Asheville-Buncombe Air Quality Agency
APPLICATION REVIEW SUMMARY

SECTION A: FACILITY INFORMATION			
COMPANY NAME:	Amcor Flexibles, Inc.		
SITE NAME:	Amcor Flexibles, Inc.		
SITE ADDRESS	3055 Sweeten Creek Road, Asheville, NC 28803		
MAILING ADDRESS:	3055 Sweeten Creek Road, Asheville, NC 28803		
GENERAL DESCRIPTION OF BUSINESS:	Manufacturer of flexible packaging products		
FACILITY CLASSIFICATION:	Title V	SITE STATUS:	Existing

SECTION B: APPLICATION INFORMATION			
DATE OF APPLICATION:	December 13, 2024	APPLICATION TRACKING NO.:	NA
DATE COMPLETE APPLICATION RECEIVED:	January 7, 2025	BOARD MEETING DATE:	March 12, 2026
CONFIDENTIALITY REQUESTED?	No	BOARD AGENDA TYPE:	Title V Renewal
APPLICATION RESULTS:	The purpose of this review is to renew the Title V permit.		
PERMIT NO. / DATE ISSUED BY APPLICATION:	11-539-25/ March 12, 2026		
PERMIT NO. / DATE VOIDED BY APPLICATION:	11-539-20/ July 13, 2020		

SECTION C: REGULATORY INFORMATION	
AB Air Quality REGULATIONS:	4.0521, 4.0530, 4.0958, 4.1100, 4.1111, 4.1806, 17.0317, 17.0500,

SECTION D: FACILITY-WIDE EMISSIONS INFORMATION		
POLLUTANTS REVIEWED AS A RESULT OF THIS APPLICATION OR AB Air Quality ACTION:	Emissions (TONS/YR)	
	Actual 2024 Emissions	Potential Emissions
PM	0.139	1.44
PM-10	0.139	1.44
PM-2.5	0.139	1.44
SO_2	0.011	0.11
NO_X	1.83	19.01
CO	1.53	15.97
VOC	26.2*	280*
Total HAPs	0.06*	8.24*
Greenhouse Gases, CO_{2e}	2,195	22,623
List all HAPs >10TPY of potential emissions	None with the current product formulations	

*Emission numbers denoted with an (*) reflect "controlled" emissions (i.e. emissions reduced by a pollution control device).

IN COMPLIANCE WITH EMISSION STANDARDS / RECOMMEND APPROVAL			
Prepared By:	Alex Latta /	Date Completed:	11/20/2025
Reviewed By:	James C. Raiford /	Date Completed:	11/24/2025
Director:	Ashley J. Featherstone /	Date Approved:	11/24/2025

SECTION A DETAILS

FACILITY INFORMATION

[Detailed discussion of any items in Section A]

Amcor Flexibles, Inc. (Amcor), formerly Pechiney Plastics Packaging, Inc. (PPPI), is a manufacturer of flexible packaging products that utilizes rotogravure and flexographic printing processes. Specifically, the facility manufactures printed plastic packages for the medical and office supply industries. At this time, approximately 70% of their products are manufactured for the medical and pharmaceutical industries. The substrates that are generally utilized are foil, polyester and nylon. The general process flow is printing → laminating → extruding → slitting/pouching. This facility has received ISO 14001 and OHSAS 18001 certifications. The permit was amended in September of 2010 to reflect the name and ownership change from Pechiney to Amcor.

There are five pieces of equipment listed on the current permit: ES-C2, ES-L1, ES-L2, ES-R1, and ES-PW. A description of each piece of equipment and associated control devices is below.

ES-C2 (C2) is a tandem extrusion coating laminator with a maximum operating speed of 1,000 feet per minute that is used to put the substrates (typically paper and foil) together. This creates an inner liner to protect the product. It has two coating stations, two extruding stations and one natural gas fired dryer. Maximum rated heat input capacity of the dryer is 2.8 MMBtu/hr. C2 has no VOC capture and control efficiency requirements (all emissions released to atmosphere).

ES-R1 (R1) is a six-station (six color), 50 inch rotogravure printing press with a maximum operating speed of 820 feet per minute. Rotogravure printing is the most sophisticated of all printing methods. Most magazines and mail-order catalogues use this method of printing since it most resembles photography. R1 is equipped with natural gas-fired dryers to ensure that there is no retained solvent on the web. Maximum rated heat input capacity of the natural gas burners is 4.57 MMBtu/hr.In the current permit, R1 is required to have a combined VOC capture and reduction efficiency of at least 85.5%.

ES-L1 (L1) is a two-station adhesive laminator with a maximum operating speed of 660 feet per minute that is used to laminate the substrate (typically polyester and/or polypropylene). This process is used to place a protective barrier to ensure that no solvents come in contact with the product. The L1 coating stations are surrounded by permanent total enclosures. Each station is equipped with natural gas-fired dryers with a combined maximum rated heat input capacity of 7.1 MMBtu/hr. In the current permit, L1 is required to have a combined VOC capture and reduction efficiency of at least 95%.

ES-L2 (L2) operates in a similar fashion to L1, with one coating station surrounded by one permanent total enclosure. The maximum operating speed of L2 is 600 feet per minute. Maximum rated heat input capacity of natural gas fired dryer is 4.8 MMBtu/hr. In the current permit, L2 is required to have a combined VOC capture and control efficiency of 95%.

The parts washer (ES-PW) is vented directly to the atmosphere. Emissions are calculated as uncontrolled.

One Regenerative Thermal Oxidizers (CD-I4) is used to control VOC emissions. During testing in November 2024, Amcor was unable to get CD-I2 to operate as required and have been unable to test since. The facility has not utilized CD-12 in several years and is aware it cannot operate the unit until testing is completed. Both catalytic oxidizers are controlled by the Megtec control system. The Megtec control system contains an algorithm program, which is based on the airflow requirements and capacities of the control equipment. Each oxidizer has a certain amount of air that it can effectively control (30,000 scfm). Each piece of equipment has a certain amount of air that when operating, it will vent to the oxidizers. These airflow parameters do not fluctuate. The system keeps track of the operational status of each of the oxidizers and each piece of equipment that is vented to those control devices. The system tracks which equipment is operating and the order in which each press came online. If the oxidizers do not have the capacity to handle the amount of process air coming in because one of them is not operating at any given time, the control system will shut the presses down, as needed, beginning with the last press to come online. If both of the oxidizers go down, the system will shut all of the presses down. The oxidizers will shut down automatically if the temperature falls below the critical level established by the

manufacturer, 550 °F. Please see Section B for additional details regarding airflow rates for the permitted equipment that is vented to the control devices.

Prior to the renewal in 2014, product formulations had changed and the HAP content has decreased significantly. As a result, potential HAP emissions are now below major source thresholds. The facility opted not to request a limit to become a synthetic minor source of HAPs in 2014, since it would have required a significant modification fee and there was little benefit to the revised designation. Also as part of the renewal process in 2014, conversations about the PSD limits in the permit occurred and language clarifying the PSD status of the facility was added to the permit. The facility is a major source for PSD purposes and the limits in the permit cannot be relaxed without the facility triggering a review under that rule.

Updates from the 2020 permit renewal (11-539-20):

In this application, Amcor requested a minor modification to incorporate an alternative operating scenario (AOS) to allow the exhaust to bypass the oxidizers while applying water-based coating materials on emission sources R1 and L2. The permit had referenced an AOS when utilizing low VOC materials, as previously requested by the facility, in footnotes on pages 3 and 6 for the source descriptions and PSD avoidance limits, but states that the permittee must notify the agency and demonstrate compliance with all applicable regulations before utilizing an AOS. In the application, Amcor stated that regarding the AOS, they will continue to meet all PSD avoidance limits, and will comply with the 40 CFR Part 63 Subpart KK using one of the options in the rule per the permit (which lists all options including those that do not rely on control devices), and by following the allowable procedures for intermittently-controllable work stations per the Subpart. Amcor included an updated compliance assurance monitoring (CAM) plan to include the AOS for bypass of the control devices while applying a low VOC or water-based coating. The CAM plan included a monitoring approach for the AOS. Additional details regarding the AOS were added to the CAM and MACT conditions, and a separate condition regarding AOSs was added to the permit. Amcor also requested that state air toxics rules and requirements be removed from the permit since the equipment can now be exempt from those requirements per 17.0702(a)(27)(B), which was updated since the 2014 renewal to exempt sources subject to federal MACT standards. While the facility can utilize this exemption, the enabling legislation for this rule change requires that the agency evaluate the entire facility to determine if there is an unacceptable risk to human health as part of an associated permit modification. A review of NC Air Toxics requirements was conducted and documented, and the conditions were removed from the permit. Amcor also provided a list of insignificant activities that they requested be added to the permit. These sources were evaluated for permitting applicability and included in the insignificant activity list.

While the permit was open, the descriptions of the permitted equipment were updated to include the maximum rated heat input capacity of the dryers and the catalytic oxidizers. Applicable requirements including the state particulate matter standards and sulfur dioxide standards will be added. No monitoring or recordkeeping requirements associated with those standards will be added to the permit since combustion of natural gas is not predicted to lead to emissions that have the potential to exceed the relevant standards. The VOC work practice rule is no longer applicable state-wide and as such, that condition will be removed from the permit.

During the initial review of the permit renewal application, the PSD avoidance condition and the MACT condition were reviewed and some additional language was added to both conditions. The CAM plan language, which is the monitoring language for the PSD avoidance condition was intended to satisfy the requirements of both rules. Both require monitoring to ensure that the capture and control technology is operating properly. The Agency had found that the facility was not meeting the MACT requirements for capture efficiency, and worked with the facility on a plan to address the deficiency. A notice of violation was issued on October 23, 2019. MACT KK requires continuous monitoring of capture efficiency for enclosed and unenclosed processes, and Amcor was not meeting that requirement for unenclosed process R-1. Amcor decided that they wanted to be classified as an area source of HAP, which would make the facility no longer subject to Subpart KK. In a letter and amended application dated April 1, 2020, the facility requested that they be classified as an area source for HAP. This change was considered a significant modification. The application fee for the difference between a minor modification and a significant modification ($8,100) was received on May 4, 2020. The facility also submitted a new CAM plan that addressed monitoring requirements for their unenclosed process (R1) as well as their Permanent Total Enclosure (PTE) for L1 and L2. The capture efficiency for R1 was established during a performance test in 2004. During that test, the vacuum pressure of the capture system was set at 30 millimeters of water, and interlocks are in place to turn the system off if the vacuum pressure goes below

25 millimeters. The proposed CAM plan included inspecting the operation condition of all the interlocks to insure proper operation. The facility proposed doing this annually, but the Agency is maintaining the current permit condition which requires semiannual inspections. Additionally, the Agency added a permit condition to record the value of the vacuum pressure daily. For the PTEs, the facility installed pressure differential monitors that record the pressure differential across the enclosure. The facility is required to monitor and log these values. The condition in the CAM plan that required amperage monitors to be utilized with the PTEs was removed as that was no longer necessary with pressure differential monitors in place. Since the new CAM plan had monitoring for both enclosures, no performance testing was required. The facility ordered the pressure differential monitors for the PTEs, but the manufacturer has had trouble fulfilling orders due to COVID-19. The Agency placed a permit condition that they need to be installed within 90 days of the issuance of the permit.

The facility also planned to replace the catalytic oxidizer CD-I3 with a new regenerative thermal oxidizer CD-I4. The new oxidizer featured a smaller burner than the previous oxidizer, so NC Toxics was not triggered. The permit was updated to include CD-I4 in all the required permit conditions. An initial performance test requirement was also included with the 2020 permit.

A review of the most recent DAQ Title V general conditions was conducted and two changes were found pertaining to the general conditions that are being updated as part of the 2020 renewal. One was related to the reporting requirements for non-operational equipment in General Condition LL. This change was not substantive but a rewording that appears to make the requirement more clear. The second change was related to when the Title V renewal application is due as specified in General Condition K. Applications are now due 6 months prior to renewal instead of 9 months prior to renewal. DAQ updated their rule at 02Q .0513(b) (Which corresponds to AB Air Quality Chapter 17.0513(b)) in 2018 as part of the Group 2 rule readoption process that was mandated by the General Assembly. The change in due date was part of that rule re-adoption, which this agency plans to adopt by reference. As such, the change was made in the 2020 permit.

Updates for 2025 Permit Renewal

In this application, Amcor requested the removal of CD-I3 from the permit, which was removed and replaced with CD-I4. All references of CD-I3 will be removed from the permit. Currently, CD-I2 sits on-site but is currently decommissioned in place. The facility was unable to get the unit operating properly during the most recent performance test and as a result, they were unable to test CD-I2. Currently, CD-I4 is the sole control device for the facility. Amcor is aware they will not be able to operate CD-I2 until testing is completed.

Additionally, Amcor also provided a list of insignificant activities that they requested be updated with the permit including the removal of several sources from the list such as DIST-04, VAC, PUMP, WASH-01, WASH-L1, and WASH-L2.

On May 6, 2025, the Agency received an application amendment to also have CD-I2 removed from the permit. All references to CD-I2 will be removed from the permit and permit review with the exception of the application history narrative.

When the facility reviewed the draft permit, they proposed that in Section 2.A.1.k.i.C to remove the requirement for logging vacuum pressure readings daily and instead to do semiannual testing of the interlocks. Sinc there is already a requirement that the interlock prevents startup of the press when the duct pressure is 30 mm or greater, the Agency approved this change. Additionally, in Section 2.A.1.g the language was changed to clarify that performance testing must occur every five years instead of every permit cycle.

SECTION B DETAILS

APPLICATION INFORMATION

[List all emission sources (permitted and exempt) reviewed as a result of this application, their associated control devices and pollutants. Provide a detailed discussion of any other items in Section B at bottom under "Application Notes"]

EMISSION SOURCE ID	EMISSION SOURCE DESCRIPTION 1. Type, manufacturer, capacity 2. Control device with ID (if any)	POLLUTANT(S) EMITTED	MISCELLANEOUS NOTES
ES-C2	One (1) Tandem Extrusion Coating Laminator with a maximum operating speed of 1,000 feet per minute with a natural gas-fired dryer (2.8 million Btu per hour maximum heat input capacity)	PM, PM-10, PM-2.5, CO, NOx, SO_2, VOCs, HAPs, and TAPs	Emissions from this source are vented directly to the atmosphere. This is a roll coating process.
ES-L1	One (1) two-station Solvent-Based Adhesive Coating Laminator with a maximum operating speed of 660 feet per minute with natural gas-fired dryers (7.1 million Btu per hour maximum heat input capacity combined) with two permanent total enclosures. Emissions are controlled by a natural gas-fired oxidizer. CD-I4 is a regenerative thermal oxidizer with 12 million Btu per hour maximum heat input capacity. CD-I4 has a rated destruction efficiency of 95%.	PM, PM-10, PM-2.5, CO, NOx, SO_2, VOCs, HAPs, and TAPs	This emission source is required to meet the requirements of a Permanent Total Enclosure (PTE), such that 100% of all VOCs are sent to the control device. Minimum required total capture and control efficiency is 95%. L1 has 2 coating decks (2 stations), both are surrounded by PTEs. This is a roll coating process.
ES-L2	One (1) Solvent-Based Adhesive Coating Laminator with a maximum operating speed of 600 feet per minute with a natural gas-fired dryer (4.8 million Btu per hour maximum heat input capacity). Emissions are controlled by a natural gas-fired oxidizer. CD-I4 is a regenerative thermal oxidizer with 12 million Btu per hour maximum heat input capacity. CD-I4 has a rated destruction efficiency of 95%.	PM, PM-10, PM-2.5, CO, NOx, SO2, VOCs, HAPs, and TAPs	This emission source is required to meet the requirements of a Permanent Total Enclosure, such that 100% of all VOCs are sent to the control device. Minimum required total capture and control efficiency is 95%. L2 has 1 coating deck (1 station), which is surrounded by a PTE. This is a roll coating process.
ES-R1	One (1) 6-station 50 inch Rotogravure Press with a maximum operating speed of 820 feet per minute with natural gas-fired dryers (4.57 million Btu per hour maximum heat input capacity combined). Emissions are controlled by a natural gas-fired oxidizer. CD-I4 is a regenerative thermal oxidizer with 12 million Btu per hour maximum heat input capacity. CD-I4 has a rated destruction efficiency of 95%.	PM, PM-10, PM-2.5, CO, NOx, SO2, VOCs, HAPs, and TAPs	This emission source has a capture efficiency requirement of 90%. Minimum required total capture and control efficiency is 85.5%.

ES-PW	One (1) Parts Washer	VOCs, HAPs, and TAPs	Permit applications state that emissions from this source are vented directly to the atmosphere. During inspections, Amcor staff have pointed out that while the equipment has the capability to vent directly to the atmosphere, it is actually vented to the distillation unit, which vents to the atmosphere. No control efficiency data has been submitted to the Agency for the distillation unit. Emissions are calculated as uncontrolled.
TANK-03	One (1) 5,200 gallon solvent storage tank	VOCs	This tank is used to store normal propyl acetate. Emissions are included in press emissions mass balance and are less than 5 tons per year, which qualifies the process as an insignificant activity because of size or production rate as defined in AB Air Quality Code 17.0503 – "Definitions". This tank is not in use at this time, but remains onsite.
TANK-04	One (1) 5,200 gallon solvent storage tank	VOCs	This tank is used to store reclaimed flammable solvent. The reclaimed solvent is used for press and parts cleaning. Emissions are included in press emissions mass balance and are less than 5 tons per year. This tank is not in use at this time, but remains onsite.
TANK-09	One (1) 5,200 gallon solvent storage tank	VOCs	This tank is used to store normal propyl acetate. Emissions are included in press emissions mass balance and are less than 5 tons per year. This tank is not in use at this time, but remains onsite.
WASH-01	One (1) solvent wash tank	VOCs	Emissions from this tank are included in press emissions mass balance and are less than 5 tons per year. This unit has been removed from the facility.
WASH-L1	One (1) laminator wash tank	VOCs	Emissions from this tank have been included in laminator emissions mass balance and were less than 5 tons per year. This tank is no longer used for washing parts. It is currently used to store wash rags. Amcor and the agency have decided to leave it on the insignificant activity list as it remains onsite and may be needed again in the future. This unit has been removed from the facility.

WASH-L2	One (1) laminator wash tank	VOCs	Emissions from this tank have been included in laminator emissions mass balance and were less than 5 tons per year. This tank is no longer used for washing parts. It is currently used to store wash rags. Amcor and the agency have decided to leave it on the insignificant activity list as it remains onsite and may be needed again in the future. This unit has been removed from the facility.
DIST-03	One (1) 500 gallon non-flammable solvent distillation unit	VOCs	This distillation unit separates contaminants from used non-flammable solvent. Emissions are included in PW unit emissions mass balance and are less than 5 tons per year.
DSLV-02	One (1) 750 gallon wash solvent tank serving one non-flammable solvent distillation unit	VOCs	Emissions are included in PW unit emissions mass balance and are less than 5 tons per year.
TANK 13	One (1) 10,000 gallon vertical fixed roof tank containing ethyl acetate	VOCs, TAP	This tank was installed in 2004. Estimated annual emissions are 467 pounds of VOCs per year.
WHCS-01	One (1) 40 gallon tank used to store HCS solution, which is the solvent (n methyl pyrrolidone) used for cleaning parts in the PW unit.	VOCs	Maximum potential emissions are less than 5 tons per year.
INK-MIX	One (1) ink and adhesive mixing room	VOCs, HAPs, and TAPs	This room includes 2 ink mixers and 1 adhesive mixer. Materials are mixed in 5 gallon pails and 55 gallon drums. The room is vented to the outdoors. Maximum potential emissions are less than 5 tons per year.
SILOS 1-4	Four (4) bulk resin storage silos	PM, PM-10, PM-2.5	Two silos are used to store low density polyethylene resin. The third silo is used to store ethylene acrylic acid resin when necessary based on product demand. The fourth silo has never been utilized. Each silo has the capacity of storing 200,000 pounds of resin pellets. Maximum potential emissions are less than 5 tons per year.

TR-CYC	One (1) trim removal system with emissions controlled by one cyclone	PM, PM-10, PM-2.5	TR-CYC is a trim removal system with emissions controlled by a cyclone that is used to capture strips of material that are removed from some products by trim knives and conveyed using trim blowers. C2, seven slitters and two pouch machines are equipped with trim knives and trim blowers. Approximately ¼ - ½ inch is cut from the sides of the product in this process. The emissions source is the trim removal system, not the cyclone. Maximum potential emissions are less than 5 tons per year.
CYLINDER	One (1) Cylinder Cleaning Area	VOCs, HAPs, and TAPs	Cylinders are wiped down before being utilized in the equipment. Maximum potential emissions are less than 5 tons per year.
ANILOX	One (1) Anilox Roll Cleaner	VOCs, TAP	This machine is located near the cylinder cleaning area and is used to clean cylinders after use in L1 and L2. The cleaning solution is a slightly corrosive dilute solution that is not volatile. Small amounts of ethyl acetate are also used here to wipe down the rolls after cleaning. Emissions are expected to be less than 5 tons per year.
WG	One (1) wet goods receiving area	VOCs, HAPs, and TAPs	Raw materials are stored here in drums and five gallon buckets. The area is vented to the atmosphere. Emissions are expected to be less than 5 tons per year.
HW	One (1) hazardous waste storage area	VOCs, HAPs, and TAPs	This area is outside next to the tank farm. Several drums of hazardous waste are stored here. Emissions are expected to be less than 5 tons per year.
CT	One (1) cooling tower serving a primary chiller and one back up chiller	NA	The chillers are insignificant activities because of size or production rate as defined in AB Air Quality Code 17.0503 – "Definitions."
PUMP	One (1) Pump Cleaning Station	VOCs, HAPs, and TAPs	Five five-gallon buckets are used to clean pumps with ethyl acetate in the wash room. Emissions are included in facility wide emissions mass balance and are expected to be less than 5 tons per year. This unit has been removed from the facility.

LATHE	Two (2) Leblond Makino lathe	PM, PM-10, PM-2.5	The lathes are used to grind the surface of rubber rolls, emissions are controlled by a fabric filter. The permit application states that 2.5 pounds of rubber is removed per roll, 6 rolls are re-surfaced per day. As such, potential uncontrolled emissions would be approximately 5,475 pounds per year (less than 5 tons per year), which qualifies the process as an insignificant activity because of size or production rate as defined in AB Air Quality Code 17.0503 – "Definitions".
VAC	One (1) central vacuum	PM, PM-10, PM-2.5	The vacuum system is used to remove dust from the laser trimming. Emissions are controlled by a fabric filter. 0.5 pounds of trim are removed per roll, 40 rolls are trimmed per day, resulting in potential emissions of 7,300 pounds per year (less than 5 tons per year). This qualifies the process as an insignificant activity because of size or production rate as defined in AB Air Quality Code 17.0503 – "Definitions". This unit has been removed from the facility.
DIST-04	One (1) distillation unit with a maximum capacity of 50 gallons	VOCs/TAPs	This unit is a Clean Planet Solvent Distillation unit that is not vented directly to the atmosphere. It is described as an enclosed/closed-loop system. The facility submitted a permitting applicability request regarding this unit in 2016 and it was determined to be an insignificant activity because of size or production rate at that time (AB Air Quality Code 17.0503 – "Definitions"). The maximum capacity listed here is from the initial applicability determination request. Per the permit application, 38 gallons of spent solvent are processed per batch. Each batch takes 11 hours to complete. Less than 1% solvent is estimated to be lost in the form of emissions. This unit has been removed from the facility.

EXTR	One (1) extrusion process	VOCs	This process utilizes low density polyethylene (LDPE) and linear low density polyethylene (LLDPE). In the permit renewal application it is noted that emissions are negligible. Upon a request for additional information, the facility provided an article entitled 'Development of Emission Factors for Polyethylene Processing' from the Journal of the Air and Waste Management Association (published online January 9, 2012). They noted that the facility consumes less than one million pounds of LDPE and LLDPE annually and referenced the table at the end of the article which shows that VOC emissions are less than 200 pounds per year per million pound of raw material. Table 7 shows worst case emissions for LDPE extrusion coating are estimated at 242 pounds of PM and 157 pounds of VOC emissions per million pounds of material processed. The paper is on the N drive in the permit review folder.
BALER	One (1) trim waste baler	PM, PM-10, PM-2.5	The facility requested a permitting applicability determination in 2016 for this baler and emissions were determined to be negligible. As such, it was determined to be an insignificant activity because of size or production rate at that time (AB Air Quality Code 17.0503 – "Definitions"). As of the last inspection in 2018, the baler was no longer in use since the market for the trim waste is not currently viable. While the baler was not listed in the application, Amcor did confirm that it is still on site and not in use. As such, it will be added to the insignificant activity list as part of this renewal.

APPLICATION NOTES

Megtec Regenerative Thermal Oxidizer (Reference No. CD-I4) is rated at 60,000 scfm (burners are rated at 12 MMBtu/hr). The current expected airflow rate to the oxidizers when all three pieces of production equipment are operating is 47,900 scfm. The maximum airflow rate to the oxidizers is 20,900 scfm from L1, 12,000 scfm from L2, and 15,000 scfm from R1 (for a total of 47,900 scfm).

Tanks 03, 04, 09 and 13 are located outside in the tank farm, which is the diked area behind the facility. The hazardous waste storage area is adjacent to the tank farm. The resin storage silos are also located outside behind the facility. All other insignificant sources are located inside the facility.

SECTION C DETAILS

REGULATORY INFORMATION

(Identify the AB Air Quality Regulations reviewed because of this application. At a minimum, the regulations already listed should be reviewed and reason given for applicability or non-applicability. If a regulation has a standard, list the standard and indicate how the source is in compliance.)

AB Air Quality REGULATION NUMBER / TITLE	EMISSION SOURCE ID NO(S). SUBJECT	NOTES ON REGULATION (Compliance demonstration, applicability, etc.)
17.0500 – Title V Procedures (40 CFR Part 70)	All	The facility is subject to Title V permitting procedures because potential emissions are in excess of the 100-ton per year applicability threshold for VOCs. In the past, they were also subject due to the 25-ton per year applicability threshold for combined HAPs, and the 10-ton per year applicability threshold for at least one individual HAP. Amcor has a current Title V permit. Permit No. 11-539-20 expires July 13, 2025. In accordance with the current permit, Amcor Flexibles submitted an application to renew the Title V permit on January 13, 2025 (application was due on January 13, 2025). Since the permit application was submitted 6 months prior to permit expiration, the permit will not expire until the renewal permit has been issued or denied. All terms and conditions of the existing permit shall remain in effect until the renewal permit has been issued or denied.
4.0515 – Particulates from Miscellaneous Industrial Processes	All	The allowable emission rates are a function of the process weight rate and shall be determined by the following equation(s), where P is the process throughput rate in tons per hour (tons/hr) and E is the allowable emission rate in pounds per hour (lbs/hr). E = 4.10 * (P) 0.67 for P < 30 tons/hr, or E = 55.0 * (P) 0.11 -40 for P >30 tons/hr. It is expected that PM emissions will result from combustion of natural gas only and as such, emission rates will be very low and no monitoring, recordkeeping, or reporting will be required consistent with current AB Air Quality policy.

4.0516 – Sulfur Dioxide Emissions from Combustion Sources	L-1, L-2, R-1	This regulation limits SO_2 emissions from these sources to 2.3 lb/MMBtu. The AP-42 SO_2 emission factor for natural gas combustion for natural gas combustion for small boilers (used for the natural gas-fired dryers) is 0.001 lb/MMBtu. Thus, the facility is expected to be in compliance. These units utilize direct fired combustion techniques. No monitoring, recordkeeping, or reporting will be required.

4.1104 – Toxic Air Pollutant Guidelines and 17.0700 – Toxic Air Pollutant Procedures	All	This facility triggered a toxics review in 2001 with the proposed addition of several new pieces of equipment. Emissions estimates exceeded the TPERs for several TAPs. The facility submitted dispersion modeling showing compliance with the AALs. The modeling was performed based on maximum emission rates; actual emissions were expected to be lower than those which were modeled. The compliance demonstration is included in the current Title V permit. As part of the 2019 permit renewal, Amcor requested that state air toxics rules and requirements be removed from the permit since the permitted equipment can now be exempt from those requirements per 17.0702(a)(27)(B), which had been updated to exempt sources subject to federal MACT standards. The enabling legislation for this rule change requires the agency to ensure that there is no 'unacceptable risk to human health' as a result of the exemption. This analysis is included in this review (please see the notes section below). On April 1, 2020, the facility submitted an application for replacing one of their catalytic oxidizers (CD-I3) with a regenerative thermal oxidizer (CD-I4). Since the natural gas burner for the new oxidizer is 1 MMBtu/hr less than the previous oxidizer, emissions will not increase and therefore does not trigger a toxics review. Please see the notes section below for more information.
4.0524 – New Source Performance Standards (40 CFR Part 60)	NA	The facility has no equipment or process that is subject to a New Source Performance Standard.
4.0530 – Prevention of Significant Deterioration (40 CFR Part 51) and 17.0317 – Avoidance Conditions	All	PSD major source applicability does apply to this facility. In 2001, the facility became a PSD major source when they utilized the one-time doubling option of their emissions threshold; the existing equipment was limited to less than 250 tons/year of VOCs, and the new equipment was limited to less than 250 tons/year of VOCs. This was done in accordance with 17.0317 - Avoidance Conditions. Emissions from any future expansions at the facility will have to be limited to less than the applicable PSD thresholds in order to avoid PSD review. VOC limits and corresponding throughput limits and destruction efficiencies are specified in the permit to show compliance with these avoidance limitations. Please see the section entitled "Regulatory Notes" below for a detailed list of PSD limits and compliance demonstration requirements.

4.0614 – Compliance Assurance Monitoring (40 CFR 64)	L-1, L-2, R-1	This facility is subject to 40 CFR Part 64. While they would qualify for exemption under 4.0614(b)(1)(A) since they are subject to 40 CFR Part 63 Subpart KK, they do satisfy all applicability requirements outlined in 4.0614(a)(1) – (a)(3) because of the applicable PSD avoidance limits to which they are subject. PPPI (now Amcor) submitted a CAM plan for all permitted emission sources that are required to be vented to control devices as part of a previous renewal application. This plan is consistent with EPA guidance for permitting of printing facilities (Technical Support Document for Title V Permitting of Printing Facilities, Draft, November 22, 2002) and the corresponding Appendices to that document, specifically, Appendix C. The CAM plan is included in the current permit under the monitoring provisions for the PSD avoidance condition. Amcor submitted an updated CAM plan as part of the 2019 permit renewal application to address the AOS that they have requested to be in their permit. In the application, Amcor states that regarding the AOS, they will continue to meet all PSD avoidance limits. The updated CAM plan includes the AOS for bypass of the control devices while applying a low VOC or water-based coating. The CAM plan includes a monitoring approach for the AOS. The facility has proposed to install, maintain, and operate a bypass position indicator at the entrance to any bypass line. The bypass indicator will provide a record indicating whether the exhaust stream from the dryer was directed to the control device or was diverted from the control device. The time and control position will be recorded at least once per hour, as well as every time the exhaust stream destination is changed. These requirements are consistent with the requirements of the MACT standard, Subpart KK in 40 CFR 63.828(a)(1) which addresses monitoring requirements for intermittently controllable work stations. The facility will also make a record of process operations to demonstrate that only low VOC or water-based coatings are used during an AOS oxidizer bypass condition. After further discussions with the facility, in a letter dated April 1, 2020, the facility submitted an amended CAM plan to address capture efficiency of both the PTE and the unenclosed process. This included monitoring the PTE pressure differential, and maintaining the interlock on the unenclosed process to ensure that it is functioning properly.

		The condition in the permit was updated to include the additional monitoring provisions for the AOS.
4.1111 – MACT (40 CFR 63)	All	This facility was previously subject to 40 CFR Part 63 Subpart KK, "National Emissions Standards for the Printing and Publishing Industry." In a letter to the Agency dated April 1, 2020, the facility requested to be classified as an area source, and is no longer subject to Subpart KK. The facility must use less than 10 tons per each rolling 12-month period of each HAP and less than 25 tons per each rolling 12-month period of any combination of HAP at the facility.
4.0521 – Control of Visible Emissions	All	The visible emissions from all permitted point sources are not to exceed 20% opacity due to their post-1971 manufacture dates. Since the sources emit primarily VOCs and the only fuel that is utilized is natural gas, visible emissions are not expected to occur and no requirements for monitoring or reporting opacity levels are included in the permit.
4.1806 – Control and Prohibition of Odorous Emissions	All	The facility will prevent odorous emissions from causing or contributing to objectionable odors beyond their property line. If the Agency determines that odors from the facility are creating a nuisance, the Director may require the facility to submit a maximum feasible odor control determination.

REGULATORY NOTES

4.1104 – Toxic Air Pollutant Guidelines and 17.0700 – Toxic Air Pollutant Procedures
As part of the permit renewal in 2014, emission rates of all TAPs were reviewed and compared to the emission rates of all previously modeled TAPs: toluene, MIBK, MEK, ethyl acetate, hexane, ammonia, and xylene. Potential toluene, MEK, ethyl acetate, and xylene emissions were well below those used in the previous modeling demonstration. The facility no longer emits MIBK, hexane, or ammonia. Two TAPs not previously evaluated for compliance with NC Air Toxics regulations were benzene and formaldehyde. Potential emissions of benzene (factoring in monthly restrictions) were below the TPER, which is 8.1 pounds per year. Potential emissions of formaldehyde were equivalent to, but not over the TPER for that pollutant, which is 0.04 pounds per hour. The two additional pollutants reviewed as part of the 2014 renewal were added to the compliance demonstration in the permit.

Stack parameters from the previous dispersion modeling analysis were compared to emission points reported in the renewal application in 2014. There were two stacks in the modeling demonstration that are no longer in use at the facility: The Reeco stack and the C-1 stack. Both pieces of equipment exhausting to these stacks have been removed. All other emissions points remain unchanged. There does appear to be one additional building ventilation exhaust point, #510. As the emission rates and total number of emissions points have decreased, the addition of one general ventilation exhaust point (assuming it was not there prior) is expected to have a negligible impact for compliance with NC Air Toxics Regulations.

Update for 2019 Permit Renewal
As part of the 2019 permit renewal, as noted above, the facility requested that state air toxics rules and requirements be removed from the permit since the permitted equipment can now be exempt from those requirements per 17.0702(a)(27)(B), which had been updated since the 2014 renewal to exempt sources subject to federal MACT standards. The enabling legislation for this rule change requires the agency to ensure that there is no 'unacceptable risk to human health' as a result of the exemption. Emission rates

of all TAPs were reviewed and compared to the emission rates of all previously modeled TAPs: toluene, MIBK, MEK, ethyl acetate, hexane, ammonia, and xylene. Potential toluene, MEK, ethyl acetate, and xylene emissions are well below those used in the previous modeling demonstration (same as in 2014). The facility no longer emits MIBK, hexane, or ammonia (this has not changed since 2014 except that the facility has used a coating in 2018 that contains ammonia and this is included in the proposed AOS-more details below).

Two TAPs not previously evaluated for compliance with NC Air Toxics regulations prior to the 2014 renewal are currently emitted: benzene and formaldehyde. The worst-case emission rates for benzene and formaldehyde were at or below the TPER when evaluated in 2014, but that was no longer the case in 2019. The spreadsheets submitted by the facility for the 2019 renewal show that the worst-case emission rates (percent of total VOCs) which is based on the coatings with the highest HAP/TAP contents per machine have increased for these two pollutants. This is reflected in the updated potential emissions calculations that were submitted by the facility and calculated by the agency as part of the 2019 permit renewal. The percentage of total VOCs for benzene utilized by L1 increased from 0.006% in 2014 to 0.1% in 2019. The percentage of total VOCs for formaldehyde utilized by R1 increased from 0.07% in 2014 to 0.1% in 2019. As such, the worst-case emissions rates are now over the TPERs: 125.04 pounds per year benzene compared to TPER of 8.1 pounds per year and 0.0508 pounds per hour formaldehyde compared to TPER of 0.04 pounds per hour (please see the attached potential emissions calculations). The use of potential emissions to evaluate TPERs is conservative and preferred but not required by Chapter 17. 0711(a), which specifies that the actual rate of emissions is the rate that is to be compared to the TPERs. The worst-case emissions rates are based on a VOC maximum input in pounds per hour for each machine.

As part of the 2019 permit renewal review, it was determined that these maximum hourly VOC input figures (R1=350 pounds per hour) were proposed limits related to NC Air Toxics requirements in the application for a facility expansion in 2001. Actual emission rates for benzene and formaldehyde for these sources as reported in the 2018 emissions inventories were determined to be less than the TPERs. Actual benzene emissions as reported in 2018 were 0.27 pounds per year (0.20 pounds from L1 + 0.07 pounds from natural gas). Total formaldehyde emissions reported in 2018 were 5.33 pounds (2.76 pounds from R1 and 2.57 pounds from natural gas combustion). A pounds per hour rate was needed for formaldehyde for comparison with the TPER. The actual VOC input rates in pounds per hour per machine were calculated based on data reported in the annual emissions inventories from 2014 through 2018. For R-1, VOC usage in pounds per hour ranged from a low of 77 pounds per hour to a highest level of 94 pounds per hour, with the average VOC input being 84.2 pounds per hour. These values were located in the supporting documentation for the inventories, the actual forms for each source were not consistently updated. Using the highest rate of 94 actual pounds per hour VOC input and 0.1% formaldehyde with emissions controls for R1, the estimated actual hourly formaldehyde emission rate is 0.0136, below the TPER of 0.04 pounds per hour. As such, the actual emissions are less than the TPER.

As part of the 2019 permit renewal, Amcor submitted data for an AOS for water-based coatings that includes one additional TAP not currently emitted, ammonia. While not currently emitted, ammonia was previously emitted and included in the 2001 modeling analysis that was submitted by the facility and used to demonstrate compliance with the requirements at that time. The TPER for ammonia is 0.68 pounds per hour for obstructed or non-vertical oriented stacks and 2.84 pounds per hour for unobstructed stacks (vertical, no rain cap). In 2001 the modeling based on worst case total emission rates for ammonia used the emission rate of 24.8 pounds per hour, which led to predicted ammonia levels at the fenceline of approximately 58% of the acceptable ambient level (AAL). Based on that information it is estimated (by ratio) that as long as the total emission rate of ammonia is less than 42 pounds per hour, the AAL should not be exceeded based on the previous modeling. The current permit application includes an estimate of 0.5 pounds per hour for the actual emission rate of ammonia for R-1 and L-2 with the AOS, based on some data gathered in 2018 (total of 1 pound per hour if both sources are operating with the AOS). Tables 2 and 5 with emissions calculations for R1 and L2 in the 2019 permit application include the emission rates and a footnote that the ammonia emissions estimate is based on 314 pounds over 188 hours using Nexeo WB Primer system containing 30% ammonia in July of 2018 ((314 pounds / 188 hours) * 0.30 = 0.5 pounds per hour). In discussions with the facility, they have noted that they do not currently have water-based coatings that are viable for their process other than the one noted above. The AOS would involve using all water based or low VOC coatings (typically less than 20% VOCs) for a product that they are manufacturing. The water-based or low VOC coatings that they have reviewed for possible use do include ammonia, and worst-case emissions would be well under 40 pounds per hour (rate discussed above compared to previous modeling).

Based on the information above for the 2019 permit application, it appears that current operations and proposed operations with the AOS would not result in an 'unacceptable risk to human health'. As such, the NC Air Toxics conditions were to be removed from the permit as requested by Amcor.

Additionally, in a letter and amended application dated April 1, 2020, the facility submitted an application for taking a limit to avoid major source HAP applicability and subpart KK, and replacing one of their catalytic oxidizers (CD-I3) with a regenerative thermal oxidizer (CD-I4). If the facility takes a limit to avoid the MACT standard, they will not be exempt from NC Air Toxics, which they acknowledged in the amended application. As such, the NC Air Toxics conditions will remain in the permit. Since the natural gas burner for the new oxidizer is 1 MMBtu/hr less than the previous oxidizer, emissions will not increase and therefore does not trigger a toxics review.

As part of this permit renewal in 2025, the facility referenced that they were subject to subpart KK, that appears to have been a typographical error.

4.0530 – Prevention of Significant Deterioration: VOC limits, corresponding VOC usage limits and destruction efficiency requirements are the following:

The VOC emissions from L2, R2, C2, and PW, calculated monthly as the sum of each consecutive twelve month period: L2 ≤ 35 tons VOCs/yr, R2 ≤ 101.5 tons VOCs/yr, C2 ≤ 100 tons VOCs/yr, PW ≤ 9 tons VOCs/yr (R2 has been removed from the facility and was removed from the permit),

- The VOC emissions from L1 F8, R1, and C1, calculated monthly as the sum of each consecutive twelve month period: L1 ≤ 62.5 tons VOCs/yr, F8 ≤ 38.5 tons VOCs/yr, R1 ≤ 72.5 tons VOCs/yr,, C1 ≤ 74.5 tons VOCs/yr (F8 and C1 have been permanently shut down and have been removed from the permit),

- The VOC material input to L2, R2, C2, PW, L1, F8, R1, and C1, each, in pounds per month, calculated each month as a twelve month rolling average: L2 and R2 ≤ 116,667 lbs/month each, C2 ≤ 16,667 lbs/month, PW ≤ 1,500 lbs/month, L1 ≤ 208,333 lbs/month, F8 ≤ 33,333 lbs/month, R1 ≤ 83,333 lbs/month, C1 ≤ 12,417 lbs/month (F8, R2, and C1 have been permanently shut down and removed from the facility and the permit),

- The combined VOC capture and reduction efficiencies for R2, F8, and R1: R2 ≥ 85.5%, F8 ≥ 80.75%, R1 ≥ 85.5% (F8 and R2 have been permanently shut down and removed from the facility and the permit).

- L1 and L2 are required to meet the requirements of a Permanent Total Enclosure (PTE), such that 100% of all VOCs are sent to the control device. Total capture and control efficiency is 95%.

While R2, F8, and C1 are no longer located at the facility, as part of the permit renewal in 2014, historical information was added to the permit condition for clarification so that the major source status of the facility is documented in the permit. Emission limits for these sources are included in the permit review for informational purposes. The facility will continue to document continuous compliance with the limits for the existing equipment through monitoring, recordkeeping, and reporting on a 12-month rolling average basis. Summary reports are required semiannually.

4.1111 – MACT (40 CFR 63) – Subpart KK (Printing and Publishing)
This facility was previously subject to 40 CFR Part 63 Subpart KK, "National Emissions Standards for the Printing and Publishing Industry." In a letter to the Agency dated April 1, 2020, the facility requested a permit limit to be classified as an area source of HAP. 40 CFR 63.820 of Subpart KK states that area source of HAP is not subject to the provision of the subpart. The facility must use less than 10 tons per each rolling 12-month period of each HAP and less than 25 tons per each rolling 12-month period of any combination of HAP at the facility. The provisions of Subpart KK have been removed from the permit and replaced with an avoidance limit of 10 tons per each HAP and 25 tons for total HAP. This was processed as a major modification.

4.1111 – MACT (40 CFR 63) – Subpart JJJJ (Paper and Other Web Coating)
In previous permit applications, Amcor requested a permit shield for this MACT standard. The preamble to the rule (see page 2 under "Does this rule apply to me?" at http://www.epa.gov/ttn/atw/powc/fr04de02f.pdf) and EPA guidance documents

(http://www.epa.gov/ttn/atw/powc/executivesummary03_30_04.pdf) indicate that this standard does not apply to printing operations covered under the Printing and Publishing NESHAP (40 CFR part 63, subpart KK) or other coating lines that are subject to other MACT standards.

In a letter dated April 1, 2020, the facility requested to be an area source for HAP. 40 CFR 63.3290 of Subpart JJJJ states that the subpart only applies to major sources of HAP. Therefore, Amcor is not subject to this subpart.

Primary and Alternative Operating Scenarios

Amcor has requested that primary and alternative operating scenarios be included in the permit. The primary operating scenario (POS) utilizes solvent based materials. The alternative operating scenario (AOS) utilizes low VOC materials. Thus far, they have only operated under the primary operating scenario. The permit lists both options and states that the permittee must notify the Agency and demonstrate compliance with all applicable regulations before utilizing the AOS.

As noted above, Amcor has requested that an AOS be incorporated into the permit as part of the 2019 renewal. The CAM plan conditions were modified to require monitoring for the AOS, as noted above. The MACT conditions in the permit already included provisions for demonstrating compliance when intermittently controlled work stations are in use. The specific requirements from the MACT standard for intermittently controlled work stations were added to the MACT condition. A separate condition with citation 17.0508(j) was added to the permit.

SECTION D DETAILS				
EMISSION INFORMATION				
CALCULATION METHOD CODES (List all that apply)	1 = Stack test result 2 = Material (mass) balance 3 = EPA approved information (AP-42, CTG, etc.) 4 = Other (specify in table below)			
CALCULATION REJECTION CODES (List all that apply)	1 = Calculation error 2 = Wrong emission factor(s) used 3 = Control efficiency(ies) not accepted 4 = Other (specify in table below)			
EMISSION SOURCE (ID NO.)	CALCULATION METHOD CODE	ACCEPT OR REJECT?	CALCULATION REJECTION CODE	AB Air Quality CALCULATIONS ATTACHED?
L-1, L-2, R-1, C-2, PW	2	Accept	NA	Yes

EMISSION NOTES

Emissions calculations were submitted by Amcor and AB Air Quality also calculated emissions. Potential emissions were calculated based on maximum rated capacity and permitted limits.

Amcor submitted potential emissions calculations based on worst case product formulations by machine and permitted limits. The 2024 emissions inventory submittal was utilized for actual emissions since the 2025 emissions inventory had not yet been submitted when the initial review was conducted. The 2024 emissions were used to update actual emissions on page 1.

The total heat input rating for natural gas combustion is currently 44.27 MMBtu/hr with the removal of equipment that has occurred over the last few years, and the replacement of the catalytic oxidizer CD-I3 with a regenerative oxidizer CD-I4.

As discussed in the preceding section regarding NC Air Toxics requirements, the VOC maximum input figures for each machine that have been reported as maximum rated capacity in this and previous permit applications appears to have been derived from proposed NC Air Toxics limits that were part of the 2001 permit application for an expansion at this facility. These maximum VOC input rates were compared to actual VOC input rates from recent emissions inventories and appear to be conservative.

SECTION E

SUPPORTING DOCUMENTATION

(Provide brief description of any attachments)

1. Emissions calculations,
2. Permit Application dated January 9, 2025 and amended application dated April 8, 2025,
3. Draft Permit,
4. Draft Permit Cover Letter, and
5. Draft Public Notice.