WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION

DIVISION OF AIR QUALITY

601 57th Street, SE
Charleston, WV 25304
(304) 926-0475
www.dep.wv.gov/daq

APPLICATION FOR NSR PERMIT AND TITLE V PERMIT REVISION (OPTIONAL)

PLEASE CHECK ALL THAT APPLY TO **NSR (45CSR13)** (IF KNOWN):

☐ **CONSTRUCTION** ☐ **MODIFICATION** ☐ **RELOCATION**
☐ **CLASS I ADMINISTRATIVE UPDATE** ☐ **TEMPORARY**
☒ **CLASS II ADMINISTRATIVE UPDATE** ☐ **AFTER-THE-FACT**

PLEASE CHECK TYPE OF **45CSR30 (TITLE V)** REVISION (IF ANY):

☐ **ADMINISTRATIVE AMENDMENT** ☒ **MINOR MODIFICATION**
☐ **SIGNIFICANT MODIFICATION**

IF ANY BOX ABOVE IS CHECKED, INCLUDE TITLE V REVISION INFORMATION AS **ATTACHMENT S** TO THIS APPLICATION

FOR TITLE V FACILITIES ONLY: Please refer to "Title V Revision Guidance" in order to determine your Title V Revision options (Appendix A, "Title V Permit Revision Flowchart") and ability to operate with the changes requested in this Permit Application.

Section I. General

1. Name of applicant *(as registered with the WV Secretary of State's Office):*
Armstrong Hardwood Flooring Company

2. Federal Employer ID No. ***(FEIN):***
7 5 2 8 8 2 6 4 5

3. Name of facility *(if different from above):*
Beverly Plant

4. The applicant is the:
☐ **OWNER** ☐ **OPERATOR** ☒ **BOTH**

5A. Applicant's mailing address:
P.O. Box 160
Beverly , WV 26253

5B. Facility's present physical address:
Route 250 South
Beverly , WV 26253

6. **West Virginia Business Registration.** Is the applicant a resident of the State of West Virginia? ☒ **YES** ☐ **NO**

- If **YES,** provide a copy of the **Certificate of Incorporation/Organization/Limited Partnership** (one page) including any name change amendments or other Business Registration Certificate as **Attachment A.**
- If **NO,** provide a copy of the **Certificate of Authority/Authority of L.L.C./Registration** (one page) including any name change amendments or other Business Certificate as **Attachment A.**

7. If applicant is a subsidiary corporation, please provide the name of parent corporation:

8. Does the applicant own, lease, have an option to buy or otherwise have control of the *proposed site?* ☒ **YES** ☐ **NO**

- If **YES,** please explain: Owner and operator of the site.
- If **NO,** you are not eligible for a permit for this source.

9. Type of plant or facility (stationary source) to be **constructed, modified, relocated, administratively updated** or **temporarily permitted** (e.g., coal preparation plant, primary crusher, etc.): Hardwood flooring manufacturing plant

10. North American Industry Classification System **(NAICS)** code for the facility:
321918

11A. DAQ Plant ID No. (for existing facilities only):
0 8 3 – 0 0 0 2 5

11B. List all current 45CSR13 and 45CSR30 (Title V) permit numbers associated with this process (for existing facilities only):
R30-08300025-2013 (MM04); R13-1147T

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

12A.

- For **Modifications, Administrative Updates** or **Temporary permits** at an existing facility, please provide directions to the *present location* of the facility from the nearest state road;
- For **Construction** or **Relocation permits,** please provide directions to the *proposed new site location* from the nearest state road. Include a **MAP** as **Attachment B**.

From Charleston, take Interstate 79 North to exit 99. Proceed east on US Route 33 to Elkins, West Virginia. Take US Route 250 South from Elkins to Beverly. The facility is located on the right of and adjacent to US Route 250, approximately 1.6 miles south of Beverly in Randolph County.

12.B. New site address (if applicable):	12C. Nearest city or town: Beverly	12D. County: Randolph
12.E. UTM Northing (KM): 4296.88	12F. UTM Easting (KM): 597.41	12G. UTM Zone:

13. Briefly describe the proposed change(s) at the facility:
Relocation of a scrap grinder, rip saw and two knot saws to be used for resizing scrap for use in the lumber yard. The equipment will exhaust to two Nederman dust collection systems.
Installation of a vacuum coater to replace manual touch up spraying of board.
Installation of a 22 kW natural gas emergency generator for backup power supply.

14A. Provide the date of anticipated installation or change: 12/01/2016 – If this is an **After-The-Fact** permit application, provide the date upon which the proposed change did happen: / /	14B. Date of anticipated Start-Up if a permit is granted: 01/15/2017

14C. Provide a **Schedule** of the planned **Installation** of/**Change** to and **Start-Up** of each of the units proposed in this permit application as **Attachment C** (if more than one unit is involved).

15. Provide maximum projected **Operating Schedule** of activity/activities outlined in this application:
Hours Per Day 24 Days Per Week 7 Weeks Per Year 52

16. Is demolition or physical renovation at an existing facility involved? ☐ **YES** ☒ **NO**

17**. Risk Management Plans.** If this facility is subject to 112(r) of the 1990 CAAA, or will become subject due to proposed changes (for applicability help see www.epa.gov/ceppo), submit your **Risk Management Plan (RMP)** to U. S. EPA Region III.

18**. Regulatory Discussion.** List all Federal and State air pollution control regulations that you believe are applicable to the proposed process *(if known).* A list of possible applicable requirements is also included in Attachment S of this application (Title V Permit Revision Information). Discuss applicability and proposed demonstration(s) of compliance *(if known).* Provide this information as **Attachment D.**

Section II. Additional attachments and supporting documents.

19. Include a check payable to WVDEP – Division of Air Quality with the appropriate **application fee** (per 45CSR22 and 45CSR13).

20. Include a **Table of Contents** as the first page of your application package.

21. Provide a **Plot Plan,** e.g. scaled map(s) and/or sketch(es) showing the location of the property on which the stationary source(s) is or is to be located as **Attachment E** (Refer to ***Plot Plan Guidance***) **.**

– Indicate the location of the nearest occupied structure (e.g. church, school, business, residence).

22. Provide a **Detailed Process Flow Diagram(s)** showing each proposed or modified emissions unit, emission point and control device as **Attachment F.**

23. Provide a **Process Description** as **Attachment G.**

– Also describe and quantify to the extent possible all changes made to the facility since the last permit review (if applicable).

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

24. Provide **Material Safety Data Sheets (MSDS)** for all materials processed, used or produced as **Attachment H.**

– For chemical processes, provide a MSDS for each compound emitted to the air.

25. Fill out the **Emission Units Table** and provide it as **Attachment I.**

26. Fill out the **Emission Points Data Summary Sheet (Table 1 and Table 2)** and provide it as **Attachment J.**

27. Fill out the **Fugitive Emissions Data Summary Sheet** and provide it as **Attachment K.**

28. Check all applicable **Emissions Unit Data Sheets** listed below:

☐ Bulk Liquid Transfer Operations	☐ Haul Road Emissions	☐ Quarry
☐ Chemical Processes	☐ Hot Mix Asphalt Plant	☐ Solid Materials Sizing, Handling and Storage Facilities
☐ Concrete Batch Plant	☐ Incinerator	☐ Storage Tanks
☐ Grey Iron and Steel Foundry	☐ Indirect Heat Exchanger	

☒ General Emission Unit, specify lumber processing equipment

Fill out and provide the **Emissions Unit Data Sheet(s)** as **Attachment L.**

29. Check all applicable **Air Pollution Control Device Sheets** listed below:

☐ Absorption Systems	☐ Baghouse	☐ Flare
☐ Adsorption Systems	☐ Condenser	☐ Mechanical Collector
☐ Afterburner	☐ Electrostatic Precipitator	☐ Wet Collecting System

☒ Other Collectors, specify Dust Collection Systems DC-01 & DC-02

Fill out and provide the **Air Pollution Control Device Sheet(s)** as **Attachment M.**

30. Provide all **Supporting Emissions Calculations** as **Attachment N,** or attach the calculations directly to the forms listed in Items 28 through 31.

31. **Monitoring, Recordkeeping, Reporting and Testing Plans.** Attach proposed monitoring, recordkeeping, reporting and testing plans in order to demonstrate compliance with the proposed emissions limits and operating parameters in this permit application. Provide this information as **Attachment O.**

➢ Please be aware that all permits must be practically enforceable whether or not the applicant chooses to propose such measures. Additionally, the DAQ may not be able to accept all measures proposed by the applicant. If none of these plans are proposed by the applicant, DAQ will develop such plans and include them in the permit.

32. **Public Notice.** At the time that the application is submitted, place a **Class I Legal Advertisement** in a newspaper of general circulation in the area where the source is or will be located (See 45CSR§13-8.3 through 45CSR§13-8.5 and ***Example Legal Advertisement*** for details). Please submit the **Affidavit of Publication** as **Attachment P** immediately upon receipt.

33**. Business Confidentiality Claims.** Does this application include confidential information (per 45CSR31)?

☐ **YES** ☒ **NO**

➢ If **YES,** identify each segment of information on each page that is submitted as confidential and provide justification for each segment claimed confidential, including the criteria under 45CSR§31-4.1, and in accordance with the DAQ's *"**Precautionary Notice – Claims of Confidentiality"*** guidance found in the ***General Instructions*** as **Attachment Q.**

Section III. Certification of Information

34. **Authority/Delegation of Authority.** Only required when someone other than the responsible official signs the application. Check applicable **Authority Form** below:

☐ Authority of Corporation or Other Business Entity	☐ Authority of Partnership
☐ Authority of Governmental Agency	☐ Authority of Limited Partnership

Submit completed and signed **Authority Form** as **Attachment R.**

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

35A. **Certification of Information.** To certify this permit application, a Responsible Official (per 45CSR§13-2.22 and 45CSR§30-2.28) or Authorized Representative shall check the appropriate box and sign below.

Certification of Truth, Accuracy, and Completeness

I, the undersigned ☒ **Responsible Official** / ☐ **Authorized Representative,** hereby certify that all information contained in this application and any supporting documents appended hereto, is true, accurate, and complete based on information and belief after reasonable inquiry I further agree to assume responsibility for the construction, modification and/or relocation and operation of the stationary source described herein in accordance with this application and any amendments thereto, as well as the Department of Environmental Protection, Division of Air Quality permit issued in accordance with this application, along with all applicable rules and regulations of the West Virginia Division of Air Quality and W.Va. Code § 22-5-1 et seq. (State Air Pollution Control Act). If the business or agency changes its Responsible Official or Authorized Representative, the Director of the Division of Air Quality will be notified in writing within 30 days of the official change.

Compliance Certification

Except for requirements identified in the Title V Application for which compliance is not achieved, I, the undersigned hereby certify that, based on information and belief formed after reasonable inquiry, all air contaminant sources identified in this application are in compliance with all applicable requirements.

SIGNATURE _____ DATE: 11/10/16

(Please use blue ink) *(Please use blue ink)*

35B. Printed name of signee: Steven Bullock		35C. Title: Plant Manager
35D. E-mail: SABullock@armstrong.com	36E. Phone: 304-338-7629	36F. FAX: 304-338-4124
36A. Printed name of contact person (if different from above): Jeff Arbogast		36B. Title: Safety Manager
36C. E-mail: JArbogast@armstrong.com	36D. Phone: 304-338-7729	36E. FAX: 304-338-4105

PLEASE CHECK ALL APPLICABLE ATTACHMENTS INCLUDED WITH THIS PERMIT APPLICATION:

- ☒ **Attachment A: Business Certificate**
- ☐ **Attachment B: Map(s)**
- ☐ **Attachment C: Installation and Start Up Schedule**
- ☒ **Attachment D: Regulatory Discussion**
- ☐ **Attachment E: Plot Plan**
- ☒ **Attachment F: Detailed Process Flow Diagram(s)**
- ☒ **Attachment G: Process Description**
- ☐ **Attachment H: Material Safety Data Sheets (MSDS)**
- ☒ **Attachment I: Emission Units Table**
- ☐ **Attachment J: Emission Points Data Summary Sheet**
- ☐ **Attachment K: Fugitive Emissions Data Summary Sheet**
- ☒ **Attachment L: Emissions Unit Data Sheet(s)**
- ☒ **Attachment M: Air Pollution Control Device Sheet(s)**
- ☒ **Attachment N: Supporting Emissions Calculations**
- ☒ **Attachment O: Monitoring/Recordkeeping/Reporting/Testing Plans**
- ☐ **Attachment P: Public Notice**
- ☐ **Attachment Q: Business Confidential Claims**
- ☐ **Attachment R: Authority Forms**
- ☒ **Attachment S: Title V Permit Revision Information**
- ☒ **Application Fee**

Please mail an original and three (3) copies of the complete permit application with the signature(s) to the DAQ, Permitting Section, at the address listed on the first page of this application. Please DO NOT fax permit applications.

FOR AGENCY USE ONLY – IF THIS IS A TITLE V SOURCE:

- ☐ ***Forward 1 copy of the application to the Title V Permitting Group and:***
- ☐ ***For Title V Administrative Amendments:***
  - ☐ ***NSR permit writer should notify Title V permit writer of draft permit,***
- ☐ ***For Title V Minor Modifications:***
  - ☐ ***Title V permit writer should send appropriate notification to EPA and affected states within 5 days of receipt,***
  - ☐ ***NSR permit writer should notify Title V permit writer of draft permit.***
- ☐ ***For Title V Significant Modifications processed in parallel with NSR Permit revision:***
  - ☐ ***NSR permit writer should notify a Title V permit writer of draft permit,***
  - ☐ ***Public notice should reference both 45CSR13 and Title V permits,***
  - ☐ ***EPA has 45 day review period of a draft permit.***

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

ATTACHMENT A
CERTIFICATE OF BUSINESS REGISTRATION

WEST VIRGINIA
STATE TAX DEPARTMENT

BUSINESS REGISTRATION CERTIFICATE

ISSUED TO:
ARMSTRONG HARDWOOD FLOORING COMPANY
DBA TIMBERLAND WOOD FLOORS
16803 DALLAS PKWY STE 200
ADDISON, TX 75001-5220

BUSINESS REGISTRATION ACCOUNT NUMBER: 1050-1395

This certificate is issued on: 07/7/2010

This certificate is issued by
the West Virginia State Tax Commissioner
in accordance with Chapter 11, Article 12, of the West Virginia Code

The person or organization identified on this certificate is registered to conduct business in the State of West Virginia at the location above.

This certificate is not transferrable and must be displayed at the location for which issued.

This certificate shall be permanent until cessation of the business for which the certificate of registration was granted or until it is suspended, revoked or cancelled by the Tax Commissioner.

Change in name or change of location shall be considered a cessation of the business and a new certificate shall be required.

TRAVELING/STREET VENDORS: Must carry a copy of this certificate in every vehicle operated by them. CONTRACTORS, DRILLING OPERATORS, TIMBER/LOGGING OPERATIONS: Must have a copy of this certificate displayed at every job site within West Virginia.

atL006 v.2
L1103002368

ATTACHMENT D
REGULATORY DISCUSSION & APPLICABILITY REVIEW

ATTACHMENT D: REGULATORY DISCUSSION AND APPLICABILITY REVIEW

The proposed project includes the repurposing of a scrap grinder, rip saw and two knot saws which were previously permitted as part of the Flooring Mill in a December 2015 permit application. The scrap grinder and saws will be used to resize and recover scrap wood for use in the lumber yard and will exhaust to two Nederman dust collection systems which will collect wood chips and saw dust to be used as hog fuel in the boilers or will be sold as useful material for animal bedding or other beneficial product. Each system will be equipped with two integrated layer polyester bag filters rated at 100% capture efficiency and 99.9% control efficiency for PM, PM-10, and PM-2.5.

In addition, a vacuum coater will be installed to replace the manual spraying necessary to touch up variations in the wood surface. This change is expected to increase application efficiency, thereby decreasing coating consumption and actual VOC emissions from the Visually Distressed Flooring Lines. However, the operation is subject to a VOC emissions limit of 5.1 tons per year. No changes are being requested to this limit. Therefore, potential VOC emissions from the Flooring Lines will not be affected by any of the proposed changes to the site.

Lastly, a 22 kW natural gas-fired emergency generator will be installed to supply backup power supply for emergency lighting and other critical plant operations. The engine is subject to 40 CFR 63 Subpart ZZZZ, National Emissions Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines. Compliance with the NESHAP is demonstrated by meeting the requirements of 40 CFR 60 Subpart JJJJ, Standards of Performance for Stationary Spark Ignition Internal Combustion Engines. As an emergency stationary SI ICE with a maximum engine power greater than 19 kW (25 hp) manufactured after January 1, 2009, the engine must comply with emissions standards listed in Table 1 to 40 CFR 60 Subpart JJJJ as follows:

Engine Type and Fuel	Maximum Engine Power	Emissions Standards g/HP-hr	
		NOx + HC	CO
Emergency Natural Gas Spark Ignition (SI) Internal Combustion (IC) Engine	25<HP<130	10	387

For all engines manufactured on or after January 1, 2011 with a maximum engine power greater than 25 HP and less than 130 HP manufactured on or after July 1, 2008, a stationary SI engine manufacturer that certifies an engine family solely to the standards applicable to emergency engines must add a permanent label stating that the engines in that family are for emergency use only. The label must be added according to the labeling requirements specified in 40 CFR 1048.135(b).

In order for the engine to be considered an emergency [1]stationary ICE, the engine must be operated only for emergency purposes and maintenance and testing of the engine as defined in §60.4248. There is no time limit on the use of emergency stationary ICE in emergency situations and a maximum of 100 hours per calendar year for maintenance checks and readiness testing. This engine will not be operated for non-emergency situations and will not fire any backup fuels.

[1] *For Reference Per §60.4248:*

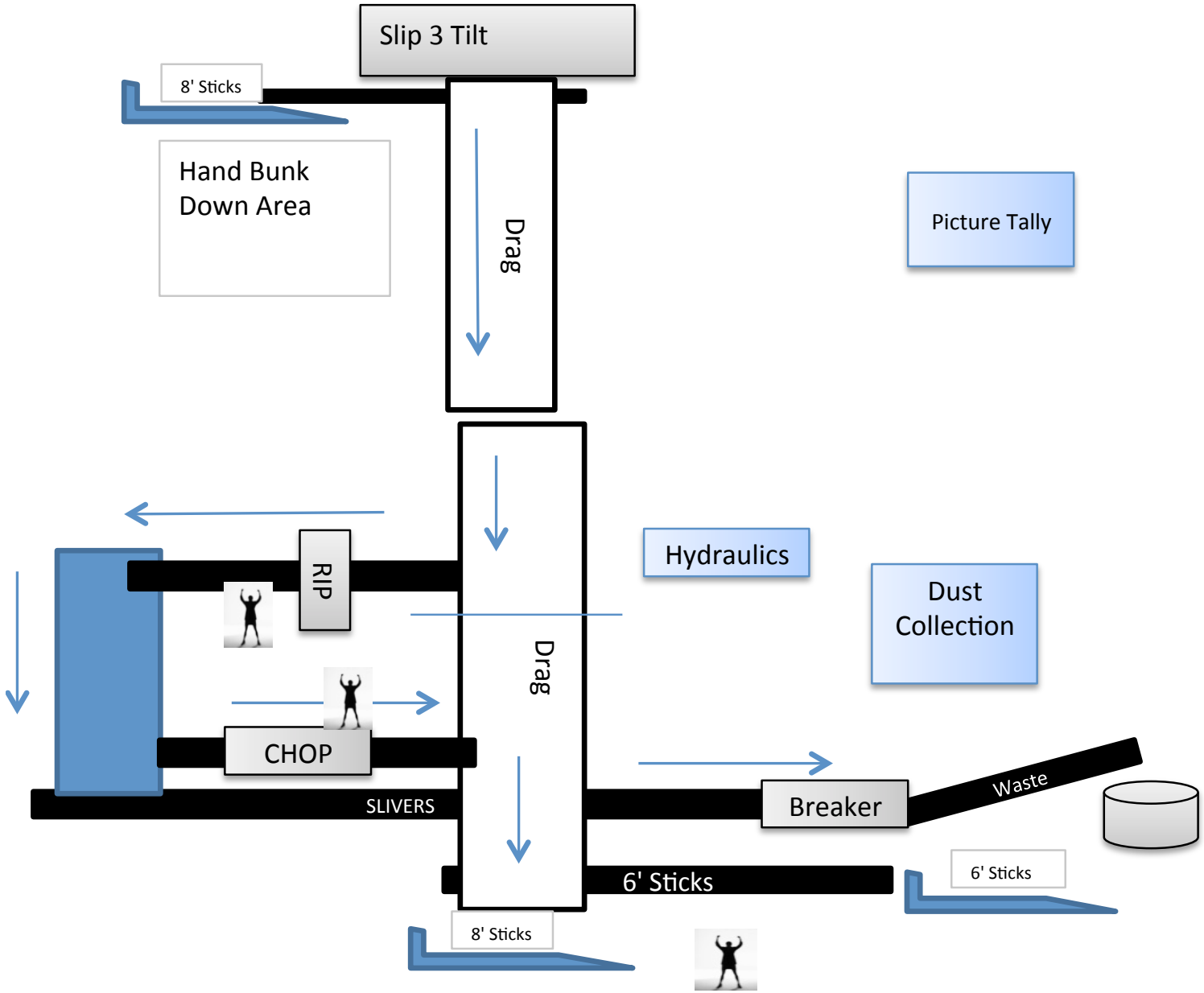
Emergency stationary internal combustion engine means any stationary reciprocating internal combustion engine that meets all of the criteria in paragraphs (1) through (3) of this definition. All emergency stationary ICE must comply with the requirements specified in §60.4243(d) in order to be considered emergency stationary ICE. If the engine does not comply with the requirements specified in §60.4243(d), then it is not considered to be an emergency stationary ICE under this subpart.

(1) The stationary ICE is operated to provide electrical power or mechanical work during an emergency situation. Examples include stationary ICE used to produce power for critical networks or equipment (including power supplied to portions of a facility) when electric power from the local utility (or the normal power source, if the facility runs on its own power production) is interrupted, or stationary ICE used to pump water in the case of fire or flood, etc.

(2) The stationary ICE is operated under limited circumstances for situations not included in paragraph (1) of this definition, as specified in §60.4243(d).

(3) The stationary ICE operates as part of a financial arrangement with another entity in situations not included in paragraph (1) of this definition only as allowed in §60.4243(d)(2)(ii) or (iii) and §60.4243(d)(3)(i).

ATTACHMENT F
PROCESS FLOW DIAGRAM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8' Sticks
Hand Bunk
Down Area
Drag
Picture Tally
RIP
Hydraulics
Dust
Collection
Drag
CHOP
SLIVERS
Breaker
Waste
6' Sticks
6' Sticks
8' Sticks

ATTACHMENT G
PROCESS DESCRIPTION

ATTACHMENT G: PROCESS DESCRIPTION

Overall Facility Process Description:

Green lumber is purchased and stacked in the Mill Yard to facilitate air drying of the lumber. The lumber is then further dried in the steam heated pre-dryer and/or one of 38 lumber kilns. Kiln-dried lumber is transferred by one of three lumber tilts to the Mill rough end saws. The rough end saws cut the lumber into strips for transfer to one of six lines of knot saws, side matchers, and end matchers. The unfinished wood flooring is graded, stacked and either stored or transferred to one of two finishing lines. Finished hardwood flooring is graded and packaged for shipment to mill customers. Two wood-fired boilers provide heat and steam to the plant.

Flooring Mill:

The Flooring Mill consists of six (6) lines where cutting, planing, and edging operations are performed to convert kiln-dried hardwood lumber into unfinished hardwood flooring. The kiln-dried lumber is fed to the rough end for preliminary sorting, cutting, and sizing and then to one of the six processing lines. The Flooring Mill also includes several hogs, three hogged fuel silos, and two truck loadouts for hogged fuel.

The enclosed application is for the repurposing of a scrap grinder, rip saw and two knot saws which were previously permitted as part of the Flooring Mill in a December 2015 permit application. The scrap grinder and saws will be used to resize scrap wood for use in the lumber yard and will exhaust to two Nederman dust collection systems which will collect wood chips and saw dust to be used as hog fuel in the boilers or will be sold as useful material for animal bedding or other beneficial product.

A vacuum coater will also be installed to replace manual coating application used touch up coating due to variations in the wood.

A 22 kW natural gas emergency generator is also being installed to provide backup power supply for emergency lighting and other critical plant operations.

One administrative change is also being requested with this application. Upon further review of the recently issued Title V Permit, R30-08300025-2013 (MM04), it was discovered that the new boiler was assigned a duplicate Emissions Point ID (S31). To avoid confusion, a revision of the ID to S34 is being requested for the natural gas-fired boiler (Emission Unit ID 001-04).

ATTACHMENT I
EMISSION UNITS TABLE

Attachment I

Emission Units Table

(includes all emission units and air pollution control devices that will be part of this permit application review, regardless of permitting status)

Emission Unit ID[1]	Emission Point ID[2]	Emission Unit Description	Year Installed/ Modified	Design Capacity	Type[3] and Date of Change	Control Device[4]
004-01	FUG	Yard Operations - Scrap Recovery	2017	6,640 ft^2/hr	New	Dust Collection System DC-01 & DC-02
003-02	S33	Visually Distressed Finishing Line - Vacuum Coater	2017	3,620 ft^2/hr	Modification	N/A
005-01	S35	22 kW Natural Gas Emergency Generator	2017	22 kW	New	N/A
001-04	S34	Natural Gas-Fired Boiler	2016	33.5 MMBtu/hr	Revised Emission Point ID	N/A

[1] For Emission Units (or Sources) use the following numbering system:1S, 2S, 3S,... or other appropriate designation.
[2] For Emission Points use the following numbering system:1E, 2E, 3E, ... or other appropriate designation.
[3] New, modification, removal
[4] For Control Devices use the following numbering system: 1C, 2C, 3C,... or other appropriate designation.

EPS

ATTACHMENT L
EMISSION UNIT DATA SHEET

Attachment L
EMISSIONS UNIT DATA SHEET
GENERAL

To be used for affected sources other than asphalt plants, foundries, incinerators, indirect heat exchangers, and quarries.

Identification Number (as assigned on *Equipment List Form*): 004-01

1. Name or type and model of proposed affected source: Yard Operations - Scrap recovery system consisting of scrap grinder, rip saws, and knot saws.
2. On a separate sheet(s), furnish a sketch(es) of this affected source. If a modification is to be made to this source, clearly indicated the change(s). Provide a narrative description of all features of the affected source which may affect the production of air pollutants.
3. Name(s) and maximum amount of proposed process material(s) charged per hour: Scrap Wood: 6,640 ft^2 per hour; 35,000 ft^2 per shift
4. Name(s) and maximum amount of proposed material(s) produced per hour: Wood Chips
5. Give chemical reactions, if applicable, that will be involved in the generation of air pollutants: None

* The identification number which appears here must correspond to the air pollution control device identification number appearing on the *List Form*.

6. Combustion Data (if applicable):

(a) Type and amount in appropriate units of fuel(s) to be burned:

None

(b) Chemical analysis of proposed fuel(s), excluding coal, including maximum percent sulfur and ash:

N/A

(c) Theoretical combustion air requirement (ACF/unit of fuel):

N/A @ °F and psia.

(d) Percent excess air: N/A

(e) Type and BTU/hr of burners and all other firing equipment planned to be used:

N/A

(f) If coal is proposed as a source of fuel, identify supplier and seams and give sizing of the coal as it will be fired:

N/A

(g) Proposed maximum design heat input: N/A × 10^6 BTU/hr.

7. Projected operating schedule:

Hours/Day < 8	Days/Week < 6	Weeks/Year < 50

8. Projected amount of pollutants that would be emitted from this affected source if no control devices were used:

@ °F and psia

a.	NO_X		lb/hr		grains/ACF
b.	SO_2		lb/hr		grains/ACF
c.	CO		lb/hr		grains/ACF
d.	PM_{10}	60	lb/hr	2.0	grains/ACF
e.	Hydrocarbons		lb/hr		grains/ACF
f.	VOCs		lb/hr		grains/ACF
g.	Pb		lb/hr		grains/ACF
h.	Specify other(s)				
			lb/hr		grains/ACF
			lb/hr		grains/ACF
			lb/hr		grains/ACF
			lb/hr		grains/ACF

NOTE: (1) An Air Pollution Control Device Sheet must be completed for any air pollution device(s) used to control emissions from this affected source.

(2) Complete the Emission Points Data Sheet.

9. Proposed Monitoring, Recordkeeping, Reporting, and Testing
Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING	RECORDKEEPING
Visible Emission Checks from Dust Collectors DC-01 and DC-02 \ Monthly Pressure Drop Across Filters \ Monthly	Visible Emissions \ Monthly Log Filter Media Pressure Drop \ Monthly Log
REPORTING	TESTING
None	None

MONITORING. PLEASE LIST AND DESCRIBE THE PROCESS PARAMETERS AND RANGES THAT ARE PROPOSED TO BE MONITORED IN ORDER TO DEMONSTRATE COMPLIANCE WITH THE OPERATION OF THIS PROCESS EQUIPMENT OPERATION/AIR POLLUTION CONTROL DEVICE.

RECORDKEEPING. PLEASE DESCRIBE THE PROPOSED RECORDKEEPING THAT WILL ACCOMPANY THE MONITORING.

REPORTING. PLEASE DESCRIBE THE PROPOSED FREQUENCY OF REPORTING OF THE RECORDKEEPING.

TESTING. PLEASE DESCRIBE ANY PROPOSED EMISSIONS TESTING FOR THIS PROCESS EQUIPMENT/AIR POLLUTION CONTROL DEVICE.

10. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty

Volumetric Air Flow: + or – 7% of Design Air Flow

ATTACHMENT M
AIR POLLUTION CONTROL DEVICE SHEET

Attachment M
Air Pollution Control Device Sheet
(OTHER COLLECTORS)

Control Device ID No. (must match Emission Units Table): Dust Collection Systems DC-01 and DC-02

Equipment Information

1. Manufacturer: Nederman Model No. S-750 & S-1000	2. Control Device Name: DC-01 and DC-02 Type: Bag Media Type \ Manual Cleaning
3. Provide diagram(s) of unit describing capture system with duct arrangement and size of duct, air volume, capacity, horsepower of movers. If applicable, state hood face velocity and hood collection efficiency. See Unit Specifications: Exhibit #2	
4. On a separate sheet(s) supply all data and calculations used in selecting or designing this collection device.	
5. Provide a scale diagram of the control device showing internal construction. See General Arrangement: Exhibit #3	
6. Submit a schematic and diagram with dimensions and flow rates. See Unit Specifications: Exhibit #2	
7. Guaranteed minimum collection efficiency for each pollutant collected: Particulate Matter: 100 %	
8. Attached efficiency curve and/or other efficiency information. See Exhibit #1	
9. Design inlet volume: DC-01 = 3,500 SCFM DC-02 = 5,000 SCFM	10. Capacity: DC-01 = 3,500 SCFM DC-02 = 5,000 SCFM
11. Indicate the liquid flow rate and describe equipment provided to measure pressure drop and flow rate, if any. None	
12. Attach any additional data including auxiliary equipment and operation details to thoroughly evaluate the control equipment.	
13. Description of method of handling the collected material(s) for reuse of disposal. Wood waste is filtered out by (24) Beane material filter bags and drops into (3) 40-gallon clear bags to be used as hog fuel or sold as animal bedding or other beneficial product.	

Gas Stream Characteristics

14. Are halogenated organics present?	☐ Yes	☒ No
Are particulates present?	☒ Yes	☐ No
Are metals present?	☐ Yes	☒ No

15. Inlet Emission stream parameters:	**Maximum**	**Typical**
Pressure (mmHg):	+ 3.68	+ 1.84
Heat Content (BTU/scf):	NA	NA
Oxygen Content (%):	Ambient	Ambient
Moisture Content (%):	< 15	< 10
Relative Humidity (%):	60	40

16. Type of pollutant(s) controlled: ☐ SO_x ☐ Odor
☒ Particulate (type): Wood dust ☐ Other

17. Inlet gas velocity: 3,500 ft/sec

18. Pollutant specific gravity: 0.3

19. Gas flow into the collector:
DC-01 3,500 ACF @ 70 °F
DC-02 5,000 ACF @ 70 °F

20. Gas stream temperature:
Inlet: Ambient °F
Outlet: Ambient °F

21. Gas flow rate:
Design Maximum:
DC-01: 3,500 ACFM DC-02: 5,000 ACFM
Average Expected: same ACFM

22. Particulate Grain Loading in grains/scf:
Inlet: 2.0
Outlet: 0.00044

23. Emission rate of each pollutant (specify) into and out of collector:

Pollutant	IN Pollutant		Emission Capture Efficiency %	OUT Pollutant		Control Efficiency %
	lb/hr	grains/acf		lb/hr	grains/acf	
A DC-01 Particulate Matter	60	2.0	100	0.0132	0.00044	99.9
B DC-02 Particulate Matter	86	2.0	100	0.0189	0.00044	99.9
C						
D						
E						

24. Dimensions of stack: Height N/A ft. Diameter N/A ft.

25. Supply a curve showing proposed collection efficiency versus gas volume from 25 to 130 percent of design rating of collector.

Particulate Distribution

26. Complete the table: Particulate Size Range (microns)	Particle Size Distribution at Inlet to Collector: Weight % for Size Range	Fraction Efficiency of Collector: Weight % for Size Range
0 – 2		
2 – 4		
4 – 6		
6 – 8		
8 – 10		
10 – 12	2	99.9
12 – 16		99.9
16 – 20		99.9
20 – 30		99.9
30 – 40		99.9
40 – 50		99.9
50 – 60		99.9
60 – 70		99.9
70 – 80		99.9
80 – 90		99.9
90 – 100		99.9
>100	98	99.99

27. Describe any air pollution control device inlet and outlet gas conditioning processes (e.g., gas cooling, gas reheating, gas humidification):
None

28. Describe the collection material disposal system:
Wood waste is filtered out by (24) Beane material filter bags and drops into (3) 40-gallon clear bags to be used as hog fuel or sold as animal bedding or other beneficial product.

29. Have you included ***Other Collectores Control Device*** in the Emissions Points Data Summary Sheet?

30. **Proposed Monitoring, Recordkeeping, Reporting, and Testing**
Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING: Visible Emission Checks \ Monthly Pressure Drop Across Filters \ Monthly	RECORDKEEPING: Visible Emissions \ Monthly Log Filter Media Pressure Drop \ Monthly Log
REPORTING: None	TESTING: None

MONITORING:	Please list and describe the process parameters and ranges that are proposed to be monitored in order to demonstrate compliance with the operation of this process equipment or air control device.
RECORDKEEPING:	Please describe the proposed recordkeeping that will accompany the monitoring.
REPORTING:	Please describe any proposed emissions testing for this process equipment on air pollution control device.
TESTING:	Please describe any proposed emissions testing for this process equipment on air pollution control device.

31. Manufacturer's Guaranteed Control Efficiency for each air pollutant.
See Exhibit #1

32. Manufacturer's Guaranteed Control Efficiency for each air pollutant.

33. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty.
Volumetric Air Flow: + or – 7% of Design Air Flow

ATTACHMENT M
EXHIBIT 1

Date: 11/02/16

For the attention of: Authority Having Jurisdiction

Reference: Exhibit #1 Filtration Efficiency of XT3 Media in S Series Filter Units

Dear Sir \ Madam,

Based on tests from similar woodworking applications, the particulate emissions from the S Series Filter Unit will be below 0.00044 grains per standard cubic foot. Also, I have included the test results performed by a third party on the filtration efficiency of the XT3 Woven Polyester Filter Media with carbon grounding strand. The below calculation concludes the efficiency of the filter media is above 99.9% by weight with an inlet load of 2 grains per standard cubic foot.

Dust Concentration Inlet \ PM Load Inlet =	2.0 grains per standard cubic foot
Dust Concentration Outlet \ PM Load Outlet =	0.00044 grains per standard cubic foot
DC-1 Total Volumetric Air Flow =	3,500 cubic feet per minute

Filtration Efficiency (%) by Weight = (1 - Dust Concentration Outlet (grains per standard cubic foot = gr/scf / Dust Concentration Inlet (gr/scf))
= 1 - 0.00044 g/scf divided by 2.0 gr/scf = 99.9 %

Inlet Dust Load Rate = Dust Concentration Inlet (grains per dry standard cubic foot = gr/dscf) times Total Volumetric Air Flow(standard cubic foot per minute = SCFM)
= 2.0 Grains x 1 lb /7,000 grains x 3,500 SCFM x 60 min / 1 hr = 60 lb per hour

Outlet Dust Load Rate = Dust Concentration Outlet (grains per dry standard cubic foot = gr/dscf) times Total Volumetric Air Flow(standard cubic foot per minute = SCFM)
= 0.00044 Grains x 1 lb /7,000 grains x 3,500 SCFM x 60 min / 1 hr = 0.0132 lb per hour

Please call with any questions.

Best regards,

Sincerely,

Robert E. Williamson

Nederman, LLC.
Robert Williamson, Technical Services Manager

Office: 336.821.0823

Nederman Technical Solution:

S-Series Filter Unit: XT3 Woven Polyester Filter Media:

The filter media selected for this application is a “continuously woven bag design” with manual cleaning. The patented XT3 Superbag is suitable for a fibrous wood waste and dust applications because it has micro-edges to assist in the release of the dust cake and a carbon fiber to ground the filter media to the metal housing.

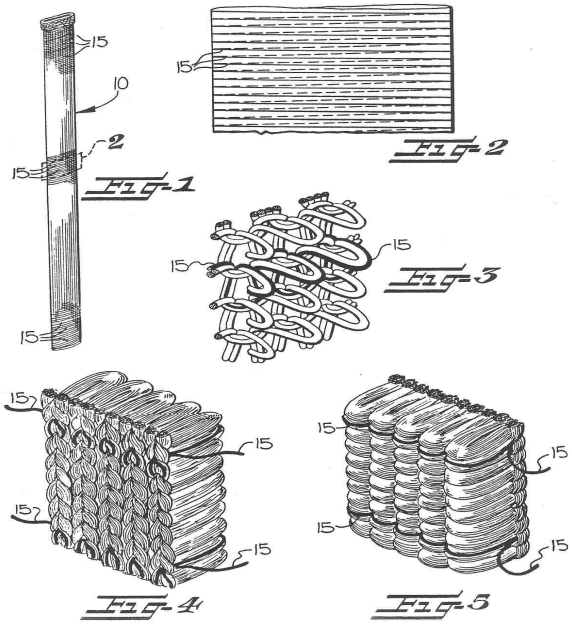


Exhibit #1

Exhibit #2

Filter/Collector Emission Test:

Application: Wood Processing

Dust: Mixture of typical dry wood, shavings, chips and dust

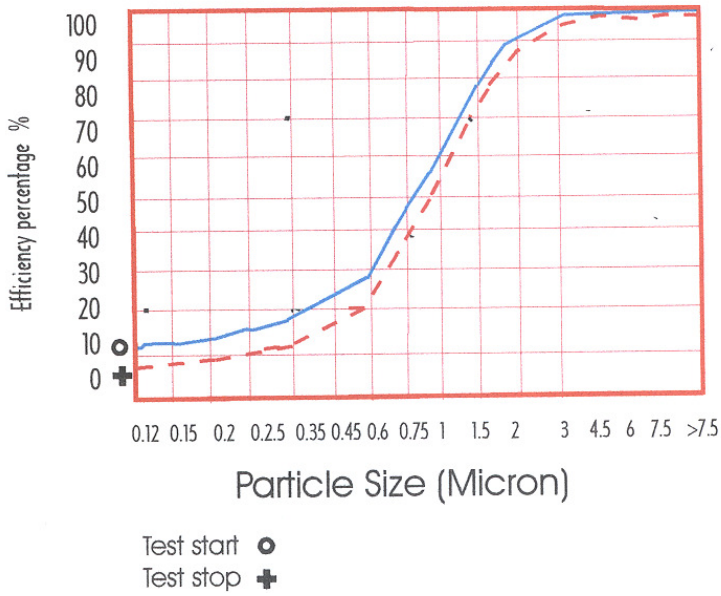
Filter model: S Series \ NF Series

Emission rate: (measured at the clean air exhaust outlet): 1 mg / m^3

Filter Media Efficiency Test:

Filter Type: XT3 Filter Media

Filter Specification: 16 Ounce Woven Polyester(100 %) with Beane Type Construction



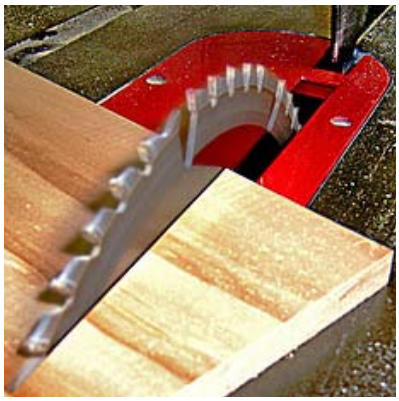
Values are dependent upon the following factors:

- Type of dust
- Density of material
- Particle size
- Dust collector design

ATTACHMENT M
EXHIBIT 2

Click to go to the page

Nederman



S-Series
Bag Filter

The S-Series (1,500-5,000 CFM)

Suitable for collection of many different types of dust including wood, paper and plastic.

Applications:

High Speed Routing • Sawing • Cutting • Single 'Cell' Manufacturing • After-Filters

Features

- *Three or single phase*
- *Easy installation*
- *Small footprint*
- *Multiple U.S. assembly points*
- *Quiet operation*
- *Bag material collection (barrel or bin option)*
- *Patented SuperBags (99.9% efficiency)*
- *Multiple waste collection options*

The Nederman Difference

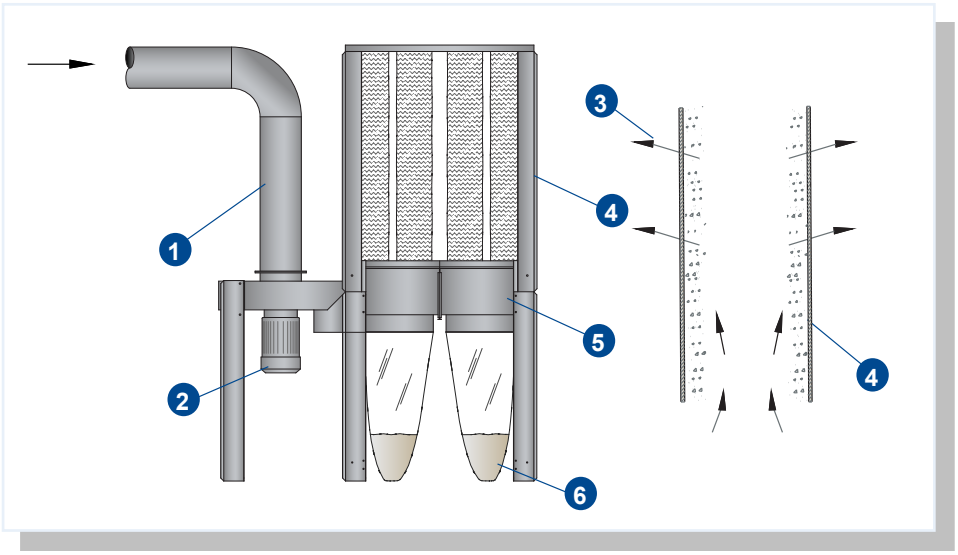
Before

After

How it Works

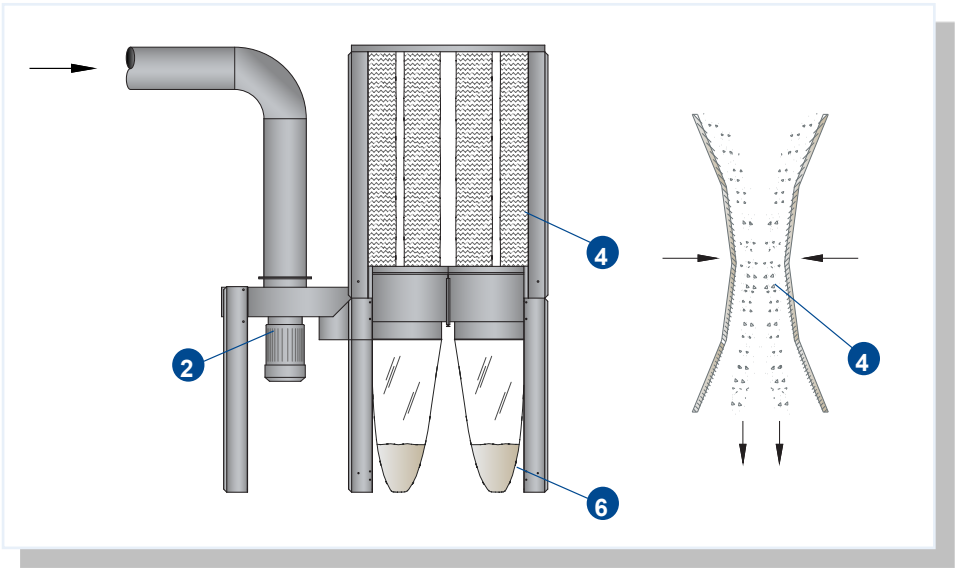
...during normal operation

1. During normal operation, the dust laden air from the plant travels down the supply duct 1
2. The dirty air then enters the COMBIFAB 2 material handling fan
3. The dust then enters the hopper section 5 of the filter
4. As air slows down within the hopper, the heavier dust particles fall down into the inside of the collection bags 6
5. The remaining dust then travels up into the inside of the filter bags 4
6. The air, which originated from the plant, is now clean and passes through the filter bag into the surrounding atmosphere 3

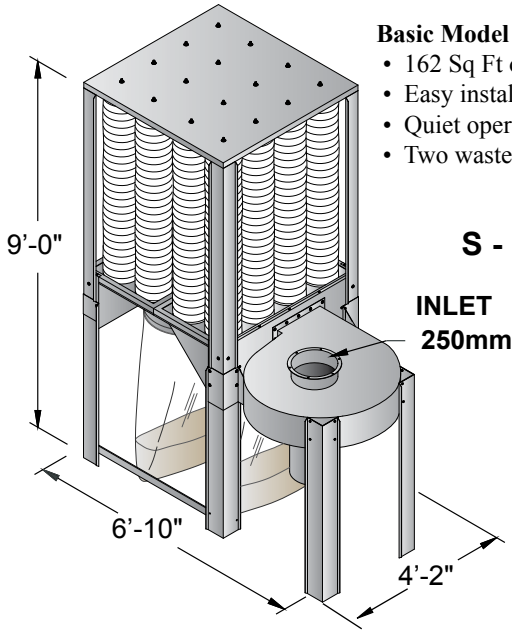


...while cleaning

1. The S Series may only clean “off-line”, when the COMBIFAB fan 2 has stopped rotating
2. The S Series is cleaned by applying physical force to the outside of the filter bag 4 which, in effect, shakes them
3. The dust cake, which hangs on the inside of the filter bag, falls into the hopper section and then into the collection bags below 6



Unit Specifications



S - 500

Basic Model Features
- 162 Sq Ft of filter media
- Easy installation
- Quiet operation
- Two waste discharge points

Basic Model Features
- Qty (1) 5 HP, 1750 RPM, TEFC motor
- Qty (16) Beane material filter bags
- Qty (2) plastic waste collection bag
- Qty (2) clamps for easy removal of waste bags

CFM RANGE

8.0" Wg	7.5" Wg	5.0" Wg
1500 CFM	2000 CFM	3000 CFM

Shipping Weight: 675lbs.

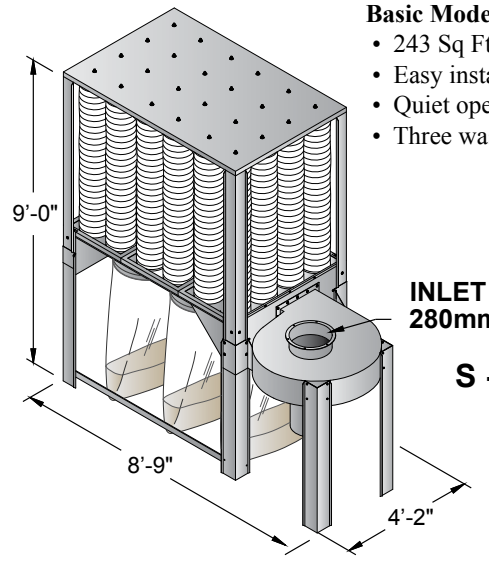
Model Number Selection:

S500 - _____ - _____ - _____

Phase	Starter	Dust discharge
1	115 115V	0 Std. Bag
	208 208V	B 2 Barrel
	230 230V	

S500 - _____ - _____ - _____

Phase	Starter	Dust discharge
3	208 208V	0 Std. Bag
	230 230V	B 2 Barrel
	460 460V	
	575 575V	



S - 750

Basic Model Features
- 243 Sq Ft of filter media
- Easy installation
- Quiet operation
- Three waste discharge points

Basic Model Features
- Qty (1) 7.5 HP, 1750 RPM, TEFC motor
- Qty (24) Beane material filter bags
- Qty (3) plastic waste collection bag
- Qty (3) clamps for easy removal of waste bags

CFM RANGE

10.0" Wg	8.0" Wg	6.0" Wg
2500 CFM	3500 CFM	4500 CFM

Shipping Weight: 900lbs.

Model Number Selection:

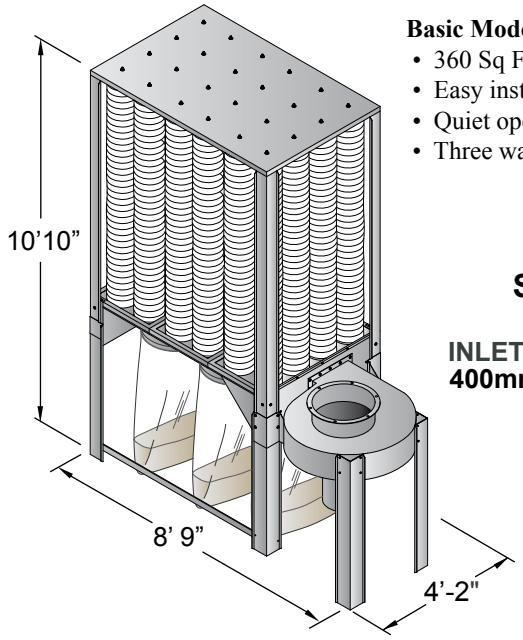
S750 - _____ - _____ - _____

Phase	Starter	Dust discharge
1	115 115V	0 Std. Bag
	208 208V	B 3 Barrel
	230 230V	D Dump Bin

S750 - _____ - _____ - _____

Phase	Starter	Dust discharge
3	208 208V	0 Std. Bag
	230 230V	B 3 Barrel
	460 460V	D Dump Bin
	575 575V	

Unit Specifications



Basic Model Features
- 360 Sq Ft of filter media
- Easy installation
- Quiet operation
- Three waste discharge points

Basic Model Features
- Qty (1) 10 HP, 1750 RPM, TEFC motor
- Qty (24) Beane material filter bags
- Qty (3) plastic waste collection bag
- Qty (3) clamps for easy removal of waste bags

S - 1000

INLET
400mm

CFM RANGE

8.0” Wg	7.0” Wg
4000 CFM	5000 CFM

Shipping Weight: 950lbs.

Model Number Selection:

S1000 - _____ - _____ - _____

Phase	Starter		Dust discharge	
3	208	208V	0	Std. Bag
	230	230V	B	3 Barrel
	460	460V	D	Dump Bin
	575	575V		

Waste Disposal Options

Bags (Standard)

Barrels (Optional)

Dump Bin (Optional)

EASY AS 1-2-3

Collector up and running in less than 1 hour

1

2

3

The Superbag

The Superbag

A filter is only as good as the filter bags it uses. This is the component that provides the filtering while allowing clean air to pass through with the least possible resistance. Therefore, the lowest possible consumption of energy is realized, even after several thousand hours of operation. Nederman patented filter bag, is fitted as the standard in all S-Series bag filters.

Efficiency and low energy consumption

Superbag is a polyester filter bag.
A patented weaving technique in tubular format give the filter bag a surface which can cope with varying dust loads and with virtually any type of dust. Better filtering efficiency is achieved with this unique filter media which provides low pressure drop, and low energy consumption.

Strength and durability

The special shape of the superbag helps to ensure that the high efficiency and effectiveness of our S-Series filter system is maintained even after long periods of operation. The durability is the result of the patented construction , strong polyester fiber and seamless body. These features also help make cleaning of the filter bag very easy.

Antistatic

Superbag's interwoven carbon fiber wire provides higher anti-static properties than traditional filter bags, both on the surface and inside. This reduces the risk of fire and explosion as fine particles are removed.

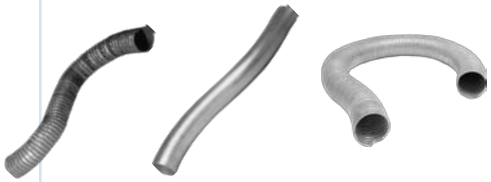
Take advantage of the benefits of Quick-Fit clamp-together ducting

- ***An easy and fast way to install the duct***
- ***Laser welded, leak-free seams***
- ***Easy to clean out, easy to reuse***
- ***Adaptable to your existing ductwork***

Below is a sampling of some of the Quick-Fit parts available:

Pipe and Clamp:

Quick-Fit pipe:	Laser welded pipe with rolled ends. Comes in 5' sections.
Adjustable Nipple:	For lengths less than 5'. The adjustable nipple slides over regular Quick-Fit pipe and telescopes to the length you need.
Clamp:	The most important part of a clamp-together duct system.



Hoses:

Flex Rubber Hose:	Extremely flexible rubber hose with steel coil
Rigid Flex Steel Hose:	Flexible rigid steel hose for higher temperatures or abrasive material
Ultra Flex Steel Hose:	Ultra flexible steel hose for higher temperatures or abrasive material

Branches:

Branches include; Branch, Y-Branch, Double Branch, & T-Branch. They can be delivered either with 30° angles (standard) or with 45° angles (optional). Quick-Fit rolled ends are standard but flanged and raw ends are optional.

Adapters:

Adapters include; Machine Adapters, Flanged Adapters, Hose Adapters, & Bell Mouth Adapters. Quick-Fit rolled ends are standard but flanged and raw ends are optional.

Dump Bin for the S-Series

Dimensions:
- Overall 33.0” wide x 70.5” long x 36.5” high
- Inside 29.0” wide x 66.5” long x 27.5” high

Weight:
500 lbs

Volume:
230 gallon
[70% increased capacity over a (3) barrel outlet]
barrels are 45 gallon each

Bringing superior conditions to the workplace and the environment

For more than 60 years Nederman has developed, manufactured and marketed products and system solutions to reduce the strain on the environment and improve working conditions in numerous industries.

Our products and systems have been ground-breaking in industries such as Machining, Metal Fabrication, Automotive, Composite Manufacturing, Food, Paper, Chemical, Pharmaceutical and many others.

Today companies all over the world are using equipment from Nederman.






Nederman LLC
102 Transit Ave
Thomasville NC, 27360
800-533-5286

Nederman

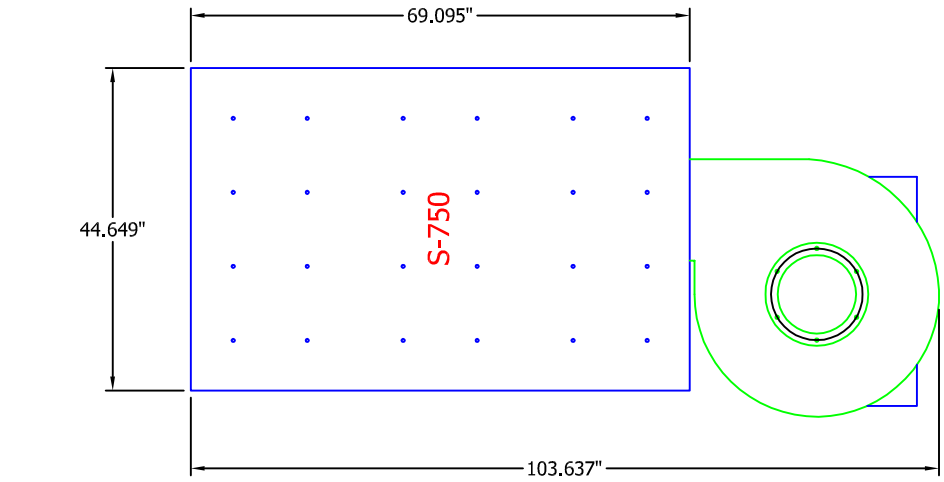
www.nederman.com

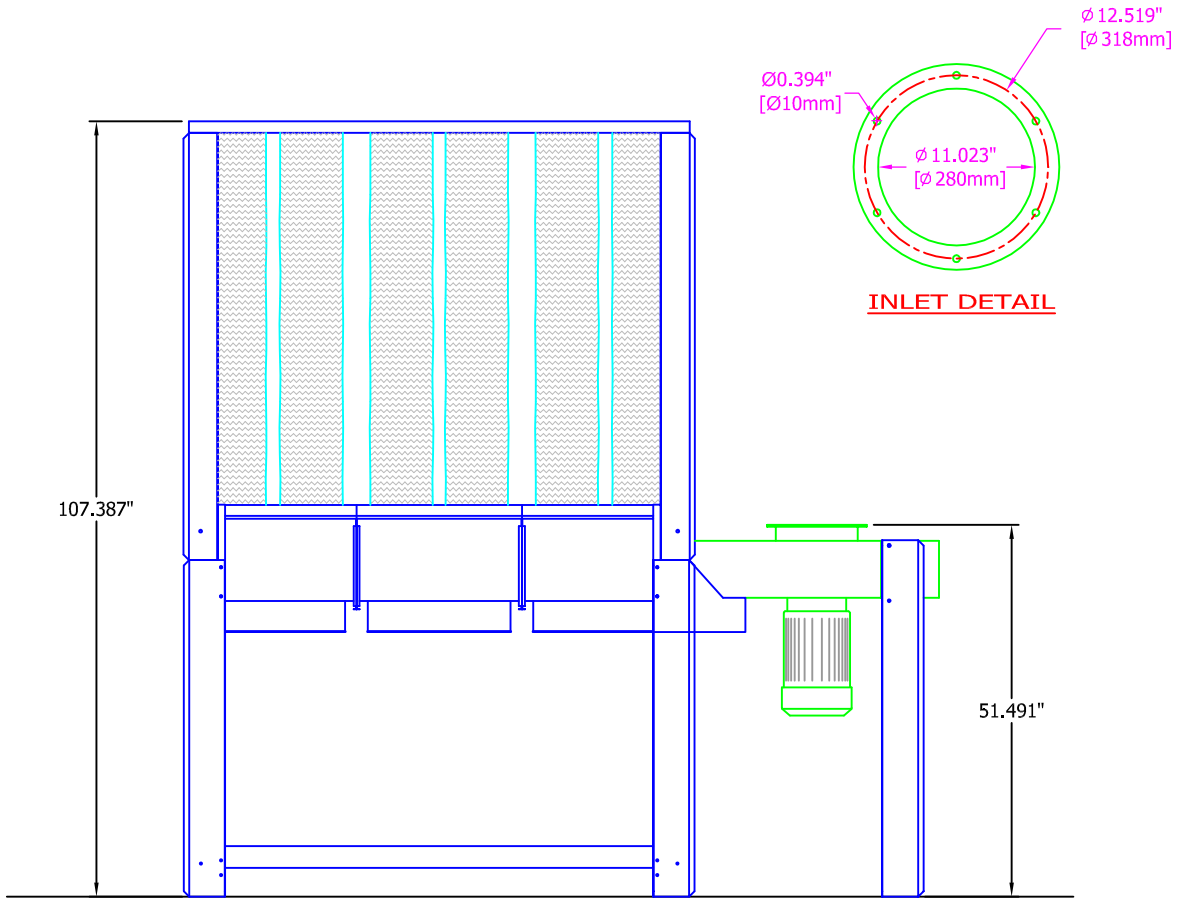
REGISTERED
ISO
9001:2008
14001:2004

Nederman Sales companies in: Australia, Austria, Belgium, Brazil, Canada, China, Czech Rep., Denmark, France, Germany, Hungary, India, Ireland, Northern Ireland, Norway, Poland, Portugal, Romania, Russia, Slovakia, Spain, Sweden, Thailand, United Kingdom, USA
Nederman Agents in: Bulgaria, Cyprus, Egypt, Estonia, Finland, Greece, Holland, Hong Kong, Iceland, Iran, Ireland, Italy, Japan, Korea, Latvia, Lithuania, Malaysia, New Zealand, Philippines, Saudi Arabia, Serbia, Singapore, Slovenia, South Africa, Switzerland, Taiwan, R.O.C, Thailand, Turkey, United Arab Emirates

S_Series.0211.1

ATTACHMENT M
EXHIBIT 3



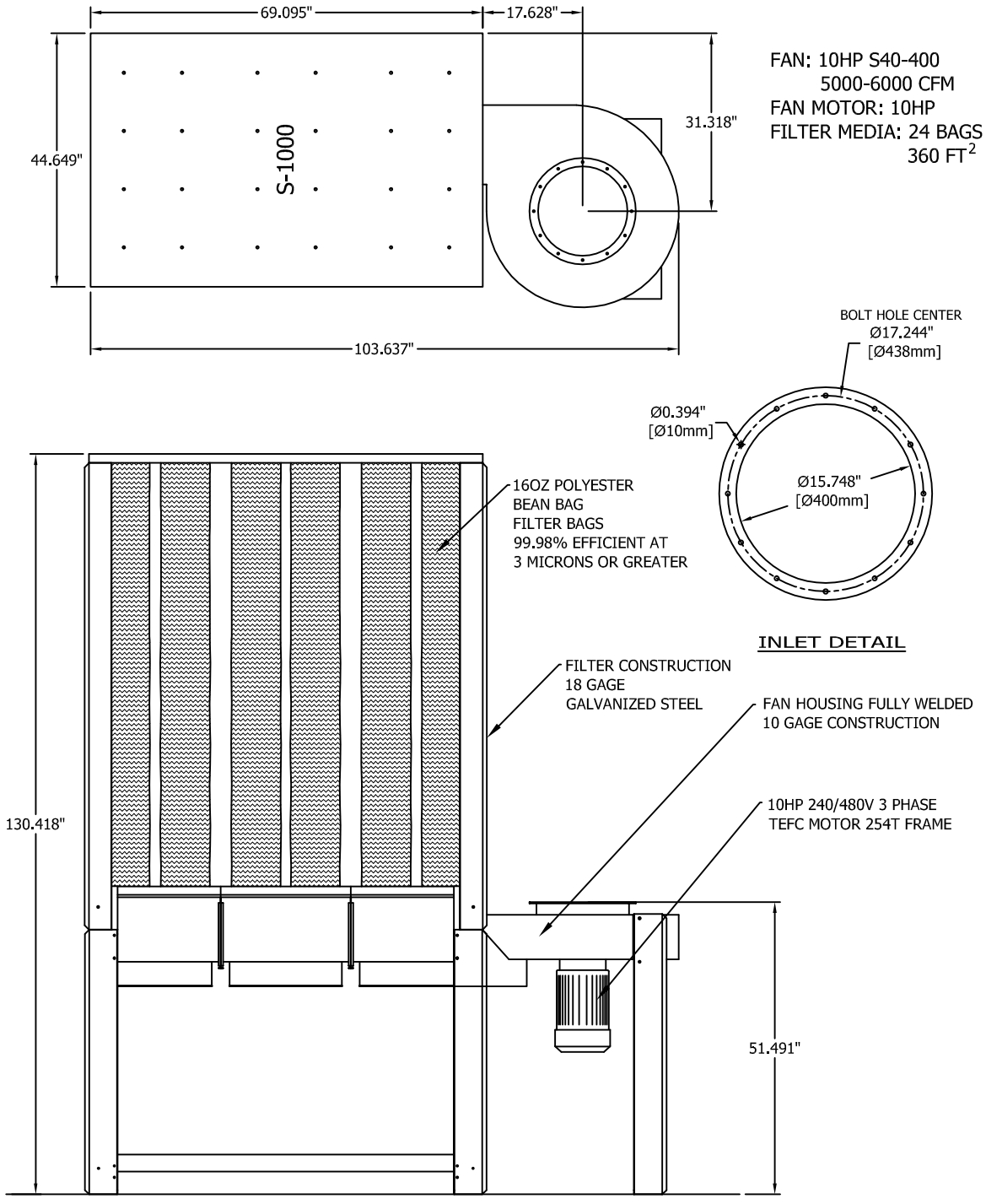


S-750

102 Transit Ave, Thomasville, NC 27360
TEL: (336) 821-0800 FAX: (336)821-0890
EMAIL: INFO.US@DANTHERMFILTRATION.COM

Nederman

NOT TO SCALE
12-09-14
DWG:S-750_SALES_PLAN_ELEV_ENGLISH2000



S-1000

102 Transit Ave, Thomasville, NC 27360
TEL: (336) 821-0800 FAX: (336)821-0890
EMAIL: INFO.US@DANTHERMFILTRATION.COM

Nederman

NOT TO SCALE
12-09-14
DWG:S-1000_SALES_PLAN_ELEV_ENGLISH2000

ATTACHMENT N
SUPPORTING EMISSIONS CALCULATIONS

Armstrong Flooring Inc - Beverly Plant
Total Project Emissions Increase

Pollutant	PM_{10}	$PM_{2.5}$	NOx	SO_2	CO	VOC
Scrap Recovery Operations	0.07	0.07	-	-	-	-
Vacuum Coater	-	-	-	-	-	-
Emergency Generator	7.02E-04	7.02E-04	0.29	4.13E-05	0.02	0.01
Potential Emissions Increase (tons/yr)	0.07	0.07	0.29	0.00	0.02	0.01

Armstrong Flooring Inc - Beverly Plant
Emissions from Scrap Recovery Operations

Design Parameters	DC-01		DC-02	
Air Flow Rate	3,500	acfm	5,000	acfm
Inlet Temp	70	ºF	70	ºF
Control Efficiency	99.90%		99.90%	
Inlet Grain Loading	2	grains/ft^3	2	grains/ft^3
Outlet Grain Loading	0.00044	grains/ft^3	0.00044	grains/ft^3

Actual Hours of Operation	20	hr/wk	
	1,000	hr/yr	Based on 50 wks/yr of operation
Max. Hours of Operation	8,760	hr/yr	

Example Emissions Calculation:

PM-10 Emissions = [grains/ft^3] x [ft^3/min] x [mins/hr] x [1 lb / 7000 grains/lb]

Emissions Calculations	DC-01		DC-02	
Uncontrolled PM-10 Emissions	60.00	lbs/hr	85.71	lbs/hr
	30.00	tons/yr	42.86	tons/yr
Max Controlled PM-10 Emissions	0.06	lbs/hr	0.09	lbs/hr
	0.03	tons/yr	0.04	tons/yr

Conversion Factors:

60	mins/hr
60,000	mins/yr
7,000	grains/lb
2,000	lbs/ton

Armstrong Flooring Inc - Beverly Plant
Emissions from Vacuum Coater

Vacuum coaters	0.85	gals/hr
Manual spraying	1	gal/hr

Product Code	Product Description	Density (lbs/gal)	VOC Content (lbs/gal)	HAP Content (wt%)
A1468D35	Blackwash	8.55	0.13	0.00%
GF121-58(F1)	WB Whitewash	11.77	0.06	0.00%

Emissions from manual spraying	0.13	lbs/hr
	0.35	tons/yr
Emissions from vacuum coaters	0.1105	lbs/hr
	0.30	tons/yr

Change in actual VOC emissions from project -0.05 tons/yr

There will be no change to potential VOC emissions from the Visually Distressed Flooring Lines since no changes are being proposed to the existing VOC Emissions Limit:

1.9	lbs/hr VOC	*[Condition 5.1.7 of the Permit]*
5.1	tons/yr VOC	
5,368.42	hrs/yr	

Armstrong Flooring Inc - Beverly Plant
Emissions from Natural Gas Emergency Generator

Parameter	Value	Units	Source
Max Input	22	kW	Manufacturer Engine Specs
Max Gas Flow Rate	0.28	MMBtu/hr	Manufacturer Engine Specs
Max Hrs of Operation	500	hrs/yr	Manufacturer Engine Specs

Pollutant	PM10F	PM2.5F	PMC	NOx	SO2	CO	VOC
Emission Factors (lbs/MMBtu)	7.71E-05	7.71E-05	9.91E-03	4.08E+00	5.88E-04	3.17E-01	1.18E-01
Total Emissions (lbs/yr)	0.01	0.01	1.39	573.24	0.08	44.54	16.58
Total Emissions (tons/yr)	5.42E-06	5.42E-06	6.96E-04	2.87E-01	4.13E-05	2.23E-02	8.29E-03

Pollutant	Natural Gas Emission Factors	Units	Total Emissions (lbs/yr)	Total Emissions (tons/yr)
1,1,2,2-Tetrachloroethane	4.00E-05	lb/MMBtu	0.01	2.81E-06
1,1,2-Trichloroethane	3.18E-05	lb/MMBtu	0.00	2.23E-06
1,3-Butadiene	2.67E-04	lb/MMBtu	0.04	1.88E-05
1,3-Dichloropropene	2.64E-05	lb/MMBtu	0.00	1.85E-06
2-Methylnaphthalene*	3.32E-05	lb/MMBtu	0.00	2.33E-06
2,2,4-Trimethylpentane	2.50E-04	lb/MMBtu	0.04	1.76E-05
Acenaphthene*	1.25E-06	lb/MMBtu	0.00	8.78E-08
Acenaphthylene*	5.53E-06	lb/MMBtu	0.00	3.88E-07
Acetaldehyde	8.36E-03	lb/MMBtu	1.17	5.87E-04
Acrolein	5.14E-03	lb/MMBtu	0.72	3.61E-04
Benzene	4.40E-04	lb/MMBtu	0.06	3.09E-05
Benzo(b)fluoranthene*	1.66E-07	lb/MMBtu	0.00	1.17E-08
Benzo(e)pyrene*	4.15E-07	lb/MMBtu	0.00	2.92E-08
Benzo(g,h,i)perylene*	4.14E-07	lb/MMBtu	0.00	2.91E-08
Biphenyl	2.12E-04	lb/MMBtu	0.03	1.49E-05
Carbon Tetrachloride	3.67E-05	lb/MMBtu	0.01	2.58E-06
Chlorobenzene	3.04E-05	lb/MMBtu	0.00	2.14E-06
Chloroform	2.85E-05	lb/MMBtu	0.00	2.00E-06
Chrysene	6.93E-07	lb/MMBtu	0.00	4.87E-08
Ethylbenzene	3.97E-05	lb/MMBtu	0.01	2.79E-06
Ethylene Dibromide	4.43E-05	lb/MMBtu	0.01	3.11E-06
Fluoranthene	1.11E-06	lb/MMBtu	0.00	7.80E-08
Fluorene	5.67E-06	lb/MMBtu	0.00	3.98E-07
Formaldehyde	5.28E-02	lb/MMBtu	7.42	3.71E-03
Methanol	2.50E-03	lb/MMBtu	0.35	1.76E-04
Methylene Chloride	2.00E-05	lb/MMBtu	0.00	1.41E-06
n-Hexane	1.11E-03	lb/MMBtu	0.16	7.80E-05
Naphthalene	7.44E-05	lb/MMBtu	0.01	5.23E-06
PAH*	2.69E-05	lb/MMBtu	0.00	1.89E-06
Phenanthrene*	1.04E-05	lb/MMBtu	0.00	7.31E-07
Phenol	2.40E-05	lb/MMBtu	0.00	1.69E-06
Pyrene*	1.36E-06	lb/MMBtu	0.00	9.55E-08
Styrene	2.36E-05	lb/MMBtu	0.00	1.66E-06
Tetrachloroethane	2.48E-06	lb/MMBtu	0.00	1.74E-07
Toluene	4.08E-04	lb/MMBtu	0.06	2.87E-05
Vinyl Chloride	1.49E-05	lb/MMBtu	0.00	1.05E-06
Xylene	1.84E-04	lb/MMBtu	0.03	1.29E-05
Total HAP			10.14	5.07E-03
Total POM			0.01	5.59E-06

Conversion Factor: 2000 lbs/ton

All emission factors were obtained from EPA AP-42 Section 3.2 for a 4-stroke lean-burn engine.

ATTACHMENT O
MONITORING, RECORDKEEPING, REPORTING, AND TESTING PLANS

ATTACHMENT O: MONITORING, TESTING, RECORDKEEPING PLAN

Monitoring Requirements:

Each dust collection system will be operated and maintained in accordance with manufacturer's specifications. Operational practices include replacement of broken bags, proper fan operations, prompt replacement of fans and duct work, and daily inspections to ensure filter bags are intact and properly attached. In addition, monthly visible emissions checks and monitoring of pressure drop is proposed for dust control systems DC-01 and DC-02, in accordance with manufacturer recommendations.

No other monitoring requirements will be impacted or triggered by this change.

Testing Requirements:

No changes are proposed that will impact or trigger any testing requirements.

Applicable Recordkeeping Requirements:

No changes are being requested with regards to the monthly records required by condition 5.2.4 of the permit for the Visually Distressed Flooring Lines.

For certified stationary SI emergency internal combustion engines, the following documentation must be kept on file by the owner or operator:

- Documentation from the manufacturer that the engine is certified to meet the applicable emissions standards;
- Records to demonstrate that appropriate maintenance was conducted in accordance with manufacturer's recommended procedures and practices.

A monthly operations log showing the results of daily integrity checks on the system as listed above and monthly emissions checks and pressure drop readings are proposed for dust control systems DC-01 and DC-02, in accordance with manufacturer recommendations.

No other recordkeeping requirements will be impacted or triggered by this change.

Reporting Requirements:

No changes are proposed that will impact or trigger any recordkeeping requirements.

ATTACHMENT S
TITLE V REVISION INFORMATION

Attachment S

Title V Permit Revision Information

1. New Applicable Requirements Summary	
Mark all applicable requirements associated with the changes involved with this permit revision:	
☐ SIP	☐ FIP
☒ Minor source NSR (45CSR13)	☐ PSD (45CSR14)
☐ NESHAP (45CSR15)	☐ Nonattainment NSR (45CSR19)
☒ Section 111 NSPS (Subpart(s) JJJJ)	☒ Section 112(d) MACT standards (Subpart(s) ZZZZ)
☐ Section 112(g) Case-by-case MACT	☐ 112(r) RMP
☐ Section 112(i) Early reduction of HAP	☐ Consumer/commercial prod. reqts., section 183(e)
☐ Section 129 Standards/Reqts.	☐ Stratospheric ozone (Title VI)
☐ Tank vessel reqt., section 183(f)	☐ Emissions cap 45CSR§30-2.6.1
☐ NAAQS, increments or visibility (temp. sources)	☐ 45CSR27 State enforceable only rule
☐ 45CSR4 State enforceable only rule	☐ Acid Rain (Title IV, 45CSR33)
☐ Emissions Trading and Banking (45CSR28)	☐ Compliance Assurance Monitoring (40CFR64) (1)
☐ NO_x Budget Trading Program Non-EGUs (45CSR1)	☐ NO_x Budget Trading Program EGUs (45CSR26)
(1) If this box is checked, please include **Compliance Assurance Monitoring (CAM) Form(s)** for each Pollutants Specific Emission Unit (PSEU) (See Attachment H to Title V Application). If this box is not checked, please explain why **Compliance Assurance Monitoring** is not applicable:	

2. Non Applicability Determinations

List all requirements, which the source has determined not applicable to this permit revision and for which a permit shield is requested. The listing shall also include the rule citation and a rationale for the determination.

☐ **Permit Shield Requested** *(not applicable to Minor Modifications)*

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

3. Suggested Title V Draft Permit Language

Are there any changes involved with this Title V Permit revision outside of the scope of the NSR Permit revision? ☐ Yes ☒ No If Yes, describe the changes below.

Also, please provide **Suggested Title V Draft Permit language** for the proposed Title V Permit revision (including all applicable requirements associated with the permit revision and any associated monitoring /recordkeeping/ reporting requirements), OR attach a marked up pages of current Title V Permit. Please include appropriate citations (Permit or Consent Order number, condition number and/or rule citation (e.g. 45CSR§7-4.1)) for those requirements being added / revised.

See attached.

4. Active NSR Permits/Permit Determinations/Consent Orders Associated With This Permit Revision

Permit or Consent Order Number	Date of Issuance	Permit/Consent Order Condition Number
R30-08300025-2013	01 / 22 / 2013	
R13-1147T	09 / 12 / 2016	

5. Inactive NSR Permits/Obsolete Permit or Consent Orders Conditions Associated With This Revision

Permit or Consent Order Number	Date of Issuance	Permit/Consent Order Condition Number
	MM/DD/YYYY	
	/ /	

6. Change in Potential Emissions

Pollutant	Change in Potential Emissions (+ or -), TPY
PM / $PM_{10,}$ / $PM_{2.5}$	0.09
NOx	0.23
SO_2	0.02
CO	0.05
VOC	0.02

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

7. Certification For Use Of Minor Modification Procedures ***(Required Only for Minor Modification Requests)***

Note:	*This certification must be signed by a responsible official. Applications without a signed certification will be returned as incomplete. The criteria for allowing the use of Minor Modification Procedures are as follows:*

i. Proposed changes do not violate any applicable requirement;

ii. Proposed changes do not involve significant changes to existing monitoring, reporting, or recordkeeping requirements in the permit;

iii. Proposed changes do not require or change a case-by-case determination of an emission limitation or other standard, or a source-specific determination for temporary sources of ambient air quality impacts, or a visibility increment analysis;

iv. Proposed changes do not seek to establish or change a permit term or condition for which there is no underlying applicable requirement and which permit or condition has been used to avoid an applicable requirement to which the source would otherwise be subject (synthetic minor). Such terms and conditions include, but are not limited to a federally enforceable emissions cap used to avoid classification as a modification under any provision of Title I or any alternative emissions limit approved pursuant to regulations promulgated under § 112(j)(5) of the Clean Air Act;

v. Proposed changes do not involve preconstruction review under Title I of the Clean Air Act or 45CSR14 and 45CSR19;

vi. Proposed changes are not required under any rule of the Director to be processed as a significant modification;

Notwithstanding subparagraph 45CSR§30-6.5.a.1.A. (items i through vi above), minor permit modification procedures may be used for permit modifications involving the use of economic incentives, marketable permits, emissions trading, and other similar approaches, to the extent that such minor permit modification procedures are explicitly provided for in rules of the Director which are approved by the U.S. EPA as a part of the State Implementation Plan under the Clean Air Act, or which may be otherwise provided for in the Title V operating permit issued under 45CSR30.

Pursuant to 45CSR§30-6.5.a.2.C., the proposed modification contained herein meets the criteria for use of Minor permit modification procedures as set forth in Section 45CSR§30-6.5.a.1.A. The use of Minor permit modification procedures are hereby requested for processing of this application.

(Signed): _____ *(Please use blue ink)* Date: 11 / 10 / 16 *(Please use blue ink)*

Named (typed): Steven A. Bullock Title: Plant Manager

Note: Please check if the following included (if applicable):

☐	Compliance Assurance Monitoring Form(s)
☒	Suggested Title V Draft Permit Language

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.