



**TECHNICAL REVIEW AND EVALUATION
OF APPLICATION FOR
AIR QUALITY PERMIT NO. 63827**

International Paper Company

I. INTRODUCTION

This Class II renewal permit is issued to International Paper Company, the Permittee, for continued operation of a corrugated carton manufacturing facility located in Yuma, Yuma County. This permit renews and supersedes Permit No. 53309

A. Company Information

1. Facility Name: International Paper Company
2. Facility Location: 2641 East 24th Street
Yuma, Yuma County, AZ 85365
3. Mailing Address: same as above

B. Attainment Classification

The facility is located in an area which is classified non-attainment for particulate matter with an aerodynamic diameter less than or equal to 10 microns (PM₁₀), and attainment or unclassified for all other criteria pollutants.

II. PROCESS DESCRIPTION

A. Manufacturing Process

International Paper Company manufactures corrugated containers, commonly referred to as “corrugated cardboard boxes” at this facility. The first step in constructing a corrugated container is the construction of the corrugated sheet of paperboard. Generally, three layers of paper are used, the two outer layers are known as linerboard and the wavy middle layer is called medium. The adhesive used to join the three layers is primarily corn starch.

Starch delivered to the facility is stored in a silo equipped with a baghouse to control particulate matter during silo loading. The starch is then transferred from the storage silo to the starch kitchen via a pneumatic system. Some final product requires an additive be used in the corn starch adhesive to help maintain a bond in moist environments. This additive will result in emissions of volatile organic compounds (VOC) from the plant. The adhesive is then pumped to the glue rolls on the corrugator.

The corrugator unwinds the medium, which is conditioned with steam produced by three boilers, and run through flute rolls to make the paper wavy. The peaks of the medium roll across the glue roll to pick-up adhesive. The first layer of linerboard is then brought into contact with the medium forming a sheet known as ‘single face’. The single face is run over another glue roll, the peaks picking up adhesive and the second layer of linerboard is brought into contact to form the corrugated sheet. Next the sheet travels through a series



of hot plates, heated with steam generated by three natural gas-fired boilers of 7.9 million British thermal unit per hour (MMBtu/hr) capacity each. The edge of the sheet is trimmed off with the trim sent to the scrap collection system. The sheet is scored or slit as needed and sent to the knife which cuts it into individual sheets that are stacked and transported to the finishing area.

In the finishing area the sheets will be run through one of five pieces of equipment. Three are of the type known as flexo-folder-glue and two are rotary die-cutters. The flexo-folder-glue will print using flexography with water based inks, die-cut, glue and fold the sheet into a container. The glue and flexographic ink each contain a small percentage of VOCs that are released as fugitives within the plant. The die-cutters function essentially the same as the flexo-folder glue without the glueing and folding. The scraps generated by die-cutting operations drop onto a small belt that carries the scrap to an entrance of the pneumatic scrap collection system.

Some of the containers produced (typically for use with field packed vegetables) are saturated with wax to impart moisture resistance. The plant has several wax storage tanks and two wax cascaders.

Finished containers are palletized and shipped to customers

B. Air Pollution Control Devices

One baghouse is used to control particulate matter generated during material transfer at the starch silo, and two cyclones are used to control particulate matter generated by the scrap handling systems.

III. EMISSIONS

Table 1: Potential Emissions

Pollutant	Emissions (tons per year)
PM ₁₀	49.84
PM _{2.5}	0.88
NO _x	11.62
CO	8.80
SO _x	0.16
VOC	37.64
HAPs	0.40

IV. APPLICABLE REGULATIONS

Table 2 displays the applicable requirements for each permitted piece of equipment along with an explanation of why the requirement is applicable

**Table 2: Verification of Applicable Regulations**

Unit	Control Device	Rule	Discussion
Boilers: B-1, B-2 and B-3	Not applicable	A.A.C. R18-2-724	<p>This standard is applicable to fuel burning equipment used to produce steam.</p> <p>40 CFR 60 Subpart Dc is not applicable because the maximum heat input of each boiler is less than 10 MMBtu/hr.</p> <p>40 CFR 63 Subpart JJJJJ is not applicable to gas-fired boilers.</p>
Starch Silo, Corrugator, Flexographic Folder Gluers (3), Rotary Die Cutters (2), Wax Cascaders (2), Wax Storage Tanks (6), and Scrap Handling Systems (2)	Baghouse, and Scrap System Cyclones (2)	A.A.C. R18-2-702.B.1 A.A.C. R18-2-730	These standards are General Provisions applicable to existing sources (702.B.1) and Standards of Performance for Unclassified Existing Sources
Emergency Fire Water Pump Engine	Not applicable	A.A.C. R18-2-719 40 CFR 63 Subpart ZZZZ	<p>Standards of Performance applicable to Existing Stationary Rotating Machinery (719), and National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (Subpart ZZZZ).</p> <p>40 CFR 60 Subpart IIII is not applicable because the emission unit is an existing source, with construction commenced prior to July 11, 2005.</p>
Fugitive Dust Sources	Reasonable precautions	A.A.C. R18-2 Article 6 A.A.C. R18-2-702	These standards are applicable to all fugitive dust sources at the facility.
Mobile sources	Reasonable precautions	A.A.C. R18-2-801 A.A.C. R18-2-802 A.A.C. R18-2-804	These are applicable to off-road mobile sources, which either move while emitting air pollutants or are frequently moved during the course of their utilization.
Abrasive Blasting	Wet blasting; Dust collecting equipment; Other approved methods	A.A.C. R-18-2-702 A.A.C. R-18-2-726	These standards are applicable to any abrasive blasting operation.



Unit	Control Device	Rule	Discussion
Spray Painting	Enclosures	A.A.C. R18-2-702 A.A.C. R-18-2-727	This standard is applicable to any spray painting operation.
Demolition/renovation operations	Not applicable	A.A.C. R18-2-1101.A.8	This standard is applicable to any asbestos related demolition or renovation operations.

V. PREVIOUS PERMIT CONDITIONS

Permit No. 53309 was issued on September 23, 2011, for the continued operation of this facility. A subsequent Minor Permit Revision, No. 59600, was issued on May 5, 2014, for the addition of one Flexo-Folder Gluer and one Automated Wax Cascader. Table 3 below illustrates if a section in Permit No. 53309 was revised, kept, or deleted.

Table 3: Permit No. 53309

Section No.	Determination			Comments
	Revised	Kept	Delete	
Attachment A				
All	X			General Provisions - Revised to represent most recent template language.
Attachment B				
I.A.1	X			Added ALT-082 opacity measurement option
II		X		Revised order of rules listed under permit shield
III.A	X			Updated applicability to include equipment changes per Minor Permit Revision No. 59600.
III.B		X		Revised outline heading format
III.C.2	X			Revised outline heading format
IV	X			Revised to represent most recent template language.
V	X			Revised to represent most recent template language.
VI	X			Revised to represent most recent template language.
VII	X			Revised to represent most recent template language.
Attachment C	X			Updated to include equipment changes per Minor Permit Revision No. 59600.

VI. MONITORING REQUIREMENTS

A. Boilers

A certified EPA Reference Method 9 observer is required to conduct quarterly surveys of visible emissions from the boiler stacks. If the opacity appears to exceed the standard, an EPA Method 9 opacity reading is required. Records of the name of the observer, date, time and results of the observation, and any corrective action taken are required.



B. Process Sources (Starch Silo, Corrugator and Scrap Paper Handling Systems 1 & 2)

A certified EPA Reference Method 9 observer is required to conduct quarterly surveys of visible emissions from the Starch Silo, Corrugator and Scrap Paper Handling Systems 1 & 2. If the opacity appears to exceed the standard, an EPA Method 9 opacity reading is required. Records of the name of the observer, date, time and results of the observation, and any corrective action taken are required.

C. Emergency Fire Water Pump Engine

A certified EPA Reference Method 9 observer is required to conduct quarterly surveys of visible emissions from the engine stack. If the opacity appears to exceed the standard, an EPA Method 9 opacity reading is required. Records of the name of the observer, date, time and results of the observation, and any corrective action taken are required.

D. Fugitive Dust

A certified EPA Reference Method 9 observer is required to conduct monthly surveys of visible emissions from the fugitive dust sources. If the opacity appears to exceed the standard, an EPA Method 9 opacity reading is required. Records of the name of the observer, date, time and results of the observation, and any corrective action taken are required.

E. Mobile Sources

The Permittee is required to keep records of all emission related maintenance performed on the mobile sources.

F. Periodic Activities

1. The Permittee is required to record the date, duration and pollution control measures of any abrasive blasting project.
2. The Permittee is required to record the date, duration, quantity of paint used, any applicable MSDS, and pollution control measures of any spray painting project.
3. The Permittee is required to maintain records of all asbestos related demolition or renovation projects. The required records include the "NESHAP Notification for Renovation and Demolition Activities" form and all supporting documents.

VII. COMPLIANCE HISTORY

There have been two facility inspections and three file/report reviews performed for this facility during the term of the previous permit.

While conducting a facility inspection on December 15, 2015, the ADEQ inspector determined the required oil change maintenance and maintenance recordkeeping for the emergency fire pump engine had not been performed. Additionally, the inspector observed a buildup of loose, fine dirt in an outdoor storage area. The Permittee resolved the alleged violations prior to issuance of a Notice of Opportunity to Correct.



No other cases or alleged violations appear to be associated with this facility or place identification number at this time.

VIII. LIST OF ABBREVIATIONS

A.A.C.	Arizona Administrative Code
ADEQ	Arizona Department of Environmental Quality
ARS	Arizona Revised Statutes
cfm	cubic feet per minute
CFR	Code of Federal Regulations
CO	Carbon Monoxide
CO ₂	Carbon Dioxide
EPA	Environmental Protection Agency
HAP(s)	Hazardous Air Pollutant(s)
hp	Horsepower
hr	Hour
lb(s)	Pound(s)
min	Minute
MMBtu	Million British Thermal Units
MSDS	Material Safety Data Sheet
NAAQS	National Ambient Air Quality Standard
NESHAP	National Emission Standard for Hazardous Air Pollutants
n/a	not applicable
NO _x	Nitrogen Oxides
NSR	New Source Review
O & M	Operations and Maintenance
PM	Particulate Matter
PM ₁₀	Particulate Matter Nominally less than 10 Micrometers
PM _{2.5}	Particulate Matter Nominally less than 2.5 Micrometers
PSD	Prevention of Significant Deterioration
PTE	Potential-to-Emit
SO ₂	Sulfur Dioxide
TPY	Tons per Year
USEPA	United States Environmental Protection Agency
VOC(s)	Volatile Organic Compound(s)