

STATEMENT OF BASIS

For the issuance of Draft Air Permit # 0492-AOP-R13 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:

Derrick Brown

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
9/20/2021	Minor Modification	Add a scrubber to SNC01; Add two (2) wet scrubbers to SN-04 (name changed to SN-C12 this modification).
07/06/2022	Minor Modification	Add a New Storage Bin , two New Bagging Stations and a New Baghouse
08/16/2022	Minor Modification	Re-purpose existing SN20 to store silica sand and rename it SN-C14.
03/10/2023	Minor Modification	Re-permit SN-08/38 as SN-C16 Milling feed conveyor
03/10/2023	Administrative Amendment	Install a small-scale R&D Pilot Plant at Plant 1

6. REVIEWER'S NOTES:

Covia ISP, Inc. (66-00219) owns and operates a facility located at 5300 Gerber Road in Fort Smith, Sebastian County, AR which manufactures silica sand-based products. This modification adds a 32,000 acfm wet scrubber to SN-C01, this kiln will be controlled by the already permitted baghouse or the scrubber. This modification removes SN-08/38, SN-21B, adds SN-C16 Mill Feed Conveyor and SN-C17 Grinding Mill and Mill Area DC; also SN-29 Plant #2 Kiln Burner capacity is increasing (by replacing the burner) from 60 MMBtu to 68 MMBtu/hr. The facility is renaming SN-29 as SN-C18A and SN-C18B. SN-C18A adds a scrubber and will control particulate emissions from Plant #2 Kiln. SN-C18B adds a scrubber and will control particulate emissions from the Plant #2 Kiln Cooler. The facility is adding two (2) 15,000 acfm wet scrubbers to control emissions from SN-04 and changing the name of SN-04 to SN-C12. This modification adds a New Storage Bin (BN-1517), two New Bagging Stations (BA-1516 and BA-1517) and a New Baghouse (SN-C13). SN-C13 will control emissions from the New Storage Bin (BN-1517), two New Bagging Stations (BA-1516 and BA-1517) as well as routed emissions from an existing Storage Bin (BN-1516) which was routed to SN-C06. Finally, this modification re-purposes existing SN-20 to store silica sand and rename it SN-C14 and adds a relocatable Project Conveyor (SN-15). This modification increases permitted emissions by 8.3 tpy of PM, 5.9 tpy pf PM₁₀, 0.2 tpy of VOC, 3.0 tpy of CO, and 3.5 tpy of NO_x.

7. COMPLIANCE STATUS:

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

Most recent Inspection Report dated 11/01/21 stated there were no areas of concern.

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? 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)
SN-73A	HAPs	NESHAP ZZZZ
Permit 0492-AOP-R12 removed facility compliance requirements for 40 C.F.R. § 60, Subpart OOO, because the facility capacity is less than 25 tons per hour.		

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 noted in application.				

11. 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 Rule 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
None cited in application.		

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
None cited in application.		

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:

Based on Division of Environmental Quality procedures for review of non-criteria pollutants, emissions of non-criteria pollutants are below thresholds of concern.

c) H₂S Modeling: N/A

15. CALCULATIONS:

SN	Emission Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
C01		0.988 gr/dscf – scrubber; 0.01 gr/dscf - baghouse	Scrubber with baghouse as backup	99%-scrubber; 99% baghouse	Control Equipment
C12		0.63 gr/dscf	Two (2) wet scrubbers; operating one at a time with the other for backup	99%	Control Equipment
SN-02, SN-18, SN-50, SN-71/72	Ap-42	1.1 lbs/ton			
05, 49	AP-42	0.1 lbs/ton			
06, 14, 23, 32/33, 42, 43, 44	AP-42	0.72 lbs/ton			
21A, 46, 47, 70	AP-42	0.05 lbs/ton			
31	AP-42	0.004 lbs/ton			
34	AP-42	0.002 lbs/ton			
62, 63	AP-42	0.00099 lbs/ton			

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
19, 22, 25, 28, 40, 41, 53	Gain Loading 0.01 grain/DSCF				7000 lbs/grain
73A, 73B	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 = 305 Hp 73B = 700 Hp
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		2029 Hp
C02, C03, C04C06, C07	ADEQ Default	0.01 gr/dscf			
C05, C08	NSPS OOO	0.022 gr/dscf			
C09, C10, C11, 04P	NSPS OOO	0.014 gr/dscf			
C01, C12,	AP-42	PM/PM ₁₀ – 7.6 SO ₂ - 0.6 VOC – 5.5 CO – 84 NO _x - 100			Natural Gas Combustion emissions
SN-C13		0.01 gr/dscf			
SN-C14		0.01 gr/dscf			
SN-C15	AP-42 Table 11.19.2-2	PM – 0.00014 lb/ton PM ₁₀ -4.6 E-5 lb/ton			

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
SN-C16	AP-42 Chapter 11.19-2	0.0030lb PM/ton; 0.0011 lb PM ₁₀ /ton	Dust Collector	99%	
SN-C17	AP-42 Chapter 11.19-2	0.025 lb PM/ton; 0.087 lb PM ₁₀ /ton	Dust Collector	99%	
SN-C18		PM/PM ₁₀ – 7.6 SO ₂ - 0.6 VOC – 5.5 CO – 84 NO _x - 100			68 MMBtu/hr
SNC-18A, SN-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
No testing required for this permit.				

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)
No monitoring required for this permit.				

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)
C12	Natural gas	67,452,000	Monthly	Y
C01	Natural gas	175,200,000	Monthly	Y
C18	Natural gas	595,680,000	Monthly	Y
70	Ore	350,000 tons	Monthly	N
02	Ore	150,000 tons	Monthly	N
73A, 73B, 73C	Hours of operation	N/A	Continuously	N
74	Gallons used	2000	Monthly	N
C15	Tons silica	876,000	Monthly	N

19. OPACITY:

SN	Opacity	Justification for limit	Compliance Mechanism
C12*, 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-05, SN-06, SN-14, SN-18, SN-19, SN-21A through SN-23, SN-25, SN-28, 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	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

20. DELETED CONDITIONS:

Former SC	Justification for removal
No conditions were deleted this permit action.	

21. GROUP A INSIGNIFICANT ACTIVITIES:

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

Source Name	Group A Cat.	Emissions (tpy)						
		PM/PM ₁₀	SO ₂	VOC	CO	NO _x	HAPs	
							Single	Total
Gas fired pilot plant kiln	A-1	0.1	0.1	0.1	0.3	0.4		
Two 0.6 MMBtu/hr Hot Water Heaters	A-1							
Four 0.38 MMBtu/hr water heaters for binder process	A-1	0.2	0.1	0.1	1.4	1.7		
Plant 1 R & D Pilot Plant (1.5 MMBtu/hr) Combustion Emissions	A-1	0.1	0.1	0.1	0.6	0.7		
Three Diesel fuel Storage Tanks (550gal; 115 gal; 30 gal)	A-3							
Two (2) 15,000 gallon diesel storage tanks	A-13			1.6E-4				
Two (2) line #3 feed vessel filters	A-13							
Two (2) heat exchangers	A-13							
Aerosol puncturing operation	A-13			0.0078				
Material Bin Vent (BV-1102)	A-13	0.38						
Bin Vent for BN-18 (BV-1218)	A-13	0.38						
Bin Vent for Hopper HO-1513 (BV-1514)	A-13	0.38						
Bin Vent for bulk bagging hopper and loadout spout (BV-2702)	A-13	0.38						
Particulate emissions from a pilot plant kiln	A-13	0.01						
Chopping mill, mixer, grinding mill with	A-13	0.342						

Source Name	Group A Cat.	Emissions (tpy)						
		PM/PM ₁₀	SO ₂	VOC	CO	NO _x	HAPs	
							Single	Total
classifier and screening units A&B at pilot plant								
Plant 2 R & D Grinding Mill #2 with Classifier (Cyclone/DC)	A-13	0.01						
Plant 1 R & D Pilot Plant Kiln & Baghouse Process Emissions	A-13	0.01						
Plant 1 R & D Pilot Plant Material Handling Baghouse	A-13	1.88						

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-R12

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-R13
 AFIN: 66-00219

\$/ton factor	25.13	Annual Chargeable Emissions (tpy)	204.2
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)	12
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		145	153.3	8.3	8.3	153.3
PM ₁₀		98	100.9	2.9		
PM _{2.5}		0		0		
SO ₂		0.7	0.7	0	0	0.7
VOC		4.1	4.3	0.2	0.2	4.3
CO		33.6	36.6	3		
NO _x		42.4	45.9	3.5	3.5	45.9
Single HAP	<input type="checkbox"/>	0.72	0.72	0		

