					Sample Collected for Potability _____					Submitted to ESRD _____	

Yield Test			Taken From Ground Level			Measurement in Metric	
Test Date 1986/06/06	Start Time 12:00 AM	Static Water Level 9.14 m	Depth to water level				
			Pumping (m)	Elapsed Time Minutes:Sec	Recovery (m)		
Method of Water Removal							
Type Air _____							
Removal Rate _____ 90.92 L/min							
Depth Withdrawn From _____ 15.85 m							
If water removal period was < 2 hours, explain why _____							

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

Contractor Certification	
Name of Journeyman responsible for drilling/construction of well UNKNOWN NA DRILLER	Certification No 1
Company Name MORTON'S WATER WELL DRILLING LTD.	Copy of Well report provided to owner _____ Date approval holder signed _____

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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
① Jim and Janice Hilts	SW 2-54-4 W4	1500m	Ag	Cat 1	1037 m	N/A	Yes
② Roger and Sandra Braithwaite	SW 1-54-4 W4	750m	Ag	Cat 1	768 m		Yes
③ Ryan Parr	NE 2-54-4 W4	750m	Ag	Cat 1	734 m		Yes
④ Eleanor Parr	NW 1-54-4 W4	750m	Ag	Cat 1	674 m		Yes

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

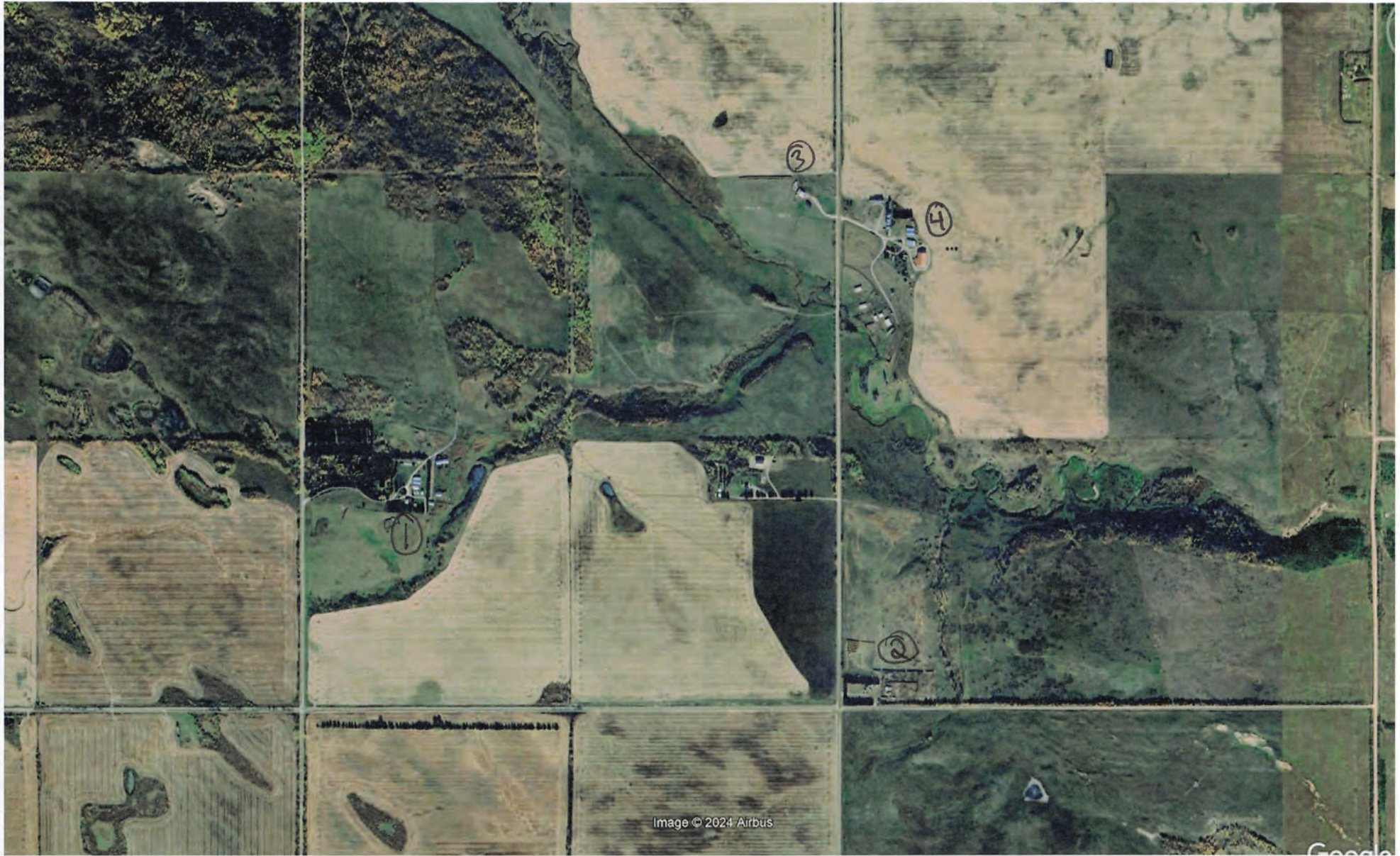
Name of land owner(s)*	Legal land description	Usable area** (ha)	Soil zone ***	NRCB USE ONLY	
				Usable area (ha)	Agreement attached (if required)
Waldo Unruh	NW 5-54- W4	160ac	black		Yes, see attached
Total				160ac	

* 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)



MDS

Manure Spreading Agreement

This agreement is between Courtney and Annabelle Unruh, manure producer, and

Waldo Unruh / Range 45 Ranch Ltd. manure receiver.

Length of agreement: This agreement is valid for a time period of 25 years
(minimum of one year)

Legal land location	Soil type ¹	Acres suitable for manure spreading ²
NW 5 54 4 W4	Black	160 ac

¹ Soil type choices: Dark brown and brown, Grey wooded, Black, Irrigated.

² Land within required setbacks from water bodies, water wells, residences, etc. is not to be included.

Other comments:

Manure producer (Confined Feeding Operation) Legal Land Location SE 2 54 4 W4

Dec 6 / 24
Date of signing


Signature

Courtney Unruh
Print name

Corporate name(if appl)

Manure Receiver – Landowner(s)³

Dec 6 / 24
Date of signing


Signature

Waldo Unruh
Print name

Range 45 Ranch Ltd
Corporate name(if appl)

Date of signing

Signature

Print name

Corporate name(if appl)

³ All registered owners of land, or authorized signing authorities must sign.

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NRCB USE ONLY

MINIMUM DISTANCE SEPARATION

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

Margin of error (if applicable): N/A

Requirements (m): Category 1: 230 m Category 2: 306 m Category 3: 383 m Category 4: 613 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: 34 ha

Land base listed: 64 ha

Area not suitable: N/A

Available area: 64 ha

Applicant has provided adequate land base

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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NRCB USE ONLY

ALL SIGNATURES IN FILE

YES NO

DATES OF APPROVAL OFFICER SITE VISITS

December 19, 2024	

CORRESPONDENCE WITH MUNICIPALITIES AND REFERRAL AGENCIES

Date deeming letters sent: January 21, 2025

Municipality: County of Vermillion River

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: _____ 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

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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. Proposed layer chicken barn
 2. Manure Pad

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.	85	18	0	
2.	15	15	0	

TOTAL CAPACITY

Adequate storage for solid manure on site

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 roof and/or concrete barrier

Liner protection

Describe how the physical integrity of the liner will be maintained seal cracks as needed

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 <i>4"</i>	Method of sulphate protection: <i>Type 50</i>
Concrete strength <i>25 mpa</i>	Concrete reinforcement size and spacing <i>10mm at 12" o.c.</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: >5 m Requirements met: YES NO

Depth to Uppermost groundwater resource: 10.79 m Requirements met: YES NO

ERST completed: see ERST page for details

N/A see DS RA24026

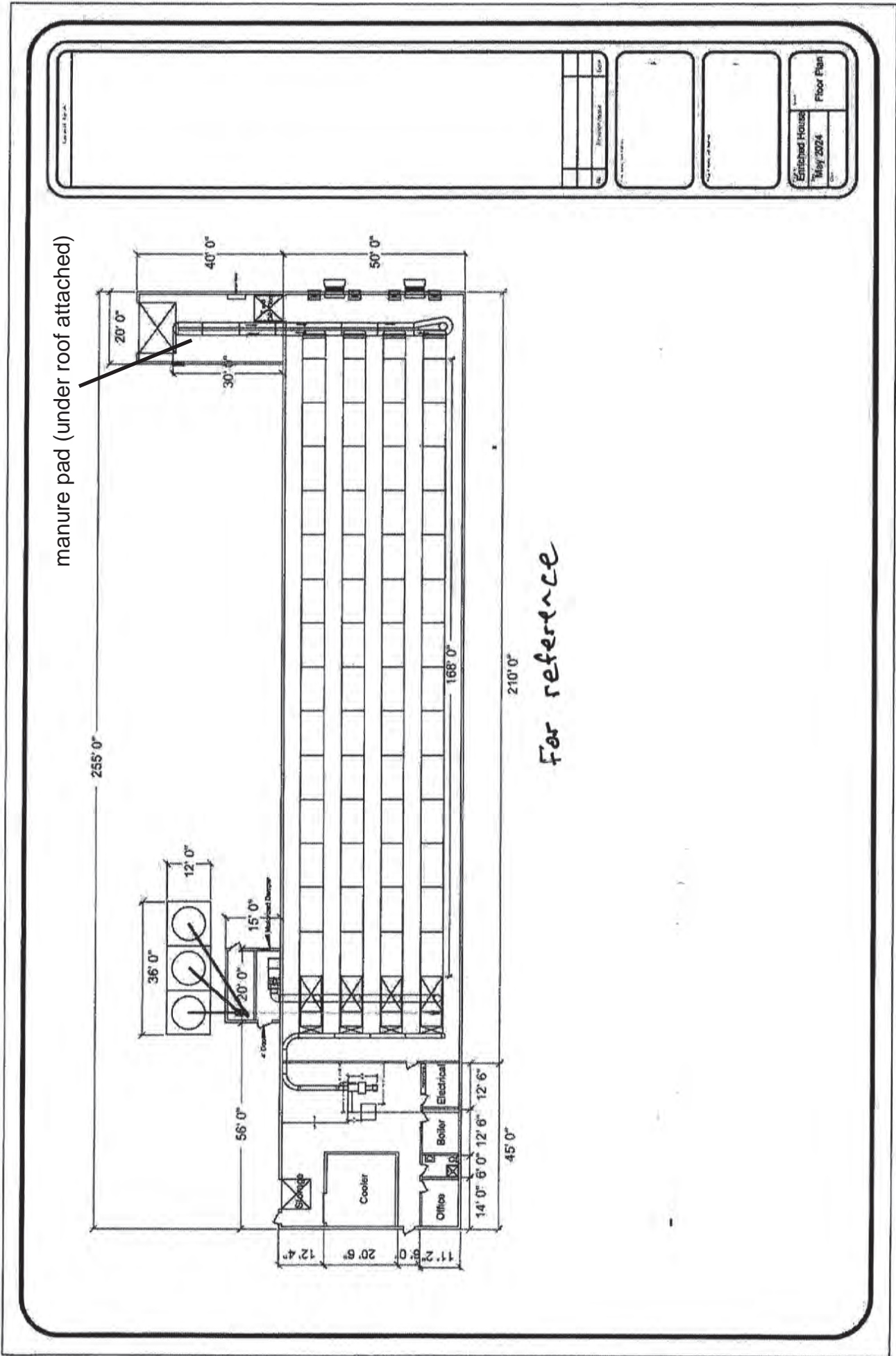
Surface water control systems

Requirements met: YES NO Details/comments:

Concrete liner details

Applicant to provide documentation confirming concrete information

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



manure pad (under roof attached)

For reference

Enriched House		Floor Plan
May 2024		
No.	Project Number	Scale