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February 13, 2026

Arizona Department of Environmental Quality
Air Quality Division
1110 W. Washington
Phoenix, AZ 85007
airpermits@azdeq.com

RE: International Paper Company, Yuma, AZ Facility (Place ID: 2221), Class II Air Quality Permit Renewal – Update

To Whom It May Concern:

Enclosed please find an updated application package for the Class II Air Quality Permit Renewal application originally submitted December 12, 2025. This renewal application is for the International Paper, Yuma AZ facility located at 2641 East 24th Street, Yuma, AZ. As the current Permit No. 88378 issued August 17, 2021 is scheduled to expire August 16, 2026, this renewal application requests the continued operation of the corrugated container manufacturing facility.

Application updates include the following:

- Notification of pending removal of two Rotary Die Cutters [Equipment #s 2464 and 2436]
- Notification of installation one replacement Rotary Die Cutter [Equipment # TBD] whose capacity will be lower than the combined total of the equipment removed
- Request to update Class II Permit Attachment B, Permit Condition III.A and Attachment C to reflect these changes

The following are enclosed with this application package:

- Standard Class II Permit Application Form (Revised to Reflect these changes)
- Application Support Document (including process description, equipment list, regulatory analysis) (Revised to Reflect these changes)
- Facility Emissions (Revised to Reflect these changes)

If you have any questions or comments concerning this permit application package please contact me at (928) 508-6388 (michael.carney@ipaper.com) or our environmental consultant Michael Waller of Ashworth Leininger Group (ALG) at (805) 764-6003 (mwaller@algcorp.com). ALG has permission to speak on our behalf regarding this permit application.

Sincerely,

Michael Carney
HSE Manager

Enclosures

CLASS II PERMIT APPLICATION PACKAGE

SECTION 3.1

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

Air Quality Division

1110 West Washington • Phoenix, AZ 85007 • Phone: (602) 771-2338

STANDARD CLASS II PERMIT APPLICATION FORM

(As required by A.R.S. § 49-426, and Chapter 2, Article 3, Arizona Administrative Code)

1. Permit to be issued to (Business license name of organization that is to receive permit):

   International Paper Company

2. Mailing Address: 2641 East 24th Street

   City: Yuma State: AZ ZIP: 85365

3. Name (or names) of Responsible Official: Manuel Gomez Leon

   Phone: (928) 509-3833 Fax: (901) 334-3855 Email: manuel.gleon@ipaper.com

4. Facility Manager/Contact Person and Title: Manuel Gomez Leon

   Phone: (928) 509-3833 Fax: (901) 334-3855 Email: manuel.gleon@ipaper.com

5. Facility Name: International Paper Yuma

   Facility Location/Address (Current/Proposed): 2641 East 24th Street

   City: Yuma County: Yuma ZIP: 85365

   Indian Reservation (if applicable, which one):

   Latitude/Longitude, Elevation: 32.679947 / -114.586987, 212 feet

6. General Nature of Business: Manufacture of corrugated containers

7. Type of Organization:

   ■ Corporation ☐ Individual Owner ☐ Partnership ☐ Government Entity ☐ LLC

   ☐ Other

8. Permit Application Basis: ☐ New Source ☐ Revision ■ Renewal of Existing Permit

   For renewal or modification, include existing permit number (and exp. date): Permit No. 88378

   Exp. date: 8/16/2026

   Date of Commencement of Construction or Modification:

   Primary Standard Industrial Classification Code: 2653 – Corrugated and Solid Fiber Boxes

9. I certify that I have knowledge of the facts herein set forth, that the same are true, accurate and complete to the best of my knowledge and belief, and that all information not identified by me as confidential in nature shall be treated by ADEQ as public record. I also attest that I am in compliance with the applicable requirements of the Permit and will continue to comply with such requirements and any future requirements that become effective during the life of the Permit. I will present a certification of compliance to ADEQ no less than annually and more frequently if specified by ADEQ. I further state that

I will assume responsibility for the construction, modification, or operation of the source in accordance with Arizona Administrative Code, Title 18, Chapter 2 and any permit issued thereof.

Signature of Responsible Official: _____

Printed Name of Signer/Official Title: Manuel Gomez Leon

Date: 2/13/26 Telephone Number: (928) 509-3833

Section 3.5 - Equipment List

Type of Equipment	Maximum Rated Capacity [1]	Make	Model	Serial Number	Date of Manufacture	Equipment ID Number
Boiler	20.08 MMBTU/hr	Hurst	S5-G-600-250	S3000-230-20	2019	B01
Flexographic Folder Gluer	12,000 sheets/hr	Langston Saturn III 37″ x 97″	5134	884588	1998	5134
Flexographic Folder Gluer	6,000 sheets/hr	United 50″ x 100″	5184	GL50-2P-146Q	1995	5184
Flexographic Folder Gluer	6,000 sheets/hr	Latitude 47″ x 106″	5224	PP3-1227FFG	2014	5224
Rotary Die Cutter**	12,000 sheets/hr	SUN 66″ x 125″	625HD	497343	2026	TBD
Automated Wax Cascader	2,500 sheets/hr	Andex 60 x 60 Waxing Machine	7700	Prototype built in Australia	1979	7700
Automated Wax Cascader	2,500 sheets/hr	Andex	7700	n/a	2014	7710
Wax Storage Tanks (3)	10,000-gallon each	n/a	n/a	n/a	1988	n/a
Wax Storage Tank	Two 8,000-gallon chambers	n/a	n/a	n/a	1988	n/a
Wax Storage Tank*	35,745 gallons	n/a	n/a	n/a	1988	n/a
Corrugator	1000 feet/min	United 98″ Corrugator	0982	SFM 98-711	1988	0982
Emergency Fire Pump Engine	175 hp	Cummins	V8	n/a	1988	FWP
Starch Silo	200,000 lbs	n/a	n/a	n/a	1988	n/a
Scrap Paper Handling System #1	41,055 cfm	n/a	n/a	n/a	1988	16-foot cyclone**
Scrap Paper Handling System #2	41,055 cfm	n/a	n/a	n/a	1988	14-foot cyclone**

*Addition of an existing wax storage tank at the facility to the Class II air permit.

**Cyclones replaced with identical units in 2021, 2 Rotary Die Cutters to be replaced with 1 Rotary Die Cutter in 2026, see attached vendor specification sheets.

[1} For generator sets, enter the maximum rated capacity of the engine rather than the maximum rated capacity of the generator.

All relevant equipment utilized at the facility should be included in the equipment list. Please complete all fields.

The date of manufacture must be included in order to determine applicability of regulations.

Indicate the units (tons/hour, horsepower, etc.) when recording the maximum rated capacity. Make additional copies of this form if necessary.

***Submit photographs of the faceplates for all engines listed above. *If an engine is certified, please also include a copy of the engine certification with the application.**

***For any newly added equipment, include a copy of the specification sheet. *These documents will be used to verify equipment information and determine applicable regulations.**

SECTION 3.6 - EMISSION SOURCE FORM

					USE THIS SECTION FOR MODIFICATIONS ONLY		
Emission Point		Regulated Air Pollutant Name	PTE		PTE AFTER MODIFICATION		CHANGE IN PTE
Number	Name		lbs/hr	tons/yr	lbs/hr	tons/yr	tons/yr
B01	Boiler	See attached emission calculations.					
0982	Corrugator						
Cyclone	Scrap Handling System #1						
Cyclone	Scrap Handling System #2						
5134, 5184, 5224, TBD, 7700, 7710	Finishing Department						
FWP	Fire Water Pump						
Tank	Wax Storage Tanks						
Silo	Starch Silo						

****Submit emission calculations spreadsheet with your application****

PERMIT APPLICATION SUPPORT DOCUMENT

Class II Air Quality Permit Renewal Application

Facility Name:	International Paper, Yuma Facility
Facility Address:	2641 East 24th Street Yuma, AZ 85365
Application Contact:	Manuel Gomez Leon, Facility General Manager (928) 509-3833
Responsible Official:	Manuel Gomez Leon, Facility General Manager (928) 509-3833

Facility Information

International Paper (IP) owns and operates a corrugated container manufacturing facility in the City of Yuma, Arizona. The facility is primarily classified under the Standard Industrial Classification Code (SIC) 2653 – Corrugated and Solid Fiber Boxes. The facility currently operates equipment including a corrugator, boiler, emergency engine, flexographic printers and a rotary die cutter to support corrugated box manufacturing.

Proposal

The IP Yuma facility submits this renewal application for the continued operation under the Class II air quality permit (Permit No. 88378). The facility's potential to emit (PTE), without controls or operating limitations, of air pollutants is less than major source thresholds, but greater than significant thresholds, thus a Class II permit is required. This permit renewal application does not propose to make any changes that would increase potential to emit in excess of the permitting exemption thresholds. This application is prepared and submitted in accordance with Arizona Revised Statutes (ARS) 49-426.

Process Description

International Paper Company manufactures corrugated containers, commonly referred to as "corrugated cardboard boxes" at this facility.

Corn starch is received via truck and unloaded into a storage silo. The unloading process and storage silo are controlled by a small sock filter. Starch is transferred from the storage silo to the starch kitchen via a pneumatic system and mixed with water. Additives can be included with the water/starch mixture to aid in the moisture resistant properties of the corrugated container. Some additives may contain volatile organics, resulting in VOC emissions from the plant. The starch mixture is pumped to the corrugator for application.

The corrugator fabricates corrugated board from three layers of paper adhered together using a mixture of cornstarch and water. The outer layers of paper are called linerboard, and the wavy middle layer is called medium. The middle layer is created from paper medium, conditioned with steam, and runs through flute rolls to make the paper wavy. The peaks of the medium now roll across a glue roll and pick up adhesive. The linerboard and medium are brought into contact forming a sheet known as 'single face'. The single faced medium is run over another glue roll, again the peaks picking up adhesive and the second layer of linerboard is brought into contact to form the corrugated sheet. The corrugated sheet now travels through a series of hot plates, heated

with steam from the boiler. The edge of the sheet is trimmed off and the trim is sent to the scrap collection system. Then the sheet is scored or slit as needed and sent to the knife which cuts it into individual sheets. The sheets are stacked and transported to the finishing area.

The finishing area consists of three flexo-folder gluers and one rotary die cutter. The flexo-folder-gluers print onto corrugated sheets with water-based inks, die cut out portions of the sheet, fold, and glue the container board into the desired configuration. The rotary die-cutter performs these same tasks with the exception of folding and gluing. Scraps generated by die-cutting operations fall onto a small belt conveyor leading to the pneumatic scrap collection system.

At times a wax cascade is used in order apply wax to corrugated containers; the wax imparting moisture resistance to containers used to hold field packed fruits or vegetables. Wax is storage onsite in heated tanks.

Finished containers are palletized and shipped to customers.

Class II Permit Updates

Request to update Class II Permit Attachment B, Permit Condition III.A and Attachment C to reflect the installation of the SUN 625HD Rotary Die Cutter to replace and remove the current Rotary Die Cutter Machines #2464 and #2436.

Rule Compliance Evaluation – Arizona Administrative Code (AAC) Regulation 18 Ch. 02 Department of Environmental Quality – Air Pollution Control

AAC R18-2-317 Facility Changes Allowed Without Permit Revision – Class II

This standard is applicable to the 2026 Rotary Die Cutter replacement, as this qualifies as a change of process equipment. This change is logged as required and information included in this renewal. The new SUN 625HD Rotary Die Cutter (RDC) will replace and remove the current RDC Machines #2464 and #2436. The same types of inks and ink application rate will be used. VOC emissions from the new RDC will be less than or equal to those being removed; therefore, the facility-wide potential to emit will not increase as a result of this project. A vendor specification sheet for the replacement RDC is included with this application submittal.

AAC R18-2-702 General Provisions

These standards are applicable to all fugitive dust sources at the facility. Control devices include water trucks and dust suppressants.

These standards are applicable to any abrasive blasting operation. Control devices include wet blasting, dust collecting equipment, and other approved methods.

These standards are applicable to any spray-painting operation. Control devices include enclosures.

Continued compliance with these provisions is anticipated.

AAC R18-2-702.B.1 General Provisions

These opacity standards are applicable to the existing sources: Starch Silo, Corrugator, Flexographic Folder Gluers (3), Wax Cascaders (2), Wax Storage Tanks (6), and Scrap Handling Systems

(2), and the replacement Rotary Die Cutter (1). Continued compliance with these provisions is anticipated.

AAC R18-2-719 Standards of Performance for Existing Stationary Rotary Machinery

The applicability date for New Source Performance Standards (NSPS) Subpart IIII is April 1, 2006 for compression ignition engines. The emergency fire water pump engine was manufactured before this date, therefore NSPS Subpart IIII is not applicable. Engines not subject to Subpart IIII are subject to Existing Stationary Rotating Machinery standards under A.A.C. R18-2-719. Therefore A.A.C. R18-2-719 is applicable to the emergency fire water pump. Continued compliance with these provisions is anticipated.

AAC R18-2-724 Standards of Performance for Fossil-fuel Fired Industrial and Commercial Equipment

This standard is applicable to fuel burning equipment used to produce steam. This applies to the 600 HP Boiler. Continued compliance with these provisions is anticipated.

AAC R18-2-726 Standards of Performance for Sandblasting Operations

These standards are applicable to any abrasive blasting operation. Continued compliance with these provisions is anticipated.

AAC R18-2-727 Standards of Performance for Spray Painting Operations

These standards are applicable to any spray-painting operation. Continued compliance with these provisions is anticipated.

AAC R18-2-730 Standards of Performance for Unclassified Sources

These standards are applicable to the existing sources: Starch Silo, Corrugator, Flexographic Folder Gluers (3), Wax Cascaders (2), Wax Storage Tanks (6), and Scrap Handling Systems (2) and the replacement Rotary Die Cutter (1). Continued compliance with these provisions is anticipated.

AAC R18-2 Article 6 Emissions from Existing and New Nonpoint Sources

These standards are applicable to all fugitive dust sources at the facility. Control devices include water trucks and dust suppressants. Continued compliance with these provisions is anticipated.

AAC R18-2-1101.A National Emission Standards for Hazardous Air Pollutants (NESHAPs)

This standard is applicable to any asbestos related demolition or renovation operations. Continued compliance with these provisions is anticipated.

Rule Compliance Evaluation – Federal Regulations

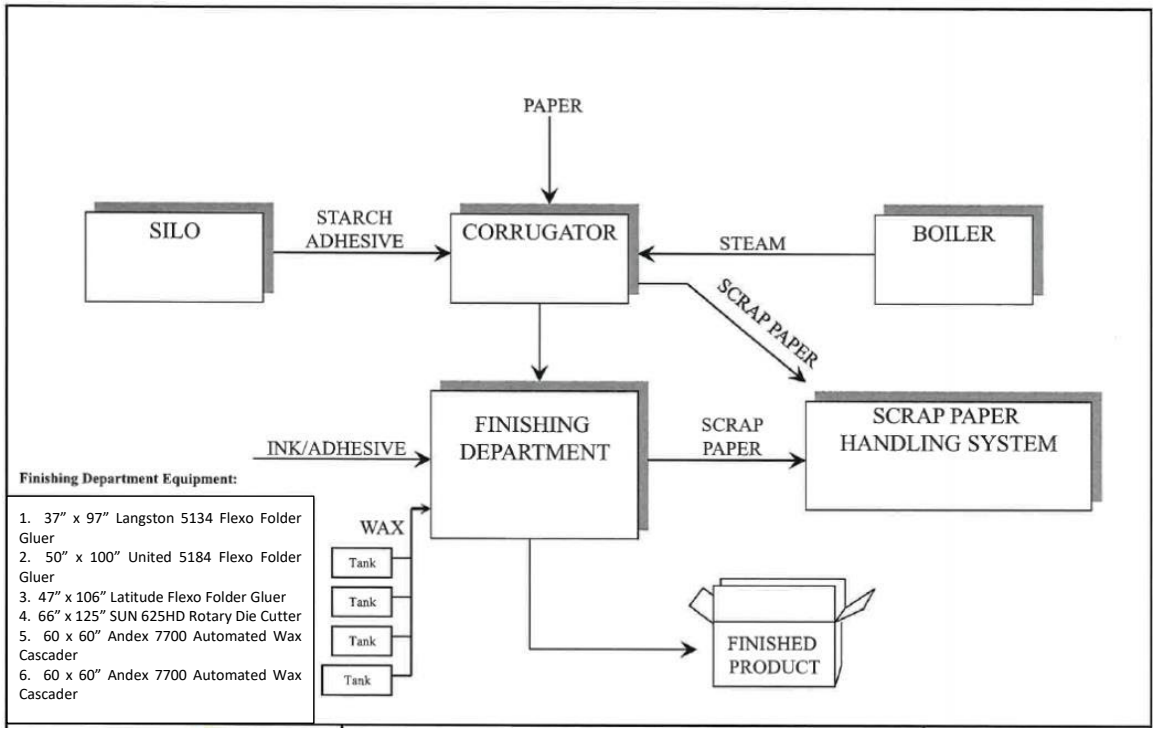
40 CFR 60 Subpart Dc Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units

600 HP Boiler: 40 CFR 60 Subpart Dc is applicable because the maximum heat input of the boiler is greater than 10 MMBtu/hr and the boiler was manufactured in 2019. Continued compliance with this rule is anticipated.

40 CFR 63 Subpart ZZZZ National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

Emergency Fire Water Pump Engine: National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines (Subpart ZZZZ) are applicable because this engine is an ICE at an area source for HAPS. Continued compliance with this rule is anticipated.

Process Flow Diagram



FACILITY EMISSIONS

Table 1
Facility-Wide Potential Emissions Summary
International Paper Company - Yuma, AZ

Source	Equipment Description	PM	PM_{10} [(a)]	$PM_{2.5}$ [(a)]	NO_X	SO_2	CO	VOC	Hazardous Air Pollutants (HAP)
		Tons per Year (tpy)							
Boiler	Natural Gas Combustion Unit	0.66	0.66	0.66	8.62	0.05	7.24	0.47	0.16
Fire Water Pump	Natural Gas Combustion Unit	0.09	0.09	0.09	1.35	0.09	0.29	0.11	1.98E-03
Starch Storage Silo	Starch Silo	5.28E-01	1.73E-01	2.93E-02	0.00	0.00	0.00	0.00	0.00
Scrap Paper Handling System[1]	Cyclone	22.19	3.9	0.7	0.00	0.00	0.00	0.00	0.00
Corrugator	Corrugator	--	--	--	0.00	0.00	0.00	10.20	0.00
Finishing	5134 Flexo Folder Gluer	0.00	0.00	0.00	0.00	0.00	0.00	3.37	0.12
Finishing	5224 Flexo Folder Gluer	0.00	0.00	0.00	0.00	0.00	0.00	2.61	0.09
Finishing	5184 Flexo Folder Gluer	0.00	0.00	0.00	0.00	0.00	0.00	2.88	0.10
Finishing	New Rotary Die Cutter (ID # TBD)	0.00	0.00	0.00	0.00	0.00	0.00	3.89	0.14
Finishing	7700 Cascader	0.00	0.00	0.00	0.00	0.00	0.00	3.53E-01	0.00
Finishing	7710 Cascader	0.00	0.00	0.00	0.00	0.00	0.00	3.53E-01	0.00
Finishing	Wax Storage Tanks	--	--	--	--	--	--	0.15	--
Facility Totals		**23.47**	**4.81**	**1.44**	**9.97**	**0.14**	**7.53**	**24.38**	**0.62**

Table 2
Facility-Wide Potential Hazardous Air Pollutants Emissions Summary
International Paper Company - Yuma, AZ

Hazardous Air Pollutant	Facility Total Emissions (tpy)	Title V Threshold (tpy)	Below Threshold?
1,3-Butadiene	1.20E-05	10	Y
1,4-dihydroxybenzene; hydroquinone; quinol	4.77E-05	10	Y
1,4-dioxane	8.06E-05	10	Y
2-methoxyaniline; o-anisidine	1.43E-05	10	Y
2-Methylnaphthalene	4.14E-06	10	Y
3,3'-dichlorobenzidine	2.01E-04	10	Y
3,3'-dimethoxybenzidine; o-dianisidine	2.84E-06	10	Y
3-Methylcholanthrene	1.55E-07	10	Y
7,12-Dimethylbenz(a)anthracene	1.38E-06	10	Y
Acenaphthene	5.90E-07	10	Y
Acenaphthylene	1.70E-06	10	Y
Acetaldehyde	2.35E-04	10	Y
Acrolein	2.83E-05	10	Y
Acrylic Acid	1.59E-02	10	Y
Anthracene	7.80E-07	10	Y
Antimony	1.02E-04	10	Y
Arsenic	9.92E-05	10	Y
Benzene	4.72E-04	10	Y
Benzo(a)anthracene	6.70E-07	10	Y
Benzo(a)pyrene	1.61E-07	10	Y
Benzo(b)fluoranthene	1.86E-07	10	Y
Benzo(g,h,i)perylene	2.53E-07	10	Y
Benzo(k)fluoranthene	2.03E-07	10	Y
Beryllium	1.03E-06	10	Y
Cadmium	9.48E-05	10	Y
Cadmium (Non-Pyrophoric)	3.68E-05	10	Y
Chromium	1.84E-03	10	Y
Chrysene	2.63E-07	10	Y
Cobalt	7.24E-06	10	Y
Dibenzo(a,h)anthracene	2.82E-07	10	Y
Dichlorobenzene	1.03E-04	10	Y
Dipropylene Glycol Monomethyl Ether	2.40E-01	10	Y
Ethanediol; Ethylene Glycol	1.17E-04	10	Y
Ethylbenzene	1.93E-04	10	Y
Ethylene Oxide; Oxirane	5.58E-07	10	Y
Fluoranthene	2.59E-06	10	Y
Fluorene	9.18E-06	10	Y
Formaldehyde	6.83E-03	10	Y
Hexachlorobenzene	3.34E-06	10	Y
Hexane	1.55E-01	10	Y
Hydrogen Cyanide	8.94E-02	10	Y
Indeno(1,2,3-cd)pyrene	2.70E-07	10	Y
Lead	4.31E-05	10	Y
Lead Powder; [Particle Diameter < 1 Mm]	3.99E-05	10	Y
Manganese	3.28E-05	10	Y
Mercury	5.92E-05	10	Y
Naphthalene	7.86E-05	10	Y
Nickel	2.80E-04	10	Y
o-toluidine; 2-aminotoluene	1.94E-04	10	Y
Phenanthrene	1.05E-05	10	Y
Polychlorobiphenyls; PCB	2.04E-04	10	Y
Propylene	7.90E-04	10	Y
Pyrene	1.90E-06	10	Y
Selenium	5.30E-05	10	Y
Styrene	1.02E-01	10	Y
Styrene Oxide; (Epoxyethyl)Benzene; Phenyloxirane	4.77E-04	10	Y
Toluene	4.61E-04	10	Y
Xylenes	8.73E-05	10	Y
Max. Individual HAP	0.24	10	Y
Total HAPs	0.62	25	Y
Check	TRUE		

Boiler (B01) Emissions		
Nat Gas Fuel Firing, Maximum Potential Operationg Hours/yr	8,760	hrs/yr
Nat Gas Fuel Firing, Maximum Hourly Firing Capacity	20.08	MMBtu/hr
Heat Value*	1,020	btu/scf
Nat Gas Fuel Firing, Maximum Hourly Firing Capacity	0.020	MMSCF/hr
Maximum Potenital Annual firing Rate (PTE):	172.452	MMSCF/yr

* Natural gas higher heating value taken from AP42 Chapter 1.4

Pollutant	Emissions Factor	Unit	Potential Emissions	
			(lb/hr)	(tpy)
NSR Pollutants [(a)(b)]				
PM_{TOTAL}	7.60	lb/MMscf	0.15	0.66
NO_X	100	lb/MMscf	1.97	8.62
SO_2	0.6	lb/MMscf	0.01	0.05
CO	84	lb/MMscf	1.65	7.24
VOC	5.5	lb/MMscf	0.11	0.47

Pollutant	Emissions Factor	Unit	Potential Emissions		
			(lb/hr)	(tpy)	
Toxic Pollutants					***HAP?***
2-Methylnaphthalene	2.40E-05	lb/MMscf	4.72E-07	2.07E-06	Y
3-Methylcholanthrene	1.80E-06	lb/MMscf	3.54E-08	1.55E-07	Y
7,12-Dimethylbenz(a)anthracene	1.60E-05	lb/MMscf	3.15E-07	1.38E-06	Y
Acenaphthene	1.80E-06	lb/MMscf	3.54E-08	1.55E-07	Y
Acenaphthylene	1.80E-06	lb/MMscf	3.54E-08	1.55E-07	Y
Anthracene	2.40E-06	lb/MMscf	4.72E-08	2.07E-07	Y
Arsenic	2.00E-04	lb/MMscf	3.94E-06	1.72E-05	Y
Barium	4.40E-03	lb/MMscf	8.66E-05	3.79E-04	N
Benzo(a)anthracene	1.80E-06	lb/MMscf	3.54E-08	1.55E-07	Y
Benzene	2.10E-03	lb/MMscf	4.13E-05	1.81E-04	Y
Benzo(a)pyrene	1.20E-06	lb/MMscf	2.36E-08	1.03E-07	Y
Benzo(b)fluoranthene	1.80E-06	lb/MMscf	3.54E-08	1.55E-07	Y
Benzo(g,h,i)perylene	1.20E-06	lb/MMscf	2.36E-08	1.03E-07	Y
Benzo(k)fluoranthene	1.80E-06	lb/MMscf	3.54E-08	1.55E-07	Y
Beryllium	1.20E-05	lb/MMscf	2.36E-07	1.03E-06	Y
Butane	2.10E+00	lb/MMscf	4.13E-02	1.81E-01	N
Cadmium	1.10E-03	lb/MMscf	2.17E-05	9.48E-05	Y
Chromium	1.40E-03	lb/MMscf	2.76E-05	1.21E-04	Y
Chrysene	1.80E-06	lb/MMscf	3.54E-08	1.55E-07	Y
Cobalt	8.40E-05	lb/MMscf	1.65E-06	7.24E-06	Y
Copper	8.50E-04	lb/MMscf	1.67E-05	7.33E-05	N
Dibenzo(a,h)anthracene	1.20E-06	lb/MMscf	2.36E-08	1.03E-07	Y
Dichlorobenzene	1.20E-03	lb/MMscf	2.36E-05	1.03E-04	Y
Ethane	3.10E+00	lb/MMscf	6.10E-02	2.67E-01	N
Formaldehyde	7.50E-02	lb/MMscf	1.48E-03	6.47E-03	Y
Fluoranthene	3.00E-06	lb/MMscf	5.91E-08	2.59E-07	Y
Fluorene	2.80E-06	lb/MMscf	5.51E-08	2.41E-07	Y
Hexane	1.80E+00	lb/MMscf	3.54E-02	1.55E-01	Y
Indeno(1,2,3-cd)pyrene	1.80E-06	lb/MMscf	3.54E-08	1.55E-07	Y
Lead	5.00E-04	lb/MMscf	9.84E-06	4.31E-05	Y
2-Methylnaphthalene	2.40E-05	lb/MMscf	4.72E-07	2.07E-06	Y
Manganese	3.80E-04	lb/MMscf	7.48E-06	3.28E-05	Y
Mercury	2.60E-04	lb/MMscf	5.12E-06	2.24E-05	Y
Molybdenum	1.10E-03	lb/MMscf	2.17E-05	9.48E-05	N
Naphthalene	6.10E-04	lb/MMscf	1.20E-05	5.26E-05	Y
Nickel	2.10E-03	lb/MMscf	4.13E-05	1.81E-04	Y
Pentane	2.60E+00	lb/MMscf	5.12E-02	2.24E-01	N
Phenanthrene	1.70E-05	lb/MMscf	3.35E-07	1.47E-06	Y
Propane	1.60E+00	lb/MMscf	3.15E-02	1.38E-01	N
Pyrene	5.00E-06	lb/MMscf	9.84E-08	4.31E-07	Y
Selenium	2.40E-05	lb/MMscf	4.72E-07	2.07E-06	Y
Toluene	3.40E-03	lb/MMscf	6.69E-05	2.93E-04	Y
Vanadium	2.30E-03	lb/MMscf	4.53E-05	1.98E-04	N
Zinc	2.90E-02	lb/MMscf	5.71E-04	2.50E-03	N
		Total Toxics	0.223	0.98	
		Total HAPs	0.037	0.16	

[(a)] Emissions factors come from U.S. EPA AP-42 Tables 1.4-1 and 1.4-2. PM emissions factor represents both filterable and condensable fractions. It is conservatively assumed that $PM=PM_{10}=PM_{2.5}$.

[(b)] Emissions factors come from U.S. EPA AP-42 Tables 1.4-2, 1.4-3, and 1.4-4.

Fire Water Pump (Cummins V8) Emissions		
Diesel Fuel Firing, Maximum Potential Operationg Hours/yr	500	hrs/yr
Maximum Rated Capacity	175	hp
Average Fuel Consumption*	7,000.00	Btu/hp

* Based on AP-42 Chapter 3.3 (p.3.3-7)

Pollutant	Emissions Factor	Unit	Potential Emissions	
			(lb/hr)	(tpy)
NSR Pollutants [(a)]				
PM_{TOTAL}	0.31	lb/MMBtu	0.38	0.09
NO_X	4.41	lb/MMBtu	5.40	1.35
SO_2	0.29	lb/MMBtu	0.36	0.09
CO	0.95	lb/MMBtu	1.16	0.29
VOC	0.36	lb/MMBtu	0.44	0.11
Hazardous Air Pollutants (HAP) [(b)]				
1,3-Butadiene	3.91E-05	lb/MMBtu	4.79E-05	1.20E-05
Acetaldehyde	7.67E-04	lb/MMBtu	9.40E-04	2.35E-04
Acenaphthylene	5.06E-06	lb/MMBtu	6.20E-06	1.55E-06
Acenaphthene	1.42E-06	lb/MMBtu	1.74E-06	4.35E-07
Acrolein	9.25E-05	lb/MMBtu	1.13E-04	2.83E-05
Anthracene	1.87E-06	lb/MMBtu	2.29E-06	5.73E-07
Benzo(a)anthracene	1.68E-06	lb/MMBtu	2.06E-06	5.15E-07
Benzo(b)fluoranthene	9.91E-08	lb/MMBtu	1.21E-07	3.03E-08
Benzo(k)fluoranthene	1.55E-07	lb/MMBtu	1.90E-07	4.75E-08
Benzo(a)pyrene	1.88E-07	lb/MMBtu	2.30E-07	5.76E-08
Benzene	9.33E-04	lb/MMBtu	1.14E-03	2.86E-04
Benzo(g,h,i)perylene	4.89E-07	lb/MMBtu	5.99E-07	1.50E-07
Chrysene	3.53E-07	lb/MMBtu	4.32E-07	1.08E-07
Dibenzo(a,h)anthracene	5.83E-07	lb/MMBtu	7.14E-07	1.79E-07
Formaldehyde	1.18E-03	lb/MMBtu	1.45E-03	3.61E-04
Fluoranthene	7.61E-06	lb/MMBtu	9.32E-06	2.33E-06
Fluorene	2.92E-05	lb/MMBtu	3.58E-05	8.94E-06
Indeno(1,2,3-cd)pyrene	3.75E-07	lb/MMBtu	4.59E-07	1.15E-07
Naphthalene	8.48E-05	lb/MMBtu	1.04E-04	2.60E-05
Phenanthrene	2.94E-05	lb/MMBtu	3.60E-05	9.00E-06
Propylene	2.58E-03	lb/MMBtu	3.16E-03	7.90E-04
Pyrene	4.78E-06	lb/MMBtu	5.86E-06	1.46E-06
Xylenes	2.85E-04	lb/MMBtu	3.49E-04	8.73E-05
Toluene	4.09E-04	lb/MMBtu	5.01E-04	1.25E-04
Total PAHs	1.68E-04	lb/MMBtu	2.06E-04	5.15E-05
		Total HAP	7.91E-03	1.98E-03

[(a)] Emissions factors come from U.S. EPA AP-42 Tables 3.3-1. PM emissions factor represents both filterable and condensable fractions. It is conservatively assumed that $PM=PM_{10}=PM_{2.5}$.

[(b)] Emissions factors come from U.S. EPA AP-42 Tables 3.3-2. (April 2025)

Starch Storage Silo Emissions					
Pollutant	Emissions Factor [a]	Potential Emissions [b][c]			
		Uncontrolled		Controlled [d]	
	(lb/ton starch)	(lb/hr)	(tpy)	(lb/hr)	(tpy)
PM	0.180	0.132	52.8	1.32E-03	0.528
PM_{10}	5.90E-02	0.043	17.3	4.34E-04	0.173
$PM_{2.5}$	1.00E-02	7.35E-03	2.93	7.35E-05	2.93E-02

[a] Emissions factors come from U.S. EPA AP-42 Tables 9.9.1-1.

[b] The hourly emissions rates are based on the maximum operational capacity of the Corrugator on an hourly basis.

[c] Emissions from the Starch Storage Silo are adjusted to account for baghouse collection efficiency for PM, PM_{10}, and $PM_{2.5}$ per guidance from U.S. EPA AP-42 Appendix B.2, Table B.2-3.

Calculations are based on the following inputs:

Parameter	Value
Starch Potential Throughput (tons/yr)	6,445
hrs/yr	8,760
Hourly Corrugator Throughput (Msf/hr) [b]	588
Annual Corrugator Throughput (Msf/yr)	5,156,000
Starch Loading Rate (lb starch/Msf)	2.5
PM Control Efficiency (%) [c]	99%
hr loading/yr [d]	91
lb/ton	2,000

[d] Annual starch loading rate is determined by the number of starch loads and the time to unload each batch. Each 24-ton load of starch takes one hour to transfer from the truck into the silo.

Scrap Paper Handling Systems #1 & #2 Emissions		
Each Cyclone System, Maximum Potential Operating Hours/yr:	8760	hrs/yr
Each Cyclone System, Maximum Hourly Capacity:	1.2	Tons Scrap/hr
Each Cyclone System, Maximum Annual Capacity (PTE):	10,228	Tons Scrap/Yr

			Scrap Paper Handling System #1		Scrap Paper Handling System #2	
Pollutant	**Emissions Factor**	**Unit**	**Potential Emissions**		**Potential Emissions**	
			(lb/hr)**	**(tpy)**	**(lb/hr)****	**(tpy)**
PM [(a)]	2.17	(lb/ton baled)	2.53	11.10	2.53	11.10
PM_{10} [(a)]	0.38	(lb/ton baled)	0.44	1.94E+00	0.44	1.94E+00
$PM_{2.5}$ [(a)]	0.065	(lb/ton baled)	0.08	0.33	0.08	0.33

[(a)] Emissions factors for PM, PM10 and PM2.5 come from NCASI Plant Specific Report on EPA M201A/M202 Testing for Trim/Scrap Handling Cyclones at PCA Corrugating/Converting Plants E. (February 2, 2023)

* Potential scrap/yr assumed to be evenly split between Scrap Paper Handling System #1 and Scrap Paper Handling System #2

** Based on total operating hours of facility

Potential Emissions Summary

Pollutant	**Potential Emissions**	
	(lb/hr)	**(tpy)**
PM	5.07	22.19
PM10	8.87E-01	3.89E+00
PM2.5	1.52E-01	6.65E-01

Corrugator Emissions		
Corrugator, Maximum Potential Operating Hours/yr:	8760	hrs/yr
Sheet Width:	98	in
Max Line Speed:	1000	ft/min
Corrugator, Maximum Hourly Production Capacity:	490,000	SF/hr
Corrugator, Maximum Annual Production Capacity (PTE):	4,292,400,000	SF/yr
Corrugator, Maximum Annual Production Capacity (PTE):	4,292,400	MSF/yr

Product	Pollutant	Emissions Factor [(a)]	Unit	Potential Emissions	
				(lb/hr)	(tpy)
Starch	None	0.00	lbs/MSF	0.00	0.00
Borax	None	0.00	lbs/MSF	0.00	0.00
Caustic Soda	None	0.00	lbs/MSF	0.00	0.00
IP Resin	None	0.00	lbs/MSF	0.00	0.00
XM5 Pentrant	None	0.00	lbs/MSF	0.00	0.00
IPX Adhesive Addit.	VOC	1.03E-04	lbs/MSF	0.05	0.22
Corrugated Sheet	VOC*	4.61E-03	lbs/MSF	2.26	9.90

* Emissions factors come from NCASI Corrugator Sheet Plant Testing for VOCs and Selected HAPs, May 2018. Emissions factors are based on Plant C; 100% double-walled corrugation factors. NMTGOC emission factor adjusted from carbon to methane.

Wax Emissions from Corrugator		
Wax Maximum Hourly Usage	178.44	lbs/hr
Wax Maximum Annual Usage	1,563,171	lbs/yr

* Maximum annual wax usage based on maximum production of equipment and historical data

Product	Average VOC Content (% by weight)	Potential Emissions	
		(lb/hr)	(tpy)
AM Wax 1480	0.01%	1.78E-02	7.82E-02

* VOC content based on the product SDS

Potential Emissions Summary

Pollutant	Potential Emissions	
	(lb/hr)	(tpy)
VOC	2.33	10.20

Machine #5134 Flexographic Folder Gluer Emissions		
Flexo, Maximum Potential Operating Hours/yr:	8760	hrs/yr
Flexo, Maximum Hourly Production Capacity:	268.25	MSF/hr
Flexo, Maximum Annual Production Capacity (PTE):	2,349,870	MSF/yr
Ink Usage (assume 100% coverage):	0.36	lb/MSF
Ink, Maximum Hourly Usage:	96.57	lb/hr
Ink, Maximum Annual Usage (PTE):	845,953	lb/yr
Additives, Maximum Hourly Usage: *	9.7	lb/hr
Additives, Maximum Annual Usage (PTE):	84,595.3	lb/yr
Adhesive, Maximum Hourly Usage:	32.70	lb/hr
Adhesive, Maximum Annual Usage (PTE):	286,473	lb/yr

* Total additive usage conservatively estimated as 10% of total ink usage (total additive usage was ~3% of ink usage according to 2024-2025 YTD vendor data)

Product Category	Product	Pollutant	Average Pollutant Content (% by weight)	Potential Emissions	
				(lb/hr)	(tpy)
Inks	Inks	VOC	0.29%	0.28	1.23
Additives	Additives	VOC	4.45%	0.43	1.88
Adhesive	Cold Set Glue (33-034A)	VOC	0.09%	2.94E-02	0.13
Inks	Inks	benzene	0.0000%	2.87E-07	0.00
Inks	Inks	ethylene oxide; oxirane	0.0000%	3.33E-08	0.00
Inks	Inks	acrylic acid	0.0010%	9.47E-04	0.00
Inks	Inks	styrene oxide; (epoxyethyl)benzene; phenyloxirane	0.0000%	2.84E-05	0.00
Inks	Inks	lead powder; [particle diameter < 1 mm]	0.0000%	2.38E-06	0.00
Inks	Inks	dipropylene glycol monomethyl ether	0.0148%	1.43E-02	0.06
Inks	Inks	1,4-dioxane	0.0000%	4.80E-06	0.00
Inks	Inks	polychlorobiphenyls; PCB	0.0000%	1.22E-05	0.00
Inks	Inks	1,4-dihydroxybenzene; hydroquinone; quinol	0.0000%	2.84E-06	0.00
Inks	Inks	toluene	0.0000%	2.56E-06	0.00
Inks	Inks	styrene	0.0063%	6.06E-03	0.03
Inks	Inks	ethylbenzene	0.0000%	1.15E-05	0.00
Inks	Inks	3,3'-dichlorobenzidine	0.0000%	1.20E-05	0.00
Inks	Inks	o-toluidine; 2-aminotoluene	0.0000%	1.16E-05	0.00
Inks	Inks	3,3'-dimethoxybenzidine; o-dianisidine	0.0000%	1.70E-07	0.00
Inks	Inks	ethanediol; ethylene glycol	0.0000%	6.99E-06	0.00
Inks	Inks	Hydrogen Cyanide	0.0055%	5.33E-03	0.02
Inks	Inks	arsenic	0.0000%	4.88E-06	0.00
Inks	Inks	hexachlorobenzene	0.0000%	1.99E-07	0.00
Inks	Inks	nickel	0.0000%	5.88E-06	0.00
Inks	Inks	chromium	0.0001%	1.02E-04	0.00
Inks	Inks	selenium	0.0000%	3.04E-06	0.00
Inks	Inks	mercury	0.0000%	2.19E-06	0.00
Inks	Inks	Antimony	0.0000%	6.09E-06	0.00
Inks	Inks	cadmium (non-pyrophoric)	0.0000%	2.19E-06	0.00
Inks	Inks	2-methoxyaniline; o-anisidine	0.0000%	8.52E-07	0.00

* Pollutant content values for Inks are based on the weighted average of the % pollutant of all inks purchased by the facility in 2024-2025 YTD, as indicated by vendor data

Potential Emissions Summary

Pollutant	Potential Emissions	
	(lb/hr)	(tpy)
VOC	0.74	3.24
Total HAPs	2.68E-02	1.18E-01

Machine #5224 Flexographic Folder Gluer Emissions		
Flexo, Maximum Potential Operating Hours/yr:	8760	hrs/yr
Flexo, Maximum Hourly Production Capacity:	207.58	MSF/hr
Flexo, Maximum Annual Production Capacity (PTE):	1,818,430	MSF/yr
Ink Usage (assume 100% coverage):	0.36	lb/MSF
Ink, Maximum Hourly Usage:	74.73	lb/hr
Ink, Maximum Annual Usage (PTE):	654,635	lb/yr
Additives, Maximum Hourly Usage: *	7.5	lb/hr
Additives, Maximum Annual Usage (PTE):	65,463.5	lb/yr
Adhesive, Maximum Hourly Usage:	25.31	lb/hr
Adhesive, Maximum Annual Usage (PTE):	221,685	lb/yr

* Total additive usage conservatively estimated as 10% of total ink usage (total additive usage was ~3% of ink usage according to 2024-2025 YTD vendor data)

Product Category	Product	Pollutant	Average Pollutant Content (% by weight)	Potential Emissions	
				(lb/hr)	(tpy)
Inks	Inks	VOC	0.29%	0.22	0.95
Additives	Additives	VOC	4.45%	0.33	1.46
Adhesive	Cold Set Glue (33-034A)	VOC	0.09%	2.28E-02	0.10
Inks	Inks	benzene	0.0000%	2.22E-07	0.00
Inks	Inks	ethylene oxide; oxirane	0.0000%	2.57E-08	0.00
Inks	Inks	acrylic acid	0.0010%	7.33E-04	0.00
Inks	Inks	styrene oxide; (epoxyethyl)benzene; phenyloxirane	0.0000%	2.20E-05	0.00
Inks	Inks	lead powder; [particle diameter < 1 mm]	0.0000%	1.84E-06	0.00
Inks	Inks	dipropylene glycol monomethyl ether	0.0148%	1.10E-02	0.05
Inks	Inks	1,4-dioxane	0.0000%	3.72E-06	0.00
Inks	Inks	polychlorobiphenyls; PCB	0.0000%	9.43E-06	0.00
Inks	Inks	1,4-dihydroxybenzene; hydroquinone; quinol	0.0000%	2.20E-06	0.00
Inks	Inks	toluene	0.0000%	1.98E-06	0.00
Inks	Inks	styrene	0.0063%	4.69E-03	0.02
Inks	Inks	ethylbenzene	0.0000%	8.90E-06	0.00
Inks	Inks	3,3'-dichlorobenzidine	0.0000%	9.27E-06	0.00
Inks	Inks	o-toluidine; 2-aminotoluene	0.0000%	8.95E-06	0.00
Inks	Inks	3,3'-dimethoxybenzidine; o-dianisidine	0.0000%	1.31E-07	0.00
Inks	Inks	ethanediol; ethylene glycol	0.0000%	5.41E-06	0.00
Inks	Inks	Hydrogen Cyanide	0.0055%	4.12E-03	0.02
Inks	Inks	arsenic	0.0000%	3.78E-06	0.00
Inks	Inks	hexachlorobenzene	0.0000%	1.54E-07	0.00
Inks	Inks	nickel	0.0000%	4.55E-06	0.00
Inks	Inks	chromium	0.0001%	7.92E-05	0.00
Inks	Inks	selenium	0.0000%	2.35E-06	0.00
Inks	Inks	mercury	0.0000%	1.69E-06	0.00
Inks	Inks	Antimony	0.0000%	4.71E-06	0.00
Inks	Inks	cadmium (non-pyrophoric)	0.0000%	1.69E-06	0.00
Inks	Inks	2-methoxyaniline; o-anisidine	0.0000%	6.59E-07	0.00

* Pollutant content values for Inks are based on the weighted average of the % pollutant of all inks purchased by the facility in 2024-2025 YTD, as indicated by vendor data

Potential Emissions Summary

Pollutant	Potential Emissions	
	(lb/hr)	(tpy)
VOC	0.57	2.50
Total HAPs	2.08E-02	9.10E-02

Machine #5184 Flexographic Folder Gluer Emissions		
Flexo, Maximum Potential Operating Hours/yr:	8760	hrs/yr
Flexo, Maximum Hourly Production Capacity:	229.17	MSF/hr
Flexo, Maximum Annual Production Capacity (PTE):	2,007,500	MSF/yr
Ink Usage (assume 100% coverage):	0.36	lb/MSF
Ink, Maximum Hourly Usage:	82.50	lb/hr
Ink, Maximum Annual Usage (PTE):	722,700	lb/yr
Additives, Maximum Hourly Usage: *	8.3	lb/hr
Additives, Maximum Annual Usage (PTE):	72,270.0	lb/yr
Adhesive, Maximum Hourly Usage:	27.94	lb/hr
Adhesive, Maximum Annual Usage (PTE):	244,735	lb/yr

* Total additive usage conservatively estimated as 10% of total ink usage (total additive usage was ~3% of ink usage according to 2024-2025 YTD vendor data)

Product Category	Product	Pollutant	Average Pollutant Content (% by weight) *	Potential Emissions	
				(lb/hr)	(tpy)
Inks	Inks	VOC	0.29%	0.24	1.05
Additives	Additives	VOC	4.45%	0.37	1.61
Adhesive	Cold Set Glue (33-034A)	VOC	0.09%	2.51E-02	0.11
Inks	Inks	benzene	0.0000%	2.45E-07	0.00
Inks	Inks	ethylene oxide; oxirane	0.0000%	2.84E-08	0.00
Inks	Inks	acrylic acid	0.0010%	8.09E-04	0.00
Inks	Inks	styrene oxide; (epoxyethyl)benzene; phenyloxirane	0.0000%	2.43E-05	0.00
Inks	Inks	lead powder; [particle diameter < 1 mm]	0.0000%	2.03E-06	0.00
Inks	Inks	dipropylene glycol monomethyl ether	0.0148%	1.22E-02	0.05
Inks	Inks	1,4-dioxane	0.0000%	4.10E-06	0.00
Inks	Inks	polychlorobiphenyls; PCB	0.0000%	1.04E-05	0.00
Inks	Inks	1,4-dihydroxybenzene; hydroquinone; quinol	0.0000%	2.43E-06	0.00
Inks	Inks	toluene	0.0000%	2.19E-06	0.00
Inks	Inks	styrene	0.0063%	5.18E-03	0.02
Inks	Inks	ethylbenzene	0.0000%	9.82E-06	0.00
Inks	Inks	3,3'-dichlorobenzidine	0.0000%	1.02E-05	0.00
Inks	Inks	o-toluidine; 2-aminotoluene	0.0000%	9.89E-06	0.00
Inks	Inks	3,3'-dimethoxybenzidine; o-dianisidine	0.0000%	1.45E-07	0.00
Inks	Inks	ethanediol; ethylene glycol	0.0000%	5.97E-06	0.00
Inks	Inks	Hydrogen Cyanide	0.0055%	4.55E-03	0.02
Inks	Inks	arsenic	0.0000%	4.17E-06	0.00
Inks	Inks	hexachlorobenzene	0.0000%	1.70E-07	0.00
Inks	Inks	nickel	0.0000%	5.02E-06	0.00
Inks	Inks	chromium	0.0001%	8.74E-05	0.00
Inks	Inks	selenium	0.0000%	2.59E-06	0.00
Inks	Inks	mercury	0.0000%	1.87E-06	0.00
Inks	Inks	Antimony	0.0000%	5.20E-06	0.00
Inks	Inks	cadmium (non-pyrophoric)	0.0000%	1.87E-06	0.00
Inks	Inks	2-methoxyaniline; o-anisidine	0.0000%	7.28E-07	0.00

* Pollutant content values for Inks are based on the weighted average of the % pollutant of all inks purchased by the facility in 2024-2025 YTD, as indicated by vendor data

Potential Emissions Summary

Pollutant	Potential Emissions	
	(lb/hr)	(tpy)
VOC	0.63	2.76
Total HAPs	2.29E-02	1.00E-01

SUN 625HD Machine Rotary Die Cutter Emissions		
Die Cutter, Maximum Potential Operating Hours/yr:	8760	hrs/yr
Die Cutter, Maximum Hourly Production Capacity:	322.63	MSF/hr
Die Cutter, Maximum Annual Production Capacity (PTE):	2,826,240	MSF/yr
Ink Usage (assume 100% coverage):	0.36	lb/MSF
Ink, Maximum Hourly Usage:	116.15	lb/hr
Ink, Maximum Annual Usage (PTE):	1,017,446	lb/yr
Additives, Maximum Hourly Usage: *	11.6	lb/hr
Additives, Maximum Annual Usage (PTE):	101,744.6	lb/yr
Adhesive, Maximum Hourly Usage:	-	lb/hr
Adhesive, Maximum Annual Usage (PTE):	-	lb/yr

* Total additive usage conservatively estimated as 10% of total ink usage (total additive usage was ~3% of ink usage according to 2024-2025 YTD vendor data)

Product Category	Product	Pollutant	Average Pollutant Content (% by weight)	Potential Emissions	
				(lb/hr)	(tpy)
Inks	Inks	VOC	0.29%	0.34	1.47
Additives	Additives	VOC	4.76%	0.55	2.42
Adhesive	Cold Set Glue (33-034A)	VOC	0.09%	0.00E+00	0.00
Inks	Inks	benzene	0.0000%	3.45E-07	0.00
Inks	Inks	ethylene oxide; oxirane	0.0000%	4.00E-08	0.00
Inks	Inks	acrylic acid	0.0010%	1.14E-03	0.00
Inks	Inks	styrene oxide; (epoxyethyl)benzene; phenyloxirane	0.0000%	3.42E-05	0.00
Inks	Inks	lead powder; [particle diameter < 1 mm]	0.0000%	2.86E-06	0.00
Inks	Inks	dipropylene glycol monomethyl ether	0.0148%	1.72E-02	0.08
Inks	Inks	1,4-dioxane	0.0000%	5.78E-06	0.00
Inks	Inks	polychlorobiphenyls; PCB	0.0000%	1.47E-05	0.00
Inks	Inks	1,4-dihydroxybenzene; hydroquinone; quinol	0.0000%	3.42E-06	0.00
Inks	Inks	toluene	0.0000%	3.08E-06	0.00
Inks	Inks	styrene	0.0063%	7.29E-03	0.03
Inks	Inks	ethylbenzene	0.0000%	1.38E-05	0.00
Inks	Inks	3,3'-dichlorobenzidine	0.0000%	1.44E-05	0.00
Inks	Inks	o-toluidine; 2-aminotoluene	0.0000%	1.39E-05	0.00
Inks	Inks	3,3'-dimethoxybenzidine; o-dianisidine	0.0000%	2.04E-07	0.00
Inks	Inks	ethanediol; ethylene glycol	0.0000%	8.41E-06	0.00
Inks	Inks	Hydrogen Cyanide	0.0055%	6.41E-03	0.03
Inks	Inks	arsenic	0.0000%	5.87E-06	0.00
Inks	Inks	hexachlorobenzene	0.0000%	2.39E-07	0.00
Inks	Inks	nickel	0.0000%	7.07E-06	0.00
Inks	Inks	chromium	0.0001%	1.23E-04	0.00
Inks	Inks	selenium	0.0000%	3.65E-06	0.00
Inks	Inks	mercury	0.0000%	2.63E-06	0.00
Inks	Inks	Antimony	0.0000%	7.32E-06	0.00
Inks	Inks	cadmium (non-pyrophoric)	0.0000%	2.63E-06	0.00
Inks	Inks	2-methoxyaniline; o-anisidine	0.0000%	1.02E-06	0.00

* Pollutant content values for Inks are based on the weighted average of the % pollutant of all inks purchased by the facility in 2024-2025 YTD, as indicated by vendor data

Potential Emissions Summary

Pollutant	Potential Emissions	
	(lb/hr)	(tpy)
VOC	0.89	3.89
Total HAPs	3.23E-02	1.41E-01

Machine #7700 Wax Cascader Emissions		
Cascader, Maximum Potential Operating Hours/yr:	8760	hrs/yr
Wax, Maximum Hourly Usage:	805.45	lb/hr
Wax, Maximum Annual Usage (PTE):	7,055,744	lb/yr

Product	Average VOC Content (% by weight) *	Potential Emissions	
		(lb/hr)	(tpy)
AM Wax 2135	0.01%	8.05E-02	3.53E-01

* VOC content based on the product SDS

* Maximum annual wax usage based on maximum production of equipment and historical data

Machine #7710 Wax Cascader Emissions		
Cascader, Maximum Potential Operating Hours/yr:	8760	hrs/yr
Cascader, Maximum Hourly Production Capacity[(a)]:	62.50	MSF/hr
Cascader, Maximum Annual Production Capacity (PTE):	547,500	MSF/yr
Wax, Maximum Hourly Usage:	805.45	lb/hr
Wax, Maximum Annual Usage (PTE):	7,055,744	lb/yr

[(a)] Hourly production capacity based on maximum blanks per hour and blank size (ft^2)

Product	Average VOC Content (% by weight) *	Potential Emissions	
		(lb/hr)	(tpy)
AM Wax 2135	0.01%	8.05E-02	3.53E-01

* VOC content based on the product SDS

* Maximum annual wax usage based on maximum production of equipment and historical data

Wax Storage Tanks		
Product Name	**Usage**	
	(lb/yr)	**(gal/yr)**
AM Wax 2125	14,111,488	2,351,915
AM Wax 1480	1,563,171	260,528
Total	**15,674,659**	**2,612,443**

Tank Capacity (gal)	**Throughput**	
	(gal/yr)	
10,000	783,972	Cascader
10,000	783,972	
10,000	783,972	
8,000	260,528	Corrugator
8,000		
35,745	142,980	Rail Dock
81,745	**2,612,444**	

Tank Emission Summary			
Tank	**Breathing Losses (lb/yr)**	**Working Losses (lb/yr)**	**Total (ton/yr)**
10,000 gallon	--	75.45	0.037725
10,000 gallon	--	75.45	0.037725
10,000 gallon	--	75.45	0.037725
8,000 gallon	--	22.82	0.01141
8,000 gallon	--	22.82	0.01141
35,745 gallon	--	25.05	0.012525
Total	**0**	**297.04**	**0.14852**

Notes:

Tank emission calculations based on AP-42 Chapter 7: Liquid Storage Tanks version October 2024.

Product characteristics are based on vendor safety data sheets.

Tank throughput for each tank prorated based on total wax storage tank capacity and historical data.

Tanks heated to 200 deg F. There are not breathing losses from heated tanks.

APT 1.1

ASHWORTH LEININGER GROUP

-42 Tanks: Version 1.1 (01/13/23)

ganic Liquid Storage Tank Emissions Calculation Spreadsheet Tool following EPA AP-42 Chapter 7

Emissions Report

Tank	Wax Storage Tank 10,000 gal
Facility	International Paper - Yuma
Site Location	Yuma, Arizona

Tank Identification and Physical Characteristics

Tank Description	Month	Throughput (gal)	Tank Type	Diameter (ft)	Working Volume (gal)	Shell Color/ Shade	Shell Condition	Paint Solar Absorp. Factor	Heated Tank	Underground or Jacketed
Wax Storage Tank	Annual 2024	783,972.00	HFR	9.00	10,000	White/White	Average	0.00	TRUE	Fully Insulated
	Annual	783,972.00								

Emissions Summary

Chemical Component	CAS Number	Fixed Roof Tank Losses		Floating Roof Tank Losses				Total Emissions (lbs/yr)
		Working Loss (lbs/yr)	Breathing Loss (lbs/yr)	Rim Seal Loss (lbs/yr)	Withdrawal Loss (lbs/yr)	Deck Fitting Loss (lbs/yr)	Deck Seam Loss (lbs/yr)	
Paraffin Wax	8002-74-2	75.45	0.00	0.00	0.00	0.00	0.00	75.45

Print Date: 11/21/2025

APT 1.1

ASHWORTH LEININGER GROUP

P-42 Tanks: Version 1.1 (01/13/23)

ganic Liquid Storage Tank Emissions Calculation Spreadsheet Tool following EPA AP-42 Chapter 7

Emissions Report

Tank	Wax Storage Tank 10,000 gal
Facility	International Paper - Yuma
Site Location	Yuma, Arizona

Meteorological Data

Meteorological Data Set	Month	Daily Ambient Temperature (deg F) Avg.	Min.	Max.	Daily Total Solar Insulation Factor (Btu/ft^2 day)	Daily Vapor Temp Range (deg F)	Liquid Bulk Temp (deg F)	Daily Liquid Surf. Temperature (deg F) Avg.	Min.	Max.	Wind Speed (mph)	Ambient Pressure (psia)
Yuma, AZ	Annual 2024	74.17	60.47	87.87	1,923	0.00	200.00	200.00	200.00	200.00	7.841667	14.60
	Annual	74.17			1,923		200.00	200.00			7.8	14.60

Liquid Contents of Storage Tank

Material Stored	Month	Material Type	Vapor Pressure (psia) Avg.	Min.	Max.	Vapor Pressure Range (psia)	Basis for Vapor Pressure Calculations	Vapor Mol. Weight (lb/lbmol)	Mol. Weight (lb/lbmol)	Avg. Liquid Density (lb/gal)
Paraffin Wax	Annual 2024	Petroleum Distillates	0.0183	0.0183	0.0183	0.0000	VP100=0.0183	506.96	506.96	7.24
	Annual		0.0183					507.0	507.0	7.2

Print Date: 11/21/2025

Emissions Report

Tank	Wax Storage Tank 10,000 gal
Facility	International Paper - Yuma
Site Location	Yuma, Arizona

Detail Calculations (AP-42) - Horizontal Fixed Roof Tanks

Month	Annual 2024	Annual
Standing Storage Losses [LS] (lbs)	0.00	0.00
Vapor Space Volume [VV] (ft^3)	700	
Effective Diameter [DE] (ft)	15.88	
Shell Length [L] (ft)	22	
Vapor Space Outage [HVO] (ft)	3.53	
Effective Height [HE] (ft)	7.07	
Vapor Density [WV] (lbs/ft^3)	0.0013	
Paint Solar Absorptance Factor [α], Shell	0	
Average Vapor Temperature [TV] (R)	659.67	
Vapor Space Expansion Factor [KE]	0.0000	
Breather Vent Pressure Setting [PBP] (psig)	0	
Breather Vent Vacuum Setting [PBV] (psig)	0	
Vented Vapor Saturation Factor [KS]	0.9966	
Working Losses [LW] (lbs)	75.45	75.45
Working Loss Turnover (Saturation) Factor [KN]	0.5493	
Turnovers [N]	78.40	
Working Loss Product Factor [KP]	1	
Vent Setting Correction Factor [KB]	1.0000	
Pressure of Vapor Space (PI) (psig)	0.0000	
Total Losses (lbs)	75.45	75.45

APT 1.1

ASHWORTH LEININGER GROUP

-42 Tanks: Version 1.1 (01/13/23)

ganic Liquid Storage Tank Emissions Calculation Spreadsheet Tool following EPA AP-42 Chapter 7

Emissions Report

Tank	Wax Storage Tank 16,000 gal
Facility	International Paper - Yuma
Site Location	Yuma, Arizona

Tank Identification and Physical Characteristics

Tank Description	Month	Throughput (gal)	Tank Type	Diameter (ft)	Working Volume (gal)	Shell Color/ Shade	Shell Condition	Paint Solar Absorp. Factor	Heated Tank	Underground or Jacketed
Wax Storage Tank	Annual 2024	260,528.00	HFR	12.00	16,000	White/White	Average	0.00	TRUE	Fully Insulated
	Annual	260,528.00								

Emissions Summary

Chemical Component	CAS Number	Fixed Roof Tank Losses		Floating Roof Tank Losses				Total Emissions (lbs/yr)
		Working Loss (lbs/yr)	Breathing Loss (lbs/yr)	Rim Seal Loss (lbs/yr)	Withdrawal Loss (lbs/yr)	Deck Fitting Loss (lbs/yr)	Deck Seam Loss (lbs/yr)	
Paraffin Wax	8002-74-2	45.64	0.00	0.00	0.00	0.00	0.00	45.64

APT 1.1

ASHWORTH LEININGER GROUP

-42 Tanks: Version 1.1 (01/13/23)

ganic Liquid Storage Tank Emissions Calculation Spreadsheet Tool following EPA AP-42 Chapter 7

Emissions Report

Tank	Wax Storage Tank 16,000 gal
Facility	International Paper - Yuma
Site Location	Yuma, Arizona

Meteorological Data

Meteorological Data Set	Month	Daily Ambient Temperature (deg F) Avg.	Min.	Max.	Daily Total Solar Insulation Factor (Btu/ft^2 day)	Daily Vapor Temp Range (deg F)	Liquid Bulk Temp (deg F)	Daily Liquid Surf. Temperature (deg F) Avg.	Min.	Max.	Wind Speed (mph)	Ambient Pressure (psia)
Yuma, AZ	Annual 2024	74.17	60.47	87.87	1,923	0.00	200.00	200.00	200.00	200.00	7.841667	14.60
	Annual	74.17			1,923		200.00	200.00			7.8	14.60

Liquid Contents of Storage Tank

Material Stored	Month	Material Type	Vapor Pressure (psia) Avg.	Min.	Max.	Vapor Pressure Range (psia)	Basis for Vapor Pressure Calculations	Vapor Mol. Weight (lb/lbmol)	Mol. Weight (lb/lbmol)	Avg. Liquid Density (lb/gal)
Paraffin Wax	Annual 2024	Petroleum Distillates	0.0183	0.0183	0.0183	0.0000	VP100=0.0183	506.96	506.96	7.24
	Annual		0.0183					507.0	507.0	7.2

Print Date: 11/21/2025

Emissions Report

Tank	Wax Storage Tank 16,000 gal
Facility	International Paper - Yuma
Site Location	Yuma, Arizona

Detail Calculations (AP-42) - Horizontal Fixed Roof Tanks

Month	Annual 2024	Annual
Standing Storage Losses [LS] (lbs)	0.00	0.00
Vapor Space Volume [VV] (ft^3)	1,131	
Effective Diameter [DE] (ft)	17.48	
Shell Length [L] (ft)	20	
Vapor Space Outage [HVO] (ft)	4.71	
Effective Height [HE] (ft)	9.42	
Vapor Density [WV] (lbs/ft^3)	0.0013	
Paint Solar Absorptance Factor [α], Shell	0	
Average Vapor Temperature [TV] (R)	659.67	
Vapor Space Expansion Factor [KE]	0.0000	
Breather Vent Pressure Setting [PBP] (psig)	0	
Breather Vent Vacuum Setting [PBV] (psig)	0	
Vented Vapor Saturation Factor [KS]	0.9955	
Working Losses [LW] (lbs)	45.64	45.64
Working Loss Turnover (Saturation) Factor [KN]	1.0000	
Turnovers [N]	16.28	
Working Loss Product Factor [KP]	1	
Vent Setting Correction Factor [KB]	1.0000	
Pressure of Vapor Space (PI) (psig)	0.0000	
Total Losses (lbs)	45.64	45.64

APT 1.1

ASHWORTH LEININGER GROUP

-42 Tanks: Version 1.1 (01/13/23)

ganic Liquid Storage Tank Emissions Calculation Spreadsheet Tool following EPA AP-42 Chapter 7

Emissions Report

Tank	Wax Storage Tank 35,000 gal
Facility	International Paper - Yuma
Site Location	Yuma, Arizona

Tank Identification and Physical Characteristics

Tank Description	Month	Throughput (gal)	Tank Type	Diameter (ft)	Working Volume (gal)	Shell Color/ Shade	Shell Condition	Paint Solar Absorp. Factor	Heated Tank	Underground or Jacketed
Wax Storage Tank	Annual 2024	142,980.00	HFR	13.00	35,745	White/White	Average	0.00	TRUE	Fully Insulated
	Annual	142,980.00								

Emissions Summary

Chemical Component	CAS Number	Fixed Roof Tank Losses		Floating Roof Tank Losses				Total Emissions (lbs/yr)
		Working Loss (lbs/yr)	Breathing Loss (lbs/yr)	Rim Seal Loss (lbs/yr)	Withdrawal Loss (lbs/yr)	Deck Fitting Loss (lbs/yr)	Deck Seam Loss (lbs/yr)	
Paraffin Wax	8002-74-2	25.05	0.00	0.00	0.00	0.00	0.00	25.05

APT 1.1

ASHWORTH LEININGER GROUP

P-42 Tanks: Version 1.1 (01/13/23)

ganic Liquid Storage Tank Emissions Calculation Spreadsheet Tool following EPA AP-42 Chapter 7

Emissions Report

Tank	Wax Storage Tank 35,000 gal
Facility	International Paper - Yuma
Site Location	Yuma, Arizona

Meteorological Data

Meteorological Data Set	Month	Daily Ambient Temperature (deg F) Avg.	Min.	Max.	Daily Total Solar Insulation Factor (Btu/ft^2 day)	Daily Vapor Temp Range (deg F)	Liquid Bulk Temp (deg F)	Daily Liquid Surf. Temperature (deg F) Avg.	Min.	Max.	Wind Speed (mph)	Ambient Pressure (psia)
Yuma, AZ	Annual 2024	74.17	60.47	87.87	1,923	0.00	200.00	200.00	200.00	200.00	7.841667	14.60
	Annual	74.17			1,923		200.00	200.00			7.8	14.60

Liquid Contents of Storage Tank

Material Stored	Month	Material Type	Vapor Pressure (psia) Avg.	Min.	Max.	Vapor Pressure Range (psia)	Basis for Vapor Pressure Calculations	Vapor Mol. Weight (lb/lbmol)	Mol. Weight (lb/lbmol)	Avg. Liquid Density (lb/gal)
Paraffin Wax	Annual 2024	Petroleum Distillates	0.0183	0.0183	0.0183	0.0000	VP100=0.0183	506.96	506.96	7.24
	Annual		0.0183					507.0	507.0	7.2

Print Date: 11/21/2025

Emissions Report

Tank	Wax Storage Tank 35,000 gal
Facility	International Paper - Yuma
Site Location	Yuma, Arizona

Detail Calculations (AP-42) - Horizontal Fixed Roof Tanks

Month	Annual 2024	Annual
Standing Storage Losses [LS] (lbs)	0.00	0.00
Vapor Space Volume [VV] (ft^3)	2,389	
Effective Diameter [DE] (ft)	24.41	
Shell Length [L] (ft)	36	
Vapor Space Outage [HVO] (ft)	5.11	
Effective Height [HE] (ft)	10.21	
Vapor Density [WV] (lbs/ft^3)	0.0013	
Paint Solar Absorptance Factor [α], Shell	0	
Average Vapor Temperature [TV] (R)	659.67	
Vapor Space Expansion Factor [KE]	0.0000	
Breather Vent Pressure Setting [PBP] (psig)	0	
Breather Vent Vacuum Setting [PBV] (psig)	0	
Vented Vapor Saturation Factor [KS]	0.9951	
Working Losses [LW] (lbs)	25.05	25.05
Working Loss Turnover (Saturation) Factor [KN]	1.0000	
Turnovers [N]	4.00	
Working Loss Product Factor [KP]	1	
Vent Setting Correction Factor [KB]	1.0000	
Pressure of Vapor Space (PI) (psig)	0.0000	
Total Losses (lbs)	25.05	25.05

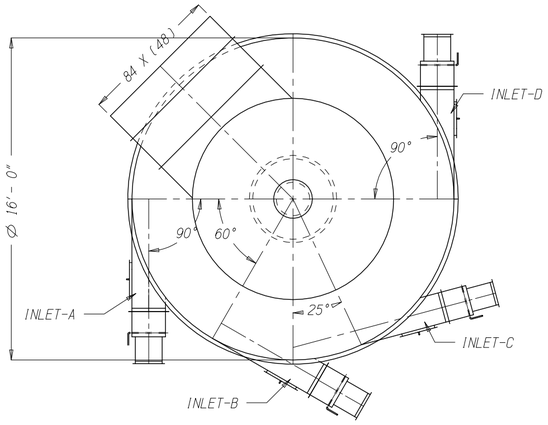
Emissions Report
Total Emissions Summary - All Tanks in Report

Emissions Report: Annual 2024

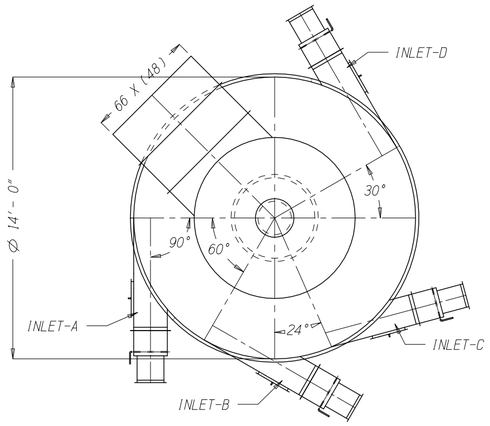
Tank Identification				Losses (lbs)
Wax Storage Tank 10,000 gal	International Paper - Yuma	Horizontal Tank	Yuma, Arizona	75.45
Wax Storage Tank 10,000 gal	International Paper - Yuma	Horizontal Tank	Yuma, Arizona	75.45
Wax Storage Tank 10,000 gal	International Paper - Yuma	Horizontal Tank	Yuma, Arizona	75.45
Wax Storage Tank 16,000 gal	International Paper - Yuma	Horizontal Tank	Yuma, Arizona	45.64
Wax Storage Tank 35,000 gal	International Paper - Yuma	Horizontal Tank	Yuma, Arizona	25.05
Total Emissions for all Tanks:				146.14

CYCLONE VENDOR SPECIFICATION SHEET

NEW 16/10 AND 14/9 BOLTED COLLECTOR

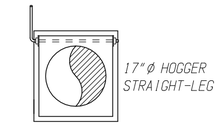


16/10 BOLTED COLLECTOR



14/9 BOLTED COLLECTOR

16/10 BOLTED COLLECTOR INLETS



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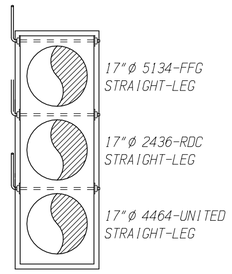

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16/10 INLET-C
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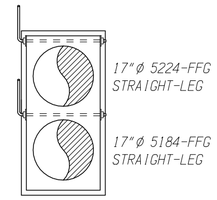

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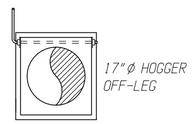
14/9 BOLTED COLLECTOR INLETS



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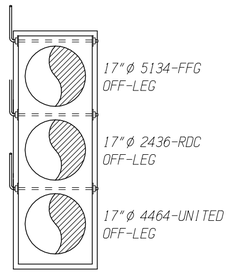

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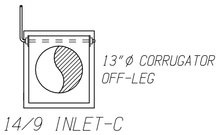

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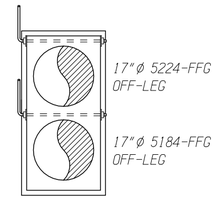

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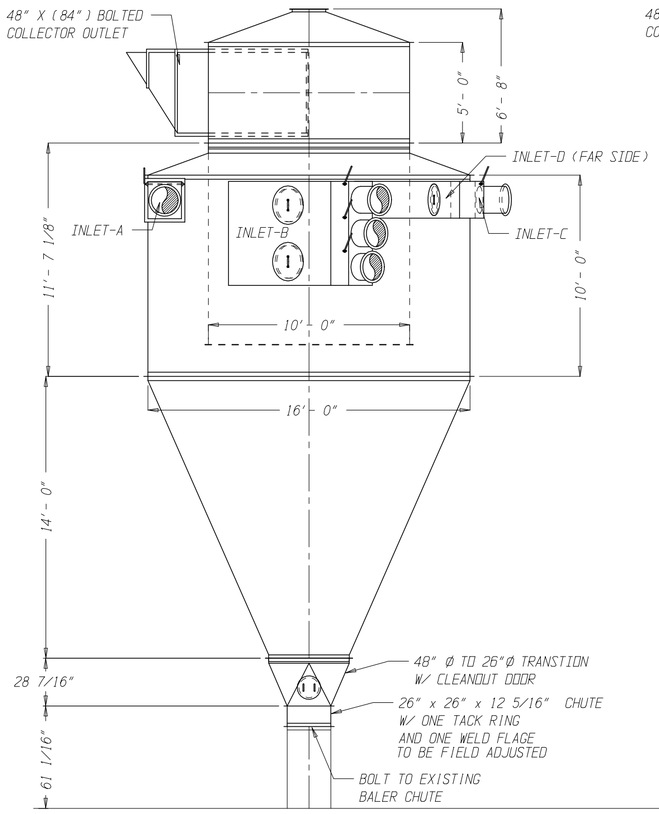
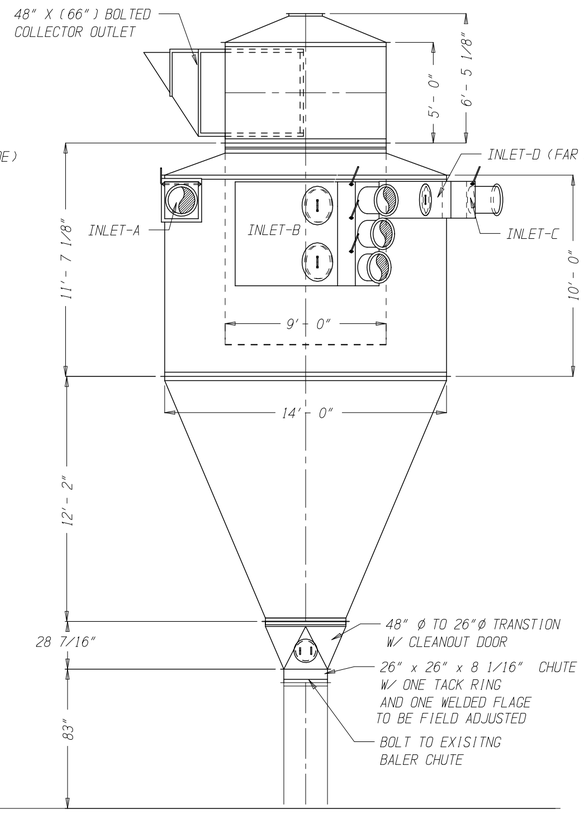
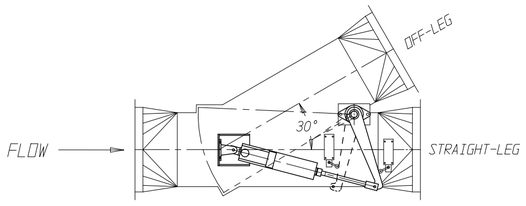
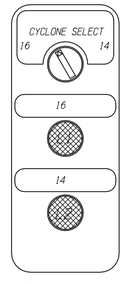






AIR OPERATED DIVERTER WITH LIMIT SWITCHES TO DEMONSTRATE OFF-LEG AND STRAIGHT-LEG TO COLLECTOR INLETS A THROUGH D (NOT TO SCALE)



CONTROL PANEL LAYOUT

SYSTEM LEGEND

SYSTEM DECRIPTION	SIZE	FAN DESCRIPTION	MOTOR HP
HOGGER	17"Ø	AIRCON P-19	50HP
5134-FFG PIT HOPPER	17"Ø	AIRCON P-19	50HP
2436-RDC BELT CONVEYOR	17"Ø	AIRCON P-19	50HP
4464-UNITED D/C PIT HOPPER	17"Ø	EXISTING-CBP	40HP
CORRUGATOR	13"Ø	EXISTING	----
5224-FFG AIRVEYOR	17"Ø	EXISTING-CBP	40HP
5184-FFG PIT HOPPER	17"Ø	EXISTING-CBP	40HP

NO.	REVISION - DESCRIPTION	DATE	BY

Aircon CORPORATION
P.O. BOX 80446
MEMPHIS, TN 38108-0446
PHONE:(901) 452-0230
FAX: (901) 452-0264
E-MAIL : doranp@aircon-corporation.com

NEW 16/10 AND 14/9 BOLTED COLLECTOR

INTERNATIONAL PAPER

YUMA, AZ

DRAWN: D. PLOWMAN
APPROVED:
SCALE: 3/16" = 1'-0"
DATE: 12/15/2020
PROJ.NO.: 2020-8367
DWG.NO.: 8367-GA-02-R0

ROTARY DIE CUTTER VENDOR SPECIFICATION SHEET

CELEBRATING CORRUGATED INNOVATION SINCE 1985

40TH ANNIVERSARY

Next-Level Productivity & Reliability

Heavy-Duty Rotary Die Cutter Re-imagined to Perform in the Most Demanding Conditions

SUN625® HD

The SUN625 HD delivers even more production volume without compromising container quality. These enhancements ensure consistent output while reducing the need for downtime — all contributing to a more reliable and efficient operation.

Numbers at a Glance:

60% Reduction of DC Deflection Under Load

300% Increase in DC Load Capacity

500% Improvement in DC Fatigue Resistance

The SUN625 HD retains the fixed-frame, vertically opening design that made the original a success. With structural upgrades, increased load capacity, enhanced speed, and reduced wear, the SUN625 HD redefines productivity and durability in high-volume production environments.

powered by Helios

REQUEST A QUOTE

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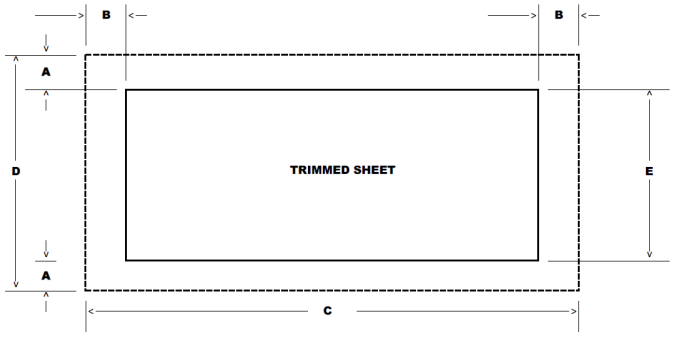
KOLBUS LMC LATITUDE MACHINERY CORP. PARA ENGINEERING Versor

SUN IS THE OFFICIAL REPRESENTATIVE FOR TAIWAN-BASED LATITUDE MACHINERY CORPORATION, ITALY-BASED PARA, POLAND-BASED VERSOR, AND GERMANY-BASED KOLBUS.

sunautomation.com SUN AUTOMATION GROUP® 1-410-472-2900

SUN 625® HD



Dimension	Minimum	Maximum
Trim Recommendation (A and B) Singlewall below 44ECT or 48# Liner Singlewall from 44ECT to Doublewall	0.375" 0.500"	
Die Cut with Trim Length Across Machine (C)		125"
Print Image Length (C)	21.75"	125"
Print Image Width (D)	15.5"	60.5" Std Feed
Untrimmed Sheet (C x D)	21.75" x 15.5"	125" x 66"
Sheet Width (Standard Feed) thru Machine (D) Two Up Feed (2 sheets per revolution) (D)	15.5" 15.5"	60.5" 27.5"
Sheet Width with Skip Feed	Tooling Limited	66" useable width
Machine Speed	40 KPM	Up to 200 KPM
Sheet Caliper	"E" Flute (0.080")	"BC" DW (0.563")

All Specifications are based on the many variables including, but not limited to, Corrugated Board Quality, Board Grade and Caliper, Cutting Die Quality and Printing Plate Quality. Other factors including, but not limited to, corrugated board moisture content, printing coverage and solid print, cutting knife height and wear, linear inches of cutting rule, creasing rule height and wear, and rubbering of the cutting die also have a factor in machine speed and cutting performance.

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CONFIDENTIAL BUSINESS INFORMATION – NCASI EMISSION FACTORS – CYCLONE

CONFIDENTIAL BUSINESS INFORMATION – NCASI EMISSION FACTORS – CORRUGATOR