

# Technical Document RA18023A

## 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.)

<b>NRCB USE ONLY</b>		Application number	<b>NRCB APPLICATION</b>
<input type="checkbox"/> Approval	<input type="checkbox"/> Registration	<input checked="" type="checkbox"/> Authorization	RA18023A
			date stamp <b>FEB 26 2020</b>

### CONTACT INFORMATION

**RECEIVED**

<b>Applicant Information</b>		
Name: Allan Child	Corporate Name (if applicable) Child Farms.	
Address: (Street/P.O. Box) Box 699		
City/Town: Killam	Province: AB	Postal Code: T0B 2L0
<b>Agent Information (if applicable)</b>		
Name:	Corporate Name (if applicable)	
Address: (Street/P.O. Box)		
City/Town:	Province:	Postal Code:

### LOCATION OF DEVELOPMENT

Which permit do you wish to amend? (List permit number and issuing agency.)	RA 18023.
Legal Land Description(s)	SW 34-45-13 W4M. (Qtr-Sec-Twp-Rg-W Mer)

### 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.

Jan 6, 20  
Date of signing

Corporate name (if applicable)

Signature  
Allan Child.  
Print name

## Application for Amendment – contd.

### 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.

lagoon was constructed 65 meters long and, 63 meters wide and, 9 meters deep. Depth was maintained at 9 meters so original manure flush system would work properly. Measurements for length and width worked better for area of dirt that needed to be moved and so equipment could access area better.

#### AO Comments:

The application seeks to modify the dimensions of the permitted and already constructed earthen liquid manure storage (EMS). The EMS will increase in size from the original dimensions of 85 m x 50 m x 6 m deep, to 65 m x 63 m x 9 m deep. The EMS was constructed in the same location 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



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

September 30, 2019

NRCB  
Provincial Building  
#303, 4920 51 Street  
Red Deer, Alberta  
T4N 6K8  
Attn: Francisco Echegaray

**Re: Allan Child**  
**Approval No. RA18023**  
**SW 34-045-13 W4M**  
**Killam, Alberta**

Dear Francisco,

In accordance with Approval No. RA18023, Envirowest Engineering (Envirowest) undertook an inspection and testing of the construction of the earthen manure storage (EMS) located at SW 34-045-13 W4M. The final inspection occurred on July 19, 2019.

The EMS was found to be 65 meters long and 63 meters wide. The overall depth is 9.0 meters. The inside wall slope is approximately 3:1. The overall storage capacity for the operation will be 12,546 cubic meters (excluding 0.5 meter freeboard). The inlet pipe enters in the western portion of the EMS, within the bottom quarter of the lagoon. The berm height is approximately 0.5 m above ground level, as stipulated in the Amber Enviroservices Inc. Soil Investigation Report.

Laboratory analysis of a composite soil sample from the EMS was determined to have a texture of clay loam, with 38% clay. The material tested by Amber Enviroservices was a clay loam.

A compacted clay liner was installed in the side walls and floor of the EMS. The former EMS walls were removed and a liner was installed from the material located in place. The liner depth was verified to be at least 1.0 meter thick and up to 6.0 meters at the base of the lagoon. The north and east walls had silt pockets removed and the liner reinstalled, the west and south walls had material removed to 1.0 meters over excavated and appropriate material installed as a clay liner. The liner material used was that tested as part of the original site assessment and the facility is located in the area proposed.

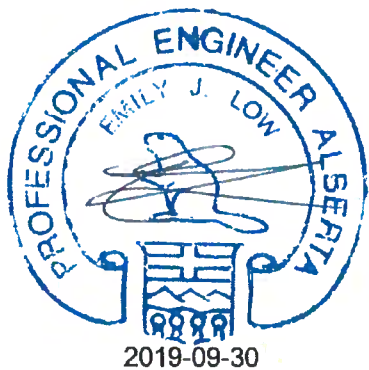
Compaction testing of the liner was undertaken for the EMS at four locations. Results of the testing are detailed below.

Test Location	Maximum Dry Density (kg/m <sup>3</sup> )	Tested Density (kg/m <sup>3</sup> )	% Compaction
North Wall	1760	2082	118
West Wall	1760	2024	115
South Wall	1760	2088	119
East Wall	1760	2051	117

Through assessment of the material in borehole BH18-01 the hydraulic conductivity of  $4.2 \times 10^{-9}$  centimeters per second or  $4.2 \times 10^{-8}$  centimeters per second field value was determined by Amber. Averaged compaction was adequate to achieve a minimum hydraulic conductivity of  $1 \times 10^{-7}$  centimeters per second.

If you have any questions, please contact the undersigned.

Respectfully submitted,



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



In consideration of Decision Summary RA18023, Authorization RA18023 is issued to:

Name: Allan Child (the "permit holder")  
Address: Box 699 Killam AB T0B 2L0  
Contact person: Doug Child

**Permitted construction** (based on the submitted site plan):

- an earthen liquid manure storage (EMS) (85 m x 50 m x 6 m deep)
- a runoff control catch basin (80 m x 35 m x 2.5 m deep)
- a solid manure storage pad (80 m x 35 m)

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 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 dates to schedule the inspections in conditions #2, 5 and 7.

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

**Construction conditions**

**EMS**

1. The permit holder shall provide the NRCB with a written construction completion report for the earthen liquid manure storage. The report shall be stamped and signed by a professional engineer, and shall verify that the EMS was constructed with the same material that was used for hydraulic conductivity testing, and that the EMS was constructed according to the proposed procedures and design specifications.
2. The permit holder shall not allow manure into the new EMS until the facility has been inspected by NRCB personnel and confirmed by them, in writing, to have been constructed in accordance with the terms and conditions of this permit.
3. The permit holder shall complete construction of the new EMS prior to November 30, 2022. Upon request, this deadline may be extended by the NRCB in writing.

**Runoff Control Catch Basin**

4. The permit holder shall provide the NRCB with a written construction completion report for the runoff control catch basin. The report shall be stamped and signed by a professional engineer, and shall verify that the runoff control catch basin was constructed with the same





material that was used for hydraulic conductivity testing, and that the runoff control catch basin was constructed according to the proposed procedures and design specifications.

5. The permit holder shall not allow manure impacted runoff into the new catch basin until the facility has been inspected by NRCB personnel and confirmed by them, in writing, to have been constructed in accordance with the terms and conditions of this permit.
6. The permit holder shall complete construction of the new runoff control catch basin prior to November 30, 2022. Upon request, this deadline may be extended by the NRCB in writing.

#### Solid Manure Storage Pad

7. The permit holder shall not allow manure into the solid manure storage pad until the facility has been inspected by NRCB personnel and confirmed by them, in writing, to have been constructed in accordance with the terms and conditions of this permit.
8. The permit holder shall complete construction of the new solid manure storage pad prior to November 30, 2022. Upon request, this deadline may be extended by the NRCB in writing.

This Authorization becomes effective immediately, and should be read in conjunction with previously issued Registration RA11005. The Authorization conditions will remain in effect unless amended in writing by the NRCB.

May 24, 2019

  
Francisco Echegaray, P.Ag.  
Approval Officer