### 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
Approval Registration Authorization	LA24020	SE 5-14-15 W4M
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.

10 2025 thwood Stock Farms Date of signing

Signature Ryan Van Hal

Print name

#### Corporate name (if applicable)

#### 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)
Add 20 Pens (North pens)	243:84 45:72 m 244:0mx 298m
Expand clean water storage	37m × 9/m
	1 Mr.

Existing facilities	Dimensions (m) (length, width, and depth)	NRCB USE ONLY
SEE NEXT Page		
9	A CHARLES IN A	
		ter and the second
NRCB USE ONLY		

Last updated September 11, 2023

# 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)

Existing facilities continued	Dimensions (m) (length, width, and depth)	NRCB USE ONLY
Feed lot Pen 1	205m × 24m	
Feed lot Pen 2	96 m × 45 m	
Feed lot Pen 2 Feed lot Pen 3 Feed lot Pen 4 Feed lot Pen 5	43m x 80 m	Sala estador
Feed lot Pen 4	40m × 43 m	
Feed lot pen 5	35m × 37 m	
Feed lot Pens 6	213.4mx 6/m	
Feed lot Pens 7	243.8 × 57.3m	
Catch basin	76.2 m x 38.1 m x 4.9 m deep	
		En l'En sint
		STREET STREET
		The second
		and the second
		C.S. C.Y. S. S.

Last updated September 11, 2023

Sec. S

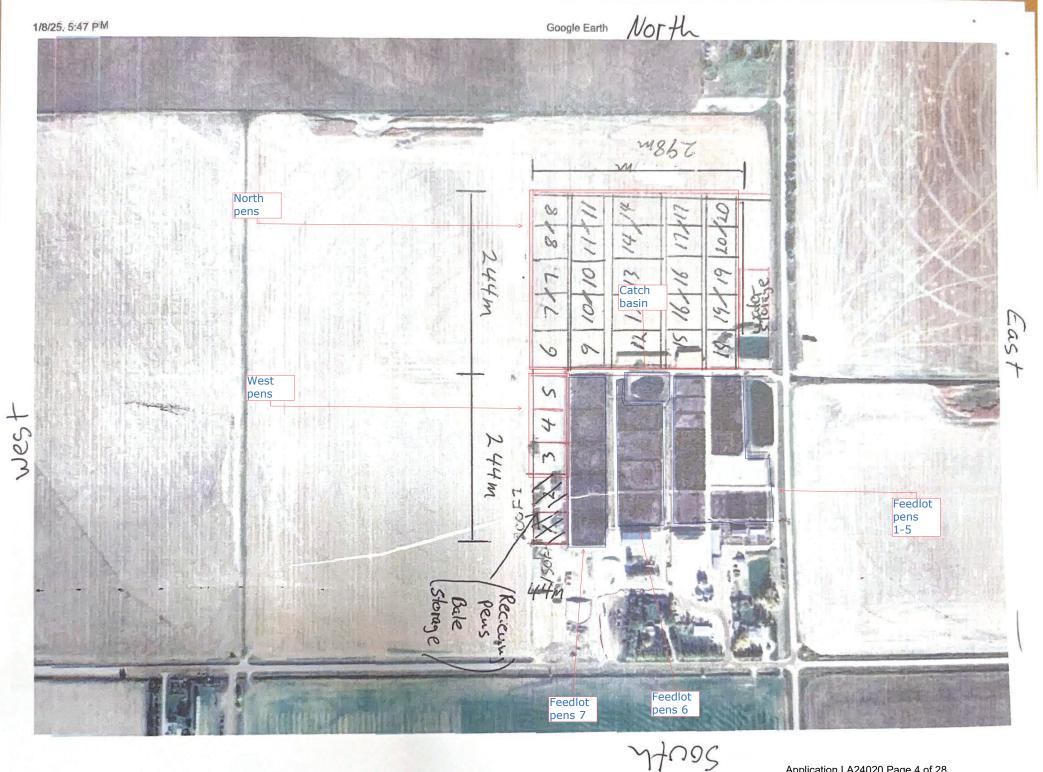
# Part 2 — Technical Requirements



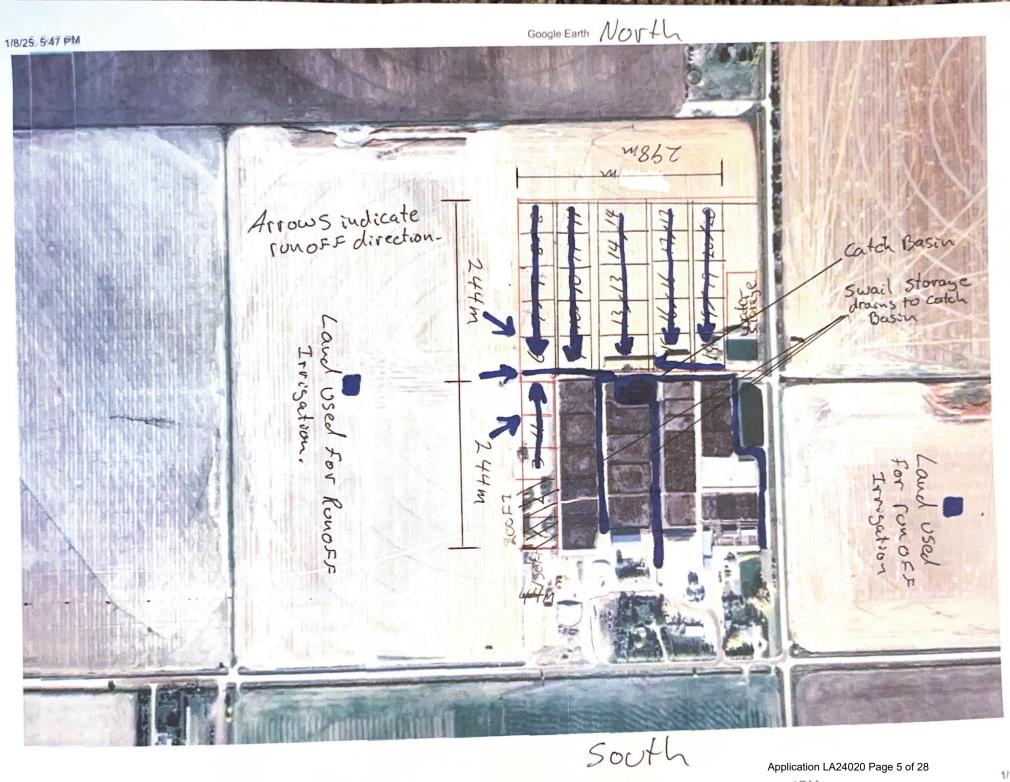
Application under the Agricultural Operation Practices Act for a confined feeding operation, manure collection area, and/or manure storage facility(ies)

		ty	
Not Replacin	ng old Facil	ity	
	0		
truction completion date for proposed facili	ities		
ional information			
O Comment: Applicant is proposing to comp	lete construction of pro	posed facilities by end of A	August 2028
o comment. Applicant is proposing to comp	lete construction of pro	posed facilities by end of A	August 2020.
stock numbers: Complete only if livestock num	bers are different from wh	at was identified in the Part	1 application. Note:
stock numbers: Complete only if livestock num tock numbers increase in your Part 2 application,			
tock numbers increase in your Part 2 application, ity for minimum distance separation (MDS).			
tock numbers increase in your Part 2 application, ity for minimum distance separation (MDS). Livestock category and type	a new Part 1 application i	must be submitted which ma Proposed increase or	y result in a loss of
ty for minimum distance separation (MDS). Livestock category and type ailable in the Schedule 2 of the Part 2 Matters		must be submitted which ma	
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Available in the Schedule 2 of the Part 2 Matters Regulation)	Permitted number Permitted livestock numbers	Proposed increase or decrease in number (if applicable) Proposed increase or decrease in number (if applicable)	Total
Livestock category and type (Available in the Schedule 2 of the Part 2 Matters Regulation) Livestock category and type (Available in the Schedule 2 of the Part 2 Matters Regulation) Regulation) See FCOW/Fmishers 900+//	a new Part 1 application i Permitted number Permitted livestock numbers 4500	nust be submitted which ma Proposed increase or decrease in number (if applicable) Proposed increase or decrease in number (if applicable) <u>4500</u> 3500	Total Total 8000
took numbers increase in your Part 2 application, ity for minimum distance separation (MDS). Livestock category and type ailable in the Schedule 2 of the Part 2 Matters Regulation) Livestock category and type (Available in the Schedule 2 of the Part 2 Matters	a new Part 1 application i Permitted number Permitted livestock numbers 4500	nust be submitted which ma Proposed increase or decrease in number (if applicable) Proposed increase or decrease in number (if applicable) <u>4500</u> 3500	Total Total 8000

Last updated September 11, 2023



Application LA24020 Page 4 of 28



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### 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

### X 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.
- I (we) request that the NRCB process the AOPA application independently of EPA's processing of the CFO's application for a water licence.
- 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 <u>not</u> 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).
- 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.
- 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.
- Provide: Water license number(s) or water conveyance agreement details \_\_\_\_\_

Signed this 10 day of March, 2025.

Signature of Applicant or Agent

Last updated September 11, 2023

# WATER CONVEYANCE AGREEMENT (Water under District's Water Licence)

THIS AGREEMENT is made in duplicate this 12 day of Murch AD 20 25

Between: BOW RIVER IRRIGATION DISTRICT of Box 140, Vauxhall, in the Province of Alberta (hereinafter called the "DISTRICT") of

the First Part

and

SOUTHWOOD STOCK FARMS LTD. Of Box 545, Vauxhall, in the Province of Alberta (hereinafter called the "APPLICANT") of the Second Part

WHEREAS the DISTRICT is empowered under Section 21 of the Irrigation Districts Act to grant and enter into agreements known as Water Conveyance Agreements, and

WHEREAS the DISTRICT has amended the purpose of use of a portion of water within DISTRICT Water License, Priority No. 1992-02-05-010, to purposes other than irrigation and domestic use, and

WHEREAS the APPLICANT has applied to the DISTRICT to enter into a water conveyance agreement to annually convey water to the lands described as:

### SE-5-14-15-W4M

(hereinafter called the "PARCEL OF LAND"), which water is part of the amended portion of the DISTRICT'S Water License with Priority No. 1992-02-05-10.

NOW THEREFORE subject to the terms and conditions hereinafter expressed, the parties hereto agree as follows:

1. The DISTRICT will annually make available to the APPLICANT up to a maximum of <u>102 acre feet</u> of water for the purpose of <u>agricultural (feedlot)</u> use to be conveyed through the irrigation works of the DISTRICT, not in a continuous flow, but as it shall be available, to a Point of Delivery off of <u>D3 PIPELINE</u> in the SE-5-14-15-W4M, for <u>agricultural (feedlot)</u> purposes only and which water is to be used exclusively on the PARCEL OF LAND.

2. The APPLICANT shall be responsible for all costs to supply, install and maintain the turnout from the irrigation works of the DISTRICT at the Point of Delivery as well as the APPLICANTS water diversion and distribution system, and to make any alterations or additions necessary to the irrigation works of the DISTRICT in order to take delivery of water. The turnout and any alterations to the DISTRICT'S works shall be designed and constructed according to the DISTRICT'S specifications and subject to the DISTRICT'S approval. The APPLICANT shall maintain the turnout to the continued satisfaction of the DISTRICT.

3. The APPLICANT hereby acknowledges and agrees that the water in the irrigation system of the DISTRICT may not be potable or may not be suitable for irrigation or other purposes, and the DISTRICT

# WATER CONVEYANCE AGREEMENT (Water under District's Water Licence)

makes no representation, warranty or guarantee, express or implied that the water delivered under this agreement is potable or suitable for the APPLICANT's purposes and the APPLICANT agrees to accept the water delivered in the condition in which it may be found at the Point of Delivery from time to time and to provide such testing, treatment or filtering as the APPLICANT considers necessary.

4. The APPLICANT acknowledges that the irrigation system of the DISTRICT is an open ditch system subjecting the water therein to contamination from all manner of environmental, human and animal factors beyond the control of the DISTRICT and the DISTRICT does not regulate, control or monitor the quality of the water in its system.

5. The DISTRICT shall not be liable for any claim of loss, injury or damage whatsoever arising out of the failure or inability of the DISTRICT to supply water for the purposes covered by this agreement.

6. This agreement shall constitute a yearly term from the date noted above and shall continue in full force and effect from year to year with the APPLICANT having the option of termination of this agreement subject to notice of termination in writing by Registered Mail or in person at the addresses of service listed here below, and giving a minimum of 60 days' notice prior to the effective date of the termination.

BOW RIVER IRRIGATION DISTRICT

P.O. Box 140, VAUXHALL, ALBERTA T0K 2K0

7. The APPLICANT is solely responsible for all costs, approvals and authorizations to construct, operate and maintain his water diversion and distribution system.

8. The APPLICANT will indemnify and save harmless the DISTRICT from any and all injury and damage by reason of the seepage of water from the APPLICANT's conveyance, pumping and storage works and/or from rights of way and easements or titled lands.

9. All water diverted from the works of the DISTRICT by the APPLICANT shall be metered by the APPLICANT through an accurate water meter located at or near the Point of Delivery, installed and maintained in good working order at the cost of the APPLICANT, with unrestricted access to the meter by the DISTRICT, unless an alternate method of estimating volumes is agreed upon.

10. The APPLICANT shall record and forward to the DISTRICT at its address of service, a report of water diverted under this agreement on a per month basis with monthly reports to be received by the DISTRICT no later than the 15<sup>th</sup> of the following month, unless an alternate method of estimating volumes is agreed upon and the need for monthly reporting is waived by the DISTRICT.

11. The DISTRICT will invoice the APPLICANT on an annual basis and the APPLICANT shall annually pay to the DISTRICT a conveyance fee per acre foot as established by DISTRICT By-Laws for the entire volume of water agreed upon in Clause 1 of this agreement regardless of whether or not the actual annual diversion and use by the APPLICANT was less than the agreed upon amount.

12. In the event the APPLICANT, in any one twelve month period beginning November 1<sup>st</sup> of one year and ending October 31<sup>st</sup> of the following year, diverts or uses an amount of water exceeding the total volume of water agreed upon in Clause 1 of this agreement, the APPLICANT must pay double the conveyance fee as noted in Clause 11 of this agreement, for each acre foot of water diverted in excess of the agreed upon amount.

# WATER CONVEYANCE AGREEMENT (Water under District's Water Licence)

13. In addition to the sums payable under Clause 11 and Clause 12 above, the APPLICANT also agrees to pay such amounts as may be imposed from time to time pursuant to Section 132 of the Irrigation Districts Act as "penalties on arrears", which shall apply to all sums payable which have not been paid by the APPLICANT within 30 days of billing.

14. In the event, in any twelve month period, beginning October 1<sup>st</sup> one year and ending September 30<sup>th</sup> of the following year, the DISTRICT determines that additional water over and above the agreed upon amount of water to be annually made available to the APPLICANT as noted in Clause 10f this agreement, is not available for the APPLICANT, the DISTRICT will notify the APPLICANT upon which time the APPLICANT is not allowed to withdraw more than the agreed upon amount.

15. Nothing in this agreement shall be construed as granting to or conferring upon the APPLICANT any proprietary right or interest in any works owned or operated by the DISTRICT.

16. In the event the APPLICANT sells or transfers the operations benefited by this agreement to another party and application is made to the DISTRICT to transfer this agreement to the new party, this agreement will be transferred to the new party subject to the stated purpose of use of water and location of use not changing.

17. Any change in the purpose of use of water or location of use is strictly prohibited.

18. a) Should the APPLICANT be in default of any of the covenants herein provided, the DISTRICT may, upon notice to the APPLICANT, reduce or terminate the delivery of water to the APPLICANT until such time as the APPLICANT has remedied his default.

b) The exercise by the DISTRICT of its rights under Clause 18. a) above, shall not be construed as a termination by the DISTRICT of this agreement.

THIS AGREEMENT is executed by the Parties as of the date shown on the first page of the Agreement.

### BOW RIVER IRRIGATION DISTRICT:



## 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: <u>Feed lot</u> Proposed 2: \_\_\_\_\_

Proposed 1: \_\_\_\_\_

Proposed 3: \_\_\_\_\_

Facility and environmental risk		v and environmental risk				NRCB USE ONLY		
raciii	information		Existing Proposed 1 Proposed 2 Proposed 3		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?	K >1 m □ ≤ 1 m	⊠r >1 m □ ≤ 1 m	⊠ >1 m □ ≤ 1 m	<mark>⊠</mark> > 1 m □ ≤ 1 m	YES NO YES with exemption		
- e	How many springs are within 100 m of the manure storage facility or manure collection area?	NONE				YES NO YES with exemption		
Surface water information	How many water wells are within 100 m of the manure storage facility or manure collection area?	NONE				YES NO		
Sur	What is the shortest distance from the manure collection or storage facility to a surface water body? (e.g., lake, creek, slough, seasonal)	600m	600 m	600 m	600 m	YES NO YES with exemption		
water ation	What is the depth to the water table?		greate	r than	3.5 m	YES NO YES with exemption		
Groundwater information	What is the depth to the groundwater resource/aquifer you draw water from?	19 m	19 m	19m	19m	YES NO YES with exemption		

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



## 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

			Contraction and		NRCB USE ON	LY	
Neighbour name(s)	Legal land description	Distance (m)	Zoning (LUB) category	MDS category (1-4)	Distance (m)	Waiver attached (if required)	Meets regulations
John Seamons	NE 5-14-15 W4	345					
Harvey PEPNECK	5E4-14-15 W4	908					
John Jensma	NE 32-13-15 W4	\$\$8	The second				
Jason Van Hal	NW 32-13-15 W4	630					
Colin Gnns	NW 4-14-15 W4	700					

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

				NRCB US	EONLY
Name of land owner(s)*	Legal land description	Usable area** (ha)	Soil zone ***	Usable area (ha)	Agreement attached (if required)
Southwood	SE 5-14-15 w4	100 AC			
	SE 32-13-15 W4	130AC			
	NW 31-13-15 W4	160 AC			
	5W9-14-15 W4	155 AC			
	NE 33-13-15 W4	155 AC			
			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)

## **Manure Application Agreement**

Field Number		Acres Available for Application
(Example: Field 6	W 1/2 of the NW 1/4 of Section 7, T 97 N, R 52 W, Hanson County,	SD 125.8)
	NW 34-14-16 W4	120
9	NE 33 - 14-16 WY	155
3	NW 33-14-16 WM	125
4	NE 32 14 . 16 WH	120
5	SE 32 - 14 - 16 WH	120
L	NE 29-14 -16 W4	172
Bell	NW 29-14-16 WH	172
Gerten	NE 20-13-15 WY	150
Redekcop Home	SE 19.14.16 WH	132
Redekop Epp	SW 7-14-16 WH	130
	NW 5-1415 W4 NE 5-1415 W4	144

The undersigned hereby authorizes <u>Southwood</u> <u>Stock</u> Forms to spread manure on the above referenced land for a period of <u>25</u> year(s). This agreement will renew year to year unless canceled 30 days prior to the anniversary date of the agreement. Cancellation of this agreement will be made in writing to the above listed person.

Land Owner (Printed): Tim	van der Hoe.k
(Signature):_	
Date: MC	Nr. 7/25

Southwood

SE-22-13-15 W4 150 Acre SW-4-14-15 W4 80 Acre NE-32-13-15 W4 150 Acre

esidence owner(s) information
ALL Names on land title: John Jensma Betty Jensma
Legal land location of residence(s):
Telephone number(s) <sup>1</sup> : Email address(es) <sup>1</sup> :
Address(es) and Postal code(s) : P. D. Box 612 Vauxhall, AB. TOK 2KZ
<sup>1</sup> Please note that personal contact information is for NRCB use ONLY and not publicly released
am/we are the legal landowner(s) of a residence(s) located at the above noted legal land location/address:
I/we have read the NRCB Fact Sheet "Minimum Distance Separation (MDS) Waivers";
I/we have discussed this application with the applicant and understand its potential impacts to our residence(s);
I/we understand that the application <b>does not</b> meet the MDS requirement to my/our residence(s), under the Agricultural Operation Practices Act (AOPA);
I/we understand that this waiver is not valid unless signed by ALL parties identified on the land title as owners;
I/we are not obligated to waive the MDS requirement to our residence(s);
I/we understand that if I/we choose to waive the MDS requirement, I/we can revoke the waiver, by providing written notice to the NRCB approval officer, as set out in the "Minimum Distance Separation (MDS) Waivers" Fact Sheet; and
I/we understand that this waiver is a public document.
laving considered my/our rights, I/we hereby waive the MDS requirement to my/our residence, with respect to
pplication number $LA 24020$
originatures or an residence owner(s) on title
John Jensma Betty Jensma
Printed names of all residence owner(s) on title

Date: 12-2-2025,

MDS Waiver Declaration Page 2 of 2

Ap	plicant information	NRCB application number: <u>LA 24020</u>
Оре	erator/operation name: <u>Sc</u>	Awood STOCK Farms 11d
Add	tress: <u>BOX 214</u>	Vaurhall AB Postal Code: Tok 2KO
Leg	al land location of confined fe	eding operation: <u>SF-5-14-15</u>
(MI abc app	DS) to their residence for the A pye. In making this request, I h plication and a copy of the Nat	vner(s) named below to waive the required minimum distance separation gricultural Operation Practices Act (AOPA) permit application identified ave provided the owner(s) with an opportunity to review my permit ural Resources Conservation Board (NRCB) Fact Sheet "Minimum Distanc able on the NRCB website at www.nrcb.ca. I have also explained:
•	have advised the owner(s) th	in section 3 of the Standards and Administration Regulation of AOPA. I at section 3(6)(a) of the Standards and Administration Regulation allows by the owners of residences, if they agree in writing to grant a waiver;
•		ent does not meet the required MDS to the owner's residence; and,
•	That this waiver applies only manure production, level of increase the MDS would requ	to this application as described. An increase in livestock capacity, annual dour production, change to the site plan or change to a facility that would ire a new waiver.
Fol	lowing is a summary of the pr	posed development:
٠	IVESTOCK, IT any, IS:	ined feeding operation (CFO), including the type, number, and category of $BEEF$ Finisher's
•	type and/or capacity at my C	A permit proposes the following changes to the existing livestock category, 0: n:shers 900 + 165
		8000 Beeffinishers
•	The proposed new CFO facil	y(ies), or changes to the existing CFO facilities, including manure storage, iny other pertinent details, if any, are (attach a site layout plan if available):
	Adding 20 pe	15/ expanding water storage
l th res	<u> </u>	at the waiver is not valid unless ALL registered owners of the

Permit Applicant:	Signature	Date:	Jet/12/2025
Residence owner(s) to initial: _		-	

MDS Waiver Declaration Page 1 of 2

Residence owner(s) information

	ALL Names on land title: Johan Magaretha Siemens
I	Legal land location of residence(s): $ME 5 - 14 - 15 W 4$
	Telephone number(s) <sup>1</sup> : Email address(es) <sup>1</sup> :
,	Address(es) <sup>1</sup> and Postal code(s) <sup>1</sup> : <u>PoBot230</u> tok2K0
3	Please note that personal contact information is for NRCB use ONLY and not publicly released
1 8	am/we are the legal landowner(s) of a residence(s) located at the above noted legal land location/address:
0	/we have read the NRCB Fact Sheet "Minimum Distance Separation (MDS) Waivers";
8	I/we have discussed this application with the applicant and understand its potential impacts to our residence(s);
6	I/we understand that the application does not meet the MDS requirement to my/our residence(s), under the Agricultural Operation Practices Act (AOPA);

- I/we understand that this waiver is not valid unless signed by ALL parties identified on the land title as owners;
- I/we are not obligated to waive the MDS requirement to our residence(s);
- I/we understand that if I/we choose to waive the MDS requirement, I/we can revoke the waiver, by
  providing written notice to the NRCB approval officer, as set out in the "Minimum Distance Separation
  (MDS) Waivers" Fact Sheet; and
- I/we understand that this waiver is a public document.

Having considered my/our rights, I/we hereby waive the MDS requirement to my/our residence, with respect to

Application number <u>LA24020</u> title Johan Siemens Margaretha Siemens Printed names of all residence owner(s) on title

Date: March 19 2025

Applicant information	N	RCB application number: <u>LA 24020</u>
Operator/operation name:	Southwood	STOCK Farms LTD
Address: Box 214	Vauxhall AL	B. Postal Code: Tok 2KO
Legal land location of confi	ned feeding operation:	SE-5-14-15
I have requested the reside	nce owner(s) named be	low to waive the required minimum distance separation ion <i>Practices Act</i> (AOPA) permit application identified

(MDS) to their residence for the Agricultural Operation Practices Act (AOPA) permit application identified above. In making this request, I have provided the owner(s) with an opportunity to review my permit application and a copy of the Natural Resources Conservation Board (NRCB) Fact Sheet "Minimum Distance Separation (MDS) Waivers" available on the NRCB website at www.nrcb.ca. I have also explained:

- The MDS requirement set out in section 3 of the Standards and Administration Regulation of AOPA. I
  have advised the owner(s) that section 3(6)(a) of the Standards and Administration Regulation allows
  this requirement to be waived by the owners of residences, if they agree in writing to grant a waiver;
- That my proposed development does not meet the required MDS to the owner's residence; and,
- That this waiver applies only to this application as described. An increase in livestock capacity, annual
  manure production, level of odour production, change to the site plan or change to a facility that would
  increase the MDS would require a new waiver.

Following is a summary of the proposed development:

 The current scope of my confined feeding operation (CFO), including the type, number, and category of livestock, if any, is:

4500 Beef Finishers

 My application for a new AOPA permit proposes the following changes to the existing livestock category, type and/or capacity at my CFO:

Increase to 8000 BEEF Finishers

 The proposed new CFO facility(ies), or changes to the existing CFO facilities, including manure storage, manure storage volume and any other pertinent details, if any, are (attach a site layout plan if available):
 Site Plan is attached

Adding 20 pens/expanding water Storage

I the applicant understand that the waiver is not valid unless ALL registered owners of the residence sign this document.

Permit Applicant:	Date:	March 19/25
Residence owner(s) to initial:	_	

Construction will start at point 628m From residence. A stake has been set to mark location.



Application LA24020 Page 18 of 28

#### MDS Spreadsheet based on 2006 AOPA Regulations

Category of	Type of Livestock	Factor A	Technology	MU	LSU	Number of	LSU
Livestock	Type of Entertain	i dotor / t	Factor		Factor	Animals	200
eedlot	Beef Cows/Finishers (900+ lbs)	0.700	0.700	0.910	0.4459	8 000	3,567.
Animals	Beef Feeders (450 - 900 lbs)	0.700	0.700	0.500	0.2450		-
	Beef Feeder Calves (<550 lbs)	0.700	0.700	0.275	0.1348		-
	Horses - PMU	0.650	0.700	1.000	0.4550		-
	Horses - Feeders > 750 lbs	0.650	0.700	1.000	0.4550		-
	Horses - Foals < 750 lbs	0.650	0.700	0.300	0.1365		-
	Mules	0.600	0.700	1.000	0.4200		-
	Donkeys	0.600	0.700	0.670	0.2814	-	-
	Bison	0.600	0.700	1.000	0.4200		-
	Other						-
Dairy		0.800	1.100	2.000	1.7600		-
	Free Stall – Lactating Cows with all						
(*count	associated dries, heifers, and calves*						
lactating	Free Stall – Lactating Cows with Dry	0.800	1.100	1.640	1.4432		-
cows only)	Cows only*						
	Free Stall – Lactating Cows only	0.800	1.100	1.400	1.2320		-
	Tie Stall – Lactating Cows only	0.800	1.000	1.400	1.1200		-
		0.800	1.000	1.400	1.1200		-
	Loose Housing – Lactating Cows only						
	Dry Cow	0.800	0.700	1.000	0.5600		-
	Replacements – Bred Heifers	0.800	0.700	0.875	0.4900		-
	(Breeding to Calving)						
	Replacements - Growing Heifers	0.800	0.700	0.525	0.2940		-
	(350 lbs to breeding)						
	Calves (< 350 lbs)	0.800	0.700	0.200	0.1120		-
	Other						-
Swine	Farrow to finish *	2.000	1.100	1.780	3.9160		-
Liquid	Farrow to wean *	2.000	1.100	0.670	1.4740		-
(*count	Farrow only *	2.000	1.100	0.530	1.1660		-
sows only)	Feeders/Boars	2.000	1.100	0.200	0.4400		-
	Growers/Roasters	2.000	1.100	0.118	0.2600		-
	Weaners	2.000	1.100	0.055	0.1210		-
	Other						-
Swine	Farrow to finish *	2.000	0.800	1.780	2.8480		-
Solid	Farrow to wean *	2.000	0.800	0.670	1.0720		-
(*Count	Farrow only *	2.000	0.800	0.530	0.8480		-
sows only)	Feeders/Boars	2.000	0.800	0.200	0.3200		-
	Growers/Roasters	2.000	0.800	0.118	0.1888		-
	Weaners	2.000	0.800	0.055	0.0880		-
	Other						-
Poultry	Chicken - Breeders - Solid	1.000	0.700	0.010	0.0070		-
	Chicken - Layers - Liquid (includes	2.000	1.100	0.008	0.0176		-
	associated pullets)						
	Chicken - Layers - (Belt Cage)	2.000	0.700	0.008	0.0112		-
	Chicken - Layers - (Deep Pit)	2.000	0.700	0.008	0.0112		-
	Chicken - Pullets/Broilers	1.000	0.700	0.002	0.0014		-
	Turkey - Toms/Breeders	1.000	0.700	0.020	0.0140		-
	Turkey - Hens (light)	1.000	0.700	0.013	0.0091		-
	Turkey - Broilers	1.000	0.700	0.010	0.0070		-
	Ducks	1.000	0.700	0.010	0.0070		-
	Geese	1.000		0.020	0.0140		-
	Other						-
Sheep and	Sheep - Ewes/Rams	0.600	0.700	0.200	0.0840		-
Goats	Sheep - Ewes with lambs	0.600	0.700	0.250	0.1050		-
	Sheep - Lambs	0.600	0.700	0.050	0.0210		-
	Sheep - Feeders	0.600		0.100	0.0420		-
	Goats - Meat/Milk (per Ewe)	0.700	0.700	0.170	0.0833		
	Goats - Nannies/Billies	0.700	0.700	0.140	0.0686		-
	Goats - Feeders	0.700	0.700	0.077	0.0377		-
	Other						-
Cervid	Elk	0.600	0.700	0.600	0.2520		-
	Deer	0.600	0.700	0.200	0.0840		-
	Other						-
Wild Boar	Feeders	2.000	0.800	0.140	0.2240	-	-
	Sow (farrowing)	2.000		0.371	0.5936		-
	· · · · · · · · · · · · · · · · · · ·	2.500	2.500	0.071	2.22.30		-

# For New Operations Dispersion Factor

1

Distance Metres 812 · 08<u>3</u> Odour Objective 41.04 54.72 68.4 Feet Category 2,666 1,083 1,354 2,167 3,554 4,443 3 109.44 7,108 4

# For Expanding Operations Dispersion Factor Expansion Factor

1 0.77

	Distance		ance
Category	Odour Objective	Feet	Metres
1	41.04	2,052	626
2	54.72	2,737	834
3	68.40	3,421	1,043
4	109.44	5,473	1,668

Total

#### Name Southwood Stock Farm Ltd. Address Legal Land Location SE-5-14-15-W4

#### Landbase Requirements (hectares) based on 2006 AOPA requirements

0

Livestock	Type of Livestock	Number of Animals	Dark Brown & Brown	Grey Wooded	Black (ha)	Irrigated (ha)
LIVESIOCK		Animais	(ha)	(ha)	(IIA)	(na)
eedlot	Cows/Finishers (900+ lbs)	8000.0	1000.0	832.0	624.0	496
Animals	Feeders (450 - 900 lbs)	0.0	0.0	0.0	0.0	490
Ammaia	Feeder Calves (<550 lbs)	0.0	0.0	0.0	0.0	(
	Horses - PMU	0.0	0.0	0.0	0.0	(
	Horses - Feeders > 750 lbs	0.0	0.0	0.0	0.0	
	Horses - Foals < 750 lbs	0.0	0.0	0.0	0.0	(
	Mules	0.0	0.0	0.0	0.0	
	Donkeys	0.0	0.0	0.0	0.0	
	Bison	0.0	0.0	0.0	0.0	
	Other	0.0				
Dairy	Free Stall – Lactating Cows with all	0.0	0.0	0.0	0.0	
*count actating :ows only)	associated dries, heifers, and calves* Free Stall – Lactating Cows with Dry Cows only *	0.0	0.0	0.0	0.0	
ows only)	Free Stall – Lactating Cows only*	0.0	0.0	0.0	0.0	
	Tie Stall – Lactating Cows only	0.0	0.0	0.0	0.0	
	The Stall – Eactating Cows only	0.0	0.0	0.0	0.0	
	Loose Housing – Lactating Cows only	0.0	0.0	0.0	0.0	
	Dry Cow (Solid manure)	0.0	0.0	0.0	0.0	
	Dry Cow (Liquid manure)	0.0	0.0	0.0	0.0	
	Replacements – Bred Heifers	0.0	0.0	0.0	0.0	
	(Breeding to Calving)	0.0	0.0	0.0	0.0	
	Replacements - Growing Heifers (350 lbs to breeding)	0.0	0.0	0.0	0.0	
	Calves (< 350 lbs)	0.0	0.0	0.0	0.0	
	Other	0.0				
Swine	Farrow to finish *	0.0	0.0	0.0	0.0	
iquid	Farrow to wean *	0.0	0.0	0.0	0.0	
*count	Farrow only *	0.0	0.0	0.0	0.0	
ows only)	Feeders/Boars	0.0	0.0	0.0	0.0	
	Growers/Roasters	0.0	0.0	0.0	0.0	
	Weaners	0.0	0.0	0.0	0.0	
	Other	0.0				
Swine	Farrow to finish *	0.0	0.0	0.0	0.0	
Solid	Farrow to wean *	0.0	0.0	0.0	0.0	
*Count	Farrow only *	0.0	0.0	0.0	0.0	
sows only)	Feeders/Boars	0.0	0.0	0.0	0.0	
	Growers/Roasters	0.0	0.0	0.0	0.0	
	Weaners	0.0	0.0	0.0	0.0	
		0.0				
Poultry	Chicken - Breeders - Solid	0.0	0.0	0.0	0.0	
	Chicken - Layers - Liquid (includes associated pullets)	0.0	0.0	0.0	0.0	
	Chicken - Layers - (Belt Cage)	0.0	0.0	0.0	0.0	
	Chicken - Layers - (Deep Pit)	0.0	0.0	0.0	0.0	
	Chicken - Pullets/Broilers	0.0	0.0	0.0	0.0	
	Turkey - Toms/Breeders	0.0	0.0	0.0	0.0	
	Turkey - Hens (light)	0.0	0.0	0.0	0.0	
	Turkey - Broilers Ducks	0.0	0.0	0.0	0.0	
	Geese	0.0	0.0	0.0	0.0	
	Other	0.0	0.0	0.0	0.0	
Goats and	Sheep - Ewes/Rams	0.0	0.0	0.0	0.0	
Sheep	Sheep - Ewes with lambs	0.0	0.0	0.0	0.0	
hoop	Sheep - Lambs	0.0	0.0	0.0	0.0	
	Sheep - Feeders	0.0	0.0	0.0	0.0	
	Goats - Meat/Milk (per Ewe)	0.0	0.0	0.0	0.0	
	Goats - Nannies/Billies	0.0	0.0	0.0	0.0	
	Goats - Feeders	0.0	0.0	0.0	0.0	
	Other	0.0	0.0	0.0	0.0	
Cervid	Elk	0.0	0.0	0.0	0.0	
	Deer	0.0	0.0	0.0	0.0	
	Other	0.0	0.0	0.0	0.0	
Vild Boar	Feeders	0.0	0.0	0.0	0.0	
a Dour	Sow (farrowing)	0.0	0.0	0.0	0.0	
	Other	0.0	0.0	0.0	0.0	
		0.0		I		
	Total Hectares		1 000	832.0	624.0	⊿0
	Total Hectares		1,000	832.0	624.0	49

# 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)

### SOLID MANURE, COMPOST, & COMPOSTING MATERIALS: Barns, feedlots, & storage facilities -Naturally occurring protective layer

(complete a copy of this section for **EACH** barn, feedlot, and storage facility for solid manure, composting materials, or compost with a naturally occurring protective layer for the liner)

Facility description / name (as indicated on site plan)

1. Feed lot Pens

2.

#### Manure storage capacity

	Length (m)	Width (m)	Depth below ground level (m)	NRCB USE ONLY Estimated storage capacity (m <sup>3</sup> )
1.	488	289	0	
2.				
			TOTAL CAPACITY	

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 - all water / run OFF is directed into a catch basin. - There are swails and the land naturally slopes to the basin. - There are wide swails in place to add more storge temporarily if needed. - a pump is installed in the basin to 2 center pivols to irrigate the water on

#### Naturally occurring protective layer details

Thickness of naturally occurring protective layer	(m)	Provide details (as required) See attached	(Geo K	leview)
Soil texture	36% sand	<u>37</u> % silt		27_% clay
Hydraulic conductivity - naturally occurring protective layer	Depth and type of soil tested	Hydraulic conductivity (cm/s)	Describe tes	st standard used 40
Additional information (	attach copies of soil test reports)	NRCB USE ONLY		
		Require	ments met:	YES NO
		Conditio	on required:	YES NO
		Report	attached:	



24 May 2024

J Lobbezoo Engineering & Consulting Services Ltd. PO Box 96, Monarch, AB T0L1M0

JLECS File: P24014

Southwood Stock Farms Ltd. PO Box 214 Vauxhall, Alberta T0K2K0

Attention: Mr. Ryan Van Hal

### Re: Geotechnical Review and Evaluation NRCB Permitting of Proposed Pens SE-05-014-15-W4M, near Vauxhall, Alberta

As requested, J Lobbezoo Engineering & Consulting Services Ltd. (JLECS) has carried out a geotechnical review and evaluation of the above-captioned site relative to the required protection of the groundwater resource, as required by the Agricultural Operation Practices Act, AB Reg. 267/2001 (hereinafter referred to as "AOPA"). This letter describes site soil conditions to support a permit application related to a series of proposed new pens to be located both north and west of the existing pens at SE-05-014-15-W4M (refer to Figure 1, attached).

In order to demonstrate the suitability of the naturally existing soils for consideration as a naturally occurring protective layer to the groundwater, eleven boreholes were advanced at the site on April 26, 2024. The boreholes were advanced at the approximate locations denoted as SW1-24 to SW11-24 on Figure 1, attached.

The boreholes were advanced by a truck-mounted drill rig owned and operated by Chilako Drilling Services Ltd. and extended depths ranging between 3.0 m and 3.6 m below the existing grade. The boreholes were logged by Mr. Larry Delong of Chilako Drilling Services.

In general, the natural mineral soils encountered in the boreholes consisted of a layer of plastic lacustrine clay loam (to approximately 0.7 m depth) which was underlain by stiff medium plastic clay till to the termination depth of the eleven boreholes. No evidence of free groundwater or a groundwater resource (as defined by the AOPA) was identified within the 3.6 m investigation depth at the proposed development site.

Samples of soil collected from the screened zone of boreholes SW2-24 and SW9-24, as well as samples from the same depth at the other boreholes were subjected to grain size analyses, which was carried out by Down to Earth Laboratories in Lethbridge, Alberta. The results indicate a soil texture breakdown of:



Borehole/Depth	% Sand	% Silt	% Clay
SW1-24 / 1.5-3.0 m	37	34	29
SW2-24 / 1.5-3.0 m	36	37	27
SW3-24 / 1.5-3.0 m	36	36	28
SW4-24 / 1.5-3.0 m	35	35	30
SW5-24 / 1.5-3.0 m	36	36	28
SW6-24 / 1.5-3.0 m	34	38	28
SW7-24 / 1.5-3.0 m	36	33	31
SW8-24 / 1.5-3.0 m	35	34	30
SW9-24 / 1.5-3.0 m	36	34	30
SW10-24 / 1.5-3.0 m	37	32	31
SW11-24 / 1.5-3.0 m	38	32	30

### Table 1: Soil Texture Analyses

To measure the *in situ* permeability of the subsurface soils, 50 mm diameter PVC monitoring wells were constructed in boreholes SW2-24 and SW9-24. Test well SW2-24 was screened from 1.55 m to 3.15 m depth while test well SW9-24 was screened from 2.0 m to 3.6 m depth. Well saturation of the 50 mm diameter monitoring wells was carried out by filling the monitoring wells to the top for several consecutive days. After several days of testing, a 24-hour water drop of 0.15 m was determined at SW2-24, and a 24-hour water drop of 0.22 m was determined at SW9-24.

To calculate the permeability of the screened portion of the clay till strata at the test well locations, a modified falling head test (as outlined in the USBR Engineering Geology Field Manual Volume 2 [2001]) was used. The input variables and output data are outlined on the attached In Situ Permeability Test reports. The results of the permeability testing indicate an *in situ* hydraulic conductivity,  $k_s$ , of 2.1 x 10<sup>-8</sup> cm/s at SW2-24, and an *in situ* hydraulic conductivity,  $k_s$ , of 2.7 x 10<sup>-8</sup> cm/s at SW9-24.

Using the measured permeability of the clay stratum, the 1.6 m of clay screened at SW2-24 is estimated to represent the equivalent of approximately 76 m of naturally occurring materials having a hydraulic conductivity of  $1 \times 10^{-6}$  cm/s (the reference standard in AOPA). Similarly, the 1.6 m of clay screened at SW9-24 is estimated to represent the equivalent of approximately 59 m of naturally occurring materials having a hydraulic conductivity of  $1 \times 10^{-6}$  cm/s. This represents natural material protection in excess of the minimum requirements outlined by the AOPA for solid manure storage (minimum 2 m, Section 9.5-c).

Southwood Stock Farms Ltd. Geotechnical Review & Evaluation, SE-05-014-15-W4M, near Vauxhall, Alberta 23 May 2024 Page 3

### **Conclusion**

Based on the results of the current investigation, permeability testing, and our understanding of the site and proposed development at the site, it is JLECS's opinion that the naturally occurring materials at the site satisfy the AOPA requirements for permitting the proposed new pens at this location.

We trust that this report satisfies your present requirements. Should you have any questions, please contact the undersigned at your convenience.

Yours truly,

### J Lobbezoo Engineering & Consulting Services Ltd.



	1
PERMIT T	<b>O PRACTICE</b>
	ENGINEERING &
CONSULTING	SERVICES LTD.
RM SIGNATURE:	M.
RM APEGA ID #:	110450
DATE:	23 may 2024
PERMIT NUN	<b>IBER: P016456</b>
The Association of P	rofessional Engineers and of Alberta (APEGA)

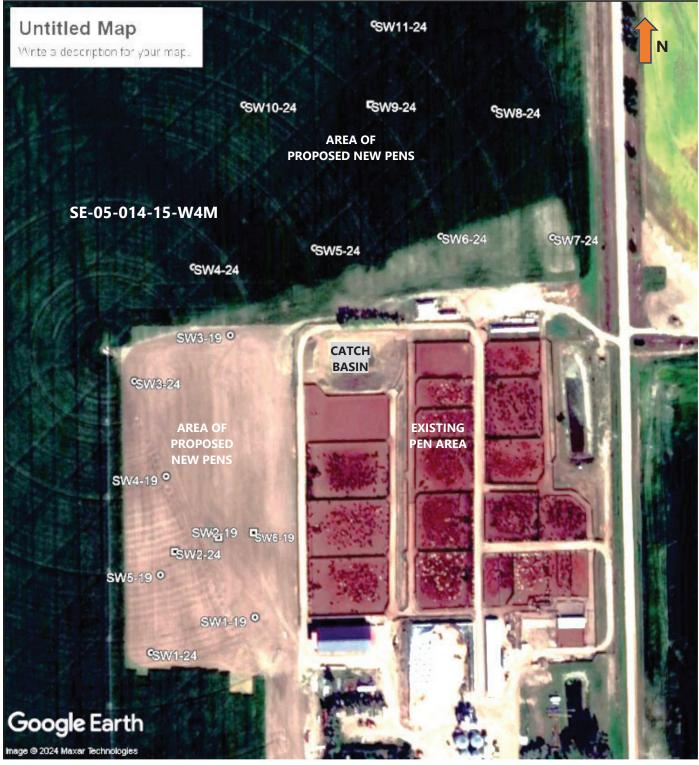
----JLECS-----

Attachments

Figure 1 Borehole Locations In Situ Permeability Test Calculations Soil Profile and Parent Material Description, Chilako Drilling Services







**Figure 1: Borehole Locations** 

**Proposed New Pens** 



### SW2-24

## In Situ Permeability Test

Modified Falling Head Permeability Equation

$$K_{s} = \frac{r^{2}}{2\ell\Delta t} \left[ \frac{\sinh^{-1}\frac{\ell}{r_{e}}}{2} \ln \left[ \frac{2H_{1}-\ell}{2H_{2}-\ell} \right] - \ln \left[ \frac{2H_{1}H_{2}-\ell}{2H_{1}H_{2}-\ell} \right] \right]$$

taken from USBR Engineering Geology Field Manual Volume 2 (2001)

#### SW2-24 - Southwood Stockfarms Ltd. JLECS File: P24014

UT VARIABLES	Terms D De L h1 h2	0.0520 0.1500 1.60 3.75	Definition diameter of standpipe (m) diameter of borehole (m) length of sand section (m) initial height of water above base of hole (m) final height of water above base of hole (m)
INPUT \	h1 h2 t	3.60	initial height of water above base of hole (m) final height of water above base of hole (m) time of test (h)

k<sub>s</sub> = 2.1E-08 cm/sec



### SW9-24

## In Situ Permeability Test

Modified Falling Head Permeability Equation

$$K_{s} = \frac{r^{2}}{2\ell\Delta t} \left[ \frac{\sinh^{-1}\frac{\ell}{r_{e}}}{2} \ln \left[ \frac{2H_{1}-\ell}{2H_{2}-\ell} \right] - \ln \left[ \frac{2H_{1}H_{2}-\ell}{2H_{1}H_{2}-\ell} \right] \right]$$

taken from USBR Engineering Geology Field Manual Volume 2 (2001)

# SW9-24 - Southwood Stock Farms Ltd. JLECS File: P24014

NPUT VARIABLES	Terms D De L h1 h2 t	0.0520 0.1500 1.60 4.20 3.98	Definition diameter of standpipe (m) diameter of borehole (m) length of sand section (m) initial height of water above base of hole (m) final height of water above base of hole (m) time of test (h)
Ĭ.	t	24.0	time of test (h)

k<sub>s</sub> = 2.7E-08 cm/sec

## CHILAKO DRILLING SERVICES LTD

Box 942 Coaldale, Alberta, T1M 1M8 (403) 345-3710

### SOIL PROFILE AND PARENT MATERIAL DESCRIPTION

	ite Location:	-					
	Location	Depth			Geological	Sample	Remarks
SW1-24	0427713 5554345	0-0.3 0.3-1.0 1.0-3.0	CL SiCL CL	M SM SM	Lac Lac Till	1.5-3.0	Stiff, med plastic, dark brown, oxidized
SW2-24	0427735 5554425	0-0.3 0.3-1.0 1.0-3.15	CL	SM	Lac Lac Till	1.5-3.0	Stiff, med plastic, brown, oxidized 50mm H.C. Well installed to 3.15m Screen: 3.15-1.65m Sand: 3.15-1.55m Bentonite: 1.55-0.0m Stickup: 0.6m Hole Diameter: 0.15m
SW3-24	0427706 5554560	0-0.15 0.15-1.0 1.0-1.5 1.5-1.6 1.6-3.0	CL-FSCL CL-FSCL CL CL CL CL		Lac Lac Till Till Till	1.5-3.0	V. Firm, med plastic, brown Sand layers Stiff, med plastic, dark brown, oxidized
SW4-24	0427756 5554650	0-0.15 0.15-0.8 0.8-3.0	CL CL CL	M M M	Lac Lac Till	1.5-3.0	Sand lens @ 0.8m, brown Stiff, med plastic, dark brown, oxidized
SW5-24	0427852 5554662	0-0.15 0.15-0.7 0.7-3.0	CL CL CL	M M M	Lac Lac Till	1.5-3.0	V. Firm, brown, sand lensing Stiff, med plastic, brown
SW6-24	0427954 5554667	0-0.15 0.15-0.7 0.7-3.0	CL CL CL	M M M	Lac Lac Till	1.5-3.0	V. Firm, brown, some sand Stiff, med plastic, dark brown
SW7-24	0428043 5554663	0-0.15 0.15-0.6 0.6-3.0	CL CL CL	VM M M	Lac Lac Till	1.5-3.0	Soft, med plastic, brown Stiff, med plastic, brown
SW8-24	0428000 5554767	0-0.15 0.15-0.4 0.4-3.0	CL CL CL	M M M	Lac Lac Till	1.5-3.0	Topsoil Stiff, med plastic, brown
SW9-24	0427900 5554775	0-0.15 0.15-0.6 0.6-3.6	CL CL-SCL CL	M M M	Lac Lac Till	1.5-3.0	Topsoil V. Firm, low-med plastic, brown Stiff, med plastic, brown 50mm H.C. Well installed to 3.6m Screen: 3.6-2.1m Sand: 3.6-2.0m Bentonite: 2.0-0.0m Stickup: 0.6m Hole Diameter: 0.15m
SW10-24	0427800 5554777	0-0.15 0.15-0.6 0.6-3.0	CL CL-SCL CL	M M M	Topsoil Lac Till	1.5-3.0	Stiff, low-med plastic, brown
SW11-24	0427905 5554839	0-0.15 0.15-0.7 0.7-1.8 1.8-3.0	CL CL-SCL CL CL	M M M M	Topsoil Lac Till Till		V. Firm Stiff, med plastic, brown, sand lensing Stiff, med plastic, brown Application LA24020 Page 28 of 2