

STATEMENT OF BASIS

For the issuance of Draft Air Permit # 1195-AR-3 AFIN: 08-00066

1. PERMITTING AUTHORITY:

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

2. APPLICANT:

Carroll County Stone, Inc.
26 County Road CR 704
Berryville, Arkansas 72616

3. PERMIT WRITER:

Elliott Marshall

4. NAICS DESCRIPTION AND CODE:

NAICS Description: Crushed and Broken Limestone Mining and Quarrying
NAICS Code: 212312

5. SUBMITTALS:

Date of Application	Type of Application (New, Renewal, Modification, De minimis/Minor Mod, or Administrative Amendment)	Short Description of Any Changes That Would Be Considered New or Modified Emissions
5/19/2016 9/08/2016	De Minimis/Modification	Replacing old diesel engine with a new one (SN-14), addition of new screening operation (SN-15 through 24). Add emission values to sources SN-06 through SN-13.

6. REVIEWER'S NOTES:

With this de minimis/modification, the facility has requested to:

1. Replace an old inefficient diesel powered generator with a new Tier IV certified diesel engine (SN-14) powered generator year model 2011, and 553 Hp.
2. Add a second portable rock crushing operation to fulfill requirements of a new project (SN-15-24, and SN-27).

3. Quantifying additional sources (SN-06, SN-07, and SN-09 through SN-13) present at the facility that were listed but not quantified in previous permit revisions.

The facility is claiming SN-25 and SN-26, generators used at the portable crushing operation, are non-road engines that are exempt from stationary source regulation under the Clean Air Act definition of stationary source. These engines cannot stay in the same location for more than 12 months or will lose the exemption. No emissions were assigned to sources SN-06 through SN-13 in permit #1195-AR-2 so this permit also includes updated emissions for those sources. The changes result in the following emission increases: 18.6 tpy of PM₁₀, 56 tpy of PM, 1.2 tpy of SO₂, 1.5 tpy of VOC, 3.7 tpy of CO, and 1.8 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.

There are currently no compliance issues with the facility.

8. PSD 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*

If yes, explain why this permit modification is not PSD.

9. SOURCE AND POLLUTANT SPECIFIC REGULATORY APPLICABILITY:

Source	Pollutant	Regulation (NSPS, NESHAP or PSD)
SN-15 Through SN-24	Particulate	40 CFR 60, Subpart OOO
SN-14	There are no specific emission limits or pollutants identified, but the rules generally regulate HAPs	40 CFR 60, Subpart IIII 40 CFR 63, Subpart ZZZZ

10. EMISSION CHANGES AND FEE CALCULATION:

See emission change and fee calculation spreadsheet in Appendix A.

11. AMBIENT AIR EVALUATIONS

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.

Non-Criteria Pollutants:

1st Tier Screening (PAER)

Estimated hourly emissions from the following sources were compared to the Presumptively Acceptable Emission Rate (PAER) for each compound. The Department 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).

Non-Criteria Pollutants:

Pollutant	TLV (mg/m^3)	PAER (lb/hr) = $0.11 \times \text{TLV}$	Proposed lb/hr	Pass?
Acetaldehyde	45	4.95	0.01	Y
Acrolein	0.2	0.02	0.01	Y
Benzene	1.6	0.176	0.02	Y
Formaldehyde	1.5	0.165	0.01	Y
Toluene	75.3	8.23	0.01	Y
Xylenes	434	47.7	0.01	Y

12. CALCULATIONS:

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
06	AP-42	0.0002 lb/ton PM 0.0001 lb/ton PM_{10}	None	N/A	Based on maximum annual throughput of 250,000 tpy.
07	AP-42	0.043 lb/ton PM 0.0203 lb/ton PM_{10}	None	N/A	Based on maximum annual throughput of 250,000 tpy.
09	AP-42	4.95 lb PM/blast 2.57 lb PM_{10} /blast	None	N/A	Based on maximum annual throughput of 250,000 tpy.
10	AP-42	1.3 lb/hole	None	N/A	Based on maximum

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
					annual throughput of 250,000 tpy.
11	AP-42	15.9 lb/VMT PM 4.69 lb/VMT PM ₁₀	Water Truck	75%	Based on the trucks watering the road surfaces every 20 minutes.
12	AP-42	0.000032 lb/ton PM 0.000016 lb/ton PM ₁₀	None	N/A	Based on maximum annual throughput of 250,000 tpy.
13	AP-42	0.00014 lb/ton PM 4.6E-05 lb/ton PM ₁₀	None	N/A	Based on maximum annual throughput of 250,000 tpy.
14	AP-42 Manufacture's Spec	lb/hp-hr 2.05E-03 SO ₂ 2.51E-03 VOC 6.68E-03 CO 3.29E-03 NO _x 3.29E-05 PM/PM ₁₀	None	N/A	Based on 1,950 operating hours annually.
15	AP-42	lb/ton 5.93E-4 PM 1.60E-05 PM ₁₀	None	N/A	Based on maximum annual throughput of 250,000 tpy.
16	AP-42	lb/ton 0.003 PM 0.0012 PM ₁₀	None	N/A	Based on maximum annual throughput of 250,000 tpy.
17	AP-42	lb/ton 0.00014 PM 4.60E-05 PM ₁₀	None	N/A	Based on maximum annual throughput of 250,000 tpy.
18	AP-42	lb/ton 0.0036 PM 0.0022 PM ₁₀	None	N/A	Based on maximum annual throughput of 250,000 tpy.
19	AP-42	lb/ton 0.003 PM 0.0012 PM ₁₀	None	N/A	Based on maximum annual throughput of 250,000 tpy.
20	AP-42	lb/ton 0.00014 PM 4.60E-05 PM ₁₀	None	N/A	Based on maximum annual throughput of 250,000 tpy.
21	AP-42	lb/ton 0.0036 PM 0.0022 PM ₁₀	None	N/A	Based on maximum annual throughput of 250,000 tpy.

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
22	AP-42	lb/ton 0.00014 PM 4.60E-05 PM ₁₀	None	N/A	Based on maximum annual throughput of 250,000 tpy.
23	AP-42	lb/ton 0.0036 PM 0.0022 PM ₁₀	None	N/A	Based on maximum annual throughput of 250,000 tpy.
24	AP-42	lb/ton 0.00014 PM 4.60E-05 PM ₁₀	None	N/A	Based on maximum annual throughput of 250,000 tpy.

13. TESTING REQUIREMENTS:

The permit requires testing of the following sources.

SN	Pollutants	Test Method	Test Interval	Justification
14	PM	Method 9 (40 CFR part 60, Appendix A-4)	Monthly	40 CFR §60.674 (b)

14. 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				

15. 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)
14	Annual operating hours	1,950 per consecutive 12 months	Monthly	Y

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SN	Recorded Item	Permit Limit	Frequency	Report (Y/N)
14	Sulfur Content	0.05%	As fuel shipments are received §60.676	Y

16. OPACITY:

SN	Opacity	Justification for limit	Compliance Mechanism
02,04,	15%	§60.672	Inspector Observation
5A,5B,5C,5D,5F,06 07,09,10,11,12,13,14	20%	§19.503	
5E	10%	§60.675	
15,17,18,20-24	7%	§60.672	
16,19	12	§60.672	

17. DELETED CONDITIONS:

Former SC	Justification for removal
N/A	

18. GROUP A INSIGNIFICANT ACTIVITIES:

Source Name	Group A Category	Emissions (tpy)						
		PM/PM ₁₀	SO ₂	VOC	CO	NO _x	HAPs	
							Single	Total
500 Gallon Tank (3 Tanks) SN-47	A-3			0.1				

19. VOIDED, SUPERSEDED, OR SUBSUMED PERMITS:

List all active permits voided/superseded/subsumed by the issuance of this permit.

Permit #
1195-AR-2

APPENDIX A – EMISSION CHANGES AND FEE CALCULATION

Fee Calculation for Minor Source

Revised 03-11-16

Facility Name:

Permit Number:

AFIN:

			Old Permit	New Permit
\$/ton factor	23.93	Permit Predominant Air Contaminant	19	75
Minimum Fee \$	400	Net Predominant Air Contaminant Increase	56	
Minimum Initial Fee \$	500			
		Permit Fee \$	<u>1340.08</u>	
Check if Administrative Amendment	<input type="checkbox"/>	Annual Chargeable Emissions (tpy)	<u>75</u>	

Pollutant (tpy)	Old Permit	New Permit	Change
PM	19	75	56
PM ₁₀	19	37.6	18.6
PM _{2.5}	0	0	0
SO ₂	0	1.2	1.2
VOC	0	1.5	1.5
CO	0	3.7	3.7
NO _x	0	1.8	1.8
Total HAP	0	0.03	0.03