

Application for Amendment

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			NRCB Applicat	ion number	Date Stamp
Approval Reg	istration 🗌 Au	uthorization	LA240	002XA	NRCB APPLICATION RECEIVED 31 JAN 25
CONTACT INFORMA	TION				
Applicant Information	on				IN TEACH
Address: (Street/P.O. Box)	on Huigh	enbos	Corporat	te Name (if app	gentes Paras
City/Town:	S KOS C	2517			
Fort Marke			Province		Postal Code:
Agent consent (if app					.02 020
to act on my behalf or as  Signed thisday of					Signature of Applicant
OCATION OF DEVE					
Which permit do you amend? (List permit n issuing agency.)		LA24002>	24002	N.R.C	amend NRCB Approval
Legal Land Description	(s)	SE S	21-09-2E	5 N4	(Qtr-Sec-Twp-Rg-W Me
vritten request that certain any construction prior to ob	d under the author information and sections remain staining an NRCB t's agent, have re	ority of the <i>Agric</i> d <i>Protection of P</i> private. permit is an offee ead and underst	cultural Operation Privacy Act. This influence and is subject and the statements	ractices Act (AO ormation is pub to enforcement	PA), and is subject to the lic unless the NRCB grants a action, including prosecution.
Nov 5 , 2c	DZH	st of my knowled	Signatu	re	110
Van Herigent	os Forn	5	H	en Van	Huigenbos
corporate name (if applicat	ile)		Print na	me	U

# **Amendment Request Info**

## Pen layout and size change

Shortly after Permit #24002 was approved we came to realize that we did not have a comfortable level of storage capacity for water to service the new build. To accommodate this, we increased the size of our freshwater dugout. This came at the expense of feedlot space. As a result, our final feedlot layout compared to the permitted build is missing two pens directly to the north of the dugout (A), and the three pens directly to the east have been made 25% smaller (B). To compensate for the loss of this area, we are proposing to add a pie shaped piece of land to the south of the feedlot unto the south row (C). This would increase the size of these pens and reduce the total feedlot area lost by roughly 40%. As we still have ample pen space to accommodate 16,500 feeder calves, I do not feel that the loss of this area negatively affects any part of our business, or any directed related party. I would like to ask the N.R.C.B to allow for an amendment to Permit #24002 to reflect these proposed changes.

# South Catch Basin Change

To accommodate the bigger dugout, we had to change the dimensions on the south catch basin. By increasing the width 2 metres, and the depth by roughly .5 metres we were able to shorten the length by 10 metres. The entire catch basin was also moved to the north, decreasing the distance between the two catch basins by 13 metres. Our new catch capacity is easily 10% bigger than our initial approved catch capacity, which in turn was already bigger then AOPA requirements. We feel that these changes were made not only to improve our water situation, but it also gives us much more flexibility on when we need to divert from the Willow Creek, and in part the L.N.I.D. This could reduce demand during peak irrigating times.

# 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.

AO Comment: Applicant is applying to amend the dimensions of the following facilities:

North Catch Basin to the as built dimensions of  $185 \text{ m} \times 42 \text{ m} \times 2.25 \text{ m}$  deep (average). The permitted dimensions in LA24002X were  $185 \text{ m} \times 40 \text{ m} \times 2 \text{ m}$  deep. Applicant indicated that the depth of the catch basin slopes from 2 m deep in the north portion to 2.5 m deep in the south portion, to allow for easier emptying and removal of solids.

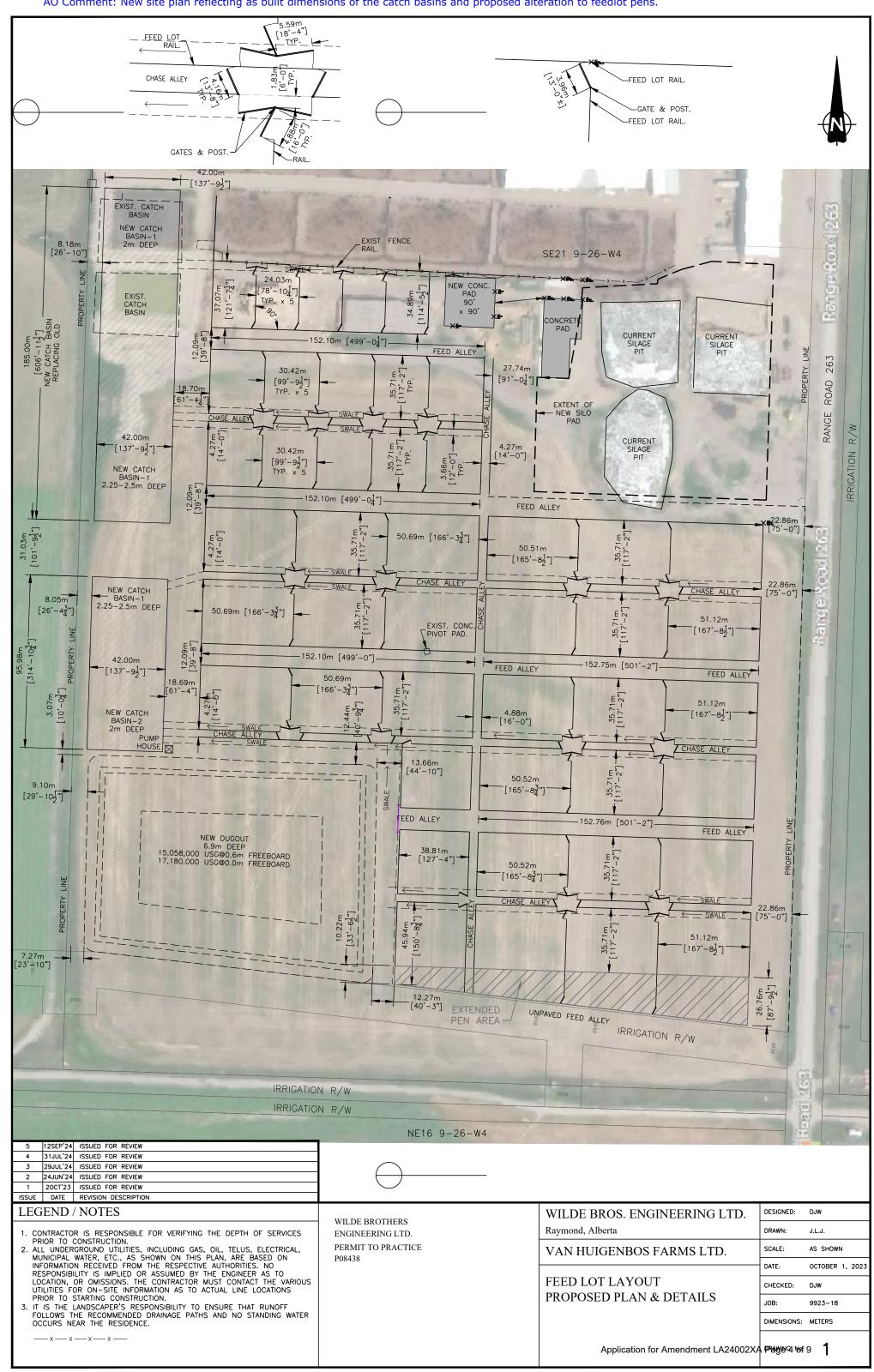
South Catch basin to the as built dimensions of  $96 \text{ m} \times 42 \text{ m} \times 2.25 \text{ m}$  deep (average). The permitted dimensions in LA24002X were  $105 \text{ m} \times 40 \text{ m} \times 2 \text{ m}$  deep. Applicant indicated that the depth of the catch basin slopes from 2 m deep in the south portion to 2.5 m deep in the north portion, to allow for easier emptying and removal of solids.

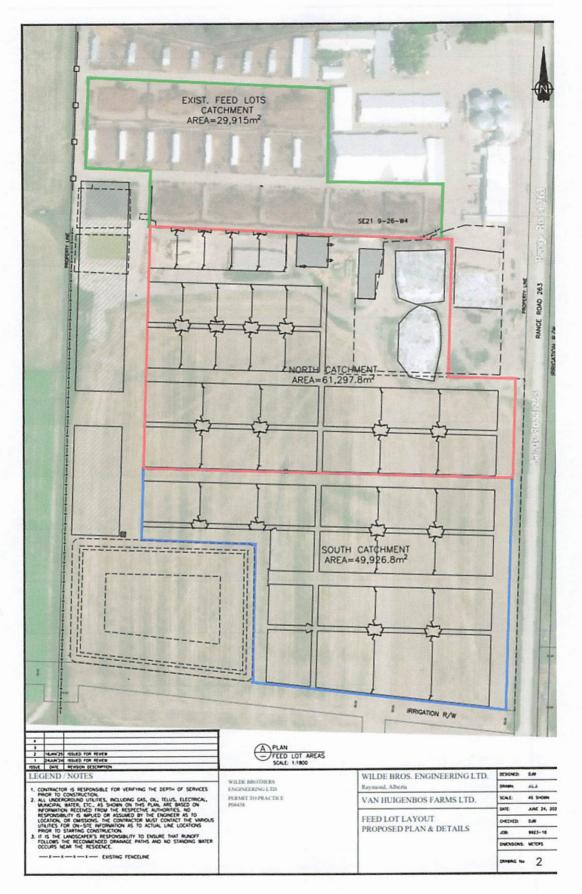
West pens to dimensions 152.1 m x 35.7 m (5 rows),  $38.8 \text{ m} \times 35.7 \text{ m}$  (2 rows), and  $38.8 \text{ m} \times 45.9 \text{ m}$ , irregular shape (1 row). The permitted dimensions in LA24002X were 152.1 m x 36.9 m (6 rows) and 50.7 m x 36.9 m (2 rows).

East pens to dimensions 152.8 m  $\times$  35.7 m (5 rows) and 152.8 m  $\times$  62.5 m, irregular shape (1 row). The permitted dimensions in LA24002X were 153.4 m  $\times$  36.9 m (6 rows).

AO Comment: During the first post construction inspection on October 31, 2024, of both catch basins, the North pens, and partially constructed West pens, I noticed that the not-yet built portion of the West pens would be different than what was permitted in LA24002X. I asked the applicant if there was going to be a change to the site layout, and he informed me at that time that due to having to construct the freshwater dugout larger, they would need to alter some of the pens to accommodate the larger freshwater dugout. I informed the applicant that any alteration to the site layout will require an amendment application, and the affected facilities could not be constructed.

Last updated: March 31, 2020





AO Comment: Updated site plan for areas contributing to run-off.

# **Catch Basin Dimension Calculator**

For more information on runoff control catch basin design consideration including liner options, catch basin protection, etc., check out the catch basin <u>factsheet</u>.

Name Van Huigenbos Farms
Land Location SE 21-09-21 W4

<ul> <li>Estimating Runoff Potentia</li> </ul>
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Area	Length (m)	Width (m)	Paved?	Area (m <sup>2</sup> )
1	499	100	YES <b>∽</b>	49900.00
	Total Area	· · · · · · · · · · · · · · · · · · ·		49900.00

Estimation of water runoff to be collected in the catch basin:

4491 m<sup>3</sup> 158598 ft<sup>3</sup> 987881 Imp. Gal

# Calculating Catch Basin Volume:

Construction Dimensions	D	Storage imensions
Length (m):	96	93.0
Width	42	39.0
(m): Depth (m):	2.5	2

# **Evacuation Capacity:**

7680 m<sup>3</sup>

271217 ft<sup>3</sup>

1689365 Imp.

Gal

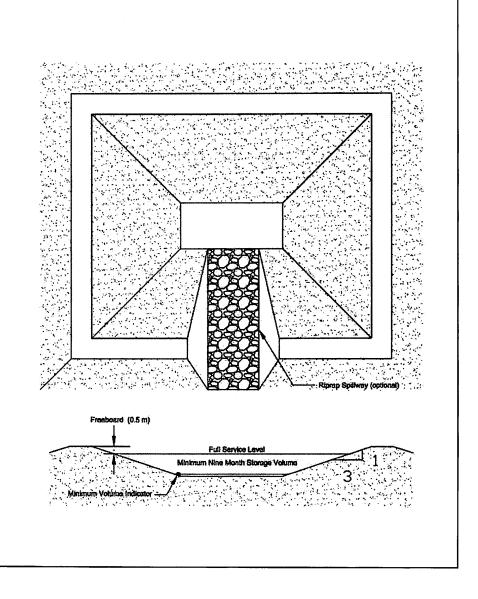
# Catch basin volume (minus freeboard):

 $5766 \text{ m}^3$ 

203624 ft<sup>3</sup>

1268340 Imp.

Gal



Comparing Catch Basin Volume versus Runoff Potential:-

Runoff potential:

4491 m<sup>3</sup>

Catch basin volume:

5766 m<sup>3</sup>

The catch basin dimensions meet the design requirements in AOPA

21 January 2024

JLECS File: P24047



PO Box 96 Monarch, AB T0L1M0

Van Huigenbos Farms Ltd.

PO Box 2517 Fort Macleod, Alberta TOL 0Z0

Attention: Henry Van Huigenbos

Re:

Substantial Completion Report New Catch Basin Construction SE-21-009-26-W4M, near Fort Macleod, Alberta

As requested, J Lobbezoo Engineering & Consulting Services Ltd. (JLECS) has carried out a field review in conjunction with the recent construction of two new catch basins at the above captioned location. Initial design details for the catch basins were outlined in the NRCB Authorization LA24002X, which indicated catch basin dimensions of 105 m by 40 m by 2 m deep, and 185 m by 40 m by 2 m deep. It is understood that the NRCB Permit application is being resubmitted for amendment to, in part, reflect a variation in catch basin dimensions.

The following comments and observations by JLECS relative to the construction of the catch basins are provided as follows:

- 1. The two catch basins (denoted in the Approval as the "North" and "South" catch basins were both constructed at the general location identified in the application. As-built survey information provided showed that the completed south catch basin at approximately 8 m from the west property line while the north catch basin was at approximately 8.2 m from the west property line, satisfying the minimum requirement of 6.1 m from the west property line as noted in the original Approval.
- 2. Based on as-built survey information provided by Wilde Bros. Engineering Ltd, the completed dimensions of the south catch basin were found to be approximately 42 m by 96 m by 2 m to 2.5 m deep, while the north catch basin was 42 m wide by 185 m long, and 2 m to 2.5 m deep. Interior side slopes of both new catch basins are inclined at approximately 3H:1V, in accordance with Section 14 of the AOPA.
- 3. As part of the construction of the new catch basins, sandy areas of the catch basin sideslopes had been subexcavated and replaced with low permeable compacted clay, consistent with the recommendation provided in the WPS report dated March 13, 2024. The base of both catch basins was observed to be competent low-permeable clay.
- 4. The groundwater table was not observed to be within 1 m of the bottom of the catch basins at during the field reviews by JLECS.

Van Huigenbos Farms Ltd. Substantial Completion Report, New Catch Basins, SE-21-009-26-W4M 21 January 2024 Page 2



It is noted that the assessment of the naturally occurring protective layer was based on boreholes VF5-23, VF10-23, VF11-23, and VF14-23. At these locations the portion of subsurface strata screened for permeability testing was below 2.7 m to 2.9 m depth (VF5-23, VF11-23 & CF14-23), and below 4.4 m depth at VF10-23 (which was located in the footprint of the north catch basin). Accordingly, the marginally increased depth of the as-built catch basins (i.e., up to 2.5 m depth) would still be above the portion of subsurface strata assessed for the naturally occurring liner.

Based on JLECS's site observations, the completed catch basins meet the applicable requirements of the Agricultural Operations Practices Act (AOPA).

We trust this satisfies your present requirements. If you have questions or require further information or clarification, please don't hesitate to contact the undersigned.

Respectfully submitted,

J Lobbezoo Engineering & Consulting Services Ltd.

21 Jan 2025

John Lobbezop, P.Eng.

Principal Geotechnical Engineer

PERMIT TO PRACTICE J LOBBEZO ENGINEERING &				
CONSULTIN RM SIGNATURE:	G SERVICES LTD.			
RM APEGA ID #:	160450			
PERMIT NU	21Jun 2028 MBER: P016456			

The Association of Professional Engineers and Geoscientists of Alberta (APEGA)