

STATEMENT OF BASIS

For the issuance of Draft Air Permit # 2111-AOP-R3 AFIN: 16-00222

1. PERMITTING AUTHORITY:

Arkansas Department of Environmental Quality
5301 Northshore Drive
North Little Rock, Arkansas 72118-5317

2. APPLICANT:

Crane Composites, Inc.
8500 CW Post Road
Jonesboro, Arkansas 72401

3. PERMIT WRITER:

John Mazurkiewicz

4. NAICS DESCRIPTION AND CODE:

NAICS Description: Unlaminated Plastics Film and Sheet (except Packaging)
Manufacturing
NAICS Code: 326199

5. SUBMITTALS:

Date of Application	Type of Application (New, Renewal, Modification, Deminimis/Minor Mod, or Administrative Amendment)	Short Description of Any Changes That Would Be Considered New or Modified Emissions
12/29/2015	Renewal	Permitting additional HAPs to account for combustion of natural gas (SN-01)

6. REVIEWER'S NOTES:

Crane Composites, Inc. (Crane) operates a facility located at 8500 CW Post Road, Jonesboro, Arkansas 72401. Prior to the issuance of this permit, Crane has operated under the authority of Arkansas Department of Environmental Quality Operating Air Permit No. 2111-AOP-R2, which expires June 27, 2016. In accordance with General Provision 3 of the permit, and ADEQ Regulation §26.406, Crane has submitted an application to renew the existing permit, along with the following modifications:

- Incorporate 40 CFR 63, Subpart EEEE (OLD MACT) provisions for Transfer Racks at the facility.
- Account for emissions resulting from combustion of natural gas at the Laminating Lines and Ovens (SN-01).

As a result of this renewal, and associated modifications, permitted emission rates have increased 0.8 tpy VOC; 0.1 tpy NO_x; 0.02 tpy Methyl Methacrylate, and 0.17 tpy other HAPs. Permitted emission rates decreased 0.2 tpy PM/PM₁₀; 0.01 tpy Styrene, and 0.06 tpy Vinyl Acetate.

7. COMPLIANCE STATUS:

The following summarizes the current compliance of the facility including active/pending enforcement actions and recent compliance activities and issues.

There are no active/pending enforcement actions or recent compliance activities regarding this facility

8. PSD APPLICABILITY:

a) Did the facility undergo PSD review in this permit (i.e., BACT, Modeling, etc.)?
No.

b) Is the facility categorized as a major source for PSD?

- *Single pollutant ≥ 100 tpy and on the list of 28 or single pollutant ≥ 250 tpy and not on list*
No.

If yes, explain why this permit modification is not PSD.

N/A

9. SOURCE AND POLLUTANT SPECIFIC REGULATORY APPLICABILITY:

Source	Pollutant	Regulation (NSPS, NESHAP or PSD)
SN-01	VOC/HAP	40 CFR Part 63, Subpart SS
Facility	VOC/HAP	40 CFR Part 63, Subpart WWW
Facility	Protection of Stratospheric Ozone	40 CFR Part 82
Facility	VOC/HAP	40 CFR 63, Subpart EEEE

10. EMISSION CHANGES AND FEE CALCULATION:

See emission change and fee calculation spreadsheet in Appendix A.

11. AMBIENT AIR EVALUATIONS:

a) Reserved.

b) Non-Criteria Pollutants:

1st Tier Screening (PAER)

Estimated hourly emissions from the following sources were compared to the Presumptively Acceptable Emission Rate (PAER) for each compound. The Department has deemed the PAER to be the product, in lb/hr, of 0.11 and the Threshold Limit Value (mg/m^3), as listed by the American Conference of Governmental Industrial Hygienists (ACGIH).

Pollutant	TLV (mg/m^3)	PAER (lb/hr) = $0.11 \times \text{TLV}$	Proposed lb/hr	Pass?
Styrene	85.2	9.37	20.88	N
Xylene	434.1	47.7	0.03	Y
Ethylbenzene	434.1	47.7	0.02	Y
Methyl Methacrylate	204.7	22.5	5.41	Y
Vinyl Acetate	35.2	3.8	3.20	Y
Acenaphthene	0.2	0.022	3.78E-08	Y
Acenaphthylene	0.2	0.022	3.78E-08	Y
Anthracene	0.2	0.022	5.04E-08	Y
Benz(a)anthracene	0.2	0.022	3.78E-08	Y
Benzo(a)pyrene	0.2	0.022	2.52E-08	Y
Benzo(b)fluoranthene	0.2	0.022	3.78E-08	Y
Benzo(g,h,i)perylene	0.2	0.022	2.52E-08	Y
Benzo(k)fluoranthene	0.2	0.022	3.78E-08	Y
Chrysene	0.2	0.022	3.78E-08	Y
Dibenzo(a,h)anthracene	0.2	0.022	2.52E-08	Y
7,12-Dimethylbenz(a)anthracene	0.2	0.022	3.36E-07	Y
Fluoranthene	0.2	0.022	6.30E-08	Y
Fluorene	0.2	0.022	5.88E-08	Y
Formaldehyde	0.3	0.033	1.58E-03	Y
Indeno(1,2,3-c,d)pyrene	0.2	0.022	3.78E-08	Y
Lead	0.05	0.0055	1.05E-05	Y
3-Methylchloranthrene	0.2	0.022	3.78E-08	Y
2-Methylnaphthalene	0.2	0.022	5.04E-07	Y
Phenanthrene	0.2	0.022	3.57E-07	Y
Polycyclic Organic Matter (POM)	0.2	0.022	1.85E-06	Y
Pyrene	0.2	0.022	1.05E-07	Y
Arsenic Compounds	0.01	0.0011	4.20E-06	Y

Pollutant	TLV (mg/m ³)	PAER (lb/hr) = 0.11 × TLV	Proposed lb/hr	Pass?
(inorganic including arsine)				
Beryllium Compounds	0.00005	5.5E-06	2.52E-07	Y
Cadmium Compounds	0.002	0.00022	2.31E-05	Y
Chromium Compounds (Trivalent, Total)	0.01	0.0011	2.94E-05	Y
Cobalt Compounds	0.02	0.0022	1.76E-06	Y
Manganese Compounds	0.2	0.022	7.98E-06	Y
Mercury Compounds	0.025	0.00275	5.46E-06	Y
Selenium Compounds	0.2	0.022	5.04E-07	Y

2nd Tier Screening (PAIL)

AERMOD air dispersion modeling was performed on the estimated hourly emissions from the following sources, in order to predict ambient concentrations beyond the property boundary. The Presumptively Acceptable Impact Level (PAIL) for each compound has been deemed by the Department to be one one-hundredth of the Threshold Limit Value as listed by the ACGIH.

Pollutant	PAIL (µg/m ³) = 1/100 of Threshold Limit Value	Modeled Concentration (µg/m ³)	Pass?
Styrene	852	104.7	Y

12. CALCULATIONS:

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
01	Natural Gas Combustion AP-42 Section 1.4	PM=7.6 lb/10 ⁶ scf SO ₂ =0.6 lb/10 ⁶ scf VOC=5.5 lb/10 ⁶ scf CO=84 lb/10 ⁶ scf NO _x =100 lb/10 ⁶ scf			
01	Panels Mass Balance	<u>Two (2) Lines- Max usage rates</u> Core resin= 100 lb/min = 6,000 lb/hr Gel coat= 18 lb/min = 1,080 lb/hr <u>Total Annual Resin Usage Limit</u> Core resin= 83,044,800 lb/yr	RTO	95%	100% Capture 95% Destruction

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
		Gel coat= 14,948,064 lb/yr <u>Total VOC's emitted from raw materials</u> 0.0219 lb VOC/lb core resin 0.0849 lb VOC/lb gel coat resin <u>VOC's emitted in these proportions</u> Wet End= 91% Ovens= 9%			
02	Mass Balance AP-42 Section 11.13	3.0 lb PM/ton	Fabric Filter	99.9%	
07	Mass Balance AP-42 Section 11.13	3.0 lb PM/ton	Fabric Filter	99.9%	
08	Tanks 4.0	16.2 lb VOC/hr			uncontrolled

13. TESTING REQUIREMENTS:

The permit requires testing of the following sources.

SN	Pollutants	Test Method	Test Interval	Justification
01	VOC	25A	5 yr	Required By 40 CFR Part 63 Subpart WWWW

14. MONITORING OR CEMS:

The permittee must monitor the following parameters with CEMS or other monitoring equipment (temperature, pressure differential, etc.)

SN	Parameter or Pollutant to be Monitored	Method (CEM, Pressure Gauge, etc.)	Frequency	Report (Y/N)
01	Combustion Chamber Temperature	Thermocouple	Continuously	Y

SN	Parameter or Pollutant to be Monitored	Method (CEM, Pressure Gauge, etc.)	Frequency	Report (Y/N)
	Inspection of PTE for leaks	N/A	Annual	N

15. RECORDKEEPING REQUIREMENTS:

The following are items (such as throughput, fuel usage, VOC content, etc.) that must be tracked and recorded.

SN	Recorded Item	Permit Limit	Frequency	Report (Y/N)
01	Core Resin Throughput	83,044,800 lb/yr	Daily	Y
	Gel Coat Resin Throughput	14,948,064 lb/yr	Daily	
	Combustion Chamber Temperature	1400 °F (minimum)	Continuously	
	Inspection of PTE for leaks	N/A	Annual	N
	Documentation that each transfer rack is not required to be controlled	N/A	N/A	N
	HAP Content	<u>Core Resins</u> 45% VOC 45% Styrene 5% Methyl Methacrylate 1% Vinyl Acetate <u>Gel Coats</u> 42% VOC 41% Styrene 0.2% Xylene 0.1% Ethylbenzene	N/A	Y
02 & 07	Amount of filler received	2,100 tons per consecutive 12-month period	Monthly	Y
08	Amount of styrene received	504,000 gallons per consecutive 12-month period	Monthly	Y

16. OPACITY:

SN	Opacity	Justification for limit	Compliance Mechanism
01, 02, 07	0%	Department Guidance	Weekly Inspection

17. DELETED CONDITIONS:

Former SC	Justification for removal
	None.

18. GROUP A INSIGNIFICANT ACTIVITIES:

Source Name	Group A Category	Emissions (tpy)						
		PM/PM ₁₀	SO ₂	VOC	CO	NO _x	HAPs	
							Single	Total
BYK 306 Additive Tank – 250 Gal.	A-2			0.01				0.01
BYK 6333 Additive Tank – 250 Gal.	A-2			0.01				0.01
300 Gallon Diesel Storage Tank	A-3			0.01				
One Lab Hood	A-5			0.01				

19. VOIDED, SUPERSEDED, OR SUBSUMED PERMITS:

List all active permits voided/superseded/subsumed by the issuance of this permit.

Permit #
2111-AOP-R2

APPENDIX A – EMISSION CHANGES AND FEE CALCULATION

Fee Calculation for Major Source

Revised 08-26-15

Facility Name: Crane Composites, Inc.
 Permit Number: 2111-AOP-R3
 AFIN: 16-00222

\$/ton factor	23.93	Annual Chargeable Emissions (tpy)	100
Permit Type	Renewal No Changes	Permit Fee \$	0

Minor Modification Fee \$	500
Minimum Modification Fee \$	1000
Renewal with Minor Modification \$	500
Check if Facility Holds an Active Minor Source or Minor Source General Permit	<input type="checkbox"/>
If Hold Active Permit, Amt of Last Annual Air Permit Invoice \$	0
Total Permit Fee Chargeable Emissions (tpy)	0.7
Initial Title V Permit Fee Chargeable Emissions (tpy)	

HAPs not included in VOC or PM:

Chlorine, Hydrazine, HCl, HF, Methyl Chloroform, Methylene Chloride, Phosphine, Tetrachloroethylene, Titanium Tetrachloride

Air Contaminants:

All air contaminants are chargeable unless they are included in other totals (e.g., H2SO4 in condensable PM, H2S in TRS, etc.)

Pollutant (tpy)	Check if Chargeable Emission	Old Permit	New Permit	Change in Emissions	Permit Fee Chargeable Emissions	Annual Chargeable Emissions
PM		0.9	0.7	-0.2		
PM ₁₀		0.9	0.7	-0.2	-0.2	0.7
SO ₂		0.1	0.1	0	0	0.1
VOC		35.2	36	0.8	0.8	36
CO		7.6	7.6	0		
NO _x		9	9.1	0.1	0.1	9.1
Styrene	<input type="checkbox"/>	34.27	34.26	-0.01		
Xylene	<input type="checkbox"/>	0.07	0.07	0		

Pollutant (tpy)	Check if Chargeable Emission	Old Permit	New Permit	Change in Emissions	Permit Fee Chargeable Emissions	Annual Chargeable Emissions
Ethylbenzene	<input type="checkbox"/>	0.04	0.04	0		
Methyl Methacrylate	<input type="checkbox"/>	2.7	2.72	0.02		
Vinyl Acetate	<input type="checkbox"/>	0.8	0.74	-0.06		
2-phenoxyethanol	<input type="checkbox"/>	0.04	0.04	0		
Combustion HAPs	<input type="checkbox"/>	0	0.17	0.17		