

STATEMENT OF BASIS

For the issuance of Draft Air Permit # 0759-AR-11 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:

Jude Jean-Francois

4. NAICS DESCRIPTION AND CODE:

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

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
4/23/2015	Deminimis	Install a Pelletron Device (SN-61)

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. This permit modification is necessary to install a Pelletron device (SN-61).

The total emission increases include + 2.5 PM/PM₁₀ tpy.

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 July 2, 2014 and was found to be 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 ≥ 100 tpy and on the list of 28 or single pollutant ≥ 250 tpy and not on list*

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

9. SOURCE AND POLLUTANT SPECIFIC REGULATORY APPLICABILITY:

Source	Pollutant	Regulation (NSPS, NESHAP or PSD)
01, 02, 03, 19	VOC, Record Tank Size	40 C.F.R. pt. 60 Subpart Kb

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:

Based on Department procedures for review of non-criteria pollutants, emissions of non-criteria pollutants are below thresholds of concern.

c) H₂S Modeling:

A.C.A. §8-3-103 requires hydrogen sulfide emissions to meet specific ambient standards. Many sources are exempt from this regulation, refer to the Arkansas Code for details.

Is the facility exempt from the H₂S Standards Yes

If exempt, explain: No H₂S emitted

12. CALCULATIONS:

SN	Emission Factor Source (AP-42, testing, etc.)	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 ₂ = 0.1 lb/hr VOC = 0.1 lb/hr CO = 0.8 lb/hr NO _x = 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 ³ dust in the air outlet	Bag Filter	99.95%	Maximum annual possible
31 & 32	Manufacturer's estimate & specifications	PM = 0.1 lb/hr SO ₂ = 0.1 lb/hr VOC = 0.2 lb/hr CO = 1.4 lb/hr NO _x = 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
42	Equipment specifications	PM = 0.4 lb/hr			Maximum annual possible
49 & 51	Manufacturer's specifications	PM = 0.1 lb/hr SO ₂ = 0.1 lb/hr VOC = 0.1 lb/hr CO = 2.6 lb/hr NO _x = 0.1 lb/hr MMA = 0.9 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
60	Engineering	Engineering	Cartridge	95%	

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
	Estimation	Estimation	Filter		
61	On-line Color Extrusion throughput	Percent of dust removed (1.85%)	Baghouse	99.0%	

13. TESTING REQUIREMENTS:

The permit requires testing of the following sources.

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

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

SN	Recorded Item	Permit Limit	Frequency	Report (Y/N)
		period		
01	Tank Dimensions and Volume Calculation	1,136 m ³	Once	N
02	Tank Dimensions and Volume Calculation	151 m ³	Once	N
03, 19	Tank Dimensions and Volume Calculation	75 m ³	Once	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

16. OPACITY:

SN	Opacity	Justification for limit	Compliance Mechanism
05, 22, 27 – 32, 35, 42, 49 – 54, 56, 58, 60 & 61	5%	Reg.18.501	Upon inspection

17. DELETED CONDITIONS:

Former SC	Justification for removal
	N/A

18. GROUP A INSIGNIFICANT ACTIVITIES:

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

19. VOIDED, SUPERSEDED, OR SUBSUMED PERMITS:

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

Permit #
0759-AR-10

APPENDIX A – EMISSION CHANGES AND FEE CALCULATION

Fee Calculation for Minor Source

Revised 08-25-14

Facility Name: Evonik Cyro, LLC

Permit Number: 0759-AR-11

AFIN: 47-00194

			Old Permit	New Permit
\$/ton factor	23.89	Permit Predominant Air Contaminant	11.8	13.8
Minimum Fee \$	400	Net Predominant Air Contaminant Increase	2	
Minimum Initial Fee \$	500			
Check if Administrative Amendment	<input type="checkbox"/>	Permit Fee \$	400	
		Annual Chargeable Emissions (tpy)	13.8	

Pollutant (tpy)	Old Permit	New Permit	Change
PM	11.3	13.8	2.5
PM ₁₀	11.3	13.8	2.5
SO ₂	3	3	0
VOC	5.3	5.3	0
CO	42.2	42.2	0
NO _x	11.8	11.8	0
Single HAP	3.5	3.5	0
Total HAPs	4.5	4.5	0