From:	Risner, Karen M.
To:	Belt, Andrew T
Cc:	Boswell, James
Subject:	RE: IDEM OAQ Contact Information for Application No. 153-47966-00011 for Peabody Midwest Mining LLC - Bear Run Mine
Date:	Tuesday, June 18, 2024 5:15:19 PM
Attachments:	image004.png 15.9 MMTPY Calcs_Revised 20240611.xlsx

Andrew,

Please find attached an electronic copy of the calculations for application No. 153-47966-00011.

Thank you,
Karen Risner

From: Belt, Andrew T <ABelt@idem.IN.gov>
Sent: Tuesday, June 18, 2024 12:49 PM
To: Risner, Karen M. <KRisner@peabodyenergy.com>
Cc: Boswell, James <JBoswell@peabodyenergy.com>
Subject: IDEM OAQ Contact Information for Application No. 153-47966-00011 for Peabody Midwest Mining LLC - Bear Run Mine

Karen,

I am the permit writer assigned to the current application No. 153-47966-00011 for Peabody Midwest Mining LLC - Bear Run Mine. I would like to extend to you my contact information so that we may have continued communication until your new permit is issued. Please keep this information at hand. It is common for questions to arise, and oftentimes, further clarification is needed during the permit review process.

To expedite the review process, please e-mail me the electronic copy of your calculations (preferably in excel format) and other supporting documents used as part of your application.

IDEM, OAQ will notify you when a draft permit has been submitted for public notice and/or when a final permit has been issued. As part of the notification, IDEM, OAQ will provide information on how to access the draft and/or final permit electronically on IDEM's website. If Source Name would prefer to receive paper copies of the entire draft and/or final permit, please let me know prior to the end of the applicant review period. If you prefer to receive paper copies of the entire permit, IDEM, OAQ will mail a paper copy of the draft permit and/or original signed final permit to the source contact. If you do not request to receive paper copies of the entire permit, IDEM, OAQ will only mail a paper copy of the original signed final permit signature page to the source contact.

Please feel free to contact me at any time if you have questions, concerns, or important information regarding your permit. For your convenience, my section chief (Brian Williams) may be contacted at 317-234-5375 or BWilliam@idem.IN.gov.

Thank you in advance for your time and assistance. I look forward to working with you.

Sincerely,

Andrew "Andy" Belt
Senior Environmental Manager 1
Office of Air Quality, Permits Branch
Indiana Department of Environmental Management
(317) 232-3217 • ABelt@idem.in.gov

Process Circuit		Original	Updated
2	Run of mine coal truck dump to feeder	14,000,000	7,638,889
3	Feeder to run of mine coal breaker conveyor	14,000,000	7,638,889
4	Run of mine breaker feed conveyor	14,000,000	7,638,889
5	Scalping screen	14,000,000	7,638,889
6	Rotary breaker	14,000,000	7,638,889
7	Rotary breaker drop to breaker reject bunker	420,000	229,167
8	Breaker reject bunker		
9	Raw coal conveyor No. 4	13,580,000	7,409,722
10	No. 2 raw coal stacking tube	6,790,000	3,704,861
11	No. 2 raw coal stockpile		
12	Raw coal stacking tube transfer conveyor	6,790,000	3,704,861
13	No. 1 raw coal stacking tube	6,790,000	3,704,861
14	No. 1 raw coal stockpile		
15	Plany feed conveyor	13,580,000	7,409,722
16	Plant refuse collecting conveyor	2,940,000	1,604,167
17	Reject bunker		
18	Refuse truck bin mass flow gate/bin bypass to reject bunker	2,940,000	1,604,167
19	Stoker collecting conveyor	300,000	150,000
20	Stoker bin mass flow gate and weigh belt	75,000	-
20a	Stoker Conveyor from stoker bin	225,000	150,000
20b	Stoker Conveyor # 2 from stoker bin	225,000	150,000
20c	Stoker Stockpile		
21	Plant clean coal conveyor	9,220,000	5,500,000
22	No. 4 clean coal stacking tube	4,610,000	2,750,000
23	No. 4 clean coal stockpile		-
24	Clean coal stacking tube transfer conveyor	4,610,000	2,750,000
25	No. 3 clean coal stacking tube	4,610,000	2,750,000
26	No. 3 clean coal stockpile		
27	Clean coal loadout conveyor No. 1	11,344,315	7,600,000
28	Clean coal loadout conveyor No. 2	10,883,315	7,240,000
29	Train loadout hopper to train (inner and outer loops)	10,883,315	7,240,000
30	Industrial steam coal conveyor	461,000	360,000

Dry Crush Circuit		Original	Updated
32	Run of mine coal stockpile		
33	Run of mine coal truck dump to feeder	1,918,500	1,578,947
34	Feeder to run of mine conveyor	1,918,500	1,578,947
35	Run of mine conveyor	1,918,500	1,578,947
36	Scalping screen	1,918,500	1,578,947
37	Rotary breaker	1,918,500	1,578,947
38	Breaker collecting conveyor	1,899,315	1,547,368
39	Coarse coal conveyor	19,185	31,579
40	Coarse coal stockpile		

41	Crusher	1,899,315	1,547,368
42A	Coarse coal conveyor to screen	1,899,315	1,547,368
42S	Scalping screen	1,899,315	1,547,368
42B	Coarse coal conveyor from screen	1,899,315	1,547,368
42O	Oversized coal storage pile		
42	Dry crush coal conveyor	1,899,315	1,547,368
43	Dry crush coal stockpile		

Raw Limestone Tons	1,050,000
Clean Tons Produced	7,000,000
Washed Product	5,500,000
Dry Crush Tons	1,500,000
Stockpile Inventory	600,000
Over Road Trucks	360,000
Stoker Product	150,000

0.216495

Attachment A: Emissions Calculations
Emission Summary

Company Name: Peabody Midwest Mining LLC - Bear Run Mine
Source Address: 7255 East CR 600 South, Carlisle, IN 47838
Minor Source Operating Permit No.: M153-35601-00011
Administrative Amendment No.:
Permit Reviewer:

	Uncontrolled / Max Throughput Capacity Potential to Emit (PTE) (tons/year)								
Process Description	PM	PM10	PM2.5	SO2	NOx	VOC	CO	Total HAPs	Worst Single HAP
Coal Preparation/Processing Plant (Fugitive Emissions) and Limestone Processing (Non-Fugitive Emissions)*									
Coal Preparation/Processing Plant Material Handling (fugitives within Coal Plant)	65.90	28.25	3.89	-	-	-	-	-	-
Coal Preparation/Processing Plant Material Storage Piles (fugitives within Coal Plant)	7.07	2.48	2.48	-	-	-	-	-	-
Coal Preparation/Processing Plant Unpaved Roads (fugitives within Coal Plant)	47.05	12.14	1.21	-	-	-	-	-	-
Limestone Processing Crushing, Screening and Transfer Points (non-fugitives)	101.79	37.22	37.22	-	-	-	-	-	-
Total*	**221.81**	**80.08**	**44.79**	-	-	-	-	-	-
Title V Threshold	**-**	**100**	**100**	-	-	-	-	-	-
Coal Mine (Fugitive Emissions) and Limestone Processing (Fugitive Emissions)**									
Coal Mining (fugitives not within Coal Plant)	4,949.03	2,573.49	148.47	-	-	-	-	-	-
Coal Mine Storage Piles (fugitives not within Coal Plant)	46.94	16.43	16.43	-	-	-	-	-	-
Coal Mine Unpaved Roads (fugitives not within Coal Plant)	7,119.52	1,836.64	183.66	-	-	-	-	-	-
Limestone Processing Storage Piles (fugitives)	2.03	0.71	0.71	-	-	-	-	-	-
Limestone Unpaved Roads (fugitives)	1,087.34	280.50	28.05	-	-	-	-	-	-
Total**	**13,204.86**	**4,707.78**	**377.33**	-	-	-	-	-	-

	Particulate Matter (PM) Emissions			
Process Description	Max Throughput Capacity Uncontrolled Emissions (ton/yr)	Controlled Emissions (ton/yr)	Maximum Annual Throughput (ton/yr)	Controlled Emissions*** (lb/ton)
Coal Preparation/Processing Plant (Fugitive Emissions) and Limestone Processing (Non-Fugitive Emissions)*				
Coal Preparation/Processing Plant Material Handling (fugitives within Coal Plant)	65.90	9.73	15,918,500	1.22E-03
Coal Preparation/Processing Plant Material Storage Piles (fugitives within Coal Plant)	7.07	7.07	15,918,500	8.88E-04
Coal Preparation/Processing Plant Unpaved Roads (fugitives within Coal Plant) - Mitigated (precipitation)	47.05	23.52	15,918,500	2.96E-03
Limestone Processing Crushing, Screening and Transfer Points (non-fugitives)	101.79	101.79	3,066,000	6.64E-02
Total*	**221.81**	**142.12**		
Coal Mine (Fugitive Emissions) and Limestone Processing (Fugitive Emissions)**				
Coal Mining (fugitives not within Coal Plant)	4,949.03	4,949.03		
Coal Mine Storage Piles (fugitives not within Coal Plant)	46.94	46.94		
Coal Mine Unpaved Roads (fugitives not within Coal Plant) - Mitigated (precipitation)	7,119.52	3,559.76		
Limestone Processing Storage Piles (fugitives)	2.03	2.03		
Limestone Unpaved Roads (fugitives) - Mitigated (precipitation)	1,087.34	543.67		
Total**	**13,204.86**	**9,101.43**		

*Since the coal preparation/processing plant is in a source category for which there is an applicable New Source Performance Standard (i.e., NSPS, Subpart Y, Standards of Performance for Coal Preparation Plants) that was in effect on August 7, 1980, the fugitive emissions from the coal preparation/processing plant (a support facility for the coal mine) are counted toward the determination of PSD and Title V Permit applicability. For a detailed explanation, see the TSD section entitled "Fugitive Emissions". Since the limestone operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2, 326 IAC 2-3, or 326 IAC 2-7, and there is no applicable New Source Performance Standard that was in effect on August 7, 1980, fugitive emissions from the limestone operation are not counted toward the determination of PSD and Title V Permit applicability.

**Fugitive emissions from the coal mine (blasting, removal of overburden, loading into trucks, dumping and storage of coal at the mine, and haul road traffic at the mine) are not be included in determining whether the entire source is major under PSD and Title V. Fugitive emissions from limestone processing are also not to be included in major source determination. For a detailed explanation, see the TSD section entitled "Fugitive Emissions".

***Controlled Emissions (lb/ton) = (Controlled Emissions (ton/yr) x 2000 lb / 1 ton) / Maximum Annual Throughput (ton/yr)

Attachment A: Emissions Calculations
Coal Preparation/Processing Plant
Material Processing, Handling, Crushing, Screening, and Conveying

Company Name: **Peabody Midwest Mining LLC - Bear Run Mine**
Source Address: **7255 East CR 600 South, Carlisle, IN 47838**
Minor Source Operating Permit No.: **M153-35601-00011**

Emission Factors for Material Processing, Handling, and Conveying (Batch or Continuous Drop Operations AP-42 Section 13.2.4)

The following calculations determine the emission factors for handling (drop points within the process) of materials in the coal preparation/processing plant, based on the minimum anticipated moisture content of the raw coal prior to washing and after washing in the process.

Ef = k*(0.0032)*[(U/5)^1.3 / (M/2)^1.4]

where: Ef = Emission factor (lb/ton)

k (PM) =	0.74	= particle size multiplier (0.74 assumed for aerodynamic diameter <=100 um)
k (PM10) =	0.35	= particle size multiplier (0.35 assumed for aerodynamic diameter <=10 um)
k (PM2.5) =	0.053	= particle size multiplier (0.053 assumed for aerodynamic diameter <=2.5 um)
U =	8	= worst case annual mean wind speed (miles/hour)

Material	Minimum Material Moisture Content (%)*	PM Emission Factor (lb/ton)**	PM10 Emission Factor (lb/ton)**	PM2.5 Emission Factor (lb/ton)**
Raw coal prior to washing	10.0	4.58E-04	2.17E-04	3.28E-05
Coal after washing in processing plant	11.5	3.77E-04	1.78E-04	2.70E-05

*Minimum material moisture content based on coal data for this mine and anticipated minimum moisture content after washing
**From AP-42 Section 13.2.4.3

Emission Factors for Crushing/Breaking and Screening (AP-42 Section 11.19.2)

The following emission factor are used to determine the PTE of crushing/breaking and screening of raw coal in the preparation/processing plant, based on the minimum anticipated moisture content of the raw coal

Process Type	Minimum Material Moisture Content (%)*	PM Emission Factor (lb/ton)**	PM10 Emission Factor (lb/ton)**	PM2.5 Emission Factor (lb/ton)**
Tertiary Crushing/Breaking (controlled)**	10.0	0.0012	0.00054	0.00010
Screening (controlled)**	10.0	0.0022	0.00074	0.00005

*Minimum material moisture content based on coal data for this mine
**The minimum moisture content of the raw coal (10.0%) is significantly higher than moisture content of crushed stone controlled by with wet suppression (0.55% to 2.88%) as indicated in AP-42 Section 11.19.2, Table 11.19.2-2. Therefore, IDEM OAQ has calculated the PTE from the crushing/breaking and screening using controlled emission factors from AP-42 Section 11.19.2, Table 11.19.2-2.

Methodology
*Coal Preparation Plant Stockpile Emissions found on Coal Preparation Plant Material Storage Piles page.
**Unpaved Road Emissions found on Unpaved Roads pages.
Maximum Annual Throughput (tons/year) based on worst case production from the coal mine and anticipated breakdown in process according to material composition/characteristics
Maximum Annual Throughput (tons/year) is less than the maximum rated capacities of the process due to a bottleneck at the mine.
Uncontrolled PTE (tons/yr) = (Maximum Material Handling Throughput (tons/yr)) * (Emission Factor (lb/ton)) * (ton/2000 lbs)
Controlled PTE (tons/yr) = (Uncontrolled PTE (tons/yr)) * (1 - Control Efficiency)
For process weight rates in excess of 60,000 lbs/hr (30 tons/hr), 326 IAC 6-3-2 Allowable Particulate Emission Rate (lbs/hour) = 55 * [Maximum Process Weight Rate (tons/hour)]^(0.11) - 40

Abbreviations
PM = Particulate Matter
PM10 = Particulate Matter (<10 um)
PM2.5 = Particulate matter (< 2.5 um)

PTE = Potential to Emit
NA = Not Applicable

Sources for Emission Factors
1. From AP-42 Section 13.2.4.3 formula using minimum coal moisture content of 10.0%, and worst case annual mean wind speed of 8 miles/hour
2. From AP-42 Section 13.2.4.3 formula using minimum coal moisture content of 11.5%, and worst case annual mean wind speed of 8 miles/hour

3. From AP-42 Section 11.19.2, Table 11.19.2-2.

Calculations shown on next page

Attachment A: Emissions Calculations
Coal Preparation/Processing Plant
Material Processing, Handling, Crushing, Screening, and Conveying

													326 IAC 6-3-2 Allowable Particulate Emission R		
Process/Vent ID	Description	Type of Emission Point	[1)] Maximum Annual Throughput (tons/year)	Uncontrolled PTE of PM (tons/year)	Uncontrolled PTE of PM10 (tons/year)	Uncontrolled PTE of PM2.5 (tons/year)	Source of Emission Factor *See chart above*	Type of Controls	Expected Overall Control Efficiency	Controlled PTE of PM (tons/year)	Controlled PTE of PM10 (tons/year)	Controlled PTE of PM2.5 (tons/year)	Maximum Process Weight Rate (tons/hour)	Maximum Hourly Emission Rate (lbs/hour)	Subject to 326 IAC 6-3?
Process Circuit															
1	Run of mine coal stockpile	stockpile*													
2	Run of mine coal truck dump to feeder	drop	14,000,000	3.21	1.52	0.23	1	95% - water mister	95.0%	0.16	0.076	0.011	2000	0.917	yes
3	Feeder to run of mine coal breaker conveyor	drop	14,000,000	3.21	1.52	0.23	1	95% - water mister	95.0%	0.16	0.076	0.011	2000	0.917	yes
4	Run of mine breaker feed conveyor	conveyor	14,000,000	3.21	1.52	0.23	1	95% - water mister, 90% enclosure	99.5%	0.02	0.008	0.001	2000	0.917	yes
5	Scalping screen	screen	14,000,000	15.40	5.18	0.35	3	95% - water mister	95.0%	0.77	0.259	0.018	2000	4.400	yes
6	Rotary breaker	rotary breaker	14,000,000	8.40	3.78	0.70	3	95% - water mister	95.0%	0.42	0.189	0.035	2000	2.400	yes
7	Rotary breaker drop to breaker reject bunker	drop	420,000	0.096	0.046	0.007	1	95% - water mister	95.0%	0.005	0.002	0.0003	2000	0.917	yes
8	Breaker reject bunker	stockpile*													
9	Raw coal conveyor No. 4	conveyor	13,580,000	3.11	1.47	0.223	1	95% - water mister, 90% enclosure	99.5%	0.016	0.007	0.0011	2000	0.917	yes
10	No. 2 raw coal stacking tube	drop	6,790,000	1.56	0.74	0.111	1	95% - water mister	95.0%	0.078	0.037	0.006	2000	0.917	yes
11	No. 2 raw coal stockpile	stockpile*													
12	Raw coal stacking tube transfer conveyor	conveyor	6,790,000	1.56	0.74	0.111	1	95% - water mister, 90% enclosure	99.5%	0.008	0.004	0.0006	2000	0.917	yes
13	No. 1 raw coal stacking tube	drop	6,790,000	1.56	0.74	0.111	1	95% - water mister	95.0%	0.078	0.037	0.006	2000	0.917	yes
14	No. 1 raw coal stockpile	stockpile*													
15	Plany feed conveyor	conveyor	13,580,000	3.11	1.47	0.223	1	95% - water mister	95.0%	0.156	0.074	0.0111	2000	0.917	yes
16	Plant refuse collecting conveyor	conveyor	2,940,000	0.55	0.26	0.040	2	90% enclosure	90.0%	0.055	0.026	0.0040	500	0.188	no
17	Reject bunker	stockpile*													
18	Refuse truck bin mass flow gate/bin bypass to reject bunker	drop	2,940,000	0.554	0.262	0.040	2	90% enclosure	90.0%	0.0554	0.0262	0.0040	500	0.188	no
19	Stoker collecting conveyor	conveyor	300,000	0.057	0.027	0.004	2	90% enclosure	90.0%	0.0057	0.0027	0.00040	500	0.188	no
20	Stoker bin mass flow gate and weigh belt	drop	75,000	0.014	0.007	0.001	2	none	0.0%	0.0141	0.0067	0.0010	500	0.188	no
20a	Stoker Conveyor from stoker bin	conveyor	225,000	0.042	0.020	0.003	2	90% enclosure	90.0%	0.0042	0.002005	0.000304	500	0.188	no
20b	Stoker Conveyor # 2 from stoker bin	conveyor	225,000	0.042	0.020	0.003	2	90% enclosure	90.0%	0.0042	0.002005	0.000304	500	0.188	no
20c	Stoker Stockpile	stockpile*													
21	Plant clean coal conveyor	conveyor	9,220,000	1.74	0.82	0.124	2	90% enclosure	90.0%	0.1737	0.0822	0.0124	1600	0.6030	yes
22	No. 4 clean coal stacking tube	drop	4,610,000	0.87	0.41	0.062	2	none	0.0%	0.8687	0.4109	0.0622	1600	0.6030	yes
23	No. 4 clean coal stockpile	stockpile*													
24	Clean coal stacking tube transfer conveyor	conveyor	4,610,000	0.87	0.41	0.062	2	90% enclosure	90.0%	0.087	0.041	0.0062	1500	0.565	yes
25	No. 3 clean coal stacking tube	drop	4,610,000	0.87	0.41	0.062	2	none	0.0%	0.869	0.411	0.0622	1500	0.565	yes
26	No. 3 clean coal stockpile	stockpile*													
27	Clean coal loadout conveyor No. 1	conveyor	11,344,315	2.14	1.01	0.153	2	95% - water mister, 90% enclosure	99.5%	0.0107	0.0051	0.0008	4000	1.508	yes
28	Clean coal loadout conveyor No. 2	conveyor	10,883,315	2.05	0.97	0.147	2	95% - water mister, 90% enclosure	99.5%	0.0103	0.0048	0.0007	4000	1.508	yes
29	Train loadout hopper to train (inner and outer loops)	drop	10,883,315	2.05	0.97	0.147	2	95% - water mister	95.0%	0.1025	0.0485	0.0073	4000	1.508	yes
30	Industrial steam coal conveyor	conveyor	461,000	0.09	0.04	0.006	2	95% - water mister, 90% enclosure	99.5%	0.00043	0.00021	0.00003	4000	1.508	yes
31	Industrial steam coal stockpile	stockpile*													
Dry Crush Circuit															
32	Run of mine coal stockpile	stockpile*													

														326 IAC 6-3-2 Allowable Particulate Emission F		
Process/Vent ID	Description	Type of Emission Point	[1)] Maximum Annual Throughput (tons/year)	Uncontrolled PTE of PM (tons/year)	Uncontrolled PTE of PM10 (tons/year)	Uncontrolled PTE of PM2.5 (tons/year)	Source of Emission Factor *See chart above*	Type of Controls	Expected Overall Control Efficiency	Controlled PTE of PM (tons/year)	Controlled PTE of PM10 (tons/year)	Controlled PTE of PM2.5 (tons/year)	Maximum Process Weight Rate (tons/hour)	Maximum Hourly Emission Rate (lbs/hour)	Subject to 326 IAC 6-3?
33	Run of mine coal truck dump to feeder	drop	1,918,500	0.44	0.21	0.031	1	none	0.0%	0.4397	0.2079	0.0315	2000	0.917	yes
34	Feeder to run of mine conveyor	conveyor	1,918,500	0.44	0.21	0.031	1	none	0.0%	0.4397	0.2079	0.0315	2000	0.917	yes
35	Run of mine conveyor	conveyor	1,918,500	0.44	0.21	0.031	1	90% enclosure	90.0%	0.0440	0.0208	0.0031	2000	0.917	yes
36	Scalping screen	screen	1,918,500	2.11	0.71	0.05	3	none	0.0%	2.1104	0.7098	0.0480	2000	4.400	yes
37	Rotary breaker	rotary breaker	1,918,500	1.15	0.52	0.10	3	none	0.0%	1.1511	0.5180	0.0959	2000	2.400	yes
38	Breaker collecting conveyor	conveyor	1,899,315	0.4353	0.2059	0.0312	1	90% enclosure	90.0%	0.043526	0.020587	0.003117	2000	0.917	yes
39	Coarse coal conveyor	conveyor	19,185	0.0044	0.0021	0.0003	1	90% enclosure	90.0%	0.000440	0.000208	0.000031	2000	0.917	yes
40	Coarse coal stockpile	stockpile*													
41	Crusher	crusher	1,899,315	1.14	0.51	0.09	3	none	0.0%	1.1396	0.5128	0.0950	2000	2.400	yes
42A	Coarse coal conveyor to screen	conveyor	1,899,315	0.44	0.21	0.03	1	90% enclosure	90.0%	0.0435	0.0206	0.0031	400	0.183	no
42S	Scalping screen	screen	1,899,315	2.09	0.70	0.05	3	95% - water mister	95.0%	0.1045	0.0351	0.0024	400	0.880	yes
42B	Coarse coal conveyor from screen	conveyor	1,899,315	0.44	0.21	0.03	1	90% enclosure	90.0%	0.0435	0.0206	0.0031	400	0.183	no
42O	Oversized coal storage pile	stockpile*													
42	Dry crush coal conveyor	conveyor	1,899,315	0.44	0.21	0.031	1	90% enclosure	90.0%	0.0435	0.0206	0.0031	2000	0.917	yes
43	Dry crush coal stockpile	stockpile*													
Roadways															
56	Preparation plant and coal yard roads	roads*													
			Totals	**65.90**	**28.25**	**3.89**				**9.73**	**4.13**	**0.58**			

Rate
326 IAC 6-3-2 Allowable Particulate Emission Rate (lbs/hour)
86.904
86.904
86.904
86.904
86.904
86.904
86.904
86.904
86.904
86.904
86.904
86.904
86.904
NA
NA
NA
NA
NA
NA
83.827
83.827
82.951
82.951
96.959
96.959
96.959
96.959

Rate
326 IAC 6-3-2 Allowable Particulate Emission Rate (lbs/hour)
86.904
86.904
86.904
86.904
86.904
86.904
86.904
86.904
66.314
66.314
66.314
86.904

Attachment A: Emissions Calculations
Coal Preparation/Processing Plant Material Storage Piles (fugitive)

Company Name: Peabody Midwest Mining LLC - Bear Run Mine
Source Address: 7255 East CR 600 South, Carlisle, IN 47838
Minor Source Operating Permit No.: M153-35601-00011

The following calculations determine the amount of emissions created by wind erosion of storage stockpiles, based on 8,760 hours of use and USEPA's AP-42 (Pre 1983 Edition), Section 11.2.3.

Ef = 1.7*(s/1.5)*(365-p)/235*(f/15)
where Ef = emission factor (lb/acre/day)
s = silt content (wt %)
p = 125 days of rain greater than or equal to 0.01 inches
f = 15 % of wind greater than or equal to 12 mph

Material Storage Pile	Stockpile ID	Silt Content (wt %)*	Emission Factor (lb/acre/day)	Maximum Anticipated Pile Size (acres)**	Uncontrolled PTE of PM (tons/yr)	Uncontrolled PTE of PM10/PM2.5 (tons/yr)
Process Circuit breaker reject bunker (rock)***	8	1.6	1.85	0.01	0.003	0.001
Process Circuit No. 2 raw coal pile	11	6.2	7.18	1.50	1.964	0.688
Process Circuit No. 1 raw coal pile	14	6.2	7.18	1.50	1.964	0.688
Process Circuit reject bunker (rock)***	17	1.6	1.85	0.01	0.003	0.001
Stoker Coal Stockpile	20c	6.2	7.18	0.50	0.655	0.229
Process Circuit No. 4 clean coal pile****	23	2.2	2.55	1.50	0.697	0.244
Process Circuit No. 3 clean coal pile****	26	2.2	2.55	1.50	0.697	0.244
Dry Crush Circuit direct ship coal pile	43	6.2	7.18	0.40	0.524	0.183
Process Circuit industrial steam coal pile****	31	2.2	2.55	0.50	0.232	0.081
Dry Crush Circuit reject rock pile***	40	1.6	1.85	0.01	0.003	0.001
Oversized coal storage pile	42O	6.2	7.18	0.25	0.327	0.115
				Totals	**7.07**	**2.48**

Methodology
*Silt content values obtained from AP-42 Table 13.2.4-1 (dated 1/95)
**Maximum anticipated pile size (acres) provided by the source.
***Assuming reject material is similar to crushed limestone
****Assuming clean coal is similar to coal as received by power plant
Uncontrolled PTE of PM (tons/yr) = (Emission Factor (lb/acre/day)) * (Maximum Pile Size (acres)) * (ton/2000 lbs) * (8760 hours/yr)
Uncontrolled PTE of PM10/PM2.5 (tons/yr) = (Potential PM Emissions (tons/yr)) * 35%
Controlled PTE (tons/yr) = (Uncontrolled PTE (tons/yr)) * (1 - Dust Control Efficiency)

Abbreviations
PM = Particulate Matter
PM10 = Particulate Matter (<10 um)
PM2.5 = Particulate Matter (<2.5 um)
PM2.5 = PM10
PTE = Potential to Emit

Attachment A: Emissions Calculations
Coal Preparation/Processing Plant Unpaved Roads (fugitive)

Company Name: **Peabody Midwest Mining LLC - Bear Run Mine**
Source Address: **7255 East CR 600 South, Carlisle, IN 47838**
Minor Source Operating Permit No.: **M153-35601-00011**

Unpaved Roads at Industrial Site

The following calculations determine the amount of emissions created by unpaved roads, based on 8,760 hours of use and AP-42, Ch 13.2.2 (12/2003).

Maximum Raw Coal Receiving Capacity to plant =	14,000,000	tons/yr	
Maximum Material Handling Capacity by Front-end Loader =	3,500,000	tons/yr	(25% handled by front-end loaders; 75% directly dumped into process feeder bins)
Maximum Raw Coal Receiving Capacity to Dry Crush/Dry Stoker Circuits =	1,918,500		
Maximum Material Handling Capacity by Front-end Loader =	479,625	tons/yr	(25% handled by front-end loaders; 75% directly dumped into process feeder bins)

Process	Vehicle Type	Maximum Weight of Vehicle (tons)	Maximum Weight of Load (tons)	Maximum Weight of Vehicle and Load (tons/trip)	Maximum trips per year (trip/yr)	Total Weight driven per year (ton/yr)	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/yr)
Front-end Loader Full (Raw Coal Handling)	Front-end loader (3 CY)	105.0	24.0	129.0	145,833	18,812,500	150	0.028	4,143
Front-end Loader Empty (Raw Coal Handling)	Front-end loader (3 CY)	105.0	0	105.0	145,833	15,312,500	150	0.028	4,143
Front-end Loader Full (Dry Crush/Dry Stoker Circuits)	Front-end loader (3 CY)	105.0	24.0	129.0	19,984	2,577,984	256	0.048	969
Front-end Loader Empty (Dry Crush/Dry Stoker Circuits)	Front-end loader (3 CY)	105.0	0	105.0	19,984	2,098,359	256	0.048	969
Total					**331,635**	**38,801,344**			**10,224**

Average Vehicle Weight Per Trip =	117.0	tons/trip
Average Miles Per Trip =	0.031	miles/trip

Unmitigated Emission Factor, Ef = k*[(s/12)^a]*[(W/3)^b] (Equation 1a from AP-42 13.2.2)

	PM	PM10	PM2.5	
where k =	4.9	1.5	0.15	lb/mi = particle size multiplier (AP-42 Table 13.2.2-2 for Industrial Roads)
s =	5.1	5.1	5.1	% = mean % silt content of unpaved roads (AP-42 Table 13.2.2-1 Coal M
a =	0.7	0.9	0.9	= constant (AP-42 Table 13.2.2-2)
W =	117.0	117.0	117.0	tons = average vehicle weight (provided by source)
b =	0.45	0.45	0.45	= constant (AP-42 Table 13.2.2-2)

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor, Eext = E * [(365 - P)/365]
Mitigated Emission Factor, Eext = E * [(365 - P)/365]
where P = 125 days of rain greater than or equal to 0.01 inches (see Fig. 13.2.2-1)

	PM	PM10	PM2.5	
Unmitigated Emission Factor, Ef =	14.00	3.61	0.36	lb/mile
Mitigated Emission Factor, Eext =	9.20	2.37	0.24	lb/mile
Dust Control Efficiency =	50%	50%	50%	(pursuant to control measures outlined in fugitive dust control plan)

Process	Vehicle Type	Unmitigated PTE of PM (tons/yr)	Unmitigated PTE of PM10 (tons/yr)	Unmitigated PTE of PM2.5 (tons/yr)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM10 (tons/yr)	Mitigated PTE of PM2.5 (tons/yr)	Controlled PTE of PM (tons/yr)	Controlled PTE of PM10 (tons/yr)
Front-end Loader Full (Raw Coal Handling)	Front-end loader (3 CY)	29.00	7.48	0.75	19.07	4.92	0.49	9.53	2.46
Front-end Loader Empty (Raw Coal Handling)	Front-end loader (3 CY)	29.00	7.48	0.75	19.07	4.92	0.49	9.53	2.46
Front-end Loader Full (Dry Crush/Dry Stoker Circuits)	Front-end loader (3 CY)	6.78	1.75	0.17	4.46	1.15	0.12	2.23	0.58
Front-end Loader Empty (Dry Crush/Dry Stoker Circuits)	Front-end loader (3 CY)	6.78	1.75	0.17	4.46	1.15	0.12	2.23	0.58
	Totals	**71.55**	**18.46**	**1.85**	**47.05**	**12.14**	**1.21**	**23.52**	**6.07**

Methodology

Maximum Weight of Vehicle and Load (tons/trip) = [Maximum Weight of Vehicle (tons/trip)] + [Maximum Weight of Load (tons/trip)]
Maximum trips per year (trip/yr) = [Maximum Capacity (tons/yr)] / [Maximum Weight of Load (tons/trip)]
Total Weight driven per year (ton/yr) = [Maximum Weight of Vehicle and Load (tons/trip)] * [Maximum trips per year (trip/yr)]
Maximum one-way distance (mi/trip) = [Maximum one-way distance (feet/trip) / [5280 ft/mile]
Maximum one-way miles (miles/yr) = [Maximum trips per year (trip/yr)] * [Maximum one-way distance (mi/trip)]
Average Vehicle Weight Per Trip (ton/trip) = SUM[Total Weight driven per year (ton/yr)] / SUM[Maximum trips per year (trip/yr)]
Average Miles Per Trip (miles/trip) = SUM[Maximum one-way miles (miles/yr)] / SUM[Maximum trips per year (trip/yr)]
Unmitigated PTE (tons/yr) = (Maximum one-way miles (miles/yr)) * (Unmitigated Emission Factor (lb/mile)) * (ton/2000 lbs)
Mitigated PTE (tons/yr) = (Maximum one-way miles (miles/yr)) * (Mitigated Emission Factor (lb/mile)) * (ton/2000 lbs)
Controlled PTE (tons/yr) = (Mitigated PTE (tons/yr)) * (1 - Dust Control Efficiency)

Abbreviations

PM = Particulate Matter
PM10 = Particulate Matter
PM2.5 = Particulate Matter
PTE = Potential to Emit

Controlled PTE of PM2.5 (tons/yr)
0.25
0.25
0.06
0.06
0.61

(<10 um)
(<2.5 um)

Attachment A: Emissions Calculations
Coal Mining (fugitive)

Company Name: Peabody Midwest Mining LLC - Bear Run Mine
Source Address: 7255 East CR 600 South, Carlisle, IN 47838
Minor Source Operating Permit No.: M153-35601-00011

The following calculations determine the amount of emissions created by mining activities at the coal mine, based on 8,760 hours of use and USEPA's AP-42 Section 11.9 for Western Surface Coal Mining

Blasting Emission Factor

$Ef = 0.000014(A)^{1.5}$

where Ef = emission factor (lb/blast)

A = 30193 horizontal area (ft2), with blasting depth less than or equal to 70 ft

Ef = 73.4 lb/blast

Process	Maximum Capacity (for 8,760 hours/year)		PM Emission Factor	Scaling Factor for PM10	Scaling Factor for PM2.5	PTE of PM (tons/year)	PTE of PM10 (tons/year)
Drilling	84,453	holes/yr	1.3 lb/hole	0.52	0.03	54.89	28.55
Blasting	1,141	blasts/yr	73.4 lb/blast	0.52	0.03	41.91	21.79
Topsoil Removal	1,494,722	tons/yr	0.058 lb/ton	0.52	0.03	43.35	22.54
Loading Overburden (T/S)	92,316,979	tons/yr	0.037 lb/ton	0.52	0.03	1,707.86	888.09
Loading Overburden (D/L)	142,863,320	tons/yr	0.037 lb/ton	0.52	0.03	2,642.97	1,374.35
Unloading Overburden (T/S)	92,316,979	tons/yr	0.002 lb/ton	0.52	0.03	92.32	48.00
Unloading Overburden (D/L)	142,863,320	tons/yr	0.002 lb/ton	0.52	0.03	142.86	74.29
Loading Coal	15,918,500	tons/yr	0.028 lb/ton	0.52	0.03	222.86	115.89
					Total	**4,949.03**	**2,573.49**

Methodology
Uncontrolled PTE (tons/yr) = (Maximum Capacity (units/yr)) * (Emission Factor (lb/unit)) * (ton/2000 lbs)
Emission factors from AP-42 Section 11.9 for Western Surface Coal Mining
*Scaling Factors for PM10 and PM2.5 assumed equal to those for blasting

Abbreviations
PM = Particulate Matter
PM10 = Particulate Matter (<10 um)
PM2.5 = Particulate Matter (<2.5 um)
PM2.5 = PM10
PTE = Potential to Emit

PTE of PM2.5 (tons/year)
1.65
1.26
1.30
51.24
79.29
2.77
4.29
6.69
148.47

Attachment A: Emissions Calculations
Coal Mine Storage Piles (fugitive)

Company Name: **Peabody Midwest Mining LLC - Bear Run Mine**
Source Address: **7255 East CR 600 South, Carlisle, IN 47838**
Minor Source Operating Permit No.: **M153-35601-00011**

The following calculations determine the amount of emissions created by wind erosion of storage stockpiles, based on 8,760 hours of use and USEPA's AP-42 (Pre 1983 Edition), Section 11.2.3.

Ef = 1.7*(s/1.5)*(365-p)/235*(f/15)
where Ef = emission factor (lb/acre/day)
s = silt content (wt %)
p = 125 days of rain greater than or equal to 0.01 inches
f = 15 % of wind greater than or equal to 12 mph

Material Storage Pile	Silt Content (wt %)*	Emission Factor (lb/acre/day)	Maximum Anticipated Pile Size (acres)**	PTE of PM (tons/yr)	PTE of PM10/PM2.5 (tons/yr)
Topsoil and subsoil piles***	7.5	8.68	1.00	1.584	0.554
Overburden spoil piles	7.5	8.68	14.00	22.180	7.763
Raw coal piles	6.2	7.18	12.10	15.847	5.546
Process Circuit run of mine coal pile	6.2	7.18	4.40	5.762	2.017
Dry Crush Circuit & Dry Stoker Circuit run of mine coal pile	6.2	7.18	1.20	1.572	0.550
			Totals	**46.94**	**16.43**

Methodology
PTE of PM (tons/yr) = (Emission Factor (lb/acre/day)) * (Maximum Pile Size (acres)) * (ton/2000 lbs) * (8760 hours/yr)
PTE of PM10/PM2.5 (tons/yr) = (Potential PM Emissions (tons/yr)) * 35%
*Silt content values obtained from AP-42 Table 13.2.4-1 (dated 1/95)
**Maximum anticipated pile size (acres) provided by the source. Overburden spoils piles land area assumed to be 3000 ft long by 200 ft wide.
***Assuming topsoil and subsoil are similar to overburden

Abbreviations
PM = Particulate Matter
PM10 = Particulate Matter (<10 um)
PM2.5 = Particulate Matter (<2.5 um)
PM2.5 = PM10
PTE = Potential to Emit

Attachment A: Emissions Calculations
Coal Mine Unpaved Roads (fugitive)

Company Name: Peabody Midwest Mining LLC - Bear Run Mine
Source Address: 7255 East CR 600 South, Carlisle, IN 47838
Minor Source Operating Permit No.: M153-35601-00011

Unpaved Roads at Industrial Site

The following calculations determine the amount of emissions created by unpaved roads, based on 8,760 hours of use and AP-42, Ch 13.2.2 (12/2003).

		Anticipated Breakdown		
	North Pit and South Pit Combined	North Pit	South Pit	
		60.0%	40.0%	
Maximum Raw Coal Shipping Capacity =	14,000,000	8,400,000	5,600,000	tons/yr
Maximum Refuse Shipping Capacity by Truck =	3,360,000	2,016,000	1,344,000	
Maximum Raw Coal Shipping to Dry Crush/Dry Stoker Circuits =	1,918,500	1,151,100	767,400	
Maximum Overburden Transport Capacity =	92,316,979	55,390,187	36,926,792	tons/yr
Maximum Topsoil and Subsoil Transport Capacity =	1,494,722	896,833	597,889	tons/yr
Maximum Coal Shipping Capacity by Truck =	700,000	NA	NA	(5% of coal will be shipped by truck; 95% of coal will be shipped by rail)

Location	Process	Vehicle Type	Maximum Weight of Vehicle (tons)	Maximum Weight of Load (tons)	Maximum Weight of Vehicle and Load (tons/trip)	Maximum trips per year (trip/yr)	Total Weight driven per year (ton/yr)	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/yr)
North Pit	Coal Mine Truck Leave Full to Plant	Dump truck (200 ton load)	107.5	167.5	275.0	50,149	13,791,045	14,800	2.803	140,565
	Coal Mine Truck Enter Empty from Plant	Dump truck (200 ton load)	107.5	0	107.5	50,149	5,391,045	14,800	2.803	140,565
	Refuse Transport Truck Leave Empty to Plant	Dump truck (200 ton load)	107.5	0	107.5	12,036	1,293,851	3,776	0.715	8,607
	Refuse Transport Truck Enter Full from Plant	Dump truck (200 ton load)	107.5	167.5	275.0	12,036	3,309,851	17,521	3.318	39,939
	Coal Mine Truck Leave Full to Dry Crush/Dry Stoker Circuits	Dump truck (200 ton load)	107.5	167.5	275.0	6,872	1,889,866	13,735	2.601	17,877
	Coal Mine Truck Enter Empty from Dry Crush/Dry Stoker Circuits	Dump truck (200 ton load)	107.5	0	107.5	6,872	738,766	13,735	2.601	17,877
	Overburden Truck Leave Full	Dump truck (200 ton load)	150.0	240.0	390.0	230,792	90,009,054	2,000	0.379	87,421
	Overburden Truck Enter Empty	Dump truck (200 ton load)	150.0	0	150.0	230,792	34,618,867	2,000	0.379	87,421
	Topsoil and Subsoil Truck Leave Full	Dump truck (200 ton load)	150.0	240.0	390.0	3,737	1,457,354	3,000	0.568	2,123
	Topsoil and Subsoil Truck Enter Empty	Dump truck (200 ton load)	150.0	0	150.0	3,737	560,521	3,000	0.568	2,123
South Pit	Coal Mine Truck Leave Full to Plant	Dump truck (200 ton load)	107.5	167.5	275.0	33,433	9,194,030	25,772	4.881	163,185
	Coal Mine Truck Enter Empty from Plant	Dump truck (200 ton load)	107.5	0	107.5	33,433	3,594,030	25,772	4.881	163,185
	Refuse Transport Truck Leave Empty to Plant	Dump truck (200 ton load)	107.5	0	107.5	8,024	862,567	3,776	0.715	5,738
	Refuse Transport Truck Enter Full from Plant	Dump truck (200 ton load)	107.5	167.5	275.0	8,024	2,206,567	26,651	5.048	40,501
	Coal Mine Truck Leave Full to Dry Crush/Dry Stoker Circuits	Dump truck (200 ton load)	107.5	167.5	275.0	4,581	1,259,910	28,827	5.460	25,013
	Coal Mine Truck Enter Empty from Dry Crush/Dry Stoker Circuits	Dump truck (200 ton load)	107.5	0	107.5	4,581	492,510	28,827	5.460	25,013
	Overburden Truck Leave Full	Dump truck (240 ton load)	162.0	240.0	402.0	153,862	61,852,376	2,000	0.379	58,281
	Overburden Truck Enter Empty	Dump truck (240 ton load)	162.0	0	162.0	153,862	24,925,584	2,000	0.379	58,281
	Topsoil and Subsoil Truck Leave Full	Dump truck (240 ton load)	162.0	240.0	402.0	2,491	1,001,464	3,000	0.568	1,415
	Topsoil and Subsoil Truck Enter Empty	Dump truck (240 ton load)	162.0	0	162.0	2,491	403,575	3,000	0.568	1,415
		Total				**1,011,955**	**258,852,833**			**1,086,548**
Coal Shipping	Coal Transport Truck Leave Full	Freight Truck (6 axles)	15.0	40.0	55.0	17,500	962,500	834	0.158	2,764
	Coal Transport Truck Enter Empty	Freight Truck (6 axles)	15.0	0	15.0	17,500	262,500	272	0.052	902
		Total				**35,000**	**1,225,000**			**3,666**

Unmitigated Emission Factor, Ef = k*[(s/12)^a]*[(W/3)^b] (Equation 1a from AP-42 13.2.2)

	PM	PM10	PM2.5	
where k =	4.9	1.5	0.15	lb/mi = particle size multiplier (AP-42 Table 13.2.2-2 for Industrial Roads)
s =	5.1	5.1	5.1	% = mean % silt content of unpaved roads (AP-42 Table 13.2.2-1 Coal Mine Plant Road)
a =	0.7	0.9	0.9	= constant (AP-42 Table 13.2.2-2)
Average Mine Roads Vehicle Weight Per Trip (W) =	255.8	255.8	255.8	tons = average vehicle weight (provided by source)
Average Coal Shipping Vehicle Weight Per Trip (W) =	35.0	35.0	35.0	tons = average vehicle weight (provided by source)
b =	0.45	0.45	0.45	= constant (AP-42 Table 13.2.2-2)

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor, Eext = E * [(365 - P)/365]

Mitigated Emission Factor, Eext = E * [(365 - P)/365]

where P = 125 days of rain greater than or equal to 0.01 inches (see Fig. 13.2.2-1)

	PM	PM10	PM2.5	
Mine Roads Unmitigated Emission Factor, Ef =	19.90	5.13	0.51	lb/mile
Mine Roads Mitigated Emission Factor, Eext =	13.09	3.38	0.34	lb/mile
Coal Shipping Unmitigated Emission Factor, Ef =	8.13	2.10	0.21	lb/mile
Coal Shipping Mitigated Emission Factor, Eext =	5.35	1.38	0.14	lb/mile
Dust Control Efficiency =	50%	50%	50%	(pursuant to control measures outlined in fugitive dust control plan)

Location	Process	Vehicle Type	Unmitigated PTE of PM (tons/yr)	Unmitigated PTE of PM10 (tons/yr)	Unmitigated PTE of PM2.5 (tons/yr)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM10 (tons/yr)	Mitigated PTE of PM2.5 (tons/yr)	Controlled PTE of PM (tons/yr)	Controlled PTE of PM10 (tons/yr)
North Pit	Coal Mine Truck Leave Full to Plant	Dump truck (200 ton load)	1,398.82	360.86	36.09	919.77	237.28	23.73	459.89	118.64
	Coal Mine Truck Enter Empty from Plant	Dump truck (200 ton load)	1,398.82	360.86	36.09	919.77	237.28	23.73	459.89	118.64
	Refuse Transport Truck Leave Empty to Plant	Dump truck (200 ton load)	85.66	22.10	2.21	56.32	14.53	1.45	28.16	7.26
	Refuse Transport Truck Enter Full from Plant	Dump truck (200 ton load)	397.45	102.53	10.25	261.34	67.42	6.74	130.67	33.71
	Coal Mine Truck Leave Full to Dry Crush/Dry Stoker Circuits	Dump truck (200 ton load)	177.90	45.89	4.59	116.98	30.18	3.02	58.49	15.09
	Coal Mine Truck Enter Empty from Dry Crush/Dry Stoker Circuits	Dump truck (200 ton load)	177.90	45.89	4.59	116.98	30.18	3.02	58.49	15.09
	Overburden Truck Leave Full	Dump truck (200 ton load)	869.97	224.43	22.44	572.03	147.57	14.76	286.02	73.78
	Overburden Truck Enter Empty	Dump truck (200 ton load)	869.97	224.43	22.44	572.03	147.57	14.76	286.02	73.78
	Topsoil and Subsoil Truck Leave Full	Dump truck (200 ton load)	21.13	5.45	0.55	13.89	3.58	0.36	6.95	1.79
	Topsoil and Subsoil Truck Enter Empty	Dump truck (200 ton load)	21.13	5.45	0.55	13.89	3.58	0.36	6.95	1.79
South Pit	Coal Mine Truck Leave Full to Plant	Dump truck (200 ton load)	1,623.92	418.93	41.89	1,067.78	275.46	27.55	533.89	137.73
	Coal Mine Truck Enter Empty from Plant	Dump truck (200 ton load)	1,623.92	418.93	41.89	1,067.78	275.46	27.55	533.89	137.73
	Refuse Transport Truck Leave Empty to Plant	Dump truck (200 ton load)	57.10	14.73	1.47	37.55	9.69	0.97	18.77	4.84
	Refuse Transport Truck Enter Full from Plant	Dump truck (200 ton load)	403.04	103.97	10.40	265.01	68.37	6.84	132.51	34.18
	Coal Mine Truck Leave Full to Dry Crush/Dry Stoker Circuits	Dump truck (200 ton load)	248.92	64.21	6.42	163.67	42.22	4.22	81.84	21.11
	Coal Mine Truck Enter Empty from Dry Crush/Dry Stoker Circuits	Dump truck (200 ton load)	248.92	64.21	6.42	163.67	42.22	4.22	81.84	21.11
	Overburden Truck Leave Full	Dump truck (240 ton load)	579.98	149.62	14.96	381.36	98.38	9.84	190.68	49.19
	Overburden Truck Enter Empty	Dump truck (240 ton load)	579.98	149.62	14.96	381.36	98.38	9.84	190.68	49.19
	Topsoil and Subsoil Truck Leave Full	Dump truck (240 ton load)	14.09	3.63	0.36	9.26	2.39	0.24	4.63	1.19
	Topsoil and Subsoil Truck Enter Empty	Dump truck (240 ton load)	14.09	3.63	0.36	9.26	2.39	0.24	4.63	1.19
Coal Shipping	Coal Transport Truck Leave Full	Freight Truck (6 axles)	11.24	2.90	0.29	7.39	1.91	0.19	3.70	0.95
	Coal Transport Truck Enter Empty	Freight Truck (6 axles)	3.67	0.95	0.09	2.41	0.62	0.06	1.21	0.31
		Totals	**10,827.60**	**2,793.22**	**279.32**	**7,119.52**	**1,836.64**	**183.66**	**3,559.76**	**918.32**

Methodology

Maximum Weight of Vehicle and Load (tons/trip) = [Maximum Weight of Vehicle (tons/trip)] + [Maximum Weight of Load (tons/trip)]
Maximum trips per year (trip/yr) = [Maximum Capacity (tons/yr)] / [Maximum Weight of Load (tons/trip)]
Total Weight driven per year (ton/yr) = [Maximum Weight of Vehicle and Load (tons/trip)] * [Maximum trips per year (trip/yr)]
Maximum one-way distance (mi/trip) = [Maximum one-way distance (feet/trip) / [5280 ft/mile]
Maximum one-way miles (miles/yr) = [Maximum trips per year (trip/yr)] * [Maximum one-way distance (mi/trip)]
Average Vehicle Weight Per Trip (ton/trip) = SUM[Total Weight driven per year (ton/yr)] / SUM[Maximum trips per year (trip/yr)]
Average Miles Per Trip (miles/trip) = SUM[Maximum one-way miles (miles/yr)] / SUM[Maximum trips per year (trip/yr)]
Unmitigated PTE (tons/yr) = (Maximum one-way miles (miles/yr)) * (Unmitigated Emission Factor (lb/mile)) * (ton/2000 lbs)
Mitigated PTE (tons/yr) = (Maximum one-way miles (miles/yr)) * (Mitigated Emission Factor (lb/mile)) * (ton/2000 lbs)
Controlled PTE (tons/yr) = (Mitigated PTE (tons/yr)) * (1 - Dust Control Efficiency)

Abbreviations

PM = Particulate Matter
PM10 = Particulate Matter (<
PM2.5 = Particulate Matter (<
PTE = Potential to Emit

Controlled PTE of PM2.5 (tons/yr)
11.86
11.86
0.73
3.37
1.51
1.51
7.38
7.38
0.18
0.18
13.77
13.77
0.48
3.42
2.11
2.11
4.92
4.92
0.12
0.12
0.10
0.03
91.83

:10 um)
<2.5 um)

Attachment A: Emissions Calculations
Limestone Processing Crushing, Screening, and Transfer Points (fugitive)

Company Name: **Peabody Midwest Mining LLC - Bear Run Mine**
Source Address: **7255 East CR 600 South, Carlisle, IN 47838**
Minor Source Operating Permit No.: **M153-35601-00011**

	Unit	Unit Description	Throughput (tons)	Hours Operated	Rate (ton/hr)	Rate (lbs/hr)	Uncontrolled PM			Uncontrolled PM10/P	
							PM Emission Factor* (lb/ton)	Tons	Lb/Hr	PM10/PM2.5 Emission Factor* (lb/ton)	Tons
Liberty 3055B Jaw Crusher	44a	Grizzly Hopper	3,066,000	8,760	350	700,000	0.003	4.59900	1.05000	0.0011	1.68630
	44b	Crusher	3,066,000	8,760	350	700,000	0.0054	8.27820	1.89000	0.0024	3.67920
	44c	Product Conveyor	3,066,000	8,760	350	700,000	0.003	4.59900	1.05000	0.0011	1.68630
	44d	Side Conveyor	306,600	8,760	350	700,000	0.003	0.45990	0.10500	0.0011	0.16863
Guardian 6203-TH32 Screen	45a	Screen	3,066,000	8,760	350	700,000	0.025	38.32500	8.75000	0.0087	13.33710
	45b	Underbelly Conveyor (Finesize)	511,000	8,760	350	700,000	0.003	0.76650	0.17500	0.0011	0.28105
	45c	Underbelly Conveyor (Finesize)	511,000	8,760	350	700,000	0.003	0.76650	0.17500	0.0011	0.28105
	45d	Side Conveyor (Midsize)	511,000	8,760	350	700,000	0.003	0.76650	0.17500	0.0011	0.28105
	45e	Side Conveyor (Topsize)	511,000	8,760	350	700,000	0.003	0.76650	0.17500	0.0011	0.28105
Patriot P400 Cone Crusher	46a	Crusher	1,533,000	8,760	350	700,000	0.0054	4.13910	0.94500	0.0024	1.83960
	46b	Product Conveyor	1,533,000	8,760	350	700,000	0.003	2.29950	0.52500	0.0011	0.84315
Guardian 6203-TH32 Screen	47a	Screen	1,533,000	8,760	350	700,000	0.025	19.16250	4.37500	0.0087	6.66855
	47b	Underbelly Conveyor (Finesize)	511,000	8,760	350	700,000	0.003	0.76650	0.17500	0.0011	0.28105
	47c	Underbelly Conveyor (Finesize)	511,000	8,760	350	700,000	0.003	0.76650	0.17500	0.0011	0.28105
	47d	Side Conveyor (Midsize)	511,000	8,760	350	700,000	0.003	0.76650	0.17500	0.0011	0.28105
	47e	Side Conveyor (Oversize)	511,000	8,760	350	700,000	0.003	0.76650	0.17500	0.0011	0.28105
	48	Fixed Conveyor	3,066,000	8,760	350	700,000	0.003	4.59900	1.05000	0.0011	1.68630
	49	Fixed Conveyor	1,533,000	8,760	350	700,000	0.003	2.29950	0.52500	0.0011	0.84315
	50	Fixed Conveyor	1,533,000	8,760	350	700,000	0.003	2.29950	0.52500	0.0011	0.84315
	51	Fixed Conveyor	1,533,000	8,760	350	700,000	0.003	2.29950	0.52500	0.0011	0.84315
	52	Fixed Conveyor	1,533,000	8,760	350	700,000	0.003	2.29950	0.52500	0.0011	0.84315
		Total						**101.79**			**37.22**

* AP-42, 11.19.2 Table 11.19.2-2. No data for uncontrolled PM2.5 emission factors, so PM2.5 was conservatively estimated as PM10.

M2.5
Lb/Hr
0.38500
0.84000
0.38500
0.03850
3.04500
0.06417
0.06417
0.06417
0.06417
0.06417
0.42000
0.19250
1.52250
0.06417
0.06417
0.06417
0.06417
0.38500
0.19250
0.19250
0.19250
0.19250

Attachment A: Emissions Calculations
Limestone Processing Material Storage Piles (fugitive)

Company Name: Peabody Midwest Mining LLC - Bear Run Mine
Source Address: 7255 East CR 600 South, Carlisle, IN 47838
Minor Source Operating Permit No.: M153-35601-00011

The following calculations determine the amount of emissions created by wind erosion of storage stockpiles, based on 8,760 hours of use and USEPA's AP-42 (Pre 1983 Edition), Section 11.2.3.

Ef = 1.7*(s/1.5)*(365-p)/235*(f/15)
where Ef = emission factor (lb/acre/day)
s = silt content (wt %)
p = 125 days of rain greater than or equal to 0.01 inches
f = 15 % of wind greater than or equal to 12 mph

Material Storage Pile	Stockpile ID	Silt Content (wt %)*	Emission Factor (lb/acre/day)	Maximum Anticipated Pile Size (acres)**	Uncontrolled PTE of PM (tons/yr)	Uncontrolled PTE of PM10/PM2.5 (tons/yr)
Raw Rock	53a	1.0	1.16	2.40	0.507	0.177
Lime	53b	3.9	4.51	0.50	0.412	0.144
2s	53c	1.6	1.85	0.50	0.169	0.059
8s	53d	1.6	1.85	1.10	0.372	0.130
53s	53e	1.6	1.85	1.10	0.372	0.130
Rip Rap	53f	1.6	1.85	0.40	0.135	0.047
11s	53g	1.6	1.85	0.20	0.068	0.024
			Totals		**2.03**	**0.71**

Methodology
*Silt content values obtained from AP-42 Table 13.2.4-1 (dated 1/95)
**Maximum anticipated pile size (acres) provided by the source.
Uncontrolled PTE of PM (tons/yr) = (Emission Factor (lb/acre/day)) * (Maximum Pile Size (acres)) * (ton/2000 lbs) * (8760 hours/yr)
Uncontrolled PTE of PM10/PM2.5 (tons/yr) = (Potential PM Emissions (tons/yr)) * 35%
Controlled PTE (tons/yr) = (Uncontrolled PTE (tons/yr)) * (1 - Dust Control Efficiency)

Abbreviations
PM = Particulate Matter
PM10 = Particulate Matter (<10 um)
PM2.5 = Particulate Matter (<2.5 um)
PM2.5 = PM10
PTE = Potential to Emit

Attachment A: Emissions Calculations
Limestone Processing Unpaved Roads (fugitive)

Company Name: **Peabody Midwest Mining LLC - Bear Run Mine**
Source Address: **7255 East CR 600 South, Carlisle, IN 47838**
Minor Source Operating Permit No.: **M153-35601-00011**

Unpaved Roads at Industrial Site

The following calculations determine the amount of emissions created by unpaved roads, based on 8,760 hours of use and AP-42, Ch 13.2.2 (12/2003).

Maximum Limestone Receiving Capacity to Plant from North =	1,533,000	tons/yr	
Maximum Limestone Receiving Capacity to Plant from South =	1,533,000	tons/yr	
Maximum Material Handling Capacity by Front-end Loader =	6,132,000	tons/yr	(load to crusher and load to freight trucks)
Maximum Limestone Shipping Capacity by Truck =	3,066,000	tons/yr	

Process	Vehicle Type	Maximum Weight of Vehicle (tons)	Maximum Weight of Load (tons)	Maximum Weight of Vehicle and Load (tons/trip)	Maximum trips per year (trip/yr)	Total Weight driven per year (ton/yr)	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/yr)
Limestone Truck to Plant Enter Full from North (Mine Roads)	Dump truck (240 ton load)	162.0	240.0	402.0	6,388	2,567,775	14,712	2.786	17,798
Limestone Truck Leave Plant Empty to North (Mine Roads)	Dump truck (240 ton load)	162.0	0	162.0	6,388	1,034,775	14,712	2.786	17,798
Limestone Truck to Plant Enter Full from South (Mine Roads)	Dump truck (240 ton load)	162.0	240.0	402.0	6,388	2,567,775	29,804	5.645	36,056
Limestone Truck Leave Plant Empty to South (Mine Roads)	Dump truck (240 ton load)	162.0	0	162.0	6,388	1,034,775	29,804	5.645	36,056
Front-end Loader Full (Within Preparation Area)	Front-end loader (3 CY)	105.0	24.0	129.0	255,500	32,959,500	150	0.028	7,259
Front-end Loader Empty (Within Preparation Area)	Front-end loader (3 CY)	105.0	0	105.0	255,500	26,827,500	150	0.028	7,259
Limestone Transport Truck Leave Full (Road To Scale)	Freight Truck (3 axles)	14.0	25.0	39.0	122,640	4,782,960	2,593	0.491	60,228
Limestone Transport Truck Enter Empty (Road to Scale)	Freight Truck (3 axles)	14.0	0	14.0	122,640	1,716,960	2,593	0.491	60,228
Total					**781,830**	**73,492,020**			**242,680**

Unmitigated Emission Factor, Ef = k*[(s/12)^a]*[(W/3)^b] (Equation 1a from AP-42 13.2.2)

	PM	PM10	PM2.5	
where k =	4.9	1.5	0.15	lb/mi = particle size multiplier (AP-42 Table 13.2.2-2 for Industrial Roads)
s =	5.1	5.1	5.1	% = mean % silt content of unpaved roads (AP-42 Table 13.2.2-1 Coal Mine Plant Road)
a =	0.7	0.9	0.9	= constant (AP-42 Table 13.2.2-2)
Average Mine Roads Vehicle Weight Per Trip (W) =	282.0	282.0	282.0	tons = average vehicle weight (provided by source)
Average Front-end Loader Vehicle Weight Per Trip (W) =	117.0	117.0	117.0	tons = average vehicle weight (provided by source)
Average Road to Scale Vehicle Weight Per Trip (W) =	26.5	26.5	26.5	tons = average vehicle weight (provided by source)
b =	0.45	0.45	0.45	= constant (AP-42 Table 13.2.2-2)

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor, Eext = E * [(365 - P)/365]
Mitigated Emission Factor, Eext = E * [(365 - P)/365]
where P = 125 days of rain greater than or equal to 0.01 inches (see Fig. 13.2.2-1)

	PM	PM10	PM2.5	
Mine Roads Unmitigated Emission Factor, Ef =	20.80	5.36	0.54	lb/mile
Mine Roads Mitigated Emission Factor, Eext =	13.67	3.53	0.35	lb/mile
Front-end Loader Unmitigated Emission Factor, Ef =	14.00	3.61	0.36	lb/mile
Front-end Loader Mitigated Emission Factor, Eext =	9.20	2.37	0.24	lb/mile
Road to Scale Unmitigated Emission Factor, Ef =	7.18	1.85	0.19	lb/mile
Road to Scale Mitigated Emission Factor, Eext =	4.72	1.22	0.12	lb/mile

Dust Control Efficiency = 50% 50% 50% (pursuant to control measures outlined in fugitive dust control plan)

Road Segment	Vehicle Type	Unmitigated PTE of PM (tons/yr)	Unmitigated PTE of PM10 (tons/yr)	Unmitigated PTE of PM2.5 (tons/yr)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM10 (tons/yr)	Mitigated PTE of PM2.5 (tons/yr)	Controlled PTE of PM (tons/yr)	Controlled PTE of PM10 (tons/yr)	Controlled PTE of PM2.5 (tons/yr)
North Mine Road	Dump truck (240 ton load)	370.12	95.48	9.55	243.37	62.78	6.28	121.68	31.39	3.14
South Mine Road	Dump truck (240 ton load)	749.80	193.43	19.34	493.02	127.19	12.72	246.51	63.59	6.36
Preparation Area Loader Traffic	Front-end loader (3 CY)	101.60	26.21	2.62	66.81	17.23	1.72	33.40	8.62	0.86
Road to Scale	Freight Truck (3 axles)	432.14	111.48	11.15	284.15	73.30	7.33	142.07	36.65	3.67
	Totals	**1653.67**	**426.60**	**42.66**	**1087.34**	**280.50**	**28.05**	**543.67**	**140.25**	**14.03**

Methodology

Maximum Weight of Vehicle and Load (tons/trip) = [Maximum Weight of Vehicle (tons/trip)] + [Maximum Weight of Load (tons/trip)]
Maximum trips per year (trip/yr) = [Maximum Capacity (tons/yr)] / [Maximum Weight of Load (tons/trip)]
Total Weight driven per year (ton/yr) = [Maximum Weight of Vehicle and Load (tons/trip)] * [Maximum trips per year (trip/yr)]
Maximum one-way distance (mi/trip) = [Maximum one-way distance (feet/trip) / [5280 ft/mile]
Maximum one-way miles (miles/yr) = [Maximum trips per year (trip/yr)] * [Maximum one-way distance (mi/trip)]
Average Vehicle Weight Per Trip (ton/trip) = SUM[Total Weight driven per year (ton/yr)] / SUM[Maximum trips per year (trip/yr)]
Average Miles Per Trip (miles/trip) = SUM[Maximum one-way miles (miles/yr)] / SUM[Maximum trips per year (trip/yr)]
Unmitigated PTE (tons/yr) = (Maximum one-way miles (miles/yr)) * (Unmitigated Emission Factor (lb/mile)) * (ton/2000 lbs)
Mitigated PTE (tons/yr) = (Maximum one-way miles (miles/yr)) * (Mitigated Emission Factor (lb/mile)) * (ton/2000 lbs)
Controlled PTE (tons/yr) = (Mitigated PTE (tons/yr)) * (1 - Dust Control Efficiency)

Abbreviations

PM = Particulate Matter
PM10 = Particulate Matter (<10 um)
PM2.5 = Particulate Matter (<2.5 um)
PTE = Potential to Emit

From:	Belt, Andrew T
To:	Risner, Karen M.
Cc:	Boswell, James
Subject:	Applicant Review for MSOP AA No.: 153-47966-00011 for Peabody Midwest Mining LLC - Bear Run Mine
Date:	Monday, July 1, 2024 8:12:00 AM
Attachments:	47966calcs.xlsx 47966let.docx 47966per.docx 47966tsd.docx image002.png
Importance:	High

Karen:

Attached please find the draft MSOP AA and supporting documents for review. As a courtesy, this draft is being provided to you for an opportunity to review and provide comments prior to the issuance of the permit approval.

The time clock for MSOP AA No.: 153-47966-00011 will be stopped during your review until you either provide comments or indicate that you do not have any comments. Due to permit accountability and IDEM's intention to issue the permit in a timely manner, you are being allotted one (1) week to provide comments in writing. If you have any conflicts or special circumstances that would impede your review process during the time allotted, please notify me directly at the email address or phone number listed below as soon as possible. If you have not responded on or before **July 8, 2024**, IDEM will assume that you have no comments pertaining to this draft and all files will be forwarded for issuance.

During this review period, I will be available to address your concerns, answer any questions that you may have, or make necessary revisions to this draft.

Pursuant to 326 IAC 2-1.1-7, the fee for this permitting action is expected to be $0, which is based on the following:

$0	MSOP Administrative Amendment

Please note: This is not a bill. This represents the anticipated fee and is subject to change if additional review is required or the permit level changes for some reason (e.g. an additional NESHAP review is required). You will receive a final bill from the OAQ Permits Administration and Support Section.

Sincerely,

Andrew "Andy" Belt
Senior Environmental Manager 1
Office of Air Quality, Permits Branch
Indiana Department of Environmental Management
(317) 232-3217 • ABelt@idem.in.gov

From: Belt, Andrew T
To: Risner, Karen M.
Cc: Boswell, James
Subject: RE: Applicant Review for MSOP AA No.: 153-47966-00011 for Peabody Midwest Mining LLC - Bear Run Mine
Date: Monday, July 1, 2024 2:50:00 PM
Attachments: 47966per.docx
47966tsd.docx
image002.png

Karen,

Attached are the updated draft permit and TSD documents.

Thanks,

Andy

Andrew "Andy" Belt
Senior Environmental Manager 1
Office of Air Quality, Permits Branch
Indiana Department of Environmental Management
(317) 232-3217 • ABelt@idem.in.gov

From: Risner, Karen M. <KRisner@peabodyenergy.com>
Sent: Monday, July 1, 2024 12:30 PM
To: Belt, Andrew T <ABelt@idem.IN.gov>
Cc: Boswell, James <JBoswell@peabodyenergy.com>
Subject: RE: Applicant Review for MSOP AA No.: 153-47966-00011 for Peabody Midwest Mining LLC - Bear Run Mine

---

Andy,

We have the following comments on the MSOP AA and supporting documents. Can you please review the comments and call our office when you have time? We have some general questions about how IDEM handles emission changes on Administrative Amendments.

1. Calcs – Should the first table on the modification summary be all zeros? What is it summarizing?
2. Cover Letter – The amendment issued on 5/15/24 is not mentioned in the first paragraph of the cover letter.
3. MSOP Page 4 – update phone number to 812-922-1048 (Karen Risner's direct office number).
4. MSOP Page 9 and 28 – unit 45d is listed twice
5. MSOP Pages 9 and 28 – Units 46a and 46b have a rate of 350 not 352
6. MSOP Page 36 – update with new emission units to match pages 9 and 28.
7. TSD – Should the table on page 8 reflect the lowered emissions after the amendment? It still shows the emissions from the original limestone approval.
8. TSD Page 12 – unit 45d is listed twice and units 46a and 46b should have a rate of 350 not 352.
9. TSD Page 15 and 18 - units 46a and 46b should have a rate of 350 not 352.

Thank you,

Karen Risner

From: Belt, Andrew T <ABelt@idem.IN.gov>
Sent: Monday, July 1, 2024 7:12 AM
To: Risner, Karen M. <KRisner@peabodyenergy.com>
Cc: Boswell, James <JBoswell@peabodyenergy.com>
Subject: Applicant Review for MSOP AA No.: 153-47966-00011 for Peabody Midwest Mining LLC - Bear Run Mine
Importance: High

Karen:

Attached please find the draft MSOP AA and supporting documents for review. As a courtesy, this draft is being provided to you for an opportunity to review and provide comments prior to the issuance of the permit approval.

The time clock for MSOP AA No.: 153-47966-00011 will be stopped during your review until you either provide comments or indicate that you do not have any comments. Due to permit accountability and IDEM's intention to issue the permit in a timely manner, you are being allotted one (1) week to provide comments in writing. If you have any conflicts or special circumstances that would impede your review process during the time allotted, please notify me directly at the email address or phone number listed below as soon as possible. If you have not responded on or before **July 8, 2024**, IDEM will assume that you have no comments pertaining to this draft and all files will be forwarded for issuance.

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Senior Environmental Manager 1
Office of Air Quality, Permits Branch
Indiana Department of Environmental Management
(317) 232-3217 • ABelt@idem.in.gov

From:	Belt, Andrew T
To:	Risner, Karen M.
Cc:	Boswell, James
Subject:	RE: Applicant Review for MSOP AA No.: 153-47966-00011 for Peabody Midwest Mining LLC - Bear Run Mine
Date:	Monday, July 1, 2024 3:45:00 PM
Attachments:	47966per.docx 47966tsd.docx image002.png

Andrew "Andy" Belt
Senior Environmental Manager 1
Office of Air Quality, Permits Branch
Indiana Department of Environmental Management
(317) 232-3217 • ABelt@idem.in.gov

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Sent: Monday, July 1, 2024 3:25 PM
To: Belt, Andrew T <ABelt@idem.IN.gov>
Cc: Boswell, James <JBoswell@peabodyenergy.com>
Subject: RE: Applicant Review for MSOP AA No.: 153-47966-00011 for Peabody Midwest Mining LLC - Bear Run Mine

---

Andy,

Just a couple more minor revisions:

MSOP page 9 & 36 – 45e is topsize side conveyor
MSOP page 29 – Units 44a, 44b, 44c and 44d are missing from the table. Unit 45e should be topsize side conveyor and unit 45f does not exist, delete.
TSD page 4, 14 & 18 – 45e is topsize side conveyor
TSD page 17 – Unit 45e should be topsize side conveyor and unit 45f does not exist, delete.

Can you please make those changes and send back to me for one more final review?

Thank you,
Karen

From: Belt, Andrew T <ABelt@idem.IN.gov>
Sent: Monday, July 1, 2024 1:50 PM
To: Risner, Karen M. <KRisner@peabodyenergy.com>
Cc: Boswell, James <JBoswell@peabodyenergy.com>
Subject: RE: Applicant Review for MSOP AA No.: 153-47966-00011 for Peabody Midwest Mining LLC - Bear Run Mine

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Thanks,

Andy

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Office of Air Quality, Permits Branch
Indiana Department of Environmental Management
(317) 232-3217 • ABelt@idem.in.gov

From: Risner, Karen M. <KRisner@peabodyenergy.com>
Sent: Monday, July 1, 2024 12:30 PM
To: Belt, Andrew T <ABelt@idem.IN.gov>
Cc: Boswell, James <JBoswell@peabodyenergy.com>
Subject: RE: Applicant Review for MSOP AA No.: 153-47966-00011 for Peabody Midwest Mining LLC - Bear Run Mine

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Karen Risner

From: Belt, Andrew T <ABelt@idem.IN.gov>
Sent: Monday, July 1, 2024 7:12 AM
To: Risner, Karen M. <KRisner@peabodyenergy.com>

Cc: Boswell, James <JBoswell@peabodyenergy.com>
Subject: Applicant Review for MSOP AA No.: 153-47966-00011 for Peabody Midwest Mining LLC - Bear Run Mine
Importance: High

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Sincerely,

Andrew "Andy" Belt
Senior Environmental Manager 1
Office of Air Quality, Permits Branch
Indiana Department of Environmental Management
(317) 232-3217 • ABelt@idem.in.gov

From: Boswell, James
To: Belt, Andrew T; Risner, Karen M.
Subject: RE: Applicant Review for MSOP AA No.: 153-47966-00011 for Peabody Midwest Mining LLC - Bear Run Mine
Date: Monday, July 1, 2024 6:12:10 PM
Attachments: image004.png

Mr. Belt, we have no further comments on the Draft Permit, TSD, Letter, or Calculations. Thank you for the opportunity to review and provide input.

Jimmy Boswell, LPG
Director Environmental, Regulatory & Permitting
Peabody
Wild Boar Mine | 566 Dickeyville Rd. | Lynnville, IN 47619
Office Phone: (812) 922-1044 | Cell: (928) 637-5031
jboswell@peabodyenergy.com

From: Belt, Andrew T <ABelt@idem.IN.gov>
Sent: Monday, July 1, 2024 2:46 PM
To: Risner, Karen M. <KRisner@peabodyenergy.com>
Cc: Boswell, James <JBoswell@peabodyenergy.com>
Subject: RE: Applicant Review for MSOP AA No.: 153-47966-00011 for Peabody Midwest Mining LLC - Bear Run Mine

Andrew "Andy" Belt
Senior Environmental Manager 1
Office of Air Quality, Permits Branch
Indiana Department of Environmental Management
(317) 232-3217 • ABelt@idem.in.gov

From: Risner, Karen M. <KRisner@peabodyenergy.com>
Sent: Monday, July 1, 2024 3:25 PM
To: Belt, Andrew T <ABelt@idem.IN.gov>
Cc: Boswell, James <JBoswell@peabodyenergy.com>
Subject: RE: Applicant Review for MSOP AA No.: 153-47966-00011 for Peabody Midwest Mining LLC - Bear Run Mine

Andy,

Just a couple more minor revisions:

MSOP page 9 & 36 – 45e is topsize side conveyor
MSOP page 29 – Units 44a, 44b, 44c and 44d are missing from the table. Unit 45e should be topsize side conveyor and unit 45f does not exist, delete.
TSD page 4, 14 & 18 – 45e is topsize side conveyor
TSD page 17 – Unit 45e should be topsize side conveyor and unit 45f does not exist, delete.

Can you please make those changes and send back to me for one more final review?

Thank you,
Karen

From: Belt, Andrew T <ABelt@idem.IN.gov>
Sent: Monday, July 1, 2024 1:50 PM
To: Risner, Karen M. <KRisner@peabodyenergy.com>
Cc: Boswell, James <JBoswell@peabodyenergy.com>
Subject: RE: Applicant Review for MSOP AA No.: 153-47966-00011 for Peabody Midwest Mining LLC - Bear Run Mine

Karen,

Attached are the updated draft permit and TSD documents.

Thanks,

Andy

Andrew "Andy" Belt
Senior Environmental Manager 1
Office of Air Quality, Permits Branch
Indiana Department of Environmental Management
(317) 232-3217 • ABelt@idem.in.gov

From: Risner, Karen M. <KRisner@peabodyenergy.com>
Sent: Monday, July 1, 2024 12:30 PM
To: Belt, Andrew T <ABelt@idem.IN.gov>
Cc: Boswell, James <JBoswell@peabodyenergy.com>
Subject: RE: Applicant Review for MSOP AA No.: 153-47966-00011 for Peabody Midwest Mining LLC - Bear Run Mine

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Andy,

We have the following comments on the MSOP AA and supporting documents. Can you please review the comments and call our office when you have time? We have some general questions about how IDEM handles emission changes on Administrative Amendments.

1. Calcs – Should the first table on the modification summary be all zeros? What is it summarizing?
2. Cover Letter – The amendment issued on 5/15/24 is not mentioned in the first paragraph of the cover letter.
3. MSOP Page 4 – update phone number to 812-922-1048 (Karen Risner's direct office number).
4. MSOP Page 9 and 28 – unit 45d is listed twice
5. MSOP Pages 9 and 28 – Units 46a and 46b have a rate of 350 not 352
6. MSOP Page 36 – update with new emission units to match pages 9 and 28.
7. TSD – Should the table on page 8 reflect the lowered emissions after the amendment? It still shows the emissions from the original limestone approval.
8. TSD Page 12 – unit 45d is listed twice and units 46a and 46b should have a rate of 350 not 352.
9. TSD Page 15 and 18 - units 46a and 46b should have a rate of 350 not 352.

Thank you,

Karen Risner

From: Belt, Andrew T <ABelt@idem.IN.gov>
Sent: Monday, July 1, 2024 7:12 AM
To: Risner, Karen M. <KRisner@peabodyenergy.com>
Cc: Boswell, James <JBoswell@peabodyenergy.com>
Subject: Applicant Review for MSOP AA No.: 153-47966-00011 for Peabody Midwest Mining LLC - Bear Run Mine
Importance: High

Karen:

Attached please find the draft MSOP AA and supporting documents for review. As a courtesy, this draft is being provided to you for an opportunity to review and provide comments prior to the issuance of the permit approval.

The time clock for MSOP AA No.: 153-47966-00011 will be stopped during your review until you either provide comments or indicate that you do not have any comments. Due to permit accountability and IDEM's intention to issue the permit in a timely manner, you are being allotted one (1) week to provide comments in writing. If you have any conflicts or special circumstances that would impede your review process during the time allotted, please notify me directly at the email address or phone number listed below as soon as possible. If you have not responded on or before **July 8, 2024**, IDEM will assume that you have no comments pertaining to this draft and all files will be forwarded for issuance.

During this review period, I will be available to address your concerns, answer any questions that you may have, or make necessary revisions to this draft.

Pursuant to 326 IAC 2-1.1-7, the fee for this permitting action is expected to be $0, which is based on the following:

$0	MSOP Administrative Amendment

Please note: This is not a bill. This represents the anticipated fee and is subject to change if additional review is required or the permit level changes for some reason (e.g. an additional NESHAP review is required). You will receive a final bill from the OAQ Permits Administration and Support Section.

Sincerely,

Andrew "Andy" Belt
Senior Environmental Manager 1
Office of Air Quality, Permits Branch
Indiana Department of Environmental Management
(317) 232-3217 • ABelt@idem.in.gov

BILLING WORKSHEET

MSOP, Registration, Exemptions

For Applications Received On and After October 1, 2019

Permit #:	153-47966-00011
Permit Reviewer:	Andy Belt
Application Received Date:	6/17/2024

Instructions: Permit Reviewers will fill out yellow-highlighted cells (as necessary) and check the appropriate box or fill in the number of reviews. The total fee will be calculated at the bottom and transferred to the billing amount on the first page. Permit Reviewers will change the bottom worksheet tab color to yellow to indicate the permit billing worksheet that was filled out. PASS staff will fill out the green-highlighted cells (as necessary).

Note: See "Transition scenarios - permits and fees" document located in SharePoint for more information on handling transition permits and associated fees.

MSOP Fees			
☐		$100	MSOP
☐		$600	MSOP w/NSR (120)*
☐		$3,500	MSOP w/NSR (120)*
☐		$600	MSOP Min Permit Revision (45)
☐		$100	MSOP Renewal
☐		$600	MSOP Renewal / Minor NSR (120)*
☐		$3,500	MSOP Renewal / Sig NSR (120)*
☐		$3,500	MSOP NSC (Minor PSD/EO) (120)
☐		$6,000	MSOP NSC (Major PSD/EO) (270)
☐		$3,500	MSOP SPR (Minor PSD/EO) (120)
☐		$6,000	MSOP SPR (Major PSD/EO) (270)
☐		$100	MSOP Relocation

** Bill $600 when the permit includes a modification (new or modified equipment) at MPR levels. Bill $3500 when the permit includes a modification (new or modified equipment) at SPR levels.*

Registration Fees			
☐		$600	Registration – (New Source subject to 326 IAC 2-5.1-2)
☐		$100	Registration Relocation
☐		$600	Registration Revision and Re-Registration – (Existing Sources subject to 326 IAC 2-5.5)

Exemption Fees			
☐		$100	Exemption

NSPS / NESHAP / 326 IAC 8-1-6 BACT / 326 IAC 2-4.1 MACT Review			
Number of Reviews	Total Fee	Fee	*See "NSPS-NESHAP-BACT Billing Info" document for instructions.*
		$500	for each review for an applicable NSPS
		$500	for each review for an applicable NESHAP
		$600	times each 326 IAC 8-1-6 BACT and each 326 IAC 2-4.1 MACT

For each best available control technology (BACT) analysis for VOC under 326 IAC 8-1-6 and for each maximum achievable control technology (MACT) under 326 IAC 2-4.1. [326 IAC 2-1.1-7(m)(5)]

Other Fees			
☐		$500	Interim – Any type
☐		$500	Public Hearing

$0 **Total Applicable Fee**

OAQ Permits Branch Invoice Worksheet

Instructions: Permit Reviewers will fill out yellow-highlighted cells (as necessary). Permit Reviewers will change the bottom worksheet tab color to yellow to indicate the permit billing worksheet that was filled out. PASS staff will fill out the green-highlighted cells (as necessary).

Source Name: Peabody Midwest Mining LLC - Bear Run Mine

TEMPO AI: 100781

Permit #: 153-47966-00011

CST #:

Credit for permit fees: $

Credit Received Date:

Note: IDEM's accounting office requires that fee bills or refunds, be sent to the accounts Department at the billing address listed on application. If a courtesy copy is needed, please indicate at the bottom of this page.

Permit Reviewer please indicate applicable fees on page #2. Total will carry over to this page.

Total Due: $ $0

Total Credit: $ $0

Total Permitting Fees Applicable: $ $0

Total Refund Due: $

Reason for Refund:

Adjustments to Applicable Fees: $

Explanation of adjustments:

A courtesy copy of the billing has been requested by the applicant, please send to:

Name/Title:

Address:

Permit Reviewer: Andy Belt

Date: 7/2/2024