

STATEMENT OF BASIS

For the issuance of Draft Air Permit # 0759-AR-13 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:

Jesse Smith

4. NAICS DESCRIPTION AND CODE:

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

5. ALL SUBMITTALS:

The following is a list of ALL permit applications included in this permit revision.

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
12/19/2017	Deminimis Mod and Modification	Removal of SN-53 and SN-60 Addition of SN-65 and SN-66

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. During this modification, the Panel Saw Dust Collector and a Conveying System Vent (SN-53 and SN-60) have been removed, Two Power Feed Systems (SN-65 and SN-66) have been added, and the VOC hourly and yearly limits for the Seal Pot Vent have been updated due to emissions testing. Specific Conditions 13 and 14 have been removed as the equipment they are referencing

is no longer in service and the general conditions have been updated as well. The testing requirement for the oxidizing units has been updated to test for VOC's instead of individual HAPs.

The total emission changes from this modification include a decrease of 0.8 tpy PM/PM<sub>10</sub> and an increase of 0.5 tpy VOC.

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 February 23, 2017. There were no issues noted at this time.

8. PSD/GHG APPLICABILITY:

a) Did the facility undergo PSD review in this permit (i.e., BACT, Modeling, etc.)? N  
If yes, were GHG emission increases significant? 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 for 8(b), 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
62, 63, 64	HAPs	40 C.F.R. § 63 Subpart ZZZZ

10. PERMIT SHIELD – TITLE V PERMITS ONLY:

Did the facility request a permit shield in this application? N

(Note - permit shields are not allowed to be added, but existing ones can remain, for minor modification applications or any Regulation 18 requirement.)

If yes, are applicable requirements included and specifically identified in the permit? N  
If not, explain why.

11. EMISSION CHANGES AND FEE CALCULATION:

See emission change and fee calculation spreadsheet in Appendix A.

12. AMBIENT AIR EVALUATIONS:

Include the results for any ambient air evaluations or modeling. Include NSR/PSD permits and permits that require an evaluation in accordance with revisions to the Arkansas State Implementation Plan, National Ambient Air Quality Standards, Infrastructure SIPs and NAAQS SIP per Ark Code Ann. § 8-4-318, dated March 2017 and the ADEQ Air Permit Screening Modeling Instructions.

a) NAAQS

A NAAQS evaluation is not required under the Arkansas State Implementation Plan, National Ambient Air Quality Standards, Infrastructure SIPs and NAAQS SIP per Ark. Code Ann. § 8-4-318, dated March 2017 and the ADEQ Air Permit Screening Modeling Instructions.

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) H<sub>2</sub>S 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 H<sub>2</sub>S Standards Y  
 If exempt, explain: No H<sub>2</sub>S emissions

13. 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 <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

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
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
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%	
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	EPA, 1995 protocol for Equipment leak emission estimates	<u>Lbs/hr services</u> Valves = 0.000363 Connectors=0.000179 Open Ends = 0.00330 Pump Seals =0.004110			
61	On-line Color Extrusion throughput	Percent of dust removed (1.85%)	Baghouse	99.0%	

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
62, 63, 64	AP-42 Chapter 3.3, 34	Up to 600hp (lb/hp-hr) PM/PM <sub>10</sub> =.0022 SO <sub>2</sub> =.00205 VOC=.00252 CO=.00668 NO <sub>x</sub> =.031			Emergency Generators
65 66	AP-42 Section 11.26	0.0035 lb PM/PM <sub>10</sub> per 1,000 lb throughput	Baghouse	99%	

14. TESTING REQUIREMENTS:

The permit requires testing of the following sources.

SN	Pollutants	Test Method	Test Interval	Justification
31, 32, 49, 51	VOC	#18	Once every five years	Reg.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	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	Monthly	N

SN	Recorded Item	Permit Limit period	Frequency	Report (Y/N)
01	Tank Dimensions and Volume Calculation	1,136 m <sup>3</sup>	Once	N
02	Tank Dimensions and Volume Calculation	151 m <sup>3</sup>	Once	N
03, 19	Tank Dimensions and Volume Calculation	75 m <sup>3</sup>	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
62, 63, 64	Hours of operation	500 hours/year	Monthly	N

17. OPACITY:

SN	Opacity	Justification for limit	Compliance Mechanism
05, 22, 27 – 32, 35, 42, 49 – 54, 56, 58, & 61, 65, 66	5%	Reg.18.501	Upon inspection
62, 63, 64	20%	Reg.19.503	Inspection Observation

18. DELETED CONDITIONS:

Former SC	Justification for removal

Former SC	Justification for removal
13 and 14	Acrylic sheet process has been removed from the facility.

19. GROUP A INSIGNIFICANT ACTIVITIES:

The following is a list of Insignificant Activities including revisions by this permit.

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 added with this permitting action.								

20. VOIDED, SUPERSEDED, OR SUBSUMED PERMITS:

The following is a list of all active permits voided/superseded/subsumed by the issuance of this permit.

Permit #
0759-AR-12





## APPENDIX A – EMISSION CHANGES AND FEE CALCULATION

## Fee Calculation for Minor Source

Revised 03-11-16

Evonik Cyro, LLC  
 Permit #: 0759-AR-13  
 AFIN: 47-00194

			Old Permit	New Permit
\$/ton factor	23.93	Permit Predominant Air Contaminant	20	20
Minimum Fee \$	400	Net Predominant Air Contaminant Increase	0	
Minimum Initial Fee \$	500			
Check if Administrative Amendment	<input type="checkbox"/>	Permit Fee \$	400	
		Annual Chargeable Emissions (tpy)	20	

Pollutant (tpy)	Old Permit	New Permit	Change
PM	14.6	13.8	-0.8
PM <sub>10</sub>	14.6	13.8	-0.8
PM <sub>2.5</sub>	0	0	0
SO <sub>2</sub>	3.7	3.7	0
VOC	10.1	10.6	0.5
CO	44.1	44.1	0
NO <sub>x</sub>	20	20	0
Single HAP	3.1	3.1	0
Total HAPs	8.8	9.3	0.5