From:	Fiona Vance
To:	Laura Friend
Cc:	Bill Kennedy; Kelsey Peddle; Francisco Echegaray; Sean Royer
Subject:	RE: LA24002 Van Huigenbos Farms Ltd. - Board Information Request
Date:	August 21, 2024 12:31:46 PM
Attachments:	Van Huigenbos 2015 ERST.pdf Van Huigenbos 2016 ERST.pdf

Good afternoon,

Further to your e-mail request below, please find attached:

1) ERST (scanned PDF) from **September 2015** for the chicken barn (later decommissioned), feedlot pens, veal (calf) barn, pole barn, "new" pens, and "new" catch basin – new being in 2015. This ERST was conducted in the context of application LA15045, and this is the ERST that the Approval Officer referred to in LA24002.
2) ERST (scanned PDF) from **January 2016** for the same facilities.

The Board and parties may wish to refer to the NRCB's Guide for the ERST (Version 1.2, dated September 2011), which is available on the NRCB public website at 74333 (nrcb.ca) .

The 2016 ERST was entered electronically into the CFO database only, which is why the scanned document is less reader-friendly than the September 2015 ERST.

The 2016 ERST is substantially the same as the 2015 ERST. In early 2016 the NRCB ran quality assurance on some ERSTs. In the course of the quality assurance exercise, minor points were corrected. You may observe that the differences between the September 2015 ERST and the January 2016 ERST are:

- Veal Barn/Barn 3 scored 31.2 on 2015 ERST for risk to surface water and 32.4 on 2016 ERST for risk to surface water. Both scores are still considered low
- LA15045 Feedlot Pens on 2016 ERST are labeled as new feedlot pens on 2015 ERST
- LA15045 Catch Basin on 2016 ERST is labeled as new catch basin on 2015 ERST
- LA15045 Feedlot pens scored 37.2 on 2015 ERST for risk to surface water and 42 on 2016 ERST for risk to surface water. Both scores are still considered low

Regards,

Fiona N. Vance (*she/elle*)
Chief Legal Officer - Operations, NRCB
Fiona.Vance@nrcb.ca
(780) 999-3197

From: Laura Friend <Laura.Friend@nrcb.ca>
Sent: Tuesday, August 20, 2024 4:23 PM
To: Fiona Vance <Fiona.Vance@nrcb.ca>
Cc: cindyc@mdwillowcreek.com; development@fortmacleod.com; execassist@fortmacleod.com; Bill Kennedy <Bill.Kennedy@nrcb.ca>; Francisco Echegaray <Francisco.Echegaray@nrcb.ca>; Kelsey Peddle <kelsey.peddle@nrcb.ca>; Sean Royer <Sean.Royer@nrcb.ca>
Subject: LA24002 Van Huigenbos Farms Ltd. - Board Information Request

Ms. Vance,

Te Board requests that you provide it with the 2015 ERST referenced in the approval officer's decision summary and technical document. On receipt, the Board will circulate the ERST to all parties in the RFR process.

The email has been bcc'd to the operator and the directly affected parties.

Laura Friend
Manager, Board Reviews
Laura.friend@nrcb.ca
403-297-8269

Environmental Risk Screening Tool for Manure Facilities at Confined Feeding Operations
Version 1.2 – September 2011

(Information on how to complete this form is available in a companion document.)

Facility 1 Name: chicken barns Facility 2 Name: feedlot pens Facility 3 Name: veal barn

Legal Land Location: SE 21-9-26 W4 CFO name: Van Huigenbos Farms

Screening Completed By: Karen Date Completed: Sept 17, 2015

NOTE- Each facility should be scored individually

HAZARD POTENTIAL

Manure Type

Solid Manure	4			
Runoff water with manure constituents (e.g., catch basin contents)	10			
Liquid Manure	20	Score:	4	4	4

Annual Manure Amount (tonnes)

>60,000	8			
40,000 to 60,000	5			
20,000 to <40,000	2			
<20,000	1	Score:	1	1	1

Total Hazard Potential Score (maximum 28): 5 | 5 | 5

PATHWAY

GROUNDWATER

General comments and overall scoring criteria

☐☐☐ *If there is a water well directly located within the manure storage area, score the groundwater section as high risk.*

If the above condition does not exist, continue scoring the groundwater section.

To help score the next two factors, complete the following and provide a sketch if possible:

Depth of storage below grade	0	0	0	(A)
Depth to top of Protective Layer below grade	4	4	4	(B)
Depth to bottom of Protective Layer below grade	18.9	18.9	18.9	(C)
Thickness of Protective Layer	14.9	14.9	14.9	(D)
Depth of UGR below grade	20.7	20.7	20.7	(E)
Depth to UGR from the bottom of the facility	20.7	20.7	20.7	(F)

Notes:

I am combining two layers for the PL - a brown oxidized till and clay and a gray unoxidized clay and till as I suspect they are the same formation - simply in contact with air and not in contact with air. (Probably doesn't change numbers appreciably)

Uppermost Groundwater Resource (UGR)

	Subsoil Texture		
Depth to UGR (m) (from the bottom of the facility)	Fine - Medium	Coarse	Very Coarse
>30	1	4	7
8 - 30	2	5	8
<8	3	6	10

Score: 8 | 8 | 8

Protective Layer(s) (PL) Between Bottom of Facility and UGR

- *Score is 20 if the storage is constructed into the UGR*

Thickness of Protective Layer(s) (m)	Subsoil Texture		
	Fine	Medium	Coarse – Very Coarse
>10	1	3	8
5 - 10	4	6	12
2 - <5	6	9	16
<2	8	12	20

Score: 1 1 1

Liner Type

Meets AOPA liner or protective layer requirements	1
Concrete liner – no specs	2
May meet AOPA requirements	15
Does not meet AOPA requirements	20

Score: 1 1 1

Notes

Naturally occurring protective layer that meets AOPA requirements proven for this application. Also one water well was decommissioned and another one drilled since the last ERST done.

Water Well Risk Scoring

Complete the table below for each water well within 400 m of the reference point identified. If the well is upslope of the facility, the well should be given a score of 1.

The "Highest Risk Water Well" is the well with the highest score.

Depth to top of open interval in water well (m)	Distance to Water Well (m)			
	>100 to 400	60 to 99	30 to 59	<30
>100m	1	2	3	4
30-100m	5	6	7	8
<30m	9	10	12	15

- *If well annulus filled with cuttings, add 3 points*
- *If well has a drive shoe seal, add 5 points*
- *If well has no seal or the nature of the seal is unknown, add 8 points.*

Well I.D.	9731008											
Score	15	10	12									
Well I.D.												
Score												

Highest Risk Water Well (highest score from wells scored above): Score: 15 10 12

Infiltration Potential

Predominant Soil type	Average Annual Precipitation (mm)		
	<400	400-600	>600
Fine	1	2	
Medium	3	4	
Coarse	5	6	8

Score: 4 | 4 | 4

Special Considerations (Allowable range of -8 to +8 with a total score for this section not to go over or under the allowable range). *Score is 0 if there are no special considerations*

Special consideration examples:

- Pumping rate of nearby water well (concern is that even if the well is upslope, a cone of depression may develop which could draw in contaminated water)
- Presence of any springs that have the potential to be impacted by the CFO.
- Water well in pit
- Certainty of information (ie. remove points for high quality of information, is not intended to be used for low quality of info)
- Additional points may be added if there are multiple wells that score high in the water well risk scoring criteria

Score: 0 | 0 | 0

If a special consideration(s) is used, describe:

Total Groundwater Pathway Score (maximum score 81): 29 | 24 | 26

EXPOSURE POTENTIAL

GROUNDWATER

☐ ☐ ☐ If no water wells are completed within 400m of the confined feeding operation facility being assessed, use an exposure potential factor of **1**

☐ ☐ ☐ If one or more water wells located within 400m of the confined feeding operation facility, but greater than 100m from the confined feeding operation facility, use an exposure potential factor of **1.1**

☐ ☐ ☐ If one or more water wells located within 100m of the confined feeding operation facility, use an exposure potential factor of **1.2**

Hazard Potential Score 5 + Groundwater Pathway Score 29 = 34 × Exposure Potential Multiplier 1.2 = Risk Score 40.8 ✓

Hazard Potential Score 5 + Groundwater Pathway Score 24 = 29 × Exposure Potential Multiplier 1.2 = Risk Score 34.8 ✓

Hazard Potential Score 5 + Groundwater Pathway Score 26 = 31 × Exposure Potential Multiplier 1.2 = Risk Score 37.2 ✓

Risk Level	Hazard Potential Score + Groundwater Pathway Score (maximum score – 109)
High Potential *Risk to the Environment*	>90
Moderate Potential *Risk to the Environment*	70 – 90
Low Potential *Risk to the Environment*	<70

If you checked off the following in the groundwater section, indicate here as well.

☐ ☐ ☐ *If there is a water well directly located within the manure storage area, score the groundwater section as high risk.*

Notes

PATHWAY

SURFACE WATER

General comments and overall scoring criteria

☐☐☐ *If body of water is known to be upslope of the facility, score the surface water section as low risk.*

☐☐☐ *If no water body within 800 m, score the surface water section as low risk.*

☐☐☐ *If the facility is located less than 1 m (in elevation) above the 1 in 25 year floodplain level, score the surface water section as high risk.*

If none of the above conditions exist, continue scoring the surface water section.

Likelihood of Runoff Reaching a Water Body

	Slope of land from facility to water body (%)			
Horizontal Distance to Water Body	<4	4 - <6	6 - 12	>12
>100m	1	2	3	4
30-100m	2	3	4	5
<30m	3	4	5	6

Score: 4 | 4 | 4

Surface Water Runoff

	Average Annual Precipitation (mm)		
Predominant Soil type	<400	400-600	>600
Coarse	1	2	
Medium	3	4	
Fine	5	6	8

Score: 4 | 4 | 4

Surface Water Run-on Control

All upslope surface water diverted around the facility	0			
Most upslope surface water diverted (>80% - 99%)	1			
Minimal upslope surface water diverted (<80%)	5	Score:	0	5	0

Manure Impacted Area Runoff Control

No yard runoff (e.g., covered facility)	0				
All runoff controlled	4				
Most runoff controlled (>80% - 99%)	10				
Minimal control of lot runoff (<80%)	20	Score:	0	4	0

Runoff Flow Path between Facility and Receiving Body of Water

	Vegetation Cover	
Type of Yard Runoff Flow	> 50% Vegetated	< 50% Vegetated or Frozen
Dispersed flow	1	4
Channelled flow	7	15

Score: 7 | 7 | 7

Notes

Special Considerations (Allowable range of -5 to +5 with a total score for this section not to go over or under the range). *Score is 0 if there are no special considerations*

Special consideration examples:

- Secondary containment
- Amount of freeboard
- Above ground earthen storage
- Certainty of information (ie. remove points for high quality of information, is not intended to be used for low quality of info)

Score: | 0 | 0 | 0 |

If a special consideration(s) is used, describe:

When scoring the surface water section of the tool choose runoff water with manure constituents for solid manure facilities.

Additional score of **6** for solid manure storage	6	6	6
Total Surface Water Pathway Score (maximum score 54):	21	30	21

Notes

SURFACE WATER

☐ ☐ ☐ If highest use surface water body (with the greatest number of types of users) located within 800m of the confined feeding operation facility being assessed is a small slough or creek on private land but not a common body of water, use an exposure potential factor of **1**

☐ ☐ ☐ If highest use surface water body (with the greatest number of types of users) located within 800m of the confined feeding operation facility being assessed is a common body of water with little human use (within 10 miles downstream), use an exposure potential factor of **1.1**

☑ ☑ ☑ If highest use surface water body (with the greatest number of types of users) located within 800m of the confined feeding operation facility being assessed is a high use common body of water (recreation, water supply, etc.), use an exposure potential factor of **1.2**

Hazard Potential Score 5 + Surface water Pathway Score 21 = 26 × Exposure Potential Multiplier 1.2 = Risk Score 31.2 ✓

Hazard Potential Score 5 + Surface water Pathway Score 30 = 35 × Exposure Potential Multiplier 1.2 = Risk Score 42 ✓

Hazard Potential Score 5 + Surface water Pathway Score 21 = 26 × Exposure Potential Multiplier 1.2 = Risk Score 31.2 ✓

Risk Level	**Hazard Potential Score + Surface Water Pathway Score (maximum score – 82)**
High Potential *Risk to the Environment*	**> 58**
Moderate Potential *Risk to the Environment*	**44 – 58**
Low Potential *Risk to the Environment*	**<44**

If you checked off the following in the surface water section, indicate here as well.

☐ ☐ ☐ *If body of water is known to be upslope of the facility, score the surface water section as low risk.*

☐ ☐ ☐ *If no water body within 800 m score the surface water section as low risk.*

☐ ☐ ☐ *If the facility is located less than 1 m (in elevation) above the 1 in 25 year floodplain level, score the surface water section as high risk.*

Print Save Reset

Environmental Risk Screening Tool for Manure Facilities at Confined Feeding Operations
Version 1.2 – September 2011

(Information on how to complete this form is available in a companion document.)

Facility 1 Name: pole barn Facility 2 Name: new feedlot pens Facility 3 Name: new catch basin

Legal Land Location: SE 21-9-26 W4 CFO name: Van Huigenbos Farms

Screening Completed By: Karen Date Completed: Sept 17, 2015

NOTE- Each facility should be scored individually

HAZARD POTENTIAL

Manure Type

Solid Manure	4			
Runoff water with manure constituents (e.g., catch basin contents)	10			
Liquid Manure	20	Score:	4	4	10

Annual Manure Amount (tonnes)

>60,000	8			
40,000 to 60,000	5			
20,000 to <40,000	2			
<20,000	1	Score:	1	1	1

Total Hazard Potential Score (maximum 28): 5 | 5 | 11

PATHWAY

GROUNDWATER

General comments and overall scoring criteria

☐☐☐ *If there is a water well directly located within the manure storage area, score the groundwater section as high risk.*

If the above condition does not exist, continue scoring the groundwater section.

To help score the next two factors, complete the following and provide a sketch if possible:

Depth of storage below grade	0	0	3	(A)
Depth to top of Protective Layer below grade	4	4	4	(B)
Depth to bottom of Protective Layer below grade	18.9	18.9	18.9	(C)
Thickness of Protective Layer	14.9	14.9	14.9	(D)
Depth of UGR below grade	20.7	20.7	20.7	(E)
Depth to UGR from the bottom of the facility	20.7	20.7	17.7	(F)

Notes:

I am combining two layers for the PL - a brown oxidized till and clay and a gray unoxidized clay and till as I suspect they are the same formation - simply in contact with air and not in contact with air. (Probably doesn't change numbers appreciably) Some assumptions made for new facilities that are not applied for yet.

Uppermost Groundwater Resource (UGR)

	Subsoil Texture		
Depth to UGR (m) (from the bottom of the facility)	Fine - Medium	Coarse	Very Coarse
>30	1	4	7
8 - 30	2	5	8
<8	3	6	10

Score: 8 | 8 | 8

Protective Layer(s) (PL) Between Bottom of Facility and UGR

- *Score is 20 if the storage is constructed into the UGR*

Thickness of Protective Layer(s) (m)	Subsoil Texture		
	Fine	Medium	Coarse – Very Coarse
>10	1	3	8
5 - 10	4	6	12
2 - <5	6	9	16
<2	8	12	20

Score: 1 | 1 | 1

Liner Type

Meets AOPA liner or protective layer requirements	1
Concrete liner – no specs	2
May meet AOPA requirements	15
Does not meet AOPA requirements	20

Score: 1 | 1 | 1

Notes

Naturally occurring protective layer that meets AOPA requirements proven for this application. Also one water well was decommissioned and another one drilled since the last ERST done.

Water Well Risk Scoring

Complete the table below for each water well within 400 m of the reference point identified. If the well is upslope of the facility, the well should be given a score of 1.

The "Highest Risk Water Well" is the well with the highest score.

	Distance to Water Well (m)			
Depth to top of open interval in water well (m)	≥100 to 400	60 to 99	30 to 59	<30
>100m	1	2	3	4
30-100m	5	6	7	8
<30m	9	10	12	15

- *If well annulus filled with cuttings, add 3 points*
- *If well has a drive shoe seal, add 5 points*
- *If well has no seal or the nature of the seal is unknown, add 8 points.*

Well I.D.	9731008											
Score	9	10	9									
Well I.D.												
Score												

Highest Risk Water Well (highest score from wells scored above): Score: 9 10 9

Infiltration Potential

Predominant Soil type	Average Annual Precipitation (mm)		
	<400	400-600	>600
Fine	1	2	
Medium	3	4	
Coarse	5	6	8

Score: 4 | 4 | 4

Special Considerations (Allowable range of -8 to +8 with a total score for this section not to go over or under the allowable range). *Score is 0 if there are no special considerations*

Special consideration examples:

- Pumping rate of nearby water well (concern is that even if the well is upslope, a cone of depression may develop which could draw in contaminated water)
- Presence of any springs that have the potential to be impacted by the CFO.
- Water well in pit
- Certainty of information (ie. remove points for high quality of information, is not intended to be used for low quality of info)
- Additional points may be added if there are multiple wells that score high in the water well risk scoring criteria

Score: 0 | 0 | 0

If a special consideration(s) is used, describe:

Total Groundwater Pathway Score (maximum score 81): 23 | 24 | 23

EXPOSURE POTENTIAL

GROUNDWATER

☐ ☐ ☐ If no water wells are completed within 400m of the confined feeding operation facility being assessed, use an exposure potential factor of **1**

☐ ☐ ■ If one or more water wells located within 400m of the confined feeding operation facility, but greater than 100m from the confined feeding operation facility, use an exposure potential factor of **1.1**

■ ■ ☐ If one or more water wells located within 100m of the confined feeding operation facility, use an exposure potential factor of **1.2**

Hazard Potential Score 5 + Groundwater Pathway Score 23 = 28 × Exposure Potential Multiplier 1.2 = Risk Score 33.6 ✓

Hazard Potential Score 5 + Groundwater Pathway Score 24 = 29 × Exposure Potential Multiplier 1.2 = Risk Score 34.8 ✓

Hazard Potential Score 11 + Groundwater Pathway Score 23 = 34 × Exposure Potential Multiplier 1.1 = Risk Score 37.4 ✓

Risk Level	**Hazard Potential Score + Groundwater Pathway Score (maximum score – 109)**
High Potential *Risk to the Environment*	**>90**
Moderate Potential *Risk to the Environment*	**70 – 90**
Low Potential *Risk to the Environment*	**<70**

If you checked off the following in the groundwater section, indicate here as well.

☐ ☐ ☐ *If there is a water well directly located within the manure storage area, score the groundwater section as high risk.*

Notes

PATHWAY

SURFACE WATER

General comments and overall scoring criteria

☐☐☐ *If body of water is known to be upslope of the facility, score the surface water section as low risk.*

☐☐☐ *If no water body within 800 m, score the surface water section as low risk.*

☐☐☐ *If the facility is located less than 1 m (in elevation) above the 1 in 25 year floodplain level, score the surface water section as high risk.*

If none of the above conditions exist, continue scoring the surface water section.

Likelihood of Runoff Reaching a Water Body

	Slope of land from facility to water body (%)			
Horizontal Distance to Water Body	<4	4 - <6	6 - 12	>12
>100m	1	2	3	4
30-100m	2	3	4	5
<30m	3	4	5	6

Score: 4 | 4 | 4

Surface Water Runoff

	Average Annual Precipitation (mm)		
Predominant Soil type	<400	400-600	>600
Coarse	1	2	
Medium	3	4	
Fine	5	6	8

Score: 4 | 4 | 4

Surface Water Run-on Control

All upslope surface water diverted around the facility	0				
Most upslope surface water diverted (>80% - 99%)	1				
Minimal upslope surface water diverted (<80%)	5	Score:	0	1	5

Manure Impacted Area Runoff Control

No yard runoff (e.g., covered facility)	0				
All runoff controlled	4				
Most runoff controlled (>80% - 99%)	10				
Minimal control of lot runoff (<80%)	20	Score:	0	4	4

Runoff Flow Path between Facility and Receiving Body of Water

	Vegetation Cover	
Type of Yard Runoff Flow	> 50% Vegetated	< 50% Vegetated or Frozen
Dispersed flow	1	4
Channelled flow	7	15

Score: 7 | 7 | 7

Notes

Special Considerations (Allowable range of -5 to +5 with a total score for this section not to go over or under the range). *Score is 0 if there are no special considerations*

Special consideration examples:

- Secondary containment
- Amount of freeboard
- Above ground earthen storage
- Certainty of information (ie. remove points for high quality of information, is not intended to be used for low quality of info)

Score: | 0 | 0 | 0 |

If a special consideration(s) is used, describe:

When scoring the surface water section of the tool choose runoff water with manure constituents for solid manure facilities.

Additional score of **6** for solid manure storage	6	6	
Total Surface Water Pathway Score (maximum score 54):	21	26	24

Notes

SURFACE WATER

☐ ☐ ☐ If highest use surface water body (with the greatest number of types of users) located within 800m of the confined feeding operation facility being assessed is a small slough or creek on private land but not a common body of water, use an exposure potential factor of **1**

☐ ☐ ☐ If highest use surface water body (with the greatest number of types of users) located within 800m of the confined feeding operation facility being assessed is a common body of water with little human use (within 10 miles downstream), use an exposure potential factor of **1.1**

☐ ☐ ☐ If highest use surface water body (with the greatest number of types of users) located within 800m of the confined feeding operation facility being assessed is a high use common body of water (recreation, water supply, etc.), use an exposure potential factor of **1.2**

Hazard Potential Score 5 + Surface water Pathway Score 21 = 26 × Exposure Potential Multiplier 1.2 = Risk Score 31.2

Hazard Potential Score 5 + Surface water Pathway Score 26 = 31 × Exposure Potential Multiplier 1.2 = Risk Score 37.2

Hazard Potential Score 11 + Surface water Pathway Score 24 = 35 × Exposure Potential Multiplier 1.2 = Risk Score 42

Risk Level	**Hazard Potential Score + Surface Water Pathway Score (maximum score – 82)**
High Potential *Risk to the Environment*	**> 58**
Moderate Potential *Risk to the Environment*	**44 – 58**
Low Potential *Risk to the Environment*	**<44**

If you checked off the following in the surface water section, indicate here as well.

☐ ☐ ☐ *If body of water is known to be upslope of the facility, score the surface water section as low risk.*

☐ ☐ ☐ *If no water body within 800 m score the surface water section as low risk.*

☐ ☐ ☐ *If the facility is located less than 1 m (in elevation) above the 1 in 25 year floodplain level, score the surface water section as high risk.*

Print Save Reset

2001.12.11.187
Van Huigenbos, Henry - Van Huigenbos Farms Ltd.
Edit Address Book (/AddressBook/ViewParty/3836?returnUrl=https%3A%2F%2Fcfo2.nrcb.ca%2FRiskAssessment%2FViewRiskAssessment%2F2974)

Willow Creek, M.D. of Southern

SE-21-009-26-W4

Risk Assessment Type	Application
Facility Name	Barn 1 and 2 (to be decomm. with Auth LA17054)
Date Of Site Visit	09/15/2015
Visit Completed By	Karen Stewart
Person Interviewed	Gerrit Van Huigebos
Screening Completed By	Karen Stewart
Date Scored	06/01/2016
Reference Well for UGR	9731008
Reference Well for PL	9731008
AOPA Approved	☐
Locked	☐

Manure Type	Solid Manure Storage	4
Annual Manure Amount (tonnes)	500 to < 20,000	1
Total Hazard Potential		5

Storage Specifications

Depth Of Storage Below Grade	0	Thickness Of Protective Layer Thickness Of Protective Layer is calculated correctly but doesn't match the overriden value from the Facility of 11.6.	11.58
Depth To Top Of Protective Layer Below Grade	7.32	Depth Of Uppermost Groundwater Resource	20.42
Depth To Bottom Of Protective Layer Below Grade	18.9	Depth To UGR from the Bottom of the Facility	20.4

Uppermost Groundwater Resource (UGR)

Depth to UGR (m): 8 - 30

Subsoil Texture: Very Coarse

8

Protective Layer(s) (PL) Between Bottom of Facility and UGR

Thickness of Protective Layers (m): >10

Subsoil Texture: Fine

☐ Storage is Constructed into UGR override

1

Liner Type

Liner Type: Meets AOPA liner or protective layer requirements

1

Water Wells

Page 1 of 1 100 Viewing 1 - 2 of 2

Well ID	Reference Point	Distance to Well (m)	Well Sealing Method	Depth to Top of Open Interval (m)	Surface Gradient to Water Well	Comments	Abandone	Outside 400m	Score
115633	chicken barn	21	No Seal/Unknown	0.00	Unknown	decommissioned in 2015	☑	☐	0
9731008	chicken barn	26	Bentonite or Cement	19.80	Unknown		☐	☐	15

Page 1 of 1 100 Viewing 1 - 2 of 2

15

Infiltration Potential

Predominant Soil Type: Medium

Average Annual Precipitation (mm): 400-600

4

Special Considerations

Special Considerations Detail

0

Groundwater Exposure Potential

- ○ No water wells are completed within 400m of the confined feeding operation facility being assessed.
- ○ One or more water wells are located within 400m of the confined feeding operation facility, but greater than 100m from the confined feeding operation facility.
- ◉ One or more water wells are located within 100m of the confined feeding operation facility.

Hazard Potential Score	5
+ Groundwater Pathway Score	29
x Exposure Potential Modifier	1.2
= Groundwater Risk Score	40.8

Low potential risk to the environment.

- ○ Body of water is known to be upslope of the facility - low risk.
- ○ No water body with 800m - low risk.
- ○ Facility is located less than 1m (in elevation) above the 1 in 25 year floodplain - high risk.
- ◉ None of the Above

Likelihood of Runoff Reaching a Water Body

Horizontal Distance to Water Body	>100m	Slope of Land From Facility to Water Body	>12	4

Surface Water Runoff

Predominant Soil Type	Medium	Average Annual Precipitation	400-600	4

Surface Water Run-on Control

0	Surface Water Run-on Control	All upslope surface water diverted around the facility

Manure Impacted Area Runoff Control

0	Manure Impacted Area Runoff Control	No yard runoff (e.g. covered facility)

Runoff Flow Path Between Facility and Receiving Body of Water

Type of Yard Runoff Flow	Channelled Flow	Vegetation Cover	>50% Vegetated	7

Special Considerations

Special Considerations Detail

0

Surface Water Exposure Potential

- ○ Highest use surface water body (with the greatest number of types of users) located within 800m of the confined feeding operation facility being assessed is a small slough or creek on private land but not a common body of water.
- ○ Highest use surface water body (with the greatest number of types of users) located within 800m of the confined feeding operation facility being assessed is a common body of water with little human use (within 10 miles downstream).
- ◉ Highest use surface water body (with the greatest number of types of users) located within 800m of the confined feeding operation facility being assessed is a high use common body of water (recreation, water supply, etc.).

Hazard Potential Score	5
+ Additional Pathway Score for Solid Manure Storage	6
+ Surface Water Pathway Score	15
x Exposure Potential Modifier	1.2
= Surface Water Risk Score	31.2

Low potential risk to the environment.

Errors
None

Warnings
Thickness Of Protective Layer is calculated correctly but doesn't match the overriden value from the Facility of 11.6.

2001.12.11.187
Van Huigenbos, Henry - Van Huigenbos Farms Ltd.
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Willow Creek, M.D. of Southern

SE-21-009-26-W4

Risk Assessment Type	Application
Facility Name	Barn 3
Date Of Site Visit	09/15/2015
Visit Completed By	Karen Stewart
Person Interviewed	Gerrit Van Huigebos
Screening Completed By	Karen Stewart
Date Scored	06/01/2016
Reference Well for UGR	9731008
Reference Well for PL	9731008
AOPA Approved	☐
Locked	☐

Manure Type	Solid Manure Storage	4
Annual Manure Amount (tonnes)	500 to < 20,000	1
Total Hazard Potential		5

Storage Specifications

Depth Of Storage Below Grade	0	Thickness Of Protective Layer Thickness Of Protective Layer is calculated correctly but doesn't match the overriden value from the Facility of 11.6.	11.58
Depth To Top Of Protective Layer Below Grade	7.32	Depth Of Uppermost Groundwater Resource	20.42
Depth To Bottom Of Protective Layer Below Grade	18.9	Depth To UGR from the Bottom of the Facility	20.4

Uppermost Groundwater Resource (UGR)

Depth to UGR (m): 8 - 30

Subsoil Texture: Very Coarse

8

Protective Layer(s) (PL) Between Bottom of Facility and UGR

Thickness of Protective Layers (m): >10

Subsoil Texture: Fine

☐ Storage is Constructed into UGR override

1

Liner Type

Liner Type: Meets AOPA liner or protective layer requirements

1

Water Wells

Page 1 of 1 100 Viewing 1 - 2 of 2

Well ID	Reference Point	Distance to Well (m)	Well Sealing Method	Depth to Top of Open Interval (m)	Surface Gradient to Water Well	Comments	Abandone	Outside 400m	Score
115633	veal barn	57	No Seal/Unknown	0.00	Unknown	decommissioned in 2015	☑	☐	0
9731008	veal barn	52	Bentonite or Cement	19.80	Unknown		☐	☐	12

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12

Infiltration Potential

Predominant Soil Type: Medium

Average Annual Precipitation (mm): 400-600

4

Special Considerations

Special Considerations Detail

0

Groundwater Exposure Potential

- ○ No water wells are completed within 400m of the confined feeding operation facility being assessed.
- ○ One or more water wells are located within 400m of the confined feeding operation facility, but greater than 100m from the confined feeding operation facility.
- ◉ One or more water wells are located within 100m of the confined feeding operation facility.

Hazard Potential Score	5
+ Groundwater Pathway Score	26
x Exposure Potential Modifier	1.2
= Groundwater Risk Score	37.2

Low potential risk to the environment.

- ○ Body of water is known to be upslope of the facility - low risk.
- ○ No water body with 800m - low risk.
- ○ Facility is located less than 1m (in elevation) above the 1 in 25 year floodplain - high risk.
- ◉ None of the Above

Likelihood of Runoff Reaching a Water Body

Page 1 of 1 100 Viewing 1 - 1 of 1

Water Body Name	Water Body Type	Reference Point	Distance To Water Body (m)	Surface Gradient to Water Body
Willow Creek	Creek	barn	289	Downslope

Page 1 of 1 100 Viewing 1 - 1 of 1

Horizontal Distance to Water Body: 30 - 100m

Slope of Land From Facility to Water Body: >12 — 5

Surface Water Runoff

Predominant Soil Type: Medium

Average Annual Precipitation: 400-600 — 4

Surface Water Run-on Control

Surface Water Run-on Control: All upslope surface water diverted around the facility

0

Manure Impacted Area Runoff Control

Manure Impacted Area Runoff Control: No yard runoff (e.g. covered facility)

0

Runoff Flow Path Between Facility and Receiving Body of Water

Type of Yard Runoff Flow: Channelled Flow

Vegetation Cover: >50% Vegetated — 7

Special Considerations

Special Considerations Detail

0

Surface Water Exposure Potential

- ○ Highest use surface water body (with the greatest number of types of users) located within 800m of the confined feeding operation facility being assessed is a small slough or creek on private land but not a common body of water.
- ○ Highest use surface water body (with the greatest number of types of users) located within 800m of the confined feeding operation facility being assessed is a common body of water with little human use (within 10 miles downstream).
- ◉ Highest use surface water body (with the greatest number of types of users) located within 800m of the confined feeding operation facility being assessed is a high use common body of water (recreation, water supply, etc.).

Hazard Potential Score	5
+ Additional Pathway Score for Solid Manure Storage	6
+ Surface Water Pathway Score	16
x Exposure Potential Modifier	1.2
= Surface Water Risk Score	32.4

Low potential risk to the environment.

Errors
None

Warnings
Thickness Of Protective Layer is calculated correctly but doesn't match the overriden value from the Facility of 11.6.

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Willow Creek, M.D. of Southern

SE-21-009-26-W4

Risk Assessment Type	Application
Facility Name	LA15045 Catch basin
Date Of Site Visit	09/15/2015
Visit Completed By	Karen Stewart
Person Interviewed	Gerrit Van Huigebos
Screening Completed By	Karen Stewart
Date Scored	06/01/2016
Reference Well for UGR	9731008
Reference Well for PL	9731008
AOPA Approved	☐
Locked	☐

Manure Type	Catch Basin	10
Annual Manure Amount (tonnes)	500 to < 20,000	1
Total Hazard Potential		11

Storage Specifications

Depth Of Storage Below Grade	2	Thickness Of Protective Layer Thickness Of Protective Layer is calculated correctly but doesn't match the overriden value from the Facility of 11.6.	11.58
Depth To Top Of Protective Layer Below Grade	7.32	Depth Of Uppermost Groundwater Resource	20.42
Depth To Bottom Of Protective Layer Below Grade	18.9	Depth To UGR from the Bottom of the Facility	18.4

Uppermost Groundwater Resource (UGR)

Depth to UGR (m): 8 - 30

Subsoil Texture: Very Coarse

8

Protective Layer(s) (PL) Between Bottom of Facility and UGR

Thickness of Protective Layers (m): >10

Subsoil Texture: Fine

☐ Storage is Constructed into UGR override

1

Liner Type

Liner Type: Meets AOPA liner or protective layer requirements

1

Water Wells

Page 1 of 1 100 Viewing 1 - 2 of 2

Well ID	Reference Point	Distance to Well (m)	Well Sealing Method	Depth to Top of Open Interval (m)	Surface Gradient to Water Well	Comments	Abandone	Outside 400m	Score
115633	corner of catch basin	310	No Seal/Unknown	0.00	Unknown	Decommissioned in 2015	☑	☐	0
9731008	corner of catch basin	315	Bentonite or Cement	19.80	Unknown		☐	☐	9

Page 1 of 1 100 Viewing 1 - 2 of 2

9

Infiltration Potential

Predominant Soil Type: Medium

Average Annual Precipitation (mm): 400-600

4

Special Considerations

Special Considerations Detail

0

Groundwater Exposure Potential

- ○ No water wells are completed within 400m of the confined feeding operation facility being assessed.
- ◉ One or more water wells are located within 400m of the confined feeding operation facility, but greater than 100m from the confined feeding operation facility.
- ○ One or more water wells are located within 100m of the confined feeding operation facility.

Hazard Potential Score: 11

+ Groundwater Pathway Score: 23

x Exposure Potential Modifier: 1.1

= Groundwater Risk Score 37.4

Low potential risk to the environment.

- ○ Body of water is known to be upslope of the facility - low risk.
- ○ No water body with 800m - low risk.
- ○ Facility is located less than 1m (in elevation) above the 1 in 25 year floodplain - high risk.
- ◉ None of the Above

Likelihood of Runoff Reaching a Water Body

Page 1 of 1 100 Viewing 1 - 1 of 1

Water Body Name	Water Body Type	Reference Point	Distance To Water Body (m)	Surface Gradient to Water Body
Willow Creek	Creek	corner of catch basin	276	Downslope

Page 1 of 1 100 Viewing 1 - 1 of 1

Horizontal Distance to Water Body: >100m

Slope of Land From Facility to Water Body: >12 — 4

Surface Water Runoff

Predominant Soil Type: Medium

Average Annual Precipitation: 400-600 — 4

Surface Water Run-on Control

Surface Water Run-on Control: Minimal upslope surface water diverted (<80%)

5

Manure Impacted Area Runoff Control

Manure Impacted Area Runoff Control: All runoff controlled

4

Runoff Flow Path Between Facility and Receiving Body of Water

Type of Yard Runoff Flow: Channelled Flow

Vegetation Cover: >50% Vegetated — 7

Special Considerations

Special Considerations Detail

0

Surface Water Exposure Potential

- ○ Highest use surface water body (with the greatest number of types of users) located within 800m of the confined feeding operation facility being assessed is a small slough or creek on private land but not a common body of water.
- ○ Highest use surface water body (with the greatest number of types of users) located within 800m of the confined feeding operation facility being assessed is a common body of water with little human use (within 10 miles downstream).
- ◉ Highest use surface water body (with the greatest number of types of users) located within 800m of the confined feeding operation facility being assessed is a high use common body of water (recreation, water supply, etc.).

Hazard Potential Score	11
+ Additional Pathway Score for Solid Manure Storage	0
+ Surface Water Pathway Score	24
x Exposure Potential Modifier	1.2
= Surface Water Risk Score	42.0

Low potential risk to the environment.

Errors
None

Warnings
Thickness Of Protective Layer is calculated correctly but doesn't match the overriden value from the Facility of 11.6.

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Willow Creek, M.D. of Southern

SE-21-009-26-W4

Risk Assessment Type	Application
Facility Name	Feedlot pens
Date Of Site Visit	09/15/2015
Visit Completed By	Karen S
Person Interviewed	Gerrit Van H
Screening Completed By	Karen
Date Scored	06/01/2016
Reference Well for UGR	9731008
Reference Well for PL	9731008
AOPA Approved	☐
Locked	☐

Manure Type	Solid Manure Storage	4
Annual Manure Amount (tonnes)	500 to < 20,000	1
	Total Hazard Potential	5

Storage Specifications

Depth Of Storage Below Grade	0	Thickness Of Protective Layer Thickness Of Protective Layer is calculated correctly but doesn't match the overriden value from the Facility of 11.6.	11.58
Depth To Top Of Protective Layer Below Grade	7.32	Depth Of Uppermost Groundwater Resource	20.42
Depth To Bottom Of Protective Layer Below Grade	18.9	Depth To UGR from the Bottom of the Facility	20.4

Uppermost Groundwater Resource (UGR)

Depth to UGR (m): 8 - 30

Subsoil Texture: Very Coarse

8

Protective Layer(s) (PL) Between Bottom of Facility and UGR

Thickness of Protective Layers (m): >10

Subsoil Texture: Fine

☐ Storage is Constructed into UGR override

1

Liner Type

Liner Type: Meets AOPA liner or protective layer requirements

1

Water Wells

Page 1 of 1 100 Viewing 1 - 2 of 2

Well ID	Reference Point	Distance to Well (m)	Well Sealing Method	Depth to Top of Open Interval (m)	Surface Gradient to Water Well	Comments	Abandone	Outside 400m	Score
115633	east side of feedlot pens	82	No Seal/Unknown	0.00	Upslope	decommissioned in 2015	☑	☐	1
9731008	east side of feedlot pens	76	Bentonite or Cement	19.80	Unknown		☐	☐	10

Page 1 of 1 100 Viewing 1 - 2 of 2

10

Infiltration Potential

Predominant Soil Type: Medium

Average Annual Precipitation (mm): 400-600

4

Special Considerations

Special Considerations Detail

0

Groundwater Exposure Potential

- ○ No water wells are completed within 400m of the confined feeding operation facility being assessed.
- ○ One or more water wells are located within 400m of the confined feeding operation facility, but greater than 100m from the confined feeding operation facility.
- ◉ One or more water wells are located within 100m of the confined feeding operation facility.

Hazard Potential Score: 5

+ Groundwater Pathway Score: 24

x Exposure Potential Modifier: 1.2

= Groundwater Risk Score 34.8

Low potential risk to the environment.

- ○ Body of water is known to be upslope of the facility - low risk.
- ○ No water body with 800m - low risk.
- ○ Facility is located less than 1m (in elevation) above the 1 in 25 year floodplain - high risk.
- ◉ None of the Above

Likelihood of Runoff Reaching a Water Body

Page 1 of 1 100 Viewing 1 - 1 of 1

Water Body Name	Water Body Type	Reference Point	Distance To Water Body (m)	Surface Gradient to Water Body
Willow Creek	Creek	northwest corner of pens	160	Downslope

Page 1 of 1 100 Viewing 1 - 1 of 1

Horizontal Distance to Water Body: >100m

Slope of Land From Facility to Water Body: >12 — 4

Surface Water Runoff

Predominant Soil Type: Medium

Average Annual Precipitation: 400-600 — 4

Surface Water Run-on Control

Surface Water Run-on Control: Minimal upslope surface water diverted (<80%)

5

Manure Impacted Area Runoff Control

Manure Impacted Area Runoff Control: All runoff controlled

4

Runoff Flow Path Between Facility and Receiving Body of Water

Type of Yard Runoff Flow: Channelled Flow

Vegetation Cover: >50% Vegetated — 7

Special Considerations

Special Considerations Detail

0

Surface Water Exposure Potential

- ○ Highest use surface water body (with the greatest number of types of users) located within 800m of the confined feeding operation facility being assessed is a small slough or creek on private land but not a common body of water.
- ○ Highest use surface water body (with the greatest number of types of users) located within 800m of the confined feeding operation facility being assessed is a common body of water with little human use (within 10 miles downstream).
- ◉ Highest use surface water body (with the greatest number of types of users) located within 800m of the confined feeding operation facility being assessed is a high use common body of water (recreation, water supply, etc.).

Hazard Potential Score	5
+ Additional Pathway Score for Solid Manure Storage	6
+ Surface Water Pathway Score	24
x Exposure Potential Modifier	1.2
= Surface Water Risk Score	42.0

Low potential risk to the environment.

Errors
None

Warnings
Thickness Of Protective Layer is calculated correctly but doesn't match the overriden value from the Facility of 11.6.

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Willow Creek, M.D. of Southern

SE-21-009-26-W4

Risk Assessment Type	Application
Facility Name	LA15045 Feedlot pens
Date Of Site Visit	09/15/2015
Visit Completed By	Karen Stewart
Person Interviewed	Gerrit Van Huigebos
Screening Completed By	Karen Stewart
Date Scored	06/01/2016
Reference Well for UGR	9731008
Reference Well for PL	9731008
AOPA Approved	☐
Locked	☐

Manure Type	Solid Manure Storage	4
Annual Manure Amount (tonnes)	500 to < 20,000	1
Total Hazard Potential		5

Storage Specifications

Depth Of Storage Below Grade	0	Thickness Of Protective Layer Thickness Of Protective Layer is calculated correctly but doesn't match the overriden value from the Facility of 11.6.	11.58
Depth To Top Of Protective Layer Below Grade	7.32	Depth Of Uppermost Groundwater Resource	20.42
Depth To Bottom Of Protective Layer Below Grade	18.9	Depth To UGR from the Bottom of the Facility	20.4

Uppermost Groundwater Resource (UGR)

Depth to UGR (m): 8 - 30

Subsoil Texture: Very Coarse

8

Protective Layer(s) (PL) Between Bottom of Facility and UGR

Thickness of Protective Layers (m): >10

Subsoil Texture: Fine

☐ Storage is Constructed into UGR override

1

Liner Type

Liner Type: Meets AOPA liner or protective layer requirements

1

Water Wells

Page 1 of 1 100 Viewing 1 - 2 of 2

Well ID	Reference Point	Distance to Well (m)	Well Sealing Method	Depth to Top of Open Interval (m)	Surface Gradient to Water Well	Comments	Abandone	Outside 400m	Score
115633			No Seal/Unknown	0.00			☑	☐	0
9731008	pens	76	Bentonite or Cement	19.80	Unknown		☐	☐	10

Page 1 of 1 100 Viewing 1 - 2 of 2

10

Infiltration Potential

Predominant Soil Type: Medium

Average Annual Precipitation (mm): 400-600

4

Special Considerations

Special Considerations Detail

0

Groundwater Exposure Potential

- ○ No water wells are completed within 400m of the confined feeding operation facility being assessed.
- ○ One or more water wells are located within 400m of the confined feeding operation facility, but greater than 100m from the confined feeding operation facility.
- ◉ One or more water wells are located within 100m of the confined feeding operation facility.

Hazard Potential Score	5
+ Groundwater Pathway Score	24
x Exposure Potential Modifier	1.2
= Groundwater Risk Score	34.8

Low potential risk to the environment.

- ( ) Body of water is known to be upslope of the facility - low risk.
- ( ) No water body with 800m - low risk.
- ( ) Facility is located less than 1m (in elevation) above the 1 in 25 year floodplain - high risk.
- (•) None of the Above

Likelihood of Runoff Reaching a Water Body

Page 1 of 1 100 Viewing 1 - 1 of 1

Water Body Name	Water Body Type	Reference Point	Distance To Water Body (m)	Surface Gradient to Water Body
Willow Creek	Creek	pens	160	Downslope

Page 1 of 1 100 Viewing 1 - 1 of 1

Horizontal Distance to Water Body: >100m

Slope of Land From Facility to Water Body: >12

4

Surface Water Runoff

Predominant Soil Type: Medium

Average Annual Precipitation: 400-600

4

Surface Water Run-on Control

Surface Water Run-on Control: Minimal upslope surface water diverted (<80%)

5

Manure Impacted Area Runoff Control

Manure Impacted Area Runoff Control: All runoff controlled

4

Runoff Flow Path Between Facility and Receiving Body of Water

Type of Yard Runoff Flow: Channelled Flow

Vegetation Cover: >50% Vegetated

7

Special Considerations

Special Considerations Detail

0

Surface Water Exposure Potential

- ○ Highest use surface water body (with the greatest number of types of users) located within 800m of the confined feeding operation facility being assessed is a small slough or creek on private land but not a common body of water.
- ○ Highest use surface water body (with the greatest number of types of users) located within 800m of the confined feeding operation facility being assessed is a common body of water with little human use (within 10 miles downstream).
- ◉ Highest use surface water body (with the greatest number of types of users) located within 800m of the confined feeding operation facility being assessed is a high use common body of water (recreation, water supply, etc.).

Hazard Potential Score	5
+ Additional Pathway Score for Solid Manure Storage	6
+ Surface Water Pathway Score	24
x Exposure Potential Modifier	1.2
= Surface Water Risk Score	42.0

Low potential risk to the environment.

Errors
None

Warnings
Thickness Of Protective Layer is calculated correctly but doesn't match the overriden value from the Facility of 11.6.

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Willow Creek, M.D. of Southern

SE-21-009-26-W4

Risk Assessment Type	Application
Facility Name	LA15037 Pole barn
Date Of Site Visit	09/15/2015
Visit Completed By	Karen Stewart
Person Interviewed	Gerrit Van Huigebos
Screening Completed By	Karen Stewart
Date Scored	06/01/2016
Reference Well for UGR	9731008
Reference Well for PL	9731008
AOPA Approved	☐
Locked	☐

Manure Type	Solid Manure Storage	4
Annual Manure Amount (tonnes)	500 to < 20,000	1
Total Hazard Potential		5

Storage Specifications

Depth Of Storage Below Grade	0	Thickness Of Protective Layer Thickness Of Protective Layer is calculated correctly but doesn't match the overriden value from the Facility of 11.6.	11.58
Depth To Top Of Protective Layer Below Grade	7.32	Depth Of Uppermost Groundwater Resource	20.42
Depth To Bottom Of Protective Layer Below Grade	18.9	Depth To UGR from the Bottom of the Facility	20.4

Uppermost Groundwater Resource (UGR)

Depth to UGR (m): 8 - 30

Subsoil Texture: Very Coarse

8

Protective Layer(s) (PL) Between Bottom of Facility and UGR

Thickness of Protective Layers (m): >10

Subsoil Texture: Fine

☐ Storage is Constructed into UGR override

1

Liner Type

Liner Type: Meets AOPA liner or protective layer requirements

1

Water Wells

Page 1 of 1 100 Viewing 1 - 2 of 2

Well ID	Reference Point	Distance to Well (m)	Well Sealing Method	Depth to Top of Open Interval (m)	Surface Gradient to Water Well	Comments	Abandone	Outside 400m	Score
115633	corner of barn	95	No Seal/Unknown	0.00	Unknown	decommissioned in 2015	☑	☐	0
9731008	corner of barn	100	Bentonite or Cement	19.80	Unknown		☐	☐	9

Page 1 of 1 100 Viewing 1 - 2 of 2

9

Infiltration Potential

Predominant Soil Type: Medium

Average Annual Precipitation (mm): 400-600

4

Special Considerations

Special Considerations Detail

0

Groundwater Exposure Potential

- ○ No water wells are completed within 400m of the confined feeding operation facility being assessed.
- ○ One or more water wells are located within 400m of the confined feeding operation facility, but greater than 100m from the confined feeding operation facility.
- ◉ One or more water wells are located within 100m of the confined feeding operation facility.

Hazard Potential Score	5
+ Groundwater Pathway Score	23
x Exposure Potential Modifier	1.2
= Groundwater Risk Score	33.6

Low potential risk to the environment.

- ( ) Body of water is known to be upslope of the facility - low risk.
- ( ) No water body with 800m - low risk.
- ( ) Facility is located less than 1m (in elevation) above the 1 in 25 year floodplain - high risk.
- (•) None of the Above

Likelihood of Runoff Reaching a Water Body

Page 1 of 1 100 Viewing 1 - 1 of 1

Water Body Name	Water Body Type	Reference Point	Distance To Water Body (m)	Surface Gradient to Water Body
Willow Creek	Creek	corner of barn	361	Downslope

Page 1 of 1 100 Viewing 1 - 1 of 1

Horizontal Distance to Water Body: >100m

Slope of Land From Facility to Water Body: >12

4

Surface Water Runoff

Predominant Soil Type: Medium

Average Annual Precipitation: 400-600

4

Surface Water Run-on Control

Surface Water Run-on Control: All upslope surface water diverted around the facility

0

Manure Impacted Area Runoff Control

Manure Impacted Area Runoff Control: No yard runoff (e.g. covered facility)

0

Runoff Flow Path Between Facility and Receiving Body of Water

Type of Yard Runoff Flow: Channelled Flow

Vegetation Cover: >50% Vegetated

7

Special Considerations

Special Considerations Detail

0

Surface Water Exposure Potential

- ○ Highest use surface water body (with the greatest number of types of users) located within 800m of the confined feeding operation facility being assessed is a small slough or creek on private land but not a common body of water.
- ○ Highest use surface water body (with the greatest number of types of users) located within 800m of the confined feeding operation facility being assessed is a common body of water with little human use (within 10 miles downstream).
- ◉ Highest use surface water body (with the greatest number of types of users) located within 800m of the confined feeding operation facility being assessed is a high use common body of water (recreation, water supply, etc.).

Hazard Potential Score	5
+ Additional Pathway Score for Solid Manure Storage	6
+ Surface Water Pathway Score	15
x Exposure Potential Modifier	1.2
= Surface Water Risk Score	31.2

Low potential risk to the environment.

Errors
None

Warnings
Thickness Of Protective Layer is calculated correctly but doesn't match the overriden value from the Facility of 11.6.