

Technical Document LA25003

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 <input type="checkbox"/> Approval <input checked="" type="checkbox"/> Registration <input type="checkbox"/> Authorization <input type="checkbox"/> Amendment	Application number	Legal land description
	LA25003	NE 10-18-14 W4M

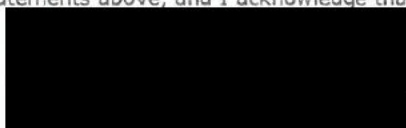
APPLICATION DISCLOSURE

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.

November 21, 2024
Date of signing



Cornelia Hermus
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)
Manure storage room XXXXX to layer barn	40 x 40 ft = 12.2 x 12.2 m
Barn	135 x 60 ft = 41.1 x 18.3 m
	200 x 64 135 FEV 60 Ft

Existing facilities: list ALL existing confined feeding operation facilities and their dimensions		
Existing facilities	Dimensions (m) (length, width, and depth)	NRCB USE ONLY
see next page (AO comment: NEW CFO)		
NRCB USE ONLY		

Part 2 – Technical Requirements



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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

Construction completion date for proposed facilities Dec 26

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
The application is for 300 milking goats (plus dries and replacements)			

East

Canal

89.17 m

50.00 m

↑ north

South



Proposed Barn
 (128'x60')
 130 ft x 60 ft

PAD

West

NE 1/4 10-18-14 W4

Part 2 – Technical Requirements

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DECLARATION AND ACKNOWLEDGMENT OF APPLICANT CONCERNING WATER ACT LICENCE

issued by Alberta Environment and Parks (AEP) 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 AEP 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 AEP'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 AEP 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 AEP'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.

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 AEP under the *Water Act* for the development or activity proposed in this AOPA application.

Signed this 21 day of November, 2021.

Signature of Applicant or Agent

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 AEP 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 AEP'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 AEP 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 AEP'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.

Signed this ____ day of _____, 20____.

Signature of Applicant or Agent

COUNTY OF NEWELL

"Home of Dinosaur Provincial Park"

183037 RR 145
P.O. Box 130
BROOKS, ALBERTA
T1R 1B2



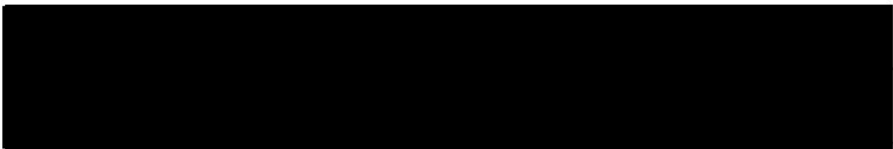
Phone: (403) 362-3266
Fax: (888) 361-7921
Email: administration@newellmail.ca
Website: www.countyofnewell.ab.ca

COUNTY OF NEWELL WATER PROJECT WATER SERVICE ACTIVATION FORM

LANDOWNER INFORMATION

Name: Marc + Cornelia Hermus

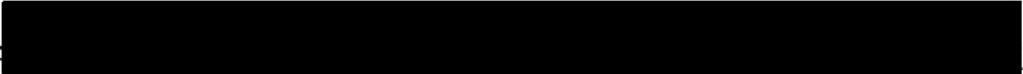
Section NE 10 Township 18 Range 14 Meridian W4



Roll #: 439800 Registration #: 4701 NRSC Contract #: C6D5

BILLING INFORMATION:

Name: Marc + Cornelia Hermus

Mailing Address: 

Number:  Flow Emitter Number: 15105

Signature:  (fixed)

ACTIVATION INFORMATION:

I, MARC HERMUS hereby confirm that my service has been activated for the County of Newell Water Project for 1 water unit(s) that are associated with the above mentioned rural address, as of this the 29 day of July, 2015.

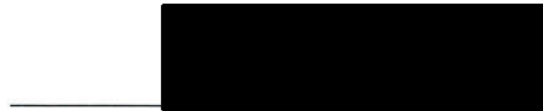
Billing will be done on an annual basis and charges will be pro-rated to reflect the actual date your service was activated.

WITNESS:

LANDOWNER:



County of Newell Representative



September 21, 2011

MARC HERMUS
Box 665
Brooks, AB.
T1R 1B6

Dear Sir:

You will not need a special license or agreement for your proposed goat dairy venture. At the present time, there is a rural water use purposes agreement in place for water use in the farmyard. The agreement authorizes you to use up to 5 acre feet [1,361,250 gallons] of water. This volume of water is sufficient for the farmyard, including a herd of up to a maximum of 500 adult goats.

Should you have further questions or concerns, do not hesitate to contact me at 403-362-1400.

Yours Truly,

EASTERN IRRIGATION DISTRICT


Robert Matoba
Land Administrator

Part 2 – Technical Requirements

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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)

~~XXXXXX~~ Proposed Coming manure pad & barn

Proposed 1: _____

Proposed 2: _____

Proposed 3: _____

Facility and environmental risk information		Facilities				NRCB USE ONLY	
		XXXXXX Proposed	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 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 located in flood plain
	Surface water information	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	confirmed during site visit and none listed in EPA database
	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	confirmed during site visit and none listed in EPA database
	What is the shortest distance from the manure collection or storage facility to a surface water body? (e.g., lake, creek, slough, seasonal)	200 m				<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES with exemption	52 m to a canal
Groundwater information	What is the depth to the water table?					<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES with exemption	Below drilling depth (4 m)
	What is the depth to the groundwater resource/aquifer you draw water from?	N/A				<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES with exemption	no wells in area. No UGR determined

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)

NRCB USE ONLY
ENVIRONMENTAL RISK SCREENING INFORMATION

ERST for proposed facilities **See decision summary for detail**

Facility	Groundwater score	Surface water score	File number

ERST for existing facilities **NA --> new CFO**

Facility	Groundwater score	Surface water score	File number

ERST related comments:

Part 2 – Technical Requirements

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NRCB USE ONLY

WATER WELL AND SURFACE WATER INFORMATION

No water wells in area

Well IDs: _____

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:

Part 2 – Technical Requirements

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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
Ron Howard	SE 15-18-14 W4 W4	450	AG	1	500 m		yes
Albert Zagorski	NW 11-18-14 W4	650	AG	1	575 m		yes
Victor Zagorski	NE 3-10-14 W4	1200	AG	1	1.3 km		yes
J Veenshra	NE 09-18-14 W4	1450	AG	1	> 1.3 km		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)
Hermus	NE 10-18-14 W4	60	irrigated	55 acres	
Total				55 acres irrigated	

* 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)

Part 2 – Technical Requirements

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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: 133 m Category 2: 177 m Category 3: 221 m Category 4: 354 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: 15 acres (irrigated)

Land base listed: 60 acres

Area not suitable: 5 acres

Available area: 55 acres

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 **New CFO**

If already completed, see _____

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NRCB USE ONLY

ALL SIGNATURES IN FILE YES NO

DATES OF APPROVAL OFFICER SITE VISITS

February 14, 2025	

CORRESPONDENCE WITH MUNICIPALITIES AND REFERRAL AGENCIES

Date deeming letters sent: January 29, 2025

Municipality: Newell County

letter sent response received written/email verbal no comments received

Alberta Health Services: NA

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: EID N/A

letter sent response received written/email verbal no comments received

Other: Dinosaur Gas Coop Ltd, Atco Gas, Astara Energy Corp. 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 - 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. PAD
2. BARN

Manure storage capacity

	Length (m)	Width (m)	Depth below ground level (m)	NRCB USE ONLY Estimated storage capacity (m ³)
1.	12, 2	12, 2	0	
2.	41, 1	18, 3	0	
TOTAL CAPACITY				Sufficient storage available

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

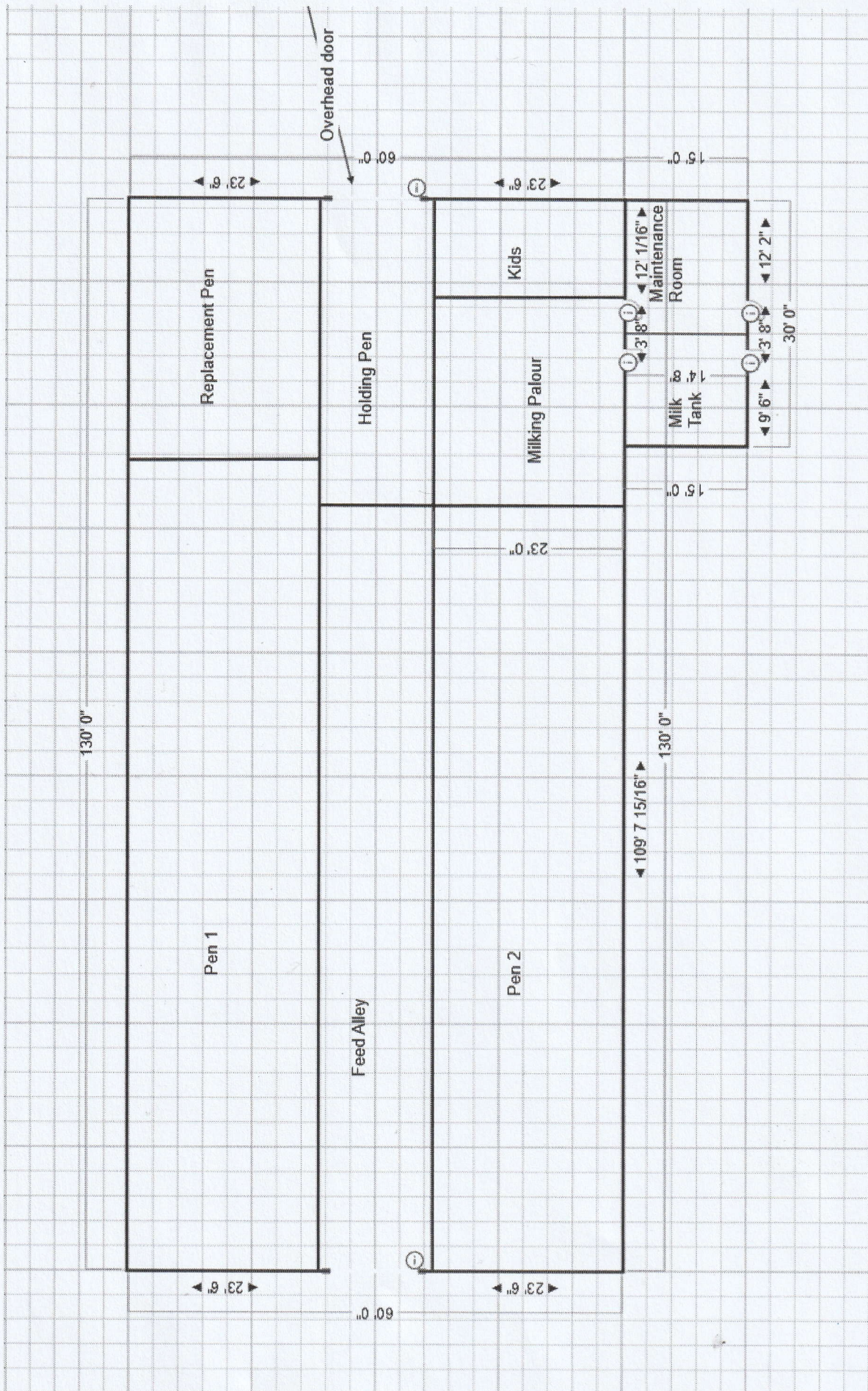
Under Roof

Naturally occurring protective layer details

Thickness of naturally occurring protective layer	Provide details (as required) <u>medium to high Plastic Clay</u>		
	<u>6 m</u> (m)		
Soil texture	_____ % sand	_____ % silt	_____ % clay
Hydraulic conductivity - naturally occurring protective layer	Depth and type of soil tested <u>silty clay till, depth 6 m</u>	Hydraulic conductivity (cm/s) <u>2.6 - 4.7 E07 cm/sec</u>	Describe test standard used <u>Falling head test</u>

Additional information (attach copies of soil test reports)

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



January 17, 2012

12-99-16

Marc Hermus
P.O. Box 665
Brooks, Alberta
T1R 1B6

RE: Goat Barn and Pad Area Assessment
Geotechnical Investigation
NE 10 - 18 - 14 - W4M

As requested, Gem Testing Ltd. completed the geotechnical investigation at the subject site on January 26, 2012 in order to determine the if a protective layer of natural occurring materials was present. A total of 4 test holes, 3 around the proposed goat barn area and 1 within the solid manure storage pad, were advanced to a depth of 6.0m at the subject site and slotted PVC Standpipe were installed in each. The Test hole Logs are attached and indicate the results of the laboratory testing that was performed on the soil samples obtained from the auger flights during drilling operations.

SILTY CLAY TILL was encountered in all of the test holes advanced below a surficial layer of silty sand and extended beyond the depth investigated. The till was generally olive in colour and contained a trace to some sand, trace of pebbles, oxide staining, a trace of sulphates and a trace of coal. The till was generally in a moist condition and ranged from a firm to hard consistency. Natural Moisture Contents performed ranged from 16.72 % to 31.74 %. Atterberg Limit index property tests performed on the till resulted in an average liquid limit of 41.0, an average plastic limit of 16, which results in a Plasticity Index of 25. These results generally classify the soil as a CI-CH (Medium to High Plastic Clay).

Five days subsequent to drilling operations 'In-Situ Falling Head Permeability Tests' were completed within each of the test holes in order to determine the hydraulic conductivity of the clay till soil encountered at the subject site. Based on the results of these test it is apparent that the native clay till exhibits an average hydraulic conductivity of 2.6×10^{-7} cm/sec with a minimum of 4.7×10^{-7} cm/sec.

Based on the field investigation, laboratory testing and in-situ testing it is our opinion that there is a more than adequate protective layer of natural occurring material is present at the subject site and is suitable for its intended use for a goat barn and solid manure storage pad.

We trust this meets with your present requirements.

Should you have any questions or require any additional information, please do not hesitate to contact our office.

Respectfully Submitted
GEM Testing Ltd.

APEGGA Permit No. 09733



Scott Dooner, P. Eng.
CEO/Project Engineer

GEM Testing Ltd.

2-2269 2nd Avenue, Dunmore, Alberta - T1B 0K3
 Ph: 580-1813

Bore Hole Log Report

Client: Marc Hermus
 Address: P.O. Box 665
 Brooks, Alberta
 T1R 1B6
 Attention: Marc Hermus
 Project: Goat Barn
 Date Advanced: 26-Jan-12
 Drill Method: Solid Stem Auger

By: SD

Report Date: 2-Feb-12
 Project No.: 12-99-16
 Report No.: 1
 Bore Hole #: 1
 Bore Hole Depth: 6
 Bore Hole Elevation:

Depth		Soil Type	SPT N	Sample Type	Soil Description	Moisture Content								Comments/Lab Test Results	
(m)	(ft)					10.00	15.00	20.00	25.00	30.00	35.00	40.00	45.00		
					Topsoil/Browns										
					Silty Sand, trace to some clay, trace of pebbles, dry to damp, compact, brown										
1															
	5			B	Silty Clay Till, trace of sand, trace of pebbles, trace of coal, oxide staining, sulphates, firm to stiff, moist, olive										
2															
	10			B	- moist stiff										
3															
	15			B	- stiff to very stiff										
4															
	20			B	- very stiff										
5															
	25														
6															
	30														
7															
	35														
8															
	40														
9															
	45														
10															
					End of Test Hole - 6.0m Test Hole dry upon completion										

GEM Testing Ltd.

Bore Hole Log Report

2-2269 2nd Avenue, Dunmore, Alberta - T1B 0K3
 Ph: 580-1813

Client: Marc Hermus
 Address: P.O. Box 665
 Brooks, Alberta
 T1R 1B6
 Attention: Marc Hermus
 Project: Goat Barn
 Date Advanced: 26-Jan-12
 Drill Method: Solid Stem Auger

Report Date: 2-Feb-12
 Project No.: 12-99-16
 Report No.: 2

Bore Hole #: 2
 Bore Hole Depth: 6
 Bore Hole Elevation:

By: SD

Depth		Soil Type	SPT N	Sample Type	Soil Description	Moisture Content								Comments/Lab Test Results		
(m)	(ft)					10.00	15.00	20.00	25.00	30.00	35.00	40.00	45.00			
1		Topsoil/Browns			Silty Sand, trace to some clay, trace of pebbles, dry to damp, compact, brown											
	5			B	Silty Clay Till, trace of sand, trace of pebbles, trace of coal, oxide staining, sulphates, firm to stiff, moist, olive			●								
2																
3	10			B	- moist to wet, stiff				●							
4					- very stiff											
	15			B	-very stiff to hard		▲		●				■			
5																
6	20			B						●						
					End of Test Hole - 6.0m Test Hole dry upon completion											
7																
	25															
8																
9	30															
10																

GEM Testing Ltd.

Bore Hole Log Report

2-2269 2nd Avenue, Dunmore, Alberta - T1B 0K3
Ph: 580-1813

Client: Marc Hermus
Address: P.O. Box 665
Brooks, Alberta
T1R 1B6
Attention: Marc Hermus
Project: Goat Barn
Date Advanced: 26-Jan-12
Drill Method: Solid Stem Auger

By: SD

Report Date: 2-Feb-12
Project No.: 12-99-16
Report No.: 3
Bore Hole #: 3
Bore Hole Depth: 6
Bore Hole Elevation:

Depth		Soil Type	SPT N	Sample Type	Soil Description	Moisture Content								Comments/Lab Test Results	
(m)	(ft)					10.00	15.00	20.00	25.00	30.00	35.00	40.00	45.00		
					Topsoil/browns										
					Silty Sand, trace to some clay, trace of pebbles, dry to damp, compact, brown										
1															
	5			B	Silty Clay Till, trace of sand, trace of pebbles, trace of coal, oxide staining, sulphates, firm to stiff, moist, olive										
2															
	10			B	- moist, stiff										
3															
	15			B	-very stiff to hard										
4															
	20			B											
5															
	25														
6					End of Test Hole - 6.0m Test Hole dry upon completion										
	30														
7															
8															
9															
10															

GEM Testing Ltd.

Bore Hole Log Report

2-2269 2nd Avenue, Dunmore, Alberta - T1B 0K3
 Ph: 580-1813

Client: Marc Hermus
 Address: P.O. Box 665
 Brooks, Alberta
 T1R 1B6
 Attention: Marc Hermus
 Project: Pad Area
 Date Advanced: 26-Jan-12
 Drill Method: Solid Stem Auger

Report Date: 2-Feb-12
 Project No.: 12-99-16
 Report No.: 4

Bore Hole #: 4
 Bore Hole Depth: 6
 Bore Hole Elevation:

By: SD

Depth		Soil Type	SPT N	Sample Type	Soil Description	Moisture Content							Comments/Lab Test Results	
(m)	(ft)					10.00	15.00	20.00	25.00	30.00	35.00	40.00		45.00
					Topsoil/browns									
					Silty Sand, trace to some clay, trace of pebbles, dry to damp, compact, brown									
1					Silty Clay Till, trace of sand, trace of pebbles, trace of coal, oxide staining, sulphates, firm to stiff, moist to wet, olive									
	5			B										
2														
	10			B	- moist, stiff									
3														
	15			B	-dry to damp, very stiff to hard									
4														
	20			B										
5														
	25													
6					End of Test Hole - 6.0m Test Hole dry upon completion									
	30													
7														
8														
9														
10														



\$55 / Basic / dep M

ALS Laboratory Group Agricultural Services

Phone:
1-800-667-7645

SOIL TEST REPORT

Dealer / Crop Consultant:

VITERRA
BOX 1209
BROOKS, AB TIR ICI
Phone: 403-362-2072
Fax: 403-362-3092
Email: bruce.balog@viterra.ca, elan.noga@viter

Client Information:

MARC HERMUS

Sample / Field Information:

Crop Year 2012
Field Name
Legal Location NE 10 18 14 W4
Soil Climatic Zone Brown
GPS Reference
Acres
Previous Crop Barley, Feed
Yield
Stubble Management Spread
Rotation Continuous

Sample ID 1159245

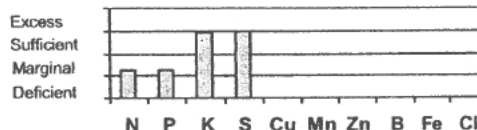
Date Sampled 02-SEP-11

SOIL TEST CHARACTERISTICS

Depth (inches)	Texture	pH	E.C.		Salinity Rating	Organic Matter %	NH ₄ -N (lb/ac)	Calculated CEC mcq/100g	Ca	Mg	K	Na	Base Saturation					
			1S:2W (mS/cm)	1S:2W Calc. Sal Extr. (mS/cm)									Ca	Mg	K	Na		
0-12	Loam	7.5	0.3	0.7	Non Saline													

SOIL TEST NUTRIENT LEVELS

Depth (inches)	NO ₃ -N	P	K	SO ₄ -S	Cu	Mn	Zn	B	Fe	Cl
0-12	29	48	911	>96						



**ALS Laboratory Group
NUTRIENT RECOMMENDATION RATES (lb/ac)**

Soil Available Moisture: Actual: _____ Typical: 1.5 inches

Wheat, CWRS	N	P ₂ O ₅	K ₂ O	S	Cu	Mn	Zn	B	Fe	Cl
27 bu/ac 7.9 in. of ppt - 25% chance of this ppt. 12.4% Protein.	5-15	20-25	0 or 15	0-0						
19 bu/ac 5.7 in. of ppt - 50% chance of this ppt. 13.5% Protein.	0-0	15-20	0 or 15	0-0						
10 bu/ac 3.4 in. of ppt - 75% chance of this ppt. 14.6% Protein.	0-0	5-10	0-0	0-0						

No Goal Submitted

Irrigation

Other Recommendations And Comments

A 0 or 15 lbs/ac K₂O recommendation is made for high K soils because K may not be available to the plant in cool (particularly cool and dry) soils.
The P₂O₅ recommendation is based on banding or seed-placement (if rate is safe). For broadcast and incorporation the P₂O₅ rate should be 2 times that shown.
Application of 20 lb/ac of N (on non-manured land) will help overcome a shortfall in soil N supply and/or plant N uptake under adverse or exceptional growing conditions
K₂O recommendations < 30 lbs/ac are for seed-placement or banding, and > 30 lbs/ac are for broadcast and incorporation. The banding rate X 2 = the broadcast and incorporation rate.

Loginnum: L104859

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