

## STATEMENT OF BASIS

For the issuance of Draft Air Permit # 1527-AOP-R17 AFIN: 63-00010

1. PERMITTING AUTHORITY:

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

2. APPLICANT:

Almatis, Inc.  
4701 Alcoa Road  
Benton, Arkansas 72015

3. PERMIT WRITER:

Christopher Riley

4. NAICS DESCRIPTION AND CODE:

NAICS Description: Alumina Refining and Primary Aluminum Production  
NAICS Code: 331313

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
4/22/2020	Minor Mod	Two sources now venting outside of buildings

6. REVIEWER'S NOTES:

Almatis, Inc., located at 4701 Alcoa Road in Bauxite, AR, operates an alumina refining facility. The facility submitted a minor modification to reroute 055BH04 (Jet Mill Product Collector) and 405BH03 (Nuisance Dust Collector) to vent outside their respective buildings. The permitted emission increases are 1.4 tpy of both PM and PM<sub>10</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 September 05, 2019, and following areas of concern were found:

- Failing to submit the June 1, 2018 SAM
- Failing to submit two upset condition reports in a timely manner
- Failing to submit two upset conditions in the 2018 ACC

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? Y  
 • *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.  
 Facility had insignificant increases in emissions. No major/significant changes made.

9. SOURCE AND POLLUTANT SPECIFIC REGULATORY APPLICABILITY:

Source	Pollutant	Regulation (NSPS, NESHAP or PSD)
EG405A01	NO <sub>x</sub> and CO	NESHAP 40 C.F.R. Part 63 Subpart ZZZZ
EG405A01	NO <sub>x</sub> and CO	NSPS 40 C.F.R. Part 60 Subpart JJJJ

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/A  
 If not, explain why.

For any requested inapplicable regulation in the permit shield, explain the reason why it is not applicable in the table below.

Source	Inapplicable Regulation	Reason
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Source	Inapplicable Regulation	Reason
N/A		

11. EMISSION CHANGES AND FEE CALCULATION:

See emission change and fee calculation spreadsheet in Appendix A.

12. AMBIENT AIR EVALUATIONS:

The following are results for ambient air evaluations or modeling.

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:

No changes were made to the emissions of any source that would be involved in modelling. See the Statement of Basis for R16 for the most recent PAER/PAIL evaluation.

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 emissions

Pollutant	Threshold value	Modeled Concentration (ppb)	Pass?
H <sub>2</sub> S	20 parts per million (5-minute average*)		
	80 parts per billion (8-hour average) residential area		
	100 parts per billion (8-hour average) nonresidential area		

\*To determine the 5-minute average use the following equation

$$C_p = C_m (t_m/t_p)^{0.2} \text{ where}$$

$C_p$  = 5-minute average concentration

$C_m$  = 1-hour average concentration

$t_m$  = 60 minutes

$t_p$  = 5 minutes

13. CALCULATIONS:

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
405BH0133 and 405BH0133	Testing (for PM/PM <sub>10</sub> , HF and NO <sub>x</sub> ) and AP-42, 1.4	PM/PM <sub>10</sub> = 4.2 lb/hr SO <sub>2</sub> = 0.6 lb/MMscf VOC = 5.5 lb/MMscf CO = 84 lb/MMscf NO <sub>x</sub> = 19.6 lb/hr HF = 915 lb HF/ton AlF <sub>3</sub>	None	N/A	When recent stack testing show lower emission factors than the ones used to calculate emissions for the current permit, the facility requests to keep the old emission factors leading to higher emissions.
426BH06 and 426BH07	Testing (for PM/PM <sub>10</sub> and NO <sub>x</sub> ) and AP-42, 1.4	PM/PM <sub>10</sub> = 0.02 grains/dscf SO <sub>2</sub> = 0.6 lb/MMscf VOC = 5.5 lb/MMscf CO = 21.90 lb/hr NO <sub>x</sub> = 45.5 lb/hr	None	N/A	When recent stack testing show lower emission factors than the ones used to calculate emissions for the current permit, the facility requests to keep the old emission factors leading to higher emissions.
71padGas	Tank 4.0.9d	VOC = 3.65 lb/hr	None	N/A	Emissions were estimated based on 12,000 gallons gasoline/year
71padDiesel	Tank 4.0.9d	VOC = 0.01	None	N/A	Emissions were

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
		lb/hr			estimated based on 12,000 gallons diesel/year
EG405A01	AP-42, 3.2	PM = 9.9E-03 lb/MMBtu PM <sub>10</sub> = 7.71E-05 lb/MMBtu SO <sub>2</sub> = 5.88E-04 lb/MMBtu VOC = 1.18E-01 lb/MMBtu CO = 5.57E-01 lb/MMBtu NO <sub>x</sub> = 4.08 lb/MMBtu	None	N/A	Maximum of 500 hrs of operation per year
All other sources	Manufacturers	Varies	Baghouses	99.95%	Emissions were calculated using ACFM and loading (grains/cu.ft)

14. TESTING REQUIREMENTS:

The permit requires testing of the following sources.

SN	Pollutants	Test Method	Test Interval	Justification
405BH0133, 405BH02133, 426BH06 and 426BH07	PM/PM10 CO NOx	201A 10 7E	Annually	Department guidance
405BH0133 and 405BH0233	HF	Method 26	Annually	Department guidance

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)
N/A				

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)
405BH0133 and 405BH0233	HF feed rate	127 lb/hr	Monthly	N
71padGas	Gasoline quantity	12,000 gal/year	Monthly	N
71padDiesel	Diesel quantity	12,000 gal/year	Monthly	N
EG405A01	Operation hours	500 hrs per calendar year	Monthly	N
400BH02, 400BH05, 400BH06, 400BH07, 400BH09, 405BH02, 405BH04, 405BH05, 405BH0133, 405BH0136, 405BH0308, 405BH0309, 405BH0310, 405BH0311, 405BH0312, 405BH0313, 405BH0605, 410BH02, 410BH05, 050BH07, 415BH0001 through 415BH0020, 420BH6194, 420BH6260, 420ABH7811, 425BH08, 426BH3317, 426BH3320, 426BH5044, 426BH5045 and	Opacity	20%	Weekly	N

SN	Recorded Item	Permit Limit	Frequency	Report (Y/N)
426BH7086				
055BH01, 055BH02, 055BH03, 405BH0233, 415BH0401, 415BH6192, 415BH6225, 415BH6227, 415BH6401, 415BH6451, 420BH05, 420BH06, 420BH6193, 420BH6194, 420BH7801, 420ABH7714, 420ABH7716, 426BH3311, 426BH3314, 426BH5015, 426BH5041, 426BH06, and 426BH07	Opacity	40%	Weekly	N

17. OPACITY:

SN	Opacity	Justification for limit	Compliance Mechanism
400BH02, 400BH05, 400BH06, 400BH07, 400BH09, 405BH02, 405BH04, 405BH05, 405BH0136, 405BH0308, 405BH0309, 405BH0310, 405BH0311, 405BH0312, 405BH0313, 405BH0605, 410BH02, 410BH05, 050BH07, 415BH0001 through 415BH0020, 420BH6194, 420BH6260,	20%	Department guidance	Annually

SN	Opacity	Justification for limit	Compliance Mechanism
420ABH7811, 420BH08, 426BH3317, 426BH3320, 426BH5044, 426BH5045 and 426BH7086			
055BH01, 055BH02, 055BH03, 415BH0401, 415BH6192, 415BH6225, 415BH6227, 415BH6401, 415BH6451, 420BH05, 420BH06, 420BH6193, 420BH6194, 420BH7801, 420ABH7714, 420ABH7716, 426BH3311, 426BH3314, 426BH5015, 426BH5041, 426BH06, and 426BH07	40%	Department guidance	Annually

18. DELETED CONDITIONS:

Former SC	Justification for removal
	N/A

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
Dump Chute, 5 from bins to ground along	A-13							



east side of Building 415								
Dump Chute, upper floors to dumpster in dock area on south end of Building 415	A-13							
Dump Chute, Building 415 railcars loading station to ground	A-13							
Dump Chute from second floor to ground, north side of Building 420A	A-13							
Dump Chute to contained area on northeast corner of Building 426 to converter wing	A-13							
Dump Chute to under bulk loading belt, south side of Building 426 in dock area	A-13							
Cooling Tower	A-13	0.01						

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 #
1527-AOP-R16

Permit #: 1527-AOP-R17

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## APPENDIX A – EMISSION CHANGES AND FEE CALCULATION

## Fee Calculation for Major Source

Revised 03-11-16

Facility Name: Almatris, Inc.  
 Permit Number: 1527-AOP-R17  
 AFIN: 63-00010

\$/ton factor	23.93	Annual Chargeable Emissions (tpy)	947.1
Permit Type	Minor Mod	Permit Fee \$	500

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)	1.4
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 condensible 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		287.7	289.1	1.4		
PM <sub>10</sub>		287.7	289.1	1.4	1.4	289.1
PM <sub>2.5</sub>		0	0	0		
SO <sub>2</sub>		17.7	17.7	0	0	17.7
VOC		3.8	3.8	0	0	3.8
CO		225.1	225.1	0		
NO <sub>x</sub>		527	527	0	0	527
HF	<input checked="" type="checkbox"/>	109.5	109.5	0	0	109.5

Pollutant (tpy)	Check if Chargeable Emission	Old Permit	New Permit	Change in Emissions	Permit Fee Chargeable Emissions	Annual Chargeable Emissions
Methylene Chloride	<input type="checkbox"/>	0.1	0.1	0		
Chrysene	<input type="checkbox"/>	0.1	0.1	0		