

Blue Ridge Environmental Defense League

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May 25, 2017

Michael S. Regan, Secretary
North Carolina Department of Environmental Quality
217 West Jones Street
Raleigh, NC 27603

**RE: Air Permit No. 10445R00, Appalachian Materials LLC, Ashe County
Facility ID#0500074, 1073 Glendale School Road Glendale Springs, NC**

Dear Secretary Regan:

On behalf of the Blue Ridge Environmental Defense League and our chapter Protect Our Fresh Air, I write to request that you initiate action to reopen the permit issued by the Division of Air Quality for an asphalt plant in Glendale Springs. Unless your office takes action, the permit will create an unbearable injustice for a unique population living in close proximity to the site of the proposed plant: the children of Camp New Hope.

We believe that the permit does not merely fail to comply with state statutes and regulations, its issuance was based on a woefully inadequate application submitted by the applicant and a complete abuse of discretion by the agency.

Background

On August 11, 2015, Appalachian Materials, LLC submitted an application to the North Carolina Division of Air Quality to build and operate a drum-mix asphalt plant on Glendale School Road in Glendale Springs, NC. The asphalt plant site is the present site of a gravel quarry, which has had a series of permit violations and off-site impacts.

On October 5, 2015, during the public comment period for Permit No. 10445R00, Blue Ridge Environmental Defense League requested that the Division of Air Quality complete a health impact study before proceeding with the permit. As discussed below, the proposed asphalt plant is in close proximity to a camp for children with health problems and disabilities, and will have a devastating impact on the children and the camp.

Even after testimony at a public hearing on the potential health impacts, the supervisor of the Winston-Salem Regional Office approved the permit on February 26, 2016, allowing construction and operation of a drum-mix asphalt plant with a production limit of 300 tons per hour and 300,000 tons per year.

Legal Basis for Request to Re-open

A unique constellation of circumstances— an extremely vulnerable population, the river valley terrain, and the imminent pollution from an asphalt plant— exist at the Glendale site. The

Division of Air Quality could not have ascertained whether the permit met statutory standards without detailed study beyond the standard air permit review. To our knowledge, no in depth health study was ever performed, and the special needs of the campers were completely ignored.

As you know, North Carolina policy is "to maintain for the citizens of the State a total environment of superior quality." NCGS § 143-211. Further, the state's Persons with Disabilities Protection Act, requires North Carolina, "to ensure equality of opportunity...and to encourage and enable all persons with disabilities to participate fully to the maximum extent of their abilities in the social and economic life of the State...to use available public accommodations and public services, and to otherwise pursue their rights and privileges as inhabitants of this State." See NCGS § 168A-2. And state regulations at 15A NCAC 02D .1101 set forth purpose of the rules under this part as "the control of toxic air pollutants to protect human health." The permit is an egregious affront to the campers.

The DEQ has ample authority to accede to our request to reopen the permit, viz.

Permit Condition A.18. PERMIT REOPENING - In accordance with 15A NCAC 2Q .0309 and N.C.G.S. 143-215.108(c), upon the Director becoming aware of any credible air emissions data not previously considered by the DAQ during the application review process, the Director may require the Permittee to submit additional information including, but not limited to, emissions estimates and air dispersion modeling. Based on this information, the Director may modify and reissue the permit with additional emission controls and/or additional operational restrictions necessary to demonstrate compliance with any applicable regulation.

The existence of Camp New Hope and its special population was ignored in the application and, apparently, by the agency issuing the permit. It is clear to us that modeling that includes the vulnerable populations will lead to the conclusion that the proposed asphalt plant does not comply with applicable regulation.

Unique Vulnerable Population

The reason for reopening the permit is to address the specific consequences of the proposed permit on Camp New Hope, a nonprofit facility offered free of charge to families who have "children with life-threatening medical conditions or serious diseases for which there is no known effective treatment or cure." A physician's assessment is part of the camp's visitor application process. The Camp New Hope website is located at www.campnewhopenc.com

Randy Brown, Camp New Hope's Director, describes some of the medical problems visitors face:

SMA—spinal muscular atrophy, Battens, trisomy 16 and 18, mitochondrial conditions, pulmonary edema, various types of cancer, seizure disorders, 85 percent of our children are in wheelchairs, feeding tubes, some type ventilators and can't talk. 25 percent are legally blind. We have a number who have cerebral palsy and multiple symptoms....All have compromised immune systems....I had 2 little boys pass away in December, two

little girls in April and a boy with Battens Wednesday of this week. My children are very, very sick.

Spinal muscular atrophy (SMA), also called autosomal recessive proximal spinal muscular atrophy and 5q spinal muscular atrophy in order to distinguish it from other conditions with similar names, is a rare neuromuscular disorder characterized by loss of motor neurons and progressive muscle wasting, often leading to early death.

Battens disease is an extremely rare and fatal autosomal recessive neurodegenerative disorder that begins in childhood. It is the most common form of a group of disorders called the neuronal ceroid lipofuscinoses (diseases which are inherited in an autosomal recessive manner).

Mosaic trisomy 16, a rare chromosomal disorder which disables but does not prevent live birth. The syndrome occurs when only some of the cells in the body contain the extra copy of chromosome 16. Some of the consequences include slow growth before birth.

Edwards syndrome, also known as trisomy 18, is a genetic disorder caused by the presence of all, or part of a third copy of chromosome 18. Many parts of the body are affected. Babies are often born small and have heart defects. Other features include a small head, small jaw, clenched fists with overlapping fingers, and severe intellectual disability.

Additional conditions suffered by the children at Camp New Hope include spinocerebellar ataxia, hydrocephaly, seizure disorders, microcephaly, Rett Syndrome and others. Below are photos of three of Camp New Hope's visitors: Ilona, Preston and Aubrey.



The children come to the camp to get out to nature in a safe and healthful environment.

Unusual Air Pollution Conditions

Asphalt plants are regulated as point sources of air pollution. The principal source is the main smoke stack which carries emissions from the aggregate dryer and exits to the atmosphere after passing through the baghouse filter. But in addition to the main stack, asphalt plants have many sources of emissions including the asphalt cement heater and storage tank, fuel tanks, conveyor

belts, hoppers and other equipment close to ground level. Because these emissions occur close to ground level and are not ejected upwards through the main stack, wind velocity is reduced and air pollution is not subject to the dispersion which occurs at higher levels. Stagnant air conditions and inversions increase the level of exposure to the local community. The photo below was taken overlooking the South Fork of the New River in Glendale Springs in the vicinity of the proposed asphalt plant site.



Fugitive emissions are pollutants not emitted from the stack but released to the atmosphere. Based on the annual consumption of asphalt cement, one can calculate the asphalt vapor fugitive emissions from any plant. Asphalt cement typically comprises 5% (0.05) of the total hot mix plant production. Fugitive air emissions equal 1.07% (0.0107) of the consumed asphalt cement.¹

So, for an asphalt plant producing 300,000 tons of hot mix asphalt per year:

$$300,000 \text{ tons hot mix} \times 0.05 = 15,000 \text{ tons/year of asphalt cement consumed.}$$

$$\begin{aligned} \text{Fugitive air emissions equal 1.07\% (0.0107) of the consumed asphalt. } & 15,000 \times 0.0107 \\ & = 161 \text{ tons per year of asphalt vapor fugitive emissions} \end{aligned}$$

The bulk of these fugitive emissions are condensed particulates. Volatile organic compounds are about 29% of the total. Therefore, about 47 tons of VOC and 114 tons of particulates may be emitted by a 300,000 ton/year asphalt plant as fugitive emissions.

The DAQ's Air Permit Review, which was the basis for the permit, indicated that the computer model used to predict pollution levels was compromised by the lack of representative surface

¹ Basis for this data is a mass balance analysis by Ravindra M. Nadkarni, Ph. D. in Metallurgy & Ceramic Engineering, University of Utah. Dr. Nadkarni authored or coauthored 70 professional papers or presentations on a variety of engineering subjects, including the economic impact of pollution control regulations, work which directly resulted in Section 119 of the Clean Air Act.

and upper air meteorological data at this location.² The DAQ used AERSCREEN instead of AERMOD. Meteorological data is necessary for AERMOD. EPA guidance for the use of AERMOD states:

Site specific meteorological data are assumed by definition to be representative of the application site; however, the determination of representativeness of site-specific data for AERMOD applications should also include an assessment of surface characteristics of the measurement and source locations and cannot be based solely on proximity.³

Emphasis added. Surface characteristics include, for example, whether a plant site is surrounded by tall trees or flat pavement, whether there is a water body or dry land or both, the smokestack release height, plume buoyancy, downwash considerations, design of the plant and so forth. These surface factors affect pollution travel, direction and speed. Without thorough analysis, the predictions of whether a plant can operate within pollution limits is only a guess.



The above Google map screen shot illustrates the position of Camp New Hope (upper left) with respect to the asphalt plant site (quarry, lower right). They are in close proximity on the South Fork of the New River.

Known Pollutants from Asphalt

Along with disease-causing particulates, there are a variety of toxic air pollutants associated with asphalt plants: mercury, nickel, arsenic cadmium, dioxins, benzene, formaldehyde, hydrogen

² NC Division of Air Quality Air Permit Review for Appalachian Materials, LLC, Glendale Asphalt Plant, App.# 0500074.15A, page 6.

³ AERMOD Implementation Guide August 3, 2015,
http://www3.epa.gov/ttn/scram/7thconf/aermod/aermod_implmntn_guide_3August2015.pdf

sulfide, MEK, tetrachloroethylene and many more. The impacts of these pollutants on the campers and the families living nearby will be devastating.

As part of the hearing process BREDL released its "Report on the Pollution Impacts from Appalachian Materials, LLC Proposed Asphalt Plant in Glendale Springs," Oct. 1, 2015.⁴ The report concludes that the Division of Air Quality's draft permit would not meet state standards for toxic air pollution and recommends that Ashe County take steps to ensure that its Polluting Industries Ordinance be strengthened in order to protect the health and safety of its people. That conclusion stands today.

Conclusion

At the present, the air quality permit is tied up in court on the issue of whether the activity complies with the Ashe County Polluting Industry Ordinance. This would be the time for you to take leadership and require your agency to reopen the permit and conduct the potential health risk study it should have done initially.

The members of BREDL, Protect Our Fresh Air, and Camp New Hope invite you and your staff to visit the camp and meet with the neighbors.

Thank you for your prompt attention to this matter.

Respectfully,



Louis A. Zeller
Executive Director

/s/ John D. Runkle

John D. Runkle
Attorney at Law

cc. Sheila Holman, Assistant Secretary
Michael Abraczinskas, Air Quality Director
Lisa Edwards, Regional Air Quality Supervisor, Winston-Salem Regional Office
Randy Brown, Camp New Hope

⁴ http://www.bredl.org/pdf5/151001_REPORT_15-274_Glendale_Springs_Appalachian_Materials.pdf