



NATURAL RESOURCES

Eric R. Greitens, Governor

Carol S. Comer, Director

APR 23 2018

Mr. Matthew Clark
 Vice President
 Midwest Proppant, LLC
 8799 Trautman Quarry Road
 Pevely, MO 63070

RE: New Source Review Permit Amendment - Permit Number: 102015-002A
 Project Number: 2018-01-051; Installation Number: 099-0178

Dear Mr. Clark:

Midwest Proppant, LLC requested a permit true up of permit 102015-002 which is more representative of the current as-built configuration of the plant. This amendment will update equipment lists that differ from the original permit. Five pieces of equipment (EU16-EU20) were installed but not included in the original permit. Changes to the emission units including those that were not originally permitted in 102015-002 are summarized in the table below.

Table 1: Installation Emission Units

Emission Unit Number	Description of Unit	Equipment Status
EU-1	Vibrating grizzly feeder	No change
EU-2	Impact crusher	No change
EU-3	Undercrusher conveyor	No change
EU-4	Vibrating screen	Removed, not installed
EU-5	Cross conveyor	Removed, not installed
EU-6	Recirculating conveyor	Removed, not installed
EU-7	Underscreen conveyor	Removed, not installed
EU-8	Stacking conveyor	Removed, not installed
EU-9	Surge bin	No change
EU-10	Screening-washing plant (negligible emissions)	No change
EU-11	Transfer conveyor (negligible emissions)	No change
EU-12	Radial stacking conveyor (negligible emissions)	No change
EU-13	Storage Pile #1	No change
EU-14	Storage Pile #2	No change
EU-15	Haul Road	No change
EU-16	Transfer Conveyor 01	Not permitted, add
EU-17	De-Watering Screen (negligible emissions)	Not permitted, add
EU-18	Transfer Conveyor 03 (negligible emissions)	Not permitted, add
EU-19	Transfer Conveyor 04 (negligible emissions)	Not permitted, add
EU-20	Transfer Conveyor 05 (negligible emissions)	Not permitted, add

Emissions from EU-16 were calculated using emission factors from AP-42 Section 11.19.2 “Crushed Stone Processing and Pulverized Mineral Processing,” August 2004. The controlled emission factors were used because the inherent moisture content of the sand is greater than 1.5% by weight. The emission units EU17-EU20 are downstream from the washing plant where the sand is wet. Screens and conveyors downstream from the washing plant were considered negligible in permit 102015-002. The new added emission units EU17-EU20 are also being considered negligible emission units since they are downstream from the washing.

The ambient air quality impact analysis conducted in permit 102015-022 is no longer valid with the addition and removal of emission units. In lieu of an ambient air impact limitation a new PM₁₀ emission limitation has been added. This change reflects the Air Pollution Control Program’s updated construction industry policy “Ceasing the Use of Nomographs” dated May 1, 2016. In addition, please note that Midwest Proppant LLC cannot operate with any other plants that have ambient impact limits based on the Air Pollution Control Program’s nomographs. Please refer to the permits of any plant that you are operating with to see if their respective permits contain an ambient impact limit.

This amendment is considered a true up for construction permit 102015-022. The project changes do not affect the type of construction permit that was issued. Please attach this letter and attached special conditions to the existing permit, permit 102015-022. Additionally, please replace Attachment A and B of permit number 102015-022 with Attachment A of this amendment. The attached special conditions include a new PM₁₀ emission limitation for the emission units described above. An updated emissions summary for the project is listed in the new Table 2.

Table 2: Emissions Summary (tons per year)

Pollutant	Regulatory <i>De Minimis</i> Levels	Existing Potential Emissions	Existing Actual Emissions	Potential Emissions of the Application	Conditioned Potential Emissions of the Application
PM	25.0	N/A	N/A	56.04	44.82
PM ₁₀	15.0	N/A	N/A	18.75	<15.0
PM _{2.5}	10.0	N/A	N/A	4.90	3.92
SO _x	40.0	N/A	N/A	N/A	N/A
NO _x	40.0	N/A	N/A	N/A	N/A
VOC	40.0	N/A	N/A	N/A	N/A
CO	100.0	N/A	N/A	N/A	N/A
HAPs	10.0/25.0	N/A	N/A	N/A	N/A

N/A = Not Applicable; N/D = Not Determined

If you were adversely affected by this permit decision, you may be entitled to pursue an appeal before the administrative hearing commission pursuant to Sections 621.250 and 643.075.6 RSMo. To appeal, you must file a petition with the administrative hearing commission within thirty days after the date this decision was mailed or the date it was delivered, whichever date was earlier.

Mr. Matthew Clark
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If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed; if it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the administrative hearing commission, whose contact information is: Administrative Hearing Commission, United States Post Office Building, 131 West High Street, Third Floor, P.O. Box 1557, Jefferson City, Missouri 65102, phone: 573-751-2422, fax: 573-751-5018, website: www.ao.mo.gov/ahc.

If you have any questions regarding this amendment, please do not hesitate to contact Chad Stephenson, at the department's Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102 or at (573) 751-4817. Thank you for your attention to this matter.

Sincerely,

AIR POLLUTION CONTROL PROGRAM



Kendall B. Hale
Permits Section Chief

KBH:csj

Enclosures

c: St. Louis Regional Office
PAMS File: 2018-01-051

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Permit No.	102015-002A
Project No.	2018-01-051

SPECIAL CONDITIONS:

The permittee is authorized to construct and operate subject to the following special conditions:

The special conditions listed in this permit were included based on the authority granted the Missouri Air Pollution Control Program by the Missouri Air Conservation Law (specifically 643.075) and by the Missouri Rules listed in Title 10, Division 10 of the Code of State Regulations (specifically 10 CSR 10-6.060). For specific details regarding conditions, see 10 CSR 10-6.060 paragraph (12)(A)10. "Conditions required by permitting authority."

Midwest Proppant, LLC
Jefferson County, Land Grand 932, T41N, R5E

1. **Superseding Condition**
The conditions of this permit supersede the following special conditions found in the previously issued construction permit 102015-002 issued by the Air Pollution Control Program.
 - A. **Special Condition 2**

2. **PM₁₀ Emission Limitation**
 - A. Midwest Proppant, LLC shall emit less than 15.0 tons of PM₁₀ in any consecutive 12-month period from the equipment listed in Table 3 below. SSM emissions as reported to the Air Pollution Control Program's Compliance/Enforcement Section in accordance with the requirements of 10 CSR 10-6.050 Start-Up, Shutdown, and Malfunction Conditions shall be included in the limit.

Table 3: Project Emission Units

Emission Unit Number	Description of Unit	Equipment Status
EU-1	Vibrating grizzly feeder	No change
EU-2	Impact crusher	No change
EU-3	Undercrusher conveyor	No change
EU-4	Vibrating screen	Removed, not installed
EU-5	Cross conveyor	Removed, not installed
EU-6	Recirculating conveyor	Removed, not installed
EU-7	Underscreen conveyor	Removed, not installed
EU-8	Stacking conveyor	Removed, not installed
EU-9	Surge bin	No change
EU-10	Screening-washing plant (negligible emissions)	No change

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Permit No.	102015-002A
Project No.	2018-01-051

SPECIAL CONDITIONS:

The permittee is authorized to construct and operate subject to the following special conditions:

Emission Unit Number	Description of Unit	Equipment Status
EU-11	Transfer conveyor (negligible emissions)	No change
EU-12	Radial stacking conveyor (negligible emissions)	No change
EU-13	Storage Pile #1	No change
EU-14	Storage Pile #2	No change
EU-15	Haul Road	No change
EU-16	Transfer Conveyor 01	Not permitted, add
EU-17	De-Watering Screen (negligible emissions)	Not permitted, add
EU-18	Transfer Conveyor 03 (negligible emissions)	Not permitted, add
EU-19	Transfer Conveyor 04 (negligible emissions)	Not permitted, add
EU-20	Transfer Conveyor 05 (negligible emissions)	Not permitted, add

3. **Record Keeping Requirement**
Midwest Proppant, LLC shall maintain all records required by this permit for not less than five years and make them available to any Missouri Department of Natural Resources' personnel upon request.

4. **Reporting Requirement**
Midwest Proppant, LLC shall report to the Air Pollution Control Program, Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than 10 days after any exceedances of the limitations imposed by this permit.

For Single Plant Operation		Pollutant	Justification for Limits	Limit Hours per Day	Limit Hours per Day w/ 365 days
Hours per day	19.2				
Days per year	365.0	N/A	N/A		
Hours per year	7006.7	PM10	De Minimis	Limit Hours per Year	Limit Hours per Year w/ 24 hr day

Pollutant	Potential Emissions of Process Equipment (tons/yr)	Potential Emissions including fugitives (tons/yr)	Allowable Emissions for 7007 hours per year (tons/yr)	De minimis Thresholds	Plantwide Composite Emission Factor (lb/ton)
PM	2.13	56.04	44.82	25	0.04
PM ₁₀	0.89	18.75	15.00	15	0.0143
PM _{2.5}	0.08	4.90	3.92	10	0.00
SO ₂	-	-		40	-
NO ₂	-	-		40	-
VOC	-	-		40	-
CO	-	-		100	-
CH ₂ O	-	-		2.00	-
Pb	-	-		0.01	-
HAPs	-	-		10	-
CO ₂	-	-		100	-
N ₂ O	-	-		100	-
CH ₄	-	-		100	-
GHG _{mass}	-	-		100	-
CO ₂ eq	-	-		100,000	-

Maximum hourly design rate (tons/hr)	300
Distance to property boundary (ft)	400

Tons of product per day	5,758.9
Tons of product per year	2,101,999.4

General Plant Information

Primary Unit Size (tons per hour)	300	It is important that you read all the comments (cells marked with a red triangle in the upper right corner) because they may direct you to make changes to the data entry cells.
Distance to property boundary (feet)	400	
Best Management Practices	Yes	

Storage Pile Information

Storage Pile ID No.	Pile #1 - Unwashed	Pile #2 - Washed	Pile #3	Pile #4
Maximum Area of Storage Pile (Acres)	0.1	0.2		
Type of Material Stored:	Sand	Sand		
Moisture Content %:	4.17	4.17		
Silt Content %:	2.8	2.8		
Method of Load In to Storage Pile	Truck	Conveyor/Stacker		
Method of Load Out from Storage Pile	Loader	Loader		
Distance Loader Travels (feet)	100	50		
Unloaded Loader Weight (tons)	34.40	34.40		
Loaded Loader Weight (tons)	46.04	46.04		
Rate (tons/hour)	300.00	300.00		
max VMT per hour	0.8763	0.4881		
Surface Treatment	Unpaved	Unpaved		
Vehicular Area Control	Documented Watering	Documented Watering		

Haul Road Information

Haul Road ID No.	Road #1	Road #2	Road #3	Road #4	Road #5	Road #6
Length of Haul Road (feet) <small>Enter the length of each roadway in feet. The plant layout diagram (drawn to scale) should document and support the value entered. Note: Twice this distance is used, one trip in and one out.</small>	1805					
Unloaded Truck Weight (tons)	14.25					
Loaded Truck Weight (tons)	41.25					
Rate Hauled (tons/hour)	300					
max VMT per hour	6.7551					
Surface Treatment	Unpaved					
Haul Road Control	Documented Watering					

Equipment Operational Status	Emission Unit Number	Description of Unit	Equipment/SCC Description	Equip Type	Max Hourly ThroughPut (MHTP)	MHTP Units	Control Type
E	EU-1	Vibrating pizzly feeder	Grizzly Feeder 30502031	Fugitive	300.0000	Tons	Moisture => 1.5%
E	EU-2	Impact crusher	Crusher-Primary (Diameter 3-12") 30502001	Process	300.0000	Tons	Moisture => 1.5%
E	EU-3	Undercrusher conveyor	Conveyor 30502008	Process	300.0000	Tons	Moisture => 1.5%
E	EU-4	REMOVED - Vibrating screen					
E	EU-5	REMOVED - Cross conveyor					
E	EU-6	REMOVED - Recticulating conveyor					
E	EU-7	REMOVED - Underscreen conveyor					
E	EU-8	REMOVED - Stacking conveyor					
E	EU-9	Surge bin	Storage Bin 30502008	Process	300.0000	Tons	Moisture => 1.5%
E	EU-10	Screening-washing plant (negligible emissions)					
E	EU-11	Transfer conveyors (negligible emissions)					
E	EU-12	Radial stacking conveyor (negligible emissions)					
N	EU-16	Transfer conveyor 01	Conveyor 30502008	Process	300.0000	Tons	Moisture => 1.5%
N	EU-17	De-watering screen (negligible)					
N	EU-18	Transfer conveyor 03 (negligible)					
N	EU-19	Transfer conveyor 04 (negligible)					
N	EU-20	Transfer conveyor 05 (negligible)					

Emission Point Number	Emission Unit Number	Description	SCC	Maximum Hourly	Units of Measure	Control Device Number	Control Type	Capture Efficiency (%)	Control Efficiency (%)
13	13	Pile #1							
		Load in		300.00	tons per hour			N/A	N/A
		Load out		300.00	tons per hour			N/A	N/A
		Vehicular Activity		0.98	VMT per hour		Unpaved, Documented Watering	N/A	90%
		Wind Erosion		0.10	acres			N/A	40%
14	14	Pile #2							
		Load in		300.00	tons per hour			N/A	N/A
		Load out		300.00	tons per hour			N/A	N/A
		Vehicular Activity		0.49	VMT per hour		Unpaved, Documented Watering	N/A	90%
		Wind Erosion		0.20	acres			N/A	40%
15	15	Road #1		6.76	VMT per hour		Unpaved, Documented Watering	N/A	90%
								N/A	74%
E	EU-1	Vibrating gizzly feeder	Grizzly Feeder 30502031	300.00	Tons	Fugitive Fugitive	Moisture => 1.5%	100%	0.00%
E	EU-2	Impact crusher	Crusher-Primary, (Diameter 3-12") 30502001	300.00	Tons	Process Process	Moisture => 1.5%	100%	77.78%
E	EU-3	Undercrusher conveyor	Conveyor 30502006	300.00	Tons	Process Process	Moisture => 1.5%	100%	95.33%
E	EU-4	REMOVED - Vibrating screen						100%	0.00%
E	EU-5	REMOVED - Cross conveyor						100%	0.00%
E	EU-6	REMOVED - Recirculating conveyor						100%	0.00%
E	EU-7	REMOVED - Underacteen conveyor						100%	0.00%
E	EU-8	REMOVED - Stacking conveyor						100%	0.00%
E	EU-9	Surge bin	Storage Bin 30502006	300.00	Tons	Process Process	Moisture => 1.5%	100%	95.33%
E	EU-10	Screening-washing plant (negligible emis						100%	0.00%
E	EU-11	Transfer conveyors (negligible emissions)						100%	0.00%
E	EU-12	Radial stacking conveyor (negligible emis						100%	0.00%
N	EU-16	Transfer conveyor 01	Conveyor 30502006	300.00	Tons	Process Process	Moisture => 1.5%	100%	95.33%
								100%	95.82%
								100%	95.82%

Emission Point Number	Emission Unit Number	Description	Pollutant	Emission Factor	Emission Factor (lb/UoM)	Emission Rate (lb/hr)	Potential Emissions (tons/yr)	Allowable Emissions (tons/yr)
13	13	Pile #1	Load in	PM	0.0021 ton	6.25E-01	2.74	2.19
				PM ₁₀	0.0010 ton	2.96E-01	1.30	1.04
				PM _{2.5}	0.0001 ton	4.48E-02	0.20	0.16
		Load out	PM	0.0021 ton	6.25E-01	2.74	2.19	
			PM ₁₀	0.0010 ton	2.96E-01	1.30	1.04	
			PM _{2.5}	0.0001 ton	4.48E-02	0.20	0.16	
		Vehicular Activity	PM	12.1736 VMT	1.10E+00	5.21	4.16	
			PM ₁₀	3.4617 VMT	3.38E-01	1.48	1.18	
			PM _{2.5}	0.3482 VMT	2.03E-01	0.89	0.71	
		Wind Erosion	PM	0.2898 acre-hr	2.90E-02	0.13	0.10	
			PM ₁₀	0.1449 acre-hr	1.45E-02	0.06	0.05	
			PM _{2.5}	0.0217 acre-hr	2.17E-03	0.01	0.01	
14	14	Pile #2	Load in	PM	0.0021 ton	6.25E-01	2.74	2.19
				PM ₁₀	0.0010 ton	2.96E-01	1.30	1.04
				PM _{2.5}	0.0001 ton	4.48E-02	0.20	0.16
		Load out	PM	0.0021 ton	6.25E-01	2.74	2.19	
			PM ₁₀	0.0010 ton	2.96E-01	1.30	1.04	
			PM _{2.5}	0.0001 ton	4.48E-02	0.20	0.16	
		Vehicular Activity	PM	12.1736 VMT	5.94E-01	2.60	2.08	
			PM ₁₀	3.4617 VMT	1.69E-01	0.74	0.59	
			PM _{2.5}	0.3482 VMT	1.01E-01	0.44	0.36	
		Wind Erosion	PM	0.2898 acre-hr	5.80E-02	0.25	0.20	
			PM ₁₀	0.1449 acre-hr	2.90E-02	0.13	0.10	
			PM _{2.5}	0.0217 acre-hr	4.35E-03	0.02	0.02	
15	15	Road #1	PM	11.7363 VMT	7.93E+00	34.72	27.77	
			PM ₁₀	3.4841 VMT	2.34E+00	10.25	8.20	
			PM _{2.5}	0.3484 VMT	6.08E-01	2.65	2.13	
E	EU-1	Vibrating gizzly feeder	PM	0.000032	Tons	9.60E-03	4.20E-02	3.38E-02
			PM ₁₀	0.000016	Tons	4.80E-03	2.10E-02	1.68E-02
			PM _{2.5}	0.000008	Tons	2.40E-03	1.05E-02	8.41E-03
E	EU-2	Impact crusher	PM	0.0054	Tons	3.60E-01	1.58E+00	1.26E+00
			PM ₁₀	0.0024	Tons	1.62E-01	7.10E-01	5.68E-01
			PM _{2.5}	0.000100781	Tons	6.80E-03	2.98E-02	2.38E-02
E	EU-3	Undercrusher conveyor	PM	0.003	Tons	4.20E-02	1.84E-01	1.47E-01
			PM ₁₀	0.0011	Tons	1.38E-02	6.04E-02	4.83E-02
			PM _{2.5}	0.00031087	Tons	3.90E-03	1.71E-02	1.37E-02
E	EU-4	REMOVED - Vibrating screen	PM					
			PM ₁₀					
			PM _{2.5}					
E	EU-5	REMOVED - Cross conveyor	PM					
			PM ₁₀					
			PM _{2.5}					
E	EU-6	REMOVED - Recirculating conveyor	PM					
			PM ₁₀					
			PM _{2.5}					
E	EU-7	REMOVED - Underscreen conveyor	PM					
			PM ₁₀					
			PM _{2.5}					
E	EU-8	REMOVED - Stacking conveyor	PM					
			PM ₁₀					
			PM _{2.5}					
E	EU-9	Surge bin	PM	0.003	Tons	4.20E-02	1.84E-01	1.47E-01
			PM ₁₀	0.0011	Tons	1.38E-02	6.04E-02	4.83E-02
			PM _{2.5}	0.00031087	Tons	3.90E-03	1.71E-02	1.37E-02
E	EU-10	Screening-washing plant (negligible emis)	PM					
			PM ₁₀					
			PM _{2.5}					
E	EU-11	Transfer conveyors (negligible emissions)	PM					
			PM ₁₀					
			PM _{2.5}					
E	EU-12	Radial stacking conveyor (negligible emis)	PM					
			PM ₁₀					
			PM _{2.5}					
N	EU-16	Transfer conveyor 01	PM	0.003	Tons	4.20E-02	1.84E-01	1.47E-01
			PM ₁₀	0.0011	Tons	1.38E-02	6.04E-02	4.83E-02
			PM _{2.5}	0.00031087	Tons	3.90E-03	1.71E-02	1.37E-02

Emission Point Number	Emission Unit Number	Description	Pollutant	Emission Factor	Emission Factor (lb/UoM)	Emission Rate (lb/hr)	Potential Emissions (tons/yr)	Allowable Emissions (tons/yr)
N	EU-17	De-watering screen (negligible)	PM PM ₁₀ PM _{2.5}					
N	EU-18	Transfer conveyor 03 (negligible)	PM PM ₁₀ PM _{2.5}					
N	EU-19	Transfer conveyor 04 (negligible)	PM PM ₁₀ PM _{2.5}					
N	EU-20	Transfer conveyor 05 (negligible)	PM PM ₁₀ PM _{2.5}					

Emission Point Number	Emission Unit Number	Description	SCC	Maximum Hourly	Units of Measure	Control Device Number	Control Type	Capture Efficiency (%)	Control Efficiency (%)
N	EU-17	De-watering screen (negligible)						100%	0.00%
N	EU-18	Transfer conveyor 03 (negligible)						100%	0.00%
N	EU-19	Transfer conveyor 04 (negligible)						100%	0.00%
N	EU-20	Transfer conveyor 05 (negligible)						100%	0.00%