west virginia department of environmental protection

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RESPONSE TO COMMENTS

W-L Construction & Paving, Inc.

Millville, Jefferson County, West Virginia

Permit Application Number: G20-C041

Facility Identification Number 037-00013

Date: November 16, 2023

The following is the Division of Air Quality's (WV DAQ) response to comments regarding Permit Application G20-C041 for W-L Construction & Paving's Millville HMA Plant that were received between August 9, 2023, and October 2, 2023, which include oral comments made during the virtual public meeting held on September 21, 2023.

Pursuant to §45-13-8.8, all submitted comments received during the public comment period have been reviewed and are addressed in this document.

ORGANIZATION OF COMMENT RESPONSE

The DAQ's response to the submitted comments includes both a general and specific response section. The general response defines issues over which the DAQ has authority and by contrast, identifies those issues that are beyond the purview of the DAQ. The general response also describes the statutory basis for the issuance/denial of a permit, DAQ Compliance/Enforcement Procedures, details the current status of the ambient air quality of Jefferson County and how that is determined, and discusses the minor source determination. The specific response summarizes each relevant non-general comment/question that falls within the purview of the DAQ and provides a response to it (if it requires a response). Due to the size and number of the comments, this document may not reproduce all the comments here verbatim and instead each comment may, where appropriate, be summarized. The DAQ makes no claim that the summaries are complete; they are provided only to place the responses in a proper context. For a complete understanding of submitted comments, please see the original documents in the file. Both the written comments and a recording of the public meeting are available on the DAQ (AX) database at a link (with instructions) located on the following page:

https://dep.wv.gov/daq/permitting/Pages/NSR-Permit-Applications.aspx

The DAQ responses, however, are directed to the entire comments and not just to what is summarized. Comments that are not directly identified and responded to in the specific response section of this document are assumed to be answered under the general response section (or not relevant to the W-L permit application or an air quality-related issue).

Statutory Authority of the DAQ

The statutory authority of the DAQ is given under the Air Pollution Control Act (APCA) West Virginia Code §22-5-1, et. seq. - which states, under §22-5-1 ("Declaration of policy and purpose"), that:

"It is hereby declared the public policy of this state and the purpose of this article to achieve and maintain such levels of air quality **as will** [underlining and emphasis added] protect human health and safety, and to the greatest degree practicable, prevent injury to plant and animal life and property, foster the comfort and convenience of the people, promote the

economic and social development of this state and facilitate the enjoyment of the natural attractions of this state."

Therefore, while the code states that the intent of the rule includes the criteria outlined in the latter part of the above sentence, it is clear by the underlined and bolded section of the above sentence that the scope of the delegated authority does not extend beyond the impact of air quality on these criteria. Based on the language under §22-5-1, et. seq., the DAQ, in making determinations on issuance or denial of permits under WV Legislative Rule 45CSR13 (Rule 13), does not take into consideration substantive non-air quality issues such as job creation, economic viability of proposed projects, strategic energy issues, non-air quality environmental impacts, nuisance issues, etc.

Statutory Basis for Permit Denial

The basis for issuance or denial of an air quality permit is given under 45CSR13 - "Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Administrative Updates, Temporary Permits, General Permits, and Procedures for Evaluation." Pursuant to §45-13-5.7, the DAQ shall issue a permit unless:

> "a determination is made that the proposed construction, modification, registration or relocation will violate applicable emission standards, will interfere with attainment or maintenance of an applicable ambient air quality standard, cause or contribute to a violation of an applicable air quality increment, or be inconsistent with the intent and purpose of this rule or W. Va. Code §22-5-1 et seq., in which case an order denying such construction, modification, relocation and operation shall be issued. The Secretary shall, to the extent possible, give priority to the issuance of any such permit so as to avoid undue delay and hardship."

It is clear under 45CSR13 that denial of a permit must be based on one of the above explicitly stated criteria or, as noted, is inconsistent with the intent of 45CSR13 or §22-5-1, et. seq. As is stated above, it is the DAQ's position that the intent of both the APCA and 45CSR13 is to circumscribe the authority of the DAQ to air quality issues as outlined in the APCA and in West Virginia's State Implementation Plan (SIP).

The air quality issues evaluated relating to W-L's proposed construction are outlined in the DAQ's Engineering Evaluation. The issues covered under that document represent the extent of the substantive air quality issues over which the DAQ believes it has authority to evaluate under 45CSR13 and the APCA as relating to W-L's Permit Application G20-C041.

DAQ Compliance/Enforcement Procedures

It is important to note here that the DAQ permitting process is but one part of a system that

works to meet the intent of the APCA. In WV the DAQ maintains a Compliance and Enforcement (C/E) Section, an Air Monitoring Section, a Planning Section, etc. to accomplish this. Most pertinent to the permitting process, the C/E Section inspects permitted sources to determine the compliance status of the facility including compliance with all testing, parametric monitoring, record-keeping, and reporting requirements. These inspections are scheduled by the C/E Section taking into consideration such issues as the size and compliance history of the source, resource management and inspector workloads, and program applicability.

When inspecting a facility, the inspectors will, in addition to visually inspecting the facility, generally review all required certified record-keeping to determine compliance with required monitoring. When violations are discovered, the C/E Section has the authority to issue a Notice of Violation (NOV) and a Cease and Desist Order (C&D) to compel facilities to stop operating the equipment/process responsible for the violation. Finally, a negotiated Consent Order (CO) may be entered into between the DAQ and the violator that lays out a finding of facts, a path back into compliance for the violator, and often includes a monetary penalty as determined on a case-by-case basis.

Additionally, the C/E Section investigates citizen complaints directed against a facility (including odor complaints), reviews monitoring reports submitted to the DAQ (again with the authority to issue violations based on the submitted reports), reviews performance test protocols submitted to the DAQ, and will often observe performance tests at the facility site. All records and documents submitted to the DAQ for compliance purposes must be certified as accurate (and subject to criminal penalties if knowingly inaccurate) by a properly designated "responsible official." All of these documents - including C/E documents such as NOVs, C&Ds, and COs - when in final form, and minus any confidential information, are available to the public via a Freedom of Information Act (FOIA) request (for documents prior to 2015) or (for new facilities) are available on the DAQ (AX) database at the link given above.

Ambient Air Quality Status of Jefferson County

The quality of the air of a defined local area - in this case for Jefferson County - is determined by its status with respect to the National Ambient Air Quality Standards (NAAQS). The Clean Air Act, which was last amended in 1990, requires the Environmental Protection Agency (EPA) to set NAAQS for pollutants considered harmful to public health and the environment. The Clean Air Act established two types of national air quality standards. Primary standards set limits to protect public health, including the health of sensitive populations such as asthmatics, children, and the elderly. Secondary standards set limits to protect public welfare, including protection against decreased visibility, damage to animals, crops, vegetation, and buildings. The EPA Office of Air Quality Planning and Standards (OAQPS) has set National Ambient Air Quality Standards for six principal pollutants, which are called criteria pollutants. They are listed at:

https://www.epa.gov/criteria-air-pollutants/naaqs-table.

Counties that are known to be violating these standards are, for specific pollutants, designated by the EPA as in "non-attainment" with the NAAQS. Counties that are not known to be violating these standards are, for specific pollutants, designated by the EPA as in "attainment/unclassifiable" with the NAAQS. It is important to note that while some counties have no on-site air monitoring, EPA will still designate these areas as in "attainment/unclassifiable" based on a variety of submitted data. These areas are still properly called "attainment areas." However, this designation is not the same as a designation of just "unclassifiable." As stated on EPA's website: "In some cases, EPA is not able to determine an area's status after evaluating the available information. Those areas are designated "unclassifiable." (https://www.epa.gov/criteria-air-pollutants/naaqs-designations-process).

W-L Construction & Paving's facility is proposed to be located in Jefferson County, WV. Jefferson County has not been designated as "non-attainment" or as "unclassifiable" and is, therefore, designated as an attainment area.

The DAQ Air Monitoring Section, with ambient air quality sampling sites located throughout West Virginia, monitors air pollutants on either a continuous or periodic basis. The DAQ operates an air monitor located in Berkeley County and other monitors throughout the State. Millville, WV is actually surrounded by air monitors. There is the Ashburn location operated by the Virginia Department of Environmental Quality to the southeast, the Frederick Airport and Hagerstown monitors operated by the Maryland Department of the Environment to the northeast and north, respectively, the Martinsburg, WV location is northwest and the Lester Building Systems monitor in Frederick County, Maryland is due west. For a full list of air monitors in WV, see the table at:

https://dep.wv.gov/daq/air-monitoring/Pages/AirQualityIndex.aspx

The location of air monitors are chosen to provide the most efficient means of assessing the ambient air quality in WV with limited resources and are based on such metrics as a location's population exposure, local emission sources, existing pollutant background levels, and other considerations. There is currently no evidence, based on available data and standard analysis procedures, to indicate that Jefferson County is not in attainment of the NAAQS or that the impacts from the potential air emissions at the proposed Empire facility would cause or contribute to a violation of the NAAQS. The location and data from air monitoring sites may be accessed at the following EPA web address:

AirNow Interactive Map (epa.gov)

As noted above, the proposed HMA facility was reviewed pursuant to the requirements of 45CSR13 - the permitting rule that contains the requirements for the review of minor sources. This rule does not require a cumulative air impact analysis that includes other sources in the determination to issue or deny the permit in question. Further, the DAQ does not believe that if such modeling was conducted, it would show that the proposed source would cause or contribute to a NAAQS violation.

General Points

This permit will allow W-L Construction & Paving, Inc. to install and operate a Hot Mix Asphalt facility. The permit will limit the amount of HMA produced and hours operated annually. Any change to the process, amount produced, added engines or the installation of any additional emission unit(s) will require W-L to apply for a permit modification in accordance with 45CSR13.

- In response to all comments that referenced substantive non-air quality issues, the APCA and 45CSR13 does not grant the DAQ the authority to take into consideration such issues in determining whether to issue or deny the permit;
- The requirements of 45CSR13 require the DAQ to, when denying a permit, explicitly state the reason pursuant to §45-13-5.7.;
- An issued permit is but the beginning of the involvement of the DAQ with a source. After issuance, a facility will receive inspections to determine compliance with the requirements as outlined in the applicable permit;
- With respect to the quality of the ambient air of Jefferson County, the EPA has designated the county as in attainment with all the NAAQS;
- DAQ's rules allows applicants to perform some pre-construction activities without a permit at the applicant's risk (e.g., construct a building, store equipment);
- The WV DAQ does not take into consideration the economic impact or lack of due to a particular facility when making a final decision on any permit application;
- The DAQ has determined that the proposed HMA facility is properly defined as a minor stationary source;
- As a proposed minor source, there is no requirement for W-L to conduct a multi-source air impact analysis nor does the DAQ believe that such modeling, if conducted, would show that the proposed source would cause or contribute to a NAAQS violation.

Virtual Public Meeting Questions/Comments

Question 1:

I know your presentation mentioned the monitoring but how will that be monitored and then shared with residents? Is that something that then we have to go online to look for those results. Or will they be sent out?

DAQ Response 1:

The C/E Section inspects permitted sources to determine the compliance status of the facility including compliance with all testing, parametric monitoring, record-keeping, and reporting requirements. All records and documents submitted to the DAQ for compliance purposes must be certified as accurate (and subject to criminal penalties if knowingly inaccurate) by a properly designated "responsible official." All, of these documents - including C/E documents such as NOVs, C&Ds, and COs - when in final form, and minus any confidential information, will be available on the DAQ (AX) database at the link:

https://documents.dep.wv.gov/AppXtender/DataSources/DEPAX16/account/login?ret=Lw==

Question 2:

About the monitoring of any health changes for residents. There seems to be a common trend that often people that live around these plants within a half mile of the plants may experience declines in health. And just wondering then who becomes responsible for sort of monitoring that data?

DAQ Response 2:

45CSR13 does not have the authority to consider health trends of populations over time. This would be something that may be available from local health agencies or the state department of health and human resources. Please reference the following resources:

http://www.cdc.gov
http://www.dhhr.wv.gov

Question 3:

Just wondering if there's been any consideration into the additional traffic that will be of such heavy equipment and vehicles. What's the plan to make sure that that road will hold up?

DAQ Response 3:

The use of public roads (and maintenance of such) are not within the purview of the DAQ.

Question 4:

So is there a possibility for extending the comment period?

DAQ Response 4:

The public comment period for the Applicant's Class I Legal Notice was to expire on September 8, 2023. Ms. Bastian contacted the DAQ on September 8, 2023 to request a public meeting regarding the HMA plant proposed.

On September 13, 2023, the DAQ published a Class I Legal Notice in the Spirit of Jefferson Advocate, announcing a Virtual Public Meeting to be held at 6:00pm on September 21, 2023. Complete registration and participation instructions were provided in the notice and the public comment period was extended until 5pm September 22, 2023.

At the end of the Virtual Public Meeting, the Director extended the comment period until 5:00pm September 27, 2023. On September 25, 2023, the Director extended the public comment period again (at Ms. Bastian's request) until 5:00pm October 2, 2023.

Question 5:
Ms. Bastian's following questions were from Ms. Wimer's email sent to the DAQ Permit Engineer, dated September 8, 20223.

The comment was that G20-C guidance seems to specify 8,760 hours/yr for annual emissions calculations and the Applicant has submitted emissions based on significantly less hours with no specified reason. Why?

DAQ Response 5:

Hot Mix Asphalt plants are considered to be a seasonal source. These type of plants generally operate only three to six months out of the year. W-L has specified the plant (dryer) will operate 2,800 hours/yr and the asphalt heater will operate 5,760 hours/yr to keep the asphaltic cement warm during non-operating hours. The General Permit Registration G20-C041 limits the operating hours for the Dryer to 2,800 hours/yr. and the Asphalt Heater to 5,760 hours/yr., on page 4 of 12 and 7 of 12, respectively.

Question 6:

The comment received was - it appears as though some of the emissions estimates use out-dated AP-42 equations and emission factors, siting the emission factor equation from AP-42 Section 11.2.3 Fugitive Emissions (May, 1983), Equation #2.

DAQ Response 6:

When the updated equation for stockpile emissions came out in 2006, the DAQ and the engineering community involved at the time, decided against using the newer equation because of the number of assumptions required with relatively small differences in calculated emissions. The DAQ continues to use the older equation for emissions from stockpiles in our General Permits, referencing the Air Pollution Engineering Manual. The reference provided by the Applicants' consultant is correct also.

Question 7:

Are the emissions from the transportation of HMA included? How about emissions from the diesel or kerosene used to keep asphalt from sticking to trucks? How about emissions from additional 13,000 trucks?

DAQ Response 7:

Vehicle emissions from burning of fuel or Particulate Matter emissions from vehicle activity on public roadways are not within the purview of the DAQ. The DAQ can only regulate emissions on plant property. W-L Construction & Paving has provided our C/E personnel with a copy of the MSDS sheet for the Asphalt Release Agent used to keep the asphalt from sticking to the trucks. A copy of the MSDS Sheet will be provided under Popular Searches on our website.

Comment 8:

There is a real old oil that seems to be used in one of the production modes and the sulfur content of that used or waste oil is not listed.

DAQ Response 8:

The Applicant's consultant used the highest value emission factor from #2 fuel oil and waste oil to estimate criteria and hazardous pollutant emissions from the dryer and asphalt heater.

Section 8.1.2. of the General Permit states 'Allowable fuels for the small heaters and boilers are natural gas, diesel fuel, and other distillate fuel oils. Recycled or used oils are not allowable fuels for small heaters and boilers.'.

Comment 9:

The baghouse data is missing any kind of information about how often the bags need to be replaced.

DAQ Response 9:

Section 5.1.14. of the General Permit discusses Maintenance of Air Pollution Control Equipment.

Question 10:

The old plant will be dismantled and gone for good and not while the other one is not in operation?

DAQ Response 10:

The current permit for the existing HMA plant is an individual permit issued as R13-1121A. W-L Construction has applied for a General Permit for the new HMA plant. On page 2 of 12 of the draft registration, at the top of the page, the statement 'This Class II General Permit Registration will supercede and replace R13-1121A.', legally implies that, as of the issue date of the General Permit, the R13-1121A permit is no longer valid and the plant can no longer operate without risking penalty. It is expected that the existing plant will shutdown at the end of the "season" and be dismantled and the newly permitted HMA plant will be constructed and begin operation at the beginning of the "season", most likely March or April of 2024.

Question 11:

Do they report to DAQ on a continual basis when they replace those bags?

DAQ Response 11:

The question was raised during discussion about the changing of filters (bags) of the baghouse (Air Pollution Control Device). Section 5.1.14. of the General Permit provides specific guidance on the maintenance of air pollution control equipment along with frequency. Records of the maintenance on air pollution control equipment is required under Sections 5.3.3. and 5.3.5.

Question 12:

So do those records get sent to DAQ or not?

DAQ Response 12:

Maintenance records of air pollution control equipment are required to be kept onsite, recorded in a form suitable and readily available for expeditious inspection and review. The files shall be maintained for at least five (5) years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. Further requirements can be found under Section 3.5.1. Retention of records of the General Permit.

Question 13:

So, my submitted question was Arsenic is known to be a toxic heavy metal and an acute irritant to humans. Benzene is a substance known to cause cancer in humans. So, will this plant release arsenic, benzene, and formaldehyde into the air of our community?

DAQ Response 13:

Benzene and Formaldehyde are released into the air as a result of the production of hot mix asphalt. The quantities are listed in the HAP Emission Summary Sheet (page 12 of 12) of the General Permit registration.

Question 14:

Can you confirm the size and location of the plot plan and that no waivers are required from adjacent property owners?

DAQ Response 14:

The permit engineer and compliance/enforcement staff have visited the facilities in previous years. For this particular application, a site inspection was conducted on September 20, 2023. It was confirmed that no signed waivers were required and the proposed facility will be greater than 300' from the nearest Occupied Dwelling as required by the General Permit.

Question 15:

Can you confirm the size and location of the plot plan and that no waivers are required from adjacent property owners?

DAQ Response 15:

The permit engineer and compliance/enforcement staff have visited the facilities in previous years. For this particular application, a site inspection was conducted on September 20, 2023. It was confirmed that no signed waivers were required and proposed facilities will be greater than 300' from residences as required by the General Permit.

If a waiver was required and could not be obtained, the Applicant would not be eligible for the General Permit. The Applicant would be required to pursue an individual Rule 13 Permit to Construct.

Question 16:

So, has Harper's Ferry National Historical Park or any of the park units within the National Capital Region of the National Park Service or the Department of Interior been contacted regarding this permit?

DAQ Response 16:

No they have not. These entities are not of special consideration or considered a Class I area, which are special pristine areas such as West Virginia's Dolly Sods and Otter Creek. If a facility were proposed within 10 kilometers of such a location, the Applicant would be required to undergo a special review and have tighter controls.

Question 17:

Okay, so the business owner is W-L Construction & Paving, is that what's registered with the West Virginia Secretary of State?

DAQ Response 17:

Yes, a copy of the Business Registration Certificate from the West Virginia State Tax Department was provided by the Applicant indicating the Certificate was issued on 7/27/2010 to W-L Construction & Paving Inc.

Question 18:

How is the accumulative effect of polluting industries tracked and monitored or overseen?

DAQ Response 18:

Currently there is no guidance from EPA on how states can mitigate cumulative impacts in a particular area.

Comments from the Jefferson County Foundation (JCF) is presented in its' entirety and followed by the DAQ Response to Comments in its' entirety

We have reviewed the publicly available materials associated with this proposed permit issuance and we have the following comments.

1. It is our understanding that this plant expects to produce 250,000 tons per year of HMA, operating for 2800 hours, with a maximum hourly production rate of 350 tons/hour. This will be from source ID DBDM1. The heat input to the plant's dryer is 120 million Btu/hour, using fuel oil No. 2 as well as "used" or recycled oil. While there are baghouses for the collection of particulate matter, no controls or any organic pollutants are noted in the application materials. The plant will store aggregates and sand in stockpiles with a storage capacity of 820,000 tons (or well over three years' of production). The HMA will also use RAP or recycled asphalt at an annual throughput of 100,000 tons/year — which is a substantial fraction of the annual HMA production of 250,000 tons/year. Thus, RAP usage is a substantial portion of the plant's operations and production. It appears that 550,000 tons of RAP will be stored at the plant (or over 5 years' worth of annual RAP usage). Asphaltic cement will be stored in tanks Ti and T2, for a combined capacity of 55,000 gallons.

2. The emissions estimates for the plant are not properly supported and only certain pollutants and processes are covered under the emissions estimates.

Below, we excerpt the emissions summary provided in the record. This is based on our review of the emissions calculations prepared by Potesta & Associates, Inc.

W-L Construction & Paving, Inc.
HMA Plant #316 - M illville, WV

Potesta & Associates, Inc.
Project No. 0101-23-0026-001

Sy: UM
Date: 7/17/2023

Checked By: PEW
Date: 7/18/2023

PTE

Emission Type	lb/hr	Uncontrolled Poin	Source lb/hr	Controlled tons/yr	Ih/hr	Uncontrolled Fugiv	Cont dhr	tons/yr
PM	249.14	325.26	24.70	22.65	124.40	96.25	37.32	28.87
PM10	62.10	77.63	8.45	7.20	36.97	29.49	il..09	8.86
PM2.5	14.53	19.34	100	2.78	3.78	3.1.13	1.14	0.93
V OC	29.65	10.62	29.65	10.62				
SO2	21.43	10.49	21.43	10.49				
NOx	[9.62	7.94	19.62	7.94				
CO	47.70	17.23	47.70	17.23				
HCI	0.07	0.03	0.07	0.03				
Formaldehyde	1.21	0.43	1.21	0.43				
Benzene	0.14	0.05	0.14	0.05				
Toluene	1.03	0.37	1.03	0.37				
Ethylberriene	0.10	0.04	0.10	0.04				
Xylenes	0.12	0.05	0.12	0.05				
Hexane	0.34	0.12	0,34	0.12				
Total HAPs	3.79	1.36	3.79	1.36				

Not Applicable

Emission Type	lb/hr	Uncontrolled Facilit	Total lb/hr	Controlled tonslyr
PM	373.54	421.51	62.02	51.52
PM 10	99.07	107.12	19.54	16.06
PM2.5	[8.31	22.44	3.14	3.71
VOC	29.65	10.62	29.65	10.62
SO2	21.43	10.49	21.43	10.49
NOx	19.62	7.94	19.62	7.94
CO	47.70	17.23	47.70	17.23
MCI	0O7	0.03	0.07	0.03
Formaldehyde	1.21	0.43	1.21	0.43
Benzene	0.14	0.05	0.14	0.05
Toluene	1.03	0.37	1.03	0.37
Ethy [benzene	0.10	0.04	0.10	0.04
Xylenes	0.12	0.05	0.12	0.05
Hexane	0.34	0.12	0.34	0.12
Total HAPs	3.79	1.36	3.79	1,36

Notes:

I. Point source emissions include transfer points., mixer, and tanks.

2. Fugitive emissions include vehicular traffic and open stockpiles. 3'

Total HAP values includes the individually-speciated HAPs.

(i) First, the only pollutants for which fugitive emissions are estimated are particulate matter — i.e., PM, PM10, and PM2.5. No fugitive emissions are estimated for other pollutants such as VOCs, including any air toxic or hazardous air pollutants (HAP) involved in the process. The emissions summary simply notes, without any basis that there are "no applicable" fugitive emissions from any other plant processes, such as, for example, the asphalt storage tanks. Or, that there are no HAP emissions, as part of particulate matter, from the RAP storage pile or from the haul roads.

(ii) Second, point source emissions are provided for PM, PM10, PM2.5, VOC, SO2, NOx, CO and HC1 and just six organic HAPs, namely formaldehyde, benzene, toluene, ethylbenzene, xylenes, and hexane. It is not clear why or how only these HAPs were chosen. No technical support is provided for the selection of just these HAPs.

3. Even for the subset of pollutants and emissions sources for which emissions were estimated, the method of estimating emissions has major technical flaws. This is based on our review of the emissions calculations prepared by Potesta & Associates, Inc.

(i) First, the emissions calculations rely substantially on EPA's AP-42 document. As examples:

- material handling emissions rely on AP-42 Section 13.2;
- crushing and screening emissions rely in part of AP-42 Section 13.2 along with DAQ's GC-40 emissions worksheet, which itself relies on AP-42;
- the HMA plant emissions rely on AP-42 Sections 11.1;
- silo filling emissions rely on AP-42 Section 11.1;
- plant load-out emissions rely on AP-42 Section 11.1;
- asphalt heater emissions rely on AP-42 Sections 1.3 and 1.4 as well as Section 1.11;
- vehicle activity emissions on roads rely on AP-42 Section 13.2; and
- stockpile emissions rely on AP-42 Section 11.2.

(ii) For tank emissions, no method of emissions calculation are provided because they are simply noted to be "negligible" based on the "low volatilization of liquid." We note that these tanks will be heated and that volatilization depends on the temperature of the liquid.

(iii) As such, it is clear that the emissions calculations for this plant rely heavily if not exclusively on AP-42 and the numerous assumptions as to input parameters when using AP-42 aside from hours of operation and production rates, for example:

- size distribution of the various particle sizes;
- moisture contents of the various materials;
- wind speed at the site;
- asphalt volatility;
- asphalt mix temperature;
- sulfur content of used or waste oil;
- silt content on the roads;
- vehicle weights and travel distances;
- silt contents of the stored materials;
- etc.

(iv) In some instances, the emissions calculations appear to rely on other data — such as "baghouse data provided by manufacturer" but the source support data for this is not provided in the record.

(v) And, in other instances the calculations for the "controlled" emission simply rely on control efficiencies like 95% for the PM species for the HMA plant, with no support of any kind.

(vi) EPA has repeatedly cautioned against the use of AP-42 to estimate the maximum or potential emissions from single source facilities. This is not only reiterated in AP-42's Introduction available at https://www.epa.gov/sites/default/files/2020-09/documents/c00s00.pdf but also in EPA's November 2000 Enforcement Alert, available at https://www.epa.gov/sites/default/files/2021-01/documents/ap42-enforcementalert.pdf

We presume that the DAQ is well aware of this enforcement alert as well as the multiple caveats and cautionary statements in the Introduction section in AP-42 itself.

Based on this, it is our opinion that the emissions calculations provided in support of this permit application are technically deficient and cannot be relied upon.

4. In addition to the complete lack of reliability of the emissions estimates provided, the permit that will be issued does not include appropriate conditions to ensure that the numerous assumptions made in the emissions calculations, including those listed above, are tracked, recorded, or are verifiable.

(i) It is not even clear how the hours of operation assumed for the various equipment, such as 2800 hours/year for the HMA plant or 5760 hours/year for the asphalt heater will be recorded and tracked.

(ii) Similarly, it is not clear how the hourly production rates used in the emissions calculations will be tracked to that those representations are not exceeded.

(iii) Of course, no stack testing is required to verify, for example, the full range of pollutants, including all HAPs from the dryer or heater (as opposed to the assumed 6 HAPs identified in the calculations) or the emissions rates for the other pollutants used in the calculations.

5. HMA plants produce numerous pollutants, many of them highly toxic. This is even more true for plants that use RAP, which this plant will do in large quantities. These emissions can and will cause adverse health impacts on surrounding exposed populations.

It is imperative therefore that the DAQ should insist on proper emissions calculations, curing the problems with using AP-42 and the many unsupported inputs and assumptions.

And, in addition, the DAQ should require that the emissions from the plant be modeled using air dispersion models and the resulting health risk impacts be quantified.

6. There are numerous additional deficiencies in the materials provided including the proper identification of the applicant, missing signatures, etc. that should also be addressed prior to issuance of the registration.

DAQ Response to Comments 1 through 6

Comment 1:

> It is our understanding that this plant expects to produce 250,000 tons per year of HMA, operating for 2800 hours, with a maximum hourly production rate of 350 tons/hour. This will be from source ID DBDM1. The heat input to the plant's dryer is 120 million Btu/hour, using fuel oil No. 2 as well as "used" or recycled oil. While there are baghouses for the collection of particulate matter, no controls or any organic pollutants are noted in the application materials. The plant will store aggregates and sand in stockpiles with a storage capacity of 820,000 tons (or well over three years' of production). The HMA will also use RAP or recycled asphalt at an annual throughput of 100,000 tons/year — which is a substantial fraction of the annual HMA production of 250,000 tons/year. Thus, RAP usage is a substantial portion of the plant's operations and production. It appears that 550,000 tons of RAP will be stored at the plant (or over 5 years' worth of annual RAP usage). Asphaltic cement will be stored in tanks Ti and T2, for a combined capacity of 55,000 gallons.

Response 1:

The following note was provided in the Application regarding stockpiles OS-1 thru OS-8: "Sizes of individual stockpiles will vary based on mixes being made and materials used. The total base area for stockpiles OS1-OS8 is 3 acres (130,680 sq. ft.)."

The Maximum Storage Capacity (tons) for this stockpile(s) footprint is specified as 820,000 tons maximum. A similar situation exists for RAP, whereas the storage capacity is specified as 550,000 tons maximum on a footprint of 87,120 square feet and 15' high while the applicant has specified 100,000 tons/year as the Maximum Yearly Throughput.

The calculations for emissions from Stockpiles that were provided indicate OS1 and OS2 (sand) are 3 acres and OS3-OS8 (aggregates) are 3 acres and OS-9 (RAP) is 2 acres. The estimate provided assumes the stockpiles are full, which means, the emissions estimate from Stockpiles is greatly inflated or over-estimated.

The Applicant has taken a self-imposed limit of 250,000 tons/year production, which, may include up to 100,000 tons/year of RAP.

Comment 2:

> The emissions estimates for the plant are not properly supported and only certain pollutants and processes are covered under the emissions estimates.
>
> Below, we excerpt the emissions summary provided in the record. This is based on our review of the emissions calculations prepared by Potesta & Associates, Inc.

(i) First, the only pollutants for which fugitive emissions are estimated are particulate matter — i.e., PM, PM10, and PM2.5. No fugitive emissions are estimated for other pollutants such as VOCs, including any air toxic or hazardous air pollutants (HAP) involved in the process. The emissions summary simply notes, without any basis that there are "no applicable" fugitive emissions from any other plant processes, such as, for example, the asphalt storage tanks. Or, that there are no HAP emissions, as part of particulate matter, from the RAP storage pile or from the haul roads.

(ii) Second, point source emissions are provided for PM, PM10, PM2.5, VOC, SO2, NOx, CO and HC1 and just six organic HAPs, namely formaldehyde, benzene, toluene, ethylbenzene, xylenes, and hexane. It is not clear why or how only these HAPs were chosen. No technical support is provided for the selection of just these HAPs.

Response 2:

(i) AP-42, Chapter 11, Section 1.2 defines Emissions and Controls from HMA plants.

Emissions from HMA plants may be divided into ducted production emissions, pre-production fugitive dust emissions, and other production-related fugitive emissions. Pre-production fugitive dust sources associated with HMA plants include vehicular traffic generating fugitive dust on paved and unpaved roads, aggregate material handling, and other aggregate processing operations. Process Fugitive Emissions include HMA Storage, Truck Load-Out, HMA Bucket Elevator and Asphalt Cement Storage.

Chapter 11.1.2.2 defines Production related fugitive emissions and emissions from ducted production operations.

The most significant ducted source of emissions from parallel-flow drum mix plants is the rotary drum dryer. Emissions from the drum consist of water (as steam evaporated from the aggregate); PM; products of combustion; CO; and small amounts of organic compounds of various species (including VOC, CH4, and HAP). The organic compound and CO emissions result from incomplete combustion of the fuel and from heating and mixing of the liquid asphalt cement inside the drum.

(ii) The emissions represented in the permit (G20-C) represent the emissions most commonly associated from the incomplete combustion of a variety of fuels. The HAP's having the largest Emission Factor and better Emission Factor Rating are generally listed.

Comment 3:

Even for the subset of pollutants and emissions sources for which emissions were estimated, the method of estimating emissions has major technical flaws. This is based on our review of the emissions calculations prepared by Potesta & Associates, Inc.

(i) First, the emissions calculations rely substantially on EPA's AP-42 document.

(ii) For tank emissions, no method of emissions calculation are provided because they are simply noted to be "negligible" based on the "low volatilization of liquid." We note that these tanks will be heated and that volatilization depends on the temperature of the liquid.

(iii) As such, it is clear that the emissions calculations for this plant rely heavily if not exclusively on AP-42 and the numerous assumptions as to input parameters when using AP-42 aside from hours of operation and production rates.

(iv) In some instances, the emissions calculations appear to rely on other data — such as "baghouse data provided by manufacturer" but the source support data for this is not provided in the record.

(v) And, in other instances the calculations for the "controlled" emission simply rely on control efficiencies like 95% for the PM species for the HMA plant, with no support of any kind.

(vi) EPA has repeatedly cautioned against the use of AP-42 to estimate the maximum or potential emissions from single source facilities. This is not only reiterated in AP-42's Introduction available at https://www.epa.gov/sites/default/files/2020-09/documents/c00s00.pdf but also in EPA's November 2000 Enforcement Alert, available at https://www.epa.gov/sites/default/files/2021-01/documents/ap42-enforcementalert.pdf

We presume that the DAQ is well aware of this enforcement alert as well as the multiple caveats and cautionary statements in the Introduction section in AP-42 itself.

Based on this, it is our opinion that the emissions calculations provided in support of this permit application are technically deficient and cannot be relied upon.

Response 3:

(ii) EPA published an Emission Assessment Report for Hot Mix Asphalt Plants in December 2000. The report presents an assessment of emissions from hot mix asphalt (HMA) manufacturing facilities. Included in the report is a description of the manufacturing process and the emissions associated with HMA production; the procedures for developing emission factors and emission inventories for the HMA industry; and estimated annual emissions for typical HMA facilities. The report can be viewed using the following link: https://www3.epa.gov/ttnchie1/ap42/ch11/related/ea-report.pdf

Table 7 of the Assessment Report provides an Estimated Annual Emissions for a Typical Batch Plant Asphalt Storage Tank [a]

Pollutant	Emissions, lb/yr	TPY
Criteria Pollutants		
PM-10	ND	
VOC	32	**0.016**
CO	3	**0.0015**
PAHs (semi-volatile HAPs)		
Acenaphthene	0.0027	
Acenaphthylene	0.001	
Anthracene	0.00092	
Benzo(b)fluoranthene	0.00051	
Fluoranthene	0.00022	
Fluorene	0.00016	
Naphthalene	0.087	
Phenanthrene	0.025	
Pyrene	0.00016	
Total PAHs	0.12	**0.00006**
Volatile HAPs		
Benzene	0.01	
Bromomethane	0.0016	
2-Butanone	0.012	
Carbon disulfide	0.0051	
Chloroethane	0.0012	
Chloromethane	0.0074	
Ethylbenzene	0.012	
Formaldehyde	140	
n-Hexane	0.032	
Isooctane	0.000099	
Methylene chloride	0.000086	
Phenol	0	
Styrene	0.0017	
Toluene	0.02	
m-/p-Xylene	0.061	
o-Xylene	0.018	
Total Volatile HAPs	140	**0.07**

[a] Uncontrolled emissions from plant producing 100,000 tons of hot mix asphalt per year. Includes emissions from oil-fired hot oil heaters. All calculated PAH emissions and almost all of the formaldehyde emissions are from the oil-fired hot oil heater.

The Bold values on the right of Table 7 shows some of the pollutants in tons per year (TPY). The Asphalt Storage Tank emissions are negligible at these levels.

The General Permit (G20-C) Sections 2.3.1.d.3, 2.3.1.d.4 and 2.3.1.e limit the asphalt cement storage tank to < 39,889 gallons capacity or < 19,812 gallons with a working true vapor pressure < 2.17 psia.

Table 2 of the Assessment Report provides an Estimated Annual Emissions for a Typical Drum Mix HMA Facility [a]

Pollutant	Annual emissions by source, pounds per year										lb/yr
	Mobile sources (diesel exhaust)	Material handling and road dust	No. 2 fuel oil-fired dryer[b]	Natural gas-fired dryer[c]	Load-out[d]	Silo filling[e]	Asphalt storage[f]	Yard[g]	Total[h] (oil-fired)	Total[h] (gas-fired)	**Proposed At Millville**
Criteria air pollutants											
PM-10	220	26,000	4,600	4,600	104	117			31,000	31,000	**10,140**
VOC	190		6,400	6,400	782	2,440	64	220	10,000	10,000	**8,080**
CO	1,200		26,000	26,000	270	236	6	72	28,000	28,000	**32,940**
SO2	26		2,200	680					2,200	710	**20,980**
NOx	560		11,000	5,200					12,000	5,800	**15,880**
Hazardous air pollutants											
PAH's	0.13		176	37	4	5.8	0.12		190	50	
Phenol					0.8				0.8	0.8	
Volatile HAP's	6.6		1,560	1,020	12.4	31	140	3.3	1,800	1,200	
Metal HAP's			19	16							
Total HAP's	6.7		1,800	1,100	17	37	140	3.3	2,000	1,300	**1,950**

a) Based on an annual HMA production rate of 200,000 tons per year.
b) Between 10 and 30 percent of the HMA is produced using fuel oil.
c) Between 70 and 90 percent of the HMA is produced using natural gas.
d) Loading of HMA into haul trucks.
e) Filling of temporary storage silo prior to load-out.
f) Includes emissions from oil-fired hot oil heaters.
g) Fugitive emissions from loaded trucks prior to departure to the job site.
h) Total expressed using two significant figures

When comparing the proposed Millville Plant to a Typical Drum Mix HMA Facility, the emissions are within the appropriate range given the worst-case emission factor from No.2 Fuel Oil and Recycled/Waste Oil were used for CO, SO2 and NOx pollutants.

(iv) & (v) A properly designed and well-run baghouse will generally have an extremely high particulate matter (PM) collection efficiency (i.e., 99.9+ percent). Baghouses are particularly effective for collecting small particles. For example, tests of baghouses on two utility boilers [8], [9] showed efficiencies of 99.8 percent for particles 10 µm in diameter and 99.6 percent to 99.9 percent for particles 2.5 µm in diameter. Because high efficiency is assumed, the design process focuses on the pressure drop.

The previous information is from EPA's Document (EPA/452/B-02-001) discussing Particulate Matter Controls published in December 1998. The document can be viewed with the following link https://www.epa.gov/sites/default/files/2020-07/documents/cs6ch1.pdf.

Potesta & Associates, Inc. chose a very conservative value for the baghouse control efficiency of 95%. This inflates the emissions shown for PM, PM10 and PM2.5. The values shown above in Bold represents only the Dryer and Heater emissions. In addition, the worst-case emission factors were selected from No. 2 Fuel Oil or Recycled/Waste Oil for CO, SO2 and NOx pollutants.

Comment 4, 5 and 6:

4. In addition to the complete lack of reliability of the emissions estimates provided, the permit that will be issued does not include appropriate conditions to ensure that the numerous assumptions made in the emissions calculations, including those listed above, are tracked, recorded, or are verifiable.

(ii) It is not even clear how the hours of operation assumed for the various equipment, such as 2800 hours/year for the HMA plant or 5760 hours/year for the asphalt heater will be recorded and tracked.

(iii)Similarly, it is not clear how the hourly production rates used in the emissions calculations will be tracked to that those representations are not exceeded.

(iv) Of course, no stack testing is required to verify, for example, the full range of pollutants, including all HAPs from the dryer or heater (as opposed to the assumed 6 HAPs identified in the calculations) or the emissions rates for the other pollutants used in the calculations.

5. HMA plants produce numerous pollutants, many of them highly toxic. This is even more true for plants that use RAP, which this plant will do in large quantities. These emissions can and will cause adverse health impacts on surrounding exposed populations.

It is imperative therefore that the DAQ should insist on proper emissions calculations, curing the problems with using AP-42 and the many unsupported inputs and assumptions.

And, in addition, the DAQ should require that the emissions from the plant be modeled using air dispersion models and the resulting health risk impacts be quantified.

6. There are numerous additional deficiencies in the materials provided including the proper identification of the applicant, missing signatures, etc. that should also be addressed prior to issuance of the registration.

Response 4, 5 and 6:

4. (iii) Section 5.0 of the General Permit (G20-C) defines the Limitations and Standards for the Hot Mix Plant itself and Section 8.0 of the G20-C permit defines the Limitations and Standards for the small Heater. Sections 5.3 and 8.4 define the Recordkeeping Requirements for the Dryer and Heater, respectively.

4. (iv) The HAP's listed in the General Permit (G20-C) are those that are most commonly found in HMA production as well as the ones in the largest quantities. The permit lists the estimated HAP emission for both the Dryer and Heater. It has been demonstrated that the Consultant has over estimated the emissions for the proposed plant.

5. Reclaimed asphalt pavement (RAP) significantly reduces the amount of virgin rock and asphalt cement needed to produce HMA. In the reclamation process, old asphalt pavement is removed from the road base. This material is then transported to the plant and is crushed and screened to the appropriate size for further processing. The paving material is then heated and mixed with new aggregate (if applicable), and the proper amount of new asphalt cement is added to produce HMA that meets the required quality specifications.

The addition of RAP does not introduce additional pollutants (it's made of the same constituents).

6. As stated previously, it is the DAQ's position that the intent of both the APCA and 45CSR13 is to circumscribe the authority of the DAQ to air quality issues as outlined in the APCA and in West Virginia's State Implementation Plan (SIP).

The General Permit Program defined in 45CSR13 was thoroughly reviewed and approved by EPA. AP-42, Fifth Edition Compilation of Air Pollutant Emissions Factors, Volume 1: Stationary Point and Area Sources is a living document that is continually reviewed and updated based on current information obtained through research and developments in new technologies.

EPA notes that since AP-42 emission factors may have effects on most aspects of air pollution control and air quality management including operating permit fees, compliance assessments, and SIP attainment emission inventories, these factors are always made available for public review and comment before publication. The Emission Factor And Inventory Group panel of public and peer reviewers includes representatives of affected industries, state and local air pollution agencies, and environmental groups.

W-L Construction & Paving, Inc. through their Consultant (Potesta & Associates, Inc.), have with all inherent inaccuracies, successfully submitted a technically complete application for a General Permit (G20-C) as of August 25, 2023.