

## STATEMENT OF BASIS

For the issuance of Draft Air Permit # 0759-AR-9 AFIN: 47-00194

1. PERMITTING AUTHORITY:

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

2. APPLICANT:

Evonik Cyro, LLC  
1500 Richard Prewitt Drive  
Osceola, Arkansas 72370

3. PERMIT WRITER:

Joseph Hurt

4. NAICS DESCRIPTION AND CODE:

NAICS Description:  
Unlaminated Plastics Film and Sheet (except Packaging) Manufacturing  
NAICS Code: 326113

5. SUBMITTALS:

4/15/2013

6. REVIEWER'S NOTES:

Evonik Cyro, LLC (Cyro) owns and operates a facility at 1500 Richard Prewitt Drive, Osceola, which manufactures polymer pellets and sheets. CYRO has proposed to remove the diesel electric generators (SN-47 and SN-48) and to add a baghouse (SN-60) to collect the saw chips generated by the new acrylic panel saw. The total permitted emission increases include 0.1 tpy of PM/PM<sub>10</sub>. The total permitted emission decreases include 1.2 tpy of SO<sub>2</sub>, 0.4 tpy of VOC, 3.8 tpy of CO, and 18.4 tpy of NO<sub>x</sub>.

7. COMPLIANCE STATUS:

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

The facility was last inspected on April 24, 2012, and was noted as in compliance.

8. PSD APPLICABILITY:

a. Did the facility undergo PSD review in this permit (i.e., BACT, Modeling, etc.)? N

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

- Single pollutant  $\geq 100$  tpy and on the list of 28 or single pollutant  $\geq 250$  tpy and not on list, or
- $CO_2e$  potential to emit  $\geq 100,000$  tpy and  $\geq 100$  tpy/ $\geq 250$  tpy of combined GHGs?

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

9. GHG MAJOR SOURCE (TITLE V):

Indicate one:

- Facility is classified as a major source for GHG and the permit includes this designation
- Facility does not have the physical potential to be a major GHG source
- Facility has restrictions on GHG or throughput rates that limit facility to a minor GHG source. Describe these restrictions: \_\_\_\_\_

10. SOURCE AND POLLUTANT SPECIFIC REGULATORY APPLICABILITY:

Source	Pollutant	Regulation (NSPS, NESHAP or PSD)
01, 02, 03, 19	VOC, Record Tank Size	40 CFR Part 60, Subpart Kb

11. EMISSION CHANGES AND FEE CALCULATION:

See emission change and fee calculation spreadsheet in Appendix A.

12. NAAQS EVALUATIONS AND NON-CRITERIA POLLUTANTS:

a) NAAQS

- (i) List the reason for a NAAQS evaluation (i.e. what changes are being permitted that would require the evaluation) and pollutants affected. If a NAAQS evaluation is not required, indicate why not.

This permitting action is for a Minor Source. Criteria pollutants were not evaluated for impacts on the NAAQS.

b) Non-Criteria Pollutants:

1<sup>st</sup> 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<sup>3</sup>), as listed by the American Conference of Governmental Industrial Hygienists (ACGIH).

Pollutant	TLV (mg/m <sup>3</sup> )	PAER (lb/hr) = 0.11 × TLV	Proposed lb/hr	Pass?
Methyl Acrylate	7.04	0.77	0.3	Yes
Methyl Methacrylate	204	22.5	1.07	Yes

13. CALCULATIONS:

SN	Emission Factor Source	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
1, 2, & 3	Tanks	VOC = 0.1 lb/hr MMA = 0.1 lb/hr			
5 & 50	Manufacturer's estimate	PM = 0.1 lb/hr SO <sub>2</sub> = 0.1 lb/hr VOC = 0.1 lb/hr CO = 0.8 lb/hr NO <sub>x</sub> = 1.1 lb/hr	None		Natural gas combustion
22, 27-30, 52-54, 58	Manufacturer's specifications	PM = 0.1 lb/hr 5 mg/m <sup>3</sup> dust in the air outlet	Bag Filter	99.95%	Maximum annual possible
31 & 32	Manufacturer's estimate & specifications	PM = 0.1 lb/hr SO <sub>2</sub> = 0.1 lb/hr VOC = 0.2 lb/hr CO = 1.4 lb/hr NO <sub>x</sub> = 0.1 lb/hr MMA = 0.1 lb/hr EA = 0.1 lb/hr			
35	Equipment specifications	PM = 0.2 lb/hr			Maximum annual possible

SN	Emission Factor Source	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
42	Equipment specifications	PM = 0.4 lb/hr			Maximum annual possible
49 & 51	Manufacturer's specifications	PM = 0.1 lb/hr SO <sub>2</sub> = 0.1 lb/hr VOC = 0.1 lb/hr CO = 2.6 lb/hr NO <sub>x</sub> = 0.1 lb/hr MMA = 0.9 lb/hr	Catalytic Oxidizer	99.0%	
55	Test Data	PM = 0.1 lb/hr SO <sub>2</sub> = 0.1 lb/hr VOC = 0.1 lb/hr CO = 1.4 lb/hr NO <sub>x</sub> = 0.1 lb/hr MMA = 0.1 lb/hr EA = 0.1 lb/hr	Catalytic Oxidizer	99.0%	
56	Worst case based on manufacturer's specifications	PM = 0.1 lb/hr 12.0 grains/A.C.F.	Bag Filter	99.9%	
58	Manufacturer's specifications	PM = 0.1 lb/hr	Bag Filter	99.9%	
59	EIIP	MMA = 0.07 lb/hr			EIIP Chapter 4.4

14. TESTING REQUIREMENTS:

The permit requires testing of the following sources.

SN	Pollutants	Test Method	Test Interval	Justification
31, 32, 49, 51, 55	Methyl Methacrylate, Methyl Acrylate	#18	Once every five years	19.702

15. 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)
05 & 50	Natural Gas Usage	Meter	Monthly	N
49, 51, & 55	Catalytic Oxidizer Temperature	CPMS	Continuously	N

16. 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)
05, 50	Natural Gas Usage	78.84 MMcf per rolling 12-month period	Monthly	N
60	Acrylic Sheets processed	24,226,700 pounds per consecutive 12-month period	Monthly	N
01, 03, 19	Tank Dimensions and Volume Calculation	75 m <sup>3</sup>	Once	N
02	Tank Dimensions and Volume Calculation	151 m <sup>3</sup>	Once	N

SN	Recorded Item	Permit Limit	Frequency	Report (Y/N)
01	VOC stored and the maximum true vapor pressure of that VOC	Determined by §60.116b(e)(3)	As necessary	N
01	Maximum tank turnovers	100 turnovers per consecutive 12-month period	Monthly	N
02	Maximum tank turnovers	100 turnovers per consecutive 12-month period	Monthly	N
03	Maximum tank turnovers	30 turnovers per consecutive 12-month period	Monthly	N

17. OPACITY:

SN	Opacity	Justification for limit	Compliance Mechanism
05, 22, 27 – 32, 35, 42, 49 – 56, 58, & 60	5%	§18.501	

18. DELETED CONDITIONS:

Former SC	Justification for removal
8 – 10	The diesel electric generators were removed.

19. GROUP A INSIGNIFICANT ACTIVITIES

Source Name	Group A Category	Emissions (tpy)						
		PM/PM <sub>10</sub>	SO <sub>2</sub>	VOC	CO	NO <sub>x</sub>	HAPs	
							Single	Total
No new insignificant activities were added with this permitting action.								

Permit #: 0759-AR-9

AFIN: 47-00194

Page 7 of 7

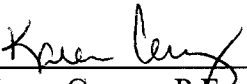
20. VOIDED, SUPERSEDED, OR SUBSUMED PERMITS:

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

Permit #
0759-AR-8

21. CONCURRENCE BY:

The following supervisor concurs with the permitting decision.

  
\_\_\_\_\_  
Karen Cerney, P.E.

APPENDIX A – EMISSION CHANGES AND FEE CALCULATION



## Fee Calculation for Minor Source

Revised 08-20-12

Facility Name: Evonik Cyro, LLC

Permit Number: 0759-AR-9

AFIN: 47-00194

			Old Permit	New Permit
\$/ton factor	22.97	Permit Predominant Air Contaminant	30.7	12.3
Minimum Fee \$	400	Net Predominant Air Contaminant Increase	-18.4	
Minimum Initial Fee \$	500			
Check if Administrative Amendment	<input type="checkbox"/>	Permit Fee \$	400	
		Annual Chargeable Emissions (tpy)	12.3	

Pollutant (tpy)	Old Permit	New Permit	Change
PM	11.7	11.8	0.1
PM <sub>10</sub>	11.7	11.8	0.1
SO <sub>2</sub>	4.7	3.5	-1.2
VOC	6.7	6.3	-0.4
CO	52.2	48.4	-3.8
NO <sub>x</sub>	30.7	12.3	-18.4
Single HAP	4	4	0
Combination HAP	5.5	5.5	0

**Request for PDS Invoice**Invoice Number  
*(assigned when invoice printed)*

PDS-

AFIN \*

47-00194

Name

*(for confirmation only)*

Evonik Cyro, LLC

Invoice Type (pick one) \*

Initial

Mod X

Variance

Annual

Renewal

Interim  
Authority

Permit Number \*

0759-AR-9

Media Code \*

A

Fee Code or Pmt Type \*

MS

Fee Description

*(for confirmation only)*

Minor Source

Amount Due \*

*(whole dollar amount only)*

\$ 400.00

Printed Comment

*(600 characters maximum)*Minimum De Minimis Fee (Net Predominant Air Contaminant  
Increase = - 18.4 tpy)*Note: The information below is for use by the requesting division if desired; it will not print on the invoice.*

Engineer

Joseph Hurt

Paid? (yes/no)

No

Check number

Not Applicable

Comments

**\* Required data** (See "g:\Misc\PDS\_FeeCodes.wpd" for descriptions and discussions of fee codes)

Request submitted by:

Pam Owen

Date:

6-18-13