



Company Name:	Arclin Surfaces LLC - Dillon Facility	Permit Writer:	Nicholas Gathings
Agency Air Number:	0880-0054	Date:	DRAFT
Permit Number:	TV-50000016 v1.0		

DATE APPLICATION RECEIVED: May 19, 2023

DATE OF LAST INSPECTION: N/A

This is a new facility, which has not been inspected yet.

PROJECT DESCRIPTION

Issuance of a new Title V permit for this facility. The facility currently operates under construction permit c/p-0880-0054-CB (c/p-CA was superseded by c/p-CB), synthetic minor construction permits 0880-0054-CC, and CP-50000098 v1.0.

This will be a full rollover of c/p-CB and a partial of CP-50000098 v1.0. Construction Permit c/p-CC was issued January 23, 2023. The equipment permitted in c/p-CC has not been constructed to date but will be incorporated into the Title V operating permit upon completion and Startup notification. This will be the facility's first Title V operating permit. The facility is covered by an application shield.

Of the two pieces of equipment permitted by CP-50000098 v1.0, only HB-1 is being rolled in with this Title V issuance; HB-2 has yet to be installed.

FACILITY DESCRIPTION

SIC CODE: 2672 – Coated and Laminated Paper

NAICS CODE: 322220 – Paper Bag and Coated and Treated Paper Manufacturing

The paper treating operation will apply various coatings to raw paper rolls for use in a variety of industries. The various coatings will be stored in dedicated storage tank areas. The feedstock will be pumped from the tank farm to the mixing area, where mixing of the various coatings occurs. The coating will then be pumped to the respective coating operation within the three-stage treatment process.

In each of the three new stages, the paper will be coated with an associated chemical application and then pass through a dryer to cure. Once the application and dryer process are finished, the paper will then continue through a set of cooling rolls. The paper is then rewound onto rolls and shipped offsite for application on various panels, such as OSB.

The coating operation is controlled by an RTO with a total heat input capacity of 11.1 million British thermal units per hour (MMBTU/hr). Emissions from each coating operation are captured through a permanent total enclosure or vent hood. The associated dryers have a combined total capacity of approximately 35 MMBTU/hr. Dryer 2 and 3 were previously considered exempt, however all dryers within Line 1 are applicable to NESHAP Subpart JJJJ as they're part of a web coating line and are thus considered permitted equipment.

EMISSIONS

Algorithm:

Chemical Application Section –

- Uncontrolled Chemical Application Section VOC Emissions are calculated by multiplying the VOC weight percent of the coating being applied per the SDS by the usage rate.



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- Controlled Chemical Application Section VOC emissions are calculated by multiplying the Uncontrolled Chemical Application Section VOC emissions per the SDS by the destruction efficiency of the thermal oxidizer.

Dryer 1, Dryer 2, & Dryer 3 –

- 13.7MMBtu/hr Natural Gas-Fired Dryer (Dryer 1), 11.2 million Btu/hr Natural Gas-Fired Dryer (Dryer 2), and 9.8 million Btu/hr Natural Gas-Fired Dryer (Dryer 3) VOC emissions will be calculated using the latest version of AP-42 Natural Gas Combustion factors.

Hot Box –

- Uncontrolled Hot Box 1 VOC emissions will be calculated by multiplying the collected residual glue and primer waste of Chemical Applications Section 2 and 3 by the VOC weight percentage of the Super Coating determined based on maximum individual HAP/TAP and maximum total VOC of the different materials collected from Chemical Applications 2 and 3 per Chemical's SDS. Controlled Hot Box 1 VOC emissions are calculated by multiplying the Uncontrolled Hot Box 1 VOC emissions by the destruction efficiency of the thermal oxidizer.

PROJECT EMISSIONS						
Pollutant	Uncontrolled		Controlled		PTE*	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
PM	0.0233	0.1023	0.0233	0.1023	0.0233	0.1023
PM ₁₀	0.0233	0.1023	0.0233	0.1023	0.0233	0.1023
PM _{2.5}	0.0193	0.0864	0.0193	0.0864	0.0193	0.0864
SO ₂	0.0269	0.1180	0.0269	0.1180	0.0269	0.1180
NO _x	4.087	17.902	4.087	17.902	4.087	17.902
CO	3.772	16.520	3.772	16.520	3.772	16.520
VOC	1,754.72	7,685.68	35.998	157.673	35.998	157.673
Acetaldehyde (H,T)	6.825E-07	2.99E-06	6.825E-07	2.99E-06	6.825E-07	2.99E-06
Acrolein (H,T)	8.082E-07	3.54E-06	8.082E-07	3.54E-06	8.082E-07	3.54E-06
Formaldehyde (H,T)	89.63	392.57	1.971	8.633	1.971	8.633
Benzo(a)pyrene (H,T)	5.388E-08	2.36E-07	5.388E-08	2.36E-07	5.388E-08	2.36E-07
Cobalt Compounds (H,T)	3.771E-06	1.652E-05	3.771E-06	1.652E-05	3.771E-06	1.652E-05
n-Hexane (H,T)	8.08E-02	0.354	8.08E-02	0.354	8.08E-02	0.354
Naphthalene (H,T)	2.739E-05	1.20E-04	2.739E-05	1.20E-04	2.739E-05	1.20E-04
Phenol (H,T)	158.53	694.37	3.202	14.023	3.202	14.023
Selenium Compounds (H,T)	8.17E-07	3.58E-06	8.17E-07	3.58E-06	8.17E-07	3.58E-06
Toluene (H,T)	1.53E-04	6.69E-04	1.53E-04	6.69E-04	1.53E-04	6.69E-04
Polycyclic Organic Matter (H,T)	2.744E-05	1.20E-04	2.744E-05	1.20E-04	2.744E-05	1.20E-04



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PROJECT EMISSIONS						
Pollutant	Uncontrolled		Controlled		PTE*	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
Lead Compounds (H)	2.245E-05	9.83E-05	2.245E-05	9.83E-05	2.245E-05	9.83E-05
Arsenic Compounds (H,T)	2.245E-05	8.98E-06	2.245E-05	8.98E-06	2.245E-05	8.98E-06
Beryllium Metal (H,T)	5.388E-07	2.36E-06	5.388E-07	2.36E-06	5.388E-07	2.36E-06
Cadmium Metal (H,T)	4.939E-05	2.16E-04	4.939E-05	2.16E-04	4.939E-05	2.16E-04
Chromic Acid VI (H,T)	6.286E-05	2.75E-04	6.286E-05	2.75E-04	6.286E-05	2.75E-04
Vinyl Acetate (H,T)	1.34	5.86	0.0268	0.117	0.0268	0.117
Manganese Compounds (H,T)	1.706E-05	7.473E-05	1.706E-05	7.473E-05	1.706E-05	7.473E-05
Mercury (H,T)	5.113E-05	1.167E-05	5.113E-05	1.167E-05	5.113E-05	1.167E-05
Nickel Metal (H,T)	9.429E-05	4.13E-04	9.429E-05	4.13E-04	9.429E-05	4.13E-04
Methanol (H,T)	1506.95	6,600.45	30.596	134.01	30.596	134.01
Benzene (H,T)	9.429E-05	4.13E-04	9.429E-05	4.13E-04	9.429E-05	4.13E-04
Total HAP	1,756.53	7,693.61	35.71	156.41	35.71	156.41

* PTE for HAP and VOC emissions controlled by CD-TO-1 were calculated based on the operation of the thermal oxidizer with an overall organic HAP control efficiency of 98 percent per NESHAP JJJJ.

SOURCE TEST REQUIREMENTS

Under 40 CFR 63 Subpart JJJJ, the affected facility has multiple options to comply with HAP emission limits. This facility has decided to use an oxidizer (RTO) to control emissions. This option requires source testing to establish destruction and removal efficiency. The facility has conducted an initial source test on the RTO and will be required to source test the RTO every 5 years.

REGULATIONS

Not Applicable - Section II(E) (Synthetic Minor)

Based on the PTE of installed sources, the facility will be major under Title V, minor for PSD, and has not requested federally enforceable limits. Construction permit CC contained a < 250.0 TPY limit for VOC but the facility has not installed enough sources to require it.

Not Applicable - Standard No. 1 (Emissions from Fuel Burning Operations)

The fuel burning operations at the Dillon facility (i.e., dryers and thermal oxidizer) do not meet the definition of "fuel burning operations" since these sources are direct fired units. This standard does not apply to the Dillon Facility.

Applicable - Standard No. 3 (state only) (Waste Combustion and Reduction)



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The RTO is subject to this regulation as an industrial incinerator.

Limitations, Monitoring, and Reporting Condition 7 of c/p-CB will be incorporated in the Title V operating permit with modified language; the use of afterburners mentioned in the construction permit condition has been removed as the RTO doesn't have afterburners.

(S.C. Regulation 61-62.5, Standard No. 3, Section IX(D)) An exemption from all of the Operator Training Requirements in S.C. Regulations 61-62.5, Standard No. 3, Section IX(C) has been granted for CD-TO-1. This is a State Only requirement. Testing is waived based on the unlikelihood of PM emissions.

Applicable - Standard No. 4 (Emissions from Process Industries)

Section IX: All equipment is subject to a 20% opacity limit.

Section VIII: As PM is only generated from fuel burning, this section is not applicable.

Not Applicable - Standard No. 5 (Volatile Organic Compounds)

The facility was not in existence in 1979 or 1980.

Applicable - Standard No. 5.2 (Control of Oxides of Nitrogen (NOx))

Dryer 1 is subject to this standard. c/p-CB established a limit of 0.0686 lb/MMBTU to be a 30% reduction below uncontrolled levels. Arclin demonstrated compliance with the limit of 0.0686 lb/MMBTU by providing manufacture certification from Honeywell.

Dryers 2 and 3 emit less than 5 tons per year of NOx each and are exempt. The RTO functions as a combustion control device and is exempt.

Not Applicable - Standard No. 7 (Prevention of Significant Deterioration)

The facility has previously requested a PSD avoidance limit for VOC emissions. This source is not in one of the 28 subject source categories, so the PSD threshold is 250.0 tons per year. All other criteria pollutants are below 250.0 tons per year.

Applicable - 61-62.6 (Control of Fugitive Particulate Matter)

The facility is subject to the statewide requirements of Section III. Construction Permit c/p-CB condition B.13 not carried forward in Title V operating permit because staff visited site and determined fugitive particulate matter emissions are not expected.

40 CFR 60 and 61-62.60 (New Source Performance Standards (NSPS))

Not Applicable - Subpart Kb (Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984, and On or Before October 4, 2023)

The requirements of 40 CFR 60, Subpart Kb "Standards of Performance for Volatile Organic Liquid Storage Vessels (including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984, and On or Before October 4, 2023" applies to each storage vessel with a



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capacity greater than or equal to 75 cubic meters (m³) that is used to store volatile organic liquids (VOL) for which construction, reconstruction, or modification commences after July 23, 1984. The storage tanks at the Dillon facility associated with line 1 were installed in May of 2022 and are each less than 75 m³ (or 19,813 gallons), they are therefore not subject to this standard.

40 CFR 61 and 61-62.61 (National Emission Standards for Hazardous Air Pollutants (NESHAP))

Not Applicable - This facility does not emit the pollutants in a way that is subject to this standard (asbestos, benzene, beryllium, coke oven emissions, arsenic, mercury, radio nuclide, radon, or vinyl chloride).

40 CFR 63 and 61-62.63 (National Emission Standards for Hazardous Air Pollutants (NESHAP) for Source Categories)

Not Applicable - Subpart EEEE (National Emission Standards for Hazardous Air Pollutants: Organic Liquids Distribution (Non-Gasoline))

40 CFR 63, Subpart EEEE establishes national emission limitations, operating limits, and work practice standards for organic hazardous air pollutants (HAP) emitted from organic liquids distribution (OLD) (non-gasoline) operations at major sources of HAP emissions. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limitations, operating limits, and work practice standards.

An organic liquid is defined in 40 CFR 63.2406 as:

any non-crude oil liquid or liquid mixture that contains 5 percent by weight or greater of the organic HAP listed in Table 1 to this subpart.

The organic liquid storage tanks at the facility are affiliated sources under NESHAP JJJJ and are thus exempt from NESHAP EEEE. Per, 40 CFR 63.2338(c)(1)

The equipment listed in paragraphs (c)(1) through (3) of this section and used in the identified operations is excluded from the affected source.

(1) Storage tanks, transfer racks, transport vehicles, containers, and equipment leak components that are part of an affected source under another 40 CFR part 63 national emission standards for hazardous air pollutants (NESHAP).

The organic liquid storage tanks present are not subject to the requirements of 40 CFR 63, Subpart EEEE.

Applicable - Subpart JJJJ (National Emission Standards for Hazardous Air Pollutants: Paper and Other Web Coating)

This subpart describes the actions you must take to reduce emissions of organic hazardous air pollutants (HAP) from paper and other web coating operations. This subpart establishes emission standards for web coating lines and specifies what you must do to comply if you own or operate a facility with web coating lines that is a major source of HAP. Certain requirements apply to all who are subject to this subpart; others depend on the means you use to comply with an emission standard.



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This subpart applies to facilities that are a major source of HAP where web coating lines are operated. Web coating lines are defined in 40 CFR 63.3310 as

Any number of work stations, of which one or more applies a continuous layer of coating material across the entire width or any portion of the width of a web substrate, and any associated curing drying equipment between an unwind or feed station and a rewind or cutting station.

Per 67 FR 72332,

For the Paper and Other Web Coating NESHAP, the affected source is the collection of all the web coating lines at a facility. As previously stated, a web coating line is defined as any number of work stations, of which one or more applies a continuous layer of coating material across the entire width or any portion of the width of a web substrate, and any associated curing/drying equipment between an unwind or feed station and a rewind or cutting station.

Affiliated operations such as mixing or dissolving of coating ingredients prior to application; coating mixing for viscosity adjustment, color tint or additive blending, or pH adjustment; cleaning of coating lines and coating line parts; handling and storage of coatings and solvent; and conveyance and treatment of wastewater are part of the paper and other web surface coating source category.

The paper treating line, which consists of Chemical Application Section 1 (ID No. CA-1), Chemical Application Section 2 (ID No. CA-2), Chemical Application Section 3 (ID No. CA-3), is considered a web coating line and is therefore subject to the requirements of this regulation.

In accordance with 40 CFR 63.3320, organic HAP emissions at new affected sources must be limited to one of the following levels:

- No more than 2 percent of the organic HAP applied for each month (98 percent reduction) at new affected sources; or
- No more than 1.6 percent of the mass of coating materials applied for each month at new affected sources; or
- No more than 8 percent of the coating solids applied for each month at new affected sources; or
- If you use an oxidizer to control organic HAP emissions, operate the oxidizer such that an outlet organic HAP concentration of no greater than 20 parts per million by volume (ppmv) by compound on a dry basis is achieved and the efficiency of the capture system is 100 percent.

Arclin has elected to comply with this rule using the first option (98% reduction for the source) and shall comply with the monitoring requirements detailed in 40 CFR 63.3350. Thermal oxidizer combustion temperature shall be monitored in accordance with 40 CFR 63.3350(e)(10) and three-hour block averages must be calculated to demonstrate compliance with the operating limits in Table 1 of Subpart JJJJ. Arclin must maintain the 3-hour average combustion temperature no more than 50 degrees lower than the average combustion temperature observed during the latest valid performance test testing.

In accordance with 40 CFR 63.3360, performance testing will be required every 5 years for the thermal oxidizer destruction efficiency.



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Arclin shall maintain records as detailed in 40 CFR 63.3410. In addition, Arclin shall submit semiannual compliance reports as required in 40 CFR 63.3400(c) by July 31 and January 31 of each calendar year, for the preceding 6-month period.

Not Applicable - 61-62.68 (Chemical Accident Prevention Provisions)

The facility does not use or store chemicals subject to this regulation above threshold quantities.

Not Applicable - 40 CFR 64 (Compliance Assurance Monitoring)

The facility has sources with pre-control emissions above major source thresholds with applicable limits and control devices used to meet those limits. Those limits, set in Subpart JJJJ were established after November 15, 1990; therefore, no CAM requirements apply. CAM does not apply to long-term mass accumulation limits. Per Standard 5.2., the facility is utilizing low NO_x burners for Equipment ID D-1. The definition of control device from the CAM regulation does not include passive control measures that act to prevent pollutants from forming such as the use of combustion or other process design features or characteristics. Given the Low NO_x burners do not meet the definition of a control device in relation to CAM there is no compliance assurance needed thus CAM is not applicable.

AMBIENT AIR STANDARDS REVIEW

Not Applicable - Standard No. 2 (Ambient Air Quality Standards)

All sources have emissions below de minimis levels. See modeling summary dated 1/29/2025.

Not Applicable - Standard No. 8 (state only) (Toxic Air Pollutants)

The facility is subject to 40 CFR 63 Subpart JJJJ. Because the facility is subject to this MACT Standard, the facility wide emissions are exempt from this standard. See modeling summary dated 1/29/2025.

PERIODIC MONITORING					
ID	Applicable Requirement	Measured Parameter	Required Monitoring Frequency	Reporting Frequency	Monitoring Basis/ Justification
CD-TO- 1	Destruction Efficiency 40 CFR 63 Subpart JJJJ	Temperature	15 minutes	Semiannual	Post-11/1990 Federal Regulation. * Monitoring inherently adequate
D-1	NO _x Limits Standard No. 5.2, Section IV	Tune ups	24 months	Maintain on site	Tune ups ensure the burner is working properly; burner tune does not change quickly; 24 months is adequate
D-1, CD-TO-1	Opacity S.C. Reg 61-62.5, Std. No 4	Visual Inspection	Semiannual	Semiannual	Opacity is not expected, and qualitative visual inspections shall suffice for monitoring



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*40 CFR 64.2(b)(1)(i) - Emission limitations or standards proposed by the Administrator after November 15, 1990 pursuant to section 111 or 112 of the Act.

PUBLIC NOTICE

This Title V Permit will undergo a 30-day public notice period and a 45-day EPA comment period in accordance with SC Regulation 61-62.1, Section II(N) and SC Regulation 61-62.70.7(h). Arclin Surfaces LLC is a new facility that has applied to the Department for an initial Title V operating permit to operate a web coating line at their Dillon SC facility.

SUMMARY AND CONCLUSIONS

It has been determined that this source, if operated in accordance with the submitted application, will meet all applicable requirements and emission standards.