



Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

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June 29, 2015

Mr. Glen Wuerthele
Presstek, LLC
749 New Ludlow Road
South Hadley, MA 01075

RE: South Hadley
Transmittal No.: X265422
Application No.: WE-15-003
Class: *SM-25*
FMF No.: 417905
AIR QUALITY PLAN APPROVAL

Dear Mr. Wuerthele:

The Massachusetts Department of Environmental Protection (“MassDEP”), Bureau of Air and Waste, has reviewed your Non-major Comprehensive Plan Application (“Application”) listed above. This Application concerns the proposed modification of an existing aqueous-based coating machine, designated as Coater #2, to include solvent-based coating use. The lithographic plate-making facility is located at 749 New Ludlow Road in South Hadley, Massachusetts (“Facility”). The Application bears the seal and signature of David P. Horowitz, Massachusetts Registered Professional Engineer Number 46271.

This Application was submitted in accordance with 310 CMR 7.02 Plan Approval and Emission Limitations as contained in 310 CMR 7.00 “Air Pollution Control” regulations adopted by MassDEP pursuant to the authority granted by Massachusetts General Laws, Chapter 111, Section 142 A-N, Chapter 21C, Section 4 and 6, and Chapter 21E, Section 6. MassDEP’s review of your Application has been limited to air pollution control regulation compliance and does not relieve you of the obligation to comply with any other regulatory requirements.

MassDEP has determined that the Application is administratively and technically complete and that the Application is in conformance with the Air Pollution Control regulations and current air pollution control engineering practice, and hereby grants this **Plan Approval** for said Application, as submitted, subject to the conditions listed below. **This Plan Approval modifies the previously approved Coater #2 to add solvent coating operations. In doing so, it establishes new, lower volatile organic compounds (VOC) and hazardous air pollutant (HAP) content limits for coatings used on Coaters #1, #2 and #3 (the “Black Line”). It incorporates the New Source Performance Standards of 40 CFR 60, Subpart TT, *Standards of Performance for Metal Coil Surface Coating* and revises facility-wide emission limits for**

VOCs. Provisions established in Plan Approval #1-P-09-013 for Coaters #1 and #3 and the catalytic oxidizer are included herein.

Please review the entire Plan Approval, as it stipulates the conditions with which the Facility owner/operator (“Permittee”) must comply in order for the Facility to be operated in compliance with this Plan Approval.

1. DESCRIPTION OF FACILITY AND APPLICATION

Presstek produces lithographic plate products by coating a metal coil substrate. The coatings used contain volatile organic compounds (VOCs) and hazardous air pollutants (HAPs). Customers receive the plates from Presstek and then add custom images to them for use in their own printing press. The plates have a limited life since the coating wears away during printing. The customer returns the used plates to Presstek for reprocessing.

The coating process uses 6, 8, and 12-gauge coil aluminum as the substrate which arrives at the facility in rolls. The coils are chemically grained in a weak acid solution, anodized in a sulfuric acid solution, and finally treated with hot sodium silicate to seal the material. After surface preparation, the metal plating material moves on to the facility's "Black Line."

The Black Line consists of three coaters in series. One is a custom rod coater and two are identical customized coaters. Currently, Coater #1 and #2 apply aqueous coatings and Coater #3 is capable of applying either aqueous-based or solvent-based coatings.¹ All three (3) coaters can run simultaneously. Coater #3 has a Permanent Total Enclosure² (PTE) installed to capture 100% of VOC and HAP emissions. Each of the three coaters is followed by an individual two-zone dryer with a 1.65 MMBtu/hr natural gas-fired burner.

Various coatings used on the Black Line are blended, to meet individual customer specifications, within the facility's Mix Room. VOCs released in the Mix Room are captured by a floor vent that is routed to an existing catalytic oxidizer. A fan rated at 500 standard cubic feet per minute is interlocked with the catalytic oxidizer to ensure that VOC controls are in place whenever solvent mixing activities are taking place. The Black Line and the catalytic oxidizer were previously approved through Plan Approval #1-P-09-013 (dated 7/1/2009).

The facility also operates a small research and development printer to test their products. In a letter dated April 29, 2010 from the MassDEP to Presstek, it was established that the emission unit was exempt from obtaining a plan approval because the potential to emit VOCs and HAPs by the printer was less than one (1) ton per year. If Presstek anticipates at any time that actual VOC/HAP emissions may exceed one ton per year, Presstek is required to first obtain a determination in writing from MassDEP of any permit requirements.

¹ Solvent-based is defined herein as a coating solution with a VOC/HAP content greater than 0.367 pounds per gallon of coating.

² As demonstrated by compliance with USEPA Method 204 (40 CFR 51, Subpart MM, Appendix M).

The following are the proposed modifications:

- Adding capability to apply solvent as well as aqueous coating on Coater #2;
- Installation of a PTE with 100% capture efficiency around Coater #2 to be routed to the existing catalytic oxidizer. Coater #2 will either have a separate PTE installed or the current PTE around Coater #3 will be expanded to include Coater #2;
- Coater #1 will remain an aqueous-based coater.
- A control damper system will be installed to route exhaust to atmosphere when running aqueous-based coatings and to the catalytic oxidizer when running solvent-based.

Presstek is proposing to maintain the facility-wide HAP (both single and total HAP) limit of one (1) ton per year established by Plan Approval #1-P-09-013 (dated 7/1/2009). An annual gallon usage was determined using a combination of the worst-case HAP content coating formulation and the application rate for that coating, as determined by Presstek. The increased facility-wide VOC emission limit will accommodate the facility's projected increase in production. Emissions were estimated using the following coating specifications:

Specifications for the Worst-Case VOC and HAP Formulation					
Black Line	Application Rate (gal _{coating} /hr)	Density (lbs/gal _{coating})	VOC Content (lbs/gal _{coating})	HAP Content (lbs/gal _{coating})	Overall Control Efficiency (%)
Coating Head #1	4.71	8.428	0.350	0.060	n/a
Coating Head #2 and #3	2.06 (each)	7.686	7.23	0.020	98

Table Key:

EU = Emission Unit Number

lbs/gal_{coating} = pounds per gallon of coating

HAP (total) = total Hazardous Air Pollutants

tpy = tons per consecutive 12-month period

PCD = Pollution Control Device

gal_{coating}/hr = gallons of coating per hour

n/a = Not applicable

Clean-up is performed by hand wiping with rags at each coating head. Coater #1 is cleaned using water. Any cleaning of Coaters #2 and #3 using solvent based cleaners will take place within the PTE. VOC and HAP emissions will be routed to the catalytic oxidizer. A lower explosive level (LEL) monitoring system will be installed at the coater head and within the dryer of Coater #2. The set point will be 25% of the coating material LEL. The monitor will be interlocked to shut down the coating process if this set point is reached or exceeded.

Existing Catalytic Oxidizer

Prior to operation of the Black Line, the operator is required to select in the computer the type of coatings (aqueous or solvent-based) that will be applied. When a product that contains solvent coating is selected, the catalytic oxidizer is activated. The system is interlocked so that the process cannot be started until the downstream temperature of the catalytic oxidizer has reached 650°F. An oxidizer failure will automatically stop the coating line.

The existing catalytic oxidizer is a Cire Technologies, Inc. Model 006070cat with a maximum rated capacity of 6,000 scfm. It includes a custom assembled Maxon Corporation Combustifume natural gas burner with a maximum heat input of 2.0 MMBtu/hr. The catalytic oxidizer is designed to have a combustion chamber residence time of 0.45 seconds. Air and gas is mixed through mixing fans attached to the burner that mix the process exhaust with natural gas. The air stream moves between the burner and the catalyst bed for additional mixing.

The oxidizer has a 1,296 cubic foot platinum coated ceramic fiber catalyst. It has a maximum catalyst temperature of 1,050 °F with a minimum residence time of 0.039 seconds. The oxidizer has two heat recovery systems. The primary heat exchanger utilizes heat from the air stream leaving the catalyst bed to preheat the incoming air to the oxidizer from the dryers. The secondary heat exchanger utilizes the air stream leaving the primary heat exchanger prior to being exhausted out of the stack to heat make-up air for the process dryers. The oxidized gas stream exits the stack 41 feet above ground elevation and 14 feet above the roof at a temperature of 300 to 380 °F.

Compliance stack testing of the existing catalytic oxidizer took place in 2009. It was determined that the control device operates with a destruction efficiency of 98.2% when the combustion chamber is maintained at 650°F. The temperature is set using a Honeywell DC-230B controller.

Top-Down BACT Analysis

Presstek proposes to modify design specifications of Coater #2 and facility-wide emission limits. Accordingly, the emission unit is subject to a top-down best available control technology (BACT) analysis. After eliminating other options as unfeasible, including routing all three coaters to the existing catalytic oxidizer (phone conversation between MassDEP and Presstek, 5/26/2015), the Facility considered two options: the installation of a new regenerative thermal oxidizer (Option #1) and using the existing CIRE Technologies, Inc. catalytic oxidizer. Option #1 was determined to be cost prohibitive considering the 1% increase in control efficiency that would result. The following is determined as BACT for the operation of Coater #2 with solvent-based coatings:

- Coating machine operators will sign off on all water-based/solvent-based coating changes;
- Presstek has proposed a combination of best management practices, pollution prevention and a limitation on raw material usage by limiting the VOC and HAP content and the number of gallons of coatings applied;
- When applying water-based coatings, emissions will be vented to atmosphere;
- When applying solvent-based coatings (on Coaters #2 and #3 only) and during cleaning operations:

- The coaters shall have a permanent total enclosure with 100% capture efficiency. Pressure will be monitored to maintain a negative static pressure. The monitor will be interlocked with the coating line to alarm and stop production if the correct negative pressure is not maintained;
- The coaters shall be controlled with an existing CIRE Technologies, Inc. catalytic oxidizer with a minimum 98% destruction efficiency confirmed through performance testing;
- The upstream and downstream temperature of the catalyst bed will be monitored and recorded continuously as an indicator of VOC destruction in the catalyst.
- The coaters shall be mechanically interlocked with the existing catalytic oxidizer. Coating and cleaning operations using solvent-based coatings/cleaners will not commence until a minimum temperature set point immediately prior to the catalytic bed of 650°F is maintained. The solvent-based coating process will shut down if the catalytic oxidizer malfunctions;
- The facility will implement work practices to minimize the evaporation of VOCs and HAPs while handling solvent-based coatings and cleanup solutions on Coater #2 and #3. Provisions for good storage and handling practices have been included in Table 6, Special Terms and Conditions;
- While mixing operations are taking place, the Permittee will ensure that air flow at the mixing stations has a minimum velocity of 200 feet per minute and exhaust will be routed to the catalytic preheated oxidizer. The mix room will have an interlock to ensure that the catalytic oxidizer is in operation when solvent coatings are being prepared.

Applicable Regulatory Requirements

In addition to being subject to the BACT requirements of 310 CMR 7.02(8)(a)2, the surface coating operation is subject to the visible emission requirements of 310 CMR 7.06, the dust, odor, construction and demolition requirements of 310 CMR 7.09 and the noise reduction requirements of 310 CMR 7.10.

The facility is subject to 310 CMR 7.18(10), *Metal Coil Coating*.

The three 1.65 MMBtu/hr natural gas-fired drying ovens on each coater and the burner on the catalytic oxidizer are exempt from plan approval requirements pursuant to 310 CMR 7.02(2)(b)15.

The Permittee has indicated that the Project is subject to 40 CFR Part 60, Subpart TT, Standards of Performance for Metal Coil Surface Coating (40 CFR 60 §§460 - 466), for which MassDEP has accepted delegation. The Permittee has indicated that the coating line is not subject to the National Emission Standards for Hazardous Air Pollutants (40 CFR Part 61) or the National Emission Standards for Hazardous Air Pollutants for Source Categories (40 CFR Part 63).

2. EMISSION UNIT IDENTIFICATION

Each Emission Unit (“EU”) identified in Table 1 is subject to and regulated by this Plan Approval:

Table 1			
EU	Description	Design Capacity	Pollution Control Device (PCD)
1 (Coater #1)	Custom Rod Coater with 1.65 MMBtu/hr natural gas-fired oven burner	5,750 ft ² substrate per hour	N/A (EU 1 only)
2 (Coater #2)	Customized Coater Application with 1.65 MMBtu/hr natural gas-fired oven burner		100% Capture PTE; CIRE Technologies, Inc. Catalytic Oxidizer Model #006070cat 6,000 scfm, 2.0 MMBtu/hr natural gas fired burner
3 (Coater #3)	Customized Coater Application with 1.65 MMBtu/hr natural gas-fired oven burner		
4 (Mix Room)	Room used for mixing and blending raw materials	2,025 ft ³ room with floor air sweep; fan to catalytic oxidizer rated at 500 scfm	

Table 1 Key:

EU = Emission Unit Number
 MMBtu/hr = million British thermal units per hour
 scfm = standard cubic feet per minute
 PTE = Permanent Total Enclosure

PCD = Pollution Control Device
 ft² = square feet
 ft³ = cubic feet

3. APPLICABLE REQUIREMENTS

A. OPERATIONAL, PRODUCTION and EMISSION LIMITS

The Permittee is subject to, and shall not exceed the Operational, Production, and Emission Limits as contained in Table 2:

Table 2			
EU	Operational / Production Limit	Air Contaminant	Emission Limit
1	$\leq 0.367 \text{ lb}_{\text{VOC}}/\text{gal}_{\text{coating}}$; $\leq 0.060 \text{ lb}_{\text{HAP}}/\text{gal}_{\text{coating}}$; $\leq 4.0 \text{ lb}_{\text{VOC}}/\text{gal}_{\text{solids}}$; $\leq 34,000 \text{ gal}_{\text{coating}}/\text{yr}$; $\leq 6,800 \text{ gal}_{\text{coating}}/\text{mo}$;	VOC	6.2 TPY 1.2 TPM
2, 3	$\leq 7.23 \text{ lb}_{\text{VOC}}/\text{gal}_{\text{coating}}$; $\leq 29,741 \text{ gal}_{\text{coating}}/\text{yr}$; $\leq 5,948 \text{ gal}_{\text{coating}}/\text{mo}$; $\leq 200 \text{ gal}_{\text{SBC}}/\text{yr}$; $\leq 25 \text{ gal}_{\text{SBC}}/\text{mo}$; 100% capture efficiency by PTE ¹ ; Coating with $\geq 0.367 \text{ lb}_{\text{VOC}}/\text{gal}_{\text{coating}}$ and solvent-based cleaning operations shall be routed to a pre-heated CIRE Technologies, Inc. catalytic oxidizer: <ul style="list-style-type: none"> • 98% destruction efficiency; • $\leq 6,000 \text{ scfm}$ to oxidizer; • 0% opacity² with exception of 5 minutes during start-up. During start-up 310 CMR 7.06 applies. 	VOC	2.6 TPY 0.5 TPM
Facility-wide	-	VOC	8.4 TPY 1.7 TPM
		HAP (total)	1.0 TPY 0.2 TPM

Table 2 Key:

EU = Emission Unit Number
 $\text{lb}_{\text{VOC}}/\text{gal}_{\text{coating}}$ = pounds of VOC per gallon of coating
 $\text{gal}_{\text{coating}}/\text{yr}$ = gallons of coating per year
 CMR = Code of Massachusetts Regulations
 $\text{lb}_{\text{HAP}}/\text{gal}_{\text{coating}}$ = pounds of HAP per gallon of coating
 PTE = Permanent Total Enclosure
 TPY = tons per consecutive 12-month period
 $\text{gal}_{\text{SBC}}/\text{yr}$ = gallons of solvent-based cleaner per year

$\text{lb}_{\text{VOC}}/\text{gal}_{\text{solids}}$ = pounds of VOC per gallon of solids
 °F = Degree Fahrenheit
 $\text{gal}_{\text{coating}}/\text{mo}$ = gallons of coating per month
 VOC = Volatile Organic Compounds
 HAP (total) = total Hazardous Air Pollutants.
 TPM = tons per month
 scfm = standard cubic feet per minute
 $\text{gal}_{\text{SBC}}/\text{mo}$ = gallons of solvent-based cleaner per month

Table 2 Notes:

- 1- According to USEPA Method 204, Criteria for and Verification of a Permanent or Temporary Total Enclosure, 40 CFR 51, Appendix M.
- 2- Opacity means that characteristic of matter which renders it capable of interfering with the transmission of rays of light and causes a degree of obscuration of an observer's view.

B. COMPLIANCE DEMONSTRATION

The Permittee is subject to, and shall comply with, the monitoring, testing, record keeping, and reporting requirements as contained in Tables 3, 4, and 5:

Table 3	
EU	Monitoring and Testing Requirements
1, 2, 3, 4	<ol style="list-style-type: none"> 1. In accordance with 310 CMR 7.18(10)(c) and 40 CFR §60.464(b), the Permittee shall monitor daily, for each coating formulation as applied, to demonstrate compliance for each calendar month and 12 consecutive months, the emission limits in Table 2. Such monitoring shall include, but is not limited to: <ol style="list-style-type: none"> a. Volume used of each coating/solvent (gal); b. Coating/solvent density (lbs/gal); c. VOC content of each coating/solvent (lbs/gal); d. HAP content of each coating/solvent (lbs/gal); e. Solid content of each coating/solvent (lbs/gal); f. VOC content of coating formulation (lbs/gal); g. HAP content of coating formulation (lbs/gal); h. Solids content of coating formulation (lbs/gal); i. Date of formulation use; j. Coater to which formulation was applied (#1, #2, and/or #3); k. Whether emissions were controlled; l. Gallons of cleanup solution used; m. VOC content of cleanup solution (lbs/gal); n. HAP content of cleanup solution (lbs/gal); and o. Quantity of product processed. 2. In accordance with 40 CFR 60.464(b), the Permittee shall compute for each affected facility the average VOC content of coatings applied during each calendar month according to the equations provided in §60.463(c)(4). 3. The Permittee shall, upon request, perform or have performed tests to demonstrate compliance. Testing shall be conducted in accordance with EPA Method 24 and/or Method 25 as described in CFR Title 40 Part 60, or by other methods approved by the MassDEP and EPA.

Table 3

EU	Monitoring and Testing Requirements
1, 2, 3, 4	<p>4. In accordance with 310 CMR 7.13 and 40 CFR §60.463(b), the Permittee shall conduct an initial performance test to determine the VOC/HAP destruction removal efficiency of the CIRE Technologies, Inc. catalytic oxidizer within 120 days after the modification and start-up of Coater #2. The emission testing shall conform to the following requirements:</p> <ul style="list-style-type: none"> a. Prior to performance testing, the Permittee shall test the structural integrity of the CIRE Technologies, Inc catalytic oxidizer, including the duct work, and make any needed repairs; b. The testing shall take place under maximum and minimum loading conditions that are representative of the facility's operation; c. The Permittee shall submit a pretest protocol to MassDEP for review at least 45 days prior to the anticipated test date. The protocol shall include a description of the proposed test port locations, sampling equipment, testing procedures, and operating conditions; d. The Permittee shall submit the final emission test report to MassDEP within 45 days after the completion of the compliance stack testing. The report shall, at a minimum, include documentation of all test findings and a description of operating parameters; e. The Permittee shall follow the test methods and procedures in accordance with 40 CFR §60.466. f. The Permittee shall confirm 100% capture efficiency of the PTE surrounding Coater #2 and Coater #3 using USEPA Method 204; g. The Permittee shall determine whether the Mix Room meets the criteria of a PTE using USEPA Method 204.
2, 3	<p>5. In accordance with the best available control technology provision of 310 CMR 7.02(8)(a)2., the Permittee shall install, calibrate, maintain, and operate a monitoring device, such as a manometer, which shall continuously monitor the pressure of each PTE to indicate that it is achieving 100% capture efficiency in accordance with USEPA Method 204, <i>Criteria for and Verification of a Permanent or Temporary Total Enclosure</i> .</p> <p style="padding-left: 40px;">The monitoring device shall be interlocked with the coating process and have an audible alarm.</p>
	<p>6. In accordance with the best available control technology provision of 310 CMR 7.02(8)(a)2., the Permittee shall install interlocks to prevent application of coatings containing greater than 0.367 pounds VOC per gallon of coating without the use of the CIRE Technologies, Inc. catalytic oxidizer preheated to 650°F.</p>
	<p>7. In accordance with 40 CFR 60.464(c), the Permittee shall install, calibrate, operate, and maintain a device to monitor continuously the gas temperature both upstream and downstream of the incinerator catalyst bed. This device shall have an accuracy of ± 2.5 °C or ± 0.75 percent of the temperature being measured expressed in degrees Celsius, whichever is greater.</p>
	<p>8. In accordance with 310 CMR 7.02(8)(a)2., audible and visual alarms shall alert the operators if the CIRE Technologies, Inc. catalytic oxidizer combustion chamber temperature drops to 650°F.</p>
4	<p>9. The Permittee shall monitor, on a daily basis, the air velocity at all mixing stations within the mix room to confirm a minimum velocity of 200 feet per minute. A pressure monitoring device will be used to verify the compliant velocity conditions in the mix room.</p>
Facility-wide	<p>10. The Permittee shall have the catalyst of the CIRE Technologies, Inc. catalytic oxidizer lab tested biannually (every two years) to ensure the catalytic oxidizer destruction removal efficiency (DRE) remains at or above 98%.</p>
	<p>11. The Permittee shall monitor all operations to ensure sufficient information is available to comply with 310 CMR 7.12 Source Registration</p>
	<p>12. If and when MassDEP requires it, the Permittee shall conduct additional emission testing in accordance with USEPA Reference Test Methods and Regulation 310 CMR 7.13</p>

Table 3 Key:

EU = Emission Unit Number
CMR = Code of Massachusetts Regulations
CFR = Code of Federal Regulations
gal = gallon
lbs/gal = pounds per gallon
HAP = total Hazardous Air Pollutants
°C = Degree Celsius

VOC = Volatile Organic Compounds
MassDEP = Massachusetts Department of
Environmental Protection
USEPA = United States Environmental Protection
Agency
PTE = Permanent Total Enclosure
°F = Degree Fahrenheit

Table 4	
EU	Record Keeping Requirements
1, 2, 3	<p>1. In accordance with 310 CMR 7.18(10)(c) and 40 CFR §60.464(b), the Permittee shall record daily, for each coating formulation as applied, to demonstrate compliance for each calendar month and 12 consecutive months, the emission limits in Table 2. Such monitoring shall include, but is not limited to:</p> <ul style="list-style-type: none"> a. Volume used of each coating/solvent (gal); b. Coating/solvent density (lbs/gal); c. VOC content of each coating/solvent (lbs/gal); d. HAP content of each coating/solvent (lbs/gal); e. Solid content of each coating/solvent (lbs/gal); f. VOC content of coating formulation (lbs/gal); g. HAP content of coating formulation (lb/gal); h. Solids content of coating formulation (lbs/gal); i. Date of formulation use; j. Coater to which formulation was applied (#1, #2, and/or #3); k. Whether emissions were controlled; l. Gallons of cleanup solution used; m. VOC content of cleanup solution (lbs/gal); n. HAP content of cleanup solution (lbs/gal); and o. Quantity of product processed. <p>2. In accordance with 40 CFR 60.464(b), the Permittee shall record for each affected facility the average VOC content of coatings applied during each calendar month according to the equations provided in §60.463(c)(4).</p> <p>3. Upon request, the Permittee shall produce records of all calculations made to determine the VOC and HAP contents of each formulation as applied.</p>
2, 3	<p>4. In accordance with 310 CMR 7.02(3)(e), on a daily basis the Permittee shall record the pressure within the PTE to indicate whether the PTE is maintaining 100% capture efficiency around Coaters #2 and #3.</p> <p>The Permittee shall record any instances of alarms and indicate whether the coating process was shut down.</p> <p>5. In accordance with 40 CFR 60.464(c), the Permittee shall continuously record the gas temperature (°F) both upstream and downstream of the incinerator catalyst bed.</p> <p>6. In Accordance with 40 CFR 60.464(c), during coating operations, the owner or operator shall record all periods in excess of 3 hours where the average difference between the temperature upstream and downstream of the incinerator catalyst bed remains below 80 percent of the temperature difference at which compliance was demonstrated during the most recent measurement of incinerator efficiency or when the inlet temperature falls more than 28 °C (50 °F) below the temperature at which compliance with §60.462(a)(2), (3), or (4) was demonstrated during the most recent measurement of incinerator efficiency required by §60.8. The records required by §60.7 shall identify each such occurrence and its duration.</p>
4	<p>7. In accordance with 310 CMR 7.02(3)(e), the Permittee shall record, on a daily basis, the pressure readings within the mix room to confirm a minimum velocity of 200 feet per minute.</p>

Table 4	
EU	Record Keeping Requirements
Facility-wide	<p>8. The Permittee shall maintain adequate records on-site to demonstrate compliance status with all operational, production, and emission limits contained in Table 2 above. Records shall also include the actual emissions of air contaminant(s) emitted for each calendar month and for each consecutive twelve-month period (current month plus prior eleven months). These records shall be compiled no later than the 15th day following each month. An electronic version of the MassDEP approved record keeping form, in Microsoft Excel format, can be downloaded at http://www.mass.gov/eea/agencies/massdep/air/approvals/limited-emissions-record-keeping-and-reporting.html#WorkbookforReportingOn-SiteRecordKeeping.</p> <p>9. The Permittee shall maintain records of monitoring and testing as required by Table 3.</p> <p>10. The Permittee shall maintain a copy of this Plan Approval, underlying Application and the most up-to-date SOMP for the EU(s) and PCD(s) approved herein on-site.</p> <p>11. The Permittee shall maintain a record of routine maintenance activities performed on the approved EU(s), PCD(s) and monitoring equipment. The records shall include, at a minimum, the type or a description of the maintenance performed and the date and time the work was completed.</p> <p>12. The Permittee shall maintain a record of all malfunctions affecting air contaminant emission rates on the approved EU(s) and PCD(s) and monitoring equipment. At a minimum, the records shall include: date and time the malfunction occurred; description of the malfunction; corrective actions taken; the date and time corrective actions were initiated and completed; and the date and time emission rates and monitoring equipment returned to compliant operation.</p> <p>13. The Permittee shall maintain records to ensure sufficient information is available to comply with 310 CMR 7.12 Source Registration.</p> <p>14. The Permittee shall maintain records required by this Plan Approval on-site for a minimum of five (5) years.</p> <p>15. The Permittee shall make records required by this Plan Approval available to MassDEP and USEPA personnel upon request.</p>

Table 4 Key:

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|---|---|
| EU = Emission Unit Number | PCD = Pollution Control Device |
| SOMP = Standard Operating and Maintenance Procedure | USEPA = United States Environmental Protection Agency |
| CMR = Code of Massachusetts Regulations | VOC = Volatile Organic Compounds |
| CFR = Code of Federal Regulations | MassDEP = Massachusetts Department of |
| gal = gallon | Environmental Protection |
| lbs/gal = pounds per gallon | USEPA = United States Environmental Protection |
| HAP = total Hazardous Air Pollutants | Agency |
| °C = Degree Celsius | PTE = Permanent Total Enclosure |
| °F = Degree Fahrenheit | |

Table 5	
EU	Reporting Requirements
2	1. The Permittee shall report to MassDEP when the new PTE has been installed and Coater #2 is operational as a solvent-based coater.
Facility-wide	2. In accordance with 40 CFR §60.465, the Permittee shall include the following data in the initial compliance report required by 40 CFR §60.8: <ol style="list-style-type: none"> a. The overall VOC destruction rate used to attain compliance with §60.462(a)(4) and the calculated emission limit used to attain compliance with §60.462(a)(4); and b. The combustion temperature of the thermal incinerator or the gas temperature, both upstream and downstream of the incinerator catalyst bed, used to attain compliance with §60.462(a)(4).
	3. In accordance with 40 CFR §60.465(c), following the initial performance test, the Permittee shall identify, record, and submit a written report to the MassDEP every calendar quarter with a determination of whether the volume-weighted average of the local mass of VOC's emitted to the atmosphere per volume of applied coating solids (N) is greater than the limit specified under §60.462(a)(4).
	4. In accordance with 40 CFR §60.7(c), the Permittee shall submit an excess emissions and monitoring systems performance report and/or summary report form (located in 40 CFR §60.7(d)) to the Administrator semiannually when the incinerator temperature drops as defined under §60.464(c). If no such periods occur, the Permittee shall state this in the report.
	5. The Permittee shall submit to MassDEP all information required by this Plan Approval over the signature of a "Responsible Official" as defined in 310 CMR 7.00 and shall include the Certification statement as provided in 310 CMR 7.01(2)(c).
	6. The Permittee shall notify the Western Regional Office of MassDEP, BAW Section Chief by telephone: (413) 755-2115, email: marc.simpson@state.ma.us, or fax : (413) 784-1149, as soon as possible, but no later than three (3) business day after discovery of an exceedance(s) of Table 2 requirements. A written report shall be submitted to the Section Chief at MassDEP within ten (10) business days thereafter and shall include: identification of exceedance(s), duration of exceedance(s), reason for the exceedance(s), corrective actions taken, and action plan to prevent future exceedance(s).
	7. The Permittee shall report every three years to MassDEP, in accordance with 310 CMR 7.12, all information as required by the Source Registration/Emission Statement Form. The Permittee shall note therein any minor changes (under 310 CMR 7.02(2)(e), 7.03, 7.26, etc.), which did not require Plan Approval.

Table 5 Key:

EU = Emission Unit Number
 SOMP = Standard Operating and Maintenance Procedure
 CMR = Code of Massachusetts Regulations
 CFR = Code of Federal Regulations
 HAP = total Hazardous Air Pollutants
 °C = Degree Celsius
 EU = Emission Unit Number
 MassDEP = Massachusetts Department of Environmental Protection

PCD = Pollution Control Device
 USEPA = United States Environmental Protection Agency
 VOC = Volatile Organic Compounds
 gal = gallon
 lbs/gal = pounds per gallon
 PTE = Permanent Total Enclosure
 °F = Degree Fahrenheit
 USEPA = United States Environmental Protection Agency

4. SPECIAL TERMS AND CONDITIONS

A. The Permittee is subject to, and shall comply with, the Special Terms and Conditions as contained in Table 6 below:

Table 6	
EU	Special Terms and Conditions
2, 3	1. The Permittee shall conduct all solvent-based cleaning operations within the PTE which shall be routed to the CIRE Technologies, Inc. catalytic oxidizer. 2. In accordance with 310 CMR 7.02(8)(a)2., the Permittee shall ensure a minimum 0.45 second residence time in the combustion chamber and 0.039 minimum residence time in the catalyst bed of the CIRE Technologies, Inc. catalytic oxidizer. 3. In accordance with 310 CMR 7.02(8)(a)2., the catalytic oxidizer combustion chamber shall be preheated to a minimum of 650°F. The temperature within the catalyst bed shall not exceed 1,050°F. 4. Per Provision 10 of Table 3, the Permittee shall notify MassDEP within 24 hours by telephone, and within 7 days in writing, if catalyst test results indicate the oxidizer is operating with a DRE of less than 98% and shall notify MassDEP in writing when the catalyst is going to be replaced. 5. The Permittee shall operate the CIRE Technologies, Inc. catalytic oxidizer in accordance with the manufacturer's Standard Operation and Maintenance Procedures (SOMP). The SOMP shall be posted at or near-by the oxidizer's control panel.
4	6. The Permittee shall operate the catalytic oxidizer and ensure PTE at all times when preparing coatings with VOC content in excess of 0.367 pounds per gallon of coating in the mix room.
Facility-wide	7. The Permittee shall install a low leakage control dampers to direct emissions from water-based operations to the atmosphere and direct solvent-based operations to the CIRE Technologies, Inc. catalytic oxidizer. The damper shall be equipped with a visual gauge for easy and redundant identification of flow path.

Table 6	
EU	Special Terms and Conditions
Facility-wide	<p>8. The Permittee shall institute the following BMPs:</p> <ul style="list-style-type: none"> a. Store all VOC-containing materials used for surface preparation, cleaning, and rework in closed containers; b. Ensure that mixing and storage containers used for VOC-containing materials used for surface preparation, cleaning and rework are kept closed at all times except when depositing or removing these materials; c. Minimize spills of VOC-containing materials used for surface preparation, cleaning, and rework; d. Convey VOC-containing materials used for surface preparation, cleaning, and rework from one location to another in closed containers or pipes; e. Minimize VOC emissions from cleaning of application, storage, mixing, and conveying equipment by ensuring that: <ul style="list-style-type: none"> i. equipment cleaning is performed without atomizing the cleanup solvent; and ii. all spent solvent is captured in closed containers f. Store and dispose of all absorbent materials, such as cloth or paper that is contaminated with VOC-containing materials used for surface preparation, cleaning, and rework in non-absorbent containers that shall be kept closed except when placing materials in or removing materials from the container.
	<p>9. The Permittee is subject to the Standards of Performance for Metal Coil Surface Coating of 40 CFR Part 60 Subpart TT., 40 CFR Part 60.460 through 60.465, in which authority has been delegated to the MassDEP, and shall comply with all applicable requirements within this subpart.</p>
	<p>10. Any prior Plan Approvals issued under 310 CMR 7.02 shall remain in effect unless specifically changed or superseded by this Plan Approval. The Facility shall not exceed the emission limits and shall comply with approved conditions specified in the prior Plan Approval(s) unless specifically altered by this Plan Approval.</p>

Table 6 Key:

- | | |
|--|---|
| EU = Emission Unit Number | DRE = destruction removal efficiency |
| PTE = Permanent Total Enclosure | VOC = Volatile Organic Compounds |
| lbs/gal = pounds per gallon | HAP (total) = total Hazardous Air Pollutants |
| BMP = Best Management Practice | CFR = Code of Federal Regulations |
| CMR = Code of Massachusetts Regulations | SOMP = Standard Operating and Maintenance Procedure |
| MassDEP = Massachusetts Department of Environmental Protection | |

B. The Permittee shall install and use an exhaust stack, as required in Table 7, on each of the Emission Units that is consistent with good air pollution control engineering practice and that discharges so as to not cause or contribute to a condition of air pollution. Each exhaust stack shall be configured to discharge the gases vertically and shall not be equipped with any part or device that restricts the vertical exhaust flow of the emitted gases, including, but not limited to, rain protection devices known as “shanty caps” and “egg beaters.”

C. The Permittee shall install and utilize exhaust stacks with the following parameters, as contained in Table 7, for the Emission Units that are regulated by this Plan Approval:

Table 7				
EU	Stack Height Above Ground (feet)	Stack Inside Exit Dimensions (feet)	Stack Gas Exit Velocity Range (feet per second)	Stack Gas Exit Temperature Range (°F)
1	37	1.5	25	~ 200
2	37	1.5	25	~ 200
3	37	1.5	25	~ 200
oxidizer	41	1.83	27-56	300 - 380

Table 7 Key:

EU = Emission Unit Number
 ~ = approximately

°F = Degree Fahrenheit

5. GENERAL CONDITIONS

The Permittee is subject to, and shall comply with, the following general conditions:

- A. Pursuant to 310 CMR 7.01, 7.02, 7.09 and 7.10, should any nuisance condition(s), including but not limited to smoke, dust, odor or noise, occur as the result of the operation of the Facility, then the Permittee shall immediately take appropriate steps including shutdown, if necessary, to abate said nuisance condition(s).
- B. If asbestos remediation/removal will occur as a result of the approved construction, reconstruction, or alteration of this Facility, the Permittee shall ensure that all removal/remediation of asbestos shall be done in accordance with 310 CMR 7.15 in its entirety and 310 CMR 4.00.
- C. If construction or demolition of an industrial, commercial or institutional building will occur as a result of the approved construction, reconstruction, or alteration of this Facility, the Permittee shall ensure that said construction or demolition shall be done in accordance with 310 CMR 7.09(2) and 310 CMR 4.00.
- D. Pursuant to 310 CMR 7.01(2)(b) and 7.02(7)(b), the Permittee shall allow MassDEP and / or USEPA personnel access to the Facility, buildings, and all pertinent records for the purpose of making inspections and surveys, collecting samples, obtaining data, and reviewing records.

- E. This Plan Approval does not negate the responsibility of the Permittee to comply with any other applicable Federal, State, or local regulations now or in the future.
- F. Should there be any differences between the Application and this Plan Approval, the Plan Approval shall govern.
- G. Pursuant to 310 CMR 7.02(3)(k), MassDEP may revoke this Plan Approval if the construction work is not commenced within two years from the date of issuance of this Plan Approval, or if the construction work is suspended for one year or more.
- H. This Plan Approval may be suspended, modified, or revoked by MassDEP if MassDEP determines that any condition or part of this Plan Approval is being violated.
- I. This Plan Approval may be modified or amended when in the opinion of MassDEP such is necessary or appropriate to clarify the Plan Approval conditions or after consideration of a written request by the Permittee to amend the Plan Approval conditions.
- J. Pursuant to 310 CMR 7.01(3) and 7.02(3)(f), the Permittee shall comply with all conditions contained in this Plan Approval. Should there be any differences between provisions contained in the General Conditions and provisions contained elsewhere in the Plan Approval, the latter shall govern.

6. MASSACHUSETTS ENVIRONMENTAL POLICY ACT

MassDEP has determined that the filing of an Environmental Notification Form (ENF) with the Secretary of Energy & Environmental Affairs, for air quality control purposes, was not required prior to this action by MassDEP. Notwithstanding this determination, the Massachusetts Environmental Policy Act (MEPA) and 301 CMR 11.00, Section 11.04, provide certain “Fail-Safe Provisions,” which allow the Secretary to require the filing of an ENF and/or an Environmental Impact Report (EIR) at a later time.

7. APPEAL PROCESS

This Plan Approval is an action of MassDEP. If you are aggrieved by this action, you may request an adjudicatory hearing. A request for a hearing must be made in writing and postmarked within twenty-one (21) days of the date of issuance of this Plan Approval.

Under 310 CMR 1.01(6)(b), the request must state clearly and concisely the facts, which are the grounds for the request, and the relief sought. Additionally, the request must state why the Plan Approval is not consistent with applicable laws and regulations.

The hearing request along with a valid check payable to the Commonwealth of Massachusetts in the amount of one hundred dollars (\$100.00) must be mailed to:

Commonwealth of Massachusetts
Department of Environmental Protection
P.O. Box 4062
Boston, MA 02211

This request will be dismissed if the filing fee is not paid, unless the appellant is exempt or granted a waiver as described below. The filing fee is not required if the appellant is a city or town (or municipal agency), county, or district of the Commonwealth of Massachusetts, or a municipal housing authority.

MassDEP may waive the adjudicatory hearing-filing fee for a person who shows that paying the fee will create an undue financial hardship. A person seeking a waiver must file, together with the hearing request as provided above, an affidavit setting forth the facts believed to support the claim of undue financial hardship.

Should you have any questions concerning this Plan Approval, please contact Amy Stratford by telephone at (413) 755-2144, or in writing at the letterhead address.

This final document copy is being provided to you electronically by the Department of Environmental Protection. A signed copy of this document is on file at the DEP office listed on the letterhead.

Marc Simpson
Section Chief
Bureau of Air and Waste

ecc: MassDEP/Boston - Yi Tian
MassDEP/WERO – Peter Czapienski
Timothy Kucab, Tighe & Bond, Inc.