

STATEMENT OF BASIS

For the issuance of Air Permit # 0492-AOP-R15 AFIN: 66-00219

1. PERMITTING AUTHORITY:

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

2. APPLICANT:

Covia ISP, Inc. - Fort Smith Plant
5300 Gerber Road
Fort Smith, Arkansas 72904-1699

3. PERMIT WRITER:

Skylar Redman

4. NAICS DESCRIPTION AND CODE:

NAICS Description: Ground or Treated Mineral and Earth Manufacturing
NAICS Code: 327992

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
3/13/2025	Renewal	Update capacity of SN-73 A,B,C to match generator sizes on tags; Remove the following sources from the permit: SN-05, SN-C12, SN-C26, SN-C27, SN-C28. Emission changes are as follows: a decrease in 17.1 tpy of PM, 8.5 tpy of PM ₁₀ , 0.1 tpy of SO ₂ , 0.2 tpy of VOC, 3.0 tpy of CO, 3.7 tpy of NO _x , 0.02 tpy of single HAPs, and 0.06 tpy of total HAPs.

6. REVIEWER’S NOTES:

With this renewal, Covia ISP, Inc. Fort Smith Plant requests the following: Update capacity of SN-73 A,B,C to match generator sizes on tags; Remove the following sources and insignificant activities from the permit: SN-05, SN-C12, SN-C26, SN-C27, SN-C28, Two (2) 0.6 MMBtu/hr hot water heaters, Four (4) 0.38 MMBtu/hr hot water heaters for binder process, One 550-gal diesel storage tank, and Aerosol can puncture operation; Add three (3) insignificant activities: 1500-gallon diesel tank for mobile equipment (A3), Welding booth (A13), Heat exchanger at Plant 2 (A13); Add a permit shield to the permit. Emission changes are as follows: a decrease in 17.1 tpy of PM, 8.5 tpy of PM₁₀, 0.1 tpy of SO₂, 0.2 tpy of VOC, 3.0 tpy of CO, 3.7 tpy of NO_x, 0.02 tpy of single HAPs, and 0.06 tpy of total HAPs.

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 August 30th, 2023 with no violations identified.

<https://echo.epa.gov/detailed-facility-report?fid=110001710630>

8. PSD/GHG 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*

9. SOURCE AND POLLUTANT SPECIFIC REGULATORY APPLICABILITY:

Source	Pollutant	Regulation (NSPS, NESHAP or PSD)
SN-73A	HAPs	NESHAP ZZZZ

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
None				

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 Rule 18 requirement.)

If yes, are applicable requirements included and specifically identified in the permit? Y

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
SN-23, 25, 28, 34, 46, 50, 51, 53, and 54	40 C.F.R. § 60, Subpart OOO	The facility capacity is less than 25 tons per hour.

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
SN-18A	--	Gas differential pressure will be continuously monitored. Values outside indicator range of 1 to 6 inches water column will require maintenance.
	--	Water flow rate will be continuously monitored. Values less than or equal to 60 gpm will require maintenance.
SN-18B	--	Gas differential pressure will be continuously monitored. Values outside indicator range of 1 to 6 inches water column will require maintenance.
	--	Water flow rate will be continuously monitored. Values less than or equal to 60 gpm will require maintenance.

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:

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

N

If exempt, explain: This facility does not emit H₂S.

15. CALCULATIONS:

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
C01	Ap-42	0.988 gr/dscf – scrubber; 0.01 gr/dscf - baghouse	Scrubber with baghouse as backup	99%-scrubber; 99% baghouse	Control Equipment
02, C19, 50, 71/72	Ap-42	1.1 lbs/ton			
49	AP-42	0.1 lbs/ton			
06, 14, 23, 42, 43, 44	AP-42	0.72 lbs/ton			
21A, 21B, 46, C21, 70	AP-42	0.05 lbs/ton			
C22	AP-42	0.004 lbs/ton			
34	AP-42	0.002 lbs/ton			

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
62, 63	AP-42	0.00099 lbs/ton			
C20, C29, 25, 28, 40, 41, 53	Gain Loading	0.01 grain/DSCF			7000 lbs/grain
73A	AP-42 Table 3.3-1	0.31 lbs PM/PM ₁₀ /MMBtu; 0.29 lbs SO ₂ /MMBtu; 0.36 lbs VOC/MMBtu; 0.95 lbs CO/MMBtu; 4.41 lbs NO _x /MMBtu			73A = 362 Hp
73B, 73C	AP-42 Table 3.4-1	0.10 lbs PM/PM ₁₀ /MMBtu; 1.52E-3 lbs SO ₂ /MMBtu; 0.09 lbs VOC/MMBtu; 0.85 lbs CO/MMBtu; 3.20 lbs NO _x /MMBtu			73B = 791 Hp 73C = 1877 Hp
C02, C03, C04, C06, C07, C23, C24, C25, C30, C31	ADEQ Default	0.01 gr/dscf			
C08	NSPS OOO	0.022 gr/dscf			
C09, C10, C11,	NSPS OOO	0.014 gr/dscf			
C01	AP-42	PM/PM ₁₀ – 7.6 SO ₂ - 0.6 VOC – 5.5 CO – 84 NO _x - 100			Natural Gas Combustion emissions SN-C-01 (30 MMBtu/hr)
C13		0.01 gr/dscf			

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
C14		0.01 gr/dscf			
C15	AP-42 Table 11.19.2-2	PM – 0.00014 lb/ton PM ₁₀ - 4.6 E-5 lb/ton			
C16	AP-42 Chapter 11.19-2	0.0030lb PM/ton; 0.0011 lb PM ₁₀ /ton	Dust Collector	99%	
C17	AP-42 Chapter 11.19-2	0.025 lb PM/ton; 0.087 lb PM ₁₀ /ton	Dust Collector	99%	
C18		PM/PM ₁₀ – 7.6 SO ₂ - 0.6 VOC – 5.5 CO – 84 NO _x - 100			68 MMBtu/hr
C18A, C18B	AP-42 Ch. 11.19-1	0.039 lb/ton			30 tph

16. TESTING REQUIREMENTS:

The permit requires testing of the following sources.

SN	Pollutants	Test Method	Test Interval	Justification
C01	PM/PM ₁₀	EPA Method 5	No later than 180 days after start-up	Rule.19.702 and/or Rule.18.1002 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311

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)
C21, C23, C24	PM ₁₀	Continuous monitoring (opacity), varied	Continuous	N
C18 A&B	Differential pressure of gas across each scrubber shall be maintained between 1 and 6 inches of water (hourly average)	Continuous monitoring	Continuous	N
	A liquid flow rate of at least 60 gallons per minute shall be maintained at each scrubber (hourly average)	Continuous monitoring	Continuous	N

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)
C01	Natural gas	262,800,000	Monthly	Y
C18	Natural gas	595,680,000	Monthly	Y
C19	Sand	180,000 tons per rolling 12-month period	Monthly	N
	Air Flow	720,000 ft ³ /hr	Monthly	N
C20	Air Flow	570,000 ft ³ /hr	Monthly	N
	Sand	111,000 tons per rolling 12-month period	Monthly	N
C21	Air Flow	1,980,000 ft ³ /hr	Monthly	N
	Sand	140,000 tons per rolling 12-month period	Monthly	N
C22	Air Flow	168,000 ft ³ /hr	Monthly	N
C23	Air Flow	168,000 ft ³ /hr	Monthly	N
C24	Air Flow	60,000 ft ³ /hr	Monthly	N
C25	Air Flow	90,000 ft ³ /hr	Monthly	N
C29	Air Flow	120,000 ft ³ /hr	Monthly	N
C30	Air Flow		Monthly	N

SN	Recorded Item	Permit Limit	Frequency	Report (Y/N)
C31	Air Flow	120,000 ft ³ /hr	Monthly	N
70	Ore	350,000 tons	Monthly	Y
02	Ore	150,000 tons	Monthly	Y
73A, 73B, 73C	Hours of operation	100 total operating hours per calendar year	Monthly	Y
74	Gallons solvent used	2000	Monthly	N
C15	Tons silica	876,000	Monthly	Y

19. OPACITY:

SN	Opacity	Justification for limit	Compliance Mechanism
C01*, 18A and C18B	5% Natural Gas	Reg.18.501 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311	Fuel burned
	*20% with scrubber	Rule 19.503 and 40 C.F.R. § 52 Subpart E	
SN-02, SN-06, SN-14, SN-15, SN-17, SN-18, SN-19, SN-21A through SN-23, SN-25, SN-28 through SN-31, SN-34, SN-40 through SN-44, SN-46, SN-47, SN-49 through SN-51, SN-53 through SN-55, SN-62, through SN-65, SN-70, SN-71/72, SN-C02 through SN-C11, SN-C13 through SN-C17, SN-C19	5%	Reg.18.501 and Ark. Code Ann. § 8-4-203 as referenced by Ark. Code Ann. §§ 8-4-304 and 8-4-311	Weekly observations
SN-73A through C	20%	Rule 19.503 and 40 C.F.R. § 52 Subpart E	Inspector Observation

20. DELETED CONDITIONS:

Former SC	Justification for removal
13	CAM conditions are already in for this source.

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
Plant 2 R&D Pilot Plant (0.65 MMBtu/hr) Combustion Emissions	A-1	0.1	0.1	0.1	0.3	0.4	5.02E-03	5.27E-03
Plant 1 R&D Pilot Plant (1.5 MMBtu/hr) Combustion Emissions	A-1	0.1	0.1	0.1	0.6	0.7	1.16E-02	1.22E-02
One 115gal diesel storage tank	A-3			0.1				
One 30 gal diesel storage tank	A-3			0.1				
One 102 gal diesel storage tank	A-3			0.1				
One 1500 gal diesel tank for mobile equipment	A-3			0.1				
Three Heat exchangers Note 1	A-13							
Two 15,000 gallon diesel storage tanks	A-13			1.6E-04				
Two line #3 milled feed vessel filters Note 2	A-13							
Material Bin Vent (BV-1102) Note 3	A-13	0.38						
Bin Vent for BN-18 (BV-1218) Note 3	A-13	0.38						
Bin Vent for Hopper HO-1513 (BV-1514) Note 3	A-13	0.38						
Bin vent for bulk bagging hopper and loadout spout (BV-2702) Note 3	A-13	0.38						
Particulate emissions from a pilot plant kiln	A-13	0.01						

Source Name	Group A Category	Emissions (tpy)						
		PM/ PM ₁₀	SO ₂	VOC	CO	NO _x	HAPs	
							Single	Total
Chopping mill, mixer, grinding mill with classifier and screening units A&B at pilot plant	A-13	0.34 2						
Plant 1 R&D Pilot Plant & Baghouse	A-13	0.01						
Plant 1 R&D Pilot Plant Material Handling Baghouse	A-13	0.01						
Plant 2 R&D Grinding Mill #2	A-13	0.01						
Welding booth	A-13	0.01						

Note 1: Ambient air will be routed to a heat exchanger, heated to ~250F° and exhausted through four (4) roof vents. Since the new four (4) heat exchanger stacks will emit waste heat and ambient air, there will be no criteria pollutant or HAP from the process emitted.

Note 2: Exhaust inside of the building

Note 3: Equipment controlled with bin vents are installed prior to 1983. Therefore, these sources are not subject to NSPS OOO.

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 #
0492-AOP-R14

APPENDIX A – EMISSION CHANGES AND FEE CALCULATION

Fee Calculation for Major Source

Revised 03-11-16

Facility Name: Covia ISP, Inc.
 Permit Number: 0492-AOP-R15
 AFIN: 66-00219

\$/ton factor	28.14	Annual Chargeable Emissions (tpy)	193.2
Permit Type	Modification	Permit Fee \$	1000

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)	-21.1
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 condensable 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		158.7	141.6	-17.1	-17.1	141.6
PM ₁₀		109.5	101	-8.5		
PM _{2.5}		0	0	0		
SO ₂		0.7	0.6	-0.1	-0.1	0.6
VOC		4.6	4.4	-0.2	-0.2	4.4
CO		40.3	37.3	-3		
NO _x		50.3	46.6	-3.7	-3.7	46.6
Single HAPs	<input type="checkbox"/>	0.83	0.81	-0.02		

Pollutant (tpy)	Check if Chargeable Emission	Old Permit	New Permit	Change in Emissions	Permit Fee Chargeable Emissions	Annual Chargeable Emissions
Total HAPs	<input type="checkbox"/>	0.91	0.85	-0.06		