Ag Processing, Inc.
Notice of Construction Application for a New Commodities Receiving Terminal and Shiploader
Application Supplement

November 2023

1 Introduction

The Port of Grays Harbor (Port) is proposing the Terminal 4 (T4) Expansion and Redevelopment Project to increase rail and shipping capacity at T4 at the Port located in the cities of Hoquiam and Aberdeen, Washington, to accommodate growth of dry bulk, breakbulk, and roll-on/roll-off cargos. As part of this larger project, Ag Processing, Inc. (AGP) is proposing to construct facilities to support a new commodity transload facility at Terminal 4B (T4B) at the Port of Grays Harbor (referred to as the AGP Project). The dry bulk facility will primarily handle soy meal, with the potential to handle other grain-derived commodities, like dry distiller grains. Whole grains will not be handled at the facility.

AGP is proposing to construct the following facilities:

- **Rail Receiving Facility:** A new rail receiving building with two receiving pits
- **Shiploader:** A new three-tower shiploader with three spouts at the T4B dock
- **Commodity Handling Systems:** Several commodity handling structures including conveyors, a bulk scale tower, and baghouses

Additional non-emitting facilities including landside and dockside motor control centers will be built, and the existing T4B dock will undergo reconstruction to support the shiploader. Existing terminal utilities and lighting systems will be upgraded to serve the new transload facility.

The emissions sources requiring a permit from the Olympic Region Clean Air Agency (ORCAA) prior to construction are listed in Table 1.

This document provides supplementary information to support a Notice of Construction application package. The package consists of the following applications and supplementary information:

- Form 1: Notice of Construction
- Form 4: Facility Information
- Equipment Forms for Each Baghouse (Form 12)
- Filter Manufacturer Emissions Statements

- Baghouse and Fan Technical Specifications
- Site Emissions Plan to Illustrate the Process Flow
- Potential to Emit Calculations

2 Emission Source Overview

Table 1 identifies and describes the emission points (EPs) associated with operations for the AGP Project. The primary pollutant is dust originating from soy meal, and the means of control is enclosure when possible, with aspiration to prevent fugitive emissions and baghouses to recover product and control exhaust. There are nine planned baghouses aspirating the receiving building, two receiving pits, parallel dry bulk handling equipment, and the three-tower shiploader. The facility will also house two central vacuum baghouses with 40-horsepower blowers used for cleaning the facility. These units will not be used for process aspiration and will not be running continuously.

2.1 Rail Receiving Building and Receiving Pits

The AGP Project will include a dual-track commodity transload facility to receive product via railcar and load this product directly to ship. The rail receiving building will consist of two receiving tracks, each equipped with a receiving pit and dedicated conveyance for transfer to the ship. The two lead tracks into the building will hold up to 55 railcars.

2.2 Bulk Commodity Scale and Conveyors

After railcars are emptied into the receiving pits, the soybean meal will be routed directly from the receiving building pits to the ship rather than on-site storage. To do this, independent and dedicated conveyor systems will reclaim product from each of the receiving pits. For each receiving pit, there will be a receiving baghouse rated for 41,900 actual cubic feet per minute (acfm; FH-4013 and FH-4306). Additional conveyors will elevate and transfer the product to the scale tower. This operation is proposed to be controlled by transfer baghouses rated for 5,500 acfm (FH-4211 and FH-4511). Product will be conveyed from each of the receiving pits by a series of dedicated drag conveyors, belt conveyors, and bucket elevators to the scale tower, where the product will be weighed and sampled for quality testing.

2.3 Shiploader

The product will be transferred to the shiploader. The shiploader will consist of two conveyors and two 3-way valves, which direct product to any two of the ship loading towers. By design, only two of the three towers will be in operation at any one time. Each initial conveyor will be aspirated by a baghouse rated at 3,500 acfm (FH-4605 and FH-4610) located 127 feet above grade. Each ship loading tower is designed with a capacity of 2,000 metric tons (MT) per hour of dry bulk agricultural product and will be aspirated by a baghouse rated at 6,000 acfm (FH-4703, FH-4803, and FH-4903) 85 feet above grade.

Table 1
Proposed Emission Data by Baghouse

Control Device	Equipment ID/ Emission Point Designation	Description
Pit 3 Receiving Baghouse	FH-4013/EP-4001	• 0.001 gr/dscf (manufacturer guarantee) • 41,900 acfm • Serves the pit 3 receiving activity
Pit 3 Transfer Baghouse	FH-4211/EP-4201	• 0.001 gr/dscf (manufacturer guarantee) • 5,500 acfm • Serves the pit 3 transfer to conveyors
Pit 4 Receiving Baghouse	FH-4306/EP-4301	• 0.001 gr/dscf (manufacturer guarantee) • 41,900 acfm • Serves the pit 4 receiving activity
Pit 4 Transfer Baghouse	FH-4511/EP-4501	• 0.001 gr/dscf (manufacturer guarantee) • 5,500 acfm • Serves the pit 4 transfer to conveyors
Ship Loader Baghouse #1	FH-4605/EP-4601	• 0.001 gr/dscf (manufacturer guarantee) • 3,500 acfm • Aspirates one initial conveyor
Ship Loader Baghouse #2	FH-4610/EP-4602	• 0.001 gr/dscf (manufacturer guarantee) • 3,500 acfm • Aspirates one initial conveyor
Shiploader West Baghouse	FH-4703/EP-4701	• 0.001 gr/dscf (manufacturer guarantee) • 6,000 acfm • Aspirates loading emissions from shiploader to ship
Shiploader Center Baghouse	FH-4803/EP-4801	• 0.001 gr/dscf (manufacturer guarantee) • 6,000 acfm • Aspirates loading emissions from shiploader to ship
Shiploader East Baghouse	FH-4903/EP-4901	• 0.001 gr/dscf (manufacturer guarantee) • 6,000 acfm • Aspirates loading emissions from shiploader to ship

Notes:
gr/dscf: grains per dry standard cubic foot
Source: AGP

3 Potential-to-Emit Calculations

All material handling activities, including drop points, transfers, unloading and loading, will occur in enclosed, aspirated areas or equipment. Meal particles captured by the fabric filters are recovered and sold as product. Because the transload facility would not function properly without the product recovery mechanism of enclosures and fabric filters, these systems are considered inherent to the process. The potential to emit is calculated based on continuous operation of the baghouses over 8,760 hours. The results are included as an attachment to this application.

4 NSPS Subpart DD Applicability

As proposed, the facility will be a commodity transload facility, and the primary product being transloaded, soy meal, is not classified as a grain per an EPA applicability determination made in 1998[1]. Because the proposed facility will not handle or store grains, it will not meet the definition of either a "grain terminal elevator" or "grain storage elevator" as defined in the New Source Performance Standards (NSPS) Subpart DD – Standards of Performance for Grain Elevators (40 CFR 60.301). Therefore, NSPS Subpart DD should not apply to the facility.

5 Ambient Impact Analysis Results

Ambient impact screening results are attached to this application. This analysis was performed according to the screening protocol provided to ORCAA. The screening analysis shows that the maximum ambient air impacts from the project are below the insignificant impact thresholds set forth in ORCAA Regulation 6.1.4, as shown in Table 2. Note that the model output represents the maximum PM_{10} concentration averaged over 1 hour. There are no National Ambient Air Quality Standards (NAAQS) or insignificant impact thresholds for 1-hour concentrations of PM_{10} or $PM_{2.5}$, so scaling factors are needed to determine the equivalent 24-hour and annual maximum average concentrations. $PM_{2.5}$ is assumed to make up 37.7% of PM_{10}, as outlined in the attached Modeling Protocol. Based on the results of the screening analysis, the proposed project does not threaten the NAAQS attainment status of the area or necessitate detailed modeling.

Table 2
AERSCREEN Ambient Impact Screening Results

Pollutant	Averaging Period	Insignificant Impact Threshold (µg/m³)	NAAQS (µg/m³)	Scaling Factor	Maximum Impact Concentration (µg/m³)	Exceeds Threshold?
Model Output	1 hour	n/a	n/a	n/a	5.101	n/a
PM_{10}	Annual	1.0	n/a	0.1	0.510	No
	24 hours	5.0	150	0.6	3.060	No
$PM_{2.5}$	Annual	0.3	12	0.1 × 37.7% = 0.0377	0.192	No
	24 hours	1.2	35	0.6 × 37.7% = 0.2262	1.154	No

Notes:
µg/m³: microgram per cubic meter
n/a: not applicable

[1] Soybean Plants, USEPA Applicability Determination Index, Control No. 9800095. USEPA Region 5. August 11, 1998. Available at: https://cfpub.epa.gov/adi/index.cfm?fuseaction=home.dsp_show_file_contents&CFID=128151497&CFTOKEN=44362866&id=9800095

Form 1: Notice of Construction

OLYMPIC REGION CLEAN AIR AGENCY

2940 Limited Lane NW - Olympia, Washington 98502 - 360-539-7610 – Fax 360-491-6308

FORM 1- NOTICE OF CONSTRUCTION

TO CONSTRUCT - INSTALL - ESTABLISH OR MODIFY AN AIR CONTAMINANT SOURCE

Form 1 Instructions:

1. Please complete all the fields below. **This NOC application is considered incomplete until signed.**
2. If the application contains any confidential business information, please complete a Request of Confidentiality of Records (www.orcaa.org).
3. Duty to Correction Application: An applicant has the duty to supplement or correct an application. Any applicant who fails to submit any relevant facts or who has submitted incorrect information in a permit application must, upon becoming aware of such failure or incorrect submittal, promptly submit supplementary factors or corrected information.

Business Name:
Ag Processing Inc

Mailing Address:
12700 West Dodge Road, Omaha, NE 68154

Physical Address of Project or New Source:
Terminal Way, Terminal 4 at Port of Grays Harbor

Billing Address:
12700 West Dodge Road, Omaha, NE 68154

For ORCAA use only

File No: 233
County No: 27
Source No: 24
Application No: 23NOC1627

Date Received:
Received
DEC 07 2023
ORCAA

Project or Equipment to be installed/established:
New commodity transload facility, incl: receiving building, material handling, shiploader, and baghouses

Anticipated startup date: ___ / ___ / 2025 Is facility currently registered with ORCAA? Yes ☐ No ☑

This project must meet the requirements of the State Environmental Policy Act (SEPA) before ORCAA can issue final approval. Indicate the SEPA compliance option:

☑ SEPA was satisfied by Port of Grays Harbor (government agency) on 09/25/23 (date) - Include a copy of the SEPA determination

☐ SEPA threshold determination by _____ (government agency) is pending - Include a copy of the environmental checklist

☐ ORCAA is the only government agency requiring a permit - Include ORCAA Environmental Checklist

☐ This project is exempt from SEPA per _____ (WAC citation).

Name of Owner of Business:
Lou Rickers

Title: Chief Operations Officer

Email: lrickers@AGP.com Phone: 402-496-7809

Authorized Representative for Application (if different than owner):

Title:

Email: Phone:

I hereby certify that the information contained in this application is, to the best of my knowledge, complete and correct.

Signature of Owner or Authorized Representative: (sign in Blue Ink)

Lou Rickers **Date:** 11/30/2023

IMPORTANT: Do not send via email or other electronic means. ORCAA must receive Original, hardcopy, signed application and payment prior to processing application.

Agency Use Only

OLYMPIC REGION CLEAN AIR AGENCY

2940 Limited Lane NW - Olympia, Washington 98502 - 360-539-7610 – Fax 360-491-6308

FORM 1D- Contact Information

Business Name	**FOR ORCAA USE**
Ag Processing Inc	**FILE #** 233
Physical Site Address (Street address, city, state, zip)	**CTY #** 27
E Terminal Way, Terminal 4 at Port of Grays Harbor Aberdeen, WA 98520	**SRC #** 24
	Date Received Received DEC 07 2023 ORCAA
Previous Business Name (if applicable)	

Contact Information

Inspection Contact	
Name Seth Taylor	Title AGP Plant Manager
Phone 402-250-4724	Email staylor@agp.com
Billing Contact	
Name Taron Courter	Title AGP Purchasing
Phone 402-492-7747	Email tcourter@agp.com
Emission Inventory Contact	
Name Dan Dunham	Title Environmental Compliance Manager
Phone 402-492-7713	Email ddunham@agp.com
Complaint Contact	
Name Seth Taylor	Title AGP Plant Manager
Phone 402-250-4724	Email staylor@agp.com
Permit Contact	
Name Kelly Jorgensen	Title Director of Environmental Compliance
Phone 402-498-5501	Email kjorgensen@agp.com

The **inspection contact** is the on-site person responsible for the everyday operation of the site and is available for inspections.
The **billing contact** is the person invoices are sent.
The **emission inventory contact** is the person requests for emissions information and material use information are sent.
The **complaint contact** is the person who receives and responds to complaints received on-site and who is contacted regarding complaints ORCAA receives.
The **permit contact** is the person responsible for filling out permit applications and receiving approval from ORCAA.

Form 4: Facility Information

FORM 4
FACILITY EMISSIONS SUMMARY

Facility: Ag Processing Inc.,Terminal 4 at Port of Grays Harbor

Instructions: on back.

Emission Unit ID#	TSP	PM-10	SOx	NOx	VOC	CO
FH-4013	1.573	1.573				
FH-4211	0.206	0.206				
FH-4306	1.573	1.573				
FH-4511	0.206	0.206				
FH-4605	0.131	0.131				
FH-4610	0.131	0.131				
FH-4703	0.225	0.225				
FH-4803	0.225	0.225				
FH-4903	0.225	0.225				
Facility Total	4.272	4.272	0.00	0.00	0.00	0.00

Equipment Forms for Each Baghouse (Form 12)

OLYMPIC REGION CLEAN AIR AGENCY

2940 Limited Lane NW - Olympia, Washington 98502 - 360-539-7610 – Fax 360-491-6308

FORM 12 BAGHOUSE

FH-4013 PIT 3 RECEIVING BAGHOUSE

GENERAL INFORMATION

Facility Name: Ag Processing Inc. Terminal 4 at Port of Grays Harbor FH-4013 PIT 3 RECEIVING BAGHOUSE	Contact Person: Kelly Jorgensen Phone Number: 402-498-5501 Email: kjorgensen@agp.com
Facility Operating Schedule: 24 hrs/day, 7 days/wk, 52 wks/yr Check days when operating: M T W Th F Sat Sun	Baghouse Operating Schedule: 24 hrs/day, 7 days/wk, 52 wks/yr Check days when operating: M T W Th F Sat Sun

x new unit installation _____ modification	Manufacturer: Schenck Process LLC	Model & Serial #s: M/N: 120MCF1120-500; S/N: 1100508678-040-1

TECHNICAL SPECIFICATIONS

Air Flow: design acfm 41,900 operating acfm 41,900 temperature (F°) Ambient	System Parameters: pressure drop (inches water) 0"-19" water vapor content (lbs water/lb dry air) fan power (hp) 200

Describe filter material:

DYNA-MAC 16 oz. Dacron Polyester Bags

Describe bag cleaning mechanism and cycle:

Pulse jet

Describe operation of baghouse including use of safety bypasses, monitoring and maintenance schedules and any other pertinent information relating to particulate emissions (use additional pages if necessary):

See process flow and schematic

PARTICULATE EMISSIONS DATA

Particulate Emissions: inlet (gr/scf) _____ outlet (gr/scf) 0.001 gr/dscf	Particulate Control Efficiency: filtering velocity (acfm/ft^2 cloth) 7.0:1 particulate control efficiency (%): 99.99%

Describe Particulate Emissions: Grain and grain by-product particulates below 10 microns in diameter.

Micron Range:	Inlet Loading (% of total)	Outlet Loading (% of total)
0 - 5	40 %	66 %
5 - 10	21 %	34 %
greater than 10	39 %	0 %

OTHER INFORMATION

The following information is needed to complete the application:

1. Manufacturer brochure or technical fact sheet for filter material.
2. Scaled technical drawings of the baghouse including top, side and interior views.
3. Manufacturer brochure or technical fact sheet for baghouse.

Note: See back side of form for ORCAA approved equipment and operations.

OLYMPIC REGION CLEAN AIR AGENCY

2940 Limited Lane NW - Olympia, Washington 98502 - 360-539-7610 – Fax 360-491-6308

FORM 12
BAGHOUSE

FH-4211 PIT 3 XFER BAGHOUSE

GENERAL INFORMATION

Facility Name: Ag Processing Inc. Terminal 4 at Port of Grays Harbor FH-4211 PIT 3 XFER BAGHOUSE	Contact Person: Kelly Jorgensen Phone Number: 402-498-5501 Email: kjorgensen@agp.com
Facility Operating Schedule: 24 hrs/day, 7 days/wk, 52 wks/yr Check days when operating: M T W Th F Sat Sun	Baghouse Operating Schedule: 24 hrs/day, 7 days/wk, 52 wks/yr Check days when operating: M T W Th F Sat Sun

x new unit installation _____ modification	Manufacturer: Schenck Process LLC	Model & Serial #s: M/N: 120MCF112-66; S/N: 1100508678-090-1

TECHNICAL SPECIFICATIONS

Air Flow: design acfm 5,500 operating acfm 5,500 temperature (F°) Ambient	System Parameters: pressure drop (inches water) 1"-14" water vapor content (lbs water/lb dry air) fan power (hp) 20

Describe filter material:

DYNA-MAC 16 oz. Dacron Polyester Bags

Describe bag cleaning mechanism and cycle:

Pulse jet

Describe operation of baghouse including use of safety bypasses, monitoring and maintenance schedules and any other pertinent information relating to particulate emissions (use additional pages if necessary):

See process flow and schematic

PARTICULATE EMISSIONS DATA

Particulate Emissions: inlet (gr/scf) _____ outlet (gr/scf) 0.001 gr/dscf	Particulate Control Efficiency: filtering velocity (acfm/ft^2 cloth) 7.0:1 particulate control efficiency (%): 99.99%

Describe Particulate Emissions: Grain and grain by-product particulates below 10 microns in diameter.

Micron Range:	Inlet Loading (% of total)	Outlet Loading (% of total)
0 - 5	40 %	66 %
5 - 10	21 %	34 %
greater than 10	39 %	0 %

OTHER INFORMATION

The following information is needed to complete the application:
1. Manufacturer brochure or technical fact sheet for filter material.
2. Scaled technical drawings of the baghouse including top, side and interior views.
3. Manufacturer brochure or technical fact sheet for baghouse.

Note: See back side of form for ORCAA approved equipment and operations.

OLYMPIC REGION CLEAN AIR AGENCY

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FORM 12
BAGHOUSE

FH-4306 PIT 4 RECEIVING BAGHOUSE

GENERAL INFORMATION

Facility Name: Ag Processing Inc. Terminal 4 at Port of Grays Harbor FH-4306 PIT 4 RECEIVING BAGHOUSE	Contact Person: Kelly Jorgensen Phone Number: 402-498-5501 Email: kjorgensen@agp.com
Facility Operating Schedule: 24 hrs/day, 7 days/wk, 52 wks/yr Check days when operating: M T W Th F Sat Sun	Baghouse Operating Schedule: 24 hrs/day, 7 days/wk, 52 wks/yr Check days when operating: M T W Th F Sat Sun

x new unit installation _____ modification	Manufacturer: Schenck Process LLC	Model & Serial #s: M/N: 120MCF1120-500; S/N: 1100508678-110-1

TECHNICAL SPECIFICATIONS

Air Flow: design acfm 41,900 operating acfm 41,900 temperature (F°) Ambient	System Parameters: pressure drop (inches water) 0"-19" water vapor content (lbs water/lb dry air) fan power (hp) 200

Describe filter material:

DYNA-MAC 16 oz. Dacron Polyester Bags

Describe bag cleaning mechanism and cycle:

Pulse jet

Describe operation of baghouse including use of safety bypasses, monitoring and maintenance schedules and any other pertinent information relating to particulate emissions (use additional pages if necessary):

See process flow and schematic

PARTICULATE EMISSIONS DATA

Particulate Emissions: inlet (gr/scf) _____ outlet (gr/scf) 0.001 gr/dscf	Particulate Control Efficiency: filtering velocity (acfm/ft^2 cloth) 7.0:1 particulate control efficiency (%): 99.99%

Describe Particulate Emissions: Grain and grain by-product particulates below 10 microns in diameter.

Micron Range:	Inlet Loading (% of total)	Outlet Loading (% of total)
0 - 5	40 %	66 %
5 - 10	21 %	34 %
greater than 10	39 %	0 %

OTHER INFORMATION

The following information is needed to complete the application:
1. Manufacturer brochure or technical fact sheet for filter material.
2. Scaled technical drawings of the baghouse including top, side and interior views.
3. Manufacturer brochure or technical fact sheet for baghouse.

Note: See back side of form for ORCAA approved equipment and operations.

OLYMPIC REGION CLEAN AIR AGENCY

2940 Limited Lane NW - Olympia, Washington 98502 - 360-539-7610 – Fax 360-491-6308

FORM 12
BAGHOUSE

FH-4511 PIT 4 XFER BAGHOUSE

GENERAL INFORMATION

Facility Name: Ag Processing Inc. Terminal 4 at Port of Grays Harbor FH -4511 PIT 4 XFER BAGHOUSE	Contact Person: Kelly Jorgensen Phone Number: 402-498-5501 Email: kjorgensen@agp.com
Facility Operating Schedule: 24 hrs/day, 7 days/wk, 52 wks/yr Check days when operating: M T W Th F Sat Sun	Baghouse Operating Schedule: 24 hrs/day, 7 days/wk, 52 wks/yr Check days when operating: M T W Th F Sat Sun

x new unit installation _____ modification	Manufacturer: Schenck Process LLC	Model & Serial #s: M/N: 120MCF112-66; S/N: 1100508678-130-1

TECHNICAL SPECIFICATIONS

Air Flow: design acfm 5,500 operating acfm 5,500 temperature (F°) Ambient	System Parameters: pressure drop (inches water) 0"-14" water vapor content (lbs water/lb dry air) fan power (hp) 20

Describe filter material:

DYNA-MAC 16 oz. Dacron Polyester Bags

Describe bag cleaning mechanism and cycle:

Pulse jet

Describe operation of baghouse including use of safety bypasses, monitoring and maintenance schedules and any other pertinent information relating to particulate emissions (use additional pages if necessary):

See process flow and schematic

PARTICULATE EMISSIONS DATA

Particulate Emissions: inlet (gr/scf) _____ outlet (gr/scf) 0.001 gr/dscf	Particulate Control Efficiency: filtering velocity (acfm/ft^2 cloth) 7.0:1 particulate control efficiency (%): 99.99%

Describe Particulate Emissions: Grain and grain by-product particulates below 10 microns in diameter.

Micron Range:	Inlet Loading (% of total)	Outlet Loading (% of total)
0 - 5	40 %	66 %
5 - 10	21 %	34 %
greater than 10	39 %	0 %

OTHER INFORMATION

The following information is needed to complete the application:
1. Manufacturer brochure or technical fact sheet for filter material.
2. Scaled technical drawings of the baghouse including top, side and interior views.
3. Manufacturer brochure or technical fact sheet for baghouse.

Note: See back side of form for ORCAA approved equipment and operations.

OLYMPIC REGION CLEAN AIR AGENCY

2940 Limited Lane NW - Olympia, Washington 98502 - 360-539-7610 – Fax 360-491-6308

FORM 12
BAGHOUSE

FH-4605 SHIP LOAD #1 BAGHOUSE

GENERAL INFORMATION

Facility Name: Ag Processing Inc.
Terminal 4 at Port of Grays Harbor
FH-4605 SHIP LOAD #1 BAGHOUSE

Contact Person: Kelly Jorgensen
Phone Number: 402-498-5501
Email: kjorgensen@agp.com

Facility Operating Schedule:
24 hrs/day, 7 days/wk, 52 wks/yr

Check days when operating:
M T W Th F Sat Sun

Baghouse Operating Schedule:
24 hrs/day, 7 days/wk, 52 wks/yr

Check days when operating:
M T W Th F Sat Sun

x new unit installation ____ modification	Manufacturer: Schenck Process LLC	Model & Serial #s: RT (round top) series

TECHNICAL SPECIFICATIONS

Air Flow:	System Parameters:
design acfm 3,500 operating acfm 3,500 temperature (F°) Ambient	pressure drop (inches water) 0"-14" water vapor content (lbs water/lb dry air) fan power (hp) 7.5

Describe filter material:
DYNA-MAC 16 oz. Dacron Polyester Bags

Describe bag cleaning mechanism and cycle:
Pulse jet

Describe operation of baghouse including use of safety bypasses, monitoring and maintenance schedules and any other pertinent information relating to particulate emissions (use additional pages if necessary):

See process flow and schematic

PARTICULATE EMISSIONS DATA

Particulate Emissions:	Particulate Control Efficiency:
inlet (gr/scf) _____ outlet (gr/scf) 0.001 gr/dscf	filtering velocity (acfm/ft^2 cloth) 6.8:1 particulate control efficiency (%): 99.99%

Describe Particulate Emissions: Grain and grain by-product particulates below 10 microns in diameter.

Micron Range:	Inlet Loading (% of total)	Outlet Loading (% of total)
0 - 5	40 %	66 %
5 - 10	21 %	34 %
greater than 10	39 %	0 %

OTHER INFORMATION

The following information is needed to complete the application:
1. Manufacturer brochure or technical fact sheet for filter material.
2. Scaled technical drawings of the baghouse including top, side and interior views.
3. Manufacturer brochure or technical fact sheet for baghouse.

Note: See back side of form for ORCAA approved equipment and operations.

OLYMPIC REGION CLEAN AIR AGENCY

2940 Limited Lane NW - Olympia, Washington 98502 - 360-539-7610 – Fax 360-491-6308

FORM 12
BAGHOUSE

FH-4610 SHIP LOAD #2 BAGHOUSE

GENERAL INFORMATION

Facility Name: Ag Processing Inc. Terminal 4 at Port of Grays Harbor FH-4610 SHIP LOAD #2 BAGHOUSE	Contact Person: Kelly Jorgensen Phone Number: 402-498-5501 Email: kjorgensen@agp.com
Facility Operating Schedule: 24 hrs/day, 7 days/wk, 52 wks/yr Check days when operating: M T W Th F Sat Sun	Baghouse Operating Schedule: 24 hrs/day, 7 days/wk, 52 wks/yr Check days when operating: M T W Th F Sat Sun

x new unit installation _____ modification	Manufacturer: Schenck Process LLC	Model & Serial #s: RT (round top) series

TECHNICAL SPECIFICATIONS

Air Flow: design acfm 3,500 operating acfm 3,500 temperature (F°) Ambient	System Parameters: pressure drop (inches water) 0"-14" water vapor content (lbs water/lb dry air) fan power (hp) 7.5

Describe filter material:

DYNA-MAC 16 oz. Dacron Polyester Bags

Describe bag cleaning mechanism and cycle:

Describe operation of baghouse including use of safety bypasses, monitoring and maintenance schedules and any other pertinent information relating to particulate emissions (use additional pages if necessary):

See process flow and schematic

PARTICULATE EMISSIONS DATA

Particulate Emissions: inlet (gr/scf) _____ outlet (gr/scf) 0.001 gr/dscf	Particulate Control Efficiency: filtering velocity (acfm/ft^2 cloth) 6.8:1 particulate control efficiency (%): 99.99%

Describe Particulate Emissions: Grain and grain by-product particulates below 10 microns in diameter.

Micron Range:	Inlet Loading (% of total)	Outlet Loading (% of total)
0 - 5	40 %	66 %
5 - 10	21 %	34 %
greater than 10	39 %	0 %

OTHER INFORMATION

The following information is needed to complete the application:
1. Manufacturer brochure or technical fact sheet for filter material.
2. Scaled technical drawings of the baghouse including top, side and interior views.
3. Manufacturer brochure or technical fact sheet for baghouse.

Note: See back side of form for ORCAA approved equipment and operations.

OLYMPIC REGION CLEAN AIR AGENCY

2940 Limited Lane NW - Olympia, Washington 98502 - 360-539-7610 – Fax 360-491-6308

FORM 12
BAGHOUSE

FH-4703 SHIPLOADER WEST BAGHOUSE

GENERAL INFORMATION

Facility Name: Ag Processing Inc.
Terminal 4 at Port of Grays Harbor
FH-4703 SHIPLOADER WEST BAGHOUSE

Contact Person: Kelly Jorgensen
Phone Number: 402-498-5501
Email: kjorgensen@agp.com

Facility Operating Schedule:
24 hrs/day, 7 days/wk, 52 wks/yr

Check days when operating:
M T W Th F Sat Sun

Baghouse Operating Schedule:
24 hrs/day, 7 days/wk, 52 wks/yr

Check days when operating:
M T W Th F Sat Sun

x new unit installation ____ modification	Manufacturer: Schenck Process LLC	Model & Serial #s: LST series

TECHNICAL SPECIFICATIONS

Air Flow:

design acfm 6,000
operating acfm 6,000
temperature (F°) Ambient

System Parameters:

pressure drop (inches water) 0"-14"
water vapor content (lbs water/lb dry air)
fan power (hp) 25

Describe filter material:

DYNA-MAC 16 oz. Dacron Polyester Bags

Describe bag cleaning mechanism and cycle:

Describe operation of baghouse including use of safety bypasses, monitoring and maintenance schedules and any other pertinent information relating to particulate emissions (use additional pages if necessary):

See process flow and schematic

PARTICULATE EMISSIONS DATA

Particulate Emissions:
inlet (gr/scf) _____
outlet (gr/scf) 0.001 gr/dscf

Particulate Control Efficiency:

filtering velocity (acfm/ft^2 cloth) 6.7:1
particulate control efficiency (%): 99.99%

Describe Particulate Emissions: Grain and grain by-product particulates below 10 microns in diameter.

Micron Range:	Inlet Loading (% of total)	Outlet Loading (% of total)
0 - 5	40 %	66 %
5 - 10	21 %	34 %
greater than 10	39 %	0 %

OTHER INFORMATION

The following information is needed to complete the application:
1. Manufacturer brochure or technical fact sheet for filter material.
2. Scaled technical drawings of the baghouse including top, side and interior views.
3. Manufacturer brochure or technical fact sheet for baghouse.

Note: See back side of form for ORCAA approved equipment and operations.

OLYMPIC REGION CLEAN AIR AGENCY

2940 Limited Lane NW - Olympia, Washington 98502 - 360-539-7610 – Fax 360-491-6308

FORM 12
BAGHOUSE

FH-4803 SHIPLOADER CENTER BAGHOUSE

GENERAL INFORMATION

Facility Name: Ag Processing Inc.
Terminal 4 at Port of Grays Harbor
FH-4803 SHIPLOADER CENTER BAGHOUSE

Contact Person: Kelly Jorgensen
Phone Number: 402-498-5501
Email: kjorgensen@agp.com

Facility Operating Schedule:
24 hrs/day, 7 days/wk, 52 wks/yr

Check days when operating:
M T W Th F Sat Sun

Baghouse Operating Schedule:
24 hrs/day, 7 days/wk, 52 wks/yr

Check days when operating:
M T W Th F Sat Sun

x new unit installation ____ modification	Manufacturer: Schenck Process LLC	Model & Serial #s: LST series

TECHNICAL SPECIFICATIONS

Air Flow:	System Parameters:
design acfm 6,000 operating acfm 6,000 temperature (F°) Ambient	pressure drop (inches water) 0"-14" water vapor content (lbs water/lb dry air) fan power (hp) 25

Describe filter material:
DYNA-MAC 16 oz. Dacron Polyester Bags

Describe bag cleaning mechanism and cycle:

Describe operation of baghouse including use of safety bypasses, monitoring and maintenance schedules and any other pertinent information relating to particulate emissions (use additional pages if necessary):
See process flow and schematic

PARTICULATE EMISSIONS DATA

Particulate Emissions:	Particulate Control Efficiency:
inlet (gr/scf) _____ outlet (gr/scf) 0.001 gr/dscf	filtering velocity (acfm/ft^2 cloth) 6.7:1 particulate control efficiency (%): 99.99%

Describe Particulate Emissions: Grain and grain by-product particulates below 10 microns in diameter.

Micron Range:	Inlet Loading (% of total)	Outlet Loading (% of total)
0 - 5	40 %	66 %
5 - 10	21 %	34 %
greater than 10	39 %	0 %

OTHER INFORMATION

The following information is needed to complete the application:
1. Manufacturer brochure or technical fact sheet for filter material.
2. Scaled technical drawings of the baghouse including top, side and interior views.
3. Manufacturer brochure or technical fact sheet for baghouse.

Note: See back side of form for ORCAA approved equipment and operations.

OLYMPIC REGION CLEAN AIR AGENCY

2940 Limited Lane NW - Olympia, Washington 98502 - 360-539-7610 – Fax 360-491-6308

FORM 12
BAGHOUSE

FH-4903 SHIPLOADER EAST BAGHOUSE

GENERAL INFORMATION

Facility Name: Ag Processing Inc. Terminal 4 at Port of Grays Harbor FH-4903 SHIPLOADER EAST BAGHOUSE	Contact Person: Kelly Jorgensen Phone Number: 402-498-5501 Email: kjorgensen@agp.com
Facility Operating Schedule: 24 hrs/day, 7 days/wk, 52 wks/yr Check days when operating: M T W Th F Sat Sun	Baghouse Operating Schedule: 24 hrs/day, 7 days/wk, 52 wks/yr Check days when operating: M T W Th F Sat Sun

x new unit installation _____ modification	Manufacturer: Schenck Process LLC	Model & Serial #s: LST series

TECHNICAL SPECIFICATIONS

Air Flow: design acfm 6,000 operating acfm 6,000 temperature (F°) Ambient	System Parameters: pressure drop (inches water) 0"-14" water vapor content (lbs water/lb dry air) fan power (hp) 25

Describe filter material:

DYNA-MAC 16 oz. Dacron Polyester Bags

Describe bag cleaning mechanism and cycle:

Describe operation of baghouse including use of safety bypasses, monitoring and maintenance schedules and any other pertinent information relating to particulate emissions (use additional pages if necessary):

See process flow and schematic

PARTICULATE EMISSIONS DATA

Particulate Emissions: inlet (gr/scf) _____ outlet (gr/scf) 0.001 gr/dscf	Particulate Control Efficiency: filtering velocity (acfm/ft^2 cloth) 6.7:1 particulate control efficiency (%): 99.99%

Describe Particulate Emissions: Grain and grain by-product particulates below 10 microns in diameter.

Micron Range:	Inlet Loading (% of total)	Outlet Loading (% of total)
0 - 5	40 %	66 %
5 - 10	21 %	34 %
greater than 10	39 %	0 %

OTHER INFORMATION

The following information is needed to complete the application:
1. Manufacturer brochure or technical fact sheet for filter material.
2. Scaled technical drawings of the baghouse including top, side and interior views.
3. Manufacturer brochure or technical fact sheet for baghouse.

Note: See back side of form for ORCAA approved equipment and operations.

Filter Manufacturer Emissions Statements

Schenck Process LLC
7901 NW 107th Terrace
Kansas City, MO 64153
Tel: 800-821-2476
Fax: 816-891-8336
www.schenckprocess.com\us

schenckprocess

FILTER EMISSIONS STATEMENT
for
DYNA-MAC 16 oz. Dacron Polyester Bags

Customer: Agrico Sales
Reference: 2023-167625 Rev 3
Equipment: 54RT21 Style III Filter
Application: Providing 146 Sq ft of media with an air to media ratio of 6.8:1 @1000 CFM

Schenck Process LLC warrants its filters to be free of mechanical defects for a period of one year from the date of shipment in accordance with the "Warranty and Limitation" statement included with the original proposal.

Schenck Process LLC also warrants the emissions of its new Dyna-MAC 16 oz. Dacron Polyester bags, when properly installed, applied and maintained, and when operated per the design parameters referenced in the original proposal and in accordance with the manufacturer's operations manuals, to emit no more than 0.001 grains/dscf of air based on PM 2.5 efficiency testing. Based on an inlet loading of 10 grains/dscf they will provide at least 99.99% capture efficiency.

The Buyer will be responsible for any emissions testing expense and Schenck Process LLC reserves the right to be present during any emission tests and shall be notified at least 2 weeks prior to the testing. Emissions testing must be conducted within 30 days of start-up, or 60 days from equipment shipment.

Misuse, abuse, operating outside the stated parameters, and / or water, oil, or hydrocarbons will void the emissions expectation. Schenck Process LLC shall not be held responsible for any failures or excess emissions due to upset operating conditions.

Under no circumstances will Schenck Process LLC be liable or responsible for incidental or consequential damages.

Drew Gormley
Industrial Ventilation Design Engineer
October 2, 2023

Cc:

Baghouse and Fan Technical Specifications

Air Vent Round (AVR/AVRC) Filter

- **Style II without a hopper is ideally suited as a bin vent filter for storage tanks, work bins and surge hoppers**
- **Style III with a 60˚ hopper, the filter receives dust through the hopper inlet and discharges the collected dust through an airlock for dust disposal or recycling**
- **Filter receiver designed to receive product from a vacuum or pressure system and is a bottom bag removal filter**

Application

Designed for heavy dust loads and for vacuum, pressure, and combination vacuum/pressure bulk pneumatic receiving and dust collection systems. Can be configured with an optional receiver. The AVR filter is a circular bodied pulse jet cleaned bag filter unit designed to handle low air volumes and higher pressure applications. It's also suitable for sites with low headroom, since the bottom-load bags are removed from the dirty side of the filter via an access door in the filter body.

The filter housing can be fitted with pleated cartridges (AVRC) to offer higher filtration efficiencies and more filter area.

Equipment

Dust laden air enters the AVR near the bottom of the unit. Rows of filter bags are mounted on a horizontal tubesheet and suspended in the filter housing. A remote fan on the exhaust side draws air through the filter. Filtered dust collects on the outside of the filter media, and falls into the hopper where it can be collected. Filtered air passes through the center of the filter bags and out through the clean air discharge at the top of the unit.

An air pulse cleaning system cleans the filter bags and dislodges filtered product so that it drops into the hopper. The cleaning system includes a compressed air manifold with a diaphragm valve and purge tube assembly centered above each row of filter bags. A pulse of compressed air is periodically directed downwards through the bag. The pulse flexes the filter bag, causing accumulated dust to be dislodged and fall to the hopper below.

The cleaning pulse is controlled by a solid state electronic timer which automatically sequences through the bank of filter bags, one row at a time, energizing a solenoid valve which controls the release of compressed air through the diaphragm valve. The timer can be set to operate at a pre-determined interval.

The pulse can also be controlled by a photohelic differential pressure gauge which responds to pressure differences across the filter. When controlled by the switch/gauge, cleaning occurs only when needed, decreasing air consumption and increasing filter bag life by avoiding unneccessary pulsing.

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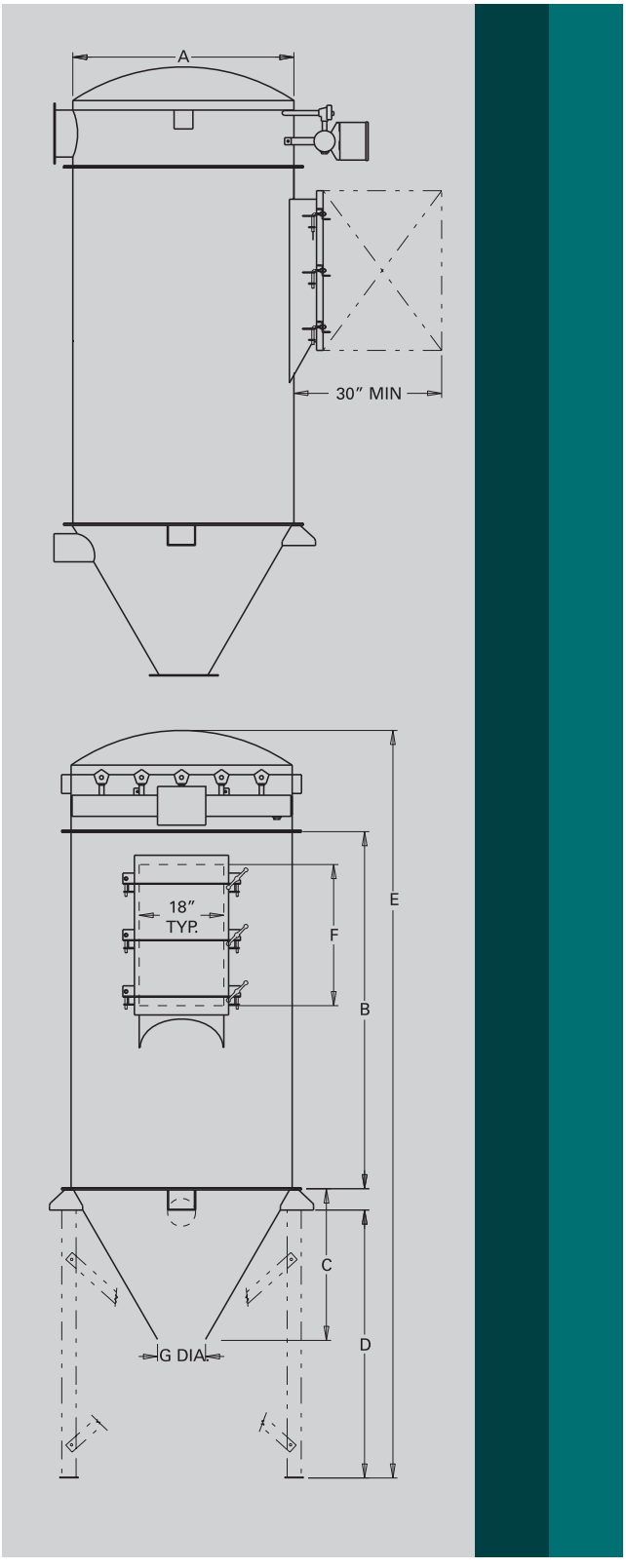
Air Vent Round (AVR/AVRC) Filter Dimensions

Model	Cloth Area (Sq. Ft.)	No. of Bags	Dimensions (inches)						
			A	B	C	D	E	F	G
18AVR7	13	7	28	28	17 9/16	40 3/4	90 3/8	20	8
36AVR7	30	7	28	40	17 9/16	40 3/4	102 3/8	22	8
54AVR7	46	7	28	58	17 9/16	40 3/4	120 3/8	30	8
72AVR7	63	7	28	76	17 9/16	40 3/4	138 3/8	38	8
18AVR14	27	14	40	28	26 1/4	51	104	20	10
36AVR14	60	14	40	40	26 1/4	51	116	22	10
54AVR14	93	14	40	58	26 1/4	51	134	30	10
72AVR14	127	14	40	76	26 1/4	51	152	38	10
96AVR14	172	14	40	100	26 1/4	51	176	48	10
36AVR21	90	21	47	40	32 5/16	57	122 13/16	22	10
54AVR21	140	21	47	58	32 5/16	57	140 13/16	30	10
72AVR21	191	21	47	76	32 5/16	57	158 13/16	38	10
96AVR21	258	21	47	100	32 5/16	57	182 13/16	48	10
54AVR32	214	32	60	58	43 9/16	68 1/4	153 11/16	30	10
72AVR32	291	32	60	76	43 9/16	68 1/4	171 1 1/16	38	10
96AVR32	393	32	60	100	43 9/16	68 1/4	195 11/16	48	10
54AVR39	261	39	66	58	48 3/4	73 1/2	159 13/16	30	10
72AVR39	354	39	66	76	48 3/4	73 1/2	177 13/16	38	10
96AVR39	479	39	66	100	48 3/4	73 1/2	201 13/16	48	10
72AVR52	473	52	72	76	54	78 5/8	183 11/16	38	10
96AVR52	639	52	72	100	54	78 5/8	207 11/16	48	10
72AVR62	564	62	84	76	62 5/8	89 1/4	195 15/16	38	12
96AVR62	761	62	84	100	62 5/8	89 1/4	219 15/16	48	12
72AVR80	728	80	93	76	67	97	204 7/8	38	16
96AVR80	983	80	93	100	67	97	228 7/8	48	16



Compressed air requirements

For most applications, 80 - 100 psi compressed air at the filter header is adequate for the proper cleaning of the filter bags. Pressures between 100 - 120 psi may be appropriate for some critical applications. Operations at pressures over 100 psi should be reviewed with Schenck Process filtration experts for recommendations. Compressed air pressures under 80 psi require special considerations in the design and sizing of the filter and should also be reviewed by Schenck Process.

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MCF PowerSaver® Dust Collector

- **Operates with medium-pressure cleaning air (7-9 psig) (.4-.6 barg)**
- **Total filter area available exceeds 23,000 ft² (2,137 m²)**
- **Cleaning capacities over 250,000 CFM (425,000 m³/h)**
- **Timing mechanism non-electrical – safe in dusty, explosive atmosphere**
- **Good for use in high temperatures 465 ºF (240 °C) and higher**

Application

Engineered for demanding applications:

- Grain milling
- Composite board manufacturing
- Process dust collection
- Chemical processing
- Food processing
- Mining
- Metals processing
- General woodworking
- Coal transfer

Operating Principle

Patented technology combines superior cleaning performance with unequaled savings in energy. Requiring no integrated plant air to function, the MCF PowerSaver generates energy cost-savings of up to 50% over conventional high pressure pulse jet or reverse air cleaning systems.

With over 5,000 man-hours invested in the MCF PowerSaver's development and over 2,500 units installed and in operation – this dust collector continues to demonstrate its dependability around the globe. It's built to handle heavy dust loads and comes in sizes and configurations to fit most industrial air quality applications, from milling to mining.

Longer Bag Life

Precision cleaning by the MCF PowerSaver prevents over-cleaning and maximizes bag life.

Lower Emissions

Medium-pressure pulse complemented by precision cleaning has proven to have much lower emissions than high pressure cleaning filter systems.

Lower Operating Costs

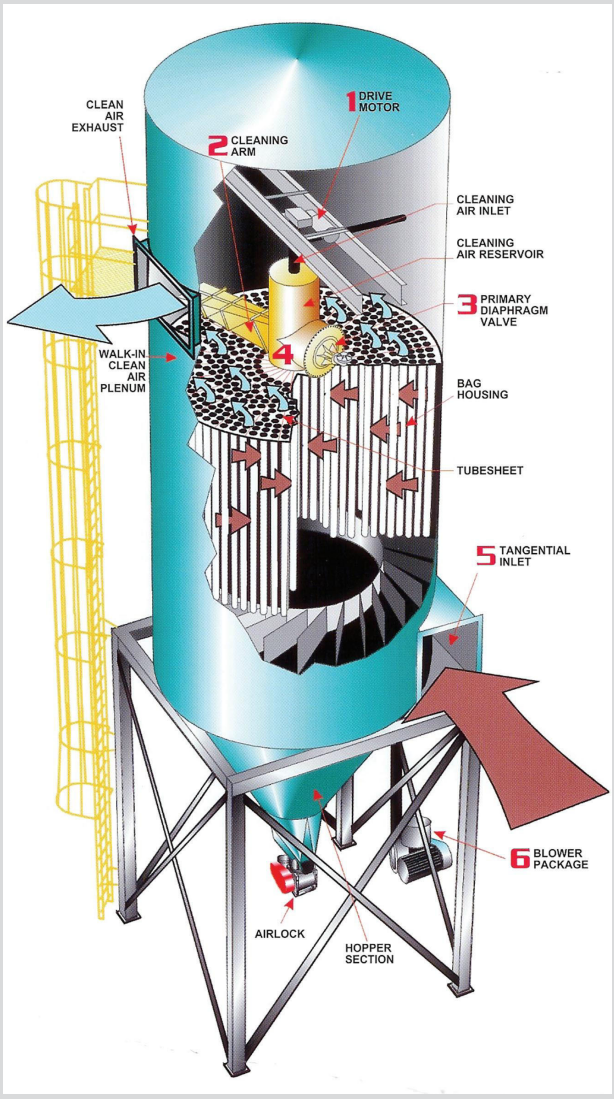
Medium-pressure, high volume air is cheaper to generate than high pressure compressed air systems.

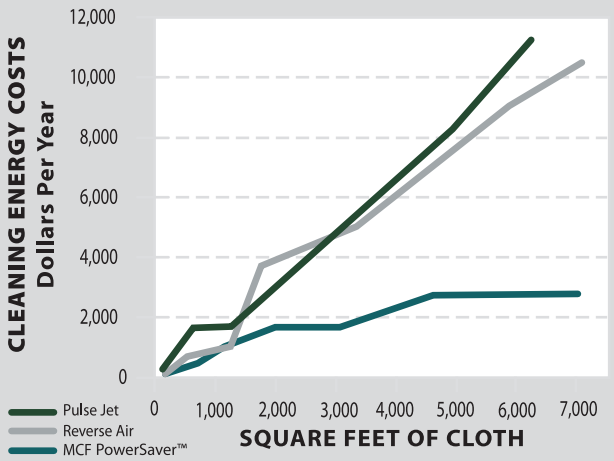
Lower Maintenance Costs

The MCF PowerSaver's "no tool" design bag change-out saves hundreds of hours of installation and maintenance over filter life.

Easy Installation

Where adequate construction space is available, the MCF housing, plenum, and hopper are shipped fully welded to simply lift into vertical position and rest in the support structure.





How the MCF PowerSaver works

1. Main Drive – this rugged explosion proof electric motor is the only electronic component used inside the filter housing. Except for the motor and external air blower package, the MCF is pneumatically operated for safety and reliability.

1. Patented Never-Miss™ Controlled-Cleaning System aligns cleaning arm and bag segments, so that air nozzles fire directly into the bag center. So there's no wasted air. No bleed. None of the wasted energy you pay for on every cycle with conventional random-cleaning and reverse-air systems.

2. Diaphragm Valve Assemblies are located close to the air reservoir and cleaning arm to maintain cleaning pressure and minimize recovery time. These two valves do the work of ten to thirty diaphragm valves and solenoids on conventional pulse-jet filters.

3. MCF Position-Sensing Index Assembly and Cleaning Control keep nozzles properly positioned and air pulses correctly timed for optimum media cleaning. The timing sprocket is laser cut and self-aligning. The Sensing Assembly and Control are direct-drive, mechanically linked components. They have no chains or belts to break, wear out, or go out of adjustment – no electronic circuits to fail. These operate reliably for years in abrasive and corrosive environments – with virtually no maintenance.

4. Tangential Inlet controls heavy dust loads utilizing Vortex Breakers built into the MCF housing, which even out the distribution of particulate-laden air coming from the tangential inlet for improved collection. Vortex Breakers create an area at the center of the housing where the air has no upward velocity and where dust particles cleaned from the bags can flow downward. A Spiral Ridge Plate traps centrifuged particles and drives them into the hopper.

5. Medium-Pressure Blower Package uses a liquid-filled pressure gauge and powers cleaning with 7-9 psig (.4-.6 barg) air for economical operation and longer bag life. Medium-pressure air virtually eliminates cold weather freeze-ups that cause other filters to fail.

Cleaning Energy Costs

Studies indicate that users can meet safety and regulatory requirements for approximately 50% of the cost of running high pressure pulse jet filters. The graph illustrates how much you could save on cleaning energy costs per year using the MCF.

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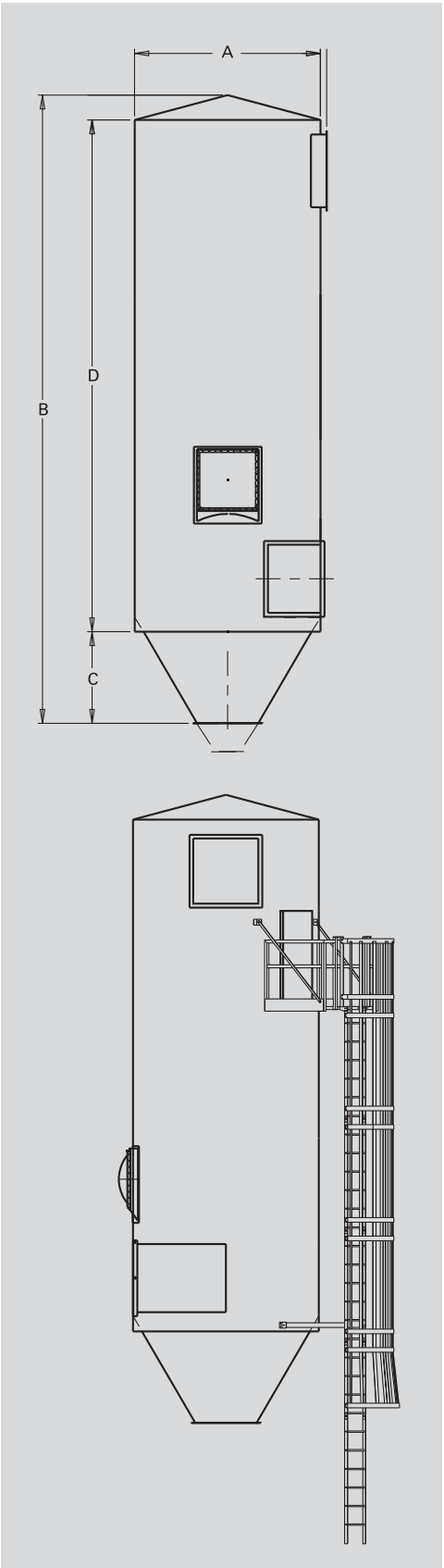
Dimensions



Model	Cloth (Sq. Ft.)	Cloth (Sq. M)	Dimensions				Blower HP (kW)	Weight lbs. (Kg)
			A in. (mm)	B in. (mm)	C in. (mm)	D in. (mm)		
96MCF112	1,070	99		311.9 (7,922)		272.5 (6,922)		6,767 (3,070)
120MCF112	1,341	125	84 (2,134)	356.9 (9,065)	28 (711)	317.5 (8,065)	3 (2.2)	7,476 (3,391)
144MCF112	1,613	150		407.9 (10,361)		368.5 (9,360)		8,261 (3,747)
96MCF153	1,462	136		326.8 (8,301)		275.5 (6,998)		8,040 (3,647)
120MCF153	1,832	170	96 (2,438)	371.8 (9,444)	38.4 (975)	320.5 (8,141)	3 (2.2)	8,886 (4,031)
144MCF153	2,204	205		423.8 (10,765)		372.5 (9,462)		9,834 (4,461)
96MCF204	1,950	181		342.9 (8,710)		279.5 (7,099)	3 (2.2)	9,090 (4,123)
120MCF204	2,443	227	108 (2,743)	388.9 (9,878)	48.8 (1,240)	325.5 (8,268)	5 (3.7)	10,152 (4,605)
144MCF204	2,939	273		440.9 (11,199)		377.5 (9,589)		11,262 (5,108)
96MCF255	2,437	226		359.9 (9,142)		284.5 (7,226)		10,981 (4,981)
120MCF255	3,054	284	120 (3,048)	405.9 (10,310)	59.2 (1,504)	330.5 (8,395)	5 (3.7)	12,146 (5,509)
144MCF255	3,674	341		458.9 (11,656)		383.5 (9,741)		13,443 (6,098)
96MCF306	2,924	272		374.9 (9,523)		287.5 (7,303)		12,136 (5,505)
120MCF306	3,665	341	132 (3,353)	422.9 (10,742)	69.6 (1,768)	335.5 (8,522)	5 (3.7)	13,537 (6,140)
144MCF306	4,409	410		474.9 (12,063)		387.5 (9,843)		15,009 (6,808)
96MCF361	3,451	321		390.9 (9,929)		291.5 (7,404)		14,344 (6,506)
120MCF361	4,324	402	144 (3,658)	438.9 (11,148)	80 (2,032)	339.5 (8,623)	5 (3.7)	15,954 (7,237)
144MCF361	5,202	483		491.9 (12,494)		392.5 (9,970)		17,582 (7,975)
96MCF416	3,976	369		406.8 (10,333)		295.5 (7,506)		19,323 (8,765)
120MCF416	4,983	463	156 (3,962)	454.8 (11,552)	90.3 (2,294)	343.5 (8,725)	5 (3.7)	21,354 (9,686)
144MCF416	5,994	557		505.8 (12,847)		394.5 (10,020)		23,463 (10,643)
96MCF494	4,722	439		422.8 (10,739)		299.5 (7,607)		21,771 (9,875)
120MCF494	5,918	550	168 (4,267)	471.8 (11,984)	100.6 (2,555)	348.5 (8,852)	5 (3.7)	24,143 (10,951)
144MCF494	7,118	661		525.8 (13,355)		402.5 (10,224)		26,581 (12,057)

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MCF Specifications

- Rugged steel construction 10-gauge or heavier
- Walk-in clean air plenum with lifting lugs
- Service door measures 60” x 32” (1,524 mm x 813 mm) for easy access
- Explosion-proof motor powers direct-drive rotating surge tank and distribution arm
- Pneumatically-controlled cleaning mechanism discharges air directly over filter bags
- Topside tool-free cage and snap-band bag removal
- 60-degree hopper with 40” (1,016 mm) diameter flange
- Self-contained positive displacement pump package supplies all required air

MCF Options

- Rotary airlocks sized by application and pollutants
- Live bottom discharge for difficult materials
- 304 or 316 stainless steel construction
- Accessories include: Sprinkler taps, broken bag detector, level probes, hopper access ports and structural supports

Schenck Process Capabilities

- Complete design-build capabilities
- Project management
- Process controls
- State-of-the-art TestCenters
- Explosion protection advice
- Aftermarket care
- Filter media advice
- Schenck Process airlocks and accessories

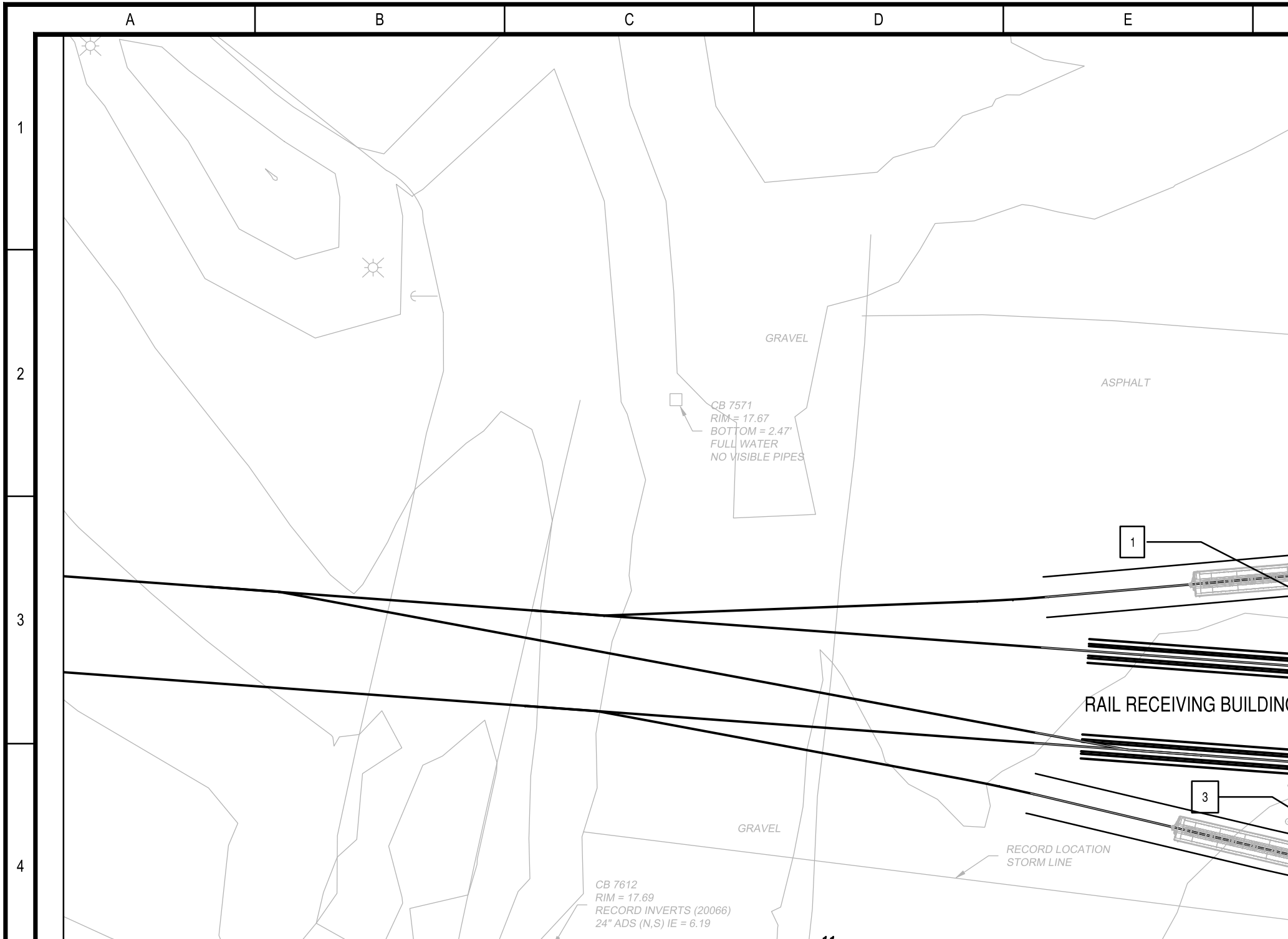
www.schenckprocess.com/contact

Ship loader & Receiving Baghouses:

Fan Model	CFM	HP	TAG #
BCS 402	41,900	200	FA-4017 Pit 3 Receiving Exhaust Fan
RBA 915	5,500	20	FA-4215 Pit 3 Transfer Baghouse Exhaust Fan
BCS 402	41,900	200	FA-4017 Pit 4 Receiving Exhaust Fan
RBA 915	5,500	20	FA-4215 Pit 4 Transfer Baghouse Exhaust Fan

Fan Model	CFM	HP	TAG #
RBO/R 911	1,000	7-1/2	Ship Load #1 Exhaust Fan
RBO/R 911	1,000	7-1/2	Ship Load #2 Exhaust Fan
RBA 915	6,000	25	Ship Loader #1 Exhaust Fan
RBA 915	6,000	25	Ship Loader #2 Exhaust Fan
RBA 915	6,000	25	Ship Loader #3 Exhaust Fan

Site Emissions Plan to Illustrate the Process Flow


A
B
C
D
E
1
2
3
4
GRAVEL
ASPHALT
CB 7571
RIM = 17.67
BOTTOM = 2.47'
FULL WATER
NO VISIBLE PIPES
1
RAIL RECEIVING BUILDIN
3
GRAVEL
RECORD LOCATION
STORM LINE
CB 7612
RIM = 17.69
RECORD INVERTS (20066)
24" ADS (N,S) IE = 6.19

Potential to Emit Calculations

Table A-1
Potential to Emit

Baghouse	Emission Point	Equipment ID	Air Flow	Grain Loading		Conversion Factors		PM Emissions	
			acfm	gr/dscf	gr/min	min/hr	gr/lb	lb/hr	tpy
Pit 3 Receiving	EP-4001	FH-4013	41,900	0.001	41.9	60	7000	0.359	1.573
Pit 3 Transfer	EP-4201	FH-4211	5,500	0.001	5.5	60	7000	0.047	0.206
Pit 4 Receiving	EP-4301	FH-4306	41,900	0.001	41.9	60	7000	0.359	1.573
Pit 4 Transfer	EP-4501	FH-4511	5,500	0.001	5.5	60	7000	0.047	0.206
Shiploader Transfer 1	EP-4601	FH-4605	3,500	0.001	3.5	60	7000	0.030	0.131
Shiploader Transfer 2	EP-4602	FH-4610	3,500	0.001	3.5	60	7000	0.030	0.131
Shiploader West	EP-4701	FH-4703	6,000	0.001	6	60	7000	0.051	0.225
Shiploader Center	EP-4801	FH-4803	6,000	0.001	6	60	7000	0.051	0.225
Shiploader East	EP-4901	FH-4903	6,000	0.001	6	60	7000	0.051	0.225
							All	0.975	4.272

Notes:
Only 2 shiploaders can be operated at once, due to design of the transfer tower. Max hourly emissions represent 2 shiploader baghouses.
acfm: actual cubic feet per minute
gr/dscf: grains per dry standard cubic foot
gr/lb: grains per pound
gr/min: grains per minute
lb/hr: pounds per hour
min/hr: minutes per hour
tpy: tons per year

Modeling Protocol

6720 South Macadam Avenue, Suite 300
Portland, Oregon 97219
503.670.1108

ANCHOR QEA

Memorandum

November 6, 2023

To: Mark Goodin, PE and Aaron Manley, PE, Olympic Regional Clean Air Agency (ORCAA)

From: Josh Bartlett and Chris Moelter, Anchor QEA, LLC

cc: Kelly Jorgensen and Stewart Marker, Ag Processing, Inc (AGP)

Re: Modeling Protocol to Support NOC Application for Ag Processing Facility at Port of Grays Harbor Terminal 4

Introduction

Ag Processing, Inc. (AGP), is proposing construction of a new dry bulk transload facility at Terminal 4B (T4B) at the Port of Grays Harbor (Port). The facility will primarily handle soybean meal, with the potential to handle dry distiller grains. The Port is located on the Pacific coast of Washington state in the cities of Hoquiam and Aberdeen in Grays Harbor County. AGP's proposed emission sources include a new rail receiving building with two receiving pits; a new three-tower shiploader with three spouts at the T4B dock; and several grain handling structures including conveyors, a bulk scale tower, and baghouses. Emissions from all baghouses will be included in the merged stack emissions for the purposes of the ambient impact screening.

Additional non-emitting facilities including landside and dockside motor control centers will be built, and the existing T4 dock will undergo reconstruction to support the shiploader. Existing terminal utilities and lighting systems will be upgraded to serve the new transload facility. AGP's proposed facilities would be a component of the larger Port of Grays Harbor Terminal 4 (T4) Expansion and Redevelopment Project, which includes upgrades to rail, dock, and cargo yard infrastructure to increase rail and shipping capacity at T4 at the Port to accommodate growth of dry bulk, breakbulk, and roll-on/roll-off cargos.

This modeling protocol describes how AGP intends to model emissions in support of a notice of construction (NOC) application for the emission units identified above to the Olympic Region Clean Air Agency (ORCAA). A significant impact level (SIL) screening analysis for PM_{10} and $PM_{2.5}$ (fine particulate matter with particle diameters less than 10 microns or 2.5 microns, respectively) will be conducted using AERSCREEN. If the SIL is exceeded for any of the pollutants, a National Ambient Air Quality Standard (NAAQS) modeling analysis will be conducted using AERMOD. This memorandum serves as AGP's dispersion modeling protocol using recommended screening-level modeling techniques for submittal to ORCAA. This protocol describes the proposed methodologies that will be used in the air dispersion modeling analysis to demonstrate compliance with the applicable 24-hour and annual PM_{10} and $PM_{2.5}$ insignificant impact thresholds established by ORCAA Rule 6.1.4, and NAAQS established by the United States Environmental Protection Agency (EPA).

Modeling Approach

Dispersion modeling will be conducted to demonstrate compliance with SILs for PM_{10} and $PM_{2.5}$. If the SIL screening does not demonstrate compliance for the pollutants, then detailed dispersion modeling will be conducted to demonstrate compliance with NAAQS. Table 1 shows the applicable SILs and NAAQS.

Table 1. SIL and NAAQS Thresholds for Relevant Pollutants

Pollutant	Averaging Period	SIL (µg/m³)	NAAQS (µg/m³)
PM_{10}	Annual	1.0	n/a
	24-hour	5.0	150
$PM_{2.5}$	Annual	0.3	12
	24-Hour	1.2	35

µg/m³: microgram per cubic meter

SIL Screening and Modeling

For the SIL screening analysis, each pollutant will be compared to the SILs in Table 1. Only the emissions associated with AGP's proposed emissions sources will be modeled. Impacts from nearby and other sources, including background concentration, will not be considered in the SIL screening analysis. If the screening results are below the SILs, no further modeling is proposed. If screening results indicate that worst-case conditions will result in an exceedance the SIL, a detailed modeling assessment in AERMOD would be performed to determine project impacts against the SILs. A detailed SIL modeling assessment would use AERMOD to incorporate terrain and meteorological data to more accurately compare ambient impacts from the sources to the SILs. If both SIL screening and SIL modeling results indicate exceedance of the insignificant impact thresholds, a cumulative NAAQS analysis would be required to ensure that the project would not result in a threat to the attainment of ambient air quality standards.

NAAQS Modeling

In a cumulative NAAQS analysis, the scope of the analysis is expanded from the SIL analysis to include impacts from all other sources in the vicinity and background concentrations. All emission sources at the Port would be included in the NAAQS analysis. If a full NAAQS analysis is required, the modeled impacts would be added to background concentrations obtained from the Federal Aviation Administration's Aviation Environmental Design Tool (AEDT); state, regional, and national ambient concentration model results; and nearby facilities.

If NAAQS modeling is necessary, ORCAA would be consulted to confirm the nearby source inventory and what sources need to be included in the NAAQS model. In the case that NAAQS modeling is

required, a cumulative modeling protocol would be provided to ORCAA for approval prior to modeling.

Screening Protocol

This section describes the procedures that will be used to conduct the air dispersion screening analysis.

Model Selection

The latest version of the AERSCREEN model will be used to estimate worst-case maximum ground-level concentrations in the air dispersion analysis. AERSCREEN is a single-source screening version of AERMOD that will produce conservative impact estimates without the need for refined meteorological or detailed terrain data. As a worst-case analysis, AERSCREEN does not incorporate historical meteorological data in its model.

Coordinate System

The location of emission source, structures and receptors will be represented in the Universal Transverse Mercator (UTM) coordinate system using the North American Datum of 1983 (NAD83), Continental U.S. projection. UTM coordinates for this analysis will be based on UTM Zone 10. The location of the AGP project is approximately 5,201,282.7 Northing and 435,894.7 Easting in UTM zone 10.

Terrain Elevations

Terrain elevations for receptors, buildings, and sources are determined using National Elevation Dataset (NED) supplied by the United States Geological Survey. AERSCREEN utilizes the AERMOD[1] preprocessor, AERMAP version 18081, to compute model object elevations from the NED grid spacing. AERMAP also calculates hill height data for all receptors. All data obtained from the NED files will be checked for completeness and spot-checked for accuracy.

Urban/Rural Determination

The Multi-Resolution Land Characteristics Consortium National 2021 Land Cover Database (NLCD) was reviewed to determine whether the site location should be classified as urban or rural. According to 40 *Code of Federal Regulations* (CFR) Part 51 Appendix W, Section 7.2.1.1(b)(i), the land use is classified as "urban" for modeling purposes if more than 50% of the land surface in a 3-kilometer (km) radius circle around the facility is categorized as "developed, high intensity" or "developed, medium intensity." The NLCD2021 data map indicates that only 26% of the land within a 3-km radius of the facility is designated as "developed, high intensity" or "developed, medium

[1] 40 CFR 51, Appendix W–Guideline on Air Quality Models, Appendix A.1– AMS/EPA Regulatory Model (AERMOD)

intensity." Therefore, since less than 50% of the land meets the criteria for the "urban" setting, AERSCREEN's default rural option will be used.

Receptor Grids

AERSCREEN automatically generates a polar-grid receptor network with spacing determined by the maximum distance to model. The receptor grid selected for this analysis extends 3 km from the source. If screening results indicate that significant concentrations may occur beyond 3 km, the receptor grid will be extended. The minimum receptor distance represents the nearest non-Port property relative to the stack. Flagpole receptors are set at a height of 1.5m.

Building Downwash

Turbulent wakes around nearby structures can impact dispersion of emissions from the source. The receiving building and existing warehouse to the east of the proposed facility will be included in the AERSCREEN input to account for downwash.

Source Types and Parameters

Emissions from the baghouses will be represented in the model as a merged stack point source. Stack parameters are summarized in Table 2. The merged stack emission point uses an emission rate equal to the combined emissions of all proposed baghouses. Per EPA screening procedures for stationary sources[2], sources that emit the same pollutant from several stacks with similar parameters that are within about 100 meters of each other may be analyzed by treating all emissions as coming from a single representative stack by selecting a "representative" stack. The representative stack in this case is that of the Pit 4 Receiving Baghouse based on these screening procedures. This baghouse is located next to the identical Pit 3 Receiving Baghouse. Combined, these two baghouses produce 70% of the total point source emissions for the facility.

Table 2. Model Source Parameters

Source	UTM Coordinates (m)	Elevation (ft)	Emission Rate (lb/hr)	Stack Height (ft)	Stack Temperature (F)	Stack Flow Rate (acfm)	Stack Diameter (ft)
Merged Stack EP-4301	435,905.99 E 5,201,276.09 N Zone 10	15.2	0.975[3]	40	Ambient	41,900	3.5

acfm: actual cubic feet per minute
F: Fahrenheit
ft: foot
lb/hr: pound per hour
m: meters

[2] USEPA, 1992. Screening Procedures for Estimating the Air Quality Impact of Stationary Sources, Revised. EPA 454/R-92-019. Available at: https://www.epa.gov/sites/default/files/2020-09/documents/epa-454r-92-019_ocr.pdf.

[3] This hourly emission rate of 0.975 lb/hr includes emissions from both receiving pit baghouses, both transfer baghouses, both shiploader initial conveyor baghouses, and two of three shiploader baghouses (a maximum of two can be operated at any one time). All baghouse emissions are assumed to be PM_{10}.

Model Settings and Assumptions

Table 3 outlines the AERSCREEN settings proposed for use in the screening model.

Table 3. Model Settings and Assumptions

Setting	Assumption	Notes
Rural/Urban	Rural	As discussed above, the surrounding area suggests use of the rural setting.
Building Downwash	On	New receiving building and existing warehouse to the east of facility included
Terrain Impacts	Off	Disabled by default
Surface Characteristics	AERMET Seasonal Tables	Selected Urban, Average Moisture AERMET seasonal tables based on location and normal precipitation
Flagpole Receptors	1.5 m	Per ORCAA requirement
Fumigation Options	Disabled	Disabled by default
Concentration Scaling Factors	AERSCREEN built-in	These scaling factors (0.6 for 24-hour average and 0.1 for annual average) are applied to the maximum 1-hour average concentrations that AERSCREEN outputs directly. These are more conservative than the scaling factors recommended by USEPA 1992[4].
Particle Size Distribution	$PM_{2.5}$ = 37.7% of PM_{10}	This is based on AP-42 Appendix B.2 grain processing particle size distribution. The processes being modeled more closely resemble grain handling than grain processing; however, the commodity itself (soybean meal) is comprised of smaller particles rather than whole grains, so this more conservative distribution is used.
Meteorological Data	Default AERMET settings	AERSCREEN uses AERMET to create generic meteorological files for screening purposes. AERSCREEN defaults will be used in the screening model.

m: meter

[4] USEPA, 1992. Screening Procedures for Estimating the Air Quality Impact of Stationary Sources, Revised. EPA 454/R-92-019. Available at: https://www.epa.gov/sites/default/files/2020-09/documents/epa-454r-92-019_ocr.pdf