Application for Amendment

NRCB Natural Resources Conservation Board

Application under the *Agricultural Operation Practices Act* to amend a permit for a confined feeding operation, manure collection area and/or manure storage facility(ies). ("Permit" means an NRCB-issued or grandfathered approval, registration, or authorization, including a grandfathered municipal development permit.)

NRCB USE ONLY

☐ Approval ☐ Registration ☑ Authorization

NRCB Application number: RA20029A

Date Stamp: NRCB APPLICATION NOV 09 2020 RECEIVED

CONTACT INFORMATION

Applicant Information

Name:	Corporate Name (if applicable)
SAM KLEINSASSER	LONE PINE HUTTERIAN BRETHREN
Address: (Street/P.O. Box) Box 250	
City/Town: BOTHA	Province: AB / Postal Code: T0C 0N0

Agent consent *(if applicable)*

I, _____ *(name of applicant)*, hereby give consent for _____ *(name of agent and company)*

to act on my behalf or as my agent for this application.

Signed this _____ day of _____, 20_____

_____ *Signature of Applicant*

LOCATION OF DEVELOPMENT

Which permit do you wish to amend? (List permit number and issuing agency.)	
Environwest Engineering INC.	RA20029
Legal Land Description(s) County of Stettler AB.	(Qtr-Sec-Twp-Rg-W Mer) SW ¼ Sec 07, Twp 039, R17, 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 herein and acknowledge that the information provided in this application is true to the best of my knowledge.

Nov 8, 2020
Date of signing

Sam M Kleinsasser
Signature

Lone Pine Colony
Corporate name (if applicable)

SAM KLEINSASSER
Print name

Application for Amendment – contd.

NRCB Natural Resources Conservation Board

AMENDMENT INFORMATION REQUIREMENTS

Instructions:
For each part of your permit that you would like amended, please detail what change you would like made and why, and how your proposed change will meet the AOPA requirements. You may attach additional pages to this form to provide this information.

Please note that an approval officer may require a page (or pages) of the Part 2 application forms to be completed as part of this application for amendment, depending on what changes are proposed.

Clay lined manure lagoon 60M X 60M was changed to 85M X ~~45~~ 44 m M clay liner of 1 meter is compacted to Enviroest Engineering Inc. space changes were made so we could agitate and empty lagoon better

AO Comments:
The application seeks to modify the dimensions of the permitted and already constructed earthen liquid manure storage (EMS). The EMS will decrease in size from the original dimensions of 61 m x 61 m x 4.5 m deep, to 85 m x 44 m x 4.5 m deep (the original capacity of the EMS was 8,656 cubic meters; however, the capacity of the already constructed EMS was reduced to 8,312 cubic meters) . The EMS was constructed in the same location, and using the same compacted clay liner that was proposed in the original application, and permitted in the authorization. The proposal will have a minimal change to its environmental risk, if any. Livestock number, and therefore, annual manure production will not change

In consideration of Decision Summary RA20029, Authorization RA20029 is issued to:

Name: Lone Pine Hutterian Brethren (the "permit holder")
Address: Box 250 Botha AB T0C 0N0
Contact person: Sam Kleinsasser

Permitted construction (based on the submitted site plan):

- Earthen liquid manure storage (EMS) (61 metres x 61 metres x 4.5 metres deep)

The permit holder shall comply with the requirements of the *Agricultural Operation Practices Act* (AOPA) and the regulations passed pursuant to that act.

The permit holder shall adhere to the descriptions contained in the filed application for RA20029 together with the site plan, building plans, engineering reports and other attached documents, unless otherwise noted in the following conditions.

The permit holder shall contact the NRCB at least 10 working days in advance of the desired inspection date to schedule the inspection in condition #2.

The permit holder is responsible for all costs associated with monitoring, sampling, testing, recording and reporting requirements.

Construction conditions

1. The permit holder shall provide the NRCB with a written construction completion report for the EMS. The report must be stamped and signed by a "professional engineer," as defined in the Standards and Administration Regulation, and must confirm that the EMS has been constructed in accordance with the propose design (prepared by Envirowest Engineering Inc. on July 24, 2020) including the:

    - Location is the same as proposed,
    - Inlet to the EMS is located in the lower quarter of the structure,
    - Constructed under the supervision of an engineer,
    - EMS dimensions, along with elevations above and below grade and side wall slopes are the same as proposed,
    - Location of and testing results of moisture content and compaction, for each 0.15 m lift to be reported in the completion report,
    - Clay content of the soil used to construct the compacted soil liner must be included in the completion report and compared it to a minimum of 28% clay content,
    - Sand and silt content of the soil used to construct the compacted soil liner must be included in the completion report, and
    - Sand, silt and clay content are to be reported for each texture test as individual test results within the completion report.

    This document must be provided to the NRCB prior to the inspection referenced in condition 2, or by a later date stated in writing by the NRCB.

2. The permit holder shall not place manure in the EMS until NRCB personnel have inspected it, and stated in writing that the EMS has been constructed in accordance with the terms and conditions of this permit.

3. The permit holder shall complete the construction of the EMS prior to November 30, 2022. Upon written request, this deadline may be extended by the NRCB in writing.

This Authorization becomes effective immediately in conjunction with previously issued Approval RA19004. The Authorization conditions will remain in effect unless amended in writing by the NRCB.

September 21, 2020

(original signed)
Francisco Echegaray, P.Ag.
Approval Officer

ENVIROWEST ENGINEERING INC.

P.O. Box 4248
Ponoka, AB.
T4J 1R6
Telephone: 403-783-8229
Facsimile: 403-783-5222

November 9, 2020

NRCB
Provincial Building
303, 4920 51st Street
Red Deer, Alberta
T4N 6K8

Attn: Francisco Echegaray, Approval Officer
francisco.echegaray@nrcb.ca

Re: Lone Pine Hutterian Brethren
Approval No. RA20029
SW 07-039-17 W4M
County of Stettler No. 6, Alberta

Dear Francisco,

In accordance with Approval No. RA20029, Envirowest Engineering (Envirowest) undertook inspection and testing of the construction of the earthen manure storage (EMS) located at SW 07-039-17 W4M. The inspection occurred on October 16, 2020.

The EMS was found to be 85 meters by 44 meters. The overall depth is an average of 4.5 meters below top of bank. The inside wall slope is approximately 3:1. The berm height is approximately 0.5 m to 1.5 m above ground level. The dimensions differ from the permitted construction dimensions. The current capacity is 8,312 cubic meters, while permitted capacity was 8,656 cubic meters.

The lagoon was constructed in the location proposed within the NRCB Part 2 application.

A compacted clay liner was installed in the side walls and floor of the EMS. Compaction testing of the liner was undertaken at approximately every lift. Results of the testing are detailed below.

Location	Moisture (%)	Density (kg/m3)	Max Dry Density (kg/m3)	% Compaction
1	18%	2060	1809	114%
2	17%	2035	1809	113%
3	17%	2021	1809	112%
4	15%	1966	1809	109%
5	16%	2078	1809	115%
6	18%	2067	1809	114%
7	19%	1926	1809	106%
8	16%	2064	1809	114%
9	15%	1993	1809	110%
10	12%	2121	1809	117%
11	22%	2006	1809	111%
12	22%	2123	1809	117%
Average	**17%**			**112%**

A minimum compaction of 106% was maintained with an average of 112%. An average moisture content of 17% was measured. Optimum moisture content is 17.5%.

Soil samples were collected from each lift. The results are presented in the following table. Analytical reports are attached.

Sample	Clay (%)	Sand (%)	Silt (%)	Texture Class	Running Average (Clay %)
SS-01	26.3	43.7	30.0	Loam	26.3
SS-02	25.0	38.8	36.2	Loam	25.7
SS-03	27.5	42.5	30.0	Clay loam	26.3
SS-04	23.7	46.3	30.0	Loam	25.6
SS-05	26.3	47.5	26.2	Sandy clay loam	25.8
SS-06	28.8	41.2	30.0	Clay loam	26.3
SS-07	26.3	41.2	32.5	Loam	26.3
SS-08	25.0	43.8	31.2	Loam	26.1
SS-09	26.3	48.7	25.0	Sandy clay loam	26.1
SS-10	23.7	47.5	28.8	Loam	25.9
SS-11	27.5	45.0	27.5	Sandy clay loam	26.0
SS-12	23.7	46.3	30.0	Loam	25.8

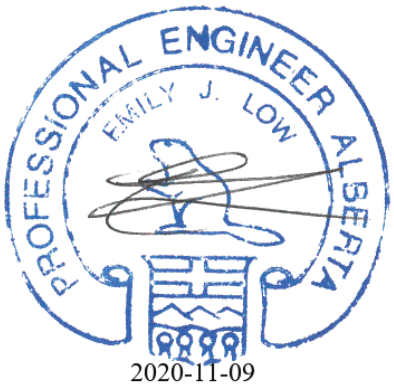
A running average clay percentage of the collected samples was maintained. It was found that the average clay content was within 2% of the proposed liner material (28%) and a minimum 23.7% clay content was present.

Based on the information collected it is considered that the installed liner meets the applicable requirements as outlined in the Envirowest Engineering report (July 24, 2020).

Envirowest Engineering is pleased to submit the inspection report to the Natural Resources Conservation Board (NRCB) and Amos Wipf of Lone Pine Hutterian Brethren. The information and conclusions contained in this report are for their sole use and such parties as may be normally involved in the approval process for such a facility. No other party is to rely upon the information contained within the report without the express written authorization of Envirowest Engineering.

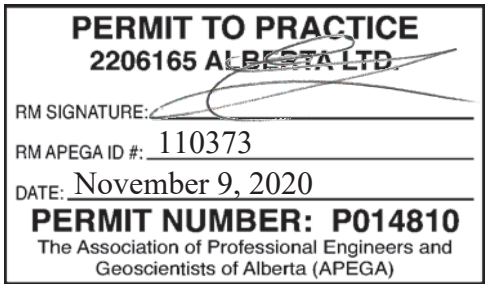
We trust that this report meets your present needs. Please feel free to contact the undersigned, should you have any questions or require additional information.

Respectfully submitted,



2020-11-09

Emily J. Low, P.Eng.
Envirowest Engineering



2206165 Alberta Ltd. o/a Envirowest Engineering
Association of Professional Engineers and Geoscientists of Alberta
Permit to Practice No. P14810

Cc'd: Amos Wipf, woodworks@lonepinecolony.com

Attachments: Laboratory Analytical

333 50th Ave. S.E.
Calgary, AB, T2G 2B3
Phone (403) 297-0868
Fax: (403) 297-0869

KaizenLAB

ANALYTICAL REPORT

Client: Envirowest Engineering
5118 50 St
Ponoka, AB, T4J 1R6

Attention: Emily Low

KaizenLAB JOB #:	**309536**
DATE RECEIVED:	17-Oct-2020
DATE REPORTED:	20-Oct-2020
PROJECT ID:	42952
LOCATION:	

KaizenLAB Sample #: 309536_001 **Sample ID:** SS-01
Date Sampled: 16-Oct-2020 **Matrix:** Soil

Parameter Description	Units	Result	Detection Limit
Particle Size Distribution by Hydrometer: Regular			
Clay	%	26.3	2.5
Silt	%	30.0	2.5
Sand	%	43.7	2.5
Texture		Loam	

KaizenLAB Sample #: 309536_002 **Sample ID:** SS-02
Date Sampled: 16-Oct-2020 **Matrix:** Soil

Parameter Description	Units	Result	Detection Limit
Particle Size Distribution by Hydrometer: Regular			
Clay	%	25.0	2.5
Silt	%	36.2	2.5
Sand	%	38.8	2.5
Texture		Loam	

KaizenLAB Sample #: 309536_003 **Sample ID:** SS-03
Date Sampled: 16-Oct-2020 **Matrix:** Soil

Parameter Description	Units	Result	Detection Limit
Particle Size Distribution by Hydrometer: Regular			
Clay	%	27.5	2.5
Silt	%	30.0	2.5
Sand	%	42.5	2.5
Texture		Clay loam	

KaizenLAB Sample #: 309536_004 **Sample ID:** SS-04
Date Sampled: 16-Oct-2020 **Matrix:** Soil

Parameter Description	Units	Result	Detection Limit
Particle Size Distribution by Hydrometer: Regular			
Clay	%	23.7	2.5
Silt	%	30.0	2.5
Sand	%	46.3	2.5
Texture		Loam	

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e-Mail: kaizenlan@kaizenlab.ca

KaizenLAB Sample #: 309536_005 **Sample ID:** SS-05
Date Sampled: 16-Oct-2020 **Matrix:** Soil

Parameter Description	Units	Result	Detection Limit
Particle Size Distribution by Hydrometer: Regular			
Clay	%	26.3	2.5
Silt	%	26.2	2.5
Sand	%	47.5	2.5
Texture		Sandy clay loam	

KaizenLAB Sample #: 309536_006 **Sample ID:** SS-06
Date Sampled: 16-Oct-2020 **Matrix:** Soil

Parameter Description	Units	Result	Detection Limit
Particle Size Distribution by Hydrometer: Regular			
Clay	%	28.8	2.5
Silt	%	30.0	2.5
Sand	%	41.2	2.5
Texture		Clay loam	

KaizenLAB Sample #: 309536_007 **Sample ID:** SS-07
Date Sampled: 16-Oct-2020 **Matrix:** Soil

Parameter Description	Units	Result	Detection Limit
Particle Size Distribution by Hydrometer: Regular			
Clay	%	26.3	2.5
Silt	%	32.5	2.5
Sand	%	41.2	2.5
Texture		Loam	

KaizenLAB Sample #: 309536_008 **Sample ID:** SS-08
Date Sampled: 16-Oct-2020 **Matrix:** Soil

Parameter Description	Units	Result	Detection Limit
Particle Size Distribution by Hydrometer: Regular			
Clay	%	25.0	2.5
Silt	%	31.2	2.5
Sand	%	43.8	2.5
Texture		Loam	

KaizenLAB Sample #: 309536_009 **Sample ID:** SS-09
Date Sampled: 16-Oct-2020 **Matrix:** Soil

Parameter Description	Units	Result	Detection Limit
Particle Size Distribution by Hydrometer: Regular			
Clay	%	26.3	2.5
Silt	%	25.0	2.5
Sand	%	48.7	2.5
Texture		Sandy clay loam	

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KaizenLAB Sample #: 309536_010 **Sample ID:** SS-10
Date Sampled: 16-Oct-2020 **Matrix:** Soil

Parameter Description	Units	Result	Detection Limit
Particle Size Distribution by Hydrometer: Regular			
Clay	%	23.7	2.5
Silt	%	28.8	2.5
Sand	%	47.5	2.5
Texture		Loam	

KaizenLAB Sample #: 309536_011 **Sample ID:** SS-11
Date Sampled: 16-Oct-2020 **Matrix:** Soil

Parameter Description	Units	Result	Detection Limit
Particle Size Distribution by Hydrometer: Regular			
Clay	%	27.5	2.5
Silt	%	27.5	2.5
Sand	%	45.0	2.5
Texture		Sandy clay loam	

KaizenLAB Sample #: 309536_012 **Sample ID:** SS-12
Date Sampled: 16-Oct-2020 **Matrix:** Soil

Parameter Description	Units	Result	Detection Limit
Particle Size Distribution by Hydrometer: Regular			
Clay	%	23.7	2.5
Silt	%	30.0	2.5
Sand	%	46.3	2.5
Texture		Loam	

Test Methodologies

Particle Size by Hydrometer in Soil: Modified from Soil Sampling & Methods of Analysis, M.R. Carter, 2008

Final Review by:

Shirley Lowe
Client Service Representative / Project Coordinator

Note: The results in this report relate only to the items tested and as received. Information is available for any items in 7.8.2.1 of ISO/IEC 17025:2017 that cannot be put on a test report. The report shall not be reproduced except in full without written approval of KaizenLAB. The validity of results may be affected if the information is provided by the customer.

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KaizenLAB

QUALITY CONTROL REPORT

Client: Envirowest Engineering

Attention: Emily Low

KaizenLAB JOB #:	**309536**
PROJECT:	42952
LOCATION:	
DATE REPORTED:	20-Oct-2020

Test: Particle Size Distribution by Hydrometer: Regular
QC Batch #: BS_HYDRO_201018_01
Date: 18-Oct-2020

	Method Blank	Calibration Verification Standard %Recovery		Laboratory Control Sample %Recovery		Duplicate or Matrix Spike Duplicate Rel. % Diff.	
Clay	N/A	N/A-NC	-	95	Pass	N/A-NC	-
Sand	N/A	N/A-NC	-	102	Pass	N/A-NC	-
Silt	N/A	N/A-NC	-	100	Pass	N/A-NC	-

Final Review by:

Shirley Lowe
Client Service Representative / Project Coordinator

Note: The results in this report relate only to the items tested and as received. Information is available for any items in 7.8.2.1 of ISO/IEC 17025:2017 that cannot be put on a test report. The report shall not be reproduced except in full without written approval of KaizenLAB. The validity of results may be affected if the information is provided by the customer.

N/A-NC: Not Applicable-Not Calculated: Result does not apply to this test or the difference between duplicate and its parent sample is not significant to perform a calculation (results are too close to the detection limit)

KaizenLAB

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Phone: (403) 297-0699 Fax: (403) 297-0869
e-mail: kaizencsr@kaizenlab.ca

CHAIN OF CUSTODY FORM

KaizenLAB Job #: 309536

SERVICE REQUESTED (3PM Cut off)

Service	Surcharge	TAT *Business days	
Regular	None	4 days	☐

RUSH TAT (3PM Cut off)

Rush	50%	2 - 3 days	☐
Priority	100%	Next day	☑
Emergency	200%	Weekend/Holiday	☐
		Same day	

Report Date 20 Oct 2020 *Please call (403) 815-5815 to coordinate rush analysis

REPORT CONTACT

Company: EnviroWest
Contact: Emily Law
Emails: elaw@enviroweserngineering
Address:
Phone: 403-783-8229

INVOICE CONTACT

Same as Report ☑
Company:
Contact:
Email:
Address:
Phone:

PROJECT DETAILS

Project ID: 42952
Location ID:
P.O. :
Quotation #:

Guideline

☑ AB Tier 1 ☐ BC
☐ CCME ☐ MB
☐ SPIGEC
☐ Drinking Water
☐ D50
☐ Other

	Client	Depot	Lab
Rec. by:	Elaw		BD
Date:	Oct 16/20		17 Oct 20
Time:	4 06		7:30AM

Additional Notes:

LAB USE ONLY
Temp: 14.9°C

ANALYSIS REQUESTED

LAB ID	SAMPLE IDENTIFICATION	DEPTH	DATE SAMPLED (DD/MM/YYYY)	TIME SAMPLED	MATRIX (SOIL / WATER)	Hydrometer	HOLD ANALYSIS	SPECIAL INSTRUCTIONS
1	SS-01		16/10/20		Soil	X		
2	SS-02					X		
3	SS-03					X		
4	SS-04					X		
5	SS-05					X		
6	SS-06					X		
7	SS-07					X		
8	SS-08					X		
9	SS-09					X		
10	SS-10					X		
11	SS-11					X		
12	SS-12					X		

Fill out chain of custody completely to avoid processing delays. Gray fields are for lab use only.

White - Lab Copy Yellow - Client Copy

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