

Hearing Officer's Report and Recommendations

Madison Asphalt, LLC
Digital Public Hearing via Webex
May 3, 2021

Public Comment Period: March 10, 2021 through May 5, 2021

Pertaining to Permit Application No. 5800063.19A and
Draft Air Quality Permit No. 10611R00 for:

Madison Asphalt, LLC
3807 US 25/70
Marshall, NC, Madison County
Facility ID No. 5800063
Fee Class: Small

Hearing Officer
Heather S. Carter, CPM
Regional Supervisor, Fayetteville Regional Office

I. Background

On February 18, 2019, the North Carolina Department of Environmental Quality (DEQ), Division of Air Quality (DAQ), received an air quality permit application (App. No. 5800063.19A) from Madison Asphalt, LLC to construct and operate a new asphalt plant at 3807 US 25/70 in Marshall, Madison County, NC. Pending issuance of the air quality permit, the Madison Asphalt, LLC plans to construct and operate a drum-mix asphalt plant with a production capacity of 170 tons of asphalt per hour on property that already includes an existing rock quarry, McCrary Stone Service, and an existing concrete batch plant, Carolina Ready Mix. The proposed asphalt plant will be fired by ultra-low sulfur (15 ppm) No. 2 fuel oil and will be subject to the federal New Source Performance Standard (NSPS) Subpart I emission standards.

II. Air Quality Permit Application and Review

DAQ's mission is to work with the state's citizens to protect and improve outdoor, or ambient, air quality in North Carolina for the health, benefit and economic well-being of all. To accomplish this mission, DAQ requires industrial facilities to apply for and receive air quality permits prior to construction and operation of the air pollution sources and air pollution control equipment to ensure compliance with all applicable federal and state regulations. As a new facility, Madison Asphalt, LLC is required to apply for and receive an air quality permit prior to installing a new asphalt plant at 3807 US 25/70 in Marshall, NC, Madison County. Additionally, as a new facility, the proposed asphalt plant is required to demonstrate compliance with state laws governing the release of toxic air pollutants. On February 18, 2019, Madison Asphalt, LLC submitted an application to DAQ ARO requesting an air permit for the 3807 US 25/70 site. On April 22, 2019, Madison Asphalt, LLC submitted a revised permit application to the ARO. On July 25, 2019, due to county zoning issues, Madison Asphalt, LLC requested their air permit application be placed on hold pending legal actions on the zoning issues. An approved zoning consistency determination from Madison County was received in the Asheville Regional Office on November 3, 2020, for building an asphalt plant at the requested location.

Patrick Ballard, permit engineer in the DAQ ARO, reviewed the application submitted by Madison Asphalt, LLC and determined that the facility could comply with all applicable federal and state air quality requirements provided that the specific conditions included in the draft air quality permit are met. Matt Porter, meteorologist in DAQ RCO, provided technical support in the application review process by conducting a site-wide dispersion modeling analysis to evaluate the combined toxic and criteria air pollutant ambient impacts from all operations located at the site, which included emissions from the proposed construction and operation of a hot mix asphalt facility and the existing concrete and quarry plant operations. The site-wide total emissions of arsenic, benzene, formaldehyde, and nickel were estimated to exceed the modeling thresholds, also known as the toxic air pollutant (TAP) emission rates (TPERs) outlined in 15A NCAC 02Q .0711. Site-wide criteria pollutants including particulate matter (both PM_{2.5} and PM₁₀), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), and carbon monoxide (CO) were modeled for comparison with the National Ambient Air Quality Standards (NAAQS). Ultimately, the site-wide dispersion modeling analysis of TAPs and criteria air pollutant emissions demonstrated compliance with the Acceptable Ambient Levels (AALs) outlined in 15A NCAC 02D.1104 and the NAAQS.

Unless the public comments received during the public hearing reveal that DAQ was in error or incomplete in its evaluation of the proposed asphalt plant from an air quality standpoint, and if the applicant will meet all federal and state laws and rules for the protection of air quality, DAQ is obligated to issue an air permit to Madison Asphalt, LLC. The following hearing officer responses to written and oral public comments will address issues raised in light of these requirements.

III. Notice of Public Hearing

At the discretion of the Director of the DAQ, a notice of the opening of a public comment period and a notice of public hearing on the draft air quality permit for Madison Asphalt, LLC was posted on the DAQ website and a press release was issued on March 10, 2021. On March 26, 2021, a press release was issued for the rescheduling of the public hearing to May 3, 2021. The notice of public hearing on the draft air quality permit for Madison Asphalt, LLC was published on March 31, 2021, in the News-Record & Sentinel newspaper. The public comment period opened on March 10, 2021 and closed on May 5, 2021. Copies of the air quality permit application, permit application review, draft air permit, and dispersion modeling review memorandum were also posted on the DAQ website for public review. Copies of the air quality permit application and related documents were available for public review in DAQ's Asheville Regional Office (ARO) and Raleigh Central Office (RCO) throughout the public comment period. On May 3, 2021, the public hearing was conducted virtually via Webex to allow for public participation while protecting public health under current guidance to prevent the spread of COVID-19. The DAQ accepted comments via mail and electronic mail in addition to the virtual public hearing.

IV. Public Comments Received and Hearing Officer Responses

From the comments received during the public comment period, it is apparent that many residents and business owners around the proposed Madison Asphalt plant are very concerned about potential impacts on their health, the environment and their local economy. At the public hearing on May 3, 2021, approximately 54 people were registered in attendance, 22 attendees spoke, all in opposition to the proposed Madison Asphalt, LLC. Additionally, 169 written e-mail comments (some with attachments) were received during the public comment period, of which 2 were in support of the proposed asphalt plant and 167 were in opposition. All comments were given equal consideration, whether they were written or made orally at the virtual public hearing. Note that all comments received prior to the opening of the public comment period were evaluated and addressed either in the draft permit or dispersion modeling subsequently conducted and presented as documents available for review during the public comment period.

The comments received, both written and oral, addressed many of the same issues. In order to make this report concise, address all issues and minimize redundancy, I have grouped the comments by topic similarity and summarized and addressed the issues of concern below. Bulleted comments in italics are direct quotes from submitted written comments, whereas bulleted non-italics are paraphrased from verbal or written comments.

Comment Category #1: Air Dispersion Model and Analysis

Inversions & Weather Data:

- *The proposed Madison asphalt plant is located in a unique microclimate above the town of Marshall, NC at the beginning of a deepening canyon along the French Broad River Valley. This unique topography creates a frequent cloud layer (atmospheric inversion layer) that forms over the river. These inversions are frequent and strong (about 300ft deep). These inversions cause toxins and odors to accumulate hour by hour instead of quickly dissipating into the upper atmosphere like the NC Department of Air Quality (DAQ) concludes in their report.*
- *The DEQ's modeling does not account for the frequency of Inversion in this area.*
- *...rather than a break up of the inversion at 7am, it happens more typically sometime between 9 and 11am...*
- *Request that...the plant NOT be allowed to operate between sunset (when temperatures start to drop and downslope winds start) and 10:00am (when the inversion has typically lifted).*
- *The DAQ is using weather data from a site located along the ridges of Jupiter, NC. The rolling hills of Jupiter are not at all similar to the steep canyon and river microclimate at the quarry.*
- *Gathering data with on-site weather stations would provide much more accurate data.*
- *The assertion that on site weather stations cost \$200K is far out of alignment with modern technology and seems to create an artificial barrier against gathering on site data.*

Background Data:

- *The DEQ used an unrealistic assumption of background toxins around the town of Marshall. The DEQ used a background level of 9 ug/m³ for the magnitude of toxins that exists in the town of Marshall. This extremely low number is derived from the Smoky Mountain National Park monitor station, which is in an extremely pristine environment. We ask the DEQ, to set up monitoring stations for NO_x around Marshall or use a conservative background level around 60 ug/m³, which is more representative of the state background levels.*

Tier 1 vs Tier 2:

- *The DAQ is applying Tier 2 standards to the Madison Asphalt Plant. Tier 2 Standards: Assumes that Nitrogen Oxide will dissipate quickly into the upper atmosphere. Using Tier 2 standards seems to artificially skew the emissions data to create results that predict lower emissions than will be the case with the frequent inversions at this plant location.*
- *Inversions absolutely indicate that you should be measuring NO_x using Tier 1 standards.*

Site-wide Data Inputs:

- *I also see from your report that you don't even regulate particulate emissions or other toxic emissions from the concrete plant over there. When you did your Site Wide Modeling, what data was used in terms of the air quality of that facility?*

- *Did the Diffusion Analysis include exhaust from the idling truck engines in their emissions?*
- *According to report, "the storage of asphalt . . . [was] long thought to have negligible emissions. In 2007, the EPA learned that that assumption was wrong. Has your modeling taken this into account? If not, shouldn't it? If not, why not?"*

Uncertainties in Analysis:

- *All results in the NCDEQ regulatory review should indicate confidence limits for the results, to provide simple scientific credibility.*
- *The USEPA (2001) highlights that we don't understand the long term health risks of asphalt emissions.*

Spatial Uncertainties:

- *Matthew Porter's receptor grid analysis is spatially biased toward more distant receptors – he only included 1 nearby house.*

Hearing Officer's Response to These Comments:

Inversions & Weather Data

AERMOD is the only preferred dispersion model for regulatory NAAQS permit modeling demonstrations. No other models exist that have been evaluated and approved by EPA for regulatory applications as codified in Appendix A to Appendix W of 40 CFR Part 51. Quantitative performance evaluations of the AERMOD modeling system conducted by EPA can be found here: AERMOD Model Formulation and Evaluation. August 2019. EPA-454/R-19-014. See: https://gaftp.epa.gov/Air/aqmg/SCRAM/models/preferred/aermod/aermod_mfed.pdf. These EPA performance evaluations show that AERMOD formulations have been designed to over-predict (i.e., positive model bias) emissions impacts in flat and complex terrain under a variety of controlling meteorological conditions for ground-based or elevated volume, area, and point sources (e.g., stacks).

The comparison between the WRF data and Asheville Airport meteorological data shows that inversion strength and frequency is higher in the WRF data. For example, inversion strength as measured by the Asheville Airport data (combined with the Peach Tree City Georgia upper air data) is roughly 0-2 degrees Celsius on the worst-case dispersion days (e.g., October 15, 2015), whereas the WRF data shows inversion strengths of roughly 2-4 degrees Celsius on those same days. Inversion frequencies using the Asheville Airport data are roughly half of inversion frequencies shown in the WRF data. For example, when comparing the frequency of mixing heights in 2015 that were less than 100 meters, which are largely caused by strong temperature inversions, these very shallow mixing heights occurred only 1,867 hours at the Asheville Airport and occurred 3,331 hours in the WRF data. Therefore, the WRF data was determined to be the most representative and appropriate data available.

The WRF data offers higher vertical and temporal (e.g., hourly) resolution than onsite met station data that could have otherwise been used to conduct the AERMOD modeling demonstrations. The WRF data provides 11 vertical levels (at the following levels: 2, 10, 30, 60, 120, 240, 480, 920, 1600, 2500, and 3500 meters) of temperature, winds, and turbulence data for every hour of the 3-year (2013-2015) AERMOD modeling simulation period. This higher

resolution data provided by the WRF is based on state-of-the-art atmospheric physics, local available surface weather observations, and available regional upper air soundings. By contrast, an onsite meteorological tower would provide hourly data for only two vertical levels of temperature (2 and 10 meters) and one vertical level of winds (10 meters) to support a permit modeling demonstration with the objective of predicting worst-case impacts at the facility property boundary with a steady-state model such as AERMOD. The WRF data is a more representative data set due to the inclusion of higher vertical and temporal resolution than an onsite met station would provide.

Additionally, NC DAQ follows EPA's Meteorological Monitoring Guidance for Regulatory Modeling Applications EPA-454/R-99-005 February 2000. This guidance specifies minimum performance and quality assurance criteria for meteorological monitoring instrumentation, site exposure, and data collection and handling. Alternative "off-the-shelf" meteorological monitoring systems sold at a discount to the general public rarely meet these minimum criteria requirements specified by EPA. These "off-the-shelf" systems are typically less accurate than professional-grade meteorological monitoring towers, data loggers, instrumentation, and 3rd-party independent quarterly validation audits required by EPA for collecting and applying meteorological data in regulatory modeling for permitting decisions.

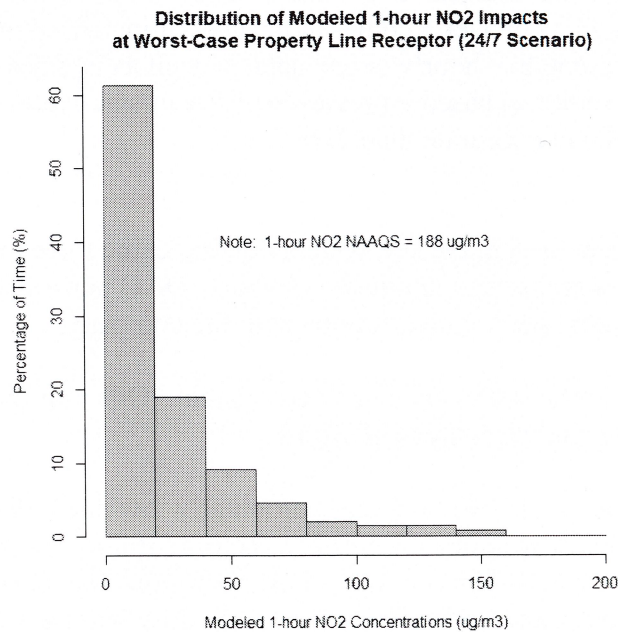
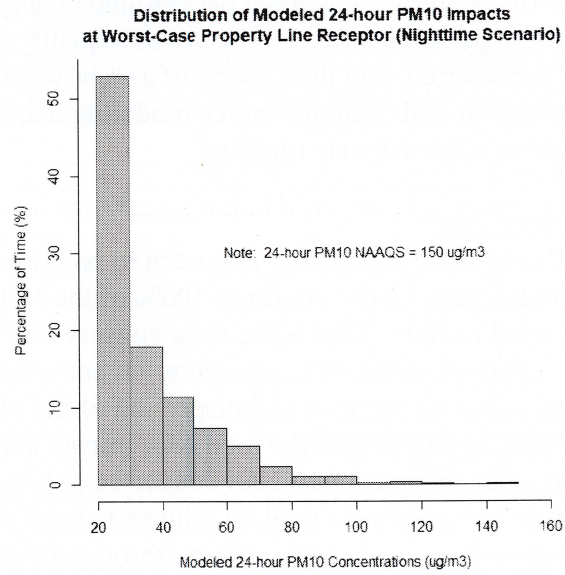
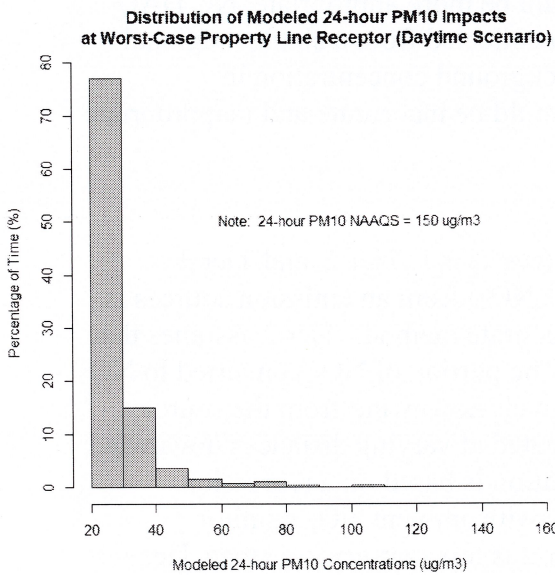
In general, ground-level maximum modeled impacts depend on air pollution plume initial concentration, travel time, and travel distance. At the property line, the plume initial concentration will be greatest, because it hasn't had a chance to mix or disperse in the atmosphere. This initial concentration decreases with time and distance as it disperses and travels downwind from the air pollution source. The air dispersion modeling results for the Madison Asphalt facility showed that worst-case impacts, predicted at the property or fence line for the ground-based releases at the proposed asphalt plant, were far greater than those predicted farther away from the facility in the river valley and surrounding ridgelines and hills. As such, the worst-case impacts predicted at the property line were used to limit emission activities and resultant emission releases of PM₁₀ and PM_{2.5} at the proposed asphalt plant to demonstrate compliance with the PM₁₀ and PM_{2.5} NAAQS. Additionally, the NO₂ modeling assumed maximum emissions for every hour of the year at the asphalt plant. However, the NO_x emissions from the asphalt drum dryer and tank heater will be lower than the emissions modeled since plant operations were limited in the model in order to show compliance with the 24-hour PM₁₀ NAAQS modeling demonstration.

After accepting daytime and nighttime operating and emissions restrictions at the asphalt plant, the 24-hour PM₁₀ impacts predicted at the worst-case receptor (which is at the western property line) would be less than 50% of the 24-hour PM₁₀ NAAQS (i.e., 50% of 150 ug/m³ = 75 ug/m³) for 324 and 348 of the days modeled for the nighttime and daytime operating scenarios, respectively, in any given year analyzed (2013-2015). In other words, under nighttime operating restrictions, the model predicts that for 324 days (89% of the time) out of the year PM₁₀ impacts will be less than half of the NAAQS. Similarly, under daytime operating restrictions, the model predicts that 348 days (95% of the time) out of the year PM₁₀ impacts will be less than half of the NAAQS. Additionally, under nighttime and daytime restrictions, 102 and 279 days per year, respectively, were modeled to be less than 25% of the NAAQS. Furthermore, occurrences of modeled impacts greater than 90% of the PM₁₀ NAAQS are effectively limited to 1 and 0 days per year for the nighttime and daytime operating scenarios, respectively. This reduced frequency

of higher impacts is directly attributable to the enforceable operating limits accepted by the asphalt plant operator as informed by the modeling.

The 1-hour NO₂ impacts predicted at the worst-case receptor (which is at the western property line) would be less than 50% of the 1-hour NO₂ NAAQS (i.e., 50% of 188 ug/m³ = 94 ug/m³) for 8,374 of the hours modeled in any given year analyzed (2013-2015). In other words, for 8,374 hours out of the year (96% of the time), 1-hour NO₂ impacts will be less than half of the NAAQS. Additionally, 7,423 hours of the year (84% of the time) 1-hour NO₂ impacts will be less than 25% of the NAAQS. The model results greater than 90% of the 1-hour NO₂ NAAQS occur only 4 hours out of the years modeled.

See the histograms below for a visual representation of the data summarized above.



Background Data

In accordance with Section 8.3.b of Appendix W to 40 CFR Part 51, a “regional site” may be selected and used to determine background concentrations where quality assured data collected at a site located in the vicinity of the project is unavailable. As such, regional sites with available quality assured NO₂, PM₁₀, and PM_{2.5} data were reviewed based on distance and representativeness of non-modeled source inventories. The NPS Look Rock Site was selected as the most representative “regional site” based on its more similar exposure to area sources such as lower-volume road traffic and other non-point biogenic and anthropogenic regional scale emissions inventories. The alternative “regional site” reviewed by NC DAQ is located in Spartanburg, SC and was determined to be unrepresentative due to the high-volume road traffic and the characteristics of the urban scale, non-point source emission inventories reflected in the PM₁₀, PM_{2.5}, and NO₂ hourly monitoring data. In response to a comment received that suggested usage of a state-wide average background concentration would be more appropriate, NC DAQ and EPA guidance clearly indicates that quality-assured data collected from a single “regional site” is preferred, and thus, usage of a state-wide average background concentration in combination with a single source modeling demonstration would be inaccurate and inappropriate to determine worst-case impacts.

Tier 1 vs Tier 2

EPA's regulatory modeling approach to NO₂ modeling involves Tier 1, Tier 2, and Tier 3 methodologies. Tier 1 assumes 100% of the NO_x (i.e., NO + NO₂) from an emission sources is converted to NO₂. This is the most conservative and least accurate method. Tier 2 assumes that only a portion of the NO_x emissions are converted to NO₂. The portion of NO_x converted to NO₂ is dependent on distance and dispersion of the plume as it travels downwind from the source. The Tier 2 method uses the total NO_x impact at receptors located at varying distances downwind to calculate the portion of NO_x converted to NO₂; the calculation is based on a regression formula that correlates total NO_x impacts from point sources with ambient NO₂ monitor concentrations collected at stations throughout the U.S. Tier 2 is less conservative than Tier 1, but has been shown to be more accurate based on EPA AERMOD model performance evaluations. Tier 3 is the least conservative, but has been shown more accurate than Tier 2; however, the increased accuracy of Tier 3 comes at the cost of increased modeling efforts in assembling 5 years of representative hourly ozone data, as well as in-stack NO_x / NO₂ ratios for project source emission inventories based on review of EPA in-stack ratio databases. DAQ used Tier 2 methodology as it is more accurate than Tier 1.

Site-wide Data Inputs

The concrete batch plant data used in the site-wide modeling came from the DAQ public files including inspection reports and permit application history, DAQ personnel site visit on November 10, 2020, and subsequent conversations with the company.

Modeling was performed on the stationary source equipment. Other air quality rules and emission standards apply to mobile source emissions.

Emissions from asphalt cement storage tanks are particularly low due to the low vapor pressure. Therefore, while uncertainty in accuracy of emission factors for liquid storage tanks may exist, concerns with heightened impacts focus on large scale operations (i.e. tank farms) and not from small, individual tanks. The proposed Madison Asphalt facility will have a single liquid asphalt

cement tank (30,000-gallon capacity) and the estimated emissions are considered negligible based on best available data.

Uncertainties in Analysis

Dispersion modeling uncertainties (i.e., model precision and bias) are addressed in the performance evaluation reports provided by EPA for AERMOD and the WRF datasets. The reports are available from EPA as follows:

AERMOD Model Formulation and Evaluation. August 2019. EPA-454/R-19-014:
https://gaftp.epa.gov/Air/aqmg/SCRAM/models/preferred/aermod/aermod_mfed.pdf

Weather Research Forecast Version 3.8 Meteorological Model Evaluation Annual 2013-2015 12-km CONUS (PDF): <https://www.epa.gov/scram/air-modeling-reports-and-journal-articles>

The proposed Madison Asphalt facility is expected to be in compliance with the applicable air quality regulations and air permit requirements which are designed to protect the ambient air for both toxic and criteria air pollutants. These ambient standards are generally set for sensitive populations such as children and the elderly and not just healthy adults. The site-wide dispersion modeling analysis of TAPs and criteria air pollutant emissions adequately demonstrated compliance with the Acceptable Ambient Levels (AALs) outlined in 15A NCAC 02D.1104 and the NAAQS, on a source-by-source basis.

Spatial Uncertainties

Receptors were modeled around the quarry property boundary at 25-meter intervals. Two nested receptor grids were modeled beyond the facility property extending 1 km with 50-meter receptor spacing and extending farther out to 5 km with 100-meter receptor spacing. Additional receptors were modeled at nearby sensitive community locations including the nearest residence, a nursing home, childcare center, and nearby baseball fields. Impacts to other nearby residences and properties are represented in the 50-meter and 100-meter receptor grids. A total of 11,395 receptors were modeled.

Hearing Officer Recommendation:

No changes to the draft permit are deemed necessary to address these comments.

Comment Category #2: Draft Air Permit Requirements:

Plant Operations:

- *This plant will be permitted to operate at roughly 50% capacity. There is great concern that production will increase once it has been established.*
- Concerns with plant capacity versus operational permit limits and questions about what safeguards are in place to prevent an increase in production/emissions with no monitoring.
- *Since this plant is aligned to fulfill asphalt needs for state road contracts, it seems unrealistic that these will be the operating hours.*

<u>Plant Shift</u>	<u># of hours</u>	<u>Capacity/hr</u>	<u>Max Tons Capable</u>	<u>Daily Limit</u>	<u>% total capacity</u>
7AM-7PM	12	170 tons/hr	2040	1300	64%
6PM-3AM	9	170 tons/hr	1530	400	35%

Inspections:

- *How often are you going to inspect to make sure they are doing only 170 tons an hour and that the plant is being operated properly? How often will you do visual emissions inspections? How often will you inspect to make sure they are in compliance with other emissions limits? How often will you inspect for particulate matter limits? How often will you check to make sure they are using ultra--low sulfur No 2 fuel?*
- *It is my understanding that DEQ is planning to monitor the operation of the plant only one day every ten years.*

Monitoring:

- *Relying on the operator to report when opacity plumes are over 20% seems a bit like asking the fox to watch the henhouse, as well as being subjective and perhaps judged by someone with little experience.*

Stack Testing:

- *The NCDEQ should be testing for toxins and particulate matter levels at 100% plant capacity in anticipation of future expansion.*
- *Even if an initial inspection and test confirm these emissions, I have concerns that retesting for particulate matter is only required 10 years later. Mechanical equipment degrades, bag-filters may or may not be replaced or repaired correctly, and operational procedures can become lax.*
- *I'd like to know what tests will be performed, when are they to be performed- how often will they be performed, and who will be performing these tests?*
- *To keep the owners (who do not reside in Madison County) honest, anything less than annual testing puts the residents and public at risk.*

Public Records Access:

- *Where will the [source test] results be filed and how will citizens access those results?*

Hearing Officer's Response to These Comments:

Plant Operations:

An asphalt plant operating below maximum capacity is not uncommon. The annual average asphalt plant production in the Asheville region is approximately 60,000 tons. The proposed Madison Asphalt plant is rated at 170 tons/hr, maximum capacity. The draft air quality permit limits the facility to a maximum annual asphalt production of 100,000 tons. The draft air quality permit further limits the hours of operation and total amount of asphalt produced during those hours in order to comply with the AALs and NAAQS, as modeled. DAQ regional staff conduct inspections which include operational records review (production, hours of operation, control device inspection and maintenance, etc), report reviews, and complaint investigations throughout the year to verify compliance with permit stipulations and limits. The proposed facility is required to comply at all times with the hours of operation or tons of asphalt produced during each time period, and all other stipulations in the draft permit, unless they apply for and receive a permit modification for those changes. All permit applications received in the DAQ are

evaluated on a case-by-case basis for compliance with all applicable state and federal emission standards.

Inspections:

DAQ regional office staff generally conduct unannounced facility inspections annually for permitted facilities. During the inspection, DAQ staff not only review facility records, but also conduct a visible emissions observation, visually observe all sources and control devices and look for indicators of compliance or non-compliance with permit conditions. Review of records also serves to verify data the facility submits to the DAQ in reports throughout the year. Regional staff also observe facilities for visible emissions, dust and odors while traveling in the region throughout the year. In addition, routine visits to the quarry and concrete batch plant, on this same site, will also allow opportunity for observation of the asphalt plant. Regional staff also investigate complaints as they are received. When source testing is conducted, the DAQ is on site to observe the test and facility operations.

Monitoring:

The proposed Madison asphalt plant is required to be in compliance with the opacity standard and with North Carolina General Statute 143-215.108(c)(1), at all times. The NCGS states that the facility shall be properly operated and maintained at all times in a manner that will effectuate an overall reduction in air pollution.

Particulate Matter (PM) emissions from the aggregate dryer will be controlled by a fabric filter (bagfilter) with required periodic inspections and maintenance (I&M) as recommended by the manufacturer in addition to annual internal I&M, at a minimum. Results of all monitoring and I&M are required to be made available for DAQ review. Additionally, DAQ staff make visible emissions observations during inspections, source test observations, drive-bys, and complaint investigations throughout the year in order to verify compliance with permit stipulations and limitations.

Bagfilters are highly efficient in controlling PM emissions and little to no visible emissions are seen from a properly operating unit. This makes it easy for an inexperienced observer to determine when emissions are higher than normal. The proposed facility must identify when equipment is not operating properly and make corrections and/or repairs that ensure the proper operation and compliance with emission standards.

Stack Testing:

PM and visible emissions (VE) testing is required on the aggregate dryer to verify compliance with state and federal PM and visible emission standards. Results of all testing are required to be submitted to DAQ for review and approval.

Source testing is conducted by a source testing company hired by the facility. The DAQ regional office standard operating procedure is to observe the source testing and facility operations during the test. The DAQ Stationary Source Compliance Branch (SSCB) reviews the results submitted by the facility as well as the DAQ source test observation report to determine whether the test was done in accordance with the EPA approved test method(s) and whether the results demonstrate compliance with applicable emission standards.

The draft permit contains the following condition that is verified by the DAQ observer during testing as well as the SSCB when they review the results submitted for approval.

“The Permittee shall be responsible for ensuring, within the limits of practicality, that the equipment or process being tested is operated at or near its maximum normal production rate or at a lesser rate if approved by the Director or his delegate.”

Federal regulations require the proposed Madison Asphalt facility to conduct source testing no later than 180 days after start-up of equipment to demonstrate compliance with applicable emission standards. However, Madison Asphalt must be in compliance with all applicable emission standards upon start-up. Additionally, DAQ requires subsequent testing be conducted at least every 10 years to demonstrate continued compliance with State and Federal regulations. This periodic testing frequency has been determined by the DAQ as sufficient to demonstrate compliance with applicable regulations based on analysis of many years of test data from asphalt plants throughout the State. Any time the margin of compliance with a standard/limit is narrow DAQ may require additional testing, monitoring, addition of controls, etc., by the facility. The DAQ uses additional tools such as visible emissions observations, visual observations of sources and control devices, and records and reports review multiple times throughout the year to verify continued compliance with the permit and applicable emission standards.

Public Records Access:

The DAQ is currently engaged in developing a new process to make all public records available directly to the public electronically. However, at this time, only a portion of public records are available via our online Public Records Search tool, located at https://xapps.ncdenr.org/aq/docs/FDocs_Search.jsp.

The public can access the results of the DAQ analysis of the source test results via the Public Records Search tool, by searching for the facility name and the document type “Stack Test Report Review.” However, at this time, to view the test results as submitted by the facility to the DAQ, the public can request a copy directly from the regional office.

Hearing Officer Recommendation:

No changes to the draft permit are deemed necessary to address these comments.

Comment Category #3: Odors

- *I should not have to smell even the slightest hint of asphalt smell because the regulation says plain as day the odorous emissions can not go beyond their property boundary. How will you make sure they are in compliance with 2D.1806? I would like a schedule of the routine compliance inspections and surveillance. I'm really worried about this because the folks near the asphalt plant in Burnsville are having a terrible time with the smell and you folks don't seem to be respectful of 2D.1806 regulations.*
- *I am not sure how complaints about odors are handled; is someone sent out with an olfactometer? Will it measure these particular odors and what baseline is used? Do we have to prove that odors are affecting our health, by getting sick?*

- *Frequent complaints of foul odors by multiple parties should trigger closure until the problem is investigated and resolved.*

Hearing Officer's Response to This Comment:

DAQ acknowledges that some amount of odors can be expected from the proposed facility as well as many other industries within the state. Odors from industrial processes are regulated under 15A NCAC 2D .1806 "Control and Prohibition of Odorous Emissions" (Specific Condition 14 of the proposed Draft Air Permit). 15A NCAC 2D .1806(f) requires an Odor Management Plan when a determination of Objectionable Odors is made by the Director based on a recommendation by staff at the local regional office according to the following:

15A NCAC 2D .1806(i):

- i. Determination of the existence of an objectionable odor. A source or facility is causing or contributing to an objectionable odor when:
 - a. a member of the Division staff determines by field investigation that an objectionable odor is present by taking into account the nature, intensity, pervasiveness, duration, and source of the odor and other pertinent such as wind direction, meteorology, and operating parameters of the facility;
 - b. the source or facility emits known odor-causing compounds such as ammonia, total volatile organics, hydrogen sulfide, or other sulfur compounds at levels that cause objectionable odors beyond the property line of that source or facility; or
 - c. the Division receives from the State Health Director epidemiological studies associating health problems with odors from the source or facility.

These determinations are typically driven by citizen complaints but can also be made based solely on a DAQ inspector's observations. Odors are regulated consistently throughout NC by DAQ. In all cases, the same odor condition referencing 15A NCAC 2D .1806 is placed in applicable air permits and in all cases, the requirement for an Odor Management Plan is based on field observations by staff in accordance with the procedures above.

Hearing Officer Recommendation:

No changes to the draft permit are deemed necessary to address these comments.

Comment Category #4: Other Matters Not Related to Air Quality

- *In addition to air pollution, we have potential water pollution, noise, traffic...and fire hazards.*
- *...effects on water quality should be reviewed.*
- *Concerns with health effects from constant and intermittent loud noise from all three facilities and the addition of nighttime noise from the asphalt plant.*
- *Emissions from the asphalt plant will have a huge negative impact on the economy of our town, through a decrease in the tourism on which our businesses depend and a fall in real estate values anywhere near the plant.*
- *Having an asphalt plant within a mile of downtown will be detrimental to the quality of life both through its terrible odor, traffic, and quality of air, as well as adversely affecting*

the reputation of our mountain county as a clean, healthy area in our beautiful mountains. This will also affect our investment if we cannot attract tenants and tourists who will spend their dollars in our county because of dirty air and stench.

- *Asphalt plants are known to decrease property values of nearby residential homes in WNC*

Hearing Officer's Response to These Comments:

While most of the comments received were thoughtful and worth considering in the proper forum, some of the comments were not directly related to the proposed Madison Asphalt, LLC air quality permit application or the air quality permitting process. As such, these comments fall outside the purview of this public hearing and are therefore not directly addressed in this report.

Hearing Officer Recommendation:

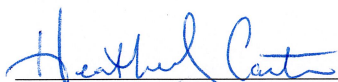
No changes to the draft permit are deemed necessary to address these comments.

V. Conclusions and Recommendations

North Carolina General Statute 143.215.108(c)(5a)b requires that an applicant satisfies to the Department that it “has substantially complied with the air quality and emission control standards applicable to any activity in which the applicant has previously engaged, and has been in substantial compliance with federal and state laws, regulations, and rules for the protection of the environment.” The proposed Madison Asphalt, LLC is a new facility, having no previous permit with the DAQ and therefore no compliance history.

After considering all the public comments addressing whether or not DAQ should issue an air quality permit for the proposed Madison Asphalt, LLC to allow the construction and operation of an asphalt plant at 3807 US 25/70 in Marshall, NC, it is the recommendation of the hearing officer that the Director issue the Air Quality permit as it was drafted at the time of public notice.

Additionally, I recommend DAQ staff remain sensitive to the health of the nearby communities and to the concerns that will remain should the asphalt plant begin operation. This can be accomplished through thorough frequent inspections and prompt responses to the citizen's air quality concerns and complaints.



Heather S. Carter, CPM, Hearing Officer

May 24, 2021

Date

Hearing Officer's Report and Recommendations

Madison Asphalt, LLC
Digital Public Hearing via Webex
May 3, 2021

SUPPORTING DOCUMENTATION

Permit Application Review
Draft Permit
Notice of Public Hearing
Public Hearing Attendance Forms
169 E-mailed Public Comments
Audio of Public Hearing Comments