

March 18, 2025

Transmitted via email to: <a href="mailto:gwri461@ecy.wa.gov">gwri461@ecy.wa.gov</a>

Washington Department of Ecology Eastern Regional Office 4601 N. Monroe St. Spokane, WA 99205-1295

Attn: Gail Wright

Re: Hammermill Dust Collector NOC Application

Viterra USA, LLC—Oilseed Processing Facility

Warden, Washington

Dear Ms. Gail:

Viterra USA, LLC (Viterra) operates an oilseed processing facility located in Warden, Washington (Facility) under Approval Order No. 15AQ-E641 (Approval Order). Landau Associates, Inc. (Landau), on behalf of Viterra, is submitting a Notice of Construction (NOC) Application to amend the existing Approval Order. A signed NOC Application form is provided as Attachment 1.

Viterra is proposing to modify the existing conveying and seed cleaning dust collector (EP-2) to remove the air stream from the Hammermill process and route it to a new, separate dust collector. The changes proposed to the Approval Order are as follows:

- Decrease the flow rate of the existing dust collector EP-2 from 10,000 actual cubic feet per minute (acfm) to 4,000 acfm
- Remove the flow information for the Hammermill from the EP-2 description
- Add a new dust collector (proposed EP-8) for the Hammermill flow rated at 5,070 acfm with an exhaust concentration of 0.005 grains per dry standard cubic feet (gr/dscf)

A site plan that shows the locations of existing EP-2 and proposed EP-8 is provided as Attachment 2.

Airflow from the Hammermill Trash Grinder, Aspiration Fan, and Plenum Chamber will be removed from EP-2, and the flow rate of EP-2 will be decreased from 10,000 acfm to 4,000 acfm. No other changes are being proposed regarding airflow from the other operations that feed to EP-2. The filter media used will remain the same; thus, there will be no change to the grain loading emission rate of 0.004 gr/dscf of particulate matter with an aerodynamic diameter of less than or equal to 10 microns (PM<sub>10</sub>). Due to the reduced airflow through the EP-2 dust collector, the potential emissions of total particulate matter (PM), PM<sub>10</sub>, and particulate matter with an aerodynamic diameter of less than or equal to 2.5 microns (PM<sub>2.5</sub>) are reduced; therefore, new source review (NSR) is not required for this modification of existing equipment. The reduction in emissions is calculated and presented in

Attachment 3. Equipment specifications for the new fan to replace the existing fan are provided in Attachment 4.

Potential-to-emit (PTE) from the new proposed dust collector that will control emissions from the Hammermill are calculated based on the maximum flow rate of 5,070 acfm, a grain loading rate of 0.005 gr/dscf, and continuous operations of 8,760 hours per year. PTE of PM, PM<sub>10</sub>, and PM<sub>2.5</sub> from the new dust collector, respectively, is less than the NSR exemption thresholds for a new emissions unit as noted in the Washington Administrative Code (WAC) 173-400-110(5)(a)(i) and Table 110(5); therefore, the new dust collector is exempt from NSR. Viterra proposes that the new dust collector be assigned to emission point number EP-8. Detailed PTE calculations and equipment specifications for the new dust collector are included in Attachments 3 and 4, respectively.

In summary, Viterra requests that amendments be made to the current Approval Order to include updates to the existing dust collector EP-2 and add a new dust collector EP-8. If you have any comments or questions regarding this request, please contact Aimi Tanada at <a href="mailto:atanada@landauinc.com">atanada@landauinc.com</a> or 425.329.0306. Thank you for your time and consideration of this request.

LANDAU ASSOCIATES, INC.

imi Janada

Aimi Tanada

**Project Scientist** 

Mark Brunner Principal

AT/MWB/dw 1924002.010

 $[$\DMDATA01\PROJECTS\1924\002\R\VITERRA\_WARDEN\_NSR\_AMENDMENT\_LETTER\_2025.03.18.DOCX]$$ 

Attachments: Attachment 1—NOC Application Form

Attachment 2—Site Plan

Attachment 3—Emission Calculations
Attachment 4—Equipment Specifications

2 landauinc.com



# **Notice of Construction Application**

A notice of construction permit is required before installing a new source of air pollution or modifying an existing source of air pollution. This application applies to facilities in Ecology's jurisdiction. Submit this application for review of your project. For general information about completing the application, refer to Ecology Forms ECY 070-410a-g, "Instructions for Ecology's Notice of Construction Application."

Ecology offers up to two hours of free pre-application assistance. We encourage you to schedule a pre-application meeting with the contact person specified for the location of your proposal, below. If you use up your two hours of free pre-application assistance, we will continue to assist you after you submit Part 1 of the application and the application fee. You may schedule a meeting with us at any point in the process.

Upon completion of the application, please enclose a check for the initial fee and mail to:

Department of Ecology Cashiering Unit PO Box 47611 Olympia, WA 98504-7611 For Fiscal Office Use Only: 0299-3030404-B00-216--001--000404

Check the box for the location of your proposal. For assistance, call the appropriate office listed below:

Check box	Ecology Permitting Office	Contact
	Chelan, Douglas, Kittitas, Klickitat, or Okanogan County Ecology Central Regional Office (509) 575-2490	Lynnette Haller (509) 457-7126 lynnette.haller@ecy.wa.gov
<b>V</b>	Adams, Asotin, Columbia, Ferry, Franklin, Garfield, Grant, Lincoln, Pend Oreille, Stevens, Walla Walla, or Whitman County	Karin Baldwin (509) 329-3452
	Ecology Eastern Regional Office (509) 329-3400	karin.baldwin@ecy.wa.gov
	San Juan County Ecology Northwest Regional Office (206) 594-0000	David Adler (425) 649-7267 david.adler@ecy.wa.gov
	For actions taken at Kraft and Sulfite Paper Mills and Aluminum Smelters Only	James DeMay (360) 407-6868 james.demay@ecy.wa.gov
	Ecology Industrial Section (360) 407-6900  For actions taken on the US Department of Energy Hanford  Reservation Only	Lilyann Murphy (509) 372-7951
	Ecology Nuclear Waste Program (509) 372-7950	lilyann.murphy@ecy.wa.gov

спеск т	tne i	box below for the fee that applies to your application.
New p	roje	ct or equipment:
		904: Basic project initial fee covers up to 16 hours of review. 2,614: Complex project initial fee covers up to 106 hours of review.
Change	e to	an existing permit or equipment:
□	det pro app \$1, \$35	67: Administrative or simple change initial fee covers up to 3 hours of review. Ecology may termine your change is complex during the completeness review of your application. If you eject is complex, you must pay the additional xxx before we will continue working on your oblication  190: Complex change initial fee covers up to 10 hours of review  60flat fee: Replace or alter control technology equipment under WAC 173-400-114. Ecology I contact you if we determine your change belongs in another fee category. You must pay the
	fee	associated with that category before we will continue working on your application.
Read e	ach	statement below, then check the box next to it to acknowledge that you agree.
✓ ✓	tra the Yo ap	e initial fee you submitted may not cover the cost of processing your application. Ecology will ack the number of hours spent on your project. If the number of hours Ecology spends exceeds a hours included in your initial fee, Ecology will bill you \$119 per hour for the extra time. In u must include all information requested by this application. Ecology may not process your plication if it does not include all the information requested. It is application allows Ecology staff to visit and inspect your facility.
		Part 1: General Information
i. Proje	-	Facility, and Company Information
		Project Name: Hammermill Dust Collector
		Facility Name: Warden Plant
	3.	Facility Street Address: 1875 W 1st St Warden, WA 98857
	4.	Facility Legal Description: LOT 1 PORT OF WARDEN NO.5 SHORT PLAT 16 17 30
	5.	Company Legal Name (if different from Facility Name):  Viterra USA, LLC
	6.	Company Mailing Address (street, city, state, zip)
		1875 W 1st St Box 10 Warden, WA 98857
II. Con	tact	t Information and Certification
	1.	Facility Contact Name (who will be onsite): Eric Sims
	2.	Facility Contact Mailing Address (if different than Company Mailing Address:

3.	Facility Contact Phone Number: 509-349-8456
4.	Facility Contact E-mail: Eric.Sims@Viterra.com
5.	Billing Contact Name (who should receive billing information): Aimi Tanada
6.	Billing Contact Mailing Address (if different Company Mailing Address): 155 NE 100th St Ste 302 Seattle, WA 91825
7.	Billing contact Phone Number: 425-329-0306
8.	Billing Contact E-mail: atanada@landauinc.com
9.	Consultant Name (optional – if 3 <sup>rd</sup> party hired to complete application elements): <u>Aimi Tanada</u>
10.	Consultant Organization/Company: Landau Associates, Inc.
11.	Consultant Mailing Address (street, city, state, zip): 155 NE 100th St Ste 302, Seattle, WA 91825
12.	Consultant Phone Number: 425-329-0306
13.	Consultant E-mail: atanada@landauinc.com
14.	Responsible Official Name and Title (who is responsible for project policy or decision making): <u>Eric Sims</u>
15.	Responsible Official Phone: 509-349-8456
16.	Responsible Official E-mail: Eric.Sims@Viterra.com
17.	Responsible Official Certification and Signature:
	I certify that the information on this application is accurate and complete.
	Signature:

### Part 2: Technical Information

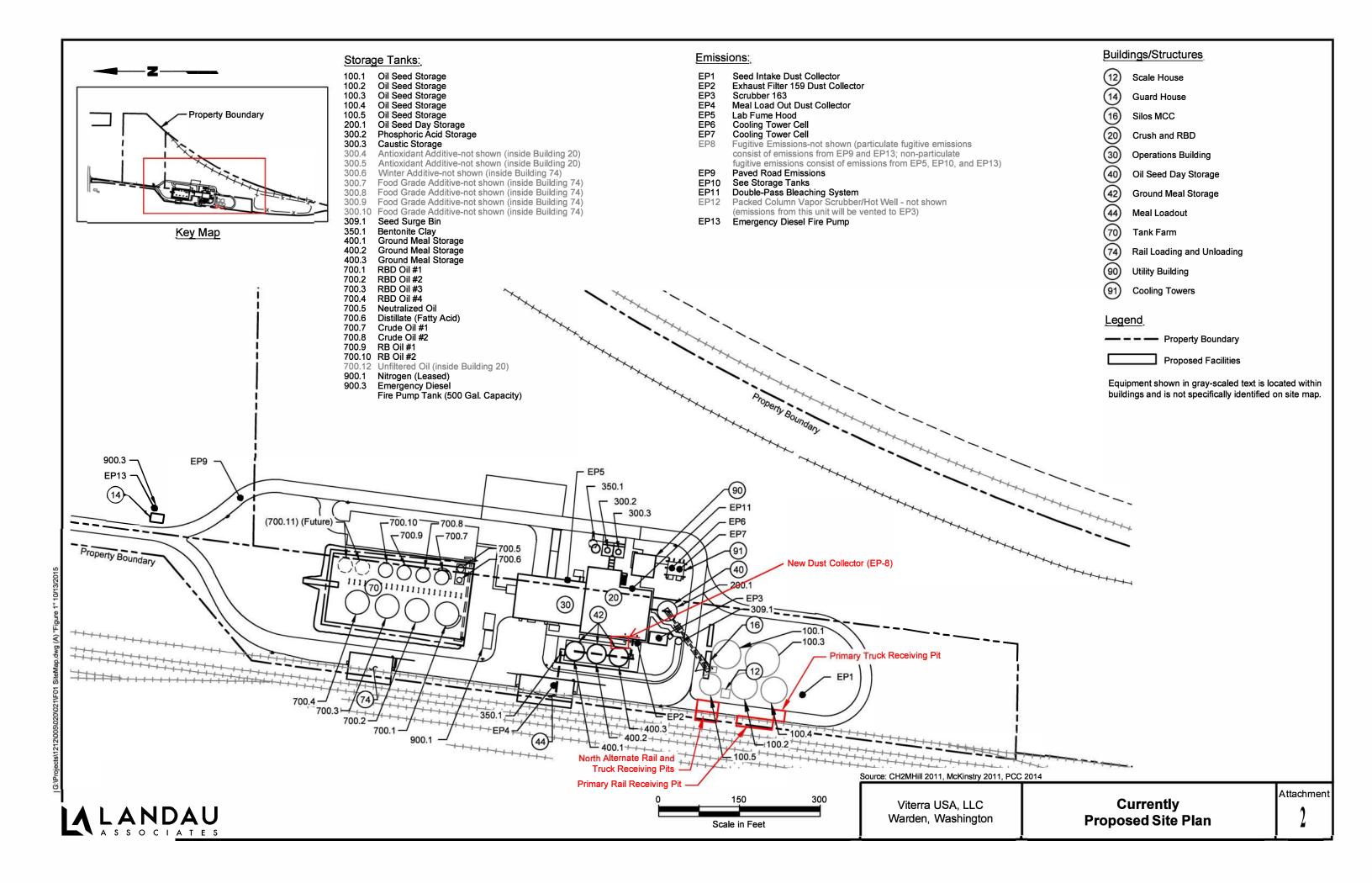
The Technical Information may be sent with this application form to the Cashiering Unit, or may be sent directly to the Ecology regional office with jurisdiction along with a copy of this application form.

For all sections, check the box next to each item as you complete it.

III. Project Description
✓ Written narrative describing your proposed project.
Projected construction start and completion dates.
Operating schedule and production rates.
List of all major process equipment and manufacturer and maximum rated capacity.
Process flow diagram with all emission points identified.
Plan view site map.
Manufacturer specification sheets for major process equipment components
Manufacturer specification sheets for pollution control equipment.
Fuel specifications, including type, consumption (per hour and per year) and percent sulfur.
IV. State Environmental Policy Act (SEPA) Compliance
Check the appropriate box below.
SEPA review is complete. Include a copy of the final SEPA checklist and SEPA determination (e.g., DNS, MDNS, and EIS) with your application.
SEPA review has not been conducted:
If review will be conducted by another agency, list the agency. You must provide a copy of the final SEPA checklist and SEPA determination before Ecology will issue your permit.  Agency reviewing SEPA:
If the review will be conducted by Ecology, fill out a SEPA checklist and submit it with your application. You can find a SEPA checklist online at <a href="https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-document-templates">https://ecology.wa.gov/Regulations-Permits/SEPA/Environmental-review/SEPA-document-templates</a>
V. Emissions Estimations of Criteria Pollutants
Does your project generate criteria air pollutant emissions? Yes No
If yes, please proved the following information regarding your criteria emissions in the application.
The names of the criteria air pollutants emitted (i.e., NO <sub>x</sub> , SO <sub>2</sub> , CO, PM <sub>2.5</sub> , PM <sub>10</sub> , TSP, VOC, and Pb)
Potential emissions of criteria air pollutants in tons per hour, tons per day, and tons per year (include calculations)
$ \checkmark $ If there will be any fugitive criteria pollutant emissions, clearly identify the pollutant and quantity
VI. Emissions Estimations of Toxic Air Pollutants
Does your project generate toxic air pollutant emissions? Yes Vo
If yes, please provide the following information regarding your toxic air pollutant emissions in your application.

The names of the toxic air pollutants emitted (specified in $\underline{WAC\ 173-460-150^1}$ )
Potential emissions of toxic air pollutants in pounds per hour, pounds per day, and pounds per year (include calculations)
If there will be any fugitive toxic air pollutant emissions, clearly identify the pollutant and quantity
VII. Emission Standard Compliance
Provide a list of all applicable new source performance standards, national emission standards for hazardous air pollutants, national emission standards for hazardous air pollutants for source categories, and emission standards adopted under Chapter 70A.15 RCW.
Does your project comply with all applicable standards identified?
VIII. Best Available Control Technology
Provide a complete evaluation of Best Available Control Technology (BACT) for your proposal.
IX. Ambient Air Impacts Analyses
Please provide the following:
Ambient air impacts analyses for Criteria Air Pollutants (including fugitive emissions)
Ambient air impacts analyses for Toxic Air Pollutants (including fugitive emissions)
Discharge point data for each point included in air impacts analyses (include only if modeling is required)
Exhaust height
Exhaust inside dimensions (ex. diameter or length and width)
Exhaust gas velocity or volumetric flow rate
Exhaust gas exit temperature
The volumetric flow rate
Description of the discharges (i.e., vertically or horizontally) and whether there are any obstructions (ex., raincap)
Identification of the emission unit(s) discharging from the point
The distance from the stack to the nearest property line
Emission unit building height, width, and length
Height of tallest building on-site or in the vicinity and the nearest distance of that building to the exhaust
Whether the facility is in an urban or rural location
Does your project cause or contribute to a violation of any ambient air quality standard or acceptable source impact level? Yes No
To request ADA accommodation, call Ecology at (360) 407-6800, 711 (relay service), or (877) 833-6341 (TTY)

<sup>&</sup>lt;sup>1</sup> http://apps.leg.wa.gov/WAC/default.aspx?cite=173-460-150



# Viterra USA, LLC - Warden Facility

### 2025 Hammermill Dust Collection Project

#### **New Hammermill Dust Collector (EP-8) Emission Calculations**

Parameters							
Equipment	New Hammermill Dust Collector (EP-8)						
Maximum Blower Rating	5,070 acfm						
	4,762 scfm	b					
Maximum Filter Rating	0.005 gr PM total/dscf	а					
Maximum Operating Hours	8,760 hrs/yr	С					

						NSR	
				Hourly	Annual	Exemption	Below NSR
				Emissions	Emissions	Threshold <sup>f</sup>	Threshold?
Pollutant	CAS No./ID	Emission Factor		(lb/hr)	(ton/yr)	(ton/yr)	(Yes/No)
Particulate matter (total)	PM	0.005 gr/dscf	d	0.20	0.89	1.25	Yes
Particulate matter (≤10 μm)	PM10	25 % of PM total	е	0.05	0.22	0.75	Yes
Particulate matter (≤2.5 μm)	PM2.5	17 % of PM <sub>10</sub>	е	0.01	0.04	0.5	Yes

#### Notes:

- a. Based on equipment specifications and guarantees provided by manufacturer and vendor.
- b. Converted from actual cubic foot per minute (acfm) to standard cubic foot per minute (scfm) based on the following equation:

Standard Air Flow (scfm) = [Actual Air Flow (acfm)]  $\times$  ( $P_a/P_s$ )  $\times$  ( $T_s/T_a$ )

where: P<sub>a</sub> = actual gas pressure = 14.1 psia (2024 avg. for Moses Lake, WA; KMWH station)

P<sub>s</sub> = standard gas pressure = 14.7 psia

 $T_a$  = actual gas temperature = 530 °R (70 °F ambient temp.)

 $T_s$  = standard gas temperature = 519 °R

- c. Assumes continuous operations.
- d. Emissions calculated using the equation below:

PM Emissions (lb/hr) = [Max. Grain Loading Rate (gr/dscf)] ÷ [7,000 gr/lb] × [Max. Blower Rating (scfm)] × [60 min/hr]

PM Emissions (ton/yr) = [PM Emissions (lb/hr)] × [Max. Operating Hours (hr/yr)] ÷ [2,000 lb/ton]

e. Particulate matter size fractions based on EPA AP-42 Section 9.9.1 Grain Elevators and Processes (April 2003), page 9.9.1-13 regarding grain handling operations. Assmues  $PM_{10}$  is 25% of total PM, and  $PM_{2.5}$  is 17% of  $PM_{10}$ .

f. New Source Review (NSR) exemption thresholds as noted in the Washington Administrative Code (WAC) 173-400-110 Table 110(5) Exemption Levels.

EP-8 Page 1 of 2

### Viterra USA, LLC - Warden Facility

### 2025 Hammermill Dust Collection Project

### Existing Conveying & Seed Cleaning Dust Collector (EP-2) Pre-Project Emission Calculations

Parameters	Pre-Project		Post-Project			
Equipment	Existing Dust Collector (EP-2) Pre-Project		Existing Dust Collector (EP-2) Post-Project			
Maximum Blower Rating	10,000 acfm		4,000 acfm	f		
	9,393 scfm	b	3,757 scfm	b		
Maximum Filter Rating	0.004 gr PM <sub>10</sub> /dscf	а	0.004 gr PM <sub>10</sub> /dscf	a		
Maximum Operating Hours	8,760 hrs/yr	С	8,760 hrs/yr	С		

				Pre-P	roject	Post-P	roject	Project Change	
				Hourly	Annual	Hourly	Annual	Hourly	Annual
				Emissions	Emissions	Emissions	Emissions	Emissions	Emissions
Pollutant	CAS No./ID	<b>Emission Factor</b>		(lb/hr)	(ton/yr)	(lb/hr)	(ton/yr)	(lb/hr)	(ton/yr)
Particulate matter (total)	PM	400 % of PM <sub>10</sub>	е	1.29	5.64	0.52	2.26	-0.77	-3.39
Particulate matter (≤10 μm)	PM10	0.004 gr/dscf	d	0.32	1.41	0.13	0.56	-0.19	-0.85
Particulate matter (≤2.5 μm)	PM2.5	17 % of PM <sub>10</sub>	е	0.05	0.24	0.02	0.10	-0.03	-0.14

#### Notes:

- a. Information listed in Approval Order No. 15AQ-E641. No change to filter media post-project.
- b. Converted from actual cubic foot per minute (acfm) to standard cubic foot per minute (scfm) based on the following equation:

Standard Air Flow (scfm) = [Actual Air Flow (acfm)]  $\times$  ( $P_a/P_s$ )  $\times$  ( $T_s/T_a$ )

where: P<sub>a</sub> = actual gas pressure = 14.1 psia (2024 avg. for Moses Lake, WA; KMWH station)

P<sub>s</sub> = standard gas pressure = 14.7 psia

 $T_a$  = actual gas temperature = 530 °R (70 °F ambient temp.)

 $T_s$  = standard gas temperature = 519 °R

- c. Assumes continuous operations.
- d. Emissions calculated using the equation below:

 $PM_{10}$  Emissions (lb/hr) = [Max. Grain Loading Rate (gr/dscf)] ÷ [7,000 gr/lb] × [Max. Blower Rating (scfm)] × [60 min/hr]

 $PM_{10}$  Emissions (ton/yr) =  $[PM_{10}$  Emissions (lb/hr)] ×  $[Max. Operating Hours (hr/yr)] \div [2,000 lb/ton]$ 

e. Particulate matter size fractions based on EPA AP-42 Section 9.9.1 Grain Elevators and Processes (April 2003), page 9.9.1-13 regarding grain handling operations. Assmues  $PM_{10}$  is 25% of total PM, and  $PM_{2.5}$  is 17% of  $PM_{10}$ .

f. Based on equipment specifications provided by the vendor/manufacturer.

EP-2 Page 2 of 2



 Date:
 8/19/2024

 File:
 2024-14555

 Sequence:
 1

Revision:

Control: 1
Chg Order: 0
Processor: CG

Customer: Viterra USA

Purchase Order: FPO0012068

Tagging: VH Collector Exhaust Fan

Office Reference: X2408035A

Inboard Bearing Mfg. & Model:

**FAN INFORMATION** 

Quantity: 1

Product Line: Series 20 General Industrial

Size: 264

Class/Wheel Type: NA / AH BRG 2-3 PEA335 300 SHURLOK-EXPANSION (or equal)

Rotation: CW Part number: A9100676
Arrangement: 1 Outboard Bearing Mfg. & Model:

Discharge: UB BRG 2-3 PA335 300 SHURLOK (or equal)

Motor Position: W Part number: A9100675

Motor By: NYB Total fan wt. With accessories: 1140 lbs

Mounting By: NYB

**DRIVE INFORMATION** 

 QTY
 DESCRIPTION
 PART NUMBER

 1 Motor Sheave
 2B80SK
 A9901035
 SF: 1.65

 1 Motor Bushing
 SK X 1 5/8
 A9900514
 Belt Tens: 4.75 lb should deflect belt 0.55 in.

1 Fan Sheave 2B5V68 A9901613 1 Fan Bushing B X 2 3/16 A9900807 2 Belt B92 A99D0422

Belt Centers: 35.28 in

**FAN PERFORMANCE DATA** 

Capacity	Volume (CFM)	Pressure (in wg)	Speed (RPM)	Power (BHP)	Temp (F)	Density (lb/ft3)	Altitude (FT)	FEI	Max SS
Operating	4000	(FSP) 15	2042	13.5	70	0.0721	1100	1.19	2510

#### SALES MEMO INFORMATION

QTY DESCRIPTION	Drawing#

1 CW UB Size 26 Series 20 General Industrial AH Arr-1 Pos-W

2024-14555-001-02

- 1 15 HP 1800 RPM 3-60-230/460 TE Premium Efficiency, Frame: 254T, F1 conduit box location, Cast Iron, Ball Bearing, ABB Motors; A9500034BAL
- 1 Motor Mounting, frame 254T
- 1 V-Belt Drive: Constant, Service Factor = 1.50
- 1 Cleanout Door: Quick Open, Steel, 3:00 (standard)

QTY DESCRIPTION Drawing#

- Drain: Housing, Steel
  Flanged Inlet: Steel
- 1 Flanged Outlet: Steel
- 1 Guard: Belt, Arrangement 1, Position W or Z, Ventilated Sheet, Steel
- 1 Guard: Shaft and Bearing, Ventilated Sheet, Steel
- 1 Flex Connector: Rectangular, Steel Flanged, Silicone belt (max temperature: 450°F), for Inlet of Inlet Box
- 1 Silencer: Fan Outlet Vertical, Rectangular, 42.0-inch length, (per silencer config ID SIL012178)
- 1 Inlet Box: 300°F, Steel, 360°
- 1 Unitary Base: Motor Position W or Z, with Inlet Box/Silencer Extension, R-I-S Isolation
- 1 Coating: Fan, All Surfaces, Enamel, TGIC Polyester Powder (Textured), CC46, tinted to Donaldson Blue, nyb Standard Prep, Group: OEM
- 1 Coating: Inlet Box, All Surfaces, Enamel, TGIC Polyester Powder (Textured), CC46, tinted to Donaldson Blue, nyb Standard Prep, Group: OEM
- 1 Coating: Silencer, Outlet, Exterior Surfaces, Enamel, TGIC Polyester Powder (Textured), CC46, tinted to Donaldson Blue, nyb Standard Prep, Group: OEM
- 1 Coating: Unitary Base, All Surfaces, Enamel, TGIC Polyester Powder (Textured), CC46, tinted to Donaldson Blue, nyb Standard Prep, Group: OEM
- 1 Unitary Base Isolation
- 1 FAN INSTALLATION AND MAINTENANCE MANUAL REFERENCE NUMBER.

2024-14555-001\_

### From the Desk of Jay Wellan

16932 Woodinville Redmond Rd. NE A208

Woodinville, WA 98072 Tel: (425) 486-6666 Fax: (425) 486-8260

Web: <a href="http://www.baxair.com">http://www.baxair.com</a>
Email: jay@baxair.com

Date: 8/13/2024

Viterra USA, LLC 1875 West First St. Warden, WA 98857

Attn: Jacob Koehn

Reference: Canola Seed Hammermill Dust Control System – Revised Fan Quotation

#### Jacob,

Thank you for the opportunity to provide a revised quotation on the dust control system. This quotation includes the DLMC collector to handle just the hammermill. We will provide a system airflow of 5070 cfm which gives you 5500 fpm transport velocity in the ductwork. We recommend using a Donaldson DLMC 1/7/15 collector to handle the dust from your process. We will provide a Rotolok rotary valve with abrasion resistant adjustable tip wipers at the discharge of the collector. We are pleased to offer the following:

#### **5070 CFM DUST COLLECTOR**

Donaldson Co. Torit Division Model 1/7/15 Dalamatic Collector 904 sq.ft cloth area 5.6:1 A/C Ratio @ 5070 cfm Includes:

- Mild steel construction
- Clean side access to bags and frames
- High body inlet needed for fine particulate drop out
- 8 slot seal frame Provides 3.5" spacing between bags
- 56 DuraLife Oleophobic polyester felt bags with frames installed at factory
- Leg supports with 48" clearance under hopper  $/ \sim 22$ " below rotary valve outlet
- Timer in NEMA 4 enclosure
- Magnehelic gauge
- Explosion vent located on top of collector can handle 20"wc pressure max. with Burst Sensor
- Hopper outlet flange to match 12x12 rotary valve
- Donaldson premium blue powder coating exterior surfaces
- Requires 17 scfm @ 90 psig clean desiccant dry compressed air

Price \$51,847.00 fob jobsite – freight listed separately

#### PAGE 2

#### **ROTARY VALVE**

Rotolok Size 12"x12" Square Rotary Valve 0.7 CFR (6.3 cu.ft/min at 18 rpm) Includes:

- Cast iron housing and endplates
- Mild steel open rotor
- AR adjustable tips set at 0.004 clearance
- PTFE packing gland type seals
- Outboard bearings
- 1 hp TE 3/60/230/460v gearmotor
- Chain drive with guard
- Gray metallic exterior coating

#### Price \$6715.00 each fob Monroe, NC

#### **Option:**

Zero speed switch ADD \$551.00

### REPLACEMENT VH COLLECTOR EXHAUST FAN Motor Operated with VFD

New York Blower

Size 264 Series 20 GI fan with AH fan wheel, Arrangement 9 - Belt Drive 4000 cfm 15"sp 2051 rpm 13.7 bhp @ 70°F & 1100' Elevation Includes:

- AH high efficiency radial bladed wheel
- 15 hp 1800 rpm TEFC Premium Efficiency 3-60-230/460v ABB motor
- Constant pitch v belt drive
- Belt guard
- Shaft and bearing guard
- Flanged fan inlet & fan outlet
- Inlet box with support leg
- Flex connector for inlet box
- Discharge silencer lowers noise level to 80 dBA at ear level
- Quick opening cleanout door
- Drain
- Unitary base with rubber in shear vibration isolation
- Donaldson blue alkyd enamel finish on all surfaces
- Yellow powder coating on guards

Revised Price \$16,272.00 fob Leitchfield, KY

## PAGE 3

**Lead-time:** 12 - 13 weeks to ship + 1 week in transit

We did not include any freight costs in this proposal. Use \$14,000.00 as an estimate for now.

Please contact me if you have any questions or comments regarding our proposal.

Best regards, Jay Wellan