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ENGINEERING EVALUATION / FACT SHEET

BACKGROUND INFORMATION

Application No.:	R13-3374 ***After-the-Fact***
Plant ID No.:	061-00180
Applicant:	LP Mineral, LLC
Facility Name:	Humphrey Quarry
Location:	Morgantown, Monongalia County
SIC / NAICS Code:	1411 / 212311; 1221 / 212111
Application Type:	Modification
Received Date:	July 28, 2017
Engineer Assigned:	Thornton E. Martin Jr.
Fee Amount:	$2,000
Date Received:	August 8, 2017
Complete Date:	August 29, 2017
Applicant Ad Date:	August 3, 2017
Newspaper:	*The Dominion Post*
UTM's:	Easting: 586.20 km Northing: 4391.95 km Zone: 17
Description:	LP Mineral, LLC is applying for a modification permit for a nonmetallic mineral processing facility in Morgantown, Monongalia County, West Virginia. The facility currently operates under General Permit G40-C055. This application proposes to change the facility to a Rule 13 Individual Permit to include the addition of a portable crushing unit, an after-the-fact replacement of the Finlay 693 Supertrak portable screen with a Spyder 516T portable screen and the addition of existing coal processing equipment: three (3) Screen Machine Scalpers, three (3) mobile conveyors and one (1) Sizer.

DESCRIPTION OF PROCESS

LP Mineral, LLC began using portable crushing and screening units for non-metallic minerals at the Humphrey facility in November of 2010 and portable crushing and screening units for coal and refuse in 2013.

The currently permitted non-metallic mineral processing units are a Lokotrack LT1213 Impactor (LT1213), a Finlay Supertrak 693 Screen (693) and a Screen Machine Spyder 516T Screen (516T). The LT1213 is powered by a 322 hp Caterpillar 3196 Tier 1 diesel engine, the 693 by a 119 hp Deutz 2012 Tier 1 diesel engine and the 516T by a 125 hp Cummins B3.9-C Tier 1 diesel engine. The Finlay Supertrak 693 Screen was replaced by a second Screen Machine Spyder 516T with a 110

hp Cummins QSB4.5 Tier 1 diesel engine. A second Lokotrack LT1213 Impactor with a 425 hp Caterpillar C-12 Tier 2 diesel engine is proposed for the facility. The units process stone at up to 200 tons per hour (TPH) and 200,000 tons per year (TPY). The units may operate in series or separately throughout the site.

The existing coal and refuse processing equipment is not included in the current permit. The equipment includes three (3) Screen Machine 107T Scalpers, two (2) of which are powered by 80 hp Cummins B3.3 diesel engines and one (1) which is powered by an 85 hp Cummins B3.3 diesel engine. There are two (2) Screen Machine 6036T 60' Mobile Conveyors and one (1) Screen Machine 80' Mobile Conveyor powered by 49 hp Yanmar 4TNV88-BDSA diesel engines. There is one (1) Sizer powered by a 533 hp Volvo TAD1232GE diesel engine (stand-alone generator). The Volvo engine/generator sits on a trailer and can be moved to power other equipment at the facility.

During non-metallic mineral processing, some incidentally removed coal is processed but, the quantity is below the threshold to consider the quarry equipment as coal processing equipment.

Non-Metallic Mineral Processing Equipment

Lokotrack LT1213 Impactor (CR1) with 322 HP Caterpillar 3196 Engine

Stone is transferred by endloader, portable screen conveyor or portable crusher conveyor to hopper CH1/PW - vibrating grizzly feeder CF1/PE (CTP1/MD) where undersize material drops through the grizzly bars (CTP2/PW) to belt conveyor CBC2/N (to ground - CTP3/COM) and oversize is fed (CTP2/PW) to crusher CR1/FE. Crushed stone transfers (CTP4/PE) to belt conveyor CBC1/N and then to stockpile OS1/N (CTP5/COM) or to hopper SH2/PE or hopper SH3/PE or hopper CH2/PE.

Screen Machine Spyder 516T (S2) with 125 HP Cummins 4B3.9 Engine

Hopper SH2/PE receives stone from CBC1/N, CBC3/N, SBC10-12/N or endloader (STP10/MD) and transfers (STP11/PE) to belt conveyor SBC5/N then to screen S2/PE (STP12/N). The screened stone transfers to three (3) belt conveyors: SBC6/N (STP13/PE) to OS1/N (STP14/N) or to another unit, SBC7/N (STP15/PE) to OS1/N (STP16/N) or SBC8/N (STP17/PE) to OS1/N (STP18/N).

Screen Machine Spyder 516T (S3) with 110 HP Cummins QSB4.5 Engine (Replaces the Finlay 693)

Hopper SH3/PE receives stone from CBC1/N, CBC3/N, SBC6-8/N or endloader (STP19/MD) and transfers (STP20/PE) to belt conveyor SBC9/N then to screen S3/PE (STP21/N). The screened stone transfers to three (3) belt conveyors: SBC10/N (STP22/PE) to OS1/N (STP23/N) or to another unit, SBC11/N (STP24/PE) to OS1/N (STP25/N) or SBC12/N (STP26/PE) to OS1/N (STP27/N).

Lokotrack LT1213 Impactor (CR2) with 425 HP Caterpillar C-12 Engine

Hopper CH2/PE - vibrating grizzly feeder CF2/PE receives stone from CBC1/N, SBC6/N, SBC10/N or endloader (CTP6/MD). Undersize material drops through the grizzly bars (CTP7/PE) to belt conveyor CBC4/N (to OS1/N - CTP8/N) and oversize is fed (CTP7/PE) to crusher CR2/FE.

Crushed stone transfers (CTP9/PE) to belt conveyor CBC3/N and then to stockpile OS1/N (CTP10/N) or to hopper SH2/PE or hopper SH3/PE or hopper CH1/PE.

The two (2) portable screens and two portable crushers can operate individually or be put into series and feed each other.

Stockpile OS1/N consists of multiple piles of raw and processed stone in the vicinity of the portable units. Raw stone is trucked to OS1/N (TTP1/MD) from the quarry or an endloader will feed the portable units directly from the quarry. Processed stone is loaded from OS1/N to trucks (TTP2/MD) by endloader.

Note on carry over moisture (COM) controls, AP-42 Table 11.19.2-2 note b states that sources do not need direct water sprays to benefit from moisture control; however, for the purposes of potential to emit of these units, no control is being applied to COM controlled sources.

Coal Processing Equipment

Three (3) Screen Machine Scalper 107T's (S4, S5 S6); two (2) with 80 hp Cummins B3.3 engines and one (1) with 85 hp Cummins B3.3 engine and three (3) Screen Machine Mobile Conveyors (MC1, MC2 MC3) with 49 hp Yanmar 4TNV88-BDSA diesel engines.

Coal is transferred (STP28/MD, STP28A/MD, STP28B/MD) by endloader or Sizer (CR3) to screen S4, S5 and/or S6. Oversize material transfers to ground (STP33/N, STP33A/N, STP33B/N) and pass-through material transfers (STP29/PE, STP29A/PE, STP29B/PE) to belt conveyor(s) SBC13/N, SBC15/N or SBC17/N, then transfers (STP30/PE, STP30A/PE. STP30B/PE) to belt conveyor(s) SBC14/N SBC16/n or SBC18/N. SBC14/N, SBC16/N and SBC18/N transsfer (STP31/N STP31A/N STP31B/N) to mobile conveyor(s) MCBC1/N MCBC2/N or MCBC3/N or toOS2/N. MCBC1/N, MCBC2/N and MCBC3/N transfer (STP32/N, STP32A/N, STP32B/N) to open stockpile OS2/N or to the Sizer (CR3/FE).

Sizer (CR3) and 533 HP Volvo TAD1232GE Engine

Material is transferred (CTP11/MD) to Sizer CR3/FE via mobile conveyor (MBC1/N, MBC2/N or MBC3/N) or Screen Machine Scalper conveyor (SBC14/N, SBC16/N or SBC18/N). The Sizer (CR3/FE) transfers (CTP12/FE) to belt conveyor CBC5/N wwhich then transfers (CTP13/N) to OS2/N or to a Screen Machine Scalper (S4/PE, S5/PE, S6/PE).

Coal and Non-Metallic Mineral Processing Equipment

The Lokotrack LT1213 Impactor (CR1) can be used to process both non-metallic minerals and coal. Screen Machine Spyder 516T (S3) can also be used to process both no-metallic minerals and coal.

LP Mineral, LLC utilizes the following equipment at the Humphrey Quarry:

Table 1: Equipment Summary

Source ID	Emission Point ID	Emission Unit Description	Design Capacity		Year Installed/ Modified	Control Device[1]
			tons/hour	tons/year		
Non-Metallic Mineral and Coal Processing Equipment						
Lokotrack LT1213 Impactor (CR1)						
CH1	CH1	20 Ton Hopper	----	400,000	2010	PW
CR1	CR1	Jaw Crusher	200	400,000 (stone) 300,000 (coal)	2010	FE
CBC1	CBC1	Belt Conveyor	200	400,000	2010	N
CBC2	CBC2	Belt Conveyor	200	400,000	2010	N
ENG-C1	E1C	2000 Caterpillar 3196, Tier 1, 322 hp	15.61 gal/hr		2010	A/F
Screen Machine Spyder 516T (S3) - REPLACES THE FINLAY 693						
SH3	SH3	25 Ton Hopper	----	400,000	2010	PE
S3	S3	Double Deck Screen	200	400,000 (stone) 600,000 (coal)	2016	PE
SBC9	SBC9	Belt Conveyor	200	400,000	2010	N
SBC10	SBC10	Belt Conveyor	200	400,000	2010	N
SBC11	SBC11	Belt Conveyor	200	400,000	2010	N
SBC12	SBC12	Belt Conveyor	200	400,000	2010	N
ENG-S3	ENG-S3	2010 Cummins QSB4.5, Tier 1, 110 hp	6.18 gal/hr		2016	A/F
Non-Metallic Mineral Processing Equipment						
Lokotrack LT1213 Impactor (CR2)						
CH2	CH2	20 Ton Hopper	----	400,000	2017	PE
CR2	CR2	Jaw Crusher	200	400,000	2017	FE
CBC3	CBC3	Belt Conveyor	200	400,000	2017	N
CBC4	CBC4	Belt Conveyor	200	400,000	2017	N
ENG-C2	E2C	2004 Caterpillar C-12, Tier 2, 425 hp	20.60 gal/hr		2017	A/F
Screen Machine Spyder 516T (S2)						
SH2	SH2	25 Ton Hopper	----	400,000	2010	PE
S2	S2	Double Deck Screen	200	400,000	2010	PE
SBC5	SBC5	Belt Conveyor	200	400,000	2010	N
SBC6	SBC6	Belt Conveyor	200	400,000	2010	N
SBC7	SBC7	Belt Conveyor	200	400,000	2010	N
SBC8	SBC8	Belt Conveyor	200	400,000	2010	N
ENG-S2	E2S	2002 Cummins 4B3.9, Tier 1, 125 hp	6.44 gal/hr		2010	A/F
Finlay 693 Supertrak Screen (S1) - REMOVED						
SH1	SH1	25 Ton Hopper	----	200,000	2010	PW
S1	S1	Double Deck Screen	200	200,000	2010	PW
SBC1	SBC1	Belt Conveyor	200	200,000	2010	N
SBC2	SBC2	Belt Conveyor	200	200,000	2010	N
SBC3	SBC3	Belt Conveyor	200	200,000	2010	N
SBC4	SBC4	Belt Conveyor	200	200,000	2010	N
ENG-S1	E1S	2002 Deutz 2012, Tier 1, 113 hp	2.16 gal/hr		2010	A/F
Coal Processing Equipment						

Source ID	Emission Point ID	Emission Unit Description	Design Capacity		Year Installed/ Modified	Control Device[1]
			tons/hour	tons/year		
Screen Machine Scalper 107T (S4)						
S4	S4	Single Deck Scalping Screen	200	600,000	2013	PE
SBC13	SBC13	Belt Conveyor	200	600,000	2013	N
SBC14	SBC14	Belt Conveyor	200	600,000	2013	N
ENG-S4	E4S	2008 Cummins B3.3, Tier 2, 80 hp	1.53 gal/hr		2013	A/F
Screen Machine Scalper 107T (S5)						
S5	S5	Single Deck Scalping Screen	200	600,000	2013	PE
SBC15	SBC15	Belt Conveyor	200	600,000	2013	N
SBC16	SBC16	Belt Conveyor	200	600,000	2013	N
ENG-S5	E5S	2008 Cummins B3.3, Tier 2, 80 hp	1.53 gal/hr		2013	A/F
Screen Machine Scalper 107T (S6)						
S6	S6	Single Deck Scalping Screen	200	600,000	2013	PE
SBC17	SBC17	Belt Conveyor	200	600,000	2013	N
SBC18	SBC18	Belt Conveyor	200	600,000	2013	N
ENG-S6	E6S	2012 Cummins B3.3, Tier 2, 85 hp	1.62 gal/hr		2013	A/F
Sizer (CR3)						
CR3	CR3	Rotary Breaker	200	300,000	2013	FE
CBC5	CBC5	Belt Conveyor	200	300,000	2013	N
ENG-C3	E3C	2001 Volvo TAD1232GE, Tier 1, 533 hp	10.18 gal/hr		2013	A/F
Screen Machine 6036T Mobile Conveyor (MC1)						
MCBC1	MCBC1	Mobile Belt Conveyor	200	600,000	2013	N
ENG-MC1	E1MC	2006 Yanmar 4TNV88-BDSA, Tier 2, 49 hp	0.94 gal/hr		2013	A/F
Screen Machine 6036T Mobile Conveyor (MC2)						
MCBC2	MCBC2	Mobile Belt Conveyor	200	600,000	2013	N
ENG-MC2	E2MC	2006 Yanmar 4TNV88-BDSA, Tier 2, 49 hp	0.94 gal/hr		2013	A/F
Screen Machine 6036T Mobile Conveyor (MC3)						
MCBC3	MCBC3	Mobile Belt Conveyor	200	400,000	2013	N
ENG-MC3	E3MC	2006 Yanmar 4TNV88-BDSA, Tier 2, 49 hp	0.94 gal/hr		2013	A/F
Storage						
OS1	OS1	Open Stockpile (Aggregate)	----	400,000	2010	N
OS2	OS2	Open Stockpile (Coal)	----	400,000	2013	N
Tanks						
Source ID	**Volume (gallons)**	**Content**	**Throughput (gallons / year)**		**Year Installed/ Modified**	**Orientation**
T01	7,000	2FO	120,000		2010	Horizontal
T02	2,000	2FO			2010	Horizontal
T03	500	Motor Oil	1,100		2010	Horizontal
T04	300	Transmission Oil	1,000		2010	Horizontal
T05	500	Hydraulic Oil	1,000		2010	Horizontal

[1] FE- Full Enclosure; PE - Partial Enclosure; PW - Partial Enclosure w/water spray; N - None; A/F - Air-to-Fuel Ratio

SITE INSPECTION

Kirk Powroznik of the North Central Regional Office, Compliance and Enforcement Section performed a targeted, full, on-site inspection of the Humphrey Quarry operations on November 30, 2016. The facility received a status code of 30 - In Compliance.

Directions from application: The quarry entrance and guard shack are located on State Route 100 approximately 1.4 miles north of Scott's Run Road (County Route 7/19).

ESTIMATE OF EMISSIONS BY REVIEWING ENGINEER

The Humphrey Quarry Facility will operate at a maximum crushing rate of 200 tons per hour and 200,000 tons per year. Emissions were calculated by Potesta & Associates, Inc. on behalf of LP Mineral, LLC and are based on maximum annual operation hours (8,760 hours per year).

Fugitive emissions from stockpiles were calculated using emission factor equation from Air Pollution Engineering Manual and References and emission factors from AP-42 Section 13.2.4 (Miscellaneous Sources: Aggregate Handling and Storage Piles). Emission factors for the unpaved haulroads were taken from AP-42 Section 13.2.2. (Unpaved Haulroads). Raw stone trucks will utilize 0.4 miles of unpaved haulroads per trip with a maximum of 5 trips per hour and 10,000 trips per year. Processed stone trucks will utilize 0.4 miles of unpaved haulroads per trip with a maximum of 8 trips per hour and 16,000 trips per year. Endloaders will utilize 1.0 miles of unpaved haulroads per trip with a maximum of 1 trips per hour and 8,760 trips per year. Water trucks/sprays will be utilized at the facility to minimize fugitive emissions the from haulroads.

AP-42 Section 13.2.4 (Miscellaneous Sources: Aggregate Handling and Storage Piles) was used to obtain emission factors for facility transfer points. AP-42 Section 13.2.4-4 (Miscellaneous Sources: Controls) and the WVDAQ G40-C Emissions Worksheet were utilized to calculate the crushing and screening emissions.

All fuel storage tanks are under the 40 CFR 60 Subpart Kb applicable size of 19,813 gallons. Tank T01 has a storage capacity of 7,000 gallons and will store #2 fuel oil. Tank T02 has a storage capacity of 2,000 gallons and will store #2 fuel oil. Tank T03 has a storage capacity of 500 gallons and will store motor oil. Tank T04 has a storage capacity of 300 gallons and will store transmission oil. Tank T05 has a storage capacity of 500 gallons and will store hydraulic oil.

The following table(s) outline the Proposed Non-Metallic Mineral Processing and Coal/Refuse Processing Emissions combined:

Table 2: Point Sources

Source Description	Regulated Air Pollutant	Maximum Hourly Controlled Emissions (lb/hr)	Maximum Annual Controlled Emissions (tons/yr)
Transfer Points	PM	16.16	17.74
	PM_{10}	7.61	8.46
	$PM_{2.5}$	1.25	1.45
Crushing	PM	3.36	2.56
	PM_{10}	1.59	1.21
	$PM_{2.5}$	0.25	0.20
Screening	PM	42.00	62.00
	PM_{10}	19.50	28.90
	$PM_{2.5}$	3.02	4.42
Engines	PM	0.49	2.17
	PM_{10}	0.49	2.17
	$PM_{2.5}$	0.49	2.17
	NOx	18.01	78.89
	CO	3.77	16.52
	SOx	3.52	15.44
	VOC	4.37	19.17
	CO2e	----	8,999.91
Engine HAP's	Benzene	0.0113	0.0493
	Toluene	0.0053	0.0230
	Xylenes	0.0037	0.0162
	1,3-Butadiene	0.0005	0.0021
	Formaldehyde	0.0141	0.0623
	Acetaldehyde	0.0094	0.0411
	Acrolein	0.0017	0.0072
	Napthalene	0.0015	0.0063
	Total HAPs	0.0473	0.2073
	PM Subtotal	62.01	84.47
	PM_{10} Subtotal	29.19	40.74
	$PM_{2.5}$ Subtotal	5.01	8.24

Table 3: Fugitive Sources

Source Description	Regulated Air Pollutant	Maximum Hourly Controlled Emissions (lb/hr)	Maximum Annual Controlled Emissions (tons/yr)
Open Stockpiles*	PM	6.13	26.84
	PM_{10}	2.92	12.78
	$PM_{2.5}$	0.44	1.92
Vehicular Traffic	PM	70.52	96.62
	PM_{10}	19.50	28.53
	$PM_{2.5}$	2.08	2.86
	PM Subtotal	76.65	123.46
	PM_{10} Subtotal	22.42	41.31
	$PM_{2.5}$ Subtotal	2.52	4.78

* When calculating total facility stockpile emissions, only the emissions for either coal or stone (not the sum of both) are included in the total emissions because coal and stone share a general stockpile area.

Table 4: Plant Total Emissions (Point + Fugitive)

Regulated Air Pollutant	Maximum Hourly Controlled Emissions (lb/hr)	Maximum Annual Controlled Emissions (tons/yr)
PM	138.66	207.93
PM_{10}	51.61	82.05
$PM_{2.5}$	7.53	13.02
NOx	18.01	78.89
CO	3.77	16.52
SOx	3.52	15.44
VOC	4.37	19.17
CO2e	----	8,999.91
Benzene	0.011	0.049
Toluene	0.005	0.023
Xylenes	0.004	0.016
1,3-Butadiene	0.0005	0.002
Formaldehyde	0.014	0.062
Acetaldehyde	0.009	0.041
Acrolein	0.002	0.007
Napthalene	0.002	0.006
Total HAPs	0.047	0.207

The following table outlines the proposed Change in Emissions:

Table 5: Change in Emissions

Regulated Air Pollutant	Original Controlled Emissions (lb/hr)	Original Controlled Emissions (tons/yr)	Proposed Controlled Emissions (lb/hr)	Proposed Controlled Emissions (tons/yr)	Change in Controlled Emissions (lb/hr)	Change in Controlled Emissions (tons/yr)
PM	27.46	29.96	138.66	207.93	111.20	177.97
PM_{10}	9.84	10.56	51.61	82.05	41.77	71.49
$PM_{2.5}$	1.53	2.00	7.53	13.02	6.00	11.02
NOx	5.35	23.44	18.01	78.89	12.66	55.45
CO	0.81	3.55	3.77	16.52	2.96	12.97
SOx	0.93	4.08	3.52	15.44	2.59	11.36
VOC	1.16	5.09	4.37	19.17	3.21	14.08
CO2e	----	2,172.25	----	8,999.91	----	6,827.66
Benzene	0.0030	0.0131	0.013	0.0493	0.0083	0.0362
Toluene	0.0014	0.0061	0.0053	0.0230	0.0039	0.0169
Xylenes	0.0009	0.0039	0.0037	0.0162	0.0028	0.0123
1,3-Butadiene	0.0001	0.0006	0.0005	0.0021	0.0003	0.0015
Formaldehyde	0.0038	0.0167	0.0141	0.0623	0.0103	0.0456
Acetaldehyde	0.0025	0.0110	0.0094	0.0411	0.0069	0.0301
Acrolein	0.0004	0.0017	0.0017	0.0072	0.0013	0.0055
Napthalene	0.0004	0.0017	0.0015	0.0063	0.0011	0.0046
Total HAPs	0.0122	0.0551	0.0473	0.2073	0.0351	0.1522

REGULATORY APPLICABILITY

PSD has no applicability to the proposed facility. The proposed modification of a non-metallic minerals processing and coal/refuse processing plant is subject to the following state and federal rules:

45CSR5 To Prevent and Control Air Pollution from the Operation of Coal Preparation Plants, Coal Handling Operations and Coal Refuse Disposal Areas

The equipment comprising (S4, S5, S6, CR3, MC1, MC2 and MC3) as well as equipment comprising (CR1 and S3 when processing coal) will be subject to the requirements of 45CSR5 because it will meet the definition of "Coal Preparation Plant" found in subsection 45CSR5.2.4. The facility should be in compliance with Section 3 (less than 20% opacity) and Section 6 (fugitive dust control system and dust control of the premises and access roads) when the particulate matter control methods and devices proposed within application R13-3374 are in operation.

45CSR7 To Prevent and Control Particulate Matter Air Pollution From Manufacturing Processes and Associated Operations

The purpose of this rule is to prevent and control particulate matter air pollution from manufacturing processes and associated operations. The equipment comprising (CR2 and S2) as well as equipment comprising (CR1 and S3 when processing aggregate) will be subject to the requirements of this rule because it meets the definition of "Manufacturing Process" found in Section 2.20 of this rule. The facility will need to be in compliance with Subsection 3.1 – no greater than 20% opacity; Subsection 3.7 – no visible emissions from any storage structure pursuant to subsection (hoppers CH2, SH2 and SH3 are partially enclosed with full enclosure load-in methods and CH1 is partially enclosed with water spray as well as full enclosure load-in method); Subsection 4.1 – PM emissions shall not exceed those under Table 45-7A (see paragraph below); Subsection 5.1 – manufacturing process and storage structures must be equipped with a system to minimize emissions (hoppers CH2, SH2 and SH3 are partially enclosed with full enclosure load-in methods and CH1 is partially enclosed with water spray as well as full enclosure load-in method); Subsection 5.2 – minimize PM emissions from haulroads and plant premises (water trucks/sprays will be utilized to control these emissions).

According to Table 45-7A, for a type 'a' source with a maximum process weight rate of 200 tons per hour, the maximum allowable emission rate is 43 lb/hr of particulate matter. The proposed maximum point source emission rate at the facility is 14.75 lb/hr of particulate matter according to calculated emissions for non-metallic mineral processing in permit application R13-3374.

45CSR13 Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Temporary Permits, General Permits, and Procedures for Evaluation

The purpose of this rule is to set forth the procedures for stationary source reporting, and the criteria for obtaining a permit to construct and operate a new stationary source which is not a major stationary source, to modify a non-major stationary source, to make modifications which

are not major modifications to an existing major stationary source and to relocate non-major stationary sources within the state of West Virginia.

The applicant is applying for a Rule 13 modification permit registration for the Humphrey Quarry facility. The proposed modification is subject to the requirements of 45CSR13 because it will result in potential controlled emissions greater than six (6) pounds per hour and ten (10) tons per year of a regulated air pollutant (PM, PM10, PM2.5 and NOx) and will involve the construction of equipment subject to NSPS Subpart OOO, Subpart Y and Subpart IIII. The facility is subject to the following sections of this rule: reporting requirements, requirements for modifications of stationary sources, demonstrating compliance with stationary sources, public review procedures, and permit application fees. The facility will demonstrate compliance by following all the applicable rules and regulations that apply to the facility. They will also follow the terms and conditions set forth in permit R13-3374. The permittee published a Class I legal advertisement in *The Dominion Post* on August 3, 2017 and submitted an application fee of $2,000.00, which includes $1,000.00 NSPS fees.

45CSR16 *Standards of Performance for New Stationary Sources*
40 CFR 60 *Subpart OOO: Standards of Performance for Nonmetallic Mineral Processing Plants*

The proposed modification is subject to 40 CFR 60 Subpart OOO because equipment comprising (CR2 and S2) as well as equipment comprising (CR1 and S3 when processing aggregate) will occur after April 22, 2008 and the plant processes more than 25 tons of rock per hour. The proposed modification is subject to 45CSR16, which incorporates by reference 40 CFR 60 Subpart OOO - Standards of Performance for Nonmetallic Mineral Processing Plants. The facility should be in compliance with 60.672 (b) no greater than 7% opacity from any transfer point on belt conveyors or from any other affected facility (as defined in 60.670 and 60.671) and no greater than 12% opacity from any crusher when the particulate matter control methods and devices proposed within application R13-3374 are in operation.

40 CFR 60 *Subpart Y: Standards of Performance for Coal Preparation Plants*

The proposed modification is subject to 40 CFR 60 Subpart Y because equipment comprising (S4, S5, S6, CR3, MC1, MC2 and MC3) as well as equipment comprising (CR1 and S3 when processing coal) was constructed and will be modified after October 24, 1974 and processes more than 200 tons of coal per day. The proposed modification includes the addition of equipment and stockpiles, which are defined as affected facilities in 40 CFR 60 Subpart Y. Therefore, the proposed modification is subject to 45CSR16, which incorporates by reference 40 CFR 60 Subpart Y - Standards of Performance for Coal Preparation Plants.

The facility should be in compliance with the following: Section 254(b) (less than 10% opacity for coal processing and conveying equipment, coal storage systems, or coal transfer and loading systems processing coal constructed, re-constructed or modified after April 28, 2008) when the particulate matter control methods and devices proposed are in operation.

The owner or operator of an open storage pile, which includes the equipment used in the loading, unloading, and conveying operations of the affected facility, constructed,

reconstructed, or modified after May 27, 2009, must prepare and operate in accordance with a submitted fugitive coal dust emissions control plan that is appropriate for the site conditions. The fugitive coal dust emissions control plan must identify and describe the control measures the owner or operator will use to minimize fugitive coal dust emissions from each open storage pile. The plan must be submitted to the Director prior to startup of the new, reconstructed or modified open storage pile.

40 CFR 60 Subpart IIII *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines*

LP Mineral, LLC's Humphrey Quarry facility is subject to this subpart. Subpart IIII applies to Stationary CI ICE manufactured after April 1, 2006, that are not fire pump engines. LP Mineral, LLC will utilize seven engines (ENG-S3, ENG-S4, ENG-S5, ENG-S6, ENG-MC1, EMG-MC2, ENG-MC3) that are subject to this rule. The remaining five engines are Tier 1 or Tier 2 certified engines.

45CSR30 Requirements for Operating Permits

In accordance with 45CSR30 Major Source Determination, the modification of a non-metallic minerals processing and coal/refuse processing plant will be a non-major source which is subject to NSPS Subpart OOO, Subpart Y and Subpart IIII. The facility's potential to emit will be 53.52 TPY of a regulated air pollutant (PM10), not including fugitive emissions from haulroads, which is less than the 45CSR30 threshold of 100 TPY. Therefore, the facility will continue to be subject to 45CSR30 and classified as a Title V deferred non-major source.

40 CFR 63 Subpart ZZZZ *National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*

LP Mineral, LLC's Humphrey Quarry facility is subject to 40CFR63 Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines, because seven of the twelve engines to be utilized are considered a new area source of HAPs since these were manufactured on or after June 12, 2006, however, the only requirements that apply are those required under 45CFR60 Subpart IIII. Five of the twelve engines are considered existing and meet the 70% CO reduction requirement based on the Manufacturers Supplied certification data.

The proposed Modification (After-the-Fact) of LP Mineral, LLC's modification of a non-metallic minerals processing and coal/refuse processing plant is NOT subject to the following state and federal rules:

45CSR14 *Permits for Construction and Major Modification of Major Stationary Sources of Air Pollution for the Prevention of Significant Deterioration*

The facility will have the potential to emit 111.31 TPY of a regulated air pollutant (PM), not including fugitive emissions from haulroads, which is less than the 45CSR14 threshold of 250 TPY. This facility is not listed in Table 2, and so fugitive emissions are not included

when determining source applicability. Therefore, the proposed Modification is not subject to the requirements set forth within 45CSR14.

40 CFR 60 Subpart Kb — *Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984*

The facility is not subject to this subpart. All tanks are smaller than the minimum size requirements for this subpart's applicability (75 cubic meters or 19,813 gallons).

TOXICITY OF NON-CRITERIA REGULATED POLLUTANTS

Various VOC/non-criteria regulated pollutants are emitted from the incomplete combustion of diesel fuel. These emissions, however, are generally small and do not adversely impact the quality of the surrounding ambient air.

AIR QUALITY IMPACT ANALYSIS

The writer deemed that an air dispersion modeling study or analysis was not required, because the proposed construction does not meet the definition of a major source as defined in 45CSR14.

MONITORING OF OPERATIONS

Registrants will be required to perform the following monitoring and recordkeeping:

1. Monitor and record daily and monthly records of the amount of non-metallic minerals and coal/refuse processed.
2. Monitor and record calendar monthly and calendar annual quantity of fuel consumed and hours of operation for all engines and combustion sources.
3. Monitor and record calendar annual quantity of organic liquid throughput in all registered storage tanks.
4. Conduct visual observations of all points listed in the registration that are subject to opacity limits.
5. Conduct annual preventative maintenance/inspection, and all routine maintenance service and repairs as required, to facilitate proper control device performance, for the control devices listed in the registration.
6. Perform are applicable required monitoring, recordkeeping, reporting and testing that is required under 40CFR60 Subparts Y, OOO and IIII.

7. These records shall be maintained on-site for a minimum of five (5) years from the date of record creation and shall be made available to the Director of the Division of Air Quality or his or her duly authorized representative upon request.

RECOMMENDATION TO DIRECTOR

The information contained in this application by LP Mineral, LLC for the modification (After-the-Fact) indicates that compliance with all applicable regulations should be achieved when all proposed particulate matter control methods are in operation. Due to the location, nature of the process, and control methods proposed, adverse impacts on the surrounding area of a non-metallic minerals processing and coal/refuse processing plant located in Morgantown, Monongalia County, WV is hereby recommended.

Thornton E. Martin Jr.
Permit Engineer

September 7, 2017
Date