

Technical Document LA25016



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	Legal land description
<input type="checkbox"/> Approval	<input type="checkbox"/> Registration	<input checked="" type="checkbox"/> Authorization	
<input type="checkbox"/> Amendment		<u>LA25016</u>	<u>NW 2-11-22 W4M</u>

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.

March 5, 2025

Adrian Sinke

Digitally signed by Adrian Sinke
Date: 2025.03.05 13:10:36 -07'00'

Date of signing

Signature

Sinke Farms Ltd

Adrian Sinke

Corporate name (if applicable)

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)
Extend Grow/Finisher barn by 36.5 m (total dimensions: 232.1 m x 28 m)	36.5x28x 0.6 m deep pits

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

Existing facilities	Dimensions (m) (length, width, and depth)	NRCB USE ONLY
Grow/Finish Barn	195.6x28	
Weaner barn	65.8x22.8	
Sow Barn	92.5x42 + 37.4 x 3.9 addition	

NRCB USE ONLY

Confirmed existing facilities

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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

October 31, 2025

Construction completion date for proposed facilities

Additional information

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
Permitted for 360 sows farrow only and 500 sows farrow to finish. No proposed change in livestock- the addition to the grow/finisher barn will produce a heavier carcass weight for the packers			

PROPOSED ADDITION.

Google Maps



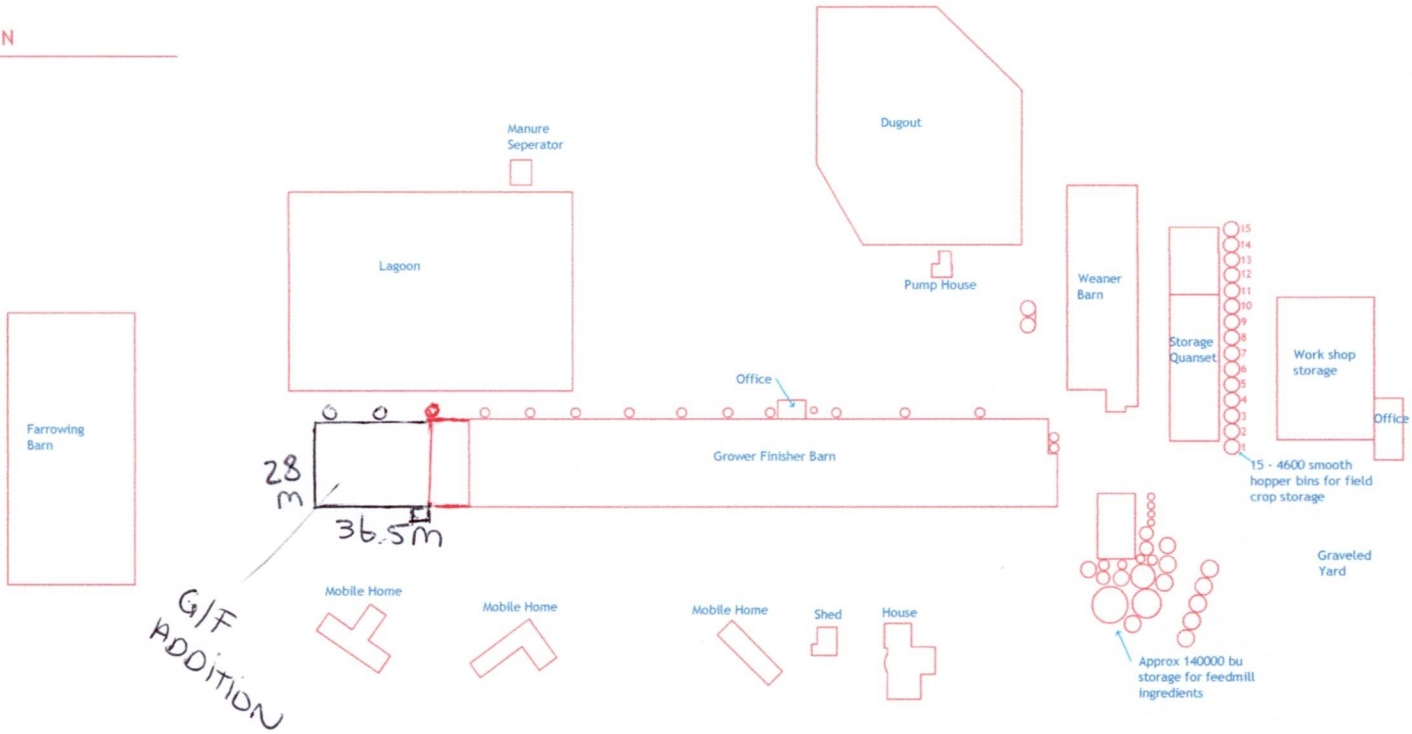
TN

NW-2-11-22 W4

Imagery ©2025 Airbus, CNES / Airbus, Maxar Technologies, S. Alberta MDC31s and Counties, Map data ©2025 20 m

Measure distance
Total distance: 100.45 m (329.55 ft)

Home Yard NW 2-11-22 W4



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Home Yard Overview			
SIZE	PSCM NO.	DWG NO.	REV
SCALE	1/128" = 1'		SHEET

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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 _____

00150685-00-00

Signed this 5 day of March, 2025.

Adrian Sinke

Digitally signed by Adrian Sinke
Date: 2025.03.05 13:18:33 -07'00'

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)



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
Schooten Feedlot	SW 2-11-22 W4	818	Rural Ag	1	818	NA	Yes
Pelleboer Farms	NW 11-11-22 W4	1784	Rural Ag	1	1,705	↓	↓
Brent Van Vaerenberg	SE 3-11-22 W4	1023	Rural Ag	1	1,023	↓	↓
Adrian Sinke	SE 11-11-22 W4	1264	Rural Ag	1	1,286	↓	↓

The proposed construction is within the permitted footprint and is not encroaching on neighbors MDS.

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)	
NA for authorizations						
				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)

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NRCB USE ONLY

MINIMUM DISTANCE SEPARATION

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

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

Requirements (m): Category 1: 701 Category 2: 934 Category 3: 1,168 Category 4: 1,868

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: _____

Land base listed: _____ NA for authorizations

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 LA05039

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NRCB USE ONLY

ALL SIGNATURES IN FILE

YES NO

DATES OF APPROVAL OFFICER SITE VISITS

March 10, 2025	

CORRESPONDENCE WITH MUNICIPALITIES AND REFERRAL AGENCIES

Date deeming letters sent: March 6, 2025

Municipality: Lethbridge 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: LNID, TC Energy N/A

letter sent response received written/email verbal no comments received

Other: ATCO Gas & Pipelines, Alpha Bow Energy N/A

letter sent response received written/email verbal no comments received

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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: Grow/Finish

Proposed 1: G/F Addition

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 in a 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. Confirmed during site visit
Surface water information	How many water wells 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	No water wells registered to LLD
	What is the shortest distance from the manure collection or storage facility to a surface water body? (e.g., lake, creek, slough, seasonal)	2400m to Piyami Drain	2400m to Piyami Drain			<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES with exemption	1600 m to Piyami drain
Groundwater information	What is the depth to the water table?	5m	5m			<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES with exemption	>3 m confirmed
	What is the depth to the groundwater resource/aquifer you draw water from?	No wells	No wells			<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES with exemption	No water wells within 1.5km

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
Grow/finish barn addition	Low	Low	LA25016

ERST for **existing** facilities

Facility	Groundwater score	Surface water score	File number
Grow/finish barn	Low	Low	LA18044
Weaner barn	Low	Low	LA18044
Sow barn	Low	Low	LA18044
EMS	Low	Low	LA18044

ERST related comments:

CFO facilities that meet or exceed AOPA requirements are presumed to pose a low risk to surface water and groundwater

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NRCB USE ONLY

WATER WELL AND SURFACE WATER INFORMATION

Well IDs: No water wells within 1.5 km _____

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:

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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. Grow/Finish Addition
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.	36.5	28	0.6	0.6	613.2
2.					
3.					
TOTAL CAPACITY					613.2

Concrete liner details

Scrape alleys or unslatted portions of barn floors (if applicable)	Concrete thickness 6"		Method of sulphate protection Type 50		
	Concrete strength 32 MPA		Concrete reinforcement size and spacing 10 m 12"x12" OC		
In-barn manure pit floors	Concrete thickness 6"		Method of sulphate protection Type 50		
	Concrete strength 32 MPA		Concrete reinforcement size and spacing 10 m 16"x16" OC		
In-barn manure pit walls	Concrete thickness 6"		Method of sulphate protection 10 m 16"x16" OC		
	Concrete strength 32 MPA	Horizontal reinforcement size and spacing 10 m 12"	Vertical reinforcement size and spacing 10 m 16"		



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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

See attached drawing.

Describe sealing practices for piping, etc. that penetrates the liner

See attached drawing.

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

Guideline minimums:

Solid manure (wet): 30MPa (C)

Liquid manure: 32MPa (B)

Category A is required to be engineered

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

Additional information

NRCB USE ONLY

Liquid manure storage volume calculator attached: YES NO

Depth to water table: > 3 m

Requirements met: YES NO

Depth to uppermost groundwater resource: No water wells within 1.5 km

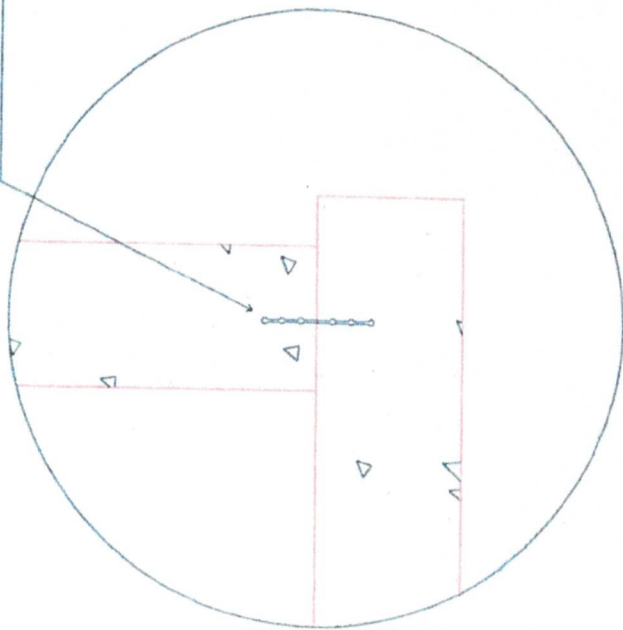
Requirements met: YES NO

ERST completed: see ERST page for details

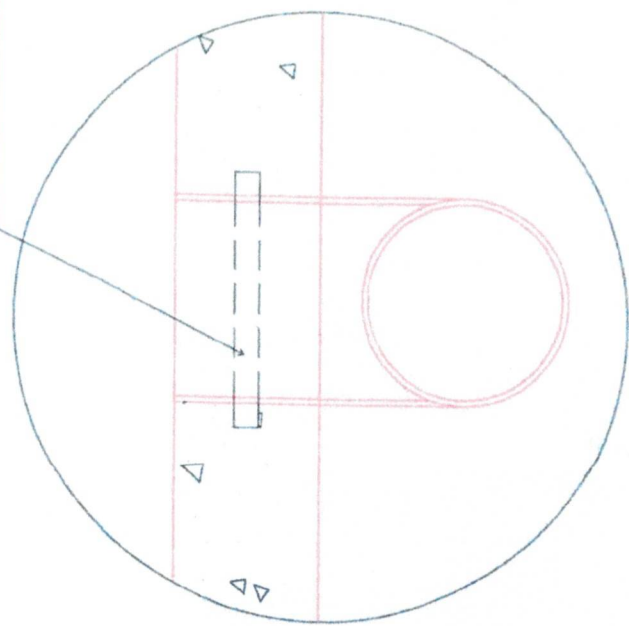
Concrete liner requirements

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

Volclay or PVC
waterstop around all
wall-floor joints.



Volclay around
all drain pipes



	Concrete Connection Details		
	DATE	PROJECT NO.	PAGE NO.
Drawn By	C.S.	SCALE	SHEET

Liquid Manure Storage Volume Calculator

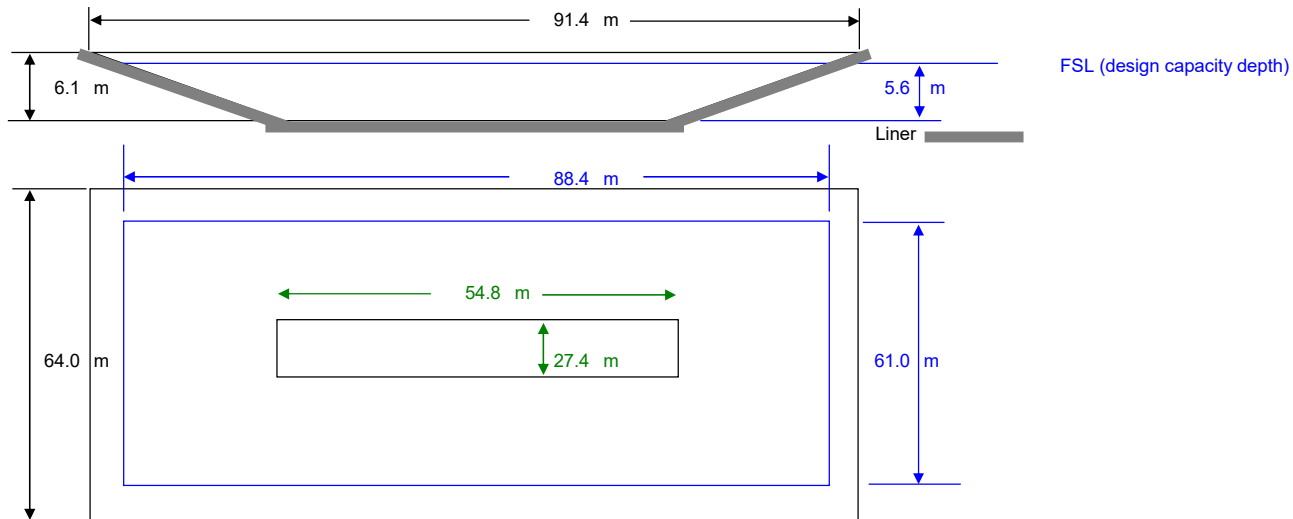
Construction Dimensions of Liquid Manure Storage	
* Only cells in blue can be changed.	
Overall Dimensions of Liquid Manure Storage	
Total Length* ₄	91.4 m
Total Width* ₄	64.0 m
Total Depth* ₄	6.1 m
Design Capacity Depth	5.60 m
End Slope* ₄	3 run:rise
Side Slope* ₄	3 run:rise
Length of Bottom	54.8 m
Width of Bottom	27.4 m
Total Capacity @ top of Bank	21,059 m ³
Liquid MS Dimensions	
	300 ft
	210 ft
	20 ft
	18 ft
	3 run:rise
	3 run:rise
	180 ft
	90 ft
Total Capacity (@top)	743,693 ft ³
	4,632,337 Imp. Gal.
Design Capacity of Liquid Manure Storage (freeboard level)	
Length (design capacity depth)	88.4 m
Width (design capacity depth)	61.0 m
Total Depth	6.1 m
Design Capacity Depth	5.60 m
End Slope	3 run:rise
Side Slope	3 run:rise
Design Capacity (freeboard level)	18,249 m ³
level)	5,392 m ²
Design Capacity (freeboard level)	
	290 ft
	200 ft
	20 ft
	18 ft
	3 run:rise
	3 run:rise
	644,467 ft ³
	4,014,279 Imp. Gal.
	58,043 ft ²

CFO Name ₁	Sinke Farms
Land Location ₁	NW 2-11-22 W4M

Type(s) of Livestock ₂	Number of Livestock	Annual Manure Production (m ³ /hd)
Sows: Farrow only	360	5.8
Sows: Farrow to Finish	500	24.0
N/A	0	0.0
N/A	0	0.0
Total manure Production (m³/yr)		

Minimum 9 Month Liquid Manure Storage Volume Required	
10,566 m³**	373,135 ft ³
	2,324,194 Imp. Gal.

** Design capacity of liquid manure storage should be equal to, or greater than, minimum 9 month liquid manure storage volume required.



— Lines in Black - Overall liquid manure storage dimensions
 — Lines in Blue - Design capacity depth dimensions (excludes freeboard)

NTS - Not To Scale

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NRCB USE ONLY	
LIQUID MANURE STORAGE VOLUME CALCULATOR (if applicable)	
Facility 1	
Name / description EMS	Capacity 18,249 m3
Facility 2	
Name / description Grower/finisher barn	Capacity 3,899 m3
Facility 3	
Name / description	Capacity
Facility 4	
Name / description	Capacity
TOTAL CAPACITY	22,148 m3
REQUIRED 9 MONTH STORAGE CAPACITY	10,566 m3
MEETS THE REQUIREMENTS FOR A MINIMUM OF 9 MONTHS STORAGE	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO