STATEMENT OF BASIS

For the issuance of Draft Air Permit # 1527-AOP-R19 AFIN: 63-00010

1. PERMITTING AUTHORITY:

Division 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:

Shai Sabaroche

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
1/19/2026	Renewal	Remove sources 426BH5044, 415BH001; Revise capacity of source EG405A01 to 55.2 kW; Remedy rounding inconsistencies

6. REVIEWER'S NOTES:

This permitting action is a renewal with the following changes:

- Remove the following sources:
  - Scale Crushing System Dust Collector (Baghouse), source 426BH5044
  - #16A Bin Discharge Air Slide DC (Baghouse), source 415BH0011
- Revise the description of the following sources:

  - 405BH0605 to #2 Blender Airslide Dust Collector
  - 415BH0013 to #18A Bin Discharge Air Slide DC
- Revise the capacity of the Emergency Generator, source EG405A01, to 55.2kW.
- Revise the PM/PM_{10} stack testing method from EPA Reference Method 201A to EPA Reference Method 5 for the following sources: 426BH06, 426BH07, 405BH0133, and 405BH0233.
- Remedy rounding inconsistencies.
- Adjust Total Other HAPs quantities to remedy erroneous classification of certain NCAPs as HAPs.
- Update citations as needed.

Permitted annual emissions increased by 0.04 tpy of Benzene and 0.41 tpy of Total Other HAPs.

7. COMPLIANCE STATUS:

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

This facility was last inspected October 15, 2024. There were no compliance violations identified at this time. https://echo.epa.gov/detailed-facility-report?fid=110000451467

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/A

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.
There are no physical changes to the facility, its method of operation, or its emissions that warrant PSD review.

9. SOURCE AND POLLUTANT SPECIFIC REGULATORY APPLICABILITY:

Source	Pollutant	Regulation (NSPS, NESHAP or PSD)
EG405A01	NO_X and CO	NESHAP 40 C.F.R. Part 63 Subpart ZZZZ
EG405A01	NO_X and CO	NSPS 40 C.F.R. Part 60 Subpart JJJJ

10. UNCONSTRUCTED SOURCES:

Unconstructed Source	Permit Approval Date	Extension Requested Date	Extension Approval Date	If Greater than 18 Months without Approval, List Reason for Continued Inclusion in Permit
N/A				

11. PERMIT SHIELD – TITLE V PERMITS ONLY:

Did the facility request a permit shield in this application? Y
(Note - permit shields are not allowed to be added, but existing ones can remain, for minor modification applications or any 8 CAR pt. 40 requirement.)

If yes, are applicable requirements included and specifically identified in the permit? Y
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
Plantwide	40 C.F.R. 60 Subpart LL	Almatis no longer processes ore
405BH0133 405BH0233 426BH06 426BH07	40 C.F.R. 60 Subpart UUU	These sources associated with calciners or dryers were installed before April 23, 1986

12. COMPLIANCE ASSURANCE MONITORING (CAM) – TITLE V PERMITS ONLY:

List sources potentially subject to CAM because they use a control device to achieve compliance and have pre-control emissions of at least 100 percent of the major source level. List the pollutant of concern and a brief summary of the CAM plan (temperature monitoring, CEMs, opacity monitoring, etc.) and frequency requirements of § 64.

Source	Pollutant Controlled	Cite Exemption or CAM Plan Monitoring and Frequency
400BH02, 400BH05, 400BH06, 400BH07, 400BH09, 405BH02, 405BH04, 405BH05, 405BH0308, 405BH0309, 405BH0310, 405BH0311, 405BH0312, 405BH0313, 405BH0605, 405BH0136, 410BH02, 410BH05, 050BH07, 415BH0001 through 415BH0018, 420BH6194,420BH6260, 420ABH7811, 420BH08, 426BH3317, 426BH3320, 426BH7086, 055BH01, 055BH02,	PM PM_{10}	Daily visible emission readings and opacity observations performed at each exhaust while the control device is in operation. Trained plant operators will perform the daily visible emission readings. Trained plant personnel will service and repair the systems on an as needed basis.

Source	Pollutant Controlled	Cite Exemption or CAM Plan Monitoring and Frequency
055BH03, 415BH0401, 415BH6192, 415BH6225, 415BH6227, 415BH6401, 415BH6451, 420BH05, 420BH06, 420BH6193, 420BH6194, 420BH7801, 420ABH7714, 420ABH7716, 426BH3311, 426BH3314, 426BH5015, 426BH5041, 426BH06, 426BH07,405BH0233, 405BH0133		Records will be kept of all daily visible emission readings.

13. EMISSION CHANGES AND FEE CALCULATION:

See emission change and fee calculation spreadsheet in Appendix A.

14. 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 DEQ Air Permit Screening Modeling Instructions.

b) Non-Criteria Pollutants:

The non-criteria pollutants listed below were evaluated. Based on Division of Environmental Quality procedures for review of non-criteria pollutants, emissions of all other non-criteria pollutants are below thresholds of concern.

1st Tier Screening (PAER)

Estimated hourly emissions from the following sources were compared to the Presumptively Acceptable Emission Rate (PAER) for each compound. The Division of Environmental Quality has deemed the PAER to be the product, in lb/hr, of 0.11 and the Threshold Limit Value (mg/m^3), as listed by the American Conference of Governmental Industrial Hygienists (ACGIH).

Pollutant	TLV (mg/m^3)	PAER (lb/hr) = 0.11 × TLV	Proposed lb/hr	Pass?
2-Methylnaphthalene	2.9080E-01	3.1988E-02	2.2243E-05	Y
Acrolein	1.1464E-01	1.2611E-02	3.0356E-03	Y

Pollutant	TLV (mg/m^3)	PAER (lb/hr) = 0.11 × TLV	Proposed lb/hr	Pass?
Benzene	6.3894E-02	7.0283E-03	1.8049E-01	N
Beryllium	5.0000E-05	5.5000E-06	1.3176E-06	Y
Cadmium	2.0000E-03	2.2000E-04	1.2078E-04	Y
Chromium	5.0000E-01	5.5000E-02	1.5373E-04	Y
Chrysene	2.0000E-01	2.2000E-02	4.0927E-07	Y
Cobalt	5.0000E-03	5.5000E-04	9.2235E-06	Y
Formaldehyde	1.2282E-01	1.3510E-02	3.9418E-02	N
Hydrofluoric Acid	4.0920E-01	4.5012E-02	5.8103E+01	N
Lead	5.0000E-02	5.5000E-03	5.4902E-05	Y
Manganese	2.0000E-02	2.2000E-03	4.1725E-05	Y
Mercury	1.0000E-02	1.1000E-03	2.8549E-05	Y
Nickel	1.0000E-01	1.1000E-02	2.3059E-04	Y
Selenium	2.0000E-01	2.2000E-02	2.6353E-06	Y

2nd Tier Screening (PAIL)

AERMOD 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 has been deemed by the Division of Environmental Quality to be one one-hundredth of the Threshold Limit Value as listed by the ACGIH.

Pollutant	PAIL ($\mu g/m^3$) = 1/100 of Threshold Limit Value	Modeled Concentration ($\mu g/m^3$)	Pass?
Benzene	6.389E-01	1.235E-01*	Y
Formaldehyde	1.228E+00	2.983E-01	Y
Hydrofluoric Acid	4.092E+00	1.904E+01	N

* Recent updates to the ACGIH TLV for Benzene introduced a more stringent short-term exposure limit. As a result, Benzene failed 2nd-Tier screening despite no changes to the facility's actual emission profile. The exceedance was driven primarily by emissions from the gasoline tank, 71padGAS.

Because the PAIL failure was caused by the updated TLV and by the conservatism built into the previous emissions-estimation method, the approach was revised. Under the prior method, the Benzene emission rate calculated per working hour of tank operation was applied uniformly across all hours of the year in AERMOD, significantly overstating true emission potential.

To correct this overestimation for 71padGAS, the number of working days per year is now defined as:

Working Days [day/yr] = Working Rate [turnovers/yr] × (1 day / 1 turnover)
assuming one turnover per day.

The revised Benzene Working-Loss is then calculated as:

Benzene Working Loss = (Working Loss [lb/yr] / Working Days [day/yr]) × (0.05 lb Benzene / 1 lb pollutant) × (1 day / 24 hr)

This results in a Benzene Working Loss of 9.19E-03 lb/hr and a total Benzene Emissions Rate of 9.89E-03 lb/hr, including Breathing Loss. The facility-wide Benzene emission rate used for screening is therefore updated to 1.04E-02 lb/hr.

This revised method preserves the total potential Benzene emissions associated with each working day but distributes those emissions across the full 24-hour period rather than concentrating them within active working hours. Consequently, each day of the year is assigned this Benzene Working Loss. While the method still assumes daily operation, it reduces modeled acute exposure while maintaining a conservative overestimate of long-term exposure, resulting in a more balanced emissions representation.

3rd Tier Screening (CA OEHHA REL)

Reference Exposure Levels (RELs) are health-protective air concentration thresholds established by the California Office of Environmental Health Hazard Assessment (CA OEHHA). They represent pollutant concentrations at or below which no adverse non-cancer health effects are anticipated for specified averaging periods.

For Hydrofluoric Acid (HF), which did not pass 2nd Tier Screening, 3rd Tier screening was conducted using AERMOD. Because short-term HF emission rates remained essentially unchanged, the modeling results from 1527-AOP-R16 were adopted for this analysis. The modeled concentrations were evaluated against the applicable CA OEHHA RELs. 1-hour and annual averaging periods were applied.

Pollutant	Average Period	CA OEHHA REL ($\mu g/m^3$)	Modeled Concentration ($\mu g/m^3$)	Pass?
Hydrofluoric Acid	1-Hour	240	59.23	Y
	Annual	14	2.3	Y

c) H_2S 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_2S Standards Y
If exempt, explain: No H_2S emissions.

15. CALCULATIONS:

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
405BH0133 405BH0133	Testing (for PM/PM_{10}, HF and NO_X) and AP-42, 1.4	PM/PM_{10} = 4.2 lb/hr SO_2 = 0.6 lb/MMscf VOC = 5.5 lb/MMscf CO = 84 lb/MMscf NO_X = 19.6 lb/hr HF = 915 lb HF/ton AlF_3	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 426BH07	Testing (for PM/PM_{10} and NO_X) and AP-42, 1.4	PM/PM_{10} = 0.02 grains/dscf SO_2 = 0.6 lb/MMscf VOC = 5.5 lb/MMscf CO = 21.90 lb/hr NO_X = 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

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
					requests to keep the old emission factors leading to higher emissions.
71padGas	Tank 4.0.9d	VOC = 3.65 lb/hr Benzene = 5% of VOC	None	N/A	Emissions were estimated based on 12,000 gallons gasoline/year
EG405A01	AP-42, 3.2	PM = 9.9E-03 lb/MMBtu PM_{10} = 7.71E-05 lb/MMBtu SO_2 = 5.88E-04 lb/MMBtu VOC = 1.18E-01 lb/MMBtu CO = 5.57E-01 lb/MMBtu NO_X = 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)

16. TESTING REQUIREMENTS:

The permit requires testing of the following sources.

SN	Pollutants	Test Method	Test Interval	Justification
405BH0133 405BH02133 426BH06 426BH07	PM/PM10 CO NOx	5 10 7E	Every 5 years	Department guidance
405BH0133 405BH0233	HF	26	Every 5 years	Department guidance

17. 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				

18. 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
055BH04, 405BH03	Opacity	5%	Weekly	N
400BH02, 400BH05, 400BH06, 400BH07, 400BH09, 405BH02, 405BH04, 405BH05, 405BH0133, 405BH0136, 405BH0308, 405BH0309, 405BH0310, 405BH0311, 405BH0312, 405BH0313, 405BH0605, 410BH02, 410BH05, 050BH07, 415BH0001 through 415BH0020,	Opacity	20%	Daily	N

SN	Recorded Item	Permit Limit	Frequency	Report (Y/N)
420BH6194, 420BH6260, 420ABH7811, 425BH08, 426BH3317, 426BH3320, 426BH5045, 426BH7086				
055BH01, 055BH02, 055BH03, 405BH0233, 415BH0401, 415BH6192, 415BH6225, 415BH6227, 415BH6401, 415BH6451, 420BH05, 420BH06, 420BH6193, 420BH6194, 420BH7801, 420ABH7714, 420ABH7716, 426BH3311, 426BH3314, 426BH5015, 426BH5041, 426BH06, 426BH07	Opacity	40%	Daily	N

19. OPACITY:

SN	Opacity	Justification for limit	Compliance Mechanism
055BH04, 405BH03	5%	Department Guidance	Annually
400BH02, 400BH05, 400BH06, 400BH07, 400BH09, 405BH02, 405BH04, 405BH05, 405BH0136, 405BH0308, 405BH0309, 405BH0310, 405BH0311, 405BH0312, 405BH0313, 405BH0605, 410BH02, 410BH05, 050BH07, 415BH0001 through 415BH0020, 420BH6194, 420BH6260, 420ABH7811, 420BH08, 426BH3317, 426BH3320, 426BH5044, 426BH5045, 426BH7086	20%	Department Guidance	CAM Plan
055BH01, 055BH02, 055BH03, 415BH0401, 415BH6192, 415BH6225, 415BH6227, 415BH6401, 415BH6451, 420BH05, 420BH06, 420BH6193, 420BH6194, 420BH7801, 420ABH7714, 420ABH7716, 426BH3311, 426BH3314, 426BH5015, 426BH5041, 426BH06, 426BH07	40%	Department Guidance	CAM Plan

20. DELETED CONDITIONS:

Former SC	Justification for removal
N/A	

21. 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_{10}	SO_2	VOC	CO	NO_x	HAPs	
							Single	Total
71padDiesel, 500 gal diesel storage tank	A-3			0.1				
Dump Chute, 5 from bins to ground along east side of Building 415	A-13							
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 comer 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						

22. 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-R18

APPENDIX A – EMISSION CHANGES AND FEE CALCULATION

Fee Calculation for Major Source

Facility Name: Almatis, Inc.
Permit Number: 1527-AOP-R19
AFIN: 63-00010

$/ton factor	28.14	Annual Chargeable Emissions (tpy)	947
Permit Type	Renewal No Changes	Permit Fee $	0

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	☐
If Hold Active Permit, Amt of Last Annual Air Permit Invoice $	0
Total Permit Fee Chargeable Emissions (tpy)	0
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		289.1	289.1	0		
PM_{10}		289.1	289.1	0	0	289.1
$PM_{2.5}$		0	0	0		
SO_2		17.7	17.7	0	0	17.7
VOC		3.7	3.7	0	0	3.7
CO		225.1	225.1	0		
NO_X		527	527	0	0	527
HF	☑	109.5	109.5	0	0	109.5
Benzene	☐	0.02	0.06	0.04		
Total Other HAPs	☐	0.6	1.01	0.41		