

STATEMENT OF BASIS

for the issuance of Draft Air Permit #759-AR-6

1. PERMITTING AUTHORITY:

Arkansas Department of Environmental Quality
8001 National Drive
Post Office Box 8913
Little Rock, Arkansas 72219-8913

2. APPLICANT:

CYRO Industries
1500 Richard Prewitt Drive
Osceola, Arkansas 72370

3. PERMIT WRITER:

Richard Nissen

4. PROCESS DESCRIPTION AND SIC CODE:

SIC Code: 2821 / Poly Pellets

5. SUBMITTALS:

22 March 2000

6. REVIEWER'S NOTES:

CYRO Industries (CSN:47-0194) 1500 Richard Prewitt Drive, Osceola, AR 72370 manufactures polymer pellets and sheets. This facility has asked the Department to make a modification to the facility's existing permit to allow the use of an alternative back-up emission control system and to add an additional baghouse (SN-58) to be in series with two existing cyclones thus removing the previous emission points (SN-33 and SN-34).

Permitted emissions for methyl methacrylate will increase 0.8 tpy (from 6.5 tpy to 7.3 tpy) with the installation of a new catalytic oxidizer, associated equipment, and maintenance. The bulk of the emission will be split between two catalytic oxidizers (the new oxidizer SN-49 and the existing oxidizer SN-51). The oxidizers will each be operated at less than 10 lb./hr vapor load (each has a rated capacity of 20 lb./hr). Each oxidizer will thus act as a back-up for the other. Other HAPs include 1.0 tpy of ethyl acrylate and trace amounts of xylene and toluene. CO emissions will increase by 11.4 ton/yr. Source SN-57 (carbon absorbers) will not be required thus the emission point will be removed.

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7. COMPLIANCE STATUS:

The March 22, 2000, inspection showed the facility to be in compliance.

8. APPLICABLE REGULATIONS:

a. Applicability

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

Did the facility undergo a previous PSD review? N Permit #: _____

Is this facility categorized as a major source? N

\$ 100 tpy and on the list of 28 (100 tpy)? _____

\$ 250 tpy all other ? _____

b. PSD Netting

Was netting performed to avoid PSD review in this permit?: N

Indicate increases and decreases used in netting for PSD purposes only:

c. Source and Pollutant Specific Regulatory Applicability

SN	Pollutant	Regulation ⁽¹⁾
01, 02, 03, 19	Tank Size Record is the only Requirement	NSPS 40 CFR 60 Subpart Kb

1. NSPS, NESHAP (Part 61 & Part 63), or PSD only

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9. EMISSION CHANGES:

Summary of plantwide emission changes:

Plantwide Permitted Emissions (ton/yr)			
Pollutant	Air Permit 759-AR-5*	Air Permit 759-AR-6	Change
PM	15.6	13.0	-2.6
PM ₁₀	15.6	13.0	-2.6
SO ₂	3.8	3.9	0.1
VOC	9.3	12.1	2.8
CO	40.8	52.2	11.4
NO _x	30.2	30.7	0.5
Single HAP	6.5	7.3	0.8
Combined HAPs	8.5	9.2	0.8

*759-AR-5 (previous permitted) values had addition errors which show an artificial increase (decrease) in pollutants.

10. MODELING:

a. Criteria Pollutants

Examination of the source type, location, plot plan, land use, emission parameters, and other available information indicate that modeling is not warranted at this time.

b. Non-Criteria Pollutants

Modeling was used to determine the permitted emission rates for ranges non-criteria pollutants.

i. 1st Tier Screening (PAER)

NA

ii. 2nd Tier Screening (PAIL)

SCREEN3 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 was deemed by the Department to be one one-hundredth of the Threshold Limit Value, as listed by the ACGIH.

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ISCST3 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 was deemed by the Department to be one one-hundredth of the Threshold Limit Value, as listed by the ACGIH.

Pollutant	(PAIL, mg/m ³) = 1/100 of Threshold Limit Value	Modeled Concentration (mg/m ³)	Pass/Fail
Ethyl Acrylate	0.0205	0.0015	Pass
Methyl Methacrylate	0.204	0.014	Pass

11. CALCULATIONS:

SN	Emission Factor Source					Comments
	Type	Source	Sect	Value	Units	
01 through 03 05, 22 27 through 32 35, 47, 48 50 through 56 & Fugitive Emissions	PM					Values Taken From Permit # 759-AR-5
	PM ₁₀					
	SO ₂					
	VOC					
	CO					
	NO _x					
	Methyl Methacrylate					
49	Ethyl Acrylate					Test Data from 1999 for SN-51
	PM			0.1	lb/hr	
	PM ₁₀			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	
58	Methyl Methacrylate			0.19	lb/hr	99.9% eff Baghouse
	PM			0.1	lb/hr	
	PM ₁₀			0.1	lb/hr	

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Permit #: 759-AR-6 Page 7 of 7	CSN:47 Emission Factor Source					Comments
	Type	Source	Sect	Value	Units	
59	Methyl Methacrylate					From Permit # 759-AR-5
	Ethyl Acrylate					

12. TESTING REQUIREMENTS:

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

13. MONITORING OR CEMS:

The following are parameters that must be monitored with CEMs or other monitoring equipment (temperature, pressure differential, etc), frequency of recording and whether records are needed to be included in any annual, semiannual or other reports.

SN	Parameter or Pollutant to be Monitored	Method of Monitoring	Frequency*	Report (Y/N)**
05,50	Natural Gas Usage	Meter	Monthly	N

* Indicate frequency of recording required for the parameter (Continuously, hourly, daily, etc.)

** Indicates whether the parameter needs to be included in reports.

14. RECORD KEEPING REQUIREMENTS:

The following are items (such as throughput, fuel usage, VOC content of coating, etc) that must be tracked and recorded, frequency of recording and whether records are needed to be included in any annual, semiannual or other reports.

SN	Recorded Item	Limit	Frequency	Report
01, 03, 19	Tank Dimensions and Volume Calculation	75 m ³	Once	No
02	Tank Dimensions and Volume Calculation	151 m ³	Once	
05, 50	Natural Gas Usage	78.9 MMcf/TMRT	Monthly	
47, 48	Diesel Fuel Usage	31,000 gal/TMRT	Each	
47, 48	Sulfur Content from Fuel Assay	7.2 g/gal	Delivery	

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SN	Recorded Item	Limit	Frequency	Report
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TMRT - Twelve Month Rolling Total

15. OPACITY:

SN	Opacity %	Justification (NSPS limit, Dept. Guidance, etc)	Compliance Mechanism ⁽¹⁾
01, 02, 03	NA		
05, 22, 27 through 35, 42	5%	18.501	Monthly
47 , 48	20%	19.503	Monthly
49 through 56	5%	18.501	Monthly
57	NA		
58	5%	18.501	Monthly

1. daily observation, weekly, control equipment operation, etc

16. DELETED CONDITIONS:

The following Specific Conditions were included in the previous permit, but deleted for the current permitting action.

Former SC	Justification for removal
SC-#6	Reporting is no longer required for Minor Source Permits.

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17. VOIDED, SUPERSEDED OR SUBSUMED PERMITS:

List all active permits for this facility which are voided/superseded/subsumed by issuance of this permit.

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18. CONCURRENCE BY:

The following supervisor concurs with the permitting decision:

T. Rheume, P.E.