

STATEMENT OF BASIS

For the issuance of Draft Air Permit # 2400-A AFIN: 46-00985

1. PERMITTING AUTHORITY:

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

2. APPLICANT:

Performance Proppants, LLC
2561 Miller County 4
Doddridge, Arkansas 71834

3. PERMIT WRITER:

Elliott Marshall

4. NAICS DESCRIPTION AND CODE:

NAICS Description: 212300
NAICS Code: Nonmetallic Mineral Mining and Quarrying

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
5/11/2018	New	This permit allows Performance Proppants to construct and operate a sand plant. All sources will be new.

6. REVIEWER'S NOTES:

Performance Proppants, LLC is proposing to construct and operate a sand plant to be located at 2561 Miller County 4, Doddridge, AR 71834. The facility submitted an application for an initial minor source permit. The facility will be permitted at 78.2 tpy PM, 41.0 tpy PM₁₀, 0.6 tpy SO₂, 4.2 tpy VOC, 64.2 tpy CO, 78.0 tpy NO_x, and 2.9 tpy Total HAP.

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 no active or pending enforcement actions.

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? 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)
09A, 09B	Particulate	NSPS UUU

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
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
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:

The non-criteria pollutants listed below were evaluated. Based on Department 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 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).

Pollutant	TLV (mg/m^3)	PAER (lb/hr) = $0.11 \times \text{TLV}$	Proposed lb/hr	Pass?
Arsenic	0.01	0.0011	3.49E-05	Yes
Beryllium	0.00005	5.5E-06	2.09E-06	Yes
Cadmium	0.002	0.00022	1.92E-04	Yes
Chromium	0.5	0.055	2.44E-04	Yes
Cobalt	0.02	0.0022	1.47E-05	Yes
Manganese	0.02	0.0022	6.63E-05	Yes
Mercury	0.01	0.0011	4.54E-05	Yes
Selenium	0.2	0.022	4.19E-06	Yes
POM	0.2	0.022	1.22E-04	Yes

13. CALCULATIONS:

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
01 02	AP-42 13.2.4	<u>Equation</u> $E=k*0.0032*(U/5)^{1.3}/(M/2)^{1.4}$	-	-	Calculations based on 5,256,000 tpy of sand
03	AP-42 13.2.4	<u>Equation</u> $E=k*0.0032*(U/5)^{1.3}/(M/2)^{1.4}$	Partial Enclosure	50%	Control efficiency from TCEQ guidance
04	AP-42 13.2.4	<u>Equation</u> $E=k*0.0032*(U/5)^{1.3}/(M/2)^{1.4}$	Water	70%	Control efficiency from TCEQ guidance
05	AP-42 13.2.4	<u>Equation</u> $E=k*0.0032*(U/5)^{1.3}/(M/2)^{1.4}$	Washed Sand	95% for PM/PM ₁₀	Control efficiency from TCEQ guidance, and similarly permitted facilities
06 07	AP-42 13.2.4	<u>Equation</u> $E=k*0.0032*(U/5)^{1.3}/(M/2)^{1.4}$	Washed Sand	95% for PM/PM ₁₀	Control efficiency from TCEQ guidance, and similarly permitted facilities
08	TCEQ Rock Crusher Emission Calculations Spreadsheet	<u>Active Pile</u> 13.20 lb-PM/acre-day 6.6 lb-PM ₁₀ /acre-day <u>Inactive Pile</u> 3.5 lb-PM/acre-day 1.75 lb- PM ₁₀ /acre-day	Moisture of Washed Sand	50%	Max Size: 2.4 acres Percent as Active: 50% Percent as Inactive: 50%
09A 09B	AP-42 1.4	<u>lb/MMBtu</u> PM/PM ₁₀ : 0.00745 CO: 0.082 NO _x : 0.1 VOC: 0.0054 SO ₂ : 0.0006	-	-	89 MMBTU/hr per dryer, calculated at 8,760 hr/yr
16A	AP-42 13.2.4	<u>Equation</u>	Baghouse	90%	Calculations

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
16B 16C		$E=k*0.0032*(U/5)^{1.3}/(M/2)^{1.4}$			based on 5,256,000 tpy of sand
17A 17B 17C	AP-42 13.2.4	<u>Equation</u> $E=k*0.0032*(U/5)^{1.3}/(M/2)^{1.4}$	Baghouse	90%	Calculations based on 5,256,000 tpy of sand
18A 18B 18C	AP-42 13.2.4	<u>Equation</u> $E=k*0.0032*(U/5)^{1.3}/(M/2)^{1.4}$	Baghouse	90%	Calculations based on 5,256,000 tpy of sand
19A1 19A2 19B1 19B2 19C1 19C2	Manufacturer Spec	0.001 gr/dscf	Vent Fabric Filters	99.9%	Max loading rate 600 ton/hr, and 300 acfm design flow rate
20A1 20A2 20B1 20B2 20C1 20C2	AP-42 13.2.4	<u>Equation</u> $E=k*0.0032*(U/5)^{1.3}/(M/2)^{1.4}$	Baghouse, Telescoping Loading Spout	98%	Max loading rate 800 ton/hr
21	AP-42 11.19.2-2	0.003 lb-PM/ton 0.0011 lb-PM ₁₀ /ton	-	-	Based on 200 ton/hr, and 8760 hr/yr

14. TESTING REQUIREMENTS:

The permit requires testing of the following sources.

SN	Pollutants	Test Method	Test Interval	Justification
09A, 09B	PM	Method 5	2 Hours	40 C.F.R. § 60.736(b)(1)
09A, 09B	Opacity	Method 9	Per Method 9	40 C.F.R. § 60.736(b)(2)

15. MONITORING OR CEMS:

SN	Parameter or Pollutant to be Monitored	Method (CEM, Pressure Gauge, etc.)	Frequency	Report (Y/N)
None				

SN	Recorded Item	Permit Limit	Frequency	Report (Y/N)
N/A				

SN	Opacity	Justification for limit	Compliance Mechanism
05, 06, 07, 16A, 16B, 16C, 17A, 17B, 17, C, 18A, 18B, 18C, 19A1, 19A2, 19B1, 19B2, 19C1, 19C2, 20A1, 20A2, 20B1, 20B2, 20C1, 20C2	5%	§18.501	Inspector Observation
09A, 09B	10%	§60.732(b)	Performance Test
01, 02, 03, 04, 08, 21	20%	§19.503	Inspector Observation

Former SC	Justification for removal
	N/A

Source Name	Group A Category	Emissions (tpy)						
		PM/PM ₁₀	SO ₂	VOC	CO	NO _x	HAPs	
							Single	Total
None								

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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 #
N/A

APPENDIX A – EMISSION CHANGES AND FEE CALCULATION

Fee Calculation for Minor Source

Revised 03-11-16

Facility Name: Perfomance Proppants,
LLC
Permit Number: 2400-A
AFIN: 46-00985

			Old Permit	New Permit
\$/ton factor	23.93	Permit Predominant Air Contaminant	0	78.2
Minimum Fee \$	400	Net Predominant Air Contaminant Increase	0	
Minimum Initial Fee \$	500			
		Permit Fee \$	1871.326	
Check if Administrative Amendment	☐	Annual Chargeable Emissions (tpy)	78.2	

Pollutant (tpy)	Old Permit	New Permit	Change
PM	0	78.2	78.2
PM ₁₀	0	41	41
PM _{2.5}	0	0	0
SO ₂	0	0.6	0.6
VOC	0	4.2	4.2
CO	0	64.2	64.2
NO _x	0	78	78
Total HAP	0	2.9	2.9