

Part 2 — Technical Requirements



NRCB Natural Resources Conservation Board

Application under the *Agricultural Operation Practices Act* for a confined feeding operation, manure collection area, and/or manure storage facility(ies)

NRCB USE ONLY	Application number RA24006	Legal land description N1/2 22-44-22 W4M
<input checked="" type="checkbox"/> Approval <input type="checkbox"/> Registration <input type="checkbox"/> Authorization <input type="checkbox"/> Amendment		

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.

Feb 26 2024

Date of signing

Silver Creek Colony Farming Co. Ltd

Signature

Edward Hoffer

Print name

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)
New Layer Barn	400' x 100' (*)
Placed Concrete Floor Into Existing Turkey Barns to Convert Them Into Broiler Barn	(60-160 x 80-380) Feet

(*) May 2, 2024 email

Existing facilities: list ALL existing confined feeding operation facilities and their dimensions		
Existing facilities	Dimensions (m) (length, width, and depth)	NRCB USE ONLY
1 Fryer Barn	75 By 500	Checked
3 Turkey Barn's - converted into Broilers	(60-160 x 80-380) 80 Feet	Checked
1 Fry Barn	64 By 400 feet	Checked
NRCB USE ONLY		
CFO permitted under Approval RA11009.		
The operator converted the existing turkey barns into broiler barns by placing concrete on the floors. This conversion did not need an application, as according to section 2(2) of AOPA the operator changes type of livestock within the same category without increasing manure and/or odour production. The new concrete liner was placed on top of an existing liner.		

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NRCB

Natural Resources
Conservation Board

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[illegible]

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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

The old Layer Barn will Be Replaced with a New Layer Barn. The Old Barn will be used To a Accommodate the Higher density of The Broilers.

Construction completion date for proposed facilities

Aug 27 2027

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
Chicken Broilers	80000	130000	210000
Turkeys Toms	20000	-20000	0
Chicken Layer	12000	23000	35000

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DECLARATION AND ACKNOWLEDGMENT OF APPLICANT CONCERNING WATER ACT LICENCE

issued by Alberta Environment and Protected Areas (EPA) 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 EPA 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 EPA'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 EPA 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 EPA'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.
7. **Provide:** Water licence application number(s) _____

Signed this 26 day of Feb, 2024.

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 EPA under the *Water Act* for the development or activity proposed in this AOPA application.
2. **Provide:** Water license number(s) or water conveyance agreement details _____

Signed this _____ day of _____, 20_____.

Signature of Applicant or Agent

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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 EPA 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 EPA'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 EPA 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 EPA'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.
7. **Provide:** Water license number(s) or water conveyance agreement details _____

Signed this ____ day of _____, 20____.

Signature of Applicant or Agent



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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)

Existing: Broiler Barn 2

Proposed 1: Broiler Barns 3-4-5 Existing - converted barns

Proposed 2: Layer Barn

Proposed 3: _____

Facility and environmental risk information		Facilities				NRCB USE ONLY	
		Existing	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 checked="" type="checkbox"/> > 1 m <input type="checkbox"/> ≤ 1 m	<input checked="" type="checkbox"/> > 1 m <input type="checkbox"/> ≤ 1 m	<input checked="" 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	Above 1 m
Surface water information	How many springs are within 100 m of the manure storage facility or manure collection area?	0	0	0		<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES with exemption	No springs notice during site visit
	How many water wells are within 100 m of the manure storage facility or manure collection area?	0	0	0		<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES with exemption	No WW within 100 m of the CFO facilities
	What is the shortest distance from the manure collection or storage facility to a surface water body? (e.g., lake, creek, slough, seasonal)	1000 Feet	1000 Feet	500 Feet		<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES with exemption	There are sloughs within 200 m of CFO facilities.
Groundwater information	What is the depth to the water table?		15 Feet	15 Feet		<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES with exemption	5 metres
	What is the depth to the groundwater resource/aquifer you draw water from?	300 Feet	300 Feet	300 Feet		<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> YES with exemption	UGR identified at 39.6 m in WW ID # 40161

Additional information (attach supporting information, e.g. borehole logs, records, etc. you consider relevant to your application)

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NRCB USE ONLY

ENVIRONMENTAL RISK SCREENING INFORMATION

ERST for proposed facilities

Facility	Groundwater score	Surface water score	File number
New layer barn	Low	Low	RA24006

ERST for existing facilities

Facility	Groundwater score	Surface water score	File number
Broiler barn #5	Low	Low	RA24006

ERST related comments:

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NRCB USE ONLY

WATER WELL AND SURFACE WATER INFORMATION

Well IDs: 40160, 40161 and 1075388

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:

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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)	Meets regulations
Brett Siemens	SW 26 44 22 4	522	Country Residential	2	531	Yes, with waiver
Bob Klassen	SE 22 44 22 4	531	Agriculture	1	522	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)
Silver Creek Colony Farming	All 26 44 22 4	640	Black Soil		
Silver Creek Colony Farming	N 15 44 22 4	320	11		
11	NW 14 44 22 4	160	11		
11	SW 1/4 NW 19 18 45 21 44	320	11		
11	NW 1/4 NE 13 24 45 22	640	11		
Total				841 hectares (2,080 acres)	

* 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)

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NRCB USE ONLY

MINIMUM DISTANCE SEPARATION

Methods used to determine distance (if applicable): Google Earth

Margin of error (if applicable): _____

Requirements (m): Category 1: 445 Category 2: 593 Category 3: 742 Category 4: 1,187

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: 545.3 hectares

Land base listed: 841.7 hectares

Area not suitable: Applicant provided extra land

Available area 841.7 hectares

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

If already completed, see Approval RA11009

Minimum Distance Separation (MDS) Waiver (declaration)

Residence owner(s) information

ALL Names on land title: JANICE SIMMONS & BRENT SIMMONS

Legal land location of residence(s):

SW 26-44-22-W4

Telephone number(s)¹

Email address(es)¹:

Address(es)¹ and Postal code(s)¹:

¹ Please note that personal contact information is for NRCB use ONLY and not publicly released

I am/we are the legal landowner(s) of a residence(s) located at the above noted legal land location/address:

- I/we have read the NRCB Fact Sheet "Minimum Distance Separation (MDS) Waivers";
- I/we have discussed this application with the applicant and understand its potential impacts to our residence(s);
- I/we understand that the application **does not** meet the MDS requirement to my/our residence(s), under the *Agricultural Operation Practices Act (AOPA)*;
- **I/we understand that this waiver is not valid unless signed by ALL parties identified on the land title as owners;**
- **I/we are not obligated to waive the MDS requirement to our residence(s);**
- I/we understand that if I/we choose to waive the MDS requirement, I/we can revoke the waiver, by providing written notice to the NRCB approval officer, as set out in the "Minimum Distance Separation (MDS) Waivers" Fact Sheet; and
- I/we understand that this waiver is a public document.

Having considered my/our rights, I/we hereby waive the MDS requirement to my/our residence, with respect to

application number RA24006

Signatures of all residence owner(s) on title

JANICE SIMMONS

BRENT SIMMONS

Printed names of all residence owner(s) on title

Date: JUNE 08, 2004



Minimum Distance Separation (MDS) Waiver (declaration)

Applicant information

NRCB application number: _____

Operator/operation name: Silver Creek Colony Farming Co. LTD

Address: RR2 Ferintosh Alberta Postal Code: T0B-2M0

Legal land location of confined feeding operation: NE 22 44 22 West of 4

I have requested the residence owner(s) named below to waive the required minimum distance separation (MDS) to their residence for the *Agricultural Operation Practices Act* (AOPA) permit application identified above. In making this request, I have provided the owner(s) with an opportunity to review my permit application and a copy of the Natural Resources Conservation Board (NRCB) Fact Sheet "Minimum Distance Separation (MDS) Waivers" available on the NRCB website at www.nrcb.ca. I have also explained:

- The MDS requirement set out in section 3 of the Standards and Administration Regulation of AOPA. I have advised the owner(s) that section 3(6)(a) of the Standards and Administration Regulation allows this requirement to be waived by the owners of residences, if they agree in writing to grant a waiver;
- That my proposed development does not meet the required MDS to the owner's residence; and,
- That this waiver applies only to this application as described. An increase in livestock capacity, annual manure production, level of odour production, change to the site plan or change to a facility that would increase the MDS would require a new waiver.

Following is a summary of the proposed development:

- The current scope of my confined feeding operation (CFO), including the type, number, and category of livestock, if any, is:

Chicken Broilers 210000

Chicken Layers 12000

- My application for a new AOPA permit proposes the following changes to the existing livestock category, type and/or capacity at my CFO:

Chicken Layer's 35000

- The proposed new CFO facility(ies), or changes to the existing CFO facilities, including manure storage, manure storage volume and any other pertinent details, if any, are (attach a site layout plan if available):

Building New Layer Barn (Free Run)

I the applicant understand that the waiver is not valid unless ALL registered owners of the residence sign this document

Permit Applicant

Signature

Date: JULY 2, 2024

Residence owner(s) to initial:

BRENT SIMMONS

JANICE SIMMONS

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NRCB USE ONLY

ALL SIGNATURES IN FILE

☒ YES ☐ NO

DATES OF APPROVAL OFFICER SITE VISITS

May 15, 2024	

CORRESPONDENCE WITH MUNICIPALITIES AND REFERRAL AGENCIES

Date deeming letters sent: May 16, 2024

Municipality: Wetaskiwin County

☒ letter sent ☒ response received ☒ written/email ☐ verbal ☐ no comments received

Alberta Health Services: ☒ N/A

☐ 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: Battle River Power Co, Lynx Energy Ltd ☐ N/A

☒ letter sent ☐ response received ☐ written/email ☐ verbal ☒ no comments received

Other: Battle River Natural Gas Co-Op ☐ 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 - Concrete liner

(complete a copy of this section for **EACH** barn, feedlot, and storage facility for solid manure, composting materials, or compost with a concrete liner)

Facility description / name (as indicated on site plan)

1. Layer Barn

2. _____

Manure storage capacity

	Length (m)	Width (m)	Depth below grade to the bottom of the liner (m)	NRCB USE ONLY Estimated storage capacity (m³)
1.	(*) 121.2	30.5	0	
2.	(*) email received on May 2, 2024 from applicant confirming the dimensions of the barn			
TOTAL CAPACITY				

☒ 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

Barns Have Roofs + Wall's

Liner protection

Describe how the physical integrity of the liner will be maintained

Check for Cracks Evertime We
Clean Barn's

NRCB USE ONLY

Requirements met: ☒ YES ☐ NO

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SOLID MANURE, COMPOST, & COMPOSTING MATERIALS: Barns, feedlots, & storage facilities - Concrete liner (cont.)

Concrete liner details

Concrete thickness 6 Inches	Method of sulphate protection: Type 50
Concrete strength 32 MPa	Concrete reinforcement size and spacing 10 mm 16 Inch oc Rebar

Concrete requirements can be found in Technical Guideline Agdex 096-93

Guideline minimums:

Solid manure: 25MPa (D)

Solid manure (wet): 30MPa (C)

Method of sulphate protection:

Type 50 or Type 10 with fly ash or equivalent

NRCB USE ONLY

Requirements met: ☒ YES ☐ NO

Condition required: ☒ YES ☐ NO

Report attached: ☐ YES ☒ NO

Additional information (attach as required)

NRCB USE ONLY

Nine month manure storage volume requirements met ☐ YES ☒ YES With STMS ☐ NO

Depth to water table: 5 m Requirements met: ☒ YES ☐ NO

Depth to Uppermost groundwater resource: 39.6 m Requirements met: ☒ YES ☐ NO

ERST completed: ☒ see ERST page for details

Surface water control systems

Requirements met: ☒ YES ☐ NO Details/comments:

Concrete liner details

A condition will be included in the approval requiring the permit holder to provide written proof that the constructed concrete liner meets the requirements

Leakage detection system required: ☐ YES ☒ NO If yes, please explain why.

Bashaw Concrete Products Ltd.
Box 640
Phone: 780-372-3854
Fax: 780-372-2102
www.bashawconcrete.com

Ticket #: 0013945
Date: 07/10/2021
Time: 6:26AM
Customer PO: Edward780 699

Sold To: Silver Creek Colony Farming

Ship To: From Hwy 21, about 5 miles
west on 611, south side

Edward [REDACTED]

Chicken barn , Kaleb [REDACTED]

Total Cubic Metres: 358.00
Running Total: 6.75
Load Number: 1

Quantity	Code	Description	Price	Extended
6.75	CM RM332	32 MPa	[REDACTED]	[REDACTED]
6.75	PM RM116	Fibermesh	[REDACTED]	[REDACTED]

Sub Total:
GST:

Ticket Total:

Water Added at Customer's Request _____ Litres

Waiting Time: _____ HRS. _____ MINS.

Driver: Dwayne Congd Truck: 4 Batchers: Jordan
Weather: WX: 27.0 F, Fog/Mist, Winds South at 5.8 MPH (5 KT), RelHumid 100%, Evap
Low) 0.000 lb/sqft/hr.

Received By: _____ Discount If Paid Today: \$ _____ /m3 (including GST) X _____ m3

NOTE: WAITING TIME CHARGED AFTER 7 MIN PER CU. METRE. SEE REVERSE FOR CONDITIONS

2 PERCENT INTEREST PER MONTH (26.824% PER ANNUM) CHARGED ON ACCOUNT AFTER 30 DAYS. INVOICES MORE THAN 30 DAYS OVERDUE, MAYBE SUBJECT TO PLACEMENT OF A BUILDERS LIEN AND BY HEREBY EXECUTING THIS INVOICE YOU AGREE TO ALL OF THE ABOVE.

Bashaw Concrete Products Ltd.
Box 640
780-372-3854
780-372-2102
www.bashawconcrete.com

CERTIFICATE OF COMPLIANCE

Date: Thu, Oct 7, 2021
Time: 6:33AM
Name of Purchaser/Contractor: Silver Creek Colony Farming
Job Location:
Project #:
Ticket #: 13945
Truck #: 4
Qty This Load: 6.75 CM
Mix Design: (RM332) 32 MPa
Driver: Dwayne Congdon
Total for this Job: 6.75 CM

Ingredient	Source	MCFac	AbsFac	OD (CM)	Abs (CM)	SSD (CM)	Free Mst	Targ (CM)	Target	Actual
Sand		0.031	0.016	886	14	900	13	913	6162	6170 kg
3/4 Rock		0.010	0.005	975	5	980	5	985	6648	6650 kg
Cement				360				360	2430	2400 kg
Cold Water				160				142	960	958 kg
Polyheed 980				325.00	ml/cwt			1218.75	8227	8250 ml
Warm Sand		0.024	0.016	0	0	0	0	0	0	0 kg
Flyash				15				15	101	110 kg

Water available to add: 845 L
Water added at plant: _____ L _____ Init
Water added at jobsite: _____ L
Total water: _____ kg
Actual W/C Ratio (Water
Conv. Factor: 1.0 Gal = 1.0Kgs): 0.094

Plant representative comments and signature:

FIELD TEST RESULTS

General Comments: _____

Air Content: _____ Air Temp: _____ Concrete Temp: _____ Slump: _____ Cyl: _____
Location/Part of Structure: _____

Time Discharged: _____

Inspector's Signature: _____



Cement Mill Test Report

Date of Issue: October 15, 2021

Plant: Exshaw AB
 Product: Portland Cement Type HS
 Manufactured: September 1-30, 2021

CHEMICAL ANALYSIS			PHYSICAL ANALYSIS		
Item	Spec limit	Test Result	Item	Spec limit	Test Result
Rapid Method, X-Ray					
SiO ₂ (%)	---	19.7	Blaine Fineness (m ² /kg)	---	426
Al ₂ O ₃ (%)	---	3.9	Retained 45 um (%)	28 max	0.8
Fe ₂ O ₃ (%)	---	3.6	Autoclave expansion (%)	1.0 max	0.08
CaO (%)	---	62.2	Compressive strength (MPa)		
MgO (%)	5.0 max	4.4	1 day		18.5
SO ₃ (%)	2.5 max **	2.9	3 day	14.5 min	29.6
Loss on ignition @ 950 (%)	3.0 max	2.4	7 day	20.0 min	34.9
Loss on ignition @ 550(%)		0.8	28 day (August 2021 Results)	26.5 min	42.2
Insoluble residue (%)	0.75 max	0.27	Time of setting (minutes)		
Inorganic Process Addition	5.0 max		Vicat initial	45 - 375	104
(Cement Kiln Dust)			Mortar Bar Expansion (%) (C5) *	0.020 max	0.008
Potential Phase Composition			Sulphate Resistance (%) (C6) *	0.035 max	0.035
C3S (%)	---	64.1	Colour (For Information Purposes Only)		31
C2S (%)	---	8.0			
C3A (%)	5 max	4.2			
C4AF (%)	---	10.9			

Other Chemical Information:

NaEq (%) Weekly Averages

Week Ending: 09/04 0.55 09/11 0.57 09/18 0.57 09/25 0.56

* Latest available value

** May exceed 2.5% SO₃ maximum based on our A3004-C5 results of <0.020% expansion at 14 days.

We certify that the above described cement, at the time of shipment, meets the chemical and physical requirements of the applicable specification for Type HS.

CSA A3001-18 STANDARD SPECIFICATIONS FOR TYPE HS CEMENT.

Lafarge Canada Inc. - Exshaw Plant
 P.O. Box 160, Highway 1A, Exshaw AB T0L 2C0
 Phone: 403-673-3815

Certified By:

Lorraine Richards

Lorraine Richards
 Quality Control Coordinator