

Hearing Officer's Report and Recommendations

Carolina Sunrock, LLC – Prospect Hill Quarry and Distribution Center
Digital Public Hearing via Webex
September 21, 2021

Public Comment Period: August 9, 2021 through September 23, 2021

Pertaining to Permit Application No. 1700017.21A and
Draft Air Quality Permit No. 10694R00 for:

Carolina Sunrock LLC – Prospect Hill Quarry and Distribution Center
1238 Wrenn Road
Prospect Hill, NC, Caswell County
Facility ID No. 1700017
Fee Class: Synthetic Minor

Hearing Officer
Michael F. Koerschner, P.E.
Environmental Engineer, Asheville Regional Office

**Hearing Officer's Report
Carolina Sunrock LLC – Prospect Hill Quarry and Distribution Center
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I. Background

On November 18, 2019, the NC Division of Air Quality (DAQ) Winston-Salem Regional Office (WSRO) received an application package from Carolina Sunrock LLC, requesting an Air Permit for a rock quarry, an asphalt plant, and a truck-mix concrete batch plant to be located at 1238 Wrenn Road, Prospect Hill, Caswell County, NC. After reviewing the applications and public comments, DAQ conducted ambient air quality modeling of criteria pollutant emissions from the facility's proposed operations to assess compliance with the National Ambient Air Quality Standards (NAAQS). DAQ found that the facility, operated as proposed in the permit application, and under modeled conditions, would cause violations of the nitrogen dioxide and sulfur dioxide NAAQS beyond the property boundaries. Therefore, the permit application was denied. The letter denying the air quality permit application was issued August 24, 2020.

On April 22, 2021, the North Carolina Department of Environmental Quality (DEQ), Division of Air Quality-WSRO, received a new air quality permit application (App. No. 1700017.21A) from Carolina Sunrock LLC to construct and operate a rock quarry, an asphalt plant, and a truck-mix concrete batch plant at 1238 Wrenn Road, Prospect Hill, Caswell County, NC. This new application addressed the permitting concerns in the mentioned August 24, 2020 air permit denial letter. Pending issuance of the draft air quality permit, Carolina Sunrock LLC plans to construct and operate:

- rock quarry operations (1200 tons per hour maximum capacity);
- a drum-mix asphalt plant (250 tons of asphalt per hour maximum capacity); and
- a truck-mix concrete batch plant (120 cubic yards concrete per hour maximum capacity).

The proposed facility will be subject to several North Carolina Air Quality Regulations, emission standards, as well as the federal New Source Performance Standards (NSPS) Subpart I (asphalt plant only), Subpart OOO (RAP and rock quarry operations), Subpart IIII (diesel engines) and Subpart JJJJ (spark-ignited engines) 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 air pollution sources and air pollution control equipment to ensure compliance with all applicable federal and state regulations. As a new facility, Carolina Sunrock LLC is required to apply for and receive an air quality permit prior to installing rock quarry operations, an asphalt plant, and a concrete batch plant at 1238 Wrenn Road, Prospect Hill, Caswell County, NC. Additionally, the proposed facility is required to demonstrate compliance with state laws governing the release of toxic air pollutants. On April

22, 2021, Carolina Sunrock LLC submitted an application to the DAQ-WSRO requesting an air permit for the 1238 Wrenn Road site. It is noted that this proposed site is located in an area without zoning; therefore, the applicant is required to publish a legal notice in accordance with 15A NCAC 02Q .0113. The application also contained a letter that stated that a public notice was published on April 7, 2021 in the Caswell Messenger and that a sign was posted on April 1, 2021. A notarized Affidavit of Publication was also included with a scanned copy of the newspaper clipping. Date-stamped photographs provided indicate that the sign was posted as required on April 1, 2021. A Zoning Consistency Determination, signed by Bryan S. Miller, County Manager, Caswell County Local Government, dated March 30, 2021, attesting that “the *proposed operation is consistent with applicable zoning and subdivision ordinances,*” was received with the permit application.

Dylan Wright, permit engineer in the DAQ WSRO, reviewed the application submitted by Carolina Sunrock 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. Matthew Porter and Nancy Jones, meteorologists in DAQ Raleigh Central Office (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 affected operations located at the site. The site-wide total emissions of arsenic, benzene, formaldehyde, mercury, and nickel were estimated to exceed the modeling thresholds, also known as the toxic air pollutant (TAP) permitting emission rates (TPERs) outlined in 15A NCAC 02Q .0711. Site-wide criteria pollutants including particulate matter (PM_{2.5} and PM₁₀), nitrogen dioxide (NO₂), and sulfur dioxide (SO₂) were modeled for comparison with the National Ambient Air Quality Standards (NAAQS). PM concentrations were modeled for comparison with the State Ambient Air Quality Standards (SAAQS)

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/SAAQS.

Unless the public comments received during the public hearing process reveal that DAQ was in error or incomplete in its evaluation of the proposed rock quarry, asphalt plant, and concrete batch 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 Carolina Sunrock LLC. The below hearing officer responses to written and oral public comments will address issues raised in light of these requirements (Section IV).

III. Notice of Public Hearing

The Division of Air Quality regulations do not require a hearing or comment period for the issuance of this draft air permit. 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 Carolina Sunrock LLC was posted on the DAQ website and a press release was issued on August 9, 2021.

The notice of public hearing on the draft air quality permit for Carolina Sunrock LLC was published in the *Burlington-Times News* on August 9, 2021 and *The Caswell Messenger* on August 11, 2021, and on the Division of Air Quality's website on August 9, 2021.

Copies of the air quality permit application, draft permit application review, draft air permit, and dispersion modeling review memoranda were posted on the DAQ website for public review. Copies of the air quality permit application and related documents were also available for public review in DAQ's Winston-Salem Regional Office (WSRO) and Raleigh Central Office (RCO) throughout the public comment period. On September 21, 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, voicemail, and electronic mail in addition to the oral comments received during 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 Carolina Sunrock facility are very concerned about potential impacts on their health, the environment, and their local economy. During the WebEx public hearing on September 21, 2021, approximately 70 attendees were logged in (in attendance). Twenty-two (22) people had registered to speak in advance. Seventeen (17) attendees spoke. The commenters were predominantly (16 of 17) opposed to the proposed Carolina Sunrock LLC facility. Two (2) voicemail comments and fifty-six (56) e-mail comments were received. All comments were given equal consideration, whether they were electronic mail, written, voicemail, or made orally at the virtual public hearing.

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. Comments in italics are direct quotes from submitted verbal or written comments, whereas non-italics are paraphrased from verbal or written comments.

Comment Category #1: General Concerns about Air Pollution

- A. The air quality impacts of this project on vegetation, including grazing and forest, have not been determined, can be significant, and may threaten our farm operation.*

Hearing Officer (HO) Response: The secondary National Ambient Air Quality Standards (NAAQS) are in place specifically to **provide public welfare protection**, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings. Based on the analyses done to evaluate compliance with the primary NAAQS, compliance with the secondary NAAQS has been demonstrated.

Comment Category #2: Permit Application Concerns

- A. The applicant claims the only difference between the 2019 and 2021 air permit applications is the use of ultra-low sulfur diesel...Explain why particulate (PM) pollution estimates have increased...*

HO Response: The potential facility-wide particulate (PM) increased because the company added in previously unquantified fugitive emissions.

- B. Due to commenter's impression that e-mail and phone conversations resulted in significant revisions during the permit review process: *Require the applicant to revise, update, and resubmit the air permit application.*

HO Response: Additional information received is considered part of the permit application and was referenced and incorporated in the air permit review. It is acceptable and not uncommon for a permit application to be amended after the initial submittal. These amendments are typically a result of questions and clarification requests by DAQ staff upon their engineering review. The format of these amendments is not restricted to the application forms. They can be in a supplemental form but must satisfy the minimum data needs of the review engineer. All permit application materials were available for public review in their entirety at the DAQ/Winston-Salem Regional Office and the DAQ/Raleigh Central Office. The draft permit review summarized any additional information received and the application chronology, as well as the final facility-wide potential emissions.

- C. *Forms have missing information and pollution control methods and systems are not fully identified. The type and configuration of all the equipment is not known.*
Action Requested: *Require applicant to provide all information on the systems and fill out all the forms completely.*

HO Response: Sufficient and substantial information was submitted for DAQ to identify the proposed equipment, conduct a comprehensive regulatory permit application/engineering review, and prepare a draft permit properly identifying the permitted equipment and regulatory requirements. Any additional information required by the air permit engineer to conduct these activities was requested and received from the company.

- D. *Diesel trucks are expected to line up and idle awaiting loadout throughout the day. Loaders are expected to operate continuously. The emissions from all the vehicles will add to the emissions of the facility and should be considered. After all, these vehicles are concentrated at this site because of the facility.*
Action Requested: *Evaluate and include emission from vehicles – dump trucks, delivery vehicles, loaders, and worker vehicles – into the facility wide estimates.*

HO Response: Modeling was performed on the stationary source equipment. Other air quality rules and emission standards apply to mobile source (vehicle) emissions.

- E. *The draft permit states if the facility does not use wet suppression, the Permittee shall repeat the NSPS performance tests within five (5) years of the previous test....it is unclear whether the performance tests will be required to be repeated every 5 years.*
Action requested: *Require the applicant to identify the systems, equipment, processes and procedures to control emissions and then determine whether subsequent performance tests will be required.*

HO Response: The draft permit correctly quotes the federal rule codified in 40 CFR Part 60 Table 3 to Subpart OOO. Some operations may not need water sprays to comply with the emission standards.

F. The applicant lists the cement/flyash weigh batcher as 25-ton capacity and the aggregate weigh batcher as 50-ton capacity in section 2.2.2. Forms A2, A3 have 5-ton and 20-ton, respectively. Require the applicant to revise the application and forms with the correct information.

HO Response: The initially submitted B forms were correct. The draft air permit lists the batchers as 5-tons and 20-tons, each. The nominal batcher size does not affect air emissions estimation because the emissions are a function of the amount of concrete produced – not the capacity of the weigh batchers.

*G. Form D1 is not correct and has not been updated. Form D1 is the key-primary form in the entire application that summarizes the facility wide pollutants.
Action Requested: Required the applicant to revise form D1 with the correct information.*

HO Response: The initially submitted Form D1 was updated June 6, 2021 with revised emission estimates. As indicated in the HO Response to 2.B., above, the draft air permit review summarizes facility-wide potential emissions.

H. Like the first application, there are errors and missing information. For example, the application lists a 1,200 ton per hour quarry production, but DAQ's review shows 1,500 tons per hour. The application lists the cement/flyash weight batcher as 25-ton capacity and the aggregate batcher at 50-ton capacity, but forms A2 and A3 show 5-ton and 20-ton capacities respectively. Form D1 lists 28.88 tons of particulate matter per year, yet the DAQ review lists 4 times that – 113.73 tons. Like you ruled in 2019, the application must be complete and accurate BEFORE DAQ can properly consider it.

HO Response: The draft air permit review has been corrected from 1,500 tons per hour to 1,200 tons per hour. The cement/flyash and aggregate weigh batchers nominal capacities are correct. The Form D1 particulate matter emissions were updated June 2, 2021. The permit review summarizes the facility-wide emission estimates.

*I. My understanding is that these sites were initially planned as a single facility, but this facility would have exceeded the requirements and limits mandated by you, the DAQ. Instead of merely following your guidelines, my understanding is that in order to skim below the minimums, the company divided the facility into multiple sites, so as to increase their allowed outputs and skirt your requirements.
Action Requested: please treat all company facilities in the area as it was originally intended — as one facility, and measure their output accordingly. I would urge that the DAQ combines the aggregate of the company's total pollutants in the area, and considers that aggregate when reviewing the permit. I assume one company is reaping the same monetary rewards of the combined facilities and therefore the combined pollutants from the split facilities should be treated as one as well.*

HO Response: Aggregating and modeling the combined impacts of all three facilities is not warranted. The modeling demonstrations have shown that the maximum impacts from each of the individual facilities occurs at or near their property boundaries and the impacts decrease exponentially as you move outward from the property boundaries. This is expected with the

types of sources modeled (i.e relatively low-level/close to the ground); thus, it is not expected that any appreciable combined impacts would be realized at the distances mentioned. The only times that the combined impacts of multiple facilities would be expected to be of concern is if the facilities were directly adjacent to or less than approximately 500 meters from one another or their emission source stacks were extremely tall.

Comment Category #3: Dispersion Modeling Concerns

- A. *DAQ denied the 2019 air permit application because of NO₂ levels exceeded NAAQS limits. The current application contains the same level of nitrogen oxides (NO_x). That should also be unacceptable.*

HO Response: The initial permit denial was based on simplified and conservative screening type dispersion modeling. The current modeling was based on more extensive and refined modeling using acceptable guidance for background monitors and Tier I/II concerns.

- B. *Revised air modeling analysis including cumulative impacts from the nearby already permitted Carolina Sunrock facility (Facility ID: 1700015) Air Permit number 10529R01 must be completed. Until the cumulative impacts are considered, this permit must be denied.*
- C. *As part of the application process, Carolina Sunrock and NC DAQ provided air dispersion modeling for the proposed Prospect Hill Quarry and Distribution Center. However, this air modeling failed to analyze the cumulative impacts from both of these Carolina Sunrock facilities. In Richmond County, NC DAQ did include a nearby facility (Enviva) in its air modeling for the International Tie Disposal (ITD) facility. The ITD permit, just like this Carolina Sunrock draft permit, was a synthetic minor – PSD avoidance permit.*
- D. *The proposed facility will emit harmful toxic pollutants such as benzene, particulate matter, arsenic, mercury, cadmium, among several others. With an already existing facility spewing similar pollutants, this highlights the need for a cumulative impact assessment. It is the combination of these effects, and any resulting environmental degradation, that should be the focus of this analysis.*

HO Response: See response to comment 2.I, above.

- E. *The current air modeling utilizes the adjusted friction velocity (ADJ_U*) option for low wind speed stable conditions. Since the previous air modeling did not use this ADJ_U* option, NC DAQ needs to provide an explanation for this change in modeling – especially since the same five-years of data were used.*

HO Response: The NC DAQ modeling was an initial conservative, screening level assessment. As such, the meteorological data did not include the adjust u* option (ADJ_U*). The modeling submitted using the ADJ_U* option was a refinement of the earlier screening level modeling. ADJ_U* is appropriately used in this application.

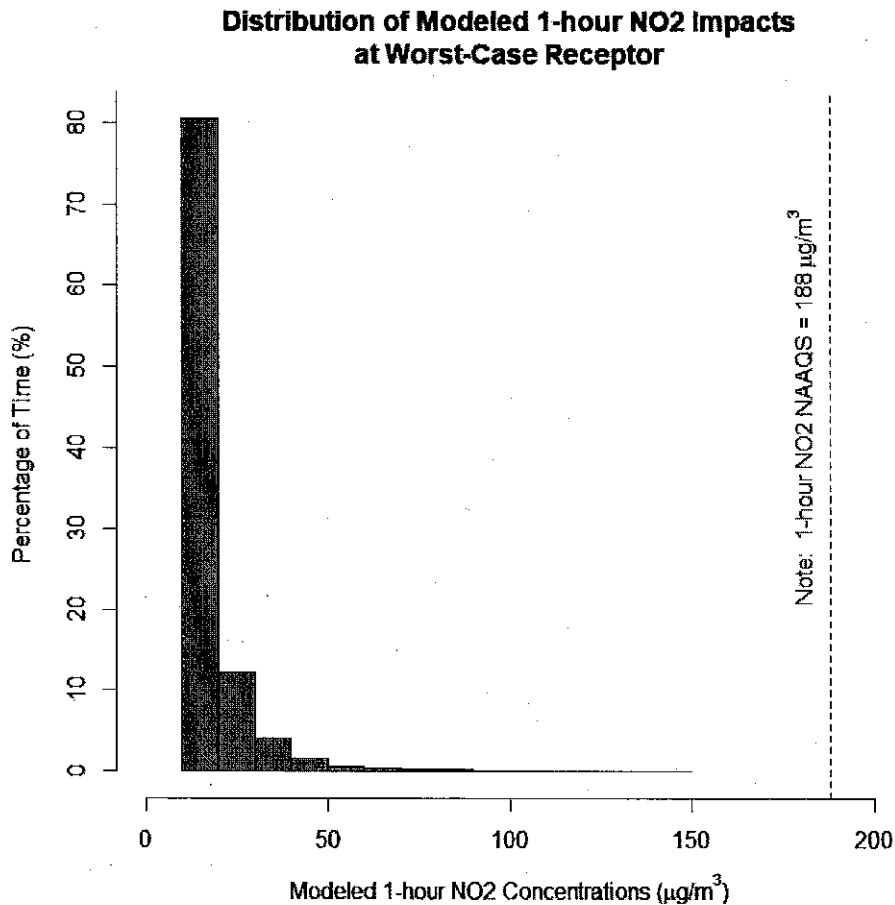
- F. *...in the previous air modeling, NC DAQ denied the permit – in part based on NO₂ Tier 1 modeling. For the current air modeling, Tier 2 was used. NC DAQ needs to provide an explanation as to why this change in modeling.*

HO Response: The NC DAQ modeling was an initial, conservative, screening level assessment. As such, the simpler NO₂ Tier 1 option was used. The modeling submitted using the Tier 2 option was a refinement of the earlier screening level modeling. Tier 2 is less conservative than Tier 1, but has been shown to be more accurate based on EPA AERMOD model performance evaluations.

G. The August 24, 2020 NC DAQ Air Modeling Review memo regarding the previous air modeling indicated that the background concentration for NO₂ is "about 60 ug/m³"¹. Now, a few months later, NC DAQ is stating that the background concentration for NO₂ is 15.3 ug/m³ using the 2015-2017 data. The NC DAQ 2015-2017 data indicates four NO₂ monitors² were in use (Forsyth, Lee, Mecklenburg and Wake) [See Attachment 2]. The Forsyth, Lee and Wake monitors are all identified as Urban location types on the NC Urban Toxics Network.³

HO Response: With the refined air modeling, a lower background NO₂ concentration was used. 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 monitoring site located nearest to the project is unavailable or unrepresentative of local conditions. As such, regional sites with available quality assured NO₂ data were reviewed based on distance and representativeness of non-modeled source inventories. The Blackburn Site (Lee County) was selected as the most representative "regional site" based on its rural setting and exposure to area sources such as lower-volume road traffic and other non-point biogenic and anthropogenic regional scale NO_x emissions inventories. Measurement data collected 2015-2017 at the Blackburn Site was considered sufficiently contemporaneous and representative of rural NO₂ concentrations expected at the Carolina Sunrock project location. The alternative "regional site" reviewed by NC DAQ (Hattie Avenue Site) is located one mile northeast of downtown Winston-Salem and was determined to be unrepresentative of the Carolina Sunrock project location due to its exposure to nearby high-volume road traffic and mobile source NO_x emissions as well as the urban non-point source NO_x emission inventories reflected in the NO₂ hourly monitoring data. While the NO₂ data collected at the Hattie Avenue Site was determined as unrepresentative for the Carolina Sunrock project locations, the SO₂ and PM_{10/2.5} data collected 2017-2019 there was determined to be sufficiently conservative to demonstrate that the modeled impacts added to the Hattie Avenue background concentrations would not cause or contribute to a violation of the SO₂ and/or PM_{10/2.5} NAAQS.

The dispersion models predict "worst case impacts" based on worst case air emissions combined with worst case meteorological conditions and worst case-receptor location. The typical hourly or daily impact from the proposed facility will almost always be significantly less than this worst case analysis. As an example to illustrate this point, the following NO₂ impact histogram from the approved modeling shows (at the worst case receptor) the impact to be well less than 30% of the NAAQS approximately 99% of the time.



Comment Category #4: Air Permit Concerns

A. Fabric filters in baghouses are the primary pollution control devices....With only an annual inspection, the facility could pollute above permitted thresholds for months before a problem is discovered.

Action Requested: *Require monthly visual inspections of the baghouse and fabric filters.*

HO Response: The bagfilter inspection and maintenance, as well as adherence to the manufacturer's recommendations, will be verified by the DAQ compliance inspector.

B. Do not allow an exemption of the mobile crusher.

HO Response: Portable (limited use) crushers are exempted from air permitting per a March 31, 2003 DAQ permitting procedures memo. The memo cites *“the sporadic nature of the operation of these crushers and the relatively insignificant amount of air emissions expected.”*

C. *Confirm that No 4 Fuel oil has the same emission factor as Recycled No. 4 Fuel oil.*

HO Response: For the recycled No. 4 oil, the Permittee will be required to demonstrate through sampling and analysis (typically supplier certifications) that the recycled oil is equivalent to virgin oil per established protocols (per draft permit Condition A.23.) The sulfur content, as well as metals and several other parameters are included in this sampling and analysis to ensure this fuel is equivalent. More information on the DEQ Recycled Oil Management Program can be found at <https://deq.nc.gov/about/divisions/air-quality/air-quality-compliance/recycled-oil-management-program>.

D. *DAQ was not provided information on how the applicant will control fugitive dust.*

Action Requested: *Require the facility to develop, implement, and comply with a fugitive dust control plan. Review and approve the plan before the air permit is approved. The plan should include controlling fugitive dust emissions at unloading and loading areas, process area stockpiles, stockpile working areas, plant parking lots, plant roads (access and haul roads), conveyors, screens, transfer points, crushers, silos, truck loadout points, aggregate weigh batcher, etc*

E. *Covering equipment and sources reduces fugitive emissions.*

Action Requested: *Require components of the HMA and concrete plants be covered or enclosed to limit fugitive emissions. This includes conveyors, tops of silos, loading stations, and gobb hopper.*

HO Response: Emissions control techniques are specified in the permit for fugitive emissions from the crushers, haul roads, and front-end loader work area. The air permit requires a water truck on site at all times and that *“The haul roads and front-end loader work area shall be adequately maintained by wet suppression to minimize fugitive emissions.”*

Fugitive dust concerns, if substantiated, can be addressed by DAQ compliance staff through 15A NCAC 02D .0540 "Particulates from Fugitive Dust Emission Sources." This regulation has a clear mechanism for requiring a fugitive dust plan if deemed necessary.

F. *Recycled/reclaimed asphalt pavement (RAP) composition may be unknown. The addition of unknown composition RAP into the HMA drum is a concern as all RAP is not the same and that subsequent loads and batches may have different composition. Some batches may contain chemicals, waste materials, heavy metals, oils, paints, adhesives, solvents, etc. that have been applied or accumulated prior to being removed from pavements and roofs. When added to the HMA drum, they may emit odors and pollutants at different levels and include pollutants not in the review and analysis.*

Action Requested: *Have strict requirements and record keeping regarding the composition of RAP to ensure the composition is consistent and the emissions are known.*

G. *Include the emissions caused by adding RAP to the HMA drum into the facility emissions calculations. Require the facility to use only RAP meeting an industry standard and not contain any materials or compounds (such as rubber or plastics) that would cause*

additional pollution or odors when added to the HMA drum. Require applicant to maintain records from the suppliers certifying each batch or load of RAP. If the RAP is found to be contaminated, not clean, or substandard, then require the permit for the use of RAP to be withdrawn and the stockpiles and RAP equipment removed from the property.

HO Response: RAP addition is commonly used by most asphalt plants as a way of recycling road material and reducing needed liquid asphalt cement. The emission factor determinations in EPA Document AP-42 Chapter 11.1 Hot Mix Asphalt Plants used stack testing from numerous plants when running RAP. Therefore, drum dryer emissions from processing RAP are already included in the emissions estimates. In addition, page 11.1-3 of the AP-42 document indicates “A counterflow drum mix plant can normally process RAP at ratios up to 50 percent with little or no observed effect upon emissions.”

H. In the draft permit for NSPS monitoring requirements, DAQ is requiring the permittee to perform monthly periodic inspections to check that water is flowing...Monthly is too long a period between inspections.

HO Response: The permit condition directly reflects the federal requirements of NSPS Subpart OOO. The Division does not see a need to require monitoring more stringent than this federal requirement.

I. Limit the amount of asphalt produced to a daily amount.

HO Response: It would be inappropriate to designate a daily limit for an annual requirement in this case. The regulatory basis for the identified limitation is an annual (12-month rolling) basis and it is not necessary or appropriate in this case to limit daily production.

J. For the fabric filter requirements in the draft air permit, the permittee shall perform periodic inspections and maintenance as recommended by the equipment manufacturer. No manufacturer's recommendations were provided in the materials for public review. The baghouses are extremely important because they are the primary filter for particulate matter.

Action Requested: *Obtain, review, and mandate manufacturer inspections and maintenance recommendations. Add additional requirements if the manufacturer recommendations are inadequate.*

HO Response: The bagfilter inspection and maintenance, as well as adherence to the manufacturer's recommendations, will be verified by the DAQ compliance inspector.

K. DAQ intends to permit Carolina Sunrock LLC to produce 5 toxic air pollutants (TAPs) - formaldehyde, mercury, nickel, arsenic, and benzene - at rates significantly higher than their permitting emission rates (TPERs) by scaling up TAPs to their acceptable ambient levels (AALs). As an example, Carolina Sunrock estimated they will pollute a total of 198 pounds per year of benzene from the entire facility, however, DAQ is drafting a permit to allow them to pollute 854 pounds per year from just the asphalt drum. Allowing the facility to pollute over four times more than they estimated does not improve the outdoor air quality of North Carolina or protect its citizens. DAQ should not permit toxic

chemicals at these high rates and should restrict them as much as possible to protect the environment and our citizens. Workers, visitors, inspectors, animals, and the environment inside the property boundary will be exposed to high levels of these 5 TAPs above what is known to be healthy especially during climatic conditions such as inversions.

Action Requested: *Only allow emission rates of TAPs, HAPs, and PM to what was calculated and not scaled up.*

- L. *DAQ intends to permit Carolina Sunrock LLC to produce benzene at a rate significantly higher than its permitted emission rate (TPER) by scaling up the emission to its acceptable ambient level (AAL). That basically means that the level of benzene will be greater than what has been determined healthy within the property boundary. The modeling of benzene dispersion does not consider all benzene emitting sources at the facility such as from dump trucks, delivery vehicles, loaders, and worker vehicles. Diesel trucks are expected to line up and idle awaiting loadout throughout the day. Loaders are expected to operate continuously. The emissions from all the vehicles will add to the emissions of the facility and may cause the AAL of benzene to be exceeded at the property boundary.*

Action Requested: *Evaluate all emitting sources of benzene and include in modeling to determine if the level is truly acceptable.*

Action Requested: *Deny the air permit because the facility will be releasing benzene at higher concentrations than are considered healthy.*

Action Requested: *Deny the air permit because the facility will be releasing arsenic at higher concentrations than are considered healthy.*

Action Requested: *Deny the air permit because the facility will be releasing formaldehyde at higher concentrations than are considered healthy.*

Action Requested: *Deny the air permit because the facility will be releasing mercury at higher concentrations than are considered healthy.*

Action Requested: *Deny the air permit because the facility will be releasing nickel at higher concentrations than are considered healthy.*

- M. *Do not write the permit for any more emissions or operations than the application says Sunrock expects to produce on an ordinary basis. Do not allow them a cushion to pollute more.*

HO Response: Carolina Sunrock requested scaled-up air emissions in the air permit application and adequately demonstrated compliance through dispersion modeling analyses. Scaling up is an option conducted by some permitted facilities to provide a compliance margin. These analyses were reviewed and approved by DAQ engineers and meteorologists. DAQ has no legal basis to deny these requested emission limitations that comply with the applicable air quality regulations. In addition, the NC Toxics Air Pollutant Regulations do not apply to the identified mobile sources. More information on acceptable ambient levels and mobile sources can be found here:

<https://files.nc.gov/ncdeq/Air%20Quality/toxics/risk/sab/aaldisc.pdf>

- N. *Condition A.11B.i and ii (page 8) limitations are unclear with regards to the referenced statute 15A NCAC 2D .0524/ 40 CFR Part 60. Clarification is needed as to how the specific limits were derived from statutes.*

HO Response: Condition A.11.B.i and ii limitations are taken directly from federal regulation 40 CFR 60.92 (40 CFR Part 60 / NSPS Subpart I) which is incorporated by reference by state regulation 15A NCAC 02D .0524.

- O. *Unsure why Condition A.13.b.i is listed in the permit when this affected facility will have commenced after April 22, 2008. Including A.13.b.i. limit only serves to add confusion in the permit for the applicable limits. Only A.13.b.ii should be included in the permit.*

HO Response: Some NSPS (including Subpart OOO) rule emission standards are based on the manufacture date of each piece of the equipment itself. Condition A.13.b.i is part of a standard format “boiler-plate” permit condition and will remain in the air permit as is.

- P. Comment No. 1 - Permit Condition No. A.3.

The last sentence of this condition contains the following - ***“Placement of the emission sources, configuration of the emission points, and operation of the sources shall be in accordance with the submitted sitewide NAAQS dispersion modeling analysis and should reflect any changes from the original analysis submittal as outlined in the AQAB review memo.”*** Carolina Sunrock requests that the phrase ***“and should reflect any changes to the original analysis submittal as outlined in the AQAB review memo”*** be removed from the permit as the revisions themselves rather than DAQ’s comments on the revisions should be used. Accordingly, the condition should be revised to: ***“Placement of the emission sources, configuration of the emission points, and operation of the sources shall be in accordance with the submitted sitewide NAAQS dispersion modeling analysis, including Permittee’s revisions to the original analysis submittal.”***

HO Response: The primary concern for this permit condition is the facility be constructed and operated as modeled (source location, stack height, etc.). I understand the commenter’s concern and the permit condition will be revised to keep the intent and improve clarity as follows:

“Placement of the emission sources, configuration of the emission points, and operation of the sources shall be in accordance with the submitted sitewide NAAQS dispersion modeling analysis and should reflect the modeling analysis that was reviewed and approved by the DAQ Air Quality Analysis Branch (AQAB) on March 23, 2021.”

- Q. *Carolina Sunrock requests that the words "filterable" and "(Method 5)" be added to Permit Condition No. A.11.b.i. as follows: "contain filterable particulate matter (Method 5) in excess of 90 mg/dscm (0.04 gr/dscf); or". 40 CFR 60, Subpart I only regulates filterable particulate matter.*

HO Response: The Division agrees 40 CFR 60, Subpart I only regulates filterable particulate matter as stack tested by EPA Reference Method 5. We have implemented this regulation in this manner consistently for all affected asphalt plants in North Carolina. However, the permit condition directly reflects the wording of the Federal rule which also simply indicates “particulate matter.” The permit will not be changed at this time.

- R. *Carolina Sunrock does not have any "wet material processing operations" as defined within 40 CFR60, Subpart 000. As such and to simplify issues and to remove*

confusing permit language, we suggest that all references to "wet material processing operations" be removed from the permit.

HO Response: The Division acknowledges the suggestion, but will leave the standard format "boiler-plate" condition in the air permit.

- S. The table in this permit condition [A.16.] implies that testing for NSPS (Subpart I) must include Test Methods 5 and 202. As stated in Comment No. 2 above, Subpart I only has emission limits for filterable particulate matter which is only Method 5. We request that DAQ modify the table to correct this implied error.*

HO Response: The testing condition also refers to total particulate matter limits of 15A NCAC 02D .0506 which does require the inclusion of condensable particulate matter. The Division agrees that only the filterable portion of the total PM test will be compared to the NSPS Subpart I limitation. Method 202 will still be required as part of the 02D .0506 compliance determination. No changes will be made to this permit condition.

- T. Condition No. 16.d. requires a 30 day written notice of the test date as required by NSPS, Subpart A. The NC DAQ Rule 15A NCAC 02D .2602 requires a 15 day notice. As the NSPS has been accepted into the NC SIP and regulations, we request that DAQ amend this requirement to 15 days to be consistent with the DAQ testing rules. We see no need for a 30 day written notice where, in all other testing situations, DAQ allows a 15 day notice.*

HO Response: The Division cannot waive the federal NSPS requirement. The 30-day notification will remain in the air permit.

- U. Condition No. 16.e. requires testing for each fuel. Carolina Sunrock requests that this permit condition be amended consistent with Permit Condition Nos. A.14.f. and g. of the Draft Burlington North permit for the asphalt permit with the same fuels. Even though we are permitting multiple fuels, a change of fuel requires a change of burner, which will not occur on a regular or periodic basis.*

HO Response: DAQ agrees that testing should encompass only the fuel(s) being used. The draft permit condition will be aligned with the draft Burlington North permit. DAQ can require additional testing with any fuel switch.

- V. Condition No. A.18. - Carolina Sunrock requests that the toxic air pollutant table in the draft permit be corrected according to the table below [see comment], as these corrections align with the permit application submittal, air dispersion modeling analysis, and Draft Burlington North Permit (which has the same proposed toxic air pollutant limits as Prospect Hill Quarry and Distribution Center).*

HO Response: DAQ has reviewed the subject table and has made corrections accordingly. Specifically, the Nickel Metal Emission Limit for ES-ACH-1 was a result of a typographical error and has been updated in the draft permit and draft permit review.

The Formaldehyde and Benzene emission limits had been previously transcribed from the dialog in the permit application text (Table 4-6) which was inaccurate. The toxic modeling was conducted using the emission calculations. Therefore, the emission limits for ES-ACH-1 and ES-ACH-2 for Formaldehyde and Benzene will be changed to correctly match what was modeled. The suggested corrections were made for these two pollutants in the draft permit and draft permit review.

The emission source descriptions for the asphalt silos and the loadout operation were updated to include all of the sources in the table in the permit.

W. Permit Condition No. A.21. - Carolina Sunrock requests that this permit condition be removed from the permit. The requirements in 15A NCAC 2Q .0304, including those related to zoning, merely specify the material to be included in the permit application and have already been satisfied by Carolina Sunrock. There is no basis to include an application condition that has already been met as an ongoing condition of the permit. Further, this condition is atypical for synthetic minor asphalt plants such as Sunrock, as is evident by reference to the following permits issued within the past three months for similar facilities, none of which include an equivalent provision: (i) Permit No. 05428R16 issued September 3, 2021 to Maymead Materials; (ii) Permit No. 02676R21 issued August 19, 2021 to Barnhill Contracting Company; (iii) Permit No. 01406R15 issued August 27, 2021 to APAC-Atlantic. The inclusion of this provision in the final permit would both exceed the agency's authority and be arbitrary and capricious.

HO Response: DAQ's authority regarding local zoning laws in the context of the air quality permitting process is described in G.S. 143-215.108(f):

An applicant for a permit under this section for a new facility or for the expansion of a facility permitted under this section shall request each local government having jurisdiction over any part of the land on which the facility and its appurtenances are to be located to issue a determination as to whether the local government has in effect a zoning or subdivision ordinance applicable to the facility and whether the proposed facility or expansion would be consistent with the ordinance ... The determination shall be verified or supported by affidavit signed by the official designated by the local government to make the determination and, if the local government states that the facility is inconsistent with a zoning or subdivision ordinance, shall include a copy of the ordinance and the specific reasons for the determination of inconsistency. A copy of any such determination shall be provided to the applicant when it is submitted to the Commission. The Commission shall not act upon an application for a permit under this section until it has received a determination from each local government requested to make a determination by the applicant. If a local government determines that the new facility or the expansion of an existing facility is inconsistent with a zoning or subdivision ordinance, and unless the local government makes a subsequent determination of consistency with all ordinances cited in the determination or the proposed facility is determined by a court of competent jurisdiction to be consistent with the cited ordinances, the Commission shall attach as a condition of the permit a requirement that the applicant, prior to construction or operation of the facility under the permit, comply with all lawfully adopted local ordinances, including those cited in the determination,

that apply to the facility at the time of construction or operation of the facility. If a local government fails to submit a determination to the Commission as provided by this subsection within 15 days after receipt of the request, the Commission may proceed to consider the permit application without regard to local zoning and subdivision ordinances ...

This statute authorizes DAQ to include a zoning permit condition only where the local government has made the determination that a facility is inconsistent with a zoning or subdivision ordinance. In this case, Caswell County through its County Manager issued a zoning consistency determination on March 31, 2021, attesting that "*the proposed operation is consistent with applicable zoning and subdivision ordinances.*" In light of this consistency determination, the statute does not confer authority on DAQ to include permit condition A.16. This determination is consistent with DAQ's July 31, 2000 Zoning Consistency Determination Guidance Memorandum, which stated that DAQ's zoning consistency determination language would be included in permits as a specific condition "only if the local government states that the facility is inconsistent with a zoning or subdivision ordinance."¹

Therefore, I recommend the zoning permit condition be removed from the draft air permit.

X. Permit Condition No. A.22. - Condition A.22.d. requires quarterly reporting. Carolina Sunrock requests that this be changed to semiannual reporting. As currently written, this permit requires more stringent reporting than a Title V permit. DAQ has deemed semiannual reporting appropriate for major facilities, and there is no legitimate reason to impose a more stringent reporting standard against Carolina Sunrock as a synthetic minor facility.

HO Response: Reporting frequency is determined by the permitted facility's expected emissions. In this case, quarterly reporting is warranted to ensure maintenance of synthetic minor status. If actual emissions remain well below thresholds, the reporting frequency can be relaxed with future permit revisions.

Comment Category #5: Community Pre-Existing Health Concerns

- A. This is already a sick county.*
- B. According to the 2019 Caswell County Health survey, Caswell County, compared to the State average, has rates of death and heart disease, cancer, and diabetes.*

HO Response: The Division acknowledges and understands the community health concerns highlighted above. Many of these same health concerns can be found in varying degrees in communities throughout North Carolina. Health concerns of many types are considered in great detail during the regulatory standard development process. Compromised and sensitive populations, such as the young, elderly, asthmatics, and health compromised are considered in State and Federal standard development. Margins of safety, at times factors of 10 to 400, are imbedded in these developed standards. More information on NC Toxics standard development can be found here: <https://files.nc.gov/ncdeq/Air%20Quality/toxics/risk/sab/aaldisc.pdf>

¹ Available at <https://files.nc.gov/ncdeq/Air%20Quality/permits/memos/newzoning.pdf>.

These NC acceptable ambient air levels are set at a conservative value following recommendations provided by an independent scientific advisory board to protect the public health with a protective margin. More information on Federal National Ambient Air Quality Standard development (including Science and Risk Assessment) can be found here:

<https://www.epa.gov/criteria-air-pollutants/process-reviewing-national-ambient-air-quality-standards>

Comment Category #6: Title VI & Environmental Justice Concerns

- A. *The Report examines Caswell County in a multitude of specific conditions in the categories of Race and Ethnicity, Age Groups and Sex, Disability, Household Income, Per Capita Income as well as Poverty. The great majority of conditions examined indicate concerning disparities when compared to the State. The report goes on to recognize that "Caswell County is designated as a Tier 1 county by the NC Department of Commerce. Tier 1 counties encompass the 40 most distressed counties based on average unemployment rate, median household income, percentage growth in population, and adjusted property tax per capita."*

HO Response: DEQ prepared an Environmental Justice (EJ) Report for the proposed Sunrock LLC facility that analyzed sociodemographic data (race, ethnicity, and poverty, county health data, and state designated Tribal statistical areas) in conjunction with the draft air quality permit. The data from this EJ Report does indicate slightly higher percentages for some non-white populations as well as elevated poverty levels overall. Given this data, DEQ conducted additional outreach and public engagement in the area surrounding the proposed facility.

Comment Category #7: North Carolina Environmental Protection Act: Subchapter 01C

No comments received.

Comment Category #8: Odor Concerns

- A. *The facility is required to utilize management practices or odor control equipment sufficient to prevent objectionable odorous emissions.*
Action Requested: *Require the applicant to identify the equipment, processes, and practices to prevent odors. Determine if the equipment and practices significantly reduce or eliminate odors.*
- B. *Additives are a way to control odor emissions when using recycled/reclaimed asphalt pavement (RAP).*
Action Requested: *Evaluate and require the applicant to use additives (if environmentally friendly) to control odors when using RAP.*
- C. *the applicant should be required to test for odorous emissions in addition to toxic emissions. The draft permit does require the applicant to test air quality periodically to ensure that toxic emissions standards are below the limits included in the permit. No such similar testing requirement is placed on the applicant for the odorous emissions of the operation which may not extend beyond the facility's boundary. The draft*

permit requires that the facility "shall not operate" if objectionable odors are detectable beyond the boundary

HO Response: 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 02D .1806 "Control and Prohibition of Odorous Emissions" (Specific Condition 14 of the proposed Draft Air Permit). 15A NCAC 02D .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 02D .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 02D .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.

Currently, there are no approved methods for testing odorous emissions.

Comment Category #9: Zoning/External Litigation

- A. In the section of the permit review labeled: 2Q .0304 – Zoning Specific Condition: It states that It is DAQ policy to include a permit condition in permits for facilities located in areas without zoning requiring compliance with all lawfully adopted local ordinances that apply to the facility at the time of construction or operation of the facility. Caswell County adopted a High Impact Ordinance last year which came out of the County wide Moratorium on polluting Industries. This Ordinance placed set backs on Rock Quarry, Asphalt and Cement Plants. Sunrock applied for this air permit after the High Impact Ordinance was adopted. This being said the submission of the application does not take the setbacks into consideration. All the data complied does not take the setbacks into consideration. The air modeling does not take this into consideration. The setbacks*

- will change the location of the asphalt and cement plants. If it is DAQ policy to have the condition that lawfully adopted ordinances to the facility at the time of construction or operation then the setbacks in the High Impact Ordinance should be applied.*
- B. *Per Draft Permit condition A.21, the applicant cannot begin construction or operation until all local permissions have been granted. There are several local permits that are in question. Several residents appealed the Caswell County Watershed Review Board's decisions in January to approve the Watershed Protection and Special Non-residential Intensity Allocation (SNIA) permits. However, the county has not set a hearing date on these appeals. In addition, the applicant has sued these residents in Superior Court. There is no court date set for that hearing. In addition, there may be future zoning requirements which may affect this facility. NC DAQ must stay informed on these issues and not allow the applicant to violate this condition of the permit. The applicant cannot begin construction or operation until these hearings have been held. The upcoming decisions from those hearings significantly affect this facility.*
- C. *the air quality permit is premature. It should only be considered after resolving the mining permit. This application is for the combined operations of the asphalt and concrete plants and the quarry. Until the mining application is resolved, the mine's operations and configuration have not been finalized. The air quality permit should be issued using the actual mine parameters. There is no way at this time to know what they are since the mining permit is still open. Therefore, consideration of this application should be held until the mine's are established.*
- D. *The maps used for the Air Quality application and the maps being used for the mining application do not appear to be the same.*

HO Response: The permit application included a zoning determination from Caswell County's County Manager. The determination states in part: *"the proposed operation is consistent with applicable zoning and subdivision ordinances."*

DAQ has evaluated the locations of emission sources and emission release points as described in the submitted air permit application. The DAQ has enforcement authority, including potential permit revocation, under draft air permit General Condition B.6., if the emission source characteristics are not in accordance with the submitted application. Specifically, General Condition B.6. states in part: *"this permit is subject to revocation or modification by the DAQ upon a determination that information contained in the application or presented in the support thereof is incorrect, conditions under which this permit was granted have changed, or violations of conditions contained in this permit have occurred."*

Additional information regarding zoning concerns are addressed in Category 4., item W., above.

Comment Category #10: Hearing/Public Notice Concerns

- A. *lawsuit has intimidated & kept people from commenting. Doesn't trust them "Based on this company's history of using the court to intimidate and silence".*
- B. *The lawsuit is seen as intimidation and has had a chilling effect on people wanting to come forward and speak out against the projects.*
- C. *I feel very intimidated by the lawsuit and do not feel that I can express my opinions on the Air Permit or speak freely about it at this time. Delay DAQ decision on the air permit until after a court ruling in the lawsuit. If the applicant loses, our county's High Impact*

Development Ordinance (HIDO) will apply and will affect the location and configuration of the projects.”

HO Response: Several comments addressed the impact of a lawsuit that was filed by Sunrock against Caswell County residents, which one commenter alleged constitutes intimidation and has had a “chilling effect” on public participation. DAQ believes that the public’s meaningful participation in the permitting process is an essential component of DAQ’s air quality program. However, DAQ cannot modify our legal procedures based on perceived community fear of reprisal.

With regard to the request that DAQ delay issuance of the permit in light of these concerns, DAQ’s time for processing an air permit application is prescribed by statute and regulation and DAQ is without authority to delay finalization of its permitting action based on the lawsuit referenced by the comments.

- D. the notices about the facility were not placed in Orange County; those commissioners knew nothing about the plans to locate three asphalt plants, three truck mix concrete batch plants, and a 600 acre quarry on the edge of the county. Only now are residents well within the stated range of air pollutants learning of this plan.*
- E. We are also requesting for an extension of the public comment period. Carolina Sunrock clearly has high interest in Caswell County, as they are also applying for a permit in Anderson. Due to the volume of proposed facilities, DAQ needs to allow more time for impacted residents to review the appropriate documents for all proposed sites. These are the communities that will have to bear the brunt of air pollution, dust, noise, truck traffic, and exposure to harmful toxins. Therefore, DAQ should extend the comment period and facilitate a process in which community members are made aware of and participate in decisions that will fundamentally affect their quality of life.*
- F. The facility will have detrimental effects on northern Orange residents as well as southern Person residents. Residents of these counties should be afforded the opportunity for public hearings as well.*
- G. In addition to all of the good reasons that others are offering, as a member of the Orange County Board of Commissioners I am puzzled to point out that my board received no formal notice of the hearings. Had we been informed of the opportunity to be heard, we surely would have conveyed the concerns of our constituents, for the proposed asphalt plant will definitely have a negative effect on the quality of life of many Orange County residents. That impact will be felt in the heavy truck traffic coming into and out of Orange county on Hwy. 86 and Efland Cedar Grove Road, as well as, more critically, the toxic pollutants whose range will extend for miles from the site. Everyone who stands to be impacted by this project deserves a chance to inform your decision making with their perspectives. I urge you to deny the permit. Alternatively, please consider continuing the hearing with proper notice to Orange County residents and elected officials so that our voices may be heard.*

HO Response: Significant public outreach was conducted. There was a strong foundation of community awareness based on the initial (first) permit application in 2019-2020. Regarding this current (second) submittal, a public notice was published on April 7, 2021 in the Caswell Messenger by the applicant and a sign was posted at the property on April 1, 2021. The opening of a public comment period and a notice of public hearing on the draft air quality permit for

Carolina Sunrock LLC was posted on the DAQ website and a press release was issued on August 9, 2021. The notice of public hearing on the draft air quality permit for Carolina Sunrock LLC was published in the Burlington-Times News on August 9, 2021 and The Caswell Messenger on August 11, 2021, and on the Division of Air Quality's website on August 9, 2021. As discussed in the EJ section above, known community leaders were consulted and flyers and letters were mailed to a 1-mile radius around the proposed facility on August 16, 2021.

H. DAQ treated these two public hearing differently for oral comments. Last night's Burlington North facility's hearing was restricted to 2 minutes. Tonight you are allowing 3 minutes. The Burlington North facility will significantly impact an Environmental Justice community. Thus, I must question DAQ's compliance with Title VI civil rights. DAQ must do better.

HO Response: The comment period was two (2) minutes for the Burlington North public hearing. That was a result of an unusually large number of speakers (121 people) who signed up to speak in advance of the public hearing. The speaking time for that hearing was adjusted to give everyone who pre-registered a chance to be heard.

Comment Category #11: Other Matters Not Related to Air Quality

- A. The large generators are anticipated to run continuously and may create a constant noise beyond the property.*
- B. Property lighting will cause light pollution at night.*
- C. Limit noise, traffic, odor, and fugitive dust in the surrounding community...Restrict the hours per day, days per week, and weeks per year to the expected operating schedule. Do not allow nighttime or early morning operations.*
- D. Required generators to be enclosed in a building or surrounded by berms to reduce noise.*
- E. Require that trucks awaiting loading be parked and turned off until it is their turn, instead of idling in line.*

HO Response: These comments were not directly related to the proposed Carolina Sunrock 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.

Comment Category #12: Accessibility

- A. The materials presented in their current form are haphazard and, intentionally or unintentionally, prevent a non-technical person from following and comprehending the materials.*
- B. Quite a number of registered participants were not able to speak due to technical or user difficulties. Please consider this suggestion as a procedural change to your virtual meetings across the state: Collect a call-back phone number when speakers register. Use this number to call the speaker directly in case of user or technical issues...*
- C. And another point, 40% of Caswell residents don't have internet access. For the rest, it is certainly intermittent at best.*
- D. I tried to participate in the public hearing held earlier this week, but our internet was apparently insufficient, as I could never get any audio of the proceedings. I believe you*

need to hold another public hearing, in Caswell County, in person, properly distanced for the virus, requiring masks.

HO Response: DAQ strives to balance the very technical nature of air permit applications and air quality control with the need for the layperson to understand our permitting actions. There are certain engineering and technical items required in the permit application forms that cannot be simplified further. The Division's air permit review, modeling memos, and information on the DAQ website are opportunities for the Division to summarize the air emissions, regulatory review, and the permitting activity. However, the very technical nature of the work at times does not allow the information to be distilled any further without losing important content.

DAQ has been conducting public hearings virtually rather than in-person, to prevent to spread of Covid-19. In addition to the virtual public hearing, DAQ accepts comments via mail, email and voice mail – allowing for all citizens to participate in the permit process. All comments received are given the same weight, whether provided orally at the virtual hearing or submitted in another format.

E. BREDL requests an extension of the Public Comment Period as stated in 15A NCAC 02Q .0307(d). Due to high interest in the Caswell County community for both Carolina Sunrock draft permits (Facility IDs: 1700016 and 1700017), there needs to be more time to allow impacted residents to review documents for both proposed sites. Scheduling the public hearings and comment periods on adjacent days may restrict some public participation.

HO Response: As indicated above, DAQ's time for processing an air permit application is prescribed by statute and regulation and DAQ does not have authority to delay finalization of its permitting actions. The two permit applications (Burlington North and Prospect Hill) were received concurrently and are, therefore, processed concurrently.

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." A review of the 5-year compliance history for all Sunrock facilities in North Carolina was conducted:

Facility ID	Facility Name	Street Address	City
9100102	Carolina Sunrock	214 Sunrock Road	Kittrell
7300078	Carolina Sunrock - Woodsdale	5280 Woodsdale Road	Roxboro
9200623	Carolina Sunrock Corporation ** INACTIVE **	8620 Barefoot Industrial Road	Raleigh
3900117	Carolina Sunrock LLC - Butner Asphalt	300 Sunrock Drive	Butner
3900074	Carolina Sunrock LLC - Butner Quarry	100 Sunrock Drive	Butner

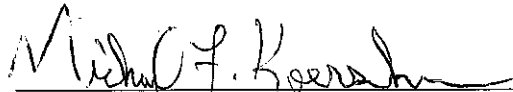
Facility ID	Facility Name	Street Address	City
9200779	Carolina Sunrock LLC - Eastern Wake Facility	1524 Old US Highway 264	Zebulon
3200270	Carolina Sunrock LLC - Muirhead Dist. Center	1503 Camden Avenue	Durham
1700015	Carolina Sunrock LLC - Prospect Hill Facility	4266 Wrenn Road	Prospect Hill
9200602	Carolina Sunrock Wake Forest Plant	5043 Unicon Drive	Wake Forest
3900093	Carolina Sunrock, LLC - Butner Concrete	100 Sunrock Drive	Butner
9200457	Carolina Sunrock, LLC - RDU Dist. Center	8620 Barefoot Industrial Road	Raleigh

One compliance concern was noted for the above set of facilities for the past five years: a Notice of Violation was issued to the Butner Concrete facility on November 6, 2018 for excessive visible emissions from a dust collector.

After considering all the public comments addressing whether or not DAQ should issue an air quality permit for the proposed Carolina Sunrock LLC –Prospect Hill Quarry and Distribution Center to allow the construction and operation of a rock quarry, an asphalt plant, and a concrete batch plant at 1238 Wrenn Road, Prospect Hill, NC, it is the recommendation of the hearing officer that the Director issue the Air Quality permit with the following changes:

- A. Correct the nominal (equipment rating) error on the rock quarry capacity as mentioned in Comment Category 2, item H.**
- B. Revise the dispersion modeling permit condition text as suggested in Category 4 item P. to ensure clarity of intent. The general requirement is not changing with this recommendation.**
- C. Revise Air Permit's Specific Condition 16.e. (fuel use while testing of drum dryer) in accordance with the HO Response to Category 4, item U.**
- D. Revise the modeled TAP table in the Air Permit's Specific Condition 18. in accordance with HO Response to Category 4, item V.**
- E. Remove the Air Permit's Specific Condition A.21. as discussed in Comment Category 4, item W.**

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. I also recommend DAQ staff ensure through compliance inspections and document review the facility is constructed and operated as provided in the dispersion modeling analysis.



Michael F. Koerschner, P.E., Hearing Officer

October 19, 2021

Hearing Officer's Report and Recommendations

Carolina Sunrock LLC
Digital Public Hearing via Webex
September 21, 2021

SUPPORTING DOCUMENTATION

Draft Permit Application Review
Draft Permit
Notice of Public Hearing
Public Hearing Attendance List
56 E-mailed Public Comments
2 transcribed voicemail comments
Audio of Public Hearing Comments
Draft EJ Report

Air Permit Review

Issue Date: XXXXXXXXXXXX

Region:Winston-Salem Regional Office
 County:Caswell
 NC Facility ID:1700017
 Inspector's Name:TBD
 Date of Last Inspection:N/A
 Compliance Code:N/A

Facility Data			Permit Applicability (this application only)	
Applicant (Facility's Name): Carolina Sunrock LLC - Prospect Hill Quarry and Dist. Center Facility Address: 1238 Wrenn Road, Prospect Hill, NC 27314 SIC: 1429 / Crushed And Broken Stone Nec NAICS: 212319 / Other Crushed and Broken Stone Mining and Quarrying Facility Classification: Before: Permit Pending After: Synthetic Minor Fee Classification: Before: N/A After: Synthetic Minor			SIP:Yes NSPS:Yes(Subpart I,OOO,III, and JJJ) NESHAP:Subpart ZZZZ PSD:No PSD Avoidance:Yes NC Toxics:Yes (2D .1100 & 2Q .0711) 112(r):No Other:N/A	
Contact Data			Application Data	
Facility Contact	Authorized Contact	Technical Contact	Application Number:1700017.21A Date Received:04/22/2021 Application Type:Greenfield Facility Application Schedule:State Existing Permit Data Existing Permit Number:N/A Existing Permit Issue Date:N/A Existing Permit Expiration Date:N/A	
Scott Martino Compliance Manager (984) 202-4761 200 Horizon Drive, Suite 100 Raleigh, NC 27615	Gregg Bowler President (919) 747-6400 200 Horizon Drive, Suite 100 Raleigh, NC 27615	Scott Martino Compliance Manager (984) 202-4761 200 Horizon Drive, Suite 100 Raleigh, NC 27615		
Review Engineer: Dylan Wright Review Engineer's Signature: _____ Date: _____			Comments / Recommendations: Issue:10694R00 Permit Issue Date:XXXXXXXXXXXX Permit Expiration Date:XXXXXXXXXXXX	

I. PURPOSE OF APPLICATION

On April 22, 2021, WSRQ-DAQ received an application package from Carolina Sunrock LLC, requesting an air permit for a new synthetic minor facility located at 1238 Wrenn Road, Prospect Hill, NC. Carolina Sunrock LLC also holds an Air Quality Permit for a separate Prospect Hill site located at 57 Wrenn Road (Fac. ID # 1700015). Therefore, to differentiate between the two Prospect Hill facilities, this site will be called "Carolina Sunrock LLC - Prospect Hill Quarry and Distribution Center." Included in the submittal were the appropriate A, B, C and D forms along with supporting documentation and a check in the amount \$400, the application fee required for a synthetic minor facility. Additionally, this application included an air dispersion modeling report that was prepared by Jon Hill, Aimee Andrews, and Trevor Peters of Trinity Consultants. This application also included a copy of a letter to the Caswell County Planning Department that stated the intent of this facility to construct an asphalt plant, concrete plant, and quarry at this location. The Zoning Consistently Determination Form was completed by Bryan Miller, County Manager of the Caswell County Local Government and stated that "the proposed operation IS consistent with applicable zoning and subdivision ordinances." It is noted that this proposed site is located in an area without zoning therefore, the applicant is required to publish a legal notice in accordance with 2Q .0113. The application also contained a letter that stated that a public notice was published on April 7, 2021 in the Caswell Messenger and a sign was posted on April 1, 2021. A notarized Affidavit of Publication was also included with a scanned copy of the newspaper clipping. Timestamped photographs indicated that the sign was posted as required. It should be noted that this facility submitted a greenfield application for this facility on November 18, 2019. This application was denied by DAQ on August 23, 2020 after the division conducted NAAQS modeling and the results showed violations of the nitrogen dioxide and sulfur dioxide NAAQS with the proposed facility.

The contact information provided in the application was consistent with the previous entries in the IBEAM database from the 2019 application. Carolina Sunrock LLC is duly registered under this name with the North Carolina Secretary of State (NCSOS) – Division of Corporations and holds a current-active status, as verified by this reviewer via online search of the NCSOS database.

Application Chronology

Date	Event	Comment
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Date	Event	Comment
April 22, 2021	Application received	Clock started
April 29, 2021	Acknowledgement Letter Sent	Clock remains on
May 25, 2021	Additional Information Requested	Clock stopped
June 7, 2021	Additional Information Received	Clock restarted
June 16, 2021	Additional Information Requested	Clock stopped
July 8, 2021	Additional Information Received	Clock restarted
[REDACTED]	Facility notified that the State permit will be finalized in the August and paved for and the construction model	Clock stopped
[REDACTED]	[REDACTED]	[REDACTED]

II. DESCRIPTION OF BUSINESS

Information contained in the application states that this facility will involve the construction of a Drum Mix Asphalt Plant (250 tons per hour maximum capacity), RAP Crushing System, a Truck Mix Concrete Batch Plant (20 cubic yards per hour) and a quarry operation (1,500 tons per hour maximum capacity). The Permitted Emission Sources and Insignificant/Exempt Activities are listed in the following tables:

Permitted Emission Sources

Emission Source ID	Emission Source Description	Control System ID	Control System Description		
Drum Mix Asphalt Plant (250 tons per hour capacity) consisting of the following:					
HMA-1 (NSPS)	Propane/Natural Gas/No. 2 Fuel Oil/Recycled No. 2 Fuel Oil/Recycled No. 4 Fuel Oil-fired drum type hot mix asphalt plant (80 MMBtu/hr. maximum heat input capacity)	HMA-CD1	Cyclone in series with a Bagfilter (8,968 square feet of filter area)		
ES-ACH1	Natural Gas/ULSD-fired Asphalt Cement Heater (1.2 MMBtu/hr. maximum heat input capacity)	N/A	N/A		
ES-ACH2	Natural Gas/ULSD-fired Asphalt Cement Heater (1.1 MMBtu/hr. maximum heat input capacity)				
HMA-LO1	Asphalt Loadout Operation Silo 1				
HMA-LO2	Asphalt Loadout Operation Silo 2				
HMA-LO3	Asphalt Loadout Operation Silo 3				
HMA-LO4	Asphalt Loadout Operation Silo 4				
HMA-LO5	Asphalt Loadout Operation Silo 5				
HMA-Silo1	Hot Mix Asphalt Storage Silo (150 tons Maximum Capacity)				
HMA-Silo2	Hot Mix Asphalt Storage Silo (150 tons Maximum Capacity)				
HMA-Silo3	Hot Mix Asphalt Storage Silo (200 tons Maximum Capacity)				
HMA-Silo4	Hot Mix Asphalt Storage Silo (200 tons Maximum Capacity)				
HMA-Silo5	Hot Mix Asphalt Storage Silo (200 tons Maximum Capacity)				
RAP Crushing System Consisting of the Following:					
RAP-CR1 (NSPS)	RAP Crusher (65 tons/hr. Maximum Capacity)			N/A	N/A
RAP-BF1 (NSPS)	RAP Bin and Feeder				
RAP-C1 (NSPS)	RAP 36" Conveyor, Feeder to Crusher				
RAP-C2 (NSPS)	RAP 36" Conveyor, Crusher to Screen				
RAP-C3 (NSPS)	RAP 36" Conveyor, Screen to Plant				
RAP-C4 (NSPS)	RAP 36" Conveyor, Screen to Conveyor (C-5)				
RAP-C5 (NSPS)	RAP 36" Conveyor, Conveyor (C-5) to Conveyor (C-6)				
RAP-C6 (NSPS)	RAP 36" Conveyor, Conveyor (C-6) to Crusher				
RAP-SC1 (NSPS)	8' X 20' Double Deck Screen				

Emission Source ID	Emission Source Description	Control System ID	Control System Description
Truck Mix Concrete Batch Plant (120 cubic yards per hour capacity) consisting of the following:			
RMC-LO1	Truck Loadout Point	RMC-CD2	Bagfilter (1,433 square feet of filter area)
RMC-Silo1	Cement Storage Silo (200-ton capacity)		
RMC-Silo2	Flyash Storage Silo (150-ton capacity)		
RMC-WB1	Cement/Flyash Weigh Batcher (5-ton max capacity)		
RMC-WB2	Aggregate Weigh Batcher (20-ton max capacity)	N/A	N/A
Non-Metallic Mineral Processing Plant utilizing water suppression with no other control device, including:			
ES-Conveying (NSPS)	Conveying Operations	N/A	N/A
ES-Crusher (NSPS)	Crushing Operations		
ES-Screening (NSPS)	Screening Operations		
Power Generators:			
ES-PGEN1 (NSPS-JJJJ, NESHAP-ZZZZ)	2065 hp Natural Gas/Propane Fired Generator #1	CD-PGEN1	Catalytic Oxidizer
ES-PGEN2 (NSPS-JJJJ, NESHAP-ZZZZ)	2065 hp Natural Gas/Propane Fired Generator #2	CD-PGEN2	Catalytic Oxidizer
ES-PGEN3 (NSPS-JJJJ, NESHAP-ZZZZ)	1721 hp Natural Gas/Propane Fired Generator #3	CD-PGEN3	Catalytic Oxidizer
Support Equipment:			
GEN-1 (NSPS-III, NESHAP-ZZZZ)	(J50V2) 350 hp Diesel Engine Powering Primary Crusher	N/A	N/A
GEN-1a (NSPS-III, NESHAP-ZZZZ)	(J45) 350 hp Diesel Engine Powering Primary Crusher		
GEN-2 (NSPS-III, NESHAP-ZZZZ)	(s190dt) 125 hp Diesel Engine Powering Screen		
GEN-3 (NSPS-III, NESHAP-ZZZZ)	(PS1300 Maxtrack) 440 hp Diesel Engine Powering Cone Crusher		
GEN-4 (NSPS-III, NESHAP-ZZZZ)	(TP80) 125 hp Diesel Engine Powering Tracked Feeder		
GEN-5 (NSPS-III, NESHAP-ZZZZ)	(PS1300 Maxtrack) 450 hp Diesel Engine Powering Cone Crusher		
GEN-7 (NSPS-III, NESHAP-ZZZZ)	(PS100 Maxtrack) 350 hp Diesel Engine Powering Cone Crusher		

Insignificant/Exempt Sources

Source	Exemption Regulation	Source of TAPs?	Source of Title V Pollutants?
IES-1 - Used Oil Storage Tank associated with Asphalt Plant (20,000-gallon capacity)	2Q .0102 (g)(4)	Yes	Yes
IES-2 - Used Oil Storage Tank associated with Asphalt Plant (20,000-gallon capacity)			
IES-3 - Liquid Asphalt Tank (30,000-gallon capacity)			
IES-4 - Liquid Asphalt Tank (30,000-gallon capacity)			
IES-5 - Diesel Fuel Storage Tank associated with Asphalt Plant (20,000-gallon capacity)	2Q .0102 (g)(4)	Yes	Yes
IES-6 - Diesel Fuel Storage Tank associated with Asphalt Plant (20,000-gallon capacity)			
IES-13 - Diesel Fuel Storage Tank associated with Quarry (20,000-gallon capacity)			
IES-14 - Diesel Fuel Storage Tank associated with Quarry (20,000-gallon capacity)			
IES-15 - Propane Storage Tank (100,000-gallon capacity)			

III. REVIEW OF RULES AND REGULATIONS

The following North Carolina Administrative Code Title 15A rules and regulations were evaluated under this review:

- 2D .0202 – Registration of Air Pollution Sources
- 2D .0501(c) – Compliance with National Ambient Air Quality Standards
- 2D .0503 – Particulates from Fuel Burning Indirect Heat Exchangers
- 2D .0506 – Particulates from Hot Mix Asphalt (HMA) Plants
- 2D .0510 – Particulates from Sand, Gravel, or Crushed Stone Operations
- 2D .0515 – Particulates from Miscellaneous Industrial Processes
- 2D .0516 – Sulfur Dioxide (SO₂) Emissions from Combustion Sources
- 2D .0521 – Control of Visible Emissions (VE)
- 2D .0524 – New Source Performance Standards (NSPS)
- 2D .0535 – Excess Emissions Reporting and Malfunctions
- 2D .0540 – Particulates from Fugitive Dust Emission Sources
- 2D .0605 – General Recordkeeping and Reporting Requirements
- 2D .0611 – Monitoring Emissions from Other Sources
- 2D .1100 – Control of Toxic Air Pollutants (TAPs)
- 2D .1111 – Maximum Achievable Control Technology
- 2D .1806 – Control and Prohibition of Odorous Emissions
- 2Q .0304 – Zoning Specific Condition
- 2Q .0315 – Synthetic Minor Facilities
- 2Q .0317 – Avoidance Condition (PSD-SO₂)
- 2Q .0317 – Avoidance Condition (Toxics)
- 2Q .0700 – Avoidance Condition (Recycled Asphalt Shingles)
- 2Q .0711 – Emission Rates Requiring a Permit

CONTROL DEVICE EVALUATION

Bagfilter HMA-CD1

The proposed Bagfilter, associated with the Hot Mix Asphalt Plant (HMA-1), was evaluated using the NCDENR Bagfilter Evaluation Spreadsheet - Version 3.3, September 23, 1999 (see Attachment). The following table lists the characteristics based on the data provided on Form C1.

Material Controlled	Abrasive Dust
No. of Modules	12
No. of Bags per Module	64
Total No. of Bags	768
Bag Length/Bag Diameter	120 in./ 4 5/8 in.
Filter Surface Area	9,299 ft ²
Inlet Air Flow Rate	51,111 ACFM
Air to Cloth Ratio	5.5:1
Max. Pressure Drop	10 In. H ₂ O
Filter Material	Aramid (Nomex)
Max. Operation Temperature	325 °F
Cleaning Procedure	Air Pulse
Claimed Control Efficiency	99%/99% for PM/PM ₁₀

According to the spreadsheet, the filtering velocity of 5.5 fpm does not exceed the typical filtering velocity of 10.0 fpm and the filter fabric is appropriate for both the maximum operating temperature and chemical resistance to acids, alkalis and organics. Also, the control efficiency as stated in the application seems reasonable, so the Bagfilter was assessed as an adequate control device. Pursuant to 15A NCAC 02Q .0112, the technical portions of the permit application related equipment controlling emissions of particulate matter with air flow rates of greater than 10,000 actual cubic feet per minute are required to be sealed by a licensed Professional Engineer (P.E.). This certification was provided on Application Form D5, bearing the seal and signature of Aimee L. Andrews, P.E., NC Professional Engineer No. 029987.

Bagfilter RMC-CD2

The proposed Bagfilter, associated with the Concrete Batch Plant, was evaluated using the NCDENR Bagfilter Evaluation Spreadsheet - Version 3.3, September 23, 1999 (see Attachment B2). The following table lists the characteristics based on the data provided on Form C1.

Material Controlled:	Cement/Fly Ash
No. of Compartments:	1
No. Bags per Compartment:	72
Max. Grain/Bag Diameter:	114 in./ 8 in.
Filter Surface Area:	1,433 ft ²
Inlet Air Flow Rate:	6,500 ACFM
Air to Cloth Ratio:	4.54:1
Filter Material:	Dacron (Polyester)
Max. Operation Temperature:	Ambient
Cleaning Procedure:	Air Pulse
Claimed Capture Efficiency:	99% for PM/PM ₁₀

According to the spreadsheet, the filtering velocity of 4.5 fpm does not exceed the typical filtering velocity of 6.0 fpm and the filter fabric is appropriate for both the maximum operating temperature and chemical resistance to acids, alkalis and organics. Also, the control efficiency as stated in the application seems reasonable, so the Bagfilter was assessed as an adequate control device. It is noted that, because the air flow rate does not exceed 10,000 ACFM, a P.E. seal is not required.

Catalytic Oxidizers CD-PGEN1, CD-PGEN2, and CD-PGEN3

This application proposes to install three Catalytic Oxidizers associated with the three Natural Gas/Propane Fired Generators. The following table lists the characteristics based on the data provided on Form C1.

Material Controlled:	Carbon Monoxide
Type of Device:	Catalytic Oxidizer
Type of Catalyst:	Platinum/Rhodium
Expected Life of Catalyst:	3 Years
Method of Detecting Spent Catalyst:	Monitor
Inlet Temp Min:	550 °F
Inlet Temp Max:	1250 °F
Outlet Temp Max:	1350 °F
Max. Operation Temperature:	880 °F
Inlet Air Flow Rate:	4162
Claimed Destruction Efficiency:	66.7%

According to the document titled "Air Pollution Control Technology Fact Sheet" (EPA-452/F-03-021) for Regenerative Incinerators, "RCO systems using precious metal-based catalyst can destroy more than 98 percent of the CO in the VOC-laden air stream." It should be noted that "Regenerative" in Regenerative Catalytic Oxidizers (RTOs) refers to the means of heat transfer and does not change the ability of this device to oxidize CO. The facility is claiming a control efficiency of 66.7% (from Miratech document in attachments). The EPA document states that control efficiencies for CO can reach 98%, therefore the claimed control efficiency seems reasonable. It is noted that the Form C1s for these control devices were certified as part of the PE Seal that was submitted with this application.

2D .0202 – Registration of Air Pollution Sources

This rule allows the Director to require a facility to report, as in this case, total weights and kinds of air pollution released as well as any other information considered essential in evaluating the potential of the source to cause air pollution. In accordance with this rule, the facility will be required to submit a CY 20XX Emissions Inventory at least ninety (90) days prior to ~~XXXXX XX XXXX~~, which is the expiration date of this Air Permit. It is reasonable to anticipate compliance.

2D .0501(c) – Compliance with National Ambient Air Quality Standards

In addition to any control or manner of operation necessary to meet emission standards in 2D .0500, any source of air pollution shall be operated with such control or in such manner that the source shall not cause the ambient air quality standards pursuant to 15 ANCAC 02D .0400 to be exceeded at any point beyond the premises on which the source is located. When controls more stringent than those named in the applicable emission standards in this Section are required to prevent violation of the ambient air quality standards or a re required create an offset, the permit shall contain a condition requiring these controls.

This facility submitted a sitewide NAAQS dispersion modeling analysis that was received March 2, 2021, and revised March 10 and 17, 2021. The modeling analysis was reviewed and approved by the DAQ Air Quality Analysis Branch (AQAB) on March 23, 2021. This condition will require the facility to operate the modeled sources in the manner in which they were modeled. This includes placement of the emission sources, configuration of the emission points, and operation of the sources. This model was conducted with the limited/controlled potential emissions with the operation restrictions listed in the Synthetic Minor condition, therefore this condition will require the facility to operate the sources in accordance with the operating restrictions of Condition A.24.

The modeling also assumed that the roads would be wetted with a water truck to control PM emissions. This condition will require that the haul roads and front-end loader work area be adequately maintained by wet suppression to minimize fugitive emissions. This condition will also require the facility to maintain on-site an equipment list and a plant (or flow) diagram of all equipment covered under this permit. The equipment list shall include the following information for each piece of equipment:

- A. A description of equipment including applicability of New Source Performance Standards, and:
 - I. Width of belt conveyors,
 - II. Dimensions and configuration (e.g., triple deck) of screens, and
 - III. Rated capacity (tons or tons/hr.) of all nonmetallic mineral processing equipment.
- B. A unique ID number.
- C. The date the equipment was manufactured
- D. The dates any required performance testing was conducted and submitted to the Regional Supervisor, DAQ.

If the facility wishes to relocate or install additional crushers, screens, conveyors, or loadout bins, they must obtain prior approval from the Director. To do this, the permittee must provide written notification to the Regional Supervisor, DAQ, including a revised equipment list and plant (or flow) diagram. It is reasonable to anticipate compliance.

2D .0503 – Particulates from Fuel Burning Indirect Heat Exchangers

This rule applies to the two (2) Natural Gas/ULSD-fired Asphalt/Cement Heaters (ES-ACH1 and ES-ACH2), and it limits particulate emissions according to the following equation:

$$E = 1.09 \times Q^{-0.2594}$$

where: E = allowable emission limit for particulate matter in lb./MMBtu
 Q = maximum total heat input of all fuel burning indirect heat exchangers in MMBtu/hr.,
 except where the maximum total heat input is ≤ 10 MMBtu/hr., as in this case, then E = 0.60 lb./MMBtu

Using the AP-42 emission factor for Fuel Oil – Tables 1.3-1 and 1.3-2, rev 5/10, and Natural Gas – Table 1.4-2, rev 7/98, the actual emissions rates are calculated as follows:

$$E_{\text{actual - Natural Gas}} = 7.6 \text{ lb. PM}_{\text{total}}/10^6 \text{ scf} \div 1,020 \text{ MMBtu}/10^6 \text{ scf} = 0.007 \text{ lb. PM/MMBtu}$$

$$E_{\text{actual - No. 2 Fuel Oil}} = (2 \text{ lb. PM}_{\text{filterable}} + 1.3 \text{ lb. PM}_{\text{condensable}})/10^3 \text{ gallons} \div 140 \text{ MMBtu}/10^3 \text{ gallons} = 0.024 \text{ lb. PM/MMBtu}$$

0.007; 0.024 lb. PM/MMBtu < 0.60 lb. PM/MMBtu → O.K.

Based on the foregoing, actual emissions for combustion of No. 2 Fuel Oil and Natural Gas are less than the allowable emissions limit; therefore, compliance is demonstrated.

2D .0506 – “Particulates from Hot Mix Asphalt Plants”

This rule is applicable to both filterable and condensable particulate emissions from the plant. It limits the allowable particulate matter emissions from Hot Mix Asphalt Plants as calculated by the following equations:

$$E = 4.9445(P)^{0.4376} \quad \text{if } P < 300 \text{ tons/hr.}$$

$$E = 60 \text{ lbs./hr.} \quad \text{if } P \geq 300 \text{ tons/hr.}$$

where: P = the process rate in tons/hr.
 E = the maximum allowable emission rate for PM in lb./hr.

Since the permitted process rate is 250 tons per hour, this plant’s allowable PM emission rate is calculated as follows:

$$E = 4.9445(250)^{0.4376} = 55.4 \text{ lb. PM/hr.}$$

Using AP-42 emission factors for Drum Mix Asphalt Plants (Table 11.1-3, 3/04), the emission factor for total PM for a Drum Mix HMA plant controlled by a fabric filter is 0.033 lb. PM/ton of asphalt; therefore, the actual expected PM emission rate is calculated as follows:

$$\text{PM} = 0.033 \text{ lb. PM/ton} \times 250 \text{ ton/hr.} = 8.25 \text{ lb. PM/hr.}$$

$$8.25 \text{ lb. PM/hr.} < 55.4 \text{ lb. PM/hr.} \rightarrow \text{O.K.}$$

Also, this rule requires that visible emissions from stacks or vents at an HMA plant shall be less than 20% opacity when averaged over a six-minute period and that fugitive dust shall be controlled as required by 2D .0540 (discussed below). A source test on the Hot Mix Asphalt Drum-type Hot Asphalt Plant (HMA-1) controlled by a Bagfilter (HMA-CD1) will need to be conducted to determine the HMA plant's particulate matter emission rate. See 2D .0605 of this review for more details regarding testing. Per the Memorandum "Hot Mix Asphalt Plant Performance Testing/Emission Testing Frequency" issued August 13, 2013, by Sheila Holman, former DAQ Director, the facility must test for compliance at least once every ten (10) years. If the emission source operates according to manufacturer specifications and with the permitted bagfilter, the source should be in compliance with this rule.

2D .0510 – Particulates from Sand, Gravel, or Crushed Stone Operations

This facility, engaging in sand, gravel, recycled asphalt pavement (RAP), or crushed stone operations, must not cause, allow, or permit any material to be produced, handled, transported, or stockpiled without taking measures to reduce to a minimum any particulate matter from becoming airborne. This is in order to prevent exceeding the ambient air quality standards beyond the property line for particulate matter. Fugitive dust shall be controlled as required by 2D .0540, as discussed below. Process generated emissions from crushers, conveyors, screens, and transfer points shall be controlled so that opacity standards required by 2D .0521 and 2D .0524, as applicable, are not exceeded. Specifically, crushers (not including RAP crushers) are to be controlled using wet suppression. Compliance is anticipated.

2D .0515 – Particulates from Miscellaneous Industrial Processes

This rule is applicable to particulate matter (PM) emissions from any stack, vent, or outlet, resulting from any industrial process for which no other emission control standards are applicable. All concrete batch plant sources at this facility are subject to this rule. All remaining sources have other emission control standards. This rule limits the allowable PM emissions as derived by the following equations:

$$E = 41.0 (P)^{0.67} \quad \text{if } P \leq 30 \text{ tons per hour}$$

$$E = 55.0 (P)^{0.11 - 40} \quad \text{if } P > 30 \text{ tons per hour}$$

where: P = the process rate in tons per hour, and
E = maximum allowable emission rate of PM in pounds per hour

Emissions factors from the NCDENR Concrete Batch Plant Emissions Calculator Spreadsheet were used to calculate the uncontrolled and controlled emissions rates and the following table indicates that the facility can comply with this rule when the Bagfilter (RMC-CD2) is installed and properly operated and maintained on the respective emission sources. Note that the process weight rates for the Truck Loadout Point, Cement Storage Silo, Flyash Storage Silo, and Aggregate Weigh Batcher were taken from information provided with the application and presented on the aforementioned NCDENR Spreadsheet. Process weight rate for the Cement/Fly Ash Weigh Batcher was calculated by this reviewer as indicated in the table footnotes.

Emission Source	Process Weight Rate (P) [tons/hr.]	Allowable Emissions Rate (E) 2D .0515 Limit [lb. PM/hr.]	Uncontrolled Expected Actual Emissions Rate [lb. PM/hr.]	Controlled Expected Actual Emissions Rate [lb. PM/hr.]
Truck Loadout Point (RMC-LO1)	240.96 ¹	60.5	52.210	1.001 ³
Cement Storage Silo (RMC-Silo1)	40.00 ¹	35.4	18.250	0.025
Flyash Storage Silo (RMC-Silo2)	50.00 ¹	35.4	78.500	0.223
Cement/Flyash Weigh Batcher (RMC-WB1)	35.76 ²	41.51	52.210	1.001 ³
Aggregate Weigh Batcher (RMC-WB2)	205.20 ¹	58.8	0.985	N/A

¹ Taken from information provided with the application as shown on the NCDENR Spreadsheet.

² $120 \text{ yd}^3/\text{hr.} \times (448 \text{ lb. Cement}/\text{yd}^3 + 148 \text{ lb. Fly Ash}/\text{yd}^3) \div 2,000 \text{ lb./ton} = 35.76 \text{ ton/hr.}$

³ As noted in the spreadsheet "Truck/Central Mix emission factors include emissions from cement and supplement weigh hoppers," and so, to be conservative, the Cement/Fly Ash Weigh Batcher emission rates are shown as the same as the Truck Loadout Point emission rate.

2D .0516 – Sulfur Dioxide Emissions from Combustion Sources

This rule applies to the Propane/Natural Gas/No. 2 Fuel Oil/Recycled No. 2 Fuel Oil/Recycled No. 4 Fuel Oil-fired drum type Hot Mix Asphalt Plant (HMA-1) and the two (2) Natural Gas/ULSD-fired Asphalt Heaters (ES-ACH1 and ES-ACH2), and it limits the emissions of sulfur dioxide (SO₂) from any source of combustion that is discharged from any vent, stack, or chimney to 2.3 lb. SO₂/MMBtu input.

For the drum dryer/mixer associated with the Asphalt Plant (HMA-1), the SO₂ emission rate is equal to 0.0003 lb./MMBtu when combusting Natural Gas, 0.253 lb./MMBtu when combusting No. 2 Fuel Oil, and 0.262 lb./MMBtu when combusting No. 4 Fuel Oil (0.5% Sulfur), as demonstrated below. It is assumed that No. 4 Fuel Oil has the same emission factors as Recycled No. 4 Fuel Oil and that emission factors for Propane are similar to those for Natural Gas.

Natural Gas (NCDENR Asphalt Emissions Calculator Spreadsheet Revision G, 08/30/2019)

SO₂ = 0.0001 lb./ton of asphalt × 250 ton/hr. ÷ 80 MMBtu/hr. = 0.0003 lb./MMBtu < 2.3 lb./MMBtu → O.K.

No. 2 Fuel Oil (0.5% Sulfur) (NCDENR Asphalt Emissions Calculator Spreadsheet Revision G, 08/30/2019)

SO₂ = 0.0811 lb./ton of asphalt × 250 ton/hr. ÷ 80 MMBtu/hr. = 0.253 lb./MMBtu < 2.3 lb./MMBtu → O.K.

No. 4 Fuel Oil (0.5% Sulfur) (NCDENR Asphalt Emissions Calculator Spreadsheet Revision G, 08/30/2019)

SO₂ = 0.0837 lb./ton of asphalt × 250 ton/hr. ÷ 80 MMBtu/hr. = 0.262 lb./MMBtu < 2.3 lb./MMBtu → O.K.

For the two (2) Natural Gas/ULSD-fired Asphalt Heaters (ES-ACH1 and ES-ACH2), the SO₂ emission rate is equal to 0.00059 lb./MMBtu when combusting Natural Gas and 0.00152 lb./MMBtu when combusting ULSD as demonstrated below. The first equation assumes the sulfur content of Natural Gas is 2,000 grains/10⁶ scf, and the average heating value of Natural Gas is 1,020 Btu/scf. The second equation assumes a Fuel Oil sulfur content (S) of 0.0015% by weight, and the average heating value of No. 2 Fuel Oil is 140,000 Btu/gal. Compliance is demonstrated.

Natural Gas (AP-42, Table 1.4-2)

SO₂ = 0.6 lb./10⁶ scf × (10⁶ scf/1,020 MMBtu) = 0.00059 lb./MMBtu < 2.3 lb./MMBtu → O.K.

No. 2 Fuel Oil (AP-42, Table 1.3-1)

SO₂ = 142 × S (S = 0.0015) lb./10³ gal × (10³ gal/140 MMBtu) = 0.00152 lb./MMBtu < 2.3 lb./MMBtu → O.K.

For the diesel-fired internal combustion engines associated with the support equipment (<600 HP), the sulfur dioxide emission rate is equal to 0.29 lbs./MMBtu (< 2.3 lbs./MMBtu) when combusting diesel fuel in an engine rated less than 600 hp output (AP-42, Table 1).

For the natural gas/propane-fired internal combustion engines used as power generators, the sulfur dioxide emission rate is equal to 0.000588 lbs./MMBtu (< 2.3 lbs./MMBtu) when combusting natural gas in a four-stroke lean burn engine (AP-42, Table 3.2-2). It is assumed that SO₂ emissions would be comparable when combusting propane.

2D .0521 - Control of Visible Emissions

This rule applies, and it will be included on the permit. According to section (d) of this rule, visible emissions from the emission sources manufactured after July 1, 1971, shall not be more than 20% opacity when averaged over a six-minute period, except that six-minute periods averaging not more than 87% opacity may occur not more than once in any hour nor more than four times in any 24-hour period. The application forms show that all equipment at this facility will be manufactured after July 1, 1971, therefore the 20% applies to all sources that are subject to this rule. However, sources subject to a visible emission standard in 2D .0506 or 2D .0524 shall meet that standard instead of the standard contained in this rule. The Drum Mix Asphalt Plant (HMA-1) is subject to both 2D .0506 and 2D .0524. Also, the RAP crushing operation (RAP-OR1, RAP-BF1, RAP-C1, RAP-C2, RAP-C3, RAP-C4, RAP-C5, RAP-C6, and RAP-SC1) and the Crushing, Conveying, and Screening operations (ES-Crusher, ES-Conveying, and ES-Screening) associated with the non-metallic mineral processing plant are subject to a NSPS, therefore they are not subject to this rule. If the subject emission sources operate according to manufacturer specifications and with the listed particulate control device, they will likely comply with the opacity limit. Future compliance is anticipated.

2D .0524 - New Source Performance Standards (NSPS)

This regulation applies, and it will be included on the permit. The Propane/Natural Gas/No. 2 Fuel Oil/Recycled No. 2 Fuel Oil/Recycled No. 4 Fuel Oil-fired drum type hot mix asphalt plant (HMA-1) is subject to **40 CFR Part 60 Subpart I for "Hot Mix Asphalt Facilities."** The facility will be required to comply with the requirements of this rule. The facility is required to notify the DAQ of the start-up date in writing, within 15 days after start-up of the HMA plant. Under §60.92, this rule states that this facility shall not discharge into the atmosphere from the affected source any gases which contain particulate matter in excess of 90 mg/dscm (0.04 gr/dscf) or exhibit 20% opacity or greater. The asphalt plant (HMA-1) controlled by a bagfilter (CD-1) will require a source test as described in 2D .0605 below, to show compliance with this rule. Future compliance is anticipated.

The facility is also subject to **40 CFR 60, Subpart OOO for "Nonmetallic Mineral Processing Plants."** This rule applies to each crusher, grinding mill, screening operation, bucket elevator, belt conveyor, bagging operation, storage bin, enclosed truck, or railcar loading station at fixed or portable nonmetallic mineral processing plants that commenced construction, reconstruction, or modification after August 31, 1983, except, in part, to fixed plants with capacities of 25 tons per hour or less or portable plants with capacities of 150 tons per hour or less. Also, crushers and grinding mills at hot mix asphalt facilities that reduce the size of nonmetallic minerals embedded in recycled asphalt pavement and subsequent affected facilities up to, but not including, the first storage silo or bin are subject to the provisions of this Subpart. Therefore, the Crushing, Conveying, and Screening Operations (ES-Crusher, ES-Conveying, and ES-Screening) associated with the quarry, RAP Crusher (RAP-CR1), the six RAP conveyors (RAP-C1 through RAP-C6), the RAP Bin and Feeder (RAP-BF1), and the 8' X 20' Double Deck Screen (RAP-SC1) are subject to this rule. Within 15 days after start-up of each source, the facility is required to notify the DAQ of the start-up date in writing.

For affected sources that commenced construction, modification, or reconstruction after August 31, 1983, but before April 22, 2008, visible emissions are limited to 15% opacity for crushers and 10% opacity for fugitive emissions from conveyor belts, screening operations, and other affected sources. For sources constructed, modified, or reconstructed on or after April 22, 2008, visible emissions are limited to 12% opacity for crushers and 7% opacity for fugitive emissions from conveyor belts, screening operations, and other affected sources. Monthly inspection requirements apply for affected sources that were constructed on or after April 22, 2008, and that use wet suppression to control emissions. A source test using EPA Method 9 on the crushers, screens, and conveyors will need to be conducted to determine their compliance with the respective opacity limits if one has not previously been conducted. The facility must perform these tests within 60 days of achieving the maximum rate, but no later than 180 days of the initial start-up of the facility. A stack test protocol must be submitted the WSRO-DAQ. To ensure that the stack test protocol is reviewed prior to the test, it must be submitted 45 days prior to the test date. If the protocol is submitted after this date, it is not required to be pre-approved by the DAQ prior to testing. In order to give DAQ the opportunity to have an observer present, the facility should provide a written notice to the WSRO at least 7 days prior to any required performance tests that involve only Method 9. The duration of the Method 9 tests must be 30 minutes (five 6-minute averages). Compliance with the fugitive visible emissions limits must be based on the average of the five 6-minute averages. If the facility does not use wet suppression to control emissions, the source must be retested every 5 years. Sources that rely on water carryover from upstream wet suppression are exempt from the 5-year retesting requirements. Future compliance is anticipated.

The facility is also subject to **40 CFR 60, Subpart IIII for "Stationary Compression Ignition Internal Combustion Engines."** This rule applies to owners and operators of any stationary CI ICE that commence construction after July 11, 2005. All of the diesel-fired engines will be 2019 or later model depending on the date that construction commences. Therefore, the seven (7) engines that are associated with the quarry (GEN-1, GEN-1a, GEN-2, GEN-3, GEN-4, GEN-5, and GEN-7) are subject to this rule. These engines will be used for non-emergency purposes therefore they will be subject to the emission standards of §60.4201. This rule states that, "*Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later non-emergency stationary CI ICE with a maximum engine power less than or equal to 2,237 kilowatt (KW) (3,000 horsepower (HP)) and a displacement of less than 10 liters per cylinder to the certification emission standards for new nonroad CI engines in 40 CFR 89.112, 40 CFR 89.113, 40 CFR 1039.101, 40 CFR 1039.102, 40 CFR 1039.104, 40 CFR 1039.105, 40 CFR 1039.107, and 40 CFR 1039.115, as applicable, for all pollutants, for the same model year and maximum engine power.*" These engines will also be subject to the fuel requirements of §60.4207. This rule states that, "*Beginning October 1, 2010, owners and operators of stationary CI ICE subject to this subpart with a displacement of less than 30 liters per cylinder that use diesel fuel must use diesel fuel that meets the requirements of 40 CFR 80.510(b) for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to October 1, 2010, may be used until depleted.*" 40 CFR 80.510(b) says that the sulfur content must be less than 15 ppm for nonroad diesel fuel. It also says that the cetane index must be greater than 40 or the aromatic content must be less than 35 volume percent.

The facility plans to purchase new Tier 4 certified engines and will only burn fuel oil that meets the fuel requirements listed above. No performance testing will be required if the facility purchases certified engines. If the facility installs, configures, and operates the engines according to the manufacturer's specifications, then it will be reasonable to anticipate compliance with 40 CFR 60, Subpart IIII.

The facility is also subject to **40 CFR 60, Subpart JJJJ for "Stationary Spark Ignition Internal Combustion Engines."** This rule applies to owners and operators of stationary SI ICE that commence construction after June 12, 2006, where the stationary SI ICE are manufactured on or after July 1, 2008. The three Natural Gas/Propane-Fired Generators (ES-PGEN1, ES-PGEN2, and ES-PGEN3) are subject to this rule. These engines will be a 2019 model or later, depending on the date of construction, and will be constructed after the issuance of this permit. Similar to Subpart IIII above, a certified engine under this rule does not have any additional requirements other than maintaining the engine according to the manufacturer's emission-related written instructions. If the facility operates these engines while combusting natural gas according to the manufacturer's emission-related written instructions they will not have to keep a maintenance plan, conduct a performance test, or submit an initial notification. This engine must comply with the following emissions standards taken from Table 1 of this rule for Non-Emergency SI Natural Gas and Non-Emergency SI Lean Burn LPG (except lean burn 500≤HP<1,350) for maximum HP>500HP manufactured after 7/1/2010:

- 1.0 g/hp-hr. of NOx
- 2.0 g/hp-hr. of CO
- 0.7 g/hp-hr. of VOC

If the facility chooses to combust propane in these engines, the engine will **not** be considered certified. If the facility combusts propane in the engines, they must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, the facility must conduct an initial performance test and conduct subsequent performance testing every 8,760 hours or 3 years, whichever comes first thereafter to demonstrate compliance. A copy of the performance test must be submitted within 60 days of the test. The facility must submit an initial notification according to §60.4245(c). It is reasonable to anticipate compliance with 40 CFR 60, Subpart JJJJ.

2D.0535 – Excess Emissions Reporting and Malfunctions

This facility is subject to this rule. In accordance with section (f) of this rule, the Permittee must notify DAQ in the event of a source of excess emissions that last for more than four (4) hours and that result from a malfunction, a breakdown of process or control equipment, or any other abnormal conditions. It is reasonable to anticipate compliance.

2D.0540 – Particulates from Fugitive Dust Emission Sources

This facility is subject to this rule. It applies to particulate emissions that do not pass through a process stack or vent and are generated within plant property boundaries. If fugitive dust emissions cause excessive visible emissions beyond property boundaries, or cause substantive complaints, the Director may require the facility to develop, implement, and comply with a fugitive dust control plan. It is reasonable to anticipate compliance.

2D.0605 – General Recordkeeping and Reporting Requirements

This rule allows the DAQ to require any monitoring, recordkeeping, reporting, or testing it deems necessary for the facility to demonstrate compliance with an emission standard or permit condition. As mentioned previously, a memorandum titled "Hot Mix Asphalt Plant Performance Testing/Emission Testing Frequency" was issued August 13, 2013, by Sheila Holman, former DAQ Director. This requires all hot mix asphalt plants to test for compliance with 2D.0506 at least once every 10 years. The results also happen to reinforce compliance with 2D.0524 (NSPS Subpart I). The stack testing is for filterable and condensable particulate matter using EPA Methods 5 and 202, respectively. Additionally, EPA Method 9 is required for visible emissions from the HMA plant, as this is the initial test. The tests must be conducted and a test report must be submitted to DAQ within 60 days after achieving the maximum production rate at which the affected source will be operated, but not later than 180 days after initial startup of the source. The facility must test while combusting the fuel that will be utilized for the majority of the operating time. In accordance with 2D.2602, a testing protocol must be provided to DAQ prior to testing. Protocols are not required to be approved before the test date, but those that are received at least 45 days prior to the test date will be reviewed. The facility must provide at least 30 days' notice in written form of any required performance testing, to provide DAQ the opportunity to have an observer present. It is reasonable to anticipate compliance.

2D.0611 – Monitoring Emissions from Other Sources

This rule applies to the Cyclone in series with Bagfilter (HMA-CD1) associated with the Drum Mix Asphalt Plant and Bagfilter (RMC-CD2) associated with the Truck Mix Concrete Batch Plant. It allows the Director to require the facility to conduct monitoring in order to demonstrate compliance with rules in Subchapters 2D and 2Q and is the basis for requiring control device inspections in the Air Permit. This facility will be required to perform periodic inspections and maintenance (I&M) as recommended by the manufacturer. At a minimum, this facility will be required to perform an annual internal inspection of each bagfilter. Records of all inspections and maintenance with dates and descriptions should be kept in a logbook (written or electronic format) located on-site. This logbook should be made available to DAQ personnel upon request. It is reasonable to anticipate compliance.

2D.1100 – Control of Toxic Air Pollutants (TAPs)

A toxics evaluation has been conducted due to the proposition of the construction of the HMA plant and associated sources that emit toxic air pollutants (TAPs). The facility modeled for Arsenic, Benzene, Formaldehyde, Mercury and Nickel due to expected actual emissions of these TAPs being above their respective Toxic Air Pollutant Permitting Emission Rates (TPERs) listed at 2Q.0711. The sources of these TAP emissions are the HMA Plant (HMA-1), the five (5) HMA storage silos (HMA-Silo 1 through HMA-Silo 5), the five (5) Asphalt Loadout Operations (HMA-LO1 through HMA-LO5), the two (2) Asphalt Cement Heaters (ES-ACH1 and ES-ACH2), and the Concrete Batch Plant. Note that the heaters cannot be exempt from toxics per 2Q.0702 (a)(18), because they are combustion sources permitted after July 10, 2010. TAPs are also expected to be emitted from the exempt storage tanks containing No. 4, Used Oil, and Diesel Fuel¹ (IES-1 through IES-6) and Liquid Asphalt² (IES-13 and IES-14), but these sources currently qualify for exemption from toxics rules per 2Q.0702 (a)(19)(B) for "fuel oils [...] or petroleum products with a true vapor pressure (TVP) less than 1.5 pounds per square inch absolute." Also note that the three (3) Natural Gas/Propane fired generators (ES-PGEN1 through ES-PGEN3) along with the seven (7) diesel fired engines associated with the quarry equipment (GEN-1, GEN-1a, GEN-2, GEN-3, GEN-4, GEN-5, and GEN-7) were also modeled although they currently qualify for exemption from toxics rules per 2Q.0702 (a)(27)(B), "an affected source pursuant to 40 CFR Part 63". They were modeled to demonstrate that there was no unacceptable risk to human health in accordance with General

¹ Distillate Fuel Oil has a TVP of 0.062 kPa (0.0090 psi) at 700 F (AP-42 7.1, Organic Liquid Storage Tanks, rev. 11/06, Table 7.1-2).

² Liquid asphalt has a TVP less than 0.12 kPa (0.017 psi) at 325°F (AP-42 11.1 HMA plants, background document, 2/2004, p. 4-82).

Statute 143-215.107(a)(5)b. Since no AALs were exceeded in the modeling, the engines are not required to have an emissions limit placed in this condition.

On July 29, 2021, Nancy Jones, Meteorologist, Air Quality Analysis Branch (AQAB) issued a Memorandum regarding the analysis stating that "The purpose for modeling was to demonstrate compliance with guidelines specified in 15A NCAC 2D.1104 for Toxic Air Pollutants (TAPs) emitted in excess of the Toxic Permitting Emission Rates (TPERs) listed in 15A NCAC 2Q.0711. The modeling adequately demonstrates compliance, on a source-by-source basis, for all toxics modeled." A revised memo was issued on August 2, 2021 showing a corrected Maximum Modeled Toxics Impacts Table. The revised memo also stated that "the modeling adequately demonstrates compliance, on a source-by-source basis, for all toxics modeled."

The following table illustrates the maximum impacts from the modeling:

Maximum Modeled TAP Impacts

TAP	Averaging Period	AAL (lb/day)	AAL (yr)
Arsenic	Annual	0.0021	6
Benzene		0.12	19
Formaldehyde	1-hr	150	27
Mercury	24-hr	0.60	<1
Nickel		6	1

Every emission point was modeled with controlled potential emission rates for the 5-year meteorological modeling period. Therefore, there will be no operational restrictions in this permit condition. The facility must operate in a manner to maintain emission rates below the rates listed in the table below. To ensure compliance, the heights and geographic positions of the stacks and release points, as specified in the modeling and contained in this permit condition, shall remain unchanged. No recordkeeping or reporting requirements are required for this condition as compliance will be demonstrated by the operations restrictions, recordkeeping, and reporting requirements of the synthetic minor permit condition. It is reasonable to anticipate compliance.

TAP Emission Limits

Affected Source(s)	Toxic Air Pollutant	Emission Limit
Propane/Natural Gas/No. 2 Fuel Oil/Recycled No. 2 Fuel Oil/Recycled No. 4 Fuel Oil-fired drum type hot mix asphalt plant (80 MMBtu/hr. maximum heat input capacity) (HMA-1)	Formaldehyde (50-00-0)	7.75E-01 lb./hr.
	Mercury, vapor (Component of HGC) (7439-97-6)	1.56E-02 lb./day
	Nickel metal (Component of NIC) (7440-02-0)	3.79E-01 lb./day
	Arsenic & Compounds (total mass of elemental AS, arsine and all inorganic compounds) (ASC (7778394))	1.23 lb./year
	Benzene (71-43-2)	8.54E+02 lb./year
Natural Gas/ULSD-fired Asphalt Cement Heater (1.2 MMBtu/hr. maximum heat input capacity) (ES-ACH1)	Formaldehyde (50-00-0)	2.83E-04 lb./hr.
	Mercury, vapor (Component of HGC) (7439-97-6)	8.64E-05 lb./day
	Nickel metal (Component of NIC) (7440-02-0)	8.67E-05 lb./year
	Arsenic & Compounds (total mass of elemental AS, arsine and all inorganic compounds) (ASC (7778394))	4.20E-02 lb./year
	Benzene (71-43-2)	2.15E-02 lb./year
Natural Gas/ULSD-fired Asphalt Cement Heater (1.1 MMBtu/hr. maximum heat input capacity) (ES-ACH2)	Formaldehyde (50-00-0)	2.59E-04 lb./hr.
	Mercury, vapor (Component of HGC) (7439-97-6)	7.92E-05 lb./day
	Nickel metal (Component of NIC) (7440-02-0)	7.92E-05 lb./day
	Arsenic & Compounds (total mass of elemental AS, arsine and all inorganic compounds) (ASC (7778394))	3.85E-02 lb./year
	Benzene (71-43-2)	1.97E-02 lb./year
Five Hot Mix Asphalt Storage Silos (150-200 tons Maximum Capacity, each) (HMA-Silo1 through HMA-Silo5)	Formaldehyde (50-00-0)	2.10E-02 lb./hr.
	Benzene (71-43-2)	8.54 lb./year

Affected Source(s)	Toxic Air Pollutant	Emission Limit
Truck Loadout Point (RMC-LO1)	Nickel metal (Component of NIC) (7440-02-0)	4.62E-03 lb./day
	Arsenic & Compounds (total mass of elemental AS, arsine and all inorganic compounds) (ASC (7778394))	5.77E-01 lb./year
Asphalt Loadout Operation for Silos 1 through 5 (HMA-LO1 through HMA-LO5)	Formaldehyde (50-00-0)	9.15E-04 lb./hr.
	Benzene (71-43-2)	4.74 lb./year

2D .1111 – Maximum Achievable Control Technology

This facility has seven (7) diesel-fired engines (GEN-1, GEN-1a, GEN-2, GEN-3, GEN-4, GEN-5, and GEN-7) and three (3) natural gas/propane-fired engines (PGEN-1, PGEN-2, and PGEN-3) that are subject to 40 CFR 63 Subpart ZZZZ. In accordance with 40 CFR §63.6590(c)(1), these sources shall meet the requirements of 40 CFR 63 Subpart ZZZZ and Subpart A by meeting the requirements of 40 CFR 60 Subpart IIII for compression ignition engines or 40 CFR 60 Subpart IIIJ for spark ignition engines. No further requirements apply for such engines under 40 CFR 63 Subpart ZZZZ or Subpart A. It is reasonable to anticipate compliance.

2D .1806 – Control and Prohibition of Odorous Emissions

This rule requires the facility to utilize management practices or odor control equipment sufficient to prevent odorous emissions from causing or contributing to objectionable emissions beyond the facility's boundaries. It is reasonable to anticipate compliance.

2O .0304 – Zoning Specific Condition

This rule is the basis for requesting that, prior to construction or operation of the facility under this permit, as prescribed by NCGS 143-215.108(f), "An applicant for a permit under this section for a new facility or for the expansion of a facility permitted under this section shall request each local government having jurisdiction over any part of the land on which the facility and its appurtenances are to be located to issue a determination as to whether the local government has in effect a zoning or subdivision ordinance applicable to the facility and whether the proposed facility or expansion would be consistent with the ordinance." As mentioned under Section I. of this review, this site is located in an area without zoning and the Applicant was required to publish a legal notice pursuant to 15A NCAC 02Q .0113. The application contained a letter that stated that a public notice was published on April 7, 2021 in the Caswell Messenger and a sign was posted on April 1, 2021. A notarized Affidavit of Publication was also included with a scanned copy of the newspaper clipping. Timestamped photographs indicated that the sign was posted as required. WSRO staff conducted a drive by of the facility in late April and noticed that the sign had been removed. Mr. Martino stated that the sign had been stolen. A replacement sign was installed on May 12th, 2021. It is DAQ policy to include a permit condition in permits for facilities located in areas without zoning requiring compliance with all lawfully adopted local ordinances that apply to the facility at the time of construction or operation of the facility.

2O .0315 - Synthetic Minor Facilities

The facility is subject to this rule. This rule allows the facility to choose to have terms and conditions placed in their permit to restrict operation to limit the potential for the facility to emit in order to avoid Title V applicability and thus be classified as a Synthetic Minor facility. The facility has the potential without controls and limits to emit more than 100 tons of SO₂, NO_x, and CO, each, per year. To ensure that the facility emits less than 100 tons of SO₂, NO_x, and CO per year, the Permittee has requested that production be limited to 600,000 tons of asphalt per consecutive 12 month period, that the sulfur content of any grade of fuel oil combusted by the facility be limited to no more than 0.5% sulfur by weight, that the sulfur content of the No. 2 Fuel Oil combusted in the Asphalt Cement Heaters (ES-ACH1 and ES-ACH2) be limited to no more than 15 PPM sulfur by weight, the production of the quarry operations shall be less than 5,694,000 tons per consecutive 12-month period, the total fuel consumption of the smaller generators associated with the quarry equipment (GEN-1, GEN-1A, GEN-2, GEN-3, GEN-4, GEN-5, GEN-7) shall be less than 569,746 gals No. 2 Fuel Oil per consecutive 12-month period, and the total fuel consumption of the three Natural Gas/Propane Fired Generators (ES-PGEN1, ES-PGEN2, and ES-PGEN3) shall be less than 119,697 MMBtu/yr. per consecutive 12-month period. The facility is required to record monthly and total annually the amount of asphalt produced, the amount of non-metallic mineral product produced by the quarry, the total fuel consumption of the three Natural Gas/Propane Fired Generators (ES-PGEN1, ES-PGEN2, and ES-PGEN3), the total fuel consumption of the smaller generators associated with the quarry equipment (GEN-1, GEN-1A, GEN-2, GEN-3, GEN-4, GEN-5, GEN-7), and keep fuel supplier certifications on-site and made available to DAQ personnel upon request. Within 30 days after each calendar quarter, regardless of actual emissions, the following data, including monthly and 12-month totals for the previous 14 months, should be provided: SO₂, NO_x, and CO emissions, monthly asphalt production, monthly non-metallic mineral product production, monthly fuel usage of the three Natural Gas/Propane Fired Generators (ES-PGEN1, ES-PGEN2, and ES-PGEN3), the total monthly fuel consumption of the smaller generators associated with the quarry equipment (GEN-1, GEN-1A, GEN-2, GEN-3, GEN-4, GEN-5, GEN-7) and a summary of the sulfur content of the fuel oils from the fuel certification records for the previous 3 months. Also, the catalytic oxidizers associated with the three power generators (CD-PGEN1, CD-PGEN2, and CD-PGEN3) must be annually inspected per the manufacturer's specifications. It is reasonable to anticipate compliance. The facility will also be required to conduct annual maintenance on the particulate control equipment (HMA-CD1 and RMC-CD2). It should be noted that, when calculating the controlled potential emissions from the RAP crushing operation, the facility made the assumption that the annual RAP crushing throughput would not exceed 40% of the total HMA plant throughput. Section 610 of the NCDOT 2018 Standard Specifications, Table 610-4 requires a maximum RAP usage of 40% for surfaces. Therefore,

there is not a need to require a RAP crushing throughput limit in this condition, as it is assumed that the facility will manufacture a product that meets the specifications of the client. It is reasonable to anticipate compliance.

2Q.0317 – Avoidance Conditions (2D .0530 PSD – Sulfur Dioxide)

This facility has the potential to emit more than 250 tons per year of Sulfur Dioxide (SO₂) emissions before controls. This facility is not on the list of 28 source categories with 100 tons per year major source thresholds. A limit of 250 tons per year of SO₂ emissions will be placed in the permit and so the facility is considered minor for PSD purposes.

Compliance with this rule is achieved by meeting the 100 tons per year SO₂ emissions limit as set forth under 2Q.0315 above. It is reasonable to anticipate compliance.

2Q.0317 – Avoidance Conditions (2Q.0700 – Recycled Fuel Oil)

This facility is subject to this rule for the avoidance of 2D.0530 "Prevention of Significant Deterioration" as previously mentioned above. It is also subject to this rule for the avoidance of 2Q.0700 "Toxic Air Pollutant Procedures" due to the use of recycled No. 2 and No. 4 fuel oils. The recycled fuel oil must be equivalent to its virgin counterpart. This can be met by following the allowable levels for arsenic, cadmium, chromium, lead, total halogens, flash point, sulfur, and ash as listed in the permit condition. The facility must record and maintain for a minimum of three (3) years the actual amount of recycled fuel oil delivered to and combusted on an annual basis. Each load received shall include a delivery manifest, a batch specific analytical report, batch signature information, and a certification indicating there were no detectable PCBs (<2ppm). It is reasonable to anticipate continued compliance.

2Q.0700 – Toxic Air Pollutant Procedures (Avoidance – Recycled Asphalt Shingles)

This rule applies, and it will be included in this permit. The facility has requested the ability to process Recycled Asphalt Shingles (RAS). The processing of RAS has the potential to emit asbestos, a toxic air pollutant with a toxic permit emission rate of 5.7×10^{-3} pound per year (obstructed or non-vertically oriented). Therefore, an avoidance condition for toxics applicability was added to the permit. The avoidance condition helps the facility to avoid NC toxics as well as NESHAP 40 CFR 61, Subpart M "National Emission Standard for Asbestos." The facility must use recycled shingles that are considered equivalent to their virgin or unadulterated counterparts by meeting the following criteria:

The recycled shingles and roofing materials are certified to be free of asbestos containing material (ACM). ACM is defined as materials containing more than one percent (1%) by weight of asbestos. This certification shall be provided by demonstration that the materials sampled are representative of the recycled asphalt roofing material and contain less than 1 percent asbestos or are certified to be asbestos free as measured by the method specified in Appendix E, 40 CFR 763, Section 1, polarized light microscopy (PLM). Certification shall be provided by NC-accredited Asbestos Inspectors or Roofing Supervisors to sample the PRAS to meet the above criteria. Accreditation shall be obtained through the Health Hazards Control Unit of the Division of Public Health.

The facility is responsible for ensuring that the RAS meet the criteria. The facility shall perform visual inspections of each received load for suspect ACM and take a sample from every 100 tons received to be tested. Any load received by an outside vendor must have a certification of no ACM and that it was tested in accordance with the best practices. If a received load was not tested by the outside vendor, the facility is responsible for testing and certifying the RAS. The facility is responsible for any discrepancies found by the DAQ. The facility shall maintain records for a minimum of three years of the amount of RAS delivered to and used at the facility. The facility shall also maintain the delivery manifest document, the batch specific analytical report, the batch signature information, and the certification statement of no ACM for each load or batch of RAS received by the facility. The facility is also responsible for complying with any additional rules or obtaining any additional permits associated with the receipt and/or storage of RAS. The DAQ also reserves the right to require any additional testing and/or monitoring of the RAS in accordance with this rule, 2Q.0317. Carolina Sunrock has multiple facilities that have air permits with this requirement, therefore the company is aware of the requirements of this condition. The DAQ anticipates future compliance with this rule from the facility.

2Q.0711 – Emission Rates Requiring a Permit (Toxics)

As previously discussed under 2D.1100, a toxics review has been triggered for this facility for certain TAPs (i.e., Arsenic, Benzene, Cadmium, Formaldehyde, Mercury and Nickel) because they are expected to be emitted above their respective toxic permit emission rates (TPER). In addition, this facility will emit additional TAP as shown in the table below that are not expected to be emitted above their respective TPER.

This facility must be operated and maintained so that any toxic air pollutant (TAP) emitted does not exceed its respective toxic permit emission rate (TPER). Prior to exceeding any TPER, the facility must modify their air quality permit. The Permittee shall maintain records of operational information demonstrating that the TAP emissions do not exceed the TPERs. A toxics review has been triggered for this initial review for the emissions of TAPs listed in the table below due to the new quarry, HMA, and Concrete Batch plants. The Hot Mix Asphalt Plant (HMA-1), the five HMA storage silos (HMA-Silo1 through HMA-Silo5), the Asphalt and Truck Loadout Operations (HMA-LO1 and HMA-LO2), the two (2) Asphalt Cement Heaters (HMA-ACH1 and HMA-ACH2), the Concrete Batch Plant, the three natural gas/propane-fired engines (ES-PGEN1 through ES-PGEN3), and the seven diesel fired engines associated with the

quarry will be sources of these TAPs. The controlled potential emission rates of these TAPs were calculated using the NCDEQ Concrete Batch Plant, Asphalt, and permittee created spreadsheets. The emissions factors that were used in the permittee created spreadsheets were verified by this permit writer. These emission rates will not exceed the TPERs as demonstrated below. It is reasonable to anticipate compliance.

Pollutant	TPER (lb./yr.)	TPER (lb./day)	TPER (lb./hr.)	Controlled Potential Emissions
Acetaldehyde (75-07-0)			6.8	3.25E-01 lb./hr.
Acrolein (107-02-8)			0.02	6.50E-03 lb./hr.
Ammonia (as NH3) (7664-41-7)			0.68	7.17E-03 lb./hr.
Benzo(a)pyrene (Component of 83329/POMTV & 56553/7PAH) (50-32-8)	2.2			2.36E-05 lb./yr.
Beryllium Metal (unreacted) (Component of BEC) (7440-41-7)	0.28			1.00E-01 lb./yr.
Carbon disulfide (75-15-0)		3.9		1.49E-02 lb./day
Chromium (VI) Soluble Chromate Compounds (Component of CRC)		0.013		6.66E-03 lb./day
Dichlorobenzene(p), 1,4- (106-46-7)			16.8	2.69E-06 lb./hr.
Fluorides (sum of all fluoride compounds as mass of F ion) (16984-48-8)		0.34	0.064	1.47E-02 lb./day, 6.13E-01 lb./hr.
Hexachlorodibenzo-p-dioxin 1,2,3,6,7,8 (57653-85-7)	0.0051			7.80E-07 lb./yr.
Hexane, n- (110-54-3)		23		5.84E+00 lb./day
Hydrogen chloride (hydrochloric acid) (7647-01-0)			0.18	5.25E-02 lb./hr.
Hydrogen sulfide (7783-06-4)		1.7		3.28E-01 lb./day
MEK (methyl ethyl ketone, 2-butanone) (78-93-3)		78	22.4	1.61E-01 lb./day, 6.70E-03 lb./hr.
Manganese & compounds (MNC)		0.63		6.45E-02 lb./day
Methyl chloroform (71-55-6)		250	64	2.88E-01 lb./day, 1.20E-02 lb./hr.
Methylene chloride (75-09-2)	1600		0.39	1.97E-02 lb./yr., 8.23E-06 lb./hr.
Perchloroethylene (tetrachloroethylene) (127-18-4)	13000			1.92E-01 lb./yr.
Phenol (108-95-2)			0.24	1.01E-03 lb./hr.
Styrene (100-42-5)			2.7	2.40E-04 lb./hr.
Tetrachlorodibenzo-p-dioxin 2,3,7,8- (Component of CLDC & 83329/POMTV) (1746-01-6)	0.0002			1.26E-07 lb./yr.
Toluene (108-88-3)		98	14.4	1.75E+01 lb./day, 7.30E-01 lb./hr.
Xylene (mixed isomers) (1330-20-7)		57	16.4	1.45E+00 lb./day, 6.04E-02 lb./hr.

IV. NEW SOURCE PERFORMANCE STANDARDS (NSPS) / NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS (NESHAP) / PREVENTION OF SIGNIFICANT DETERIORATION (PSD) / EPA SECTION 112r / ATTAINMENT/NON-ATTAINMENT STATUS

- **NSPS APPLICABILITY** - As discussed in Section III. under 2D .0524, the facility **is** subject to 40 CFR 60 Subpart I – “Standards of Performance for Hot Mix Asphalt Facilities” and Subpart OOO for “Nonmetallic Mineral Processing Plants.”

The two Asphalt Cement Heaters (ES-ACH1 and ES-ACH2) **are not** subject to 40 CFR Part 60, Subpart Dc because the maximum heat input of each is less than 10 million Btu per hour.

The insignificant aboveground storage tanks containing fuel oil and liquid asphalt (IES-1 through IES-6, IES-13, and IES-14) not subject to 40 CFR Part 60, Subpart Kb, because fuel oil has a true vapor pressure (TVP) less than 0.062 kilopascals (kPa) 0.0090 psi, at 70° F. (AP-42 7.1, Organic Liquid Storage Tanks, rev. 11/06, Table 7.1-2), and liquid asphalt has a TVP of 0.12

kPa (0.017 psi) at 325 °F (AP-42 11.1 HMA plants, background document, 2/2004, p. 4-82). The 100,000-gallon propane storage tank (IES-15) does not emit to the atmosphere. According to section 60.110b(d)(2) of the rule, pressure vessels designed to operate in excess of 204.9 kPa (29.72 psi) and without emissions to the atmosphere are exempt from the Subpart's requirements.

This facility has seven (7) diesel-fired engines (GEN-1, GEN-1a, GEN-2, GEN-3, GEN-4, GEN-5, and GEN-7) that are subject to 40 CFR 60 Subpart IIII. See Section III. under 2D .0524 for more details.

This facility has three (3) natural gas/propane-fired engines (PGEN-1, PGEN-2, and PGEN-3) that are subject to 40 CFR 60 Subpart JJJJ. See Section III. under 2D .0524 for more details.

- **NESHAP APPLICABILITY** - This facility is subject to a NESHAP regulation.

This facility has seven (7) diesel-fired engines (GEN-1, GEN-1a, GEN-2, GEN-3, GEN-4, GEN-5, and GEN-7) and three (3) natural gas/propane-fired engines (PGEN-1, PGEN-2, and PGEN-3) that are subject to 40 CFR 63 Subpart ZZZZ. See Section III. under 2D .1111 for more details.

The two Asphalt Cement Heaters (ES-ACH1 and ES-ACH2) are not subject to 40 CFR 63 Subpart JJJJJ for Industrial, Commercial, and Institutional Boilers at Area Sources. This rule defines boilers as "an enclosed device using controlled flame combustion in which water is heated to recover thermal energy in the form of steam or hot water." These heaters are not considered boilers as defined by this rule, i.e., it is not used to create steam, and so this rule does not apply.

The facility is not subject to 40 CFR 63 Subpart LLLL - National Emission Standards for Hazardous Air Pollutants: Asphalt Processing and Asphalt Roofing Manufacturing. This facility is not defined as an asphalt processing plant or asphalt roofing manufacturer in this Subpart, and is classified as minor for HAP emissions, and so this rule does not apply.

The facility is avoiding subjectivity to 40 CFR 61, Subpart M "National Emission Standard for Asbestos" by inserting an avoidance condition in the permit. The avoidance condition helps the facility to avoid NC toxics as well as this NESHAP. The facility must use recycled shingles that are considered equivalent to their virgin or unadulterated counterparts by meeting a set of criteria. See Section III. under 2Q .0700 for more details.

- **PSD APPLICABILITY** - As discussed in Section III. under 2Q .0317, this facility has the potential to emit greater than 250 tons per year (before controls) of a criteria pollutant (SO₂) but has a permit condition under rule 2Q .0317 so that it can be considered minor for PSD purposes. This facility is not one of the twenty-eight named PSD source categories limited to 100 tons per year (after controls) of any criteria pollutant. Caswell County has not yet triggered a PSD baseline date. Therefore, increment tracking is not required.

- **TOXICS APPLICABILITY** - The facility does emit toxics and is subject to 2D .1100 and 2Q .0711. See Section III. for further discussion.

- **EPA SECTION 112(r)** - This facility will have a 100,000-gallon propane storage tank (IES-15) for fuel for the three natural gas/propane-fired generators (ES-PGEN 1 through ES-PGEN3). §68.126 of this rule states that "a flammable substance listed in Tables 3 and 4 of §68.130 is nevertheless excluded from all provisions of this part when the substance is used as a fuel or held for sale as a fuel at a retail facility." This facility is subject to the "General Duty Clause" of EPA Section 112(r) regulations; however, it is not subject to the Risk Management Plan (RMP) requirement due to §68.126.

- **ATTAINMENT/NON-ATTAINMENT STATUS** - Caswell County is considered in attainment or unclassifiable for all regulated pollutants.

V. FACILITY - WIDE EMISSIONS

This facility has a variety of emission sources. The emissions of these sources were calculated using the following methods:

- Emissions from the HMA plant were calculated using the NCDENR Asphalt Emissions Calculator spreadsheet (Revision G).
- Emissions from the Asphalt Cement Heaters were calculated using the NCDENR Fuel Oil Combustion Calculator (Revision G) and using the NCDENR Asphalt Emissions Calculator spreadsheet, mentioned above.
- Emissions from the concrete batch plant were calculated using the NCDENR Concrete Batch Plant Emissions Calculator spreadsheet (Revision D).
- Emissions from the quarry equipment was calculated using the NCDENR Stone Quarry Emissions Calculator spreadsheet (Revision C).
- Emissions from the three natural gas/propane-fired power generating engines were calculated using a spreadsheet that the facility's consultant created using emissions factors from AP-42, vendor specifications, and 40 CFR 60 Subpart JJJJ emissions limits.

- Emissions from the seven diesel-fired power generating engines were calculated using a spreadsheet that the facility's consultant created using emissions factors from AP-42, the NCDENR Gas & Diesel Internal Combustion Engines Emissions Calculator spreadsheet (Revision S), and 40 CFR 60 Subpart IIII emissions limits.

Uncontrolled Potential Emissions for Title V Applicability were calculated assuming 8760 hours/year production and no production operating restrictions. Compliance with all federally enforceable emission limits (e.g. NSPS limits for the asphalt plant and generators) was also assumed. Stockpiles, and their associated drop points were not considered as part of the Uncontrolled Potential Emissions for Title V Applicability because they are considered fugitive. The controlled potential emissions for the facility were calculated assuming that the emission sources were controlled by the control devices listed in the equipment list and all of the operating restrictions in 2Q.0315 are observed. The operating restrictions in this condition include:

- Asphalt production is limited to 600,000 tons per consecutive 12-month period
- The sulfur content of any grade of fuel oil combusted by the facility is limited to no more than 0.5% sulfur (by weight)
- The sulfur content of the No. 2 Fuel Oil combusted in the Asphalt Cement Heaters (ES-ACH1 and ES-ACH2) is limited to no more than 15 PPM sulfur (by weight)
- The production of the quarry operations will be less than 5,694,000 tons per consecutive 12-month period
- The total fuel consumption of the smaller generators associated with the quarry equipment (GEN-1, GEN-1A, GEN-2, GEN-3, GEN-4, GEN-5, GEN-7) shall be less than 569,746 gallons No. 2 Fuel Oil/yr. per consecutive 12-month period
- The total fuel consumption of the three Natural Gas/Propane Fired Generators (ES-PGEN1, ES-PGEN2, and ES-PGEN3) shall be less than 119,697 MMBtu/yr. per consecutive 12-month period

The following table summarizes the facility-wide emissions from this facility:

Pollutant	Potential Emissions with Synthetic Minor Limits (tons/year)	Uncontrolled Potential Emissions for Title V Applicability (tons/year)
PM	113.78	126.48*
PM ₁₀	41.92	57.10*
PM _{2.5}	18.63	30.64*
SO ₂	25.27	666.01
NO _x	45.26	103.5
CO	99.38	242.86
VOC	48.93	95.16
HAP _{Total}	4.08	13.31
HAP _{Highest} (Formaldehyde)	0.956	3.49

VI. COMPLIANCE HISTORY

There is no compliance history as this is a Greenfield facility. This facility will be targeted for a compliance inspection upon issuance of this permit.

VII. APPLICATION FEE

An application fee of \$400, the required fee for a new permit for a Greenfield facility, was submitted along with the application.

VIII. ZONING CONSISTENCY DETERMINATION (ZCD)

As mentioned previously, this site is located in an area without zoning; therefore, a legal notice is required per 2Q.0113. In the permit application, the facility submitted a Zoning Consistency Determination form that had been filled out and signed by Mr. Bryan S. Miller, Caswell County Manager. This form stated that "The proposed operation IS consistent with applicable zoning and subdivision ordinances." A public notice was published on April 7, 2021 in the Caswell Messenger and a sign was posted on April 1, 2021. A notarized Affidavit of Publication was also included with a scanned copy of the newspaper clipping. Timestamped photographs indicated that the sign was posted as required. WSRO staff conducted a drive by of the facility in late April and noticed that the sign had been removed. Mr. Martino stated that the sign had been stolen. A replacement sign was installed on May 12th, 2021. The actions of the facility to demonstrate that the operation of this facility is consistent with local zoning appears to be adequate.

IX. RECOMMENDATION

It is recommended that Air Quality Permit No. 10694R00 be issued to Carolina Sunrock LLC - Prospect Hill Quarry and Distribution Center.

DRAFT

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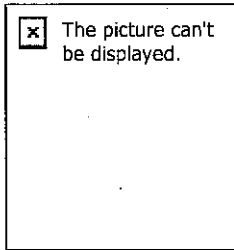
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ROY COOPER
Governor

ELIZABETH S. BISER
Secretary

MICHAEL A. ABRACZINSKAS
Director



XXXXXX 2021

Mr. Gregg Bowler
President
Carolina Sunrock LLC - Prospect Hill Quarry and Dist. Center
200 Horizon Drive, Suite 100
Raleigh, NC 27615

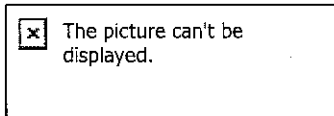
Subject: Air Permit No. 10694R00
Carolina Sunrock LLC - Prospect Hill Quarry and Dist. Center
Prospect Hill, Caswell County, North Carolina
Permit Class: Synthetic Minor
Facility ID# 1700017

Dear Mr. Bowler:

In accordance with your completed application received July 8, 2021, we are forwarding herewith Permit No. 10694R00 to Carolina Sunrock LLC - Prospect Hill Quarry and Dist. Center, Prospect Hill, Caswell County, North Carolina for the construction and operation of air emissions sources or air cleaning devices and appurtenances. Additionally, any emissions activities determined from your air permit application as meeting the exemption requirements contained in 15A NCAC 2Q .0102 have been listed for information purposes as an "ATTACHMENT" to the enclosed air permit. Please note the records retention requirements are contained in General Condition 2 of the General Conditions and Limitations.

If any parts, requirements, or limitations contained in this permit are unacceptable to you, you have the right to request a formal adjudicatory hearing within 30 days following receipt of this permit, identifying the specific issues to be contested. Such a request will stay the effectiveness of the entire permit. This hearing request must be in the form of a written petition, conforming to G.S. 150B-23 of the North Carolina General Statutes, and filed with the Office of Administrative Hearings, 6714 Mail Service Center, Raleigh, NC 27699-6714. The form for requesting a formal adjudicatory hearing may be obtained upon request from the Office of Administrative Hearings. Unless a request for a hearing is made pursuant to G.S. 150B-23, this air permit shall be final and binding.

You may request modification of your air permit through informal means pursuant to G.S. 150B-22. This request must be submitted in writing to the Director and must identify the specific provisions or issues for which the modification is sought. Please note that the permit will become final and binding regardless of a request for informal modification unless a request for a hearing is also made under G.S. 150B-23.



Unless exempted by a condition of this permit or the regulations, construction of new air pollution sources or air cleaning devices, or modifications to the sources or air cleaning devices described in this permit must be covered under a permit issued by the Division of Air Quality prior to construction. Failure to do so is a violation of G.S. 143-215.108 and may subject the Permittee to civil or criminal penalties as described in G.S. 143-215.114A and 143-215.114B.

This permit shall be effective from [REDACTED] 20XX until [REDACTED], is nontransferable to future owners and operators, and shall be subject to the conditions and limitations as specified therein.

Changes have been made to the permit stipulations. The Permittee is responsible for carefully reading the entire permit and evaluating the requirements of each permit stipulation. The Permittee shall comply with all terms, conditions, requirements, limitations and restrictions set forth in this permit. Noncompliance with any permit condition is grounds for enforcement action, for permit termination, revocation and reissuance, or modification, or for denial of a permit renewal application.

Should you have any questions concerning this matter, please contact Dylan Wright at 336-776-9646 or dylan.wright@ncdenr.gov.

Sincerely,

T. Ray Stewart, Jr., P.E., CPM, Regional Supervisor
Division of Air Quality, NC DEQ

DAW
Enclosures

c: Winston-Salem Regional Office
Connie Horne, Cover letter only

NORTH CAROLINA ENVIRONMENTAL MANAGEMENT COMMISSION

DEPARTMENT OF ENVIRONMENTAL QUALITY

DIVISION OF AIR QUALITY

AIR PERMIT NO. 10694R00

Issue Date: ~~XXXXXX~~, 2021

Effective Date: ~~XXXXXX~~, 2021

Expiration Date: ~~XXXXXX~~, 2029

Replaces Permit: (new)

To construct and operate air emission source(s) and/or air cleaning device(s), and for the discharge of the associated air contaminants into the atmosphere in accordance with the provisions of Article 21B of Chapter 143, General Statutes of North Carolina (NCGS) as amended, and other applicable Laws, Rules and Regulations,

Carolina Sunrock LLC - Prospect Hill Quarry and Dist. Center
 1238 Wrenn Road
 Prospect Hill, Caswell County, North Carolina
 Permit Class: Synthetic Minor
 Facility ID# 1700017

(The Permittee) is hereby authorized to construct and operate the air emissions sources and/or air cleaning devices and appurtenances described below:

Emission Source ID	Emission Source Description	Control System ID	Control System Description
Drum Mix Asphalt Plant (250 tons per hour capacity) consisting of the following:			
HMA-1 (NSPS)	Propane/Natural Gas/No. 2 Fuel Oil/Recycled No. 2 Fuel Oil/Recycled No. 4 Fuel Oil-fired drum type hot mix asphalt plant (80 MMBtu/hr. maximum heat input capacity)	HMA-CD1	Cyclone in series with a Bagfilter (8,968 square feet of filter area)
ES-ACH1	Natural Gas/ULSD-fired Asphalt Cement Heater (1.2 MMBtu/hr. maximum heat input capacity)	N/A	N/A
ES-ACH2	Natural Gas/ULSD-fired Asphalt Cement Heater (1.1 MMBtu/hr. maximum heat input capacity)		
HMA-LO1	Asphalt Loadout Operation Silo 1		
HMA-LO2	Asphalt Loadout Operation Silo 2		
HMA-LO3	Asphalt Loadout Operation Silo 3		
HMA-LO4	Asphalt Loadout Operation Silo 4		
HMA-LO5	Asphalt Loadout Operation Silo 5		
HMA-Silo1	Hot Mix Asphalt Storage Silo (150 tons Maximum Capacity)		
HMA-Silo2	Hot Mix Asphalt Storage Silo (150 tons Maximum Capacity)		
HMA-Silo3	Hot Mix Asphalt Storage Silo (200 tons Maximum Capacity)		
HMA-Silo4	Hot Mix Asphalt Storage Silo (200 tons Maximum Capacity)		
HMA-Silo5	Hot Mix Asphalt Storage Silo (200 tons Maximum Capacity)		

Emission Source ID	Emission Source Description	Control System ID	Control System Description
RAP Crushing System Consisting of the Following:			
RAP-CR1 (NSPS)	RAP Crusher (65 tons/hr. Maximum Capacity)	N/A	N/A
RAP-BF1 (NSPS)	RAP Bin and Feeder		
RAP-C1 (NSPS)	RAP 36" Conveyor, Feeder to Crusher		
RAP-C2 (NSPS)	RAP 36" Conveyor, Crusher to Screen		
RAP-C3 (NSPS)	RAP 36" Conveyor, Screen to Plant		
RAP-C4 (NSPS)	RAP 36" Conveyor, Screen to Conveyor (C-5)		
RAP-C5 (NSPS)	RAP 36" Conveyor, Conveyor (C-5) to Conveyor (C-6)		
RAP-C6 (NSPS)	RAP 36" Conveyor, Conveyor (C-6) to Crusher		
RAP-SC1 (NSPS)	8' X 20' Double Deck Screen		
Truck Mix Concrete Batch Plant (120 cubic yards per hour capacity) consisting of the following:			
RMC-LO1	Truck Loadout Point	RMC-CD2	Bagfilter (1,433 square feet of filter area)
RMC-Silo1	Cement Storage Silo (200-ton capacity)		
RMC-Silo2	Flyash Storage Silo (150-ton capacity)		
RMC-WB1	Cement/Flyash Weigh Batcher (5-ton max capacity)	N/A	N/A
RMC-WB2	Aggregate Weigh Batcher (20-ton max capacity)		
Non-Metallic Mineral Processing Plant utilizing water suppression with no other control device, including:			
ES-Conveying (NSPS)	Conveying Operations	N/A	N/A
ES-Crusher (NSPS)	Crushing Operations		
ES-Screening (NSPS)	Screening Operations		
Power Generators:			
ES-PGEN1 (NSPS, NESHAP)	2065 hp Natural Gas/Propane Fired Generator #1	CD-PGEN1	Catalytic Oxidizer
ES-PGEN2 (NSPS, NESHAP)	2065 hp Natural Gas/Propane Fired Generator #2	CD-PGEN2	Catalytic Oxidizer
ES-PGEN3 (NSPS, NESHAP)	1721 hp Natural Gas/Propane Fired Generator #3	CD-PGEN3	Catalytic Oxidizer
Support Equipment:			
GEN-1 (NSPS-III, NESHAP-ZZZZ)	(J50V2) 350 hp Diesel Engine Powering Primary Crusher	N/A	N/A
GEN-1a (NSPS-III, NESHAP-ZZZZ)	(J45) 350 hp Diesel Engine Powering Primary Crusher		
GEN-2 (NSPS-III, NESHAP-ZZZZ)	(s190dt) 125 hp Diesel Engine Powering Screen		
GEN-3 (NSPS-III, NESHAP-ZZZZ)	(PS1300 Maxtrack) 440 hp Diesel Engine Powering Cone Crusher		
GEN-4 (NSPS-III, NESHAP-ZZZZ)	(TF80) 125 hp Diesel Engine Powering Tracked Feeder		
GEN-5 (NSPS-III, NESHAP-ZZZZ)	(PS1300 Maxtrack) 450 hp Diesel Engine Powering Cone Crusher		
GEN-7 (NSPS-III, NESHAP-ZZZZ)	(PS100 Maxtrack) 350 hp Diesel Engine Powering Cone Crusher		

in accordance with the completed application 1700017.21A received July 8, 2021, including any plans, specifications, previous applications, and other supporting data, all of which are filed with the Department of Environmental Quality, Division of Air Quality (DAQ) and are incorporated as part of this permit.

This permit is subject to the following specified conditions and limitations including any TESTING, REPORTING, OR MONITORING REQUIREMENTS:

A. SPECIFIC CONDITIONS AND LIMITATIONS

1. Any air emission sources, or control devices authorized to construct and operate above must be operated and maintained in accordance with the provisions contained herein. The Permittee shall comply with applicable Environmental Management Commission Regulations, including Title 15A North Carolina Administrative Code (NCAC), Subchapter 2D .0202, 2D .0501, 2D .0503, 2D .0506, 2D .0510, 2D .0515, 2D .0516, 2D .0521, 2D .0524 (40 CFR 60, Subpart I, Subpart IIII, Subpart JJJJ, Subpart OOO), 2D .0535, 2D .0540, 2D .0605, 2D .0611, 2D .1100, 2D .1111 (40 CFR 63, Subpart ZZZZ), 2D .1806, 2Q .0304, 2Q .0315, 2Q .0317 (Avoidance) and 2Q .0711.
2. PERMIT RENEWAL AND EMISSION INVENTORY REQUIREMENT - The Permittee, at least 90 days prior to the expiration date of this permit, shall request permit renewal by letter in accordance with 15A NCAC 2Q .0304(d) and (f). Pursuant to 15A NCAC 2Q .0203(i), no permit application fee is required for renewal of an existing air permit (without a modification request). The renewal request (with application Form A) should be submitted to the Regional Supervisor, DAQ. Also, at least 90 days prior to the expiration date of this permit, the Permittee shall submit the air pollution emission inventory report (with Certification Sheet) in accordance with 15A NCAC 2D .0202, pursuant to N.C. General Statute 143 215.65. The report shall be submitted to the Regional Supervisor, DAQ and shall document air pollutants emitted for the 2028 calendar year.
3. COMPLIANCE WITH EMISSION CONTROL STANDARDS - As required by 15A NCAC 2D .0501 (c) any source of air pollution shall be operated with such control or in such manner that the source shall not cause the ambient air quality standards pursuant to 15A NCAC 02D .0400 to be exceeded at any point beyond the premises on which the source is located. When controls more stringent than those named in the applicable emission standards in this Section are required to prevent violation of the ambient air quality standards or are required to create an offset, the permit shall contain a condition requiring these controls.

The Permittee submitted a sitewide NAAQS dispersion modeling analysis that was received March 2, 2021, and revised March 10 and 17, 2021. The modeling analysis was reviewed and approved by the DAQ Air Quality Analysis Branch (AQAB) on March 23, 2021. Placement of the emission sources, configuration of the emission points, and operation of the sources shall be in accordance with the submitted sitewide NAAQS dispersion modeling analysis and should reflect any changes from the original analysis submittal as outlined in the AQAB review memo.

- a. Production Limitations - To ensure compliance with 2D.0501(c), the Permittee shall operate the modeled sources in accordance with the operating restrictions presented in Condition A.22, below.
- b. Water Truck – An operable water truck shall be available on site (can be on the quarry property) at all times while the plant is operating. The haul roads and front-end loader work area shall be adequately maintained by wet suppression to minimize fugitive emissions.
- c. The Permittee shall maintain on-site an equipment list and a plant (or flow) diagram of all equipment covered under this permit.
 - i. The equipment list shall include the following information for each piece of equipment:
 - A. A description of equipment including applicability of New Source Performance Standards, and:
 - I. Width of belt conveyors,
 - II. Dimensions and configuration (e.g., triple deck) of screens, and
 - III. Rated capacity (tons or tons/hr.) of all nonmetallic mineral processing equipment.
 - B. A unique ID number.
 - C. The date the equipment was manufactured.
 - D. The dates any required performance testing was conducted and submitted to the Regional Supervisor, DAQ.
 - ii. The equipment list and plant (or flow) diagram shall bear the date when the current list and diagrams were revised.
 - iii. The Permittee shall provide documentation to the Regional Supervisor, DAQ, for any required performance testing within seven days of a written request.
 - iv. Notwithstanding General Conditions and Limitations titled "Equipment Relocation" and "Reporting Requirement," the Permittee may install new and relocate existing nonmetallic mineral processing equipment after obtaining prior approval from the Director. The Permittee shall provide written notification to the Regional Supervisor, DAQ, including a revised equipment list and plant (or flow) diagram, each time nonmetallic mineral processing equipment is installed or relocated at a facility. Nonmetallic mineral processing equipment includes all crushers, screens, conveyors and loadout bins.

4. PARTICULATE CONTROL REQUIREMENT - As required by 15A NCAC 2D .0503 "Particulates from Fuel Burning Indirect Heat Exchangers," particulate matter emissions from the fuel burning indirect heat exchangers shall not exceed the allowable emission rates listed below:

Source	Emission Limit (lbs./million Btu)
Natural Gas/No.2 fuel oil-fired Asphalt Cement Heater	0.6, each

(1.2 MMBtu/hr. maximum heat input capacity) (ES-ACH1)	
Natural Gas/No.2 fuel oil-fired Asphalt Cement Heater	
(1.1 MMBtu/hr. maximum heat input capacity) (ES-ACH2)	

5. PARTICULATE CONTROL REQUIREMENT - As required by 15A NCAC 2D .0506
 "Particulates from Hot Mix Asphalt Plants,"

- a. Particulate matter emissions resulting from the operation of a hot mix asphalt plant shall not exceed allowable emission rates. The allowable emission rates are, as defined in 15A NCAC 2D .0506, a function of the process weight rate and shall be determined by the following equation (calculated to three significant figures), where P is the process throughput rate in tons per hour (tons/hr.) and E is the allowable emission rate in pounds per hour (lbs./hr.).

$$E = 4.9445 * (P)^{0.4376} \quad \text{for } P < 300 \text{ tons/hr. or}$$

$$E = 60 \text{ lbs./hr.} \quad \text{for } P \geq 300 \text{ tons/hr.}$$

- b. Visible emissions from stacks or vents at a hot mix asphalt plant shall be less than 20 percent opacity when averaged over a six-minute period.
- c. Fugitive dust emissions shall be controlled as required by 15A NCAC 2D .0540 "Particulates From Fugitive Dust Emission Sources."
- d. Fugitive emissions for sources at a hot mix asphalt plant not covered elsewhere under this Rule shall not exceed 20 percent opacity averaged over six minutes.
6. PARTICULATE CONTROL REQUIREMENT - As required by 15A NCAC 2D .0510
 "Particulates from Sand, Gravel, or Crushed Stone Operations," the following requirements apply:

- a. The Permittee of a sand, gravel, recycled asphalt pavement (RAP), or crushed stone operation shall not cause, allow, or permit any material to be produced, handled, transported, or stockpiled without taking measures to reduce to a minimum any particulate matter from becoming airborne to prevent exceeding the ambient air quality standards beyond the property line for particulate matter, both PM₁₀ and total suspended particulates.
- b. Fugitive dust emissions from sand, gravel, RAP, or crushed stone operations shall be controlled by 15A NCAC 2D .0540 "Particulates from Fugitive Dust Emission Sources."
- c. The Permittee of any sand, gravel, RAP, or crushed stone operation shall control process-generated emissions:
- i. From crushers with wet suppression (excluding RAP crushers); and
 - ii. From conveyors, screens, and transfer points

such that the applicable opacity standards in 15A NCAC 2D .0521 "Control of Visible Emissions," or 15A NCAC 2D .0524 "New Source Performance standards" are not exceeded.

7. PARTICULATE CONTROL REQUIREMENT - As required by 15A NCAC 2D .0515 "Particulates from Miscellaneous Industrial Processes," particulate matter emissions from Truck Loadout Point (ID No. RMC-LO1), Cement Storage Silo (200-ton capacity) (ID No. RMC-Silo1), Flyash Storage Silo (150-ton capacity) (ID No. RMC-Silo2), Cement/Flyash Weigh Batcher (25-ton max capacity) (ID No. RMC-WB1) and Aggregate Weigh Batcher (50-ton max capacity) (ID No. RMC-WB2) shall not exceed allowable emission rates. The allowable emission rates are, as defined in 15A NCAC 2D .0515, a function of the process weight rate and shall be determined by the following equation(s), where P is the process throughput rate in tons per hour (tons/hr.) and E is the allowable emission rate in pounds per hour (lbs./hr.).

$$E = 4.10 * (P)^{0.67} \quad \text{for } P \leq 30 \text{ tons/hr. or}$$

$$E = 55 * (P)^{0.11} - 40 \quad \text{for } P > 30 \text{ tons/hr.}$$

8. SULFUR DIOXIDE CONTROL REQUIREMENT - As required by 15A NCAC 2D .0516 "Sulfur Dioxide Emissions from Combustion Sources," sulfur dioxide emissions from the combustion sources shall not exceed 2.3 pounds per million Btu heat input.
9. VISIBLE EMISSIONS CONTROL REQUIREMENT - As required by 15A NCAC 2D .0521 "Control of Visible Emissions," visible emissions from the emission sources, manufactured after July 1, 1971, shall not be more than 20 percent opacity when averaged over a six-minute period, except that six-minute periods averaging not more than 87 percent opacity may occur not more than once in any hour nor more than four times in any 24-hour period. However, sources which must comply with a visible emissions standard in 15A NCAC 2D .0524 "New Source Performance Standards" or .1110 "National Emission Standards for Hazardous Air Pollutants," shall meet that standard instead of the 2D .0521 visible emissions standard.
10. 15A NCAC 2D .0524 "NEW SOURCE PERFORMANCE STANDARDS" - For the following equipment, The Permittee shall comply with all applicable provisions, including the notification, testing, reporting, recordkeeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 2D .0524 "New Source Performance Standards" (NSPS) as promulgated in 40 CFR 60, Subpart indicated below, and including Subpart A "General Provisions."

(J50V2) 350 hp Diesel Engine Powering Primary Crusher (ID No. GEN-1) (J45) 350 hp Diesel Engine Powering Primary Crusher (ID No. GEN-1a) (s190dt) 125 hp Diesel Engine Powering Screen (ID No. GEN-2) (PS1300 Maxtrack) 440 hp Diesel Engine Powering Cone Crusher (ID No. GEN-3) (TF80) 125 hp Diesel Engine Powering Tracked Feeder (ID No. GEN-4) (PS1300 Maxtrack) 450 hp Diesel Engine Powering Cone Crusher (ID No. GEN-5) (PS100 Maxtrack) 350 hp Diesel Engine Powering Cone Crusher (ID No. GEN-7)	40 CFR 60, Subpart IIII "Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (CI ICE)"
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a. Emission Standards:

- i. The Permittee shall operate and maintain stationary CI ICE that achieve the emission standards as required in 40 CFR 60.4204 over the entire life of the engine.
- ii. For the 2007 model year and later non-emergency stationary CI ICE with a displacement of less than 30 liters per cylinder, the Permittee shall comply with the emission standards for new CI engines in 40 CFR 60.4201, as applicable. [60.4204(b)]

b. Fuel Requirements:

- i. Engines subject to this subpart with a displacement of less than 30 liters per cylinder that use diesel fuel shall use diesel fuel that meets the requirements of 40 CFR 80.510(b) for nonroad diesel fuel, as listed below, except that any existing diesel fuel purchased (or otherwise obtained) prior to October 1, 2010, may be used until depleted. [60.4207(b)]
 - A. Has a maximum sulfur content of 15 ppm [40 CFR 80.510(b)]; and
 - B. Has a minimum cetane index of 40 or a maximum aromatic content of 35 volume percent. [40 CFR 80.510(b)]

c. Compliance Requirements:

- i. The Permittee shall do all the following, except as permitted under 40 CFR 60.4211(g): [60.4211(a)]
 - A. Operate and maintain the stationary CI ICE and control device according to the manufacturer's written emission-related instructions or procedures developed by the Permittee that are approved by the engine manufacturer; [60.4211(a)(1)]
 - B. Change only those emission-related settings that are permitted by the manufacturer [60.4211(a)(2)]; and
 - C. Meet the requirements of 40 CFR parts 89, 94 and/or 1068, as applicable. [60.4211(a)(3)]
- ii. For the 2007 model year and later stationary CI ICE that must comply with the emission standards specified in 40 CFR 60.4204(b) or 4205(b), the Permittee shall comply by purchasing an engine certified to the emission standards in 40 CFR 60.4204(b), or 4205(b) or (c), as applicable, for the same model year and maximum engine power. The engine shall be installed and configured according to the manufacturer's emission-related specifications, except as permitted in 40 CFR 60.4211(g). [60.4211(c)]
- iii. If the Permittee does not install, configure, operate, and maintain the engine and control device according to the manufacturer's emission-related written instructions, or if the Permittee changes emission-related settings in a way

that is not permitted by the manufacturer, the Permittee shall demonstrate compliance per the requirements of 40 CFR 60.4211(g). [60.4211(g)]

11. 15A NCAC 2D .0524 "NEW SOURCE PERFORMANCE STANDARDS" - For the Hot Mix Asphalt Plant (ID No. HMA-1), the Permittee shall comply with all applicable provisions, including the notification, testing, reporting, recordkeeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 2D .0524 "New Source Performance Standards" (NSPS) as promulgated in 40 CFR 60, Subpart I, including Subpart A "General Provisions."

- a. NSPS Reporting Requirements - In addition to any other notification requirements to the Environmental Protection Agency (EPA), the Permittee is required to NOTIFY the Regional Supervisor, DAQ, in WRITING of the following:
 - i. The date construction (40 CFR 60.7) or reconstruction (40 CFR 60.15) of an affected source is commenced, postmarked no later than 30 days after such date. This requirement shall not apply in the case of mass-produced sources which are purchased in completed form;
 - ii. The actual date of initial start-up of an affected source, postmarked within 15 days after such date.
- b. NSPS Emissions Limitations - As required by 15A NCAC 2D .0524, the Permittee shall not discharge or cause the discharge into the atmosphere from any affected source any gases which:
 - i. Contain particulate matter in excess of 90 mg/dscm (0.04 gr/dscf); or
 - ii. Exhibit 20 percent opacity, or greater.
- c. NSPS Performance Testing - As required by 15A NCAC 2D .0524, the following performance tests shall be conducted:
 - i. The Permittee shall conduct the testing required in Permit Condition A.16.

12. 15A NCAC 2D .0524 "NEW SOURCE PERFORMANCE STANDARDS" - For the following equipment, the Permittee shall comply with all applicable provisions, including the notification, testing, reporting, recordkeeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 2D .0524 "New Source Performance Standards" (NSPS) as promulgated in 40 CFR Part 60, Subpart indicated below, and including Subpart A "General Provisions."

Emission Source	Regulation
Generator #1 (ID No. ES-PGEN1) Generator #2 (ID No. ES-PGEN2) Generator #3 (ID No. ES-PGEN3)	40 CFR Part 60, Subpart JJJJ Standards of Performance for Stationary Spark Ignition Combustion Engines (SI ICE)

a. Compliance Requirements - As required by 15A NCAC 2D .0524, the following compliance requirements shall apply:

- i. The Permittee shall operate and maintain stationary SI ICE that achieve the emission standards as required in 40 CFR 60.4233 over the entire life of the engine. [60.4234]
- ii. Owners and operators of stationary SI ICE who conduct performance tests shall follow the procedures in 40 CFR 60.4244. [60.4244]
- iii. For SI ICE is manufactured after July 1, 2008, that must comply with the emission standards specified in 40 CFR 60.4233(a) through (c), the Permittee shall comply by purchasing an engine certified to the emission standards in 40 CFR 60.4231(a) through (c), as applicable, for the same engine class and maximum engine power. In addition, the Permittee shall meet **one** of the requirements specified in (A) and (B) of this section. [60.4243(a)]

A. For the certified stationary SI ICE and control device that are operated and maintained according to the manufacturer's emission-related written instructions, the Permittee shall keep records of conducted maintenance to demonstrate compliance, but no performance testing is required. The Permittee shall also meet the requirements as specified in 40 CFR Part 1068, Subparts A through D, as they apply to you. If engine settings are adjusted according to and consistent with the manufacturer's instructions, the stationary SI ICE will not be considered out of compliance [60.4243(a)(1)]; or

B. If the certified stationary SI ICE and control device are not operated and maintained according to the manufacturer's emission-related written instructions, the engine will be considered a non-certified engine, and the Permittee shall demonstrate compliance according to the following, as appropriate. [60.4243(a)(2)]

For the stationary SI ICE that is greater than 500 HP, the Permittee shall keep a maintenance plan and records of conducted maintenance and shall, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, the Permittee shall conduct an initial performance test within 1 year of engine startup and conduct subsequent performance testing every 8,760 hours or 3 years, whichever comes first, thereafter to demonstrate compliance. [60.4243(a)(2)(iii)]

- iv. For the stationary SI ICE that must comply with the emission standards specified in 40 CFR 60.4233(d) or (e), the Permittee shall demonstrate compliance according to one of the methods specified in paragraphs A and B of this section. [60.4243(b)]

- A. Purchasing an engine certified according to procedures specified in this subpart, for the same model year and demonstrating compliance according to one of the methods specified in 40 CFR 60.4243(a) [60.4243(b)(1)]; or
- B. Purchasing a non-certified engine and demonstrating compliance with the emission standards specified in 40 CFR 60.4233(d) or (e) and according to the requirements specified in 40 CFR 60.4244, as applicable, and according to the following: [60.4243(b)(2)]
 - I. For a stationary SI ICE that is greater than 500 HP, the Permittee shall keep a maintenance plan and records of conducted maintenance and shall, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, the Permittee shall conduct an initial performance test and conduct subsequent performance testing every 8,760 hours or 3 years, whichever comes first thereafter to demonstrate compliance. [60.4243(b)(2)(i)]
- v. It is expected that air-to-fuel ratio (AFR) controllers will be used with the operation of three-way catalysts/non-selective catalytic reduction. The AFR controller shall be maintained and operated appropriately in order to ensure proper operation of the engine and control device to minimize emissions at all times. [60.4243(g)]
- b. Recordkeeping Requirements - As required by 15A NCAC 2D .0524, the following recordkeeping requirements shall apply:
 - i. The Permittee shall keep records as follows: [60.4245]
 - A. All notifications submitted to comply with this subpart and all documentation supporting any notification; [60.4245(a)(1)]
 - B. Maintenance conducted on the engine; [60.4245(a)(2)]
 - C. If the stationary SI ICE is a certified engine, documentation from the manufacturer that the engine is certified to meet the emission standards and information as required in 40 CFR parts 90, 1048, 1054, and 1060, as applicable [60.4245(a)(3)]; and
 - D. If the stationary SI ICE is not a certified engine or is a certified engine operating in a non-certified manner and subject to 40 CFR 60.4243(a)(2), documentation that the engine meets the emission standards. [60.4245(a)(4)]
 - ii. A copy of the maintenance plan, if required, and records of conducted maintenance. [60.4243(a)(1)]
 - iii. Copies of any performance testing required under this Subpart. [60.4245(d)]

- iv. All records required under this section shall be maintained for a period of two years following the date of such record. All records shall be kept on-site and made available to DAQ personnel upon request. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524 if recordkeeping requirements are not maintained. [40 CFR 60.7(f)]
- c. Reporting Requirements - As required by 15A NCAC 2D .0524, the following reporting requirements shall apply:
 - i. For SI ICE subject to performance testing as required, and conducted according to the requirements of 40 CFR 60.4244, the Permittee shall submit a copy of each performance test within 60 days after the test has been completed. [60.4243(a)(2), (b)(2), (e) and (f)]
 - ii. For stationary SI ICE greater than or equal to 500 HP that have not been certified by an engine manufacturer to meet the emission standards in 40 CFR 60.4231, the Permittee shall submit an initial notification as required in 40 CFR 60.7(a)(1). The notification shall include the information in paragraphs (A) through (E) of this section. [60.4245(c)]
 - A. Name and address of the owner or operator; [60.4245(c)(1)]
 - B. The address of the affected source; [60.4245(c)(2)]
 - C. Engine information including make, model, engine family, serial number, model year, maximum engine power, and engine displacement; [60.4245(c)(3)]
 - D. Emission control equipment; [60.4245(c)(4)] and
 - E. Fuel used. [60.4245(c)(5)]
- 13. 15A NCAC 2D .0524 "NEW SOURCE PERFORMANCE STANDARDS" - For the nonmetallic mineral processing equipment (wet material processing operations, as defined in 60.671, are not subject to this Subpart) including Conveying Operations (ID No. ES-Conveying), Crushing Operations (ID No. ES-Crusher), Screening Operations (ID No. ES-Screening), RAP Bin and Feeder (ID No. RAP-BF1), RAP 36" Conveyor (C-1) Feeder to Crusher (RAP-CR1) (ID No. RAP-C1), RAP 36" Conveyor (C-2) Crusher to Screen (RAP-CR1) (ID No. RAP-C2), RAP 36" Conveyor (C-3) Screen to Plant (ID No. RAP-C3), RAP 36" Conveyor (C-4) Screen to Conveyor (C-5) (ID No. RAP-C4), RAP 36" Conveyor (C-5) Conveyor (C-5) to Conveyor (C-6) (ID No. RAP-C5) and RAP 36" Conveyor (C-6) Conveyor (C-6) to Crusher (RAP-CR1) (ID No. RAP-C6), the Permittee shall comply with all applicable provisions, including the notification, testing, reporting, recordkeeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 2D .0524 "New Source Performance Standards" (NSPS) as promulgated in 40 CFR 60, Subpart OOO, including Subpart A "General Provisions."
 - a. NSPS Reporting Requirements - In addition to any other notification requirements to the Environmental Protection Agency (EPA), the Permittee is required to NOTIFY the Regional Supervisor, DAQ, in WRITING, of the following:

- i. The actual date of initial start-up of an affected facility, postmarked within 15 days after such date;
- b. NSPS Emissions Limitations - As required by 15A NCAC 2D .0524 [40 CFR 60.672], the following permit limits shall not be exceeded:

- i. For affected facilities that commenced construction, modification, or reconstruction after August 31, 1983 but before April 22, 2008 (wet material processing operations, as defined in 60.671, and Like-For-Like-Replacement, as allowed in 60.670(d), are not subject to this Subpart):

Affected Facility	Pollutant	Emission Limit
Crushers	Visible Emissions	15% opacity
Fugitive emissions from conveyor belts, screening operations, and other affected facilities	Visible Emissions	10% opacity

- ii. For affected facilities that commenced construction, modification, or reconstruction on or after April 22, 2008 (wet material processing operations, as defined in 60.671, and Like-For-Like-Replacement, as allowed in 60.670(d), are not subject to this Subpart)

Affected Facility	Pollutant	Emission Limit
Crushers	Visible Emissions	12% opacity
Fugitive emissions from conveyor belts, screening operations, and other affected facilities	Visible Emissions	7% opacity

- c. NSPS Monitoring Requirements - As required by 15A NCAC 2D .0524 [40 CFR 60.674], the following monitoring shall be conducted:

- i. For any affected facility that commenced construction, modification, or reconstruction on or after April 22, 2008 that uses wet suppression to control emissions (Like-For-Like-Replacement, as allowed in 60.670(d), is not subject to this Subpart), the Permittee shall:

- A. Perform monthly periodic inspections to check that water is flowing to discharge spray nozzles in the wet suppression systems.

- B. Initiate corrective action within 24 hours and complete corrective action as expeditiously as practical if the Permittee finds that water is not flowing properly during an inspection of the water spray nozzles.

- d. NSPS Recordkeeping Requirements - As required by 15A NCAC 2D .0524 [40 CFR 60.676], the following recordkeeping requirements shall be conducted:

- i. Each inspection of the water spray nozzles, including the date of each inspection and any corrective actions taken, shall be recorded in a logbook (in written or electronic form).
 - ii. The logbooks (in written or electronic form) shall be maintained on-site and made available to DAQ personnel upon request.
- e. NSPS Performance Testing - As required by 15A NCAC 2D .0524, the following performance tests shall be conducted:

Affected Facility	Pollutant	Test Method
Crushers	Visible Emissions	Method 9
Fugitive emissions from conveyor belts, screening operations, and other affected facilities	Visible Emissions	Method 9

- i. All performance tests shall be conducted in accordance with EPA Reference Methods, contained in 40 CFR 60, Appendix A;
- ii. The EPA Administrator retains the exclusive right to approve equivalent and alternative test methods, continuous monitoring procedures, and reporting requirements;
- iii. Within 60 days after achieving the maximum production rate at which the affected facility(s) will be operated, but not later than 180 days after the initial start-up of the affected facility(s), the Permittee shall conduct the required performance test(s) and submit two copies of a written report of the test(s) to the Regional Supervisor, DAQ;
- iv. 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 specified by the Director or his delegate;
- v. All associated testing costs are the responsibility of the Permittee;
- vi. The Permittee shall arrange for air emission testing protocols to be provided to the DAQ prior to testing. Testing protocols are not required to be pre-approved by the DAQ prior to testing. The DAQ shall review testing protocols for pre-approval prior to testing if requested by the Permittee at least 45 days before conducting the test; and
- vii. To afford the Regional Supervisor, DAQ, the opportunity to have an observer present, the Permittee shall PROVIDE the Regional Office, in WRITING, at least 7 days notice of any required performance test(s) that involve only Method 9. All other tests require a 30-day notice.
- viii. When determining compliance with the visible emissions limit from fugitive emissions from crushers, conveyor belts, screening operations, and other

affected facilities (as described in 60.672(b) or 60.672(e)(1)), the duration of the Method 9 test must be 30 minutes (five 6-minute averages). Compliance with the fugitive visible emissions limits must be based on the average of the five 6-minute averages.

ix. For any affected facility that commenced construction, modification, or reconstruction on or after April 22, 2008 that does not use wet suppression to control emissions, the Permittee shall repeat the performance tests within five (5) years of the previous test.

A. If an affected facility relies on water carryover from upstream wet suppression to control fugitive emissions, then that affected facility is exempt from the 5-year repeat testing requirement provided that the Permittee conducts periodic inspections of the upstream wet suppression that is responsible for controlling fugitive emissions from the affected facility and designates which upstream wet suppression systems will be periodically inspected at the time of the initial performance test.

f. Like-For-Like-Replacement - As provided in 40 CFR 60.670(d), when an existing facility is replaced by a piece of equipment of equal or smaller size, as defined in 40 CFR 60.671, having the same function as the existing facility, and there is no increase in the amount of emissions, the new facility is exempt from the provisions of 40 CFR 60.672, 60.674, and 60.675 except as provided for in 60.670(d)(3). The Permittee shall comply with the reporting requirements of 40 CFR 60.676(a). Equipment covered under 40 CFR 60.670 shall comply the requirements of 15A NCAC 2D .0521.

14. NOTIFICATION REQUIREMENT - As required by 15A NCAC 2D .0535, the Permittee of a source of excess emissions that last for more than four hours and that results from a malfunction, a breakdown of process or control equipment or any other abnormal conditions, shall:

- a. Notify the Director or his designee of any such occurrence by 9:00 a.m. Eastern time of the Division's next business day of becoming aware of the occurrence and describe:
 - i. the name and location of the facility,
 - ii. the nature and cause of the malfunction or breakdown,
 - iii. the time when the malfunction or breakdown is first observed,
 - iv. the expected duration, and
 - v. an estimated rate of emissions.
- b. Notify the Director or his designee immediately when the corrective measures have been accomplished.

This reporting requirement does not allow the operation of the facility in excess of Environmental Management Commission Regulations.

15. **FUGITIVE DUST CONTROL REQUIREMENT** - As required by 15A NCAC 2D .0540 "Particulates from Fugitive Dust Emission Sources," the Permittee shall not cause or allow fugitive dust emissions to cause or contribute to substantive complaints or excess visible emissions beyond the property boundary. If substantive complaints are received or excessive fugitive dust emissions from the facility are observed beyond the property boundaries for six minutes in any one hour (using Reference Method 22 in 40 CFR, Appendix A), the owner or operator may be required to submit a fugitive dust plan as described in 2D .0540(f).

"Fugitive dust emissions" means particulate matter that does not pass through a process stack or vent and that is generated within plant property boundaries from activities such as: unloading and loading areas, process areas stockpiles, stock pile working, plant parking lots, and plant roads (including access roads and haul roads).

16. **TESTING REQUIREMENT** - Under the provisions of North Carolina General Statute 143-215.108 and in accordance with 15A NCAC 2D .0605, the Permittee shall demonstrate compliance with the emission limit(s) by testing the emission source(s) for the specified pollutant(s) as follows:

Affected Source(s)	Pollutant	Target Parameter	Test Method
Hot Mix Asphalt Plant (80 MMBtu/hr. maximum heat input capacity) (HMA-1)	Filterable Particulate Matter	As per 15A NCAC 2D .0506 and 2D .0524	Method 5
	Condensable Particulate Matter		Method 202
	Visible Emissions	20% Opacity	Method 9

- a. All performance tests shall be conducted in accordance with EPA Reference Methods, contained in 40 CFR 60, Appendix A;
- b. The EPA Administrator retains the exclusive right to approve equivalent and alternative test methods, continuous monitoring procedures, and reporting requirements;
- c. The Permittee shall arrange for air emission testing protocols to be provided to the DAQ prior to testing. Testing protocols are not required to be pre-approved by the DAQ prior to testing. The DAQ shall review testing protocols for pre-approval prior to testing if requested by the Permittee at least 45 days before conducting the test.
- d. To afford the Regional Supervisor, DAQ, the opportunity to have an observer present, the Permittee shall PROVIDE the Regional Office, in WRITING, at least 30 days notice of any required performance tests.
- e. Within 60 days after achieving the maximum production rate at which the source will be operated, but not later than 180 days after the initial start-up of the affected source, for each fuel permitted, the Permittee shall conduct the required performance

test(s) and submit two copies of a written report of the test(s) to the Regional Supervisor, DAQ.

- f. This permit may be revoked, with proper notice to the Permittee, or enforcement procedures initiated, if the results of the test(s) indicate that the facility does not meet applicable limitations.
- g. The source 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 specified by the Director or his delegate.
- h. All associated testing costs are the responsibility of the Permittee.

17. FABRIC FILTER REQUIREMENTS including cartridge filters, baghouses, and other dry filter particulate collection devices - As required by 15A NCAC 2D .0611, particulate matter emissions shall be controlled as described in the permitted equipment list.

- a. Inspection and Maintenance Requirements - To comply with the provisions of this permit and ensure that emissions do not exceed the regulatory limits, the Permittee shall perform, at a minimum, an annual (for each 12 month period following the initial inspection) internal inspection of each particulate collection device system. In addition, the Permittee shall perform periodic inspections and maintenance as recommended by the equipment manufacturer.
- b. Recordkeeping Requirements - The results of all inspections and any variance from manufacturer's recommendations or from those given in this permit (when applicable) shall be investigated with corrections made and dates of actions recorded in a logbook. Records of all maintenance activities shall be recorded in the logbook. The logbook (in written or electronic format) shall be kept on-site and made available to DAQ personnel upon request.

18. TOXIC AIR POLLUTANT EMISSIONS LIMITATION AND REPORTING

REQUIREMENT - Pursuant to 15A NCAC 2D .1100 "Control of Toxic Air Pollutants," and in accordance with the approved application for an air toxic compliance demonstration, the permit limits in the table below shall not be exceeded. The Permittee has submitted a toxic air pollutant dispersion modeling analysis dated April 22, 2021 for the facility's toxic air pollutant emissions as listed in the below table. The modeling analysis was reviewed and approved by the DAQ Air Quality Analysis Branch (AQAB) on July 29, 2021. Placement of the emission sources, configuration of the emission points, and operation of the sources shall be in accordance with the submitted dispersion modeling analysis and should reflect any changes from the original analysis submittal as outlined in the AQAB review memo.

Affected Source(s)	Toxic Air Pollutant	Emission Limit
Propane/Natural Gas/No. 2 Fuel Oil/Recycled No. 2 Fuel Oil/Recycled No. 4 Fuel Oil-fired drum type hot mix asphalt plant (80 MMBtu/hr. maximum heat input capacity) (HMA-1)	Formaldehyde (50-00-0)	7.75E-01 lb./hr.
	Mercury, vapor (Component of HGC) (7439-97-6)	1.56E-02 lb./day
	Nickel metal (Component of NIC) (7440-02-0)	3.79E-01 lb./day

Affected Source(s)	Toxic Air Pollutant	Emission Limit
	Arsenic & Compounds (total mass of elemental AS, arsine and all inorganic compounds) (ASC (7778394))	1.23 lb./year
	Benzene (71-43-2)	8.54E+02 lb./year
Natural Gas/No.2 fuel oil-fired Asphalt Cement Heater (1.2 MMBtu/hr. maximum heat input capacity) (ES-ACH1)	Formaldehyde (50-00-0)	2.83E-04 lb./hr.
	Mercury, vapor (Component of HGC) (7439-97-6)	8.64E-05 lb./day
	Nickel metal (Component of NIC) (7440-02-0)	8.67E-05 lb./year
	Arsenic & Compounds (total mass of elemental AS, arsine and all inorganic compounds) (ASC (7778394))	4.20E-02 lb./year
	Benzene (71-43-2)	2.15E-02 lb./year
Natural Gas/No.2 fuel oil-fired Asphalt Cement Heater (1.1 MMBtu/hr. maximum heat input capacity) (ES-ACH2)	Formaldehyde (50-00-0)	2.59E-04 lb./hr.
	Mercury, vapor (Component of HGC) (7439-97-6)	7.92E-05 lb./day
	Nickel metal (Component of NIC) (7440-02-0)	7.92E-05 lb./day
	Arsenic & Compounds (total mass of elemental AS, arsine and all inorganic compounds) (ASC (7778394))	3.85E-02 lb./year
	Benzene (71-43-2)	1.97E-02 lb./year
Hot Mix Asphalt Storage Silo (150 tons Maximum Capacity) (HMA-Silo1)	Formaldehyde (50-00-0)	2.10E-02 lb./hr.
	Benzene (71-43-2)	8.54 lb./year
Truck Loadout Point (RMC-LO1)	Nickel metal (Component of NIC) (7440-02-0)	4.62E-03 lb./day
	Arsenic & Compounds (total mass of elemental AS, arsine and all inorganic compounds) (ASC (7778394))	5.77E-01 lb./year
Asphalt Loadout Operation Silo 1 (HMA-LO1)	Formaldehyde (50-00-0)	9.15E-04 lb./hr.
	Benzene (71-43-2)	4.74 lb./year

a. Restrictions - To ensure compliance with the above limits, the following restrictions shall apply:

i. Maintain compliance with the operating restrictions of Condition A.22.

19. 15A NCAC 2D .1111 "MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY" - For the ten (10) generators (ID Nos. ES-PGEN1, ES-PGEN2, ES-PGEN3, GEN-1, GEN-1a, GEN-2, GEN-3, GEN-4, GEN-5, GEN-7), classified as **new** stationary RICE located at an area source of HAP emissions, the Permittee shall comply with all applicable provisions, including the notification, testing, reporting, recordkeeping, and monitoring requirements contained in Environmental

Management Commission Standard 15A NCAC 2D .1111, as promulgated in 40 CFR 63, Subpart ZZZZ - "National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines," including Subpart A "General Provisions."

- a. In accordance with 40 CFR §63.6590(c)(1), this source(s) shall meet the requirements of 40 CFR 63 Subpart ZZZZ and Subpart A by meeting the requirements of 40 CFR 60 Subpart IIII for compression ignition engines or 40 CFR 60 Subpart JJJJ for spark ignition engines. No further requirements apply for such engines under 40 CFR 63 Subpart ZZZZ or Subpart A.

20. CONTROL AND PROHIBITION OF ODOROUS EMISSIONS - As required by 15A NCAC 2D .1806 "Control and Prohibition of Odorous Emissions" the Permittee shall not operate the facility without implementing management practices or installing and operating odor control equipment sufficient to prevent odorous emissions from the facility from causing or contributing to objectionable odors beyond the facility's boundary.

21. ZONING SPECIFIC CONDITION - In accordance with 15A NCAC 2Q .0304, prior to construction or operation of the facility under this permit, the Permittee shall comply with all lawfully adopted local ordinances that apply to the facility at the time of construction or operation of the facility. The local zoning authority shall have the responsibility of enforcing all lawfully adopted local zoning or subdivision ordinances.

22. LIMITATION TO AVOID 15A NCAC 2Q .0501 - Pursuant to 15A NCAC 2Q .0315 "Synthetic Minor Facilities," to avoid the applicability of 15A NCAC 2Q .0501 "Purpose of Section and Requirement for a Permit," as requested by the Permittee, facility-wide emissions shall be less than the following:

Pollutant	Emission Limit (Tons per consecutive 12-month period)
SO ₂	100
NO _x	100
CO	100

- a. Operations Restrictions - To ensure emissions do not exceed the limitations above, the following restrictions shall apply:
 - i. The amount of asphalt produced shall be less than 600,000 tons per consecutive 12-month period.
 - ii. The sulfur content of the Recycled No. 4 fuel oil shall be limited to 0.5% sulfur by weight.
 - iii. The sulfur content of the No. 2 fuel oil combusted in the Asphalt Cement Heaters (ES-ACH1 and ES-ACH2) shall be limited to 15 PPM sulfur by weight.
 - iv. The production of the quarry operations shall be less than 5,694,000 tons per consecutive 12-month period.

- v. The total fuel consumption of the three Natural Gas/Propane Fired Generators (ES-PGEN1, ES-PGEN2, and ES-PGEN3) shall not exceed 119,697 MMBtu/yr. per consecutive 12-month period.
- vi. The total fuel consumption of the smaller generators associated with the quarry equipment (GEN-1, GEN-1A, GEN-2, GEN-3, GEN-4, GEN-5, and GEN-7) shall be less than 569,746 gallons of No. 2 Fuel Oil per consecutive 12-month period
- vii. If multiple fuels are used, emissions should be determined using the sum of the individual emissions rates.

b. Inspection and Maintenance Requirements -

- i. Catalytic Oxidizer Requirements - Emissions shall be controlled as described in the permitted equipment list. To comply with the provisions of this permit and ensure that emissions do not exceed the regulatory limits, the Permittee shall perform periodic inspections and maintenance (I&M) as recommended by the manufacturer. As a minimum, the I&M program will include an annual (for each 12-month period following the initial inspection) internal inspection of each primary heat exchanger and associated inlet/outlet valves to ensure structural integrity.

c. Recordkeeping Requirements

- i. The Permittee shall record monthly and total monthly (for the previous 12 months) the following:
 - A. The amount [tons] of asphalt produced.
 - B. The facility-wide SO₂, NO_x, and CO emissions.
 - C. The total fuel consumption of the three Natural Gas/Propane Fired Generators (ES-PGEN1, ES-PGEN2, and ES-PGEN3).
 - D. The total No. 2 Fuel Oil consumption, in gallons, of the smaller generators associated with the quarry equipment (GEN-1, GEN-1A, GEN-2, GEN-3, GEN-4, GEN-5, GEN-7).
 - E. The amount of non-metallic mineral product [tons] produced by the quarry.
- ii. Fuel supplier certification shall be kept on-site and made available to DAQ personnel upon request.
- iii. A log book (in written or electronic format) shall be kept on site for Catalytic Oxidizers (CD-PGEN1 through CD-PGEN3) and made available to Division of Air Quality personnel upon request. The Permittee shall record all inspection, maintenance and monitoring requirements listed above in the log book. Any variance from the manufacturer's recommendations shall be investigated with corrections made and date of actions recorded in the log book.

- d. Reporting Requirements - Within 30 days after each calendar year quarter, regardless of the actual emissions, the Permittee shall submit the following:

- i. emissions and/or operational data listed below. The data should include monthly and 12-month totals for the previous 14 months. The data must be calculated for each of the three 12-month periods over the previous 14 months.
 - A. The amount [tons] of asphalt produced.
 - B. The facility-wide SO₂, NO_x and CO emissions [tons].
 - C. The total fuel consumption of the three Generators (ES-PGEN1, ES-PGEN2, and ES-PGEN3).
 - D. The total No. 2 Fuel Oil consumption, in gallons, of the smaller generators associated with the quarry equipment (GEN-1, GEN-1A, GEN-2, GEN-3, GEN-4, GEN-5, GEN-7).
 - E. The amount of non-metallic mineral product [tons] produced by the quarry.
- ii. copies of the fuel certification records for the previous 3 months
- iii. summary of all control device monitoring and recordkeeping activities described above for the previous 3 months

23. LIMITATION TO AVOID 15A NCAC 2D .0530 "PREVENTION OF SIGNIFICANT DETERIORATION" - In accordance with 15A NCAC 2D .0317, to comply with this permit and avoid the applicability of 15A NCAC 2D .0530 "Prevention of Significant Deterioration," as requested by the Permittee, emissions shall be limited as follows:

Affected Source(s)	Pollutant	Emission Limit (Tons Per Consecutive 12-month Period)
Facility Wide	SO ₂	250

24. VENDOR SUPPLIED RECYCLED No(s) and 4 FUEL OIL REQUIREMENTS - In accordance with Rule 2Q .0317, the Permittee is avoiding the applicability of Rule 2Q .0700 by using recycled fuels which are equivalent to their virgin counterparts. The Permittee is allowed to use the recycled fuel oil(s) as follows:

- a. Specifications - The recycled fuel oil(s) shall be equivalent to unadulterated fossil fuel by meeting the following criteria:

Constituent/Property	Allowable Level
Arsenic	1.0 ppm maximum
Cadmium	2.0 ppm maximum
Chromium	5.0 ppm maximum
Lead	100 ppm maximum
Total Halogens	1000 ppm maximum

Flash Point	
No. 2	100°F minimum
No. 4	130°F minimum
Sulfur	
No. 2	0.5% maximum (by weight)
No. 4	2.0% maximum (by weight)
Ash	1.0% maximum

- b. The Permittee is responsible for ensuring that the recycled fuel oil(s), as received at the site, meet(s) the approved criteria for unadulterated fuel. The Permittee is held responsible for any discrepancies discovered by DAQ as a result of any sampling and analysis of the fuel oil(s).
- c. Recordkeeping Requirements - The Permittee shall maintain at the facility for a minimum of three years, and shall make available to representatives of the DAQ upon request, accurate records of the following:
- i. The actual amount of recycled fuel oil(s) delivered to, and combusted at the facility on an annual basis.
 - ii. Each load of recycled fuel oil received shall include the following:
 - A. A delivery manifest document clearly showing the shipment content and amount, its place and date of loading, and place and date of destination.
 - B. A batch specific analytical report that contains an analysis for all constituents / properties listed above. Analytical results of the samples representative of the recycled oil shipment from the vendor shall be no more than one year old when received.
 - C. Batch signature information consisting of the following: a batch number, tank identification with batch volume of recycled oil, date and time the batch completed treatment, and volume(s) delivered.
 - D. A certification indicating that the recycled fuel oil does not contain detectable PCBs (<2ppm).
- d. The DAQ reserves the right to require additional testing and/or monitoring of the recycled fuel oil(s) on an annual basis or without notice.

25. RECYCLED ASPHALT SHINGLE REQUIREMENTS - In accordance with Rule 2Q .0317, the Permittee is avoiding the applicability of Rule 2Q .0700 and 2D .1100 for asbestos, and 40 CFR 61, Subpart M, *National Emission Standard for Asbestos* by using post-consumer reclaimed asphalt roofing shingles (also known as PRAS and herein denoted as recycled shingles) which are equivalent to their virgin or unadulterated counterparts. The Permittee is allowed to use the recycled shingles and associated asphalt roofing materials provided the following conditions are met:

Specifications - The recycled shingles shall be considered equivalent to unadulterated asphalt and

aggregate for use in manufacturing of asphalt concrete by meeting the following criteria:

The recycled shingles and roofing materials are certified to be free of asbestos containing material (ACM). ACM is defined as materials containing more than one percent (1 %) of asbestos. This certification shall be provided by demonstration that the materials sampled are representative of the recycled asphalt roofing materials and contain less than 1 percent asbestos or are certified to be asbestos free as measured by the method specified in appendix E, 40 CFR 763, Section 1, polarized light microscopy (PLM). Certification shall be provided by NC-accredited Asbestos Inspectors or Roofing Supervisors to sample the PRAS to meet the above criteria. Accreditation shall be obtained through the Division of Public Health's Health Hazards Control Unit.

- a. The Permittee is responsible for ensuring that the recycled shingles and roofing materials, as used at the site, meet the approved criteria for unadulterated materials including meeting minimum sampling criteria as specified by best practices. These practices shall include visual inspection of each load for suspect ACM and a sampling of at least one sample event per 100 tons of recycled shingles received for processing.
 - i. Each load or batch of recycled asphalt roofing materials purchased from or provided by an outside vendor shall include a certification that the material does not contain ACM and that it was tested in accordance with the best practices specified above, or
 - ii. If certification of the incoming recycled shingle material is not provided at delivery by an outside vendor, the Permittee shall arrange for testing and certification of the material as not being ACM meeting the specifications outlined above, prior to use in the process. The Permittee shall arrange for the results of such sampling and testing to be provided in a manner and form consistent with meeting the recordkeeping requirements cited below.
- b. The Permittee is held responsible for any discrepancies discovered by DAQ as a result of any sampling and analysis of the recycled shingles and asphalt roofing materials.
- c. Recordkeeping Requirements - The Permittee shall maintain certifications that the materials received and used are not ACM. These certifications shall be maintained at the facility for a minimum of three years, and shall be made available to representatives of the DAQ upon request. In addition, accurate records of the following:
 - i. The actual amount of recycled shingles delivered to and used at the facility in the production of asphalt concrete pavement.
 - ii. Each load or batch of recycled shingles shall include the following:
 - A. A delivery manifest document clearly showing the shipment content and amount, its place and date of loading, and place and date of destination.
 - B. A batch specific analytical report that contains an analysis for all constituents / properties listed above in the specification. Analytical results of the samples representative of the recycled shingles / roofing materials shipment from the vendor shall be no more than one year old when received.

- C. Batch signature information consisting of the following: a batch number, batch weight or volume of recycled shingles / roofing materials delivered.
- D. A certification statement indicating that the recycled shingles were sampled in accordance with best practices and tested according to appendix E, 40 CFR 763, Section 1 and do not contain ACM or are otherwise asbestos-free as determined by PLM prior to grinding.

- d. The Permittee shall be obligated to comply with any additional regulations or obtain any additional permits associated with the receipt and/or storage of the recycled asphalt roofing materials. This permit condition to use these materials in the asphalt concrete manufacturing process creates no waiver from other applicable laws and regulations.
- e. The DAQ reserves the right to require additional testing and/or monitoring of the recycled shingles/roofing materials in accordance with Rule 2Q. 0317.

26. TOXIC AIR POLLUTANT EMISSIONS LIMITATION REQUIREMENT - Pursuant to 15A NCAC 2Q .0711 "Emission Rates Requiring a Permit," for each of the below listed toxic air pollutants (TAPs), the Permittee has made a demonstration that facility-wide actual emissions, where one or more emission release points are obstructed or non-vertically oriented, do not exceed the Toxic Permit Emission Rates (TPERs) listed in 15A NCAC 2Q .0711(a). The facility shall be operated and maintained in such a manner that emissions of any listed TAPs from the facility, including fugitive emissions, will not exceed TPERs listed in 15A NCAC 2Q .0711(a).

- a. A permit to emit any of the below listed TAPs shall be required for this facility if actual emissions from all sources will become greater than the corresponding TPERs.
- b. PRIOR to exceeding any of these listed TPERs, the Permittee shall be responsible for obtaining a permit to emit TAPs and for demonstrating compliance with the requirements of 15A NCAC 2D .1100 "Control of Toxic Air Pollutants".
- c. In accordance with the approved application, the Permittee shall maintain records of operational information demonstrating that the TAP emissions do not exceed the TPERs as listed below:

Pollutant	Carcinogens (lb./yr.)	Chronic Toxicants (lb./day)	Acute Systemic Toxicants (lb./hr.)	Acute Irritants (lb./hr.)
Acetaldehyde (75-07-0)				6.8
Acrolein (107-02-8)				0.02
Ammonia (as NH3) (7664-41-7)				0.68
Benzo(a)pyrene (Component of 83329/POMTV & 56553/7PAH) (50-32-8)	2.2			
Beryllium Metal (unreacted) (Component of BEC) (7440-41-7)	0.28			

Pollutant	Carcinogens (lb./yr.)	Chronic Toxicants (lb./day)	Acute Systemic Toxicants (lb./hr.)	Acute Irritants (lb./hr.)
Cadmium Metal, elemental, unreacted (Component of CDC) (7440-43-9)	0.37			
Carbon disulfide (75-15-0)		3.9		
Chromium (VI) Soluble Chromate Compounds (Component of CRC) (SolCR6)		0.013		
Dichlorobenzene(p), 1,4- (106-46-7)				16.8
Fluorides (sum of all fluoride compounds as mass of F ion) (16984-48-8)		0.34	0.064	
Hexachlorodibenzo-p-dioxin 1,2,3,6,7,8 (57653-85-7)	0.0051			
Hexane, n- (110-54-3)		23		
Hydrogen chloride (hydrochloric acid) (7647-01-0)				0.18
Hydrogen sulfide (7783-06-4)		1.7		
MEK (methyl ethyl ketone) 2- butanone) (78-93-3)		78		22.4
Manganese & compounds (MNC)		0.63		
Methyl chloroform (71-55-6)		250		64
Methylene chloride (75-09-2)	1600		0.39	
Perchloroethylene (tetrachloroethylene) (127-18-4)	13000			
Phenol (108-95-2)			0.24	
Styrene (100-42-5)			2.7	
Tetrachlorodibenzo-p-dioxin 2,3,7,8- (Component of CLDC & 83329/POMTV) (1746-01-6)	0.0002			
Toluene (108-88-3)		98		14.4
Xylene (mixed isomers) (1330- 20-7)		57		16.4

B. GENERAL CONDITIONS AND LIMITATIONS

1. In accordance with G.S. 143-215.108(c)(1), TWO COPIES OF ALL DOCUMENTS, REPORTS, TEST DATA, MONITORING DATA, NOTIFICATIONS, REQUESTS FOR

RENEWAL, AND ANY OTHER INFORMATION REQUIRED BY THIS PERMIT shall be submitted to the:

Regional Supervisor
North Carolina Division of Air Quality
Winston-Salem Regional Office
450 West Hanes Mill Road
Suite 300
Winston-Salem, NC 27105
336-776-9800

For identification purposes, each submittal should include the facility name as listed on the permit, the facility identification number, and the permit number.

2. RECORDS RETENTION REQUIREMENT - In accordance with 15A NCAC 2D .0605, any records required by the conditions of this permit shall be kept on site and made available to DAQ personnel for inspection upon request. These records shall be maintained in a form suitable and readily available for expeditious inspection and review. These records must be kept on site for a minimum of 2 years, unless another time period is otherwise specified.
3. ANNUAL FEE PAYMENT - Pursuant to 15A NCAC 2Q .0203(a), the Permittee shall pay the annual permit fee within 30 days of being billed by the DAQ. Failure to pay the fee in a timely manner will cause the DAQ to initiate action to revoke the permit.
4. EQUIPMENT RELOCATION - In accordance with 15A NCAC 2Q .0301, a new air permit shall be obtained by the Permittee prior to establishing, building, erecting, using, or operating the emission sources or air cleaning equipment at a site or location not specified in this permit.
5. REPORTING REQUIREMENT - In accordance with 15A NCAC 2Q .0309, any of the following that would result in previously unpermitted, new, or increased emissions must be reported to the Regional Supervisor, DAQ:
 - a. changes in the information submitted in the application regarding facility emissions;
 - b. changes that modify equipment or processes of existing permitted facilities; or
 - c. changes in the quantity or quality of materials processed.

If appropriate, modifications to the permit may then be made by the DAQ to reflect any necessary changes in the permit conditions. In no case are any new or increased emissions allowed that will cause a violation of the emission limitations specified herein.

6. In accordance with 15A NCAC 2Q .0309, this permit is subject to revocation or modification by the DAQ upon a determination that information contained in the application or presented in the support thereof is incorrect, conditions under which this permit was granted have changed, or violations of conditions contained in this permit have occurred. In accordance with G.S. 143-215.108(c)(1), the facility shall be properly operated and maintained at all times in a manner that will effectuate an overall reduction in air pollution.

Unless otherwise specified by this permit, no emission source may be operated without the concurrent operation of its associated air cleaning device(s) and appurtenances.

7. In accordance with G.S. 143-215.108(c)(1), this permit is nontransferable by the Permittee. Future owners and operators must obtain a new air permit from the DAQ.
8. In accordance with G.S. 143-215.108(c)(1), this issuance of this permit in no way absolves the Permittee of liability for any potential civil penalties which may be assessed for violations of State law which have occurred prior to the effective date of this permit.
9. In accordance with G.S. 143-215.108(c)(1), this permit does not relieve the Permittee of the responsibility of complying with all applicable requirements of any Federal, State, or Local water quality or land quality control authority.
10. In accordance with 15A NCAC 2D .0605, reports on the operation and maintenance of the facility shall be submitted by the Permittee to the Regional Supervisor, DAQ at such intervals and in such form and detail as may be required by the DAQ. Information required in such reports may include, but is not limited to, process weight rates, firing rates, hours of operation, and preventive maintenance schedules.
11. A violation of any term or condition of this permit shall subject the Permittee to enforcement pursuant to G.S. 143-215.114A, 143-215.114B, and 143-215.114C, including assessment of civil and/or criminal penalties.
12. Pursuant to North Carolina General Statute 143-215.3(a)(2), no person shall refuse entry or access to any authorized representative of the DAQ who requests entry or access for purposes of inspection, and who presents appropriate credentials, nor shall any person obstruct, hamper, or interfere with any such representative while in the process of carrying out his official duties. Refusal of entry or access may constitute grounds for permit revocation and assessment of civil penalties.
13. In accordance with G.S. 143-215.108(c)(1), this permit does not relieve the Permittee of the responsibility of complying with any applicable Federal, State, or Local requirements governing the handling, disposal, or incineration of hazardous, solid, or medical wastes, including the Resource Conservation and Recovery Act (RCRA) administered by the Division of Waste Management.
14. PERMIT RETENTION REQUIREMENT - In accordance with 15A NCAC 2Q .0110, the Permittee shall retain a current copy of the air permit at the site. The Permittee must make available to personnel of the DAQ, upon request, the current copy of the air permit for the site.
15. CLEAN AIR ACT SECTION 112(r) REQUIREMENTS - Pursuant to 15A NCAC 2D .2100 "Risk Management Program," if the Permittee is required to develop and register a risk management plan pursuant to Section 112(r) of the Federal Clean Air Act, then the Permittee is required to register this plan with the USEPA in accordance with 40 CFR Part 68.
16. PREVENTION OF ACCIDENTAL RELEASES - GENERAL DUTY - Pursuant to Title I Part A Section 112(r)(1) of the Clean Air Act "Hazardous Air Pollutants - Prevention of

Accidental Releases - Purpose and General Duty," although a risk management plan may not be required, if the Permittee produces, processes, handles, or stores any amount of a listed hazardous substance, the Permittee has a general duty to take such steps as are necessary to prevent the accidental release of such substance and to minimize the consequences of any release. **This condition is federally-enforceable only.**

17. GENERAL EMISSIONS TESTING AND REPORTING REQUIREMENTS - If emissions testing is required by this permit, or the DAQ, or if the Permittee submits emissions testing to the DAQ in support of a permit application or to demonstrate compliance, the Permittee shall perform such testing in accordance with 15A NCAC 2D .2600 and follow all DAQ procedures including protocol approval, regional notification, report submittal, and test results approval. Additionally, in accordance with 15A NCAC 2D .0605, the Permittee shall follow the procedures for obtaining any required audit sample and reporting those results.

Permit issued this the 30th of July, 2021.

NORTH CAROLINA ENVIRONMENTAL MANAGEMENT COMMISSION

T. Ray Stewart, Jr., P.E., CPM
Regional Supervisor
By Authority of the Environmental Management Commission

Air Permit No. 10694R00

Insignificant / Exempt Activities

Source	Exemption Regulation	Source of TAPs?	Source of Title V Pollutants?
IES-1 - Used Oil Storage Tank associated with Asphalt Plant (20,000-gallon capacity)	2Q .0102 (g)(4)	Yes	Yes
IES-2 - Used Oil Storage Tank associated with Asphalt Plant (20,000-gallon capacity)			
IES-3 - Liquid Asphalt Tank (30,000-gallon capacity)	2Q .0102 (g)(14)(B)		
IES-4 - Liquid Asphalt Tank (30,000-gallon capacity)			
IES-5 - Diesel Fuel Storage Tank associated with Asphalt Plant (20,000-gallon capacity)	2Q .0102 (g)(4)		
IES-6 - Diesel Fuel Storage Tank associated with Asphalt Plant (20,000-gallon capacity)			
IES-13 - Diesel Fuel Storage Tank associated with Quarry (20,000-gallon capacity)			
IES-14 - Diesel Fuel Storage Tank associated with Quarry (20,000-gallon capacity)			
IES-15 - Propane Storage Tank (100,000-gallon capacity)			

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1. Because an activity is exempted from being required to have a permit or permit modification does not mean that the activity is exempted from an applicable requirement or that the owner or operator of the source is exempted from demonstrating compliance with any applicable requirement.
 2. When applicable, emissions from stationary source activities identified above shall be included in determining compliance with the permit requirements for toxic air pollutants under 15A NCAC 2D .1100 "Control of Toxic Air Pollutants" or 2Q .0711 "Emission Rates Requiring a Permit."
 3. Sample permit conditions showing the regulatory requirements for exempt sources subject to NESHAP, NSPS, and NCAC rules may be found here:
<https://deq.nc.gov/aqpermitconditions>

Attend	User Type	FirstName	LastName	Email	Attend
1	Panelist	Zaynab	Nasif	zaynab.nasif@ncdenr.gov	Yes
2	Attendee	John	C	appsupgrp@gmail.com	Yes
3	Attendee	Chis	MC	appsupgrp@gmail.com	Yes
4	Attendee	Aimee	Andrews	aandrews@trinityconsultants.com	Yes
5	Attendee	Jason	S	jason.spey@gmail.com	Yes
6	Attendee	Joseph	Ponzi	jponzi@brookspierce.com	Yes
7	Attendee	Lynden	Harris	lharris@hiddenvoices.org	Yes
8	Attendee	Lynden	Harris	lharris@hiddenvoices.org	Yes
9	Attendee	Mark	Barker	mebarker@cox.net	Yes
10	Attendee	oriana		orianaoriana@gmail.com	Yes
11	Attendee	Michael	Koerschner	michael.koerschner@ncdenr.gov	Yes
12	Attendee	Michael	Koerschner	michael.koerschner@ncdenr.gov	Yes
13	Attendee	Xavier	Patrick	x.monkscorrigan@gmail.com	Yes
14	Attendee	T	Nick	tnickcarp@gmail.com	Yes
15	Attendee	Leslie	Zimmerman	lesliezimmerman1@gmail.com	Yes
16	Attendee	Mike	Abraczinskas	michael.abraczinskas@ncdenr.gov	Yes
17	Attendee	Daphne	Quinn	dapbro@gmail.com	Yes
18	Attendee		JTice	jackstice@nc.rr.com	Yes
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24	Attendee	Tea	Bowers	teabowers4@gmail.com	Yes
25	Attendee	Kelly	Garcia	kelly.garcia@dhhs.nc.gov	Yes
26	Attendee	Matt	Porter	matthew.porter@ncdenr.gov	Yes
27	Attendee	Matt	Porter2	matthew.porter@ncdenr.gov	Yes
28	Attendee	Leo	Governale	leo.governale@ncdenr.gov	Yes
29	Attendee	william	sharpe	bsharpe57@aol.com	Yes
30	Attendee	william	sharpe	bsharpe57@aol.com	Yes
31	Attendee	Barbara	Yearley	barbarayearley@yahoo.com	Yes
32	Attendee	Brendan	Davey	brendan.davey@ncdenr.gov	Yes
33	Attendee	Heather	Langan	hlangan7@gmail.com	Yes
34	Attendee	Donna	Nicholais	dnicholais@gmail.com	Yes
35	Attendee	Phil	Barfield	cambarus.david@gmail.com	Yes
36	Attendee	Mark	Langan	mark.langan@duke.edu	Yes
37	Attendee	sharon	guy	guycookn@gmail.com	Yes
38	Attendee	Ed	Dougherty	ed@treeiflifedesugns.com	Yes
39	Attendee	Taylor	Hartsfield	taylor.hartsfield@ncdenr.gov	Yes
40	Attendee	rick	lonon	rlonongoog@gmail.com	Yes
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42	Attendee	Sharon	Kimbro	marchhare313@bellsouth.net	Yes
43	Attendee		Oakley	scottoakley@att.net	Yes
44	Attendee	michael	Pjetraj	michael.pjetraj@ncdenr.gov	Yes
45	Attendee		michael	michael.pjetraj@ncdenr.gov	Yes
46	Attendee		karen	tategrk@bellsouth.net	Yes



47 Attendee	Galen	Boerema	gboerema@thesunrockgroup.com	Yes
48 Attendee	Tracy	Davis	tracy.davis@atsenvirosolutions.com	Yes
49 Attendee	Heather	Wylie	heather.wylie@ncdenr.gov	Yes
50 Attendee	Ty	Lautenschlager	ty.lautenschlager@dhhs.nc.gov	Yes
51 Attendee	Terry	Johnson	johnson.terry@epa.gov	Yes
52 Attendee	Denise	Burnette	denisefburnette@gmail.com	Yes
53 Attendee	Dylan	Wright	dylan.wright@ncdenr.gov	Yes
54 Attendee	Noah	Harris	noahcooperharris@gmail.com	Yes
55 Attendee	Marcia	McNally	mmcally@centurylink.net	Yes
56 Attendee	Cooper	Harris	cooper@cooperharris.com	Yes
57 Attendee		KTBrown	chaosanddisarray@aol.com	Yes
58 Attendee	Kim	Gaetz	kim.gaetz@dhhs.nc.gov	Yes
59 Attendee	Jim	Coleman	jcoleman19@elon.edu	Yes
60 Attendee	Dawn	Dougherty	dawn@treeoflifedesigns.com	Yes
61 Attendee	Dawn	Dougherty	dawn@treeoflifedesigns.com	Yes
62 Attendee	James	Vail	vailjames17@gmail.com	Yes
63 Attendee	Mark	Huncik	mhuncik@cs.com	Yes
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69 Attendee	Rob	Bowers	robbowers530@gmail.com	Yes
70 Attendee	Claude	Tyson	claud@bleytyson.com	Yes
71 Attendee	Elliot	Tardif	elliott.tardif@ncdenr.gov	Yes
72 Attendee	Robert	Skip Anderson	skip@skipandersondesign.com	Yes
73 Attendee	Robert	Skip Anderson	skip@skipandersondesign.com	Yes
74 Attendee	Ray	Stewart	ray.stewart@ncdenr.gov	Yes
75 Attendee	Pat	Warren	patwarren9@gmail.com	Yes
76 Attendee	Scott	Martino	smartino@thesunrocgroup.com	Yes
77 Attendee	Lauren	S	renfish711@hotmail.com	Yes
78 Attendee	Lauren	S	renfish711@hotmail.com	Yes
79 Attendee	Lauren	S	renfish711@hotmail.com	Yes
80 Attendee	Lauren	S	renfish711@hotmail.com	Yes
81 Attendee	Lauren	S	renfish711@hotmail.com	Yes
82 Attendee	Belinda	Layne	hoot6000@gmail.com	Yes
83 Attendee	Ann	Joyner	annmossjoyner@gmail.com	Yes
84 Attendee	Robert	Smith	wordwell@aol.com	Yes
85 Attendee	Cheri	Bowers	robandcheri@mac.com	Yes
86 Attendee	Cheri	Bowers	robandcheri@mac.com	Yes
87 Attendee	Davis	Murphy	davis.murphy@ncdenr.gov	Yes
88 Attendee	Lisa	Sorg	lisa@ncpolicywatch.com	Yes

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From: [Wrenn, Mark A.](#)
To: [SVC_DENR.DAQ.publiccomments](#)
Cc: [Earl Wrenn](#)
Subject: [External] "Carolina Sunrock – Prospect Hill Quarry and Distribution Center."
Date: Tuesday, August 10, 2021 1:50:57 PM

CAUTION: External email. Do not click links or open attachments unless you verify. Send all suspicious email as an attachment to Report Spam.

To whom it may concern:

In the section of the permit review labeled : 2Q .0304 – Zoning Specific Condition: It states that It is DAQ policy to include a permit condition in permits for facilities located in areas without zoning requiring compliance with all lawfully adopted local ordinances that apply to the facility at the time of construction or operation of the facility.

Caswell County adopted a High Impact Ordinance last year which came out of the County wide Moratorium on polluting Industries. This Ordinance placed set backs on Rock Quarry, Asphalt and Cement Plants. Sunrock applied for this air permit after the High Impact Ordinance was adopted. This being said the submission of the application does not take the set backs into consideration. All the data compiled does not take the set backs into consideration. The air modeling does not take this into consideration. The set backs will change the locations of both pits and the location of the asphalt and cement plants.

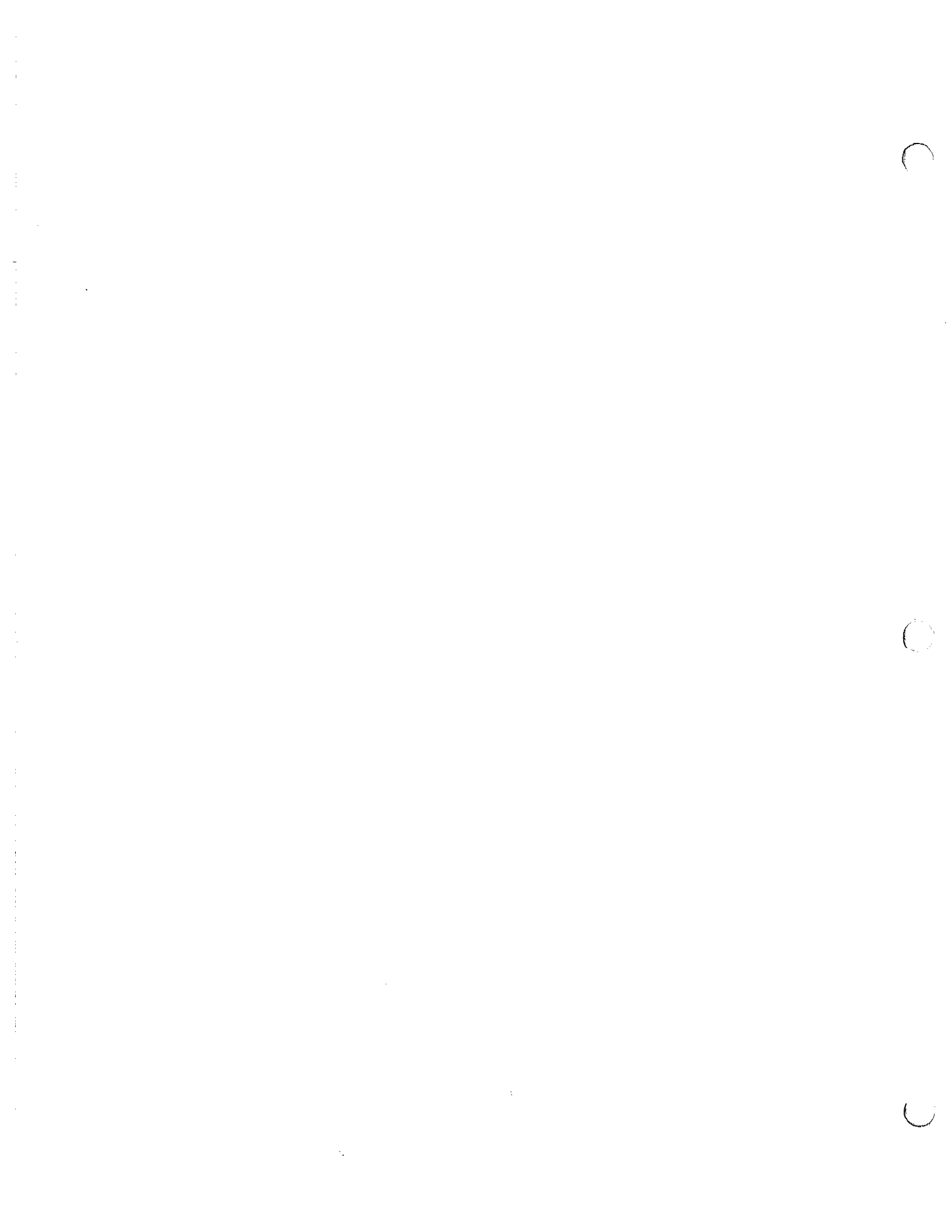
If it is DAQ policy to have the condition that lawfully adopted ordinances to the facility at the time of construction or operation then the set backs in the High Impact Ordinance should be applied.

While County Manager Brian Miller signed a zoning consistency letter would only mean that it is permissible, however the operation will have to meet set back requirements. I will also add that there is currently a litigation over vested rights for Sunrocks projects in Caswell County.

I would ask that these issues be addressed before the DAQ moves forward with the Air Permit process.

Regards,

Mark Wrenn
2372 Ridgeville Rd
Prospect Hill, NC



From: Phil
To: Nasif, Zaynab R
Cc: Murphy, Davis; SVC_DENR.DAQ.publiccomments
Subject: Re: [External] Re: Carolina Sunrock Hearings
Date: Thursday, August 26, 2021 9:15:04 AM
Attachments: [image001.png](#)
[image002.png](#)

CAUTION: External email. Do not click links or open attachments unless you verify; send all suspicious emails as an attachment to ReportSpam.

Hi Zaynab,

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Note that the draft Environmental Justice Reports will be ready within the next few days. Please don't hesitate to contact me for any additional questions.

Best.

Zaynab



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North Carolina Department of Environmental Quality
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(c) 919.618.0968
Zaynab.Nasif@ncdenr.gov

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From: Nasif, Zaynab R
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To: Nasif, Zaynab R <zaynab.nasif@ncdenr.gov>
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If you wish to speak at the Burlington North public hearing, you must register by 4:00 p.m. on September 20. To register, please visit: <https://bit.ly/2TYC1HC> or call (919) 618-0968.

Event title: Public Hearing for Carolina Sunrock LLC – Burlington North Plant

Date and Time: September 20, 2021 at 6 p.m.

Phone: US TOLL +1-415-655-0003, Access Code 161 633 4904

WebEx Link: <https://bit.ly/3xlibM1>

Event Password: NCDAQ

If you wish to speak at the Prospect Hill public hearing, you must register by 4:00 p.m.

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Event title: Public Hearing for Carolina Sunrock LLC – Prospect Hill Quarry and Distribution Center

Date and Time: September 21, 2021 at 6 p.m.

Phone: US TOLL +1-415-655-0003, Access Code 161 805 4856

WebEx Link: <https://bit.ly/3rW9FdA>

Event Password: NCDAQ

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From: [Nasif, Zaynab R](#)
To: [SVC_DENR.DAQ.publiccomments](#)
Subject: FW: [External] Sunrock Quarry & Asphalt Plants in Caswell County
Date: Thursday, September 2, 2021 8:32:55 AM

-----Original Message-----

From: Lynn Pendergraft <casperranch@yahoo.com>
Sent: Thursday, September 2, 2021 8:31 AM
To: Nasif, Zaynab R <zaynab.nasif@ncdenr.gov>
Subject: [External] Sunrock Quarry & Asphalt Plants in Caswell County

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Sir, I have spoken at every opportunity against this horrific action. I do not intend on trying to speak at the next "hearing" because there is nothing left to say that is going to change the minds of your people who could stop this. It's so frustrating that DEQ does NOT care whether this southeast corner of Caswell County is ruined by the destruction of the air quality & pollution of our water. It's extremely sad that the 20 children that live on the 1.5 mile stretch next to the quarry site will have their health jeopardized by this pollution. And the damage that will be done to our wildlife & our peace & quiet. I am a retired employee of the USEPA. I worked for 32 years with many chemical engineers who were so dedicated to stopping air & water pollution. I am sorry that DEQ does not have that dedication.

Lynn Pendergraft
3131 Wrenn Rd
Prospect Hill, NC. 27314

Sent from my iPhone

C

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C

From: Phil
To: Nasif, Zaynab R
Cc: Murphv, Davis; SVC, DENR, DAQ, publiccomments
Subject: Re: [External] Re: Carolina Sunrock Hearings
Date: Tuesday, September 14, 2021 9:13:58 PM
Attachments: image002.png
image003.png

CAUTION: External email. Do not click links or open attachments unless you verify (and all suspicious email as an attachment to Report a scam.

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Are there any other emails, letters, memos, and phone records between DEQ/DAQ and Carolina Sunrock during this period relative to the two air permits that updates, clarifies, or changes the information and data in the 2021 air permit applications?

I request DAQ postpone the hearing and extend the comment deadline until all the information is provided and the public is given the opportunity and time to review the materials.

Thank you,
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I am still working on gathering the correspondence portion (your last bullet) of the request, so I will get that to you soon when they are available.

Let me know if you have any additional questions.

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Zaynab

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Zaynab.Nasif@ncdenr.gov



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To: Nasif, Zaynab R <zaynab.nasif@ncdenr.gov>
Cc: Murphy, Davis <davis.murphy@ncdenr.gov>; SVC_DENR.DAQ.publiccomments <DAQ.publiccomments@ncdenr.gov>
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Event title: Public Hearing for Carolina Sunrock LLC – Burlington North Plant

Date and Time: September 20, 2021 at 6 p.m.

Phone: US TOLL +1-415-655-0003, Access Code 161 633 4904

WebEx Link: <https://bit.ly/3xliHM1>

Event Password: NCDAQ

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Event title: Public Hearing for Carolina Sunrock LLC – Prospect Hill Quarry and Distribution Center

Date and Time: September 21, 2021 at 6 p.m.

Phone: US TOLL +1-415-655-0003, Access Code 161 805 4856

WebEx Link: <https://bit.ly/3rW9FdA>

Event Password: NCDAQ

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From: Phil
To: Nasif, Zaynab R
Cc: Murphy, Davis; SVC DENR.DAQ.publiccomments
Subject: Re: [External] Re: Carolina Sunrock Hearings
Date: Friday, September 17, 2021 9:10:10 AM
Attachments: image002.png
image003.png

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Hi Zaynab,

Can you provide the missing attachments mentioned in the DAQ reviews of the air permit applications?

Prospect Hill review:

- NCDENR Bagfilter Evaluation Spreadsheet - Version 3.3, September 23, 1999 (Attachment B2)
- Miratech document

Burlington North review:

- A1 Bagfilter Evaluation for HMA-CD1
- A2 Bagfilter Evaluation for RMC-CD2
- B Application narrative requesting asphalt production to be limited to 50,000 tons per year
- C NCDENR Concrete Batch Emissions Calculator spreadsheet
- D NCDENR Fuel Oil Emissions Calculator spreadsheet
- E1 NCDENR Asphalt Emissions Calculator spreadsheet for Actual SO2 and CO Emissions w/ Synthetic Minor Limits
- E2 NCDENR Asphalt Emissions Calculator spreadsheet for Expected Actual Emissions using Natural Gas
- E3 NCDENR Asphalt Emissions Calculator spreadsheet for Expected Actual Emissions using Waste/No. Fuel Oil
- E4 NCDENR Asphalt Emissions Calculator spreadsheet for Potential Emissions before controls/limits
- E5 NCDENR Asphalt Emissions Calculator spreadsheet for Potential Emissions after controls/limits
- E6 NCDENR Asphalt Emissions Calculator spreadsheet for Potential TAP Emissions using Natural Gas
- E7 NCDENR Asphalt Emissions Calculator spreadsheet for Potential TAP Emissions using No.4/No 6 Fuel Oil
- E8 NCDENR Concrete Batch Emissions Calculator spreadsheet for Potential TAP Emissions
- E9 Facility-Wide Emissions Summary Spreadsheet

Again, I request DAQ postpone the hearing and extend the comment deadline until all the information is provided and the public is given the opportunity and time to review the materials. Without the information, the applications and reviews are incomplete and does not allow a basis for public review and comment.

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WebEx Link: <https://bit.ly/3xtihM1>

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Email correspondence to and from this address is subject to the North Carolina Public Records Law and may be disclosed to third parties.

From: [William Sharpe](#)
To: [SVC_DENR.DAQ_publiccomments](#)
Subject: [External] CarolinaSunrockProspectHillQuarryandDistributionCenter
Date: Saturday, September 18, 2021 3:02:13 PM
Attachments: [quarry comments - Google Docs.pdf](#)

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Comments attached.....

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My name is William Sharpe, my wife and I have a home at 727 Solomon Road, Leasburg.

After 43 years of working in the heavy duty truck industry, I have learned that trucks and equipment leak fluids. Most components on trucks and equipment have vents that release pressure and fluid to the atmosphere, 90% of the trucks and equipment we work on have leaks.

50% continue to leak after they leave our shop because the warranty and customers won't pay to correct the issue. These include antifreeze, hydraulic fluid, engine oil, transmission fluid, gear oil and others.

These fluids contain wear metals and are considered hazardous to your health. You don't want these in your drinking water pumped from Lake Roxboro. Trucks coming on site to pick up products will have more of the same leaks and poor maintenance, these are older trucks and most don't meet the latest emissions standards.

There is no emission testing for on/off hwy diesel trucks and no annual state run inspection stations like the ones required for cars.

These trucks picking up products will be traveling on narrow, winding, two lane highways.

Some surveys show as many as 30% of the trucks traveling highways have anti lock brake warning lights on. This puts farmers on tractors and school buses picking up children at a high risk. Imagine a dump truck loaded with 80,000 pounds, traveling 65mph that can't stop.

Recently a logging truck ran thru a school room at Lamb's Chapel in Haw Riverbrakes failed

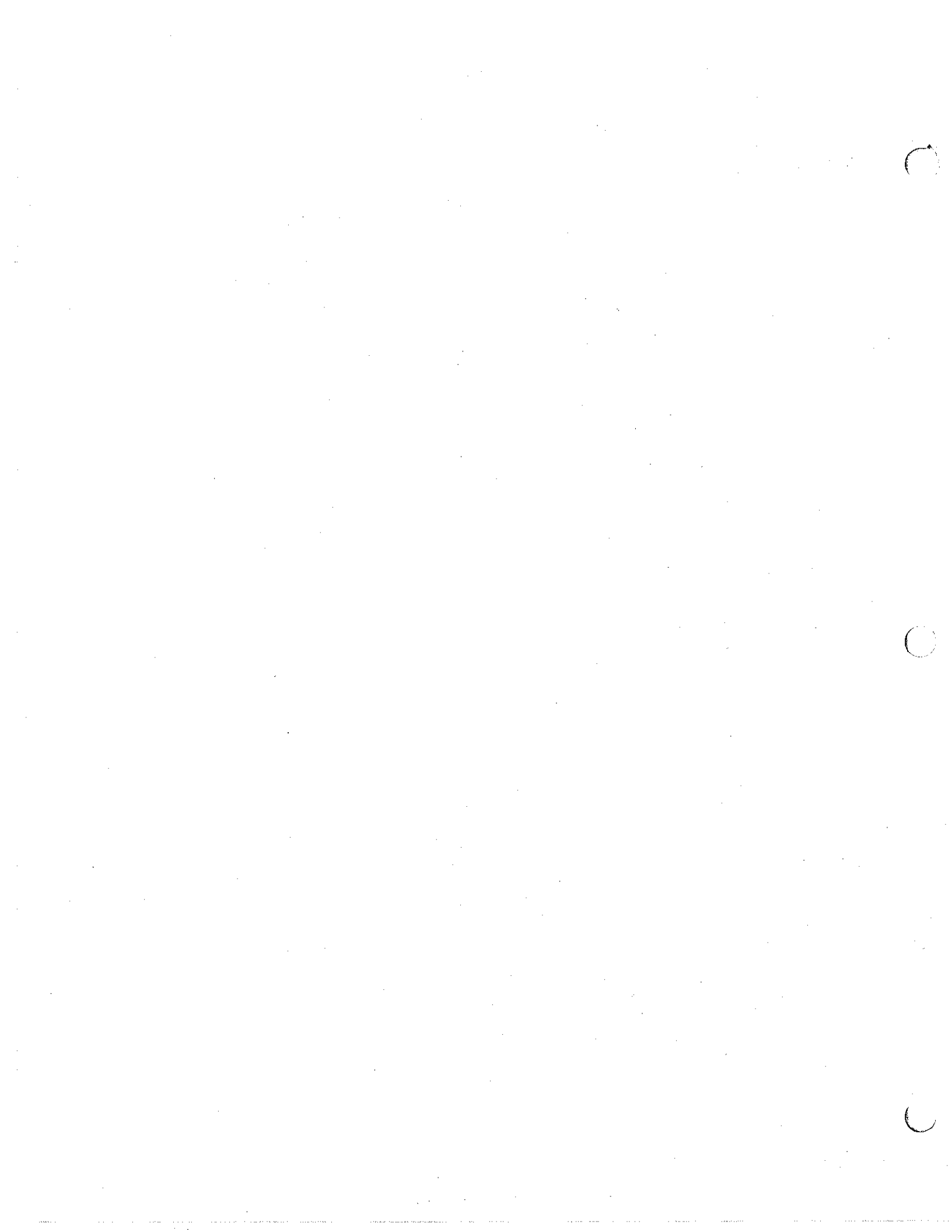
Quarry blasting will crack brick, mortar joints and foundations.....

My parents home was damaged from runway expansion in Burlington....

Quarry workers may be protected for silica and dust by wearing respirators, but what about children at play and farm workers?

Rock quarries, asphalt plants and other industries that pollute are allowed to self police and report their own problems. No one from the county, state or federal agencies will be there to monitor daily activity. **This is a big problem.**

Please don't allow Caswell county to be destroyed. We love our community.



From: [Lynn Pendergraft](#)
To: [SVC_DENR.DAO.publiccomments](#)
Subject: [External] CarolinaSunrockProspectHillQuarryandDistributionCenter
Date: Saturday, September 18, 2021 3:52:15 PM

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Carolina Sunrock LLC - Prospect Hill Comments

My name is Lynn Pendergraft. My husband, Frankie, and I moved to Wrenn Road, Prospect Hill in 1994. We chose this location because of the peacefulness of the area. There was an abundance of fresh air, open sky to view the beauty of the days and nights, land to make pastures for our horses, lots of wildlife to view. Being this remote we never ever dreamed of anything like a polluting company coming into our community. We went into the chicken business, building two 500 foot houses that can contain as many as 30,000 chickens. We ran the business for 22 years ourselves and now have our houses leased out. To be productive, those chickens must have non-polluted airflow year-round and the equipment that maintains that air-flow requires clean air to do its job.

Our grandchildren (and our daughter & her husband) live on this farm as well. We are concerned for their health if polluted air is allowed to cover our area. Also, there are 20 children on the mile stretch from the 2nd quarry site up Wrenn Road towards Highway 49. Would you not be concerned if any of these were your children or grandchildren? Consider the people in this area with asthma or COPD or heart issues that affect their breathing and their health in general.

You people of DEQ have our health and safety in your hands! You have the ability to "tweak" numbers to allow this company to pollute this area of Caswell County BUT you also have the ability to disallow the pollution and save our air!

THIS COULD BE YOUR COMMUNITY

Lynn Pendergraft
3131 Wrenn Road
Prospect Hill, NC. 27314

Sent from my iPhone

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From: [Ahmad Hariri](#)
To: [SVC_DENR.DAO_publiccomments](#)
Subject: [External] Carolina Sunrock Prospect Hill Quarry and Distribution Center
Date: Saturday, September 18, 2021 4:46:55 PM

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To whom it may concern:

We are currently building our family home on the western shore of Roxboro Lake.

We are drawn to the natural beauty and serenity of the lake and surrounding areas.

We hope that this home will be enjoyed by our family and friends for many generations.

Please deny Carolina Sunrock an air quality permit and help preserve our quality of life now and for the future.

Thank you.

Ahmad Hariri & Anna Craig

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From: [Patrick Tighe](#)
To: [SVC_DENR.DAO.publiccomments](#)
Subject: [External] CarolinaSunrockProspectHillQuarryandDistributionCenter
Date: Saturday, September 18, 2021 5:18:35 PM

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Hello DAQ,

The proposed SunRock Quarry and Asphalt plant for Prospect Hill and Caswell County will be a major polluter in every way. Air , sound , traffic , stream , wells , Roxboro lake , habitat . What are the positives SunRock brings to our area? They need to find another piece of land where there won't be so much harm done to the people, the land, the water , the air. SunRock please move on there is a lot of land out there.

Department of Air Quality...hundreds have voiced their concerns . All of us understand the need for a quarry but SunRock could not have picked a worse location.

Thank you DAQ for listening.

Patrick Tighe
1079 Wilson Rd
Hurdle Mills NC 27541

Sent from my iPhone

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From: [Ted Harrison](#)
To: [SVC DENR.DAO.publiccomments](#)
Subject: [External] Asphalt Plant in Prospect Hill
Date: Sunday, September 19, 2021 2:08:07 PM

CAUTION: External email. Do not click links or open attachments unless you verify. Send all suspicious email as an attachment to Report Spam.<<mailto:report.spam@nc.gov>>

I oppose the Sunroc plant!

Speaking as a grandfather, father and former resident of the area I oppose the assault on the environment of the area. The decisions we make today should make a sustainable world 7 generations into the future. Granting the permit today will only make a profit now and destroy the world of future generations.

No!

Henry T. Harrison

Sent from my iPhone

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From: [Kim Dye](#)
To: [SVC_DENR.DAO.publiccomments](#)
Subject: [External] CarolinaSunrockProspectHillQuarryandDistributionCenter
Date: Sunday, September 19, 2021 5:30:32 PM

CAUTION: External email. Do not click links or open attachments unless you verify. Send all suspicious email as an attachment to Report Spam.

To Whom It May Concern:

Our concerns for the health of our community have not changed since the first time we asked you to deny the permits to Sunrock. Their presence in our community will greatly risk the air quality of our area. The pollutants from their plant/quarry will put us ALL in danger of developing major health issues now and for generations to come.

We once again ask you to please give careful consideration to the consequences of their presence ...i.e. destruction of the air, water, land, life(human and animal) and so much more...

Please help us protect the beautiful community that we love by once again denying them permits.

We thank you for your time and consideration.

Regards,

Charles and Kim McLamb
3638 Ridgeville Rd
Prospect Hill NC

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From: [Molly Harrison](#)
To: [SVC_DENR.DAO.publiccomments](#)
Subject: [External] Carolina Sunrock - Prospect Hill Quarry and Distribution Center
Date: Monday, September 20, 2021 9:29:47 AM

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Good morning,

I am writing to vehemently oppose the proposal by Carolina Sunrock for a quarry and distribution center in Prospect Hill, NC. Prospect Hill is a beautiful, rural community that has remained mostly free of the scourge of big development. As is the case with many industries, Carolina Sunrock sees this pristine land and, in its greed, can only imagine a way to exploit and ruin it. Residents of the community are opposed to such exploitation. We do not want particulate matter floating through the air and poisoning our lungs. We do not want to choke on plumes of black smoke from diesel trucks hauling the product they have indiscriminately stripped from the land. We do not want the noise of large industrial vehicles violating our right to the quiet enjoyment of our homes. Please do not allow this proposal to move forward - it would be ruinous to the quality of life that has so far been preserved in Prospect Hill.

Thank you,
Molly Harrison

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From: [Nasif, Zaynab R](#)
To: [SVC DENR.DAO.publiccomments](#)
Subject: FW: [External] Public Hearing for Carolina Sunrock LLC - Prospect Hill Quarry & Dist Center
Date: Monday, September 20, 2021 9:34:10 AM

From: Lynn Pendergraft <casperanch@yahoo.com>
Sent: Saturday, September 18, 2021 11:04 AM
To: Nasif, Zaynab R <zaynab.nasif@ncdenr.gov>
Subject: [External] Public Hearing for Carolina Sunrock LLC - Prospect Hill Quarry & Dist Center

CAUTION: External email. Do not click links or open attachments unless you verify. Send all suspicious email as an attachment to Report Spam.

Sir, could you have my comments read at the hearing regarding the Prospect Hill Quarry - September 21, 2021 (6 pm)

Carolina Sunrock LLC - Prospect Hill Comments

My name is Lynn Pendergraft. My husband, Frankie, and I moved to Wrenn Road, Prospect Hill in 1994. We chose this location because of the peacefulness of the area. There was an abundance of fresh air, open sky to view the beauty of the days and nights, land to make pastures for our horses, lots of wildlife to view. Being this remote we never ever dreamed of anything like a polluting company coming into our community. We went into the chicken business, building two 500 foot houses that can contain as many as 30,000 chickens. We ran the business for 22 years ourselves and now have our houses leased out. To be productive, those chickens must have non-polluted airflow year-round and the equipment that maintains that

air-flow requires clean air to do its job.

Our grandchildren (and our daughter & her husband) live on this farm as well. We are concerned for their health if polluted air is allowed to cover our area. Also, there are 20 children on the mile stretch from the 2nd quarry site up Wrenn Road towards Highway 49. Would you not be concerned if any of these were your children or grandchildren? Consider the people in this area with asthma or COPD or heart issues that affect their breathing and their health in general.

You people of DEQ have our health and safety in your hands! You have the ability to "tweak" numbers to allow this company to pollute this area of Caswell County BUT you also have the ability to disallow the pollution and save our air!

THIS COULD BE YOUR COMMUNITY. !

Lynn Pendergraft
3131 Wrenn Road
Prospect Hill, NC. 27314
Sent from my iPad

From: [Caroline Massengill](#)
To: [SVC DENR.DAO.publiccomments](#)
Subject: [External] Carolina Sunrock—Prospect Hill Quarry and Distribution Center
Date: Monday, September 20, 2021 6:48:16 PM

CAUTION: External email. Do not click links or open attachments unless you verify. Send all suspicious email as an attachment to [ReportSpam](#).

I am a co-owner of a family farm in Prospect Hill that has been a part of this rural community for many generations. Our family home and former general store are listed on the National Register of Historic Places. I am extremely concerned about the impact of the proposed quarry and asphalt plant in Prospect Hill.

William S. Powell's book, [North Carolina Gazetteer](#) describes Prospect Hill as "named for the site on the former Warren family plantation because of the elevated view. A post office was established here about 1820."

Prospect Hill is rich in history, rich in family farms, and rich in people who want clean air, relatively quiet roads, quality water, and noise levels that allow them to enjoy their rural life. The image of huge, noisy trucks carrying boulders, gravel, and asphalt on farm roads, traveling by strawberry patches, tobacco fields, and family gardens, spewing trash and black smoke is very sad.

Please reject Sunrock's proposal for a quarry in Prospect Hill and reject the asphalt plant. Do not let this large company ruin our family farm life and the rural Prospect Hill environment.

Caroline Warren Massengill
103 Buckden Place
Cary, NC 27518
Caroline.massengill@gmail.com

Sent from my iPhone

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From: [James Vail](#)
To: [SVC_DENR.DAO.publiccomments](#)
Subject: [External] Prospect Hill Quarry and Distribution Center
Date: Monday, September 20, 2021 8:47:39 PM
Attachments: [DAO presentation Sept. 2021.docx](#)

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DAQ personnel: Enclosed are my comments of the proposed Wrenn Road facility.

- Dr. James Vail -

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DAQ Public Hearing on Sunrock Prospect Hill Proposal - September 21, 2021

My name is Dr. James Vail. I am an environmental scientist having long experience in government and the private sector. Although I am mostly retired, I currently work part-time, albeit now remotely, for EPA's Triangle Research Park facility. Although I have been intimately involved in the past with such topics such as air dispersion modeling, air toxics, particulate matter, risk assessment and the effects of human exposure to toxic and NAAQS pollutants, my testimony today focuses on several deficits in DAQ's evaluation of the Sunrock proposal.

My overall impression from examining the series of papers released by the Air Quality Branch of the DEQ pertaining to Sunrock's proposed facility at Wrenn Road is that they pursued a well-trying, traditional cookie-cutter approach to assessing air quality measures. Unfortunately their appraisal offers little to predict the real impact on me and my neighbors if the Sunrock proposal is given a green light. The material provided for this hearing thus contravenes the statement provided by the Division of Air Quality on the Internet that states "The NC Division of Air Quality (DAQ) works 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." How will our ambient air be improved by the Sunrock facility?

With all these calculations presented, one could ask, what is missing? The answer is: a number of significant air issues that DAQ has utterly failed to address. If these are not examined and made a formal part of the record, I fear for the quality of life my wife and I can expect as well as seeing a troubled future for many of my neighbors.

DAQ's Deficits in Examining Air Quality

Noise Pollution

The ambient air, while a vehicle for the transport of toxic materials and particulates, so too, is its role as a medium to transmit sound. This was recognized in the 1990 Clean Air Amendments for EPA, that called for the establishment of Title IV, a provision that addresses noise. So clearly, similar to EPA, the issue of noise is within DAQ's air quality purview and needs to be addressed here.

As noted by Sunrock's application to the state, the Wrenn Road asphalt plant and quarry operation will utilize two massive Jenbacher generators to power operations in the quarry as well as asphalt processes. These are massive units, not the type of small emergency generators used by homeowners. The specifications given by the manufacturer indicate some sound levels above 115 decibels associated with the operation of these machines. These levels are similar to **amplified music at a rock concert and** not far removed from those noises associated with jet planes (120-140 decibels) at airports. It has been shown that high noise levels are detrimental to people's health, including the well-being of children. While I do not live immediately adjacent to the Wrenn Road site and do not have to endure these painful sound levels, we live close enough to be subject to an almost constant

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background din during the warm weather seasons when the facility is proposed to operate. When we walk or exercise outdoors – which we now do for over an hour most every day – we would be surrounded by a constant, irritating noise.

Odor Pollution

The ambient air also is a medium for the transmission of objectionable smells. Nothing in the DEQ information distribution addresses this important issue. Asphalt facilities are well-known to be producers of offensive smells and they travel via the wind and diffusion, similar to the movement of air toxics and particulates. This situation particularly impacts those of us living downwind from the point of origin as can be clearly observed in the summer wind rose for this area. Such is the case for me and my neighbors where we reside directly in the path of typical breezes from the southwest during much of the warm weather months. An interesting quote from the Internet states: “When the asphalt is heated and vented at the plant, the smell radiates out into the atmosphere which becomes the only thing people smell, giving asphalt plants a bad reputation and causing a problem for many producers.” Going outdoors during the times of operation of the asphalt plant in the vicinity of Lake Roxboro will take considerable fortitude. Why the issue of objectionable smell in the present case was ignored by DAQ is curious given that investigations of citizen odor complaints by this agency is not an uncommon activity.

Light Pollution

Operation of the Wrenn Road facility will necessitate activity during nighttime hours. Thus, much of the southwest sky will be illuminated when it normally would be dark. Due to the presence of small particles suspended in the ambient air and lit by nighttime illumination, the sky will become somewhat opaque. For those of us who are amateur astronomers, a significant portion of the southwest sky will be off limits for star gazing - just another air quality issue ignored by DAQ.

Possible Fixes

DAQ could act to help mitigate the concern associated with these issues by: 1) Requiring that earthen berms be constructed around the generators, thus helping to direct the noise upward rather than propagating the sound laterally, 2) Requiring that Sunrock add odor suppressants to the asphalt-making process and 3) Require that all outdoor lighting to minimize glare while reducing light trespass and skyglow. Accessing The International Dark Sky Association would be a most useful reference in this regard; website: (<https://www.darksky.org/our-work/lighting/lighting-for-industry/fsa/fsa-products/>)

Summary

About 20 years ago, my wife and I had a log cabin constructed on the shores of Lake Roxboro. We chose this location precisely because of its tranquil atmosphere and natural beauty. On many nights my wife and I we sit on our front porch and simply absorb the peaceful surroundings. Little did I realize, those many years ago, that our peaceful neighborhood was threatened to become an

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industrial backwater. The full environmental impacts of this proposal has not been adequately captured by DAQ and are in need of being carefully examined.



From: [Rachel Watersong](#)
To: [SVC DENR.DAO.publiccomments](#)
Subject: [External] Carolina Sunrock – Prospect Hill Quarry and Distribution Center
Date: Tuesday, September 21, 2021 10:45:56 AM

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Dear DEQ,

Please, please do not approve Sunrock's application for the quarry and distribution center. I am a Caswell resident who lives near the quarry and I am very concerned about the impact of the quarry on our environment and quality of life. We do not need this kind of harmful project in our county.

Thank you,
Rachel Watersong

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From: Dawn Leith
To: SVC_DENR.DAO.publiccomments
Subject: [External] Carolina Sunrock – Prospect Hill Quarry and Distribution Center
Date: Tuesday, September 21, 2021 2:35:05 PM

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These are my comments for the hearing for Tuesday, September 21, 2021, regarding Carolina Sunrock Prospect Hill Quarry and Distribution Center.

Dawn Leith Dougherty
2685 Ridgeville Rd.
Prospect Hill, NC 27314

My name is Dawn Leith Dougherty, I reside at 2685 Ridgeville Rd., Prospect Hill NC, directly across the street from the proposed quarry and asphalt plant site. I am speaking today to ask the DAQ to please deny Carolina Sunrock permits to operate in Prospect Hill. I am one of the 55 Prospect Hill residents defending myself against a lawsuit filed against us by this company. Based on this, there are many people who would have been here today speaking with you, but are scared to speak at all due to this company's well-known tactics to silence their opposition and limit public participation. We were attempting to exercise our right as citizens in appealing to Caswell County to deny the permits that we felt were wrongly issued. When we were first notified of this project, Sunrock told us it wants to be "good neighbors" with us. This is a line they use in their own press releases as well. I'm not sure where in the world this is considered to be neighborly, but certainly not in MY world.

We are extremely concerned about this site, as we live in a 130 year-old home that isn't insulated well or air tight. My husband and I are gardeners who grow much of our own organic food. I own a small apothecary business and grow some of my own herbs for my business and was hoping to expand my growing business, as well as my hobby farm. Our plan was also to become beekeepers here, and possibly raise chickens. I am also a holistic healer, a business which I was planning on growing here as well. I see clients and students in my home. My husband is also a renowned flute maker and we depend upon clean air to be able to play these instruments. Air quality is a huge concern because of these things, and potential cancer-causing airborne particulates getting into my home, breathed by us, my clients, and our animals, as well as even being outside any amount of time to grow food and garden, will be impossible if this potentially destructive operation is allowed here. Our neighbors and many residents of Caswell County are vegetable, livestock/chicken, tobacco, and hemp farmers and also depend upon clean air and clean product, as well as many are an aging population, many of whom have breathing issues already. As an agricultural and recreational county, we NEED clean air and water here and have no recourse if it is polluted. If I were to stay here in my home, the only future I see for myself and my husband is fighting lung cancer or other severe health issues, as we are directly across the street from the proposed site of a quarry, asphalt plant, and concrete facility. The blasting and silica dust alone from the operation is enough to pollute my air on a daily basis, not to mention the mix of toxic chemicals pumped out constantly from an asphalt plant. This company wants to operate asphalt plants within 10 miles of each other. Why? Because of the pollution from these operations, the air quality of Caswell County will suffer greatly if this is to be allowed.

Based on this company's history of using the courts to intimidate and silence, we do not trust them to be "good neighbors". I am asking the DAQ to please deny these air quality permits for Carolina Sunrock. I thank you for your time.

From: [Karen Anderson](#)
To: [SVC_DENR.DAO.publiccomments](#)
Subject: [External] Carolina Sunrock-Prospect Hill
Date: Tuesday, September 21, 2021 3:46:14 PM

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As a resident of Caswell County I have grave concerns about the environmental impact of the proposed quarry, asphalt and concrete plants. Caswell is an agricultural county and it is dependent on clean air, soil and water. Organic produce and tobacco, as well as traditionally grown crops, and livestock are a strong economic engine for the county.

These proposed industries are incompatible with agricultural investments which are already in place. It is established that fine rock dust which is a product of blasting in a quarry, can travel miles and cover crops, home sites, and, eventually, lungs of everyone who comes in contact with it. The aggregate of this proposed industry, plus industries already in place, must be fully considered. The health of residents and their livelihood must be priority one. For years we have so thoughtlessly and carelessly allowed industry to have its way in this country. The crowding of one industry next to others has created massive environmental quality issues. We need to learn from past mistakes!

I strongly urge the Dept. of Air Quality to look closely at every phase of Sun Rock's business proposal to determine short and long term environmental impacts. They must prove with finely observed scientific evidence that their movement within the county will be benign. They have no other motivator than money. Our motivation is one of keeping our lovely county clean for ourselves, our children and their future.

Respectfully Yours,

Karen P Anderson
1827 Wilson Rd.
Hurdle Mills NC 27541

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From: [Carol Warren](#)
To: [SVC_DENR.DAQ_publiccomments](#)
Subject: [External] "Carolina Sunrock – Prospect Hill Quarry and Distribution Center."
Date: Tuesday, September 21, 2021 4:25:53 PM

CAUTION: External Email. Do not click links or open attachments unless you verify. Send all suspicious email as an attachment to Report Spam.

Thank you for this opportunity to comment on the Carolina Sunrock permit application.

While these comments are made concerning Prospect Hill, they also apply to our other proposed Carolina Sunrock project at Burlington North.

So far, we in Caswell have enjoyed relatively clean air and water but as you know, Caswell County is one of the poorer counties in the state. We have a large number of low- and middle-(by local standards) income residents. We should qualify what we mean by "middle income", because our economy is on a different scale compared to the economy of most other counties in the state. "Middle income" here is very similar to "low income" in many of our surrounding areas. We worked for relatively low wages here, and invested in property here, expecting to stay. Few of us really have the resources that would give us the option to move somewhere else if Sunrock makes our communities' air or water toxic or unhealthy for the people living here. This is particularly true for our relatives and neighbors most sensitive to Sunrock's various forms of pollution.

Sunrock does not seem to comprehend that we do not see them as likely to be good neighbors. For example, they are suing a large number of our neighbors for exercising their right to free speech. Also, they do not take into consideration that our county will bear the extreme burden of not one, but two polluting Sunrock plants or that plumes of particulate matter, (including lung-damaging silica), as well as carbon monoxide, nitrogen dioxide and sulfur dioxide and VOCs can travel from one part of the county to another, at times multiplying the effects on certain communities in Southern Caswell.

Our clean air and water are resources that make this a good place for small farmers and for people who enjoy the outdoors.

Those outdoor activities are highlighted in our county's strategic plan as things to be supported and nurtured. Our county government is working to write ordinances to catch up to the growing threat posed by polluting industries, but our county is, unfortunately, not currently prepared for managing this threat. We implore the state DAQ to do its job and protect us from this menace.

Sandy and Carol Warren

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From: Phil
To: SVC_DENR.DAQ.publiccomments
Subject: [External] Carolina Sunrock - Prospect Hill Quarry and Distribution Center
Date: Tuesday, September 21, 2021 7:06:58 PM

CAUTION: External email. Do not click links or open attachments unless you verify. Send all suspicious email as an attachment to Report Spam.

DAQ,

Below are my comments given at tonight's public hearing.

Regards,
Phil Barfield

Comments for the 6PM, September 21, 2021 Public Hearing for Carolina Sunrock LLC
Proposed Air Quality Permit – Prospect Hill:

The Division of Air Quality mission statement is *“to protect and improve the outdoor air quality of North Carolina. DAQ works 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.”*

I request DAQ to do just that and deny this air permit application from Carolina Sunrock. I come here tonight very concerned. The applicant is suing 55 neighbors when they exercised their right to object to a local permit that was issued by our county Planner.

The lawsuit is seen as intimidation and has had a chilling effect on people wanting to come forward and speak out against the projects.

As I and others have pointed out in previous submitted comments, the application is incomplete, contains errors, has contradicting information, and omits critical information for review. Also, it has substantially changed since original submission through revision after revision. DAQ should demand an accurate, complete application from Carolina Sunrock.

Carolina Sunrock is planning to come into our county with 3 asphalt plants, 3 truck mix concrete batch plants, and a 630-acre rock quarry site. The planned activities will pollute our air, our land, and our water with particulate matter and toxic chemicals. Some chemicals will be released from smokestacks at toxic levels higher than considered healthy for humans and will require DAQ permits to do so. Carolina Sunrock is requesting permission to pollute these toxic chemicals at maximum rates that are much higher than they will produce to, and I quote, *“afford the facility operational flexibility.”* As an example, Carolina Sunrock estimated they will pollute a total of 238 pounds per year of benzene from the entire facility, however, you are drafting a permit to allow them to pollute 854 pounds per year from just the asphalt drum. Allowing the facility to pollute over three and a half times more than they estimated does not improve the outdoor air quality of North Carolina or protect its citizens. DAQ should not permit toxic chemicals at these high rates and should restrict them as much as possible to protect the environment and our citizens.

If not denied, DAQ should not take any further action on this application until after a court

ruling in the lawsuit. If the applicant loses, our county's new development ordinance will apply and will affect the location and configuration of the projects. If they can meet the new ordinance requirements for this project, then they will need to submit a new air permit application.

Thank you for the opportunity to voice my concerns.

From: [Phil](#)
To: [SVC_DENR.DAO.publiccomments](#)
Subject: [External] Carolina Sunrock - Prospect Hill Quarry and Distribution Center
Date: Tuesday, September 21, 2021 7:15:44 PM
Attachments: [Carolina Sunrock LLC – Prospect Hill Comments - Sept 21 2021.pdf](#)

CAUTION: External email. Do not click links or open attachments unless you verify. Send all suspicious email as an attachment to Report Spam.

DAQ,

Attached are my comments to the Carolina Sunrock - Prospect Hill Quarry and Distribution Center air permit application.

Please acknowledge receipt.

Thank you,
Phil Barfield

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Carolina Sunrock LLC – Prospect Hill Comments

1. The applicant is suing 55 neighbors when they exercised their right to object to a local permit that was issued by our county Planning Director. The lawsuit is seen as intimidation and has had a chilling effect on people wanting to come forward and speak out against the projects.

Action Requested: Delay DAQ decision on the air permit until after a court ruling in the lawsuit. If the applicant loses, our county's High Impact Development Ordinance (HIDO) will apply and will affect the location and configuration of the projects. New air permit applications will be required if they can meet the HIDO requirements.

2. Changes, correspondence, and attachments to the air permit applications and DAQ review were not made available to the public before the hearing or comment period.

Action Requested: Post the information to the DAQ website, reschedule the hearing, and extend the comment periods to allow the public sufficient time to review and comment.

3. The applicant claims the only difference between the 2019 and 2021 air permit applications is the use of ultra-low sulfur diesel (ULSD).

Action Requested: Explain why particulate matter (PM) pollution estimates have increased between the two applications. Was this the result of using ULSD?

4. DAQ denied the 2019 air permit application because NO₂ exceeded NAAQS limits.

Action Requested: Explain why the same level of nitrogen oxide (NO_x) pollution is now acceptable when it wasn't previously.

5. The air permit application requires revision and resubmittal due to substantial changes to the original application. E-mails, phone conversations, and memos since the submittal on 4/21/2021 have affected the core basis for review and approval. When projected emissions change substantially during the course of DAQ review, as in this case, the application must be revised and resubmitted. As an example, the particulate matter projected emissions jumped from 28.88 tons per year in the application to 113.73 tons per year by the time the DAQ review was concluded. That is a fourfold increase.

Action Requested: Require applicant to revise, update, and resubmit the air permit application. Post the information to the DAQ website, reschedule the hearing, and extend the comment periods to allow the public sufficient time to review and comment.

6. The materials presented in their current form are haphazard and, intentionally or unintentionally prevent a non-technical person from following and comprehending the materials. They are a barrier to citizens who want to understand the impacts to their community, the environment, and their health. They discriminate against those without an advanced technical degree. When providing for public comment and review, the materials need to be organized, clearly written, errors corrected, and revisions incorporated so an average person can read and understand the content.

Carolina Sunrock LLC – Prospect Hill Comments

Action Requested: Require applicant to correct, revise, update, and resubmit the air permit application. Post the information to the DAQ website, reschedule the hearing, and extend the comment periods to allow the public sufficient time to review and comment.

7. The materials for public review do not adequately describe the facility. Forms have missing information and pollution control methods and systems are not fully identified. The type and configuration of all the equipment is not known.

Action Requested: Require applicant to provide all information on the systems and fill out all the forms completely.

8. Asphalt and concrete plant have been operating for years across the country with little change to the various technologies and methods used. Some technology being used is known to be better than others (counterflow vs batch). Enclosures, wet suppression, odor control, counterflow double drum, blue smoke control, are some that should be required and incorporated.

Action Requested: Evaluate the facility configuration and equipment and require the best technology and methods that would benefit the environment and public health.

9. Fabric filters in baghouses are the primary pollution control devices. DAQ is requiring an annual internal inspection, but a monthly visual inspection is required to ensure the filters are attached, intact, and in good condition. With only an annual inspection, the facility could pollute above permitted thresholds for months before a problem is discovered.

Action Requested: Require monthly visual inspections of the baghouse and fabric filters.

10. The applicant includes a mobile crusher in the Prospect Hill application and states that it is exempt, however, the regulation cited does not exempt crushers operating at a quarry or a facility with a mining permit. The crusher will be operating at a quarry with a mining permit [TBD].

Do not allow an exemption of the mobile crusher.

11. The facility has the capability to store and use No. 2 fuel oil. No. 4 and No. 4 recycled fuel oils pollute more than No. 2 fuel oil.

Action Requested: Do not allow more polluting fuel oils (No. 4 and No. 4 recycled fuel oils) to be used.

12. In the DAQ review, DAQ assumes No. 4 Fuel Oil has the same emission factor as Recycled No. 4 Fuel Oil and that emissions factors for Propane are similar to those of Natural Gas.

Action Requested: Confirm these assumptions and cite the appropriate sources. If not true and they are different, then re-evaluate the SO₂ emission rate for the drum dryer/mixer.

13. Except in the case of crushers, haul roads, and front-end loader work area, DAQ states that fugitive dust and process generated emissions shall be controlled but do not require how or by what means. DAQ leaves it up to the applicant to determine how the emissions will be controlled and then, after construction, confirms it against an opacity standard.

Action Requested: Require the applicant to identify the systems, processes, and procedures to specifically control emissions in the application. Review them for adequacy. Require emission controls be put in place that have been proven effective in the industry such as enclosures and wet suppression systems.

14. DAQ was not provided information on how the applicant will control fugitive dust.

Action Requested: Require the facility to develop, implement, and comply with a fugitive dust control plan. Review and approve the plan before the air permit is approved. The plan should include controlling fugitive dust emissions at unloading and loading areas, process area stockpiles, stockpile working areas, plant parking lots, plant roads (access and haul roads), conveyors, screens, transfer points, crushers, silos, truck loadout points, aggregate weigh batcher, etc.

15. Covering equipment and sources reduces fugitive emissions.

Action Requested: Require components of the HMA and concrete plants be covered or enclosed to limit fugitive emissions. This includes conveyors, tops of silos, loading stations, and gobb hopper.

16. The facility is required to utilize management practices or odor control equipment sufficient to prevent objectionable odorous emissions.

Action Requested: Require the applicant to identify the equipment, processes, and practices to prevent odors. Determine if the equipment and practices significantly reduce or eliminate odors.

17. Additives are a way to control odor emissions when using recycled/reclaimed asphalt pavement (RAP) and post-consumer reclaimed asphalt shingles (PRAS or RAS).

Action Requested: Evaluate and require the applicant to use additives (if environmentally friendly) to control odors when using RAP and/or PRAS.

18. Recycled/reclaimed asphalt pavement (RAP) and post-consumer reclaimed asphalt shingles (PRAS or RAS) composition may be unknown. The addition of unknown composition RAP and PRAS into the HMA drum is a concern as all RAP and PRAS is not the same and that subsequent loads and batches may have different composition. Some batches may contain chemicals, waste materials, heavy metals, oils, paints, adhesives, solvents, etc. that have been applied or accumulated prior to being removed from pavements and roofs. PRAS may also contain adhesives, cement, tar paper, etc.. When

Carolina Sunrock LLC – Prospect Hill Comments

added to the HMA drum, they may emit odors and pollutants at different levels and include pollutants not in the review and analysis.

Action Requested: Have strict requirements and record keeping (in addition to the asbestos requirement) regarding the composition of RAP and PRAS to ensure the composition is consistent and the emissions are known. Include the emissions caused by adding RAP and/or PRAS to the HMA drum into the facility emissions calculations. Require the facility to use only RAP and PRAS meeting an industry standard and not contain any materials or compounds (such as rubber or plastics) that would cause additional pollution or odors when added to the HMA drum. Require applicant to maintain records from the suppliers certifying each batch or load of RAP and RAS. If the RAP or PRAS is found to be contaminated, not clean, or substandard, then require the permit for the use of RAP and PRAS to be withdrawn and the stockpiles and RAP/RAS equipment removed from the property.

19. The large generators are anticipated to run continuously and may create a constant noise beyond the property.

Action Requested: Require the generators to be either enclosed in a building with sound protection or surrounded by berms and landscaping sufficient to prevent noise outside the property. Require insulation around the generators and exhaust to dampen sound.

20. Property lighting will cause light pollution at night.

Action Requested: Require all outside lighting to be covered and directed downward with shields.

21. In the draft permit for NSPS monitoring requirements, DAQ is requiring the permittee to perform monthly periodic inspections to check that water is flowing to discharge spray nozzles in wet suppression systems. Monthly is too long a period between inspections. Faulty nozzles could allow emissions for weeks without being detected.

Action Requested: At a minimum, require weekly inspections.

22. Limit the amount of asphalt produced to a daily amount based on the 600,000 tons per consecutive 12-month period, the expected operating schedule of 6 day/wk, and 50 wk/yr, and the percentage annual throughput. Production should not exceed 2,000 tons per day at any time during the year.

Action Requested: Require a daily maximum to ensure the facility did not exceed the 12-month asphalt production limit and therefore not exceed SO₂ and CO emission limits. Require the permittee to record daily as well as monthly and total annual amount [tons] of asphalt produced.

23. Limit noise, traffic, odor, and fugitive dust in the surrounding community.

Carolina Sunrock LLC – Prospect Hill Comments

Action Requested: Restrict the hours per day, days per week, and weeks per year to the expected operating schedule. Do not allow nighttime or early morning operations (i.e., no operations from 8PM to 8AM).

24. Diesel trucks are expected to line up and idle awaiting loadout throughout the day. Loaders are expected to operate continuously. The emissions from all the vehicles will add to the emissions of the facility and should be considered. After all, these vehicles are concentrated at this site because of the facility.

Action Requested: Evaluate and include emission from vehicles – dump trucks, delivery vehicles, loaders, and worker vehicles – into the facility wide estimates.

25. Employ audit methods to confirm asphalt and concrete production and emissions other than just reviewing permittee's logs.

Action Requested: Audit sales receipts, contracts, invoices, and fuel and cement purchases to confirm asphalt and concrete production and emissions.

26. For the fabric filter requirements in the draft air permit, the permittee shall perform periodic inspections and maintenance as recommended by the equipment manufacturer. No manufacturer's recommendations were provided in the materials for public review. The baghouses are extremely important because they are the primary filter for particulate matter.

Action Requested: Obtain, review, and mandate manufacturer inspections and maintenance recommendations. Add additional requirements if the manufacturer recommendations are inadequate.

27. The draft permit states if the facility does not use wet suppression to control emissions, the Permittee shall repeat the NSPS performance tests within five (5) years of the previous test. If the facility uses an upstream wet suppression to control fugitive emissions, then the facility is exempt from the 5-year repeat testing requirement. The applicant doesn't state the facility will use wet suppression or use upstream wet suppression, so it is unclear whether the performance tests will be required to be repeated every 5 years.

Action Requested: Require the applicant to identify the systems, equipment, processes, and procedures to control emissions and then determine whether subsequent performance tests will be required.

28. DAQ intends to permit Carolina Sunrock LLC to produce 5 toxic air pollutants (TAPs) - formaldehyde, mercury, nickel, arsenic, and benzene - at rates significantly higher than their permitting emission rates (TPERs) by scaling up TAPs to their acceptable ambient levels (AALs). As an example, Carolina Sunrock estimated they will pollute a total of 238 pounds per year of benzene from the entire facility, however, DAQ is drafting a permit to allow them to pollute 854 pounds per year from just the asphalt drum. Allowing the facility to pollute over four times more than they estimated does not improve the outdoor air quality

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of North Carolina or protect its citizens. DAQ should not permit toxic chemicals at these high rates and should restrict them as much as possible to protect the environment and our citizens. Workers, visitors, inspectors, animals, and the environment inside the property boundary will be exposed to high levels of these 5 TAPs above what is known to be healthy especially during climatic conditions such as inversions.

Action Requested: Only allow emission rates of TAPs, HAPs, and PM to what was calculated and not scaled up. Mandate the use of personal protective equipment (PPE) and proper respiratory equipment to negate this exposure for use by anyone on the property.

29. DAQ intends to permit Carolina Sunrock LLC to produce benzene at a rate significantly higher than its permitted emission rate (TPER) by scaling up the emission to its acceptable ambient level (AAL). That basically means that the level of benzene will be greater than what has been determined healthy within the property boundary. The modeling of benzene dispersion does not consider all benzene emitting sources at the facility such as from dump trucks, delivery vehicles, loaders, and worker vehicles. Diesel trucks are expected to line up and idle awaiting loadout throughout the day. Loaders are expected to operate continuously. The emissions from all the vehicles will add to the emissions of the facility and may cause the AAL of benzene to be exceeded at the property boundary.

Action Requested: Evaluate all emitting sources of benzene and include in modeling to determine if the level is truly acceptable.

30. The air permit application should be denied because the facility will be releasing benzene at higher concentrations than are considered healthy (above TPER). Benzene causes cancer and is unacceptable at any level. According to the Center for Disease Control (CDC) – “Breathing very high levels of benzene can result in death, while high levels can cause drowsiness, dizziness, rapid heart rate, headaches, tremors, confusion, and unconsciousness. Eating or drinking foods containing high levels of benzene can cause vomiting, irritation of the stomach, dizziness, sleepiness, convulsions, rapid heart rate, and death.

The major effect of benzene from long-term exposure is on the blood. Benzene causes harmful effects on the bone marrow and can cause a decrease in red blood cells leading to anemia. It can also cause excessive bleeding and can affect the immune system, increasing the chance for infection.

Some women who breathed high levels of benzene for many months had irregular menstrual periods and a decrease in the size of their ovaries, but we do not know for certain that benzene caused the effects. It is not known whether benzene will affect fertility in men.

Long-term exposure to high levels of benzene in the air can cause leukemia, particularly acute myelogenous leukemia, often referred to as AML. This is a cancer of the blood forming organs. The Department of Health and Human Services (DHHS) has determined that benzene is a known carcinogen. The International Agency for Research on Cancer (IARC) and the EPA have determined that benzene is carcinogenic to humans.

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Children can be affected by benzene exposure in the same ways as adults. It is not known if children are more susceptible to benzene poisoning than adults.

Benzene can pass from the mother's blood to a fetus. Animal studies have shown low birth weights, delayed bone formation, and bone marrow damage when pregnant animals breathed benzene."

Action Requested: Deny the air permit because the facility will be releasing benzene at higher concentrations than are considered healthy.

31. The air permit application should be denied because the facility will be releasing arsenic at higher concentrations than are considered healthy (above TPER). Industrial emission of arsenic is unacceptable at any level. According to CDC – "Inhalation of inorganic arsenic may cause respiratory irritation, nausea, skin effects, and increased risk of lung cancer.

Acute high dose oral exposure to inorganic arsenic may cause nausea, vomiting, diarrhea, cardiovascular effects and encephalopathy.

Long term oral exposure to low levels of inorganic arsenic may cause dermal effects (such as hyperpigmentation and hyperkeratosis, corns and warts) and peripheral neuropathy characterized by a numbness in the hands and feet that may progress to a painful "pins and needles" sensation. There may also be an increased risk of skin cancer, bladder cancer, and lung cancer.

Oral exposure to MMA may result in gastrointestinal damage. Kidney effects may be observed following chronic exposure.

Chronic oral exposure to DMA may result in urinary bladder and kidney effects.

Children who are exposed to high levels of arsenic exhibit symptoms similar to those seen in adults, including cardiovascular, dermal, and neurological effects, and vomiting following ingestion.

There is some evidence that metabolism of inorganic arsenic in children is less efficient than in adults."

Action Requested: Deny the air permit because the facility will be releasing arsenic at higher concentrations than are considered healthy.

32. The air permit application should be denied because the facility will be releasing formaldehyde at higher concentrations than are considered healthy (above TPER). Formaldehyde causes cancer and industrial emission is unacceptable at any level. According to CDC – "Nasal and eye irritation, neurological effects, and increased risk of asthma and/or allergy have been observed in humans breathing 0.1 to 0.5 ppm. Eczema and changes in lung function have been observed at 0.6 to 1.9 ppm.

Decreased body weight, gastrointestinal ulcers, liver and kidney damage were observed in animals orally exposed to 50–100 milligrams/kilogram/day (mg/kg/day) formaldehyde.

The Department of Health and Human Services (HHS) determined in 2011 that formaldehyde is a known human carcinogen based on sufficient human and animal inhalation studies.

A small number of studies have looked at the health effects of formaldehyde in children. It is very likely that breathing formaldehyde will result in nose and eye irritation. We do not know if the irritation would occur at lower concentrations in children than in adults.

There is some evidence of asthma or asthma-like symptoms for children exposed to formaldehyde in homes.”

Action Requested: Deny the air permit because the facility will be releasing formaldehyde at higher concentrations than are considered healthy.

33. The air permit application should be denied because the facility will be releasing mercury at higher concentrations than are considered healthy (above TPER). Mercury emission is unacceptable at any level. According to CDC – “Inorganic mercury (metallic mercury and inorganic mercury compounds) enters the air from mining ore deposits, burning coal and waste, and from manufacturing plants.

It enters the water or soil from natural deposits, disposal of wastes, and volcanic activity.

Methylmercury may be formed in water and soil by small organisms called bacteria.

Methylmercury builds up in the tissues of fish. Larger and older fish tend to have the highest levels of mercury.

The nervous system is very sensitive to all forms of mercury. Methylmercury and metallic mercury vapors are more harmful than other forms, because more mercury in these forms reaches the brain. Exposure to high levels of metallic, inorganic, or organic mercury can permanently damage the brain, kidneys, and developing fetus. Effects on brain functioning may result in irritability, shyness, tremors, changes in vision or hearing, and memory problems.

Short-term exposure to high levels of metallic mercury vapors may cause effects including lung damage, nausea, vomiting, diarrhea, increases in blood pressure or heart rate, skin rashes, and eye irritation.

There are inadequate human cancer data available for all forms of mercury. Mercuric chloride has caused increases in several types of tumors in rats and mice, and methylmercury has caused kidney tumors in male mice. The EPA has determined that mercuric chloride and methylmercury are possible human carcinogens.

Carolina Sunrock LLC – Prospect Hill Comments

Very young children are more sensitive to mercury than adults. Mercury in the mother's body passes to the fetus and may accumulate there. It can also pass to a nursing infant through breast milk. However, the benefits of breast feeding may be greater than the possible adverse effects of mercury in breast milk.

Mercury's harmful effects that may be passed from the mother to the fetus include brain damage, mental retardation, incoordination, blindness, seizures, and inability to speak. Children poisoned by mercury may develop problems of their nervous and digestive systems, and kidney damage.”

Action Requested: Deny the air permit because the facility will be releasing mercury at higher concentrations than are considered healthy.

34. The air permit application should be denied because the facility will be releasing nickel at higher concentrations than are considered healthy (above TPER). Nickel emission is unacceptable at any level. According to CDC – “The most commonly reported adverse health effect associated with nickel exposure is contact dermatitis.

After an individual is sensitized to nickel, dermal contact with small amount of nickel or oral exposure to fairly low doses can result in dermatitis. Health effects are determined by the dose (how much), the duration (how long), and the route of exposure.

Approximately 10–20% of the general population is sensitized to nickel.

Lung inflammation is the predominant noncancerous respiratory effect.

The toxicity of nickel in the respiratory tract appears to be related to solubility of the individual nickel compounds with soluble nickel compounds being the most toxic.

Atrophy of the nasal epithelium has been observed following exposure to soluble nickel compounds.

Nickel compounds are considered human carcinogens and metallic nickel is possibly a human carcinogen.

Decreased survival has been observed in the offspring of rats exposed to nickel in drinking water.

It is not known if children are more susceptible to nickel poisoning than adults”

Action Requested: Deny the air permit because the facility will be releasing nickel at higher concentrations than are considered healthy.

35. Fires at asphalt plants do happen and are not uncommon. They are real possibilities due to the high temperatures required for the asphalt mix and asphalt cement. These temperatures

Carolina Sunrock LLC – Prospect Hill Comments

can approach or exceed the flash points of the products where a source of ignition will cause the vapors produced to catch on fire. Case in point is the fire at an asphalt plant in Statesville, NC on Aug 5, 2019. More than 15 different agencies responded. Flames leaped 50 feet into the air and smoke could be seen billowing for miles. The smoke is presumed to contain many toxic and hazardous air pollutants well above TPER thresholds that would be an immediate danger to human and animal health.

Action Requested: Require a fire prevention plan, a fire safety plan, a firefighting plan, an emergency response plan, and an evacuation plan that includes neighboring properties. Have local fire and sheriff departments review and approve the plans since they would be the ones to respond. Require the applicant to provide the surrounding community with the evacuation plan in the event of a fire.

36. The applicant lists the cement/flyash weight batcher as 25-ton capacity and the aggregate weigh batcher as 50-ton capacity in section 2.2.2. Forms A2, A3 have 5-ton and 20-ton respectively.

Require the applicant to revise the application and forms with the correct information.

37. Form D1 is not correct and has not been updated. Form D1 is the key/primary form in the entire application that summarizes the facility wide pollutants. The form lists 28.88 tons of particulate matter (PM) per year and the DAQ review lists 113.73 tons of PM (almost 4 times greater pollution). The quantity in the form and in the review should match.

Action Requested: Require the applicant to revise Form D1 with the correct information. Explain why the applicant wasn't required to correct or update key forms in the application.

38. The application lists a 1,200 tons per hour quarry production. The DAQ review lists 1,500 tons per hour.

Resolve the conflicting information and correct the application or review.

Thank you for this opportunity to comment.

Respectfully submitted,
Phil Barfield

From: Richard Lonon
To: [SVC_DENR.DAO_publiccomments](#)
Cc: Lynden Harris; Bill Lonon; Deborah Lonon; Cooper Harris; Noah Cooper-Harris; Rob Bowers; Allan Parnell; Ann Moss Joyner
Subject: [External] Carolina Sunrock - Prospect Hill
Date: Tuesday, September 21, 2021 7:30:20 PM

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Thank you for the virtual meeting.

Quite a number of registered participants were not able to speak due to technical or user difficulties.

Please consider this suggestion as a procedural change to your virtual meetings across the state:

Collect a call-back phone number when speakers register. Use this number to call the speaker directly in case of user or technical issues such as occurred this evening.

Make this extra effort to get citizen input!!

As you know, Caswell is not a technology rich county, like many NC counties
Many citizen voices may be being silenced by relying participants to have the experience to negotiate technical roadblocks.

Thank you,
Richard Lonon



From: lharris@hiddenvoices.org
To: "Richard Lonon"; SVC_DENR.DAO.publiccomments
Cc: "Bill Lonon"; "Deborah Lonon"; "Cooper Harris"; "Noah Cooper-Harris"; "Rob Bowers"; "Allan Parnell"; "Ann Moss Joyner"
Subject: [External] RE: Carolina Sunrock - Prospect Hill
Date: Tuesday, September 21, 2021 7:33:32 PM

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And another point, 40% of Caswell residents don't have internet access. For the rest, it is certainly intermittent at best.

From: Richard Lonon <rlnonogoo@gmail.com>
Sent: Tuesday, September 21, 2021 7:30 PM
To: daq.publiccomments@ncdenr.gov
Cc: Lynden Harris <lharris@hiddenvoices.org>; Bill Lonon <b.lonon@outlook.com>; Deborah Lonon <dbclonon@gmail.com>; Cooper Harris <cooper@cooperharris.com>; Noah Cooper-Harris <noahcooperharris@gmail.com>; Rob Bowers <robandcheri@mac.com>; Allan Parnell <allanmparnell@gmail.com>; Ann Moss Joyner <annmossjoyner@gmail.com>
Subject: Carolina Sunrock - Prospect Hill

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Richard Lonon



From: lharris@hiddenvoices.org
To: "Richard Lonon"; [SVC_DENR.DAQ_publiccomments](#)
Cc: "Bill Lonon"; "Deborah Lonon"; "Cooper Harris"; "Noah Cooper-Harris"; "Rob Bowers"; "Allan Parnell"; "Ann Moss Joyner"
Subject: [External] RE: Carolina Sunrock - Prospect Hill
Date: Tuesday, September 21, 2021 7:36:12 PM

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I just realized that this email is also being sent to the DAQ public comments. Please do take time to enumerate for DAQ the reason this permit should be disallowed once again. A horrible company with an insidious and deadly plan for our community.

Thanks!
Lynden

From: lharris@hiddenvoices.org <lharris@hiddenvoices.org>
Sent: Tuesday, September 21, 2021 7:33 PM
To: 'Richard Lonon' <rlnonongoog@gmail.com>; 'daq.publiccomments@ncdenr.gov' <daq.publiccomments@ncdenr.gov>
Cc: 'Bill Lonon' <b.lonon@outlook.com>; 'Deborah Lonon' <dbclonon@gmail.com>; 'Cooper Harris' <cooper@cooperharris.com>; 'Noah Cooper-Harris' <noahcooperharris@gmail.com>; 'Rob Bowers' <robandcheri@mac.com>; 'Allan Parnell' <allanmparnell@gmail.com>; 'Ann Moss Joyner' <annmossjoyner@gmail.com>
Subject: RE: Carolina Sunrock - Prospect Hill

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To: daq.publiccomments@ncdenr.gov
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Subject: Carolina Sunrock - Prospect Hill

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As you know, Caswell is not a technology rich county, like many NC counties
Many citizen voices may be being silenced by relying participants to have the experience to
negotiate technical roadblocks.

Thank you,
Richard Lonon

From: [Donna Nicholais](#)
To: [SVC_DFNR.DAO.publiccomments](#)
Subject: [External] Carolina Sunrock-Prospect Hill
Date: Tuesday, September 21, 2021 7:55:33 PM

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My name is Donna Nicholais and I own a property approximately 1000 ft from the proposed Prospect Hill Quarry Site. I am also one of the 55 citizens that the applicant is suing for exercising our right to object to a local permit that was issued by Caswell County. As much as I hate to admit it, I feel very intimidated by the lawsuit and do not feel that I can express my opinions on the Air Permit or speak freely about it at this time.

That being said, I would like to request that the DAQ delay its decision on any air permits until after the court ruling is made on this lawsuit.

Thank you for your consideration in this matter.



From: [Kim Steffan](#)
To: SVC_DENR.DAQ.publiccomments
Subject: [External] Carolina Sunrock - Prospect Hill Quarry and Distribution Center
Date: Tuesday, September 21, 2021 8:56:04 PM

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September 21, 2021

NC Division of Air Quality
NC Department of Environmental Quality
DAQ.publiccomments@ncdenr.gov

Re: Carolina Sunrock – Prospect Hill Quarry and Distribution Center

Dear DAQ Staff:

These comments are from Kim Steffan. I reside at 3598 Corbett Ridge Road, Mebane, NC, about 3.5 miles from the proposed facility.

Thank you for hosting the public hearing and receiving these written comments. DAQ properly denied Sunrock's first permit application and should do the same again, for similar reasons: the application is incomplete and inadequate, or has actually gotten worse.

1. DAQ denied the 2019 air permit application because NO₂ levels exceeded NAAQS limits. The current application contains the same level of nitrogen oxides (NO_x). That should also be unacceptable.
2. Particulate matter has increased significantly from the first to the second application. It further increased from 28.88 tons per year in the current application to 113.73 tons per year with additional information provided SINCE the second application.
3. The application and DAQ review do not take into account the effects of motor vehicle emissions at the site, particularly large diesel engine trucks idling as they line up to await loading, as well as many delivery vehicles, dump trucks, and loaders. Those vehicles are an integral part of the facility's operation; their emissions must be considered as part of the effects of this facility.
4. Like the first application, there are many important "HOW" questions that remain unanswered and incomplete. For example, the application does not describe how it will control fugitive dust, nor methods for controlling emissions, nor methods for avoiding nuisance lighting and noise.
5. Like the first application, there are errors and missing information. For example, the application lists a 1,200 ton per hour quarry production, but DAQ's review shows 1,500 tons per hour. The application lists the cement/flyash weight batcher as 25-ton capacity and the aggregate batcher at 50-ton capacity, but forms A2 and A3 show 5-ton and 20-

ton capacities respectively. Form D1 lists 28.88 tons of particulate matter per year, yet the DAQ review lists 4 times that – 113.73 tons. Like you ruled in 2019, the application must be complete and accurate BEFORE DAQ can properly consider it.

In addition, it is unconscionable for DAQ to consider this plant without considering the cumulative effects of the applicant's other 2 plants – one just down the road, and another within 10 miles. Sunrock effectively attempts to thumb their nose at DAQ by dividing up their emissions into 3 nearby plants to escape the scrutiny of combining these into one plant location – yet the effect on community air quality is EXACTLY THE SAME. DAQ is there to protect the health of citizens and the quality of the environment in our State. DAQ should not shrink from its duty and from using common sense for fear of being sued by Sunrock for considering combined effects in this situation. If Sunrock is using this ploy here, they and similar companies are bound to be doing this elsewhere in our State. You cannot let that become the accepted modus operandi because it makes an end run around your own regulations. If DAQ is sued by Sunrock for doing the right thing, the common sense thing, then my tax dollars are put to good use in defending the agency's decision that they must consider the cumulative effect of these related facilities.

Although DAQ should properly deny the permit application, if DAQ imprudently decides to approve the permit, DAQ should exercise its authority to at least limit the damage that will be done to air quality in our community in the following ways:

1. Require that dust-producing activities be covered or enclosed.
2. Do not write the permit for any more emissions or operations than the application says Sunrock expects to produce on an ordinary basis. Do not allow them a cushion to pollute more.
3. Require generators to be enclosed in a building or surrounded by berms to reduce noise.
4. Limit operations to time between 8 a.m. and 8 p.m.
5. Impose a daily limit (not simply an annual limit) on production.
6. Require more frequent inspection of fabric filters and bag houses.
7. Do not exempt the mobile crusher from regulation.
8. Require cleaner rather than dirtier fuel oils to be used.
9. Require that trucks awaiting loading be parked and turned off until it is their turn, instead of idling in line.
10. Lower the amount of amount of emissions allowed, from particulates, to NOx, to sulfur dioxide, to hazardous substances such as arsenic, benzene, nickel, and mercury.

We the people are depending on you to fulfill your duty of protecting our health and our environment by denying this permit. Thank you for your consideration.

Sincerely,
Kim Steffan

Kim K. Steffan
Steffan & Associates, P.C.
Attorneys at Law
2411 Old NC 86

Hillsborough, NC 27278
Phone (919) 732-7300
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From: Cooper Harris
To: SVC_DENR.DAQ.publiccomments
Cc: cc: Lynden Harris; Bill Lonon; Deborah Lonon; Cooper Harris; Noah Cooper-Harris; Rob Bowers; Allan Parnell; Ann Moss Joyner; Richard Lonon; Xavier Monks-Corrigan; Christine Monks-Corrigan; John Corrigan
Subject: [External] Comments: Carolina Sunrock - Prospect Hill
Date: Wednesday, September 22, 2021 8:46:11 AM

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Dear members of the DAQ — Thank you for the virtual meeting; indeed it is unfortunate we were not able to gather in person given ~40% of Caswell residents don't have dependable internet (ours *just* came back on Tues at 9am). But we do appreciate you hearing us nonetheless!

I'd like to submit 3 comments, accompanied by requested actions.

Thank you for your sincere attention here.
Cooper

--

1. Comment: As stated earlier this evening in the hearing, the company (Sunrock) has planned multiple facilities within a very small geographic area. My understanding is that these sites were initially planned as a single facility, but this facility would have exceeded the requirements and limits mandated by you, the DAQ. Instead of merely following your guidelines, my understanding is that in order to skim below the minimums, the company divided the facility into multiple sites, so as to increase their allowed outputs and skirt your requirements.

Action Requested: please treat all company facilities in the area as it was originally intended — as one facility, and measure their output accordingly. I would urge that the DAQ combines the aggregate of the company's total pollutants in the area, and considers that aggregate when reviewing the permit. I assume one company is reaping the same monetary rewards of the combined facilities and therefore the combined pollutants from the split facilities should be treated as one as well.

2. Comment: DAQ denied the 2019 air permit application because NO₂ exceeded NAAQS limits.

Action Requested: Explain why the same level of nitrogen oxides (NO_x) is now acceptable.

3. Comment: The applicant is suing 55 neighbors when they exercised their right to object to a local permit that was issued by the county Planning Director. I know I speak for myself when I say this was a very intimidating/scary thing to hear. And in my opinion it has been wielded as an effective threat, having a chilling effect on people wanting to come forward and speak their concerns. I myself had a few neighbors express concerns to me re: speaking in front of you, the DAQ, tonight for fear of retribution. Further, the company has subpoenaed the volunteer admin of a list-serve that sends updates / info on the quarry proceedings. These neighbors have had to hire attorneys to defend themselves; something that they are not all in financial positions to do. Finally, it's been rumored that Sunrock has paid the neighbors surrounding their *current* facility to sign non-disclosure / confidentiality agreements (some neighbors have indicated they felt threatened into signing these), the outcome of which is that

these folks are not allowed to testify in our hearings nor speak about their experience with Sunrock. They now legally are prevented from sharing what it is actually like to live beside an operational Sunrock facility. Suing, subpoenaing, and legally putting what could be called "gag orders" on folks who reside beside their current facility — such practices are not what I would call neighborly. And – for me – these business practices start to raise a lot of questions.

Most pertinent to the DAQ's purview – since the company has decided to move forward with the suit – it only makes sense to delay the permit until the ruling for this suit is resolved (given the ruling itself will affect elements of the permit).

Action Requested: Delay DAQ decision on the air permit until after a court ruling in the lawsuit. If the applicant loses, our county's High Impact Development Ordinance (HIDO) will apply and will affect the location and configuration of the projects. New air permit applications will be required if they can meet the HIDO requirements.

Cooper Harris
Founder & CEO
www.Klickly.com
[LinkedIn](#) | [Wiki](#)
m: 919.619.3072

From: [Mark E. Barker](#)
To: [SVC_DENR.DAO.publiccomments](#)
Subject: [External] Carolina Sunrock - Prospect Hill Quarry and Distribution Center
Date: Wednesday, September 22, 2021 10:36:49 AM
Attachments: [20210923 BREDL CarolinaSunrock Prospect Hill.pdf](#)

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To Whom It May Concern:

Please find attached comments from the Blue Ridge Environmental Defense League regarding the proposed Carolina Sunrock – Prospect Hill Quarry and Distribution Center in Caswell County.

Mark

Mark E. Barker
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Blue Ridge Environmental Defense League

www.BREDL.org 1828 Brandon Ave. SW Roanoke, VA 24015 mebarker@cox.net (540) 342-5580

September 23, 2021

N.C. Division of Air Quality
450 West Hanes Mill Road, Suite 300
Winston-Salem, NC 27105
336-776-9800

Delivered via email

Email: DAQ_publiccomments@ncdenr.gov

Subject: Carolina Sunrock – Prospect Hill Quarry and Distribution Center

COMMENTS REGARDING CAROLINA SUNROCK LLC – PROSPECT HILL QUARRY AND DISTRIBUTION CENTER APPLICATION 1700017.21A DRAFT AIR PERMIT

To Whom It May Concern:

I am submitting comments on behalf of the Blue Ridge Environmental Defense League (BREDL), our Protect Caswell chapter and North Carolina members. Our chapter will submit additional comments.

Draft Permit must be denied

Revised air modeling analysis including cumulative impacts from the nearby already permitted Carolina Sunrock facility (Facility ID: 1700015) Air Permit number 10529R01 must be completed. Until the cumulative impacts are considered, this permit must be denied.

Request for extension of Public Comment Period

BREDL requests an extension of the Public Comment Period as stated in 15A NCAC 02Q .0307(d). Due to high interest in the Caswell County community for both Carolina Sunrock draft permits (Facility IDs: 1700016 and 1700017), there needs to be more time to allow impacted residents to review documents for both proposed sites. Scheduling the public hearings and comment periods on adjacent days may restrict some public participation.

Air Modeling must analyze cumulative impacts from nearby facility

On January 3, 2018, the NC DAQ granted Carolina Sunrock – Prospect Hill facility (Facility ID: 1700015) Air Permit number 10529R01. This permitted Prospect Hill facility is just over 3 miles [See Attachment 1] from the proposed Prospect Hill Quarry and Distribution Center (Facility ID: 1700017).

As part of the application process, Carolina Sunrock and NC DAQ provided air dispersion modeling for the proposed Prospect Hill Quarry and Distribution Center. However, this air modeling failed to analyze the cumulative impacts from both of these Carolina Sunrock facilities. In Richmond County, NC DAQ did include a nearby facility (Enviva) in its air modeling for the International Tie Disposal (ITD) facility. The ITD permit, just like this Carolina Sunrock draft permit, was a synthetic minor – PSD avoidance permit.

NC DAQ has been non-responsive to our inquiries/requests regarding the nearby facility 1700015 permit. BREDL has submitted two letters to NC DAQ on September 28, 2020 and November 30, 2020.

The current air modeling utilizes the adjusted friction velocity (ADJ_U*) option for low wind speed stable conditions. Since the previous air modeling did not use this ADJ_U* option, NC DAQ needs to provide an explanation for this change in modeling – especially since the same five-years of data were used.

- NC DAQ needs to explain why the ADJ_U* option was used in the current air modeling when it was not used in the previous air modeling.

It's interesting to note that in the previous air modeling, NC DAQ denied the permit – in part based on NO₂ Tier 1 modeling. For the current air modeling, Tier 2 was used. NC DAQ needs to provide an explanation as to why this change in modeling.

- NC DAQ needs to explain why a permit was denied based of NO₂ Tier 1 modeling in 2020, but NO₂ Tier 2 modeling was used in the current modeling.

The August 24, 2020 NC DAQ Air Modeling Review memo regarding the previous air modeling indicated that the background concentration for NO₂ is “about 60 ug/m³”¹. Now, a few months later, NC DAQ is stating that the background concentration for NO₂ is 15.3 ug/m³ using the 2015-2017 data. The NC DAQ 2015-2017 data indicates four NO₂ monitors² were in use (Forsyth, Lee, Mecklenburg and Wake) [See Attachment 2]. The Forsyth, Lee and Wake monitors are all identified as Urban location types on the NC Urban Toxics Network.³

The Lee County monitor concentration is roughly converted to 15.04 ug/m³. While the Forsyth and Wake monitors' concentrations are converted to 67.68 ug/m³. The Wake County monitor is over 13.5 miles closer to the Prospect Hill proposed facility [See Attachment 3] than the Lee County monitor which was used for the background concentration.

¹ North Carolina Division of Air Quality Memorandum, Criteria Pollutant Air Dispersion Modeling Analysis for Carolina Sunrock, LLC, Jones, August 24, 2020, p.2

² <https://deq.nc.gov/about/divisions/air-quality/air-quality-monitoring/historical-data-summaries/design-value-2#2015--2017>

³ <https://deq.nc.gov/about/divisions/air-quality/air-quality-data/urban-air-toxics-network>

Health Impacts

This proposed facility will emit several dozen harmful pollutants with varying health impacts. The following list details a few of these.

Formaldehyde

Formaldehyde is a colorless, flammable gas at room temperature. It has a pungent, distinct odor and may cause a burning sensation to the eyes, nose, and lungs at high concentrations. The breakdown products of formaldehyde in air include formic acid and carbon monoxide. The most common health symptoms include irritation of the eyes, nose, and throat, along with increased tearing, which occurs at air concentrations of about 0.4–3 parts per million (ppm). National Institute for Occupational Safety and Health (NIOSH) states that formaldehyde is immediately dangerous to life and health at 20 ppm. One large study of people with asthma found that they may be more sensitive to the effects of inhaled formaldehyde than other people.⁴

A recent media report⁵ details an Environmental Protection Agency (EPA) draft assessment from 2017 of formaldehyde that was suppressed by the previous Administration. The assessment found that the pollutant causes myeloid leukemia. The draft assessment concluded that 1 microgram of formaldehyde in a cubic meter of air increases the number of myeloid leukemia cases by roughly 3.5 in 100,000 people. That's more than three times the cancer risk in the assessment now in use.

Cadmium

Cadmium (as oxide, chloride, and sulfate) will exist in air as particles or vapors (from high temperature processes). It can be transported long distances in the atmosphere, where it will deposit (wet or dry) onto soils and water surfaces. Breathing air with lower levels of cadmium over long periods of time (for years) results in a build-up of cadmium in the kidney, and if sufficiently high, may result in kidney disease. The U.S. Department of Health and Human Services (DHHS) has determined that cadmium and cadmium compounds are known human carcinogens. The International Agency for Research on Cancer (IARC) has determined that cadmium is carcinogenic to humans. The EPA has determined that cadmium is a probable human carcinogen.⁶

Arsenic

Arsenic released from combustion processes is usually attached to very small particles. Arsenic contained in wind-borne soil is generally found in larger particles. These particles settle to the ground or are washed out of the air by rain. Arsenic that is attached to very small particles may stay in the air for many days and travel long distances. If you breathe high levels of inorganic arsenic, then you are likely to experience a sore throat and irritated lungs. You may also

⁴ <https://www.atsdr.cdc.gov/ToxProfiles/tp111-c1-b.pdf>

⁵ <https://theintercept.com/2021/08/19/formaldehyde-leukemia-epa-trump-suppressed/>

⁶ <https://www.atsdr.cdc.gov/PHS/PHS.asp?id=46&tid=15>

develop some of the skin effects mentioned above. The exposure level that produces these effects is uncertain, but it is probably above 100 micrograms of arsenic per cubic meter ($\mu\text{g}/\text{m}^3$) for a brief exposure. Longer exposure at lower concentrations can lead to skin effects, and also to circulatory and peripheral nervous disorders.⁷

Benzene

Benzene reacts with other chemicals in the air and breaks down within a few days. Benzene in the air can attach to rain or snow and be carried back down to the ground. It breaks down more slowly in water and soil, and can pass through the soil into underground water. Breathing very high levels of benzene can result in death, while high levels can cause drowsiness, dizziness, rapid heart rate, headaches, tremors, confusion, and unconsciousness. Eating or drinking foods containing high levels of benzene can cause vomiting, irritation of the stomach, dizziness, sleepiness, convulsions, rapid heart rate, and death. The major effect of benzene from long-term exposure is on the blood. Benzene causes harmful effects on the bone marrow and can cause a decrease in red blood cells leading to anemia. It can also cause excessive bleeding and can affect the immune system, increasing the chance for infection. Long-term exposure to high levels of benzene in the air can cause leukemia, particularly acute myelogenous leukemia, often referred to as AML. This is a cancer of the bloodforming organs. The Department of Health and Human Services (DHHS) has determined that benzene is a known carcinogen. The International Agency for Research on Cancer (IARC) and the EPA have determined that benzene is carcinogenic to humans.⁸

Mercury

Mercury combines with other elements, such as chlorine, sulfur, or oxygen, to form inorganic mercury compounds or "salts," which are usually white powders or crystals. Mercury also combines with carbon to make organic mercury compounds. The nervous system is very sensitive to all forms of mercury. Methylmercury and metallic mercury vapors are more harmful than other forms, because more mercury in these forms reaches the brain. Exposure to high levels of metallic, inorganic, or organic mercury can permanently damage the brain, kidneys, and developing fetus. Effects on brain functioning may result in irritability, shyness, tremors, changes in vision or hearing, and memory problems. Short-term exposure to high levels of metallic mercury vapors may cause effects including lung damage, nausea, vomiting, diarrhea, increases in blood pressure or heart rate, skin rashes, and eye irritation. The EPA has determined that mercuric chloride and methylmercury are possible human carcinogens.⁹

Nickel

Nickel can combine with other elements such as chlorine, sulfur, and oxygen to form nickel compounds. Many nickel compounds dissolve fairly easy in water and have a green color. Nickel and its compounds have no characteristic odor or taste. In the air, it attaches to small particles of dust that settle to the ground or are taken out of the air in rain or snow; this usually takes

⁷ <https://www.atsdr.cdc.gov/ToxProfiles/tp.asp?id=22&tid=3>

⁸ <https://www.atsdr.cdc.gov/toxfaqs/TF.asp?id=38&tid=14>

⁹ <https://www.atsdr.cdc.gov/toxfaqs/TF.asp?id=113&tid=24>

many days. The most common harmful health effect of nickel in humans is an allergic reaction. Approximately 10-20% of the population is sensitive to nickel. People can become sensitive to nickel when jewelry or other things containing it are in direct contact with the skin for a long time. Once a person is sensitized to nickel, further contact with the metal may produce a reaction. Some people who are sensitive to nickel have asthma attacks following exposure to nickel. Some sensitized people react when they consume food or water containing nickel or breathe dust containing it.

NO_x

Health Impacts from NO_x include inflammation of the airways and an increase in heart attack risk. Long term exposure increases the risk of respiratory conditions, can decrease lung function, and increases the response to allergens. Long-term exposure to traffic-related nitrogen dioxide (NO₂) and nitrogen oxides (NO_x) may contribute to the development of COPD with possibly enhanced susceptibility in people with diabetes and asthma.

VOCs

There are various health impacts from volatile organic compounds. Short-term exposure to VOCs may cause irritation of the eyes and respiratory tract, headaches, dizziness, visual disorders and memory problems. Long-term exposure to VOCs may cause irritation of the eyes, nose, and throat, nausea, fatigue, cancer, loss of coordination, damage to the liver and kidneys and damage to the central nervous system.

PM 2.5

Health impacts from Particulate Matter include increased hospital admissions, aggravated asthma, increases in respiratory symptoms (coughing, difficult/painful breathing), chronic bronchitis, decreased lung function, premature death, increases dementia risk, increases risks for heart attacks, heart disease, strokes, and increases premature births. Lung cancer rose by 18% for every increase of 5 ug/m³ in PM 2.5. PM 2.5 causes about 200,000 early deaths each year. Reducing particulates has added 5 months to urban life expectancy.

SO₂

Sulfur dioxide irritates the skin and mucous membranes of the eyes, nose, throat, and lungs. Short-term exposures to SO₂ can harm the human respiratory system and make breathing difficult. Symptoms can include pain when taking a deep breath, coughing, throat irritation, and breathing difficulties. People with asthma, especially children, can suffer effects.

Applicant's attempt to curtail public participation

We want to make part of the public record the applicant's attempt to curtail public participation prior to the official public commenting period. Several subpoenas have been served to dozens of residents along with community groups. In addition, these citizens have had to answer intrusive legal interrogatories and some are having to deliver depositions. To

date, neither BREDL nor our chapter Protect Caswell has appealed local Caswell County decisions through the local governmental process or court system. Yet, BREDL has been served with 3 separate subpoenas related to individuals' or other organizations' actions regarding the proposed Burlington North and Prospect Hill Quarry facilities. The applicant has sued at least 55 residents who chose to appeal a local watershed review board's decision on Watershed Protection and Special Non-residential Intensity Allocation (SNIA) permits. The resident's appeal was an administrative appeal within the county government. However, the applicant chose to take these community members to Superior Court instead of letting the local appeal process conclude. To date, Caswell County has not scheduled a date to hear these residents' appeals.

Public comments, meetings and hearings are an integral part of our free society and a huge part of our Constitutional rights. There are still many countries in the world where these activities are not granted. Federal, state and local statutes govern these public participation opportunities ensuring that we as citizens have our chance to speak out in favor or opposition to various proposals and projects, or simply to share our thoughts on an issue. It's just one of many things that make this country great. Any attempt to curtail these rights should not be taken lightly. Residents should not feel intimidated about participating in the permitting process.

Carolina Sunrock actions have included

- September 11, 2020: Files Administrative Appeal on NC DAQ permits denial decisions - Carolina Sunrock v. NC DEQ, DAQ Administrative Hearings case. Heard in January 2021, working on negotiations end of February 2021. Instead of appealing further, in March, Carolina Sunrock asked for the case to be dismissed and decided to resubmit their applications.
- November 2020: Began subpoenaing citizens regarding Carolina Sunrock v. NC DEQ, DAQ Administrative Hearings case. They requested correspondence that could have been easily obtained via FOIA to NC DEQ – correspondence between the individuals and NC DEQ. BREDL also received a subpoena in this case that BREDL is not involved in. BREDL responded mid-November.
- April 22, 2021: Sues 55 citizens in Superior Court for using their U.S. First Amendment and NC administrative rights in appealing county permitting decisions to the County Watershed Review Board.
- April 2021: Carolina Sunrock sends letter to Caswell County requesting the County send them any correspondence between the County and Protect Caswell and any of the 55 defendants.
- May 5, 2021: Requests info from BREDL – seeking correspondence between BREDL and DEQ and Caswell County. A case that BREDL is not involved in. BREDL responded on May 27, 2021.
- July 30, 2021: Subpoena for info regarding Foust/Shoffner/NAACP administrative hearing case against NC DEQ, DWR. A case that BREDL is not involved in. Commanded to produce, permit inspection and copying of communications between said individuals.

In addition, residents who have corresponded with Caswell County officials receive a note such as this:

**** Please note, as part of a standing public records request, Bill Brian of Morningstar Law Group (currently representing Carolina Sunrock) is copied on this email.**

The above is another example of how local citizens, even those not involved with the company's lawsuit, can feel intimidated thus reducing public participation.

Draft Permit

Condition A.11B.i and ii (page 8) limitations are unclear with regards to the referenced statute 15A NCAC 2D .0524/ 40 CFR Part 60 . Clarification is needed as to how the specific limits were derived from statutes.

Unsure why Condition A.13.b.i is listed in the permit when this affected facility will have commenced after April 22, 2008. Including A.13.b.i. limit only serves to add confusion in the permit for the applicable limits. Only A.13.b.ii should be included in the permit.

Per Draft Permit condition A.21, the applicant cannot begin construction or operation until all local permissions have been granted. There are several local permits that are in question. Several residents appealed the Caswell County Watershed Review Board's decisions in January to approve the Watershed Protection and Special Non-residential Intensity Allocation (SNIA) permits. However, the county has not set a hearing date on these appeals. In addition, the applicant has sued these residents in Superior Court. There is no court date set for that hearing. In addition, there may be future zoning requirements which may affect this facility. NC DAQ must stay informed on these issues and not allow the applicant to violate this condition of the permit. The applicant cannot begin construction or operation until these hearings have been held. The upcoming decisions from those hearings significantly affect this facility.

EPA Review of Synthetic Minor Permit

On July 8, EPA Office of Inspector General (OIG) released a report¹⁰ outlining details of their "audit to determine whether EPA and state and local agencies provide sufficient oversight to assure that synthetic-minor sources of air emissions comply with the limits in their air permits."

As mentioned in the OIG report accompanying "At a Glance" document, synthetic-minor facilities agree to permit restrictions in order to reduce their emissions below major-source thresholds thus avoiding more stringent permitting and compliance requirements.

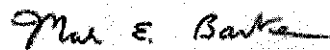
¹⁰ EPA Should Conduct More Oversight of Synthetic-Minor-Source Permitting to Assure Permits Adhere to EPA Guidance, Report # 21-P-0175, July 8, 2021, EPA, <https://www.epa.gov/office-inspector-general/report-epa-should-conduct-more-oversight-synthetic-minor-source-permitting>

The OIG reviewed 16 permits and found that nearly 1 in 5 permit limits did not have sufficient information within the permit to determine whether the limits were technically accurate. Of those limits, over 1 in 10 did not have sufficient monitoring requirements to determine whether the facility's assumed pollution reduction was being achieved. As the OIG document pointed out, "This could result in a synthetic-minor facility emitting pollutants at or above major-source levels without being detected."

In lieu of this EPA OIG report, we will request that EPA review this permit to ensure that it is technically accurate with regards to limits and monitoring requirements.

Thank you for this opportunity to comment.

Respectfully submitted,



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(540) 342-5580 (home/office)
(540) 525-5241 (cell)
mebarker@cox.net
mbarker@bredl.org

Attachment 1



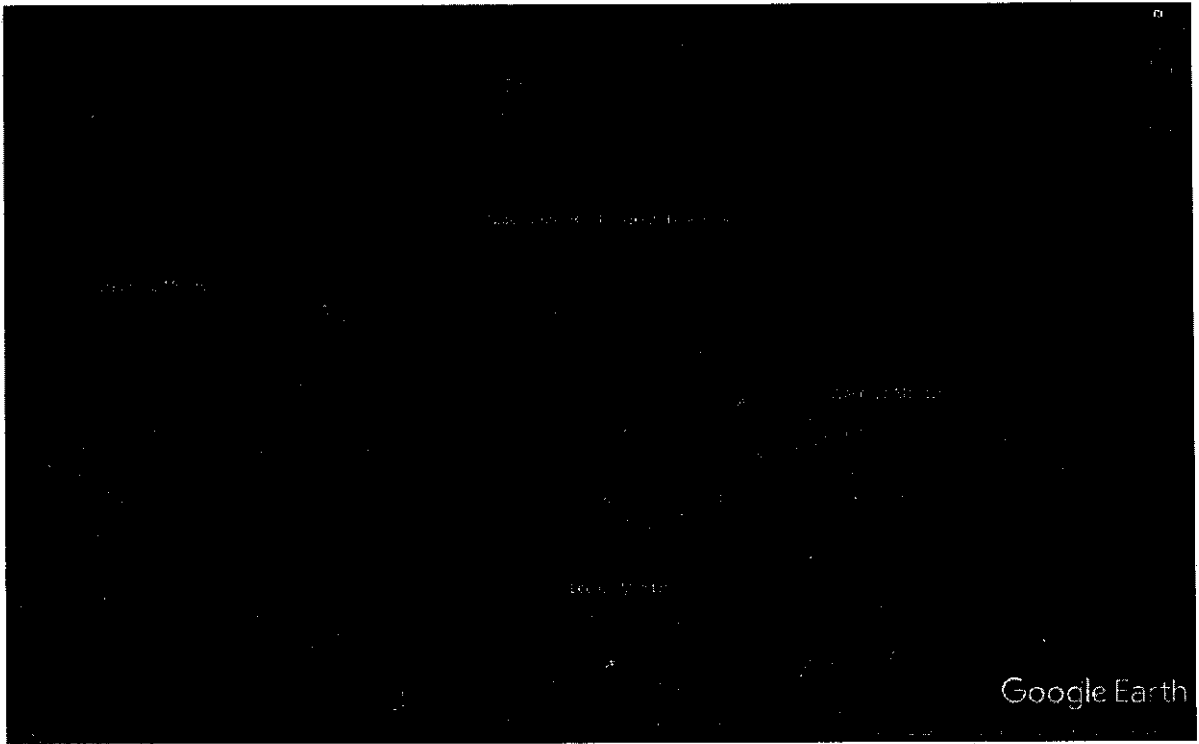
Attachment 2

North Carolina NO² Monitors in use during 2015-2017

County	Average 98th Percentile	Site Name	Arithmetic Mean	Site Name
Forsyth	36 ppb ^[a]	Hattie Avenue ^[1]	7 ppb	Hattie Avenue ^[1]
Lee	8 ppb ^[a]	Blackstone ^[2]	1 ppb	Blackstone ^[2]
Mecklenburg	39 ppb	Remount Road ^[1]	11 ppb	Remount Road ^{[1][*]}
Wake	36 ppb	Millbrook ^[1]	9 ppb	Triple Oak ^[1]

Source: <https://deq.nc.gov/about/divisions/air-quality/air-quality-monitoring/historical-data-summaries/design-value-2#2015---2017>

Attachment 3



From: [Leslie Zimmerman](#)
To: [SVC_DENR.DAQ.publiccomments](#)
Subject: [External] sunrock, Prospect Hill
Date: Wednesday, September 22, 2021 11:58:57 AM
Attachments: [Goggle Map Health Center 9-21.png](#)
[Goggle Map Schools East 9-21.png](#)
[Goggle Map Schools west 9-21.png](#)
[Goggle Map Churches west 9-21.png](#)
[Map Developers Distance DAO 9-21.png](#)
[Goggle Map Churches East 9-21.png](#)
[Mine Map Inconsistency DAO 9-21.png](#)
[Goggle Map Churches South 9-21.png](#)
[GIS w roads DAO 9-21.png](#)
[GIS wout road DAO 9-21.png](#)
[DAQ 9 21 2021.pdf](#)
[Carolina Sunrock Pg 9 2 Construction Application \(2021-06-29, updated modeling\).pdf](#)
[Carolina Sunrock Pg 11 2 Construction Application \(2021-06-29, updated modeling\).pdf](#)

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Attached please find my comments and back up (13 attachments). These are different from the one I made last night.

Leslie Zimmerman



[Caswell Local Foods Council, Inc](#)



Leslie Zimmerman, 732 Solomon Road, Leasburg, I represent myself.

The Air Quality Permit Application maps submitted in Carolina Sunrock Prospect Hill 2 Construction 2021-6-29 Updated Modeling ~~are not consistent~~ do not appear to match the maps submitted for the mining application that are available online at:

<https://deq.nc.gov/about/divisions/energy-mineral-land-resources/energy-mineral-land-permits/mining-program#carolina-sunrock-llc>
Prospect Hill Quarry and Distribution Center - Mine Maps and S&E Plan

See attachment Mine Map Inconsistency DAQ 9-21

Figure 4-1. Map of Area Surrounding Carolina Sunrock (Carolina Sunrock Prospect Hill 2 Construction 2021-6-29 Updated Modeling) shows some but not all the churches. It also does not include schools or health centers. See attached Google map screenshots.

The map is so small you don't see that the property is up against the South Hyco Creek and Lake Roxboro.

Please see attached GIS maps. (<https://www.webgis.net/nc/caswell/>)

The northeastern corner of the modeling map sits 882 feet from Lake Roxboro, a recreational lake and the secondary reservoir for the city of Roxboro.

https://www.mapdevelopers.com/distance_finder.php?polylines=%5B%5B%5B%5B36.31094834868407%2C-79.15575906457185%5D%2C%5B36.311155532558175%2C-79.15277404015838%5D%2C%5B36.311151209840276%2C-79.15277404015838%5D%5D%2C%22%23000000%22%5D%5D

The maps used for the Air Quality application and the maps being used for the mining application do not appear to be the same.

DEQ and DAQ should require all maps, site plans to be consistent in the Air Quality Permit Application and the Mining Permit Application.



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Community Health Center

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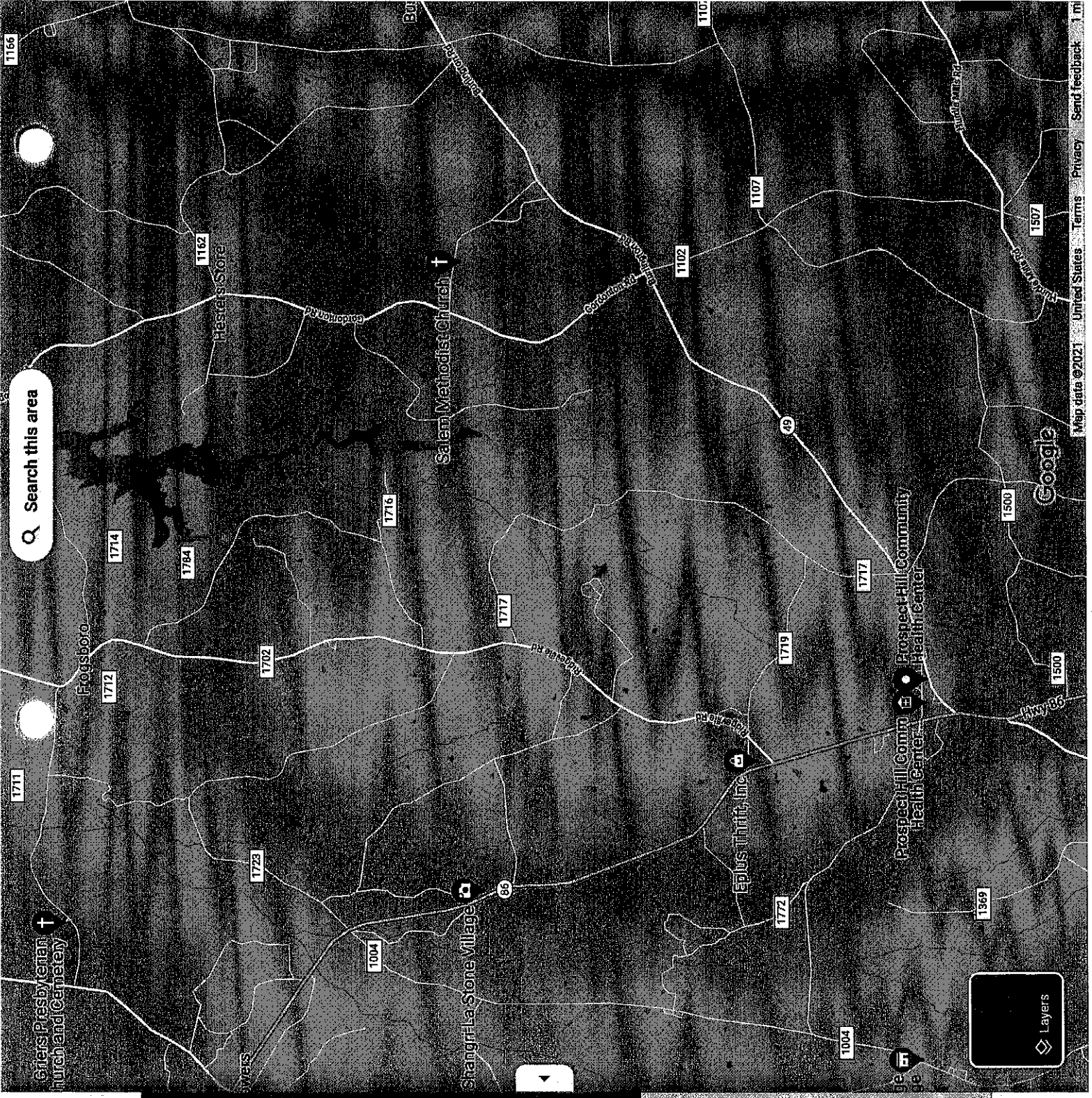
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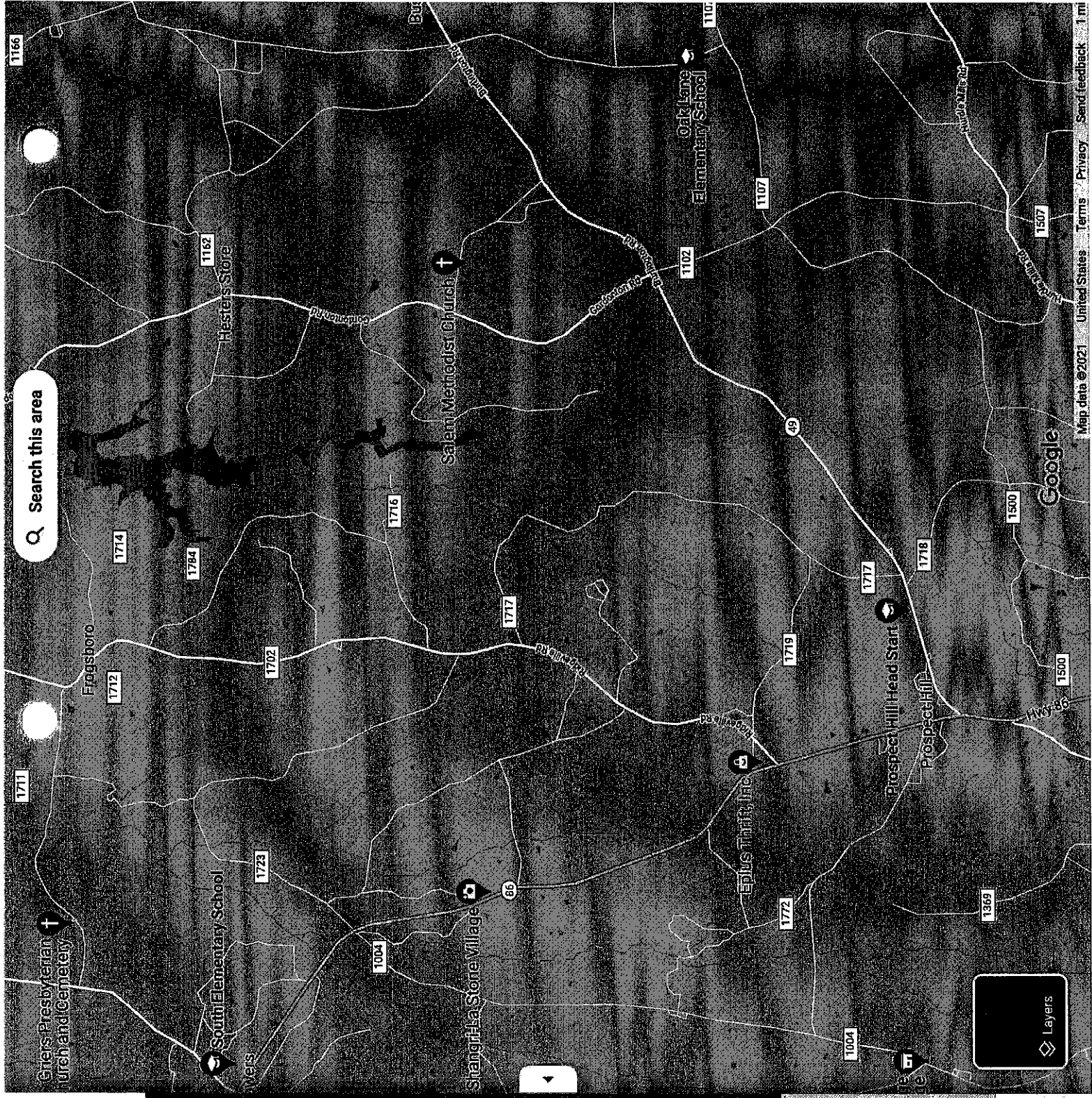


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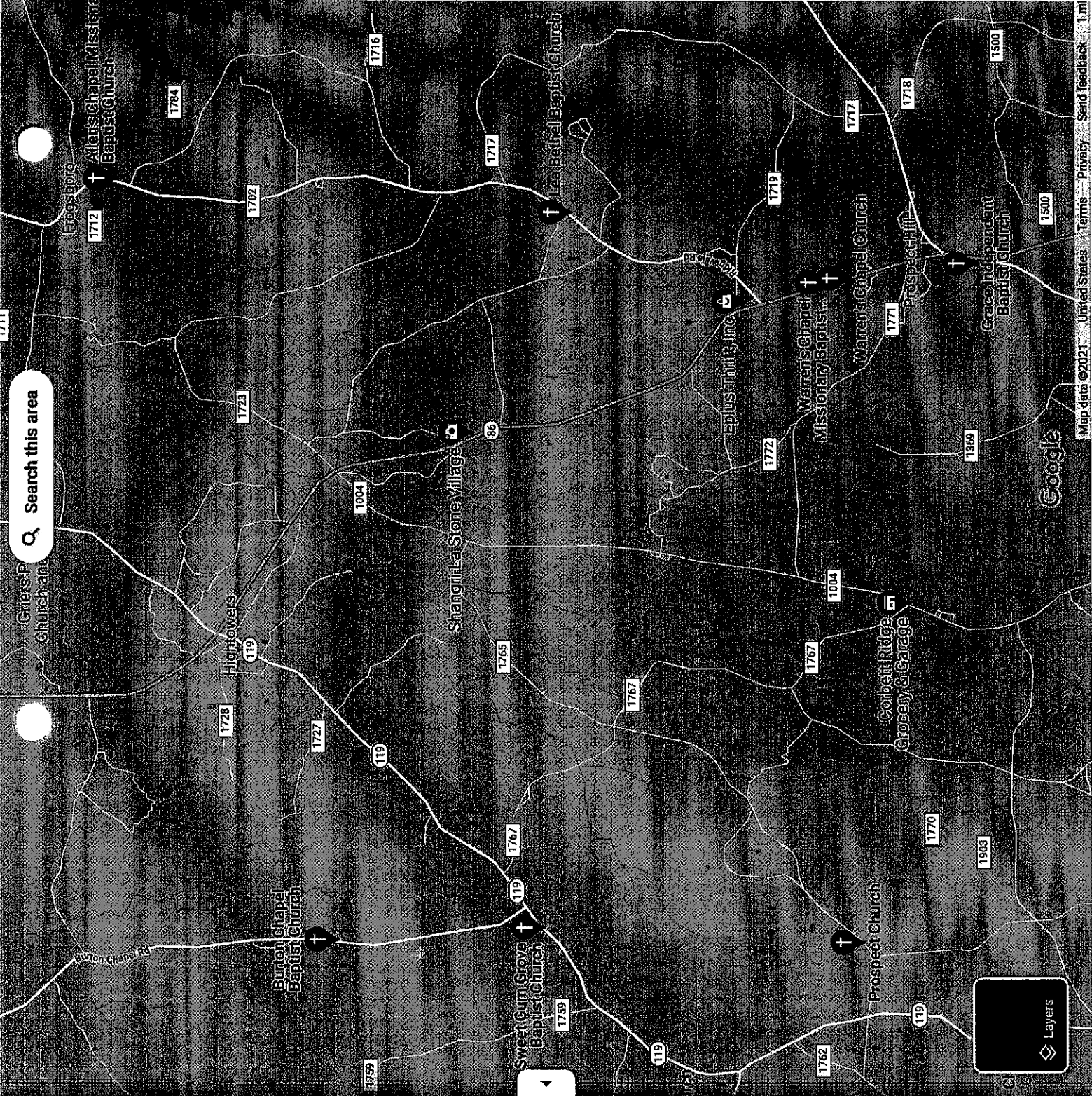
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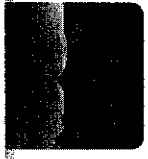


Chicken See locations

christ See locations

of christ

Chicken North Roxboro Street, Durham, NC



Baptist Church

2777 Burton Chapel



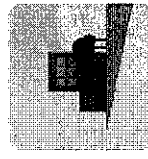
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2) 2922 NC-86



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1820 Ridgeville Rd



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church · 933 Salem



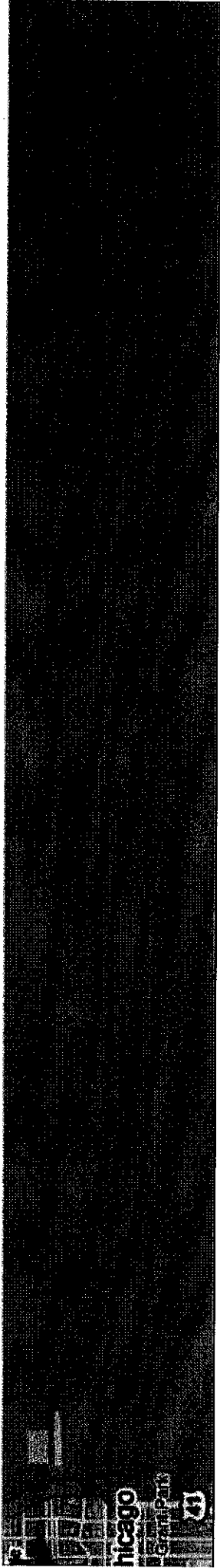
el Church

1468 NC-86

20

when map moves





200 henry daniels road

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Zoom to Address

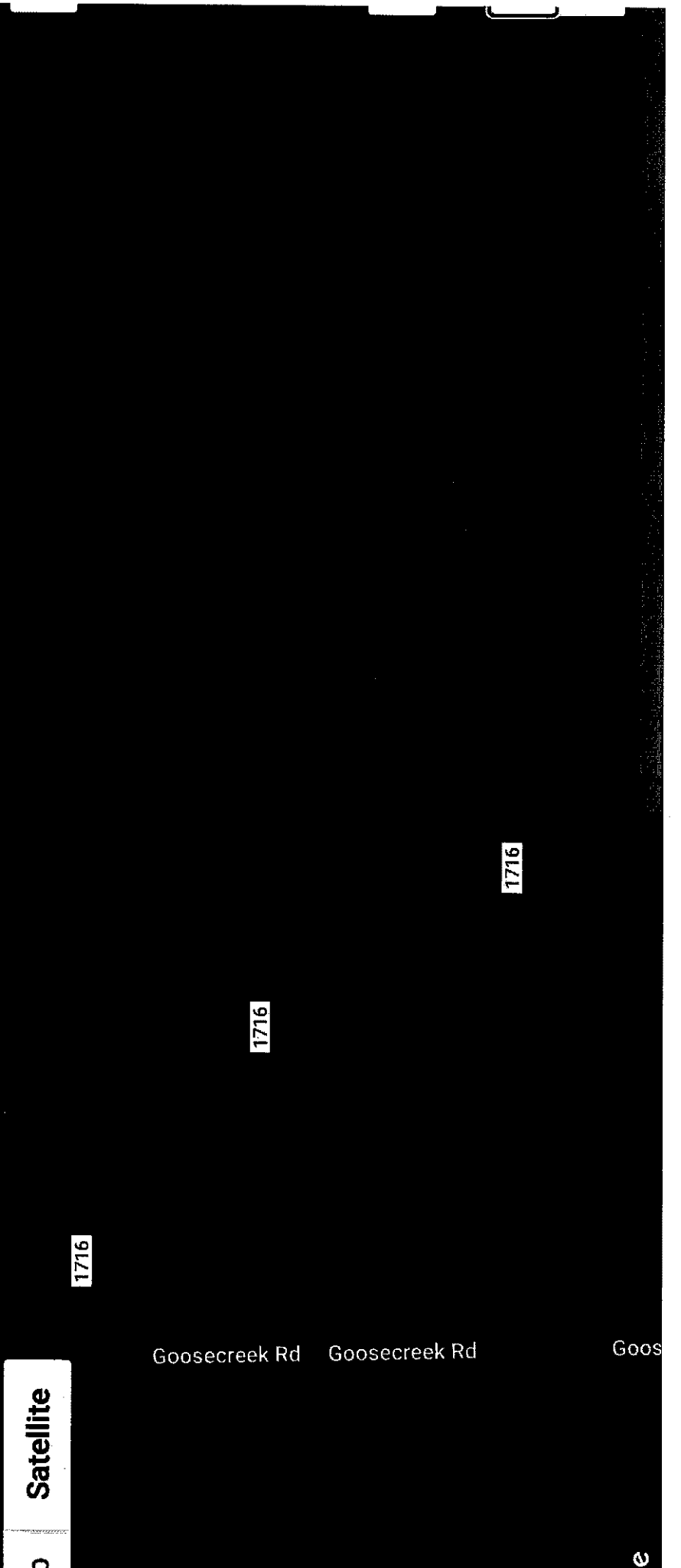
Draw New Line

Remove Last Point

Remove Active Line

Shrink Map

Section Distance 269 meters , 882 feet 0.167 miles 0.269 km



Satellite

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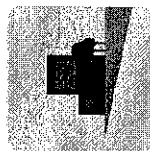
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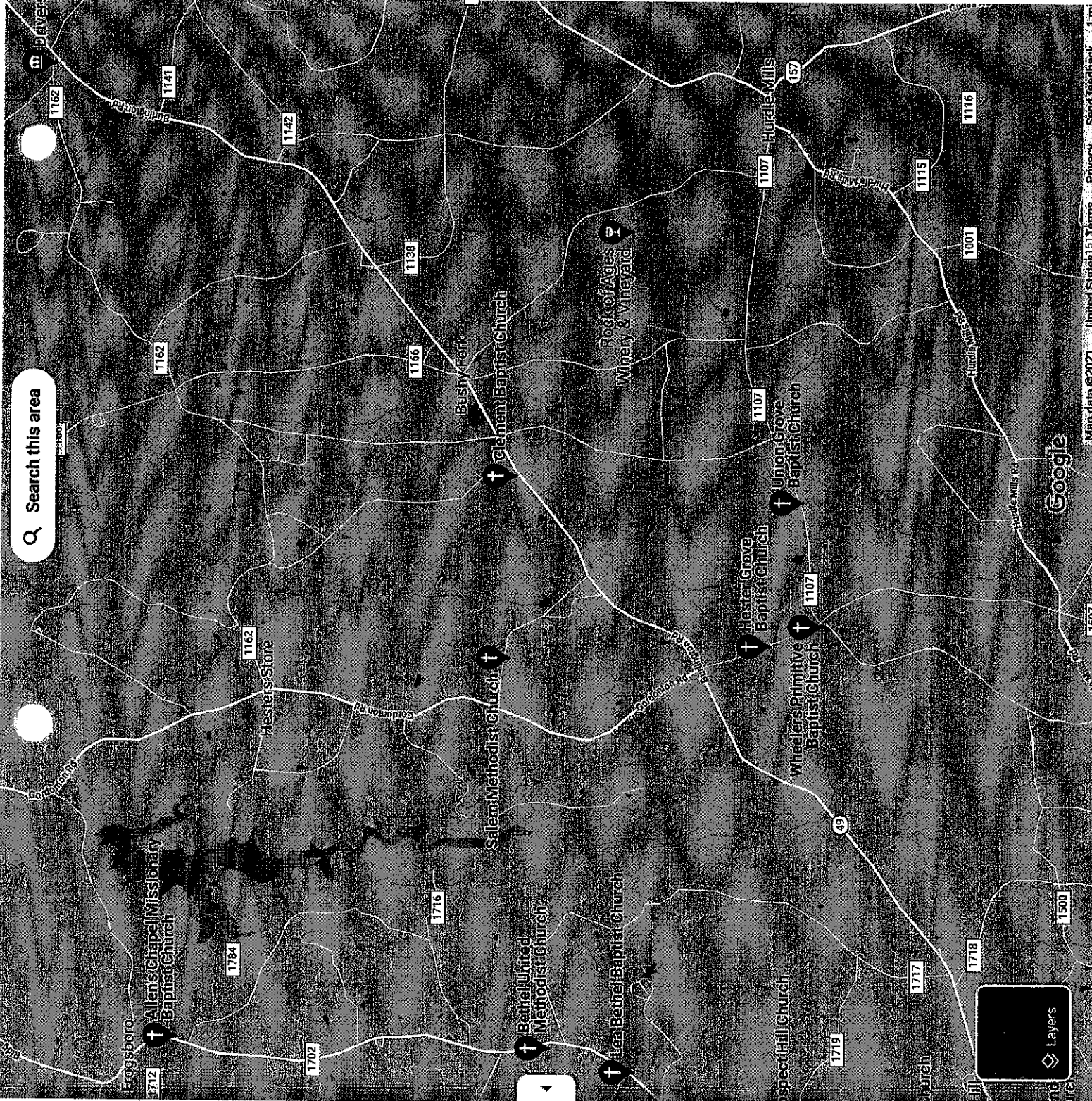


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when map moves



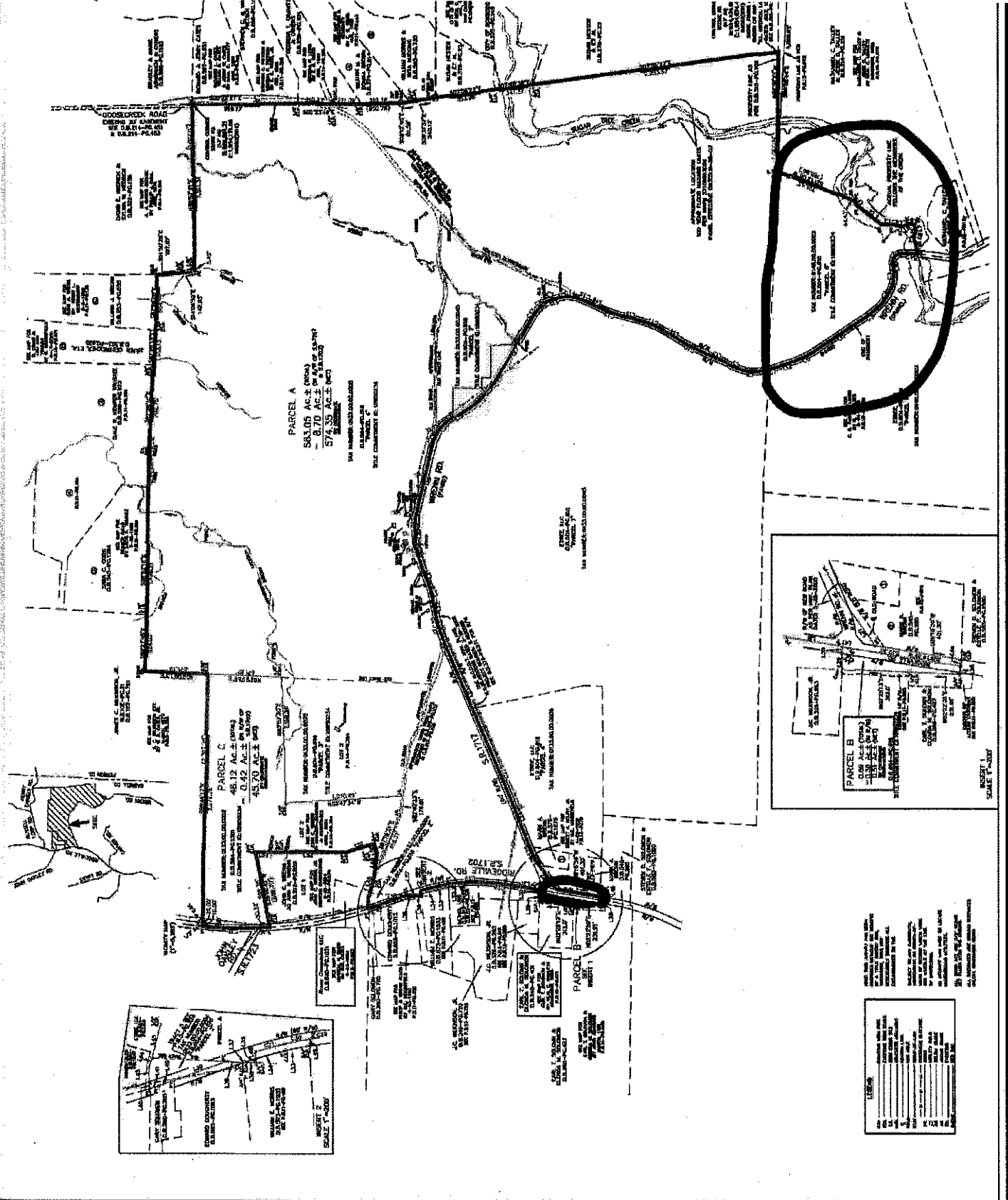
Search this area



Layers

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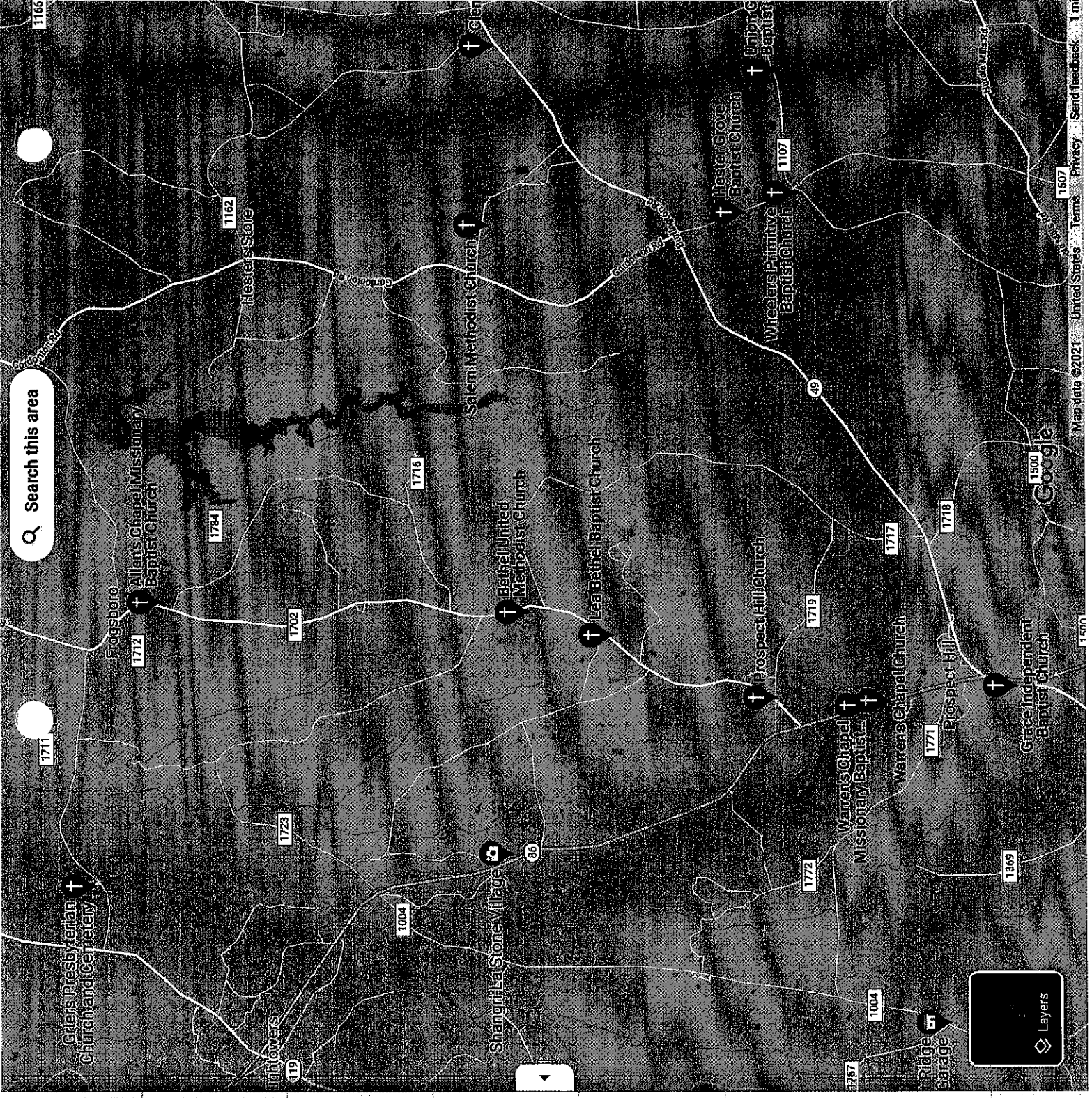






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GOOSE CREEK RD

CACTUS DR

WREN RD

CARVER RD

RIDGEVILLE RD

WAKLEY RD

EGYPT RD

PAINTER RD

NC 66 HWY S

MUDDER RD

BARNWELL RD

DOGWOOD TR

NC OLD 66 S

JIMMYS DR

DAVE SMITH RD

CORBELL







file

Joining Parcels

Layers by Buffer

Parcels

Unhighlight Highlight Clear

Print to KML Export to SHP

Parcel: 0133 005
Value: 0133.00.00.0005.0000
Owner: E LLC

Address: NC 27216
WRENN RD
ROSPECT HILL
300
04 Pg: 816
Area: 488.71
Block: 315 Pg: 96
Parcel ID: d

(right-click to copy)
File Maps

Location: at point: N: 928991, E: 1950813

Parcels: TOWERS
Commissioners Districts
Location Districts 2

Map ID: N: 934024, E: 1943820



From: [Scott Martino](#)
To: [SVC_DENR.DAO.publiccomments](#)
Cc: [Scott Martino](#)
Subject: [External] Carolina Sunrock – Prospect Hill Quarry and Distribution Center
Date: Wednesday, September 22, 2021 12:05:04 PM
Attachments: [Carolina Sunrock Prospect Hill Quarry and Distribution Center draft permit coments 09-22-2021.pdf](#)

CAUTION: External email. Do not click links or open attachments unless you verify. Send all suspicious email as an attachment to Report Spam.

Please Find the attached comments on behalf of Carolina Sunrock in regards to the draft permit for our proposed facility.

Thankyou

Scott Martino

Scott Martino

Environmental Compliance Manager/Mine Engineer
Carolina Sunrock
200 Horizon Drive Suite 100
Raleigh, NC 27615
Office Phone:(919) 7476336 Cell (984) 202-4761



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SUNROCK®
CAROLINA SUNROCK LLC

Galen Boerema
Executive Vice President and General Counsel
200 Horizon Drive, Suite 100
Raleigh, NC 27615

September 22, 2021

Submitted via email at: DAQ.publiccomments@ncdenr.gov

Mr. Michael Koerschner
North Carolina Department of Environmental Quality
Division of Air Quality
1641 Mail Service Center
Raleigh, NC 27669-1641

**Re: Carolina Sunrock LLC Comments to Draft Permit, Air Permit No. 10694R00,
Facility ID #1700017 located in Prospect Hill, Caswell County, North Carolina**

Dear Mr. Koerschner:

Carolina Sunrock LLC (Sunrock) appreciates the opportunity to submit comments on the North Carolina Department of Environmental Quality (DEQ), Division of Air Quality (DAQ)'s proposed Air Permit No. 10694R00 for the Prospect Hill Quarry and Distribution Center, Facility ID #1700017 (Proposed Air Permit) located in Prospect Hill, North Carolina.

EXECUTIVE SUMMARY

Carolina Sunrock appreciates the collaboration, time, and expertise provided by the North Carolina Division of Air Quality (DAQ) in developing the Proposed Air Permit. Moreover, Carolina Sunrock appreciates the DAQ's recommended approval of Permit 10694R00. Carolina Sunrock's comments include permit term wording clarifications, testing clarifications, toxic air pollutant source description and limit corrections, zoning condition deletion, and reporting frequency revisions.

In accordance with the public notice for the Prospect Hill Quarry and Distribution Center, the following comments are submitted for the referenced Draft Permit. Please consider that any comments that have been submitted for the Draft Permit also apply to the DAQ Air Permit Review document, as applicable.

Comment No. 1 - Permit Condition No. A.3.

The last sentence of this condition contains the following – ***"Placement of the emission sources, configuration of the emission points, and operation of the sources shall be in accordance with the submitted sitewide NAAQS dispersion modeling analysis and should reflect any changes from the original analysis submittal as outlined in the AQAB review memo."***

Carolina Sunrock requests that the phrase ***"and should reflect any changes to the original analysis submittal as outlined in the AQAB review memo."*** be removed from the permit as



CAROLINA SUNROCK LLC

the revisions themselves rather than DAQ's comments on the revisions should be used. Accordingly, the condition should be revised to: "Placement of the emission sources, configuration of the emission points, and operation of the sources shall be in accordance with the submitted sitewide NAAQS dispersion modeling analysis, including Permittee's revisions to the original analysis submittal."

Comment No. 2 – Permit Condition No. A.11.

Carolina Sunrock requests that the words "filterable" and "(Method 5)" be added to Permit Condition No. A.11.b.i. as follows: "contain filterable particulate matter (Method 5) in excess of 90 mg/dscm (0.04 gr/dscf); or". 40 CFR 60, Subpart I only regulates filterable particulate matter.

Comment No. 3 – Permit Condition No. A.13.

Carolina Sunrock does not have any "wet material processing operations" as defined within 40 CFR 60, Subpart 000. As such and to simplify issues and to remove confusing permit language, we suggest that all references to "wet material processing operations" be removed from the permit.

Comment No. 4 – Permit Condition No. A.16.

The table in this permit condition implies that testing for NSPS (Subpart I) must include Test Methods 5 and 202. As stated in Comment No. 2 above, Subpart I only has emission limits for filterable particulate matter which is only Method 5. We request that DAQ modify the table to correct this implied error.

Comment No. 5 – Permit Condition No. A.16.

Condition No. 16.d. requires a 30 day written notice of the test date as required by NSPS, Subpart A. The NC DAQ Rule 15A NCAC 02D .2602 requires a 15 day notice. As the NSPS has been accepted into the NC SIP and regulations, we request that DAQ amend this requirement to 15 days to be consistent with the DAQ testing rules. We see no need for a 30 day written notice where, in all other testing situations, DAQ allows a 15 day notice.

Comment No. 6 – Permit Condition No. A.16.

Condition No. 16.e. requires testing for each fuel. Carolina Sunrock requests that this permit condition be amended consistent with Permit Condition Nos. A.14.f. and g. of the Draft Burlington North permit for the asphalt permit with the same fuels. Even though we are permitting multiple fuels, a change of fuel requires a change of burner, which will not occur on a regular or periodic basis. Furthermore, the fuels have a minor effect on the particulate emissions from the asphalt plant as reflected in the table below which provides the combined uncontrolled particulate emissions from the drum dryer and each fuel. Based on the data in the table, it is evident that the operation of the drum dryer is the principal source of particulate emissions and not fuel combustion itself.

Fuel Source	Uncontrolled PM Emission Rate (lb/hr)*
Natural Gas	8002
Propane (assumed equivalent to natural gas)	8002
No. 2 Fuel Oil	8002

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No. 4 Fuel Oil	8002
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* PM emissions based on NCDEQ Asphalt Emissions Calculator Revision F 07/18/2012

Comment No. 7 – Permit Condition No. A.18.

Carolina Sunrock requests that the toxic air pollutant table in the draft permit be corrected according to the table below, as these corrections align with the permit application submittal, air dispersion modeling analysis, and Draft Burlington North Permit (which has the same proposed toxic air pollutant limits as Prospect Hill Quarry and Distribution Center).

Affected Source(s)	Toxic Air Pollutant	Correction
Natural Gas/No. 2 fuel oil-fired Asphalt Cement Heater (1.2 MMBtu/hr maximum heat input capacity) (ES-ACH-1)	Formaldehyde 2.83E-04 lb/hr	Correct limit to 4.11E-04 lb/hr
	Nickel Metal 8.67E-05 lb/yr	Correct limit and units to 8.64E-05 lb/day
	Benzene 2.15E-02 lb/yr	Correct limit to 2.06E-01 lb/yr
Natural Gas/No. 2 fuel oil-fired Asphalt Cement Heater (1.1 MMBtu/hr maximum heat input capacity) (ES-ACH-2)	Formaldehyde 2.59E-04 lb/hr	Correct limit to 3.77E-04 lb/hr
	Benzene 1.97E-02 lb/yr	Correct limit to 1.89E-01 lb/yr
Hot Mix Asphalt Storage Silo (150 tons Maximum Capacity) (HMA-Silo1)		Correct source description to include all Five Storage Silos (HMA-Silo1 through HMA-Silo5)
Asphalt Loadout Operation Silo 1 (HMA-LO1)		Correct source description to include all Five Loadout Silos (HMA-LO1 through HMA-LO5)

Comment No. 8 – Permit Condition No. A.21.

Carolina Sunrock requests that this permit condition be removed from the permit. The requirements in 15A NCAC 2Q .0304, including those related to zoning, merely specify the material to be included in the permit application and have already been satisfied by Carolina Sunrock. There is no basis to include an application condition that has already been met as an ongoing condition of the permit. Further, this condition is atypical for synthetic minor asphalt plants such as Sunrock, as is evident by reference to the following permits issued within the past three months for similar facilities, none of which include an equivalent provision: (i) Permit No. 05428R16 issued September 3, 2021 to Maymead Materials; (ii) Permit No. 02676R21 issued August 19, 2021 to Barnhill Contracting Company; (iii) Permit No. 01406R15 issued August 27, 2021 to APAC-Atlantic. The inclusion of this provision in the final permit would both exceed the agency's authority and be arbitrary and capricious.

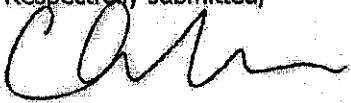
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CAROLINA SUNROCK LLC

Comment No. 9 – Permit Condition No. A.22.

Condition A.22.d. requires quarterly reporting. Carolina Sunrock requests that this be changed to semiannual reporting. As currently written, this permit requires more stringent reporting than a Title V permit. DAQ has deemed semiannual reporting appropriate for major facilities, and there is no legitimate reason to impose a more stringent reporting standard against Carolina Sunrock as a synthetic minor facility.

Carolina Sunrock looks forward to continuing its on-going dialogue with North Carolina DAQ on the issuance of air permits in the State of North Carolina. It is Carolina Sunrock's desire that DAQ issue the air permit to Carolina Sunrock to construct and operate the Prospect Hill Quarry and Distribution Center in a manner that protects North Carolina's residents.

Respectfully submitted,



Galen Boerema
Executive Vice President and General Counsel

Cc:

From: Mark Zimmerman
To: SVC_DENR.DAO.publiccomments
Subject: [External] Carolina Sunrock Prospect Hill Quarry and Distribution Center
Date: Wednesday, September 22, 2021 12:51:51 PM

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I have two comments regarding the application:

First, the air quality permit is premature. It should only be considered after resolving the mining permit. This application is for the combined operations of the asphalt and concrete plants and the quarry. Until the mining application is resolved, the mine's operations and configuration have not been finalized. The air quality permit should be issued using the actual mine parameters. There is no way at this time to know what they are since the mining permit is still open. Therefore, consideration of this application should be held until the mine's are established.

Second, the applicant should be required to test for odorous emissions in addition to toxic emissions. The draft permit does require the applicant to test air quality periodically to ensure that toxic emissions standards are below the limits included in the permit. No such similar testing requirement is placed on the applicant for the odorous emissions of the operation which may not extend beyond the facility's boundary. The draft permit requires that the facility "shall not operate" if objectionable odors are detectable beyond the boundary:

20. CONTROL AND PROHIBITION OF ODOROUS EMISSIONS - As required by 15A NCAC 2D .1806 "Control and Prohibition of Odorous Emissions" the Permittee shall not operate the facility without implementing management practices or installing and operating odor control equipment sufficient to prevent odorous emissions from the facility from causing or contributing to objectionable odors beyond the facility's boundary.

This requests that the applicant be required to periodically test for known odorous compounds.

This is particularly important for this facility, since it directly abuts a publicly owned recreational facility (§ 74-51.(d)(5) "That the operation will have a significantly adverse effect on the purposes of a publicly owned park, forest or recreation area;") This recreational area allows activities are dependent on enjoyment of a natural environment. Fishing, sailing, boating, swimming, hiking and other outdoor activities will be significantly adversely affected if the prevailing winds carry asphalt plant or other industrial odors across the lake and surrounding forest and fields. Regular testing will assure that the facility's odorous emissions do not impact enjoyment of the recreational area.

Thank you for your consideration.

Mark Zimmerman
919-270-0417

"There is only one way to avoid criticism: do nothing, say nothing, and be nothing." ~ Aristotle

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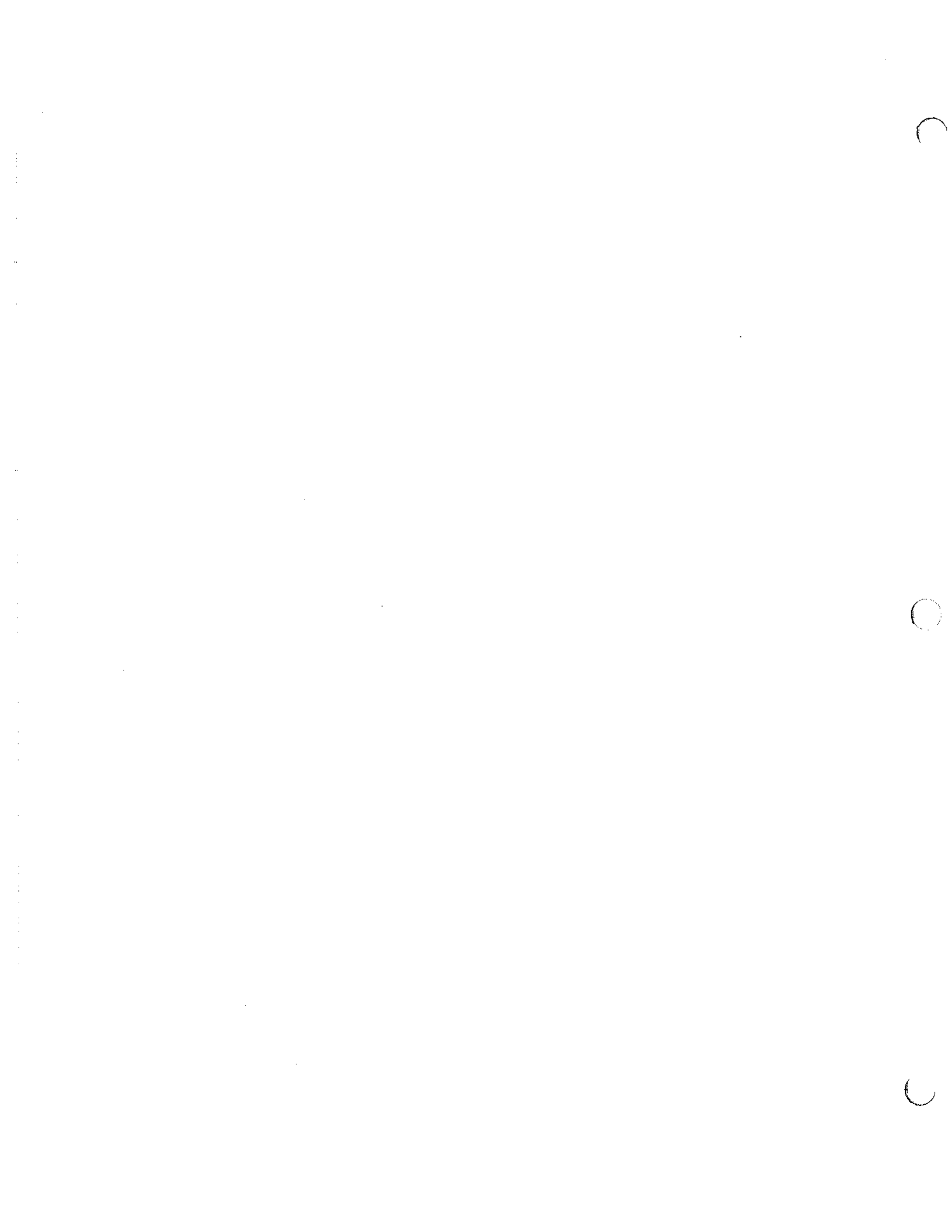
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From: [William Sharpe](#)
To: [SVC_DENR.DAO.publiccomments](#)
Subject: [External] world health organization air quality changes
Date: Wednesday, September 22, 2021 1:47:22 PM
Attachments: [World health air quality update .docx](#)

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World health organization air quality dangers attached...



New WHO Global Air Quality Guidelines aim to save millions of lives from air pollution

Air pollution is one of the biggest environmental threats to human health, alongside climate change.

22 September 2021

News release

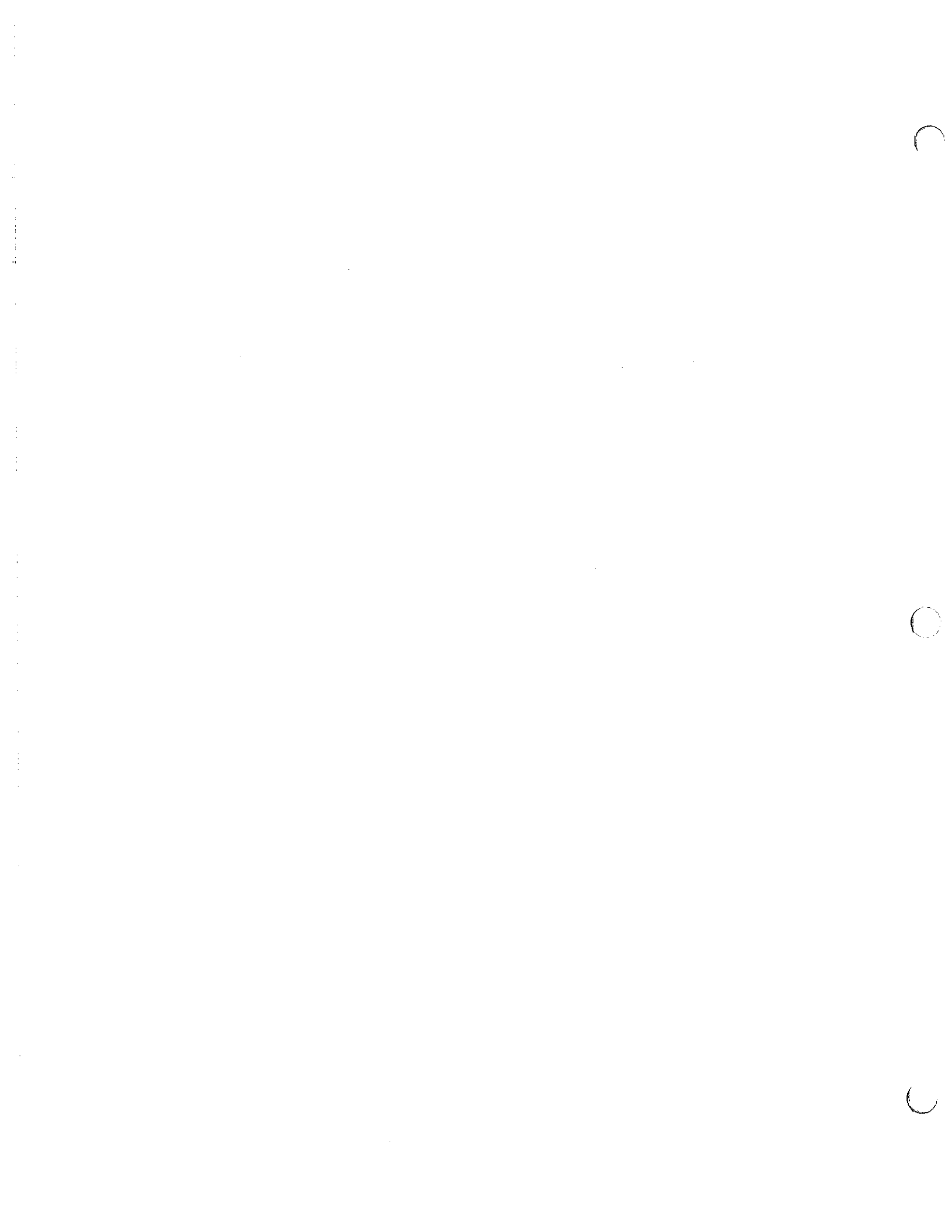
Copenhagen and Geneva

Reading time: 4 min (1081 words)

Français

New World Health Organization (WHO) Global Air Quality Guidelines (AQGs) provide clear evidence of the damage air pollution inflicts on human health, at even lower concentrations than previously understood. The guidelines recommend new air quality levels to protect the health of populations, by reducing levels of key air pollutants, some of which also contribute to climate change.

Since WHO's last 2005 global update, there has been a marked increase of evidence that shows how air pollution affects different aspects of health. For that reason, and after a systematic review of the accumulated evidence, WHO has adjusted almost all the AQGs levels downwards, warning that exceeding the new air quality guideline levels is associated with significant risks to health. At the same time, however, adhering to them could save millions of lives.



Every year, exposure to air pollution is estimated to cause 7 million premature deaths and result in the loss of millions more healthy years of life. In children, this could include reduced lung growth and function, respiratory infections and aggravated asthma. In adults, ischaemic heart disease and stroke are the most common causes of premature death attributable to outdoor air pollution, and evidence is also emerging of other effects such as diabetes and neurodegenerative conditions. This puts the burden of disease attributable to air pollution on a par with other major global health risks such as unhealthy diet and tobacco smoking.

Air pollution is one of the biggest environmental threats to human health, alongside climate change. Improving air quality can enhance climate change mitigation efforts, while reducing emissions will in turn improve air quality. By striving to achieve these guideline levels, countries will be both protecting health as well as mitigating global climate change.

WHO's new guidelines recommend air quality levels for 6 pollutants, where evidence has advanced the most on health effects from exposure. When action is taken on these so-called classical pollutants – particulate matter (PM), ozone (O₃), nitrogen dioxide (NO₂), sulfur dioxide (SO₂) and carbon monoxide (CO), it also has an impact on other damaging pollutants.

The health risks associated with particulate matter equal or smaller than 10 and 2.5 microns (µm) in diameter (PM₁₀ and PM_{2.5}, respectively) are of particular public health relevance. Both PM₁₀ and PM_{2.5} are capable of penetrating deep into the lungs but PM_{2.5} can even enter the bloodstream, primarily resulting in cardiovascular and respiratory impacts, and also affecting other organs. PM is primarily generated by fuel combustion in different sectors, including transport, energy, households, industry, and from agriculture. In 2013, outdoor air pollution and particulate matter were classified as carcinogenic by WHO's International Agency for Research on Cancer (IARC).

The guidelines also highlight good practices for the management of certain types of particulate matter (for example, black carbon/elemental carbon, ultrafine particles, particles originating from sand and dust storms) for which there is currently insufficient quantitative evidence to set air quality guideline levels. They are applicable to both

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outdoor and indoor environments globally, and cover all settings.

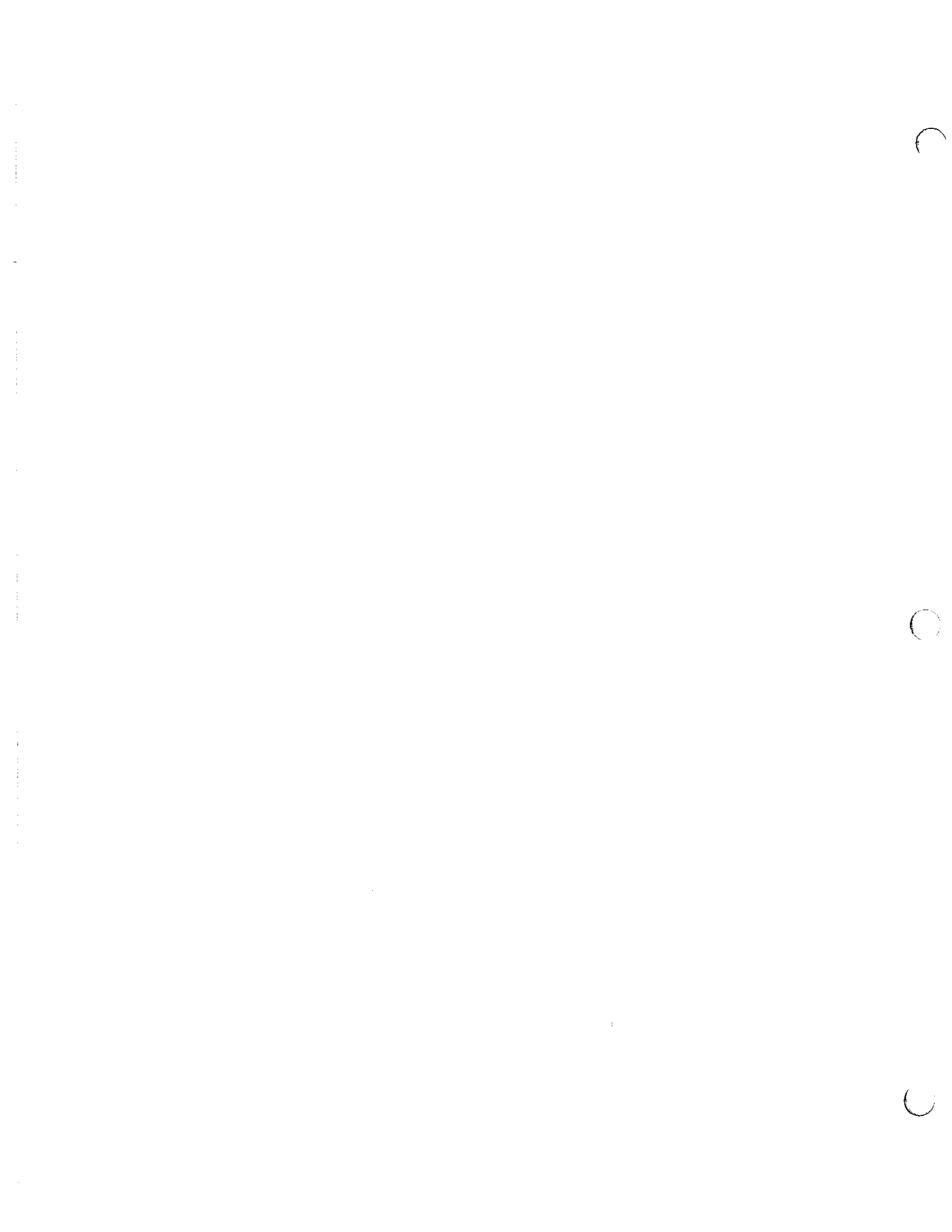
“Air pollution is a threat to health in all countries, but it hits people in low- and middle-income countries the hardest,” said WHO Director-General, Dr Tedros Adhanom Ghebreyesus. “WHO’s new Air Quality Guidelines are an evidence-based and practical tool for improving the quality of the air on which all life depends. I urge all countries and all those fighting to protect our environment to put them to use to reduce suffering and save lives.”

An unequal burden of disease

Disparities in air pollution exposure are increasing worldwide, particularly as low- and middle-income countries are experiencing growing levels of air pollution because of large-scale urbanization and economic development that has largely relied on the burning of fossil fuels.

“Annually, WHO estimates that millions of deaths are caused by the effects of air pollution, mainly from noncommunicable diseases. Clean air should be a fundamental human right and a necessary condition for healthy and productive societies. However, despite some improvements in air quality over the past three decades, millions of people continue to die prematurely, often affecting the most vulnerable and marginalized populations,” said WHO Regional Director for Europe, Dr Hans Henri P. Kluge. “We know the magnitude of the problem and we know how to solve it. These updated guidelines give policy-makers solid evidence and the necessary tool to tackle this long-term health burden.”

Global assessments of ambient air pollution alone suggest hundreds of millions of healthy life years of life lost, with the greatest attributable disease burden seen in low and middle-income countries. The more exposed to air pollution they are, the greater the health impact, particularly on individuals with chronic conditions (such as asthma, chronic obstructive pulmonary disease, and heart disease), as well as older people, children and pregnant women.



In 2019, more than 90% of the global population lived in areas where concentrations exceeded the 2005 WHO air quality guideline for long term exposure to PM_{2.5}. Countries with strong policy-driven improvements in air quality have often seen marked reduction in air pollution, whereas declines over the past 30 years were less noticeable in regions with already good air quality.

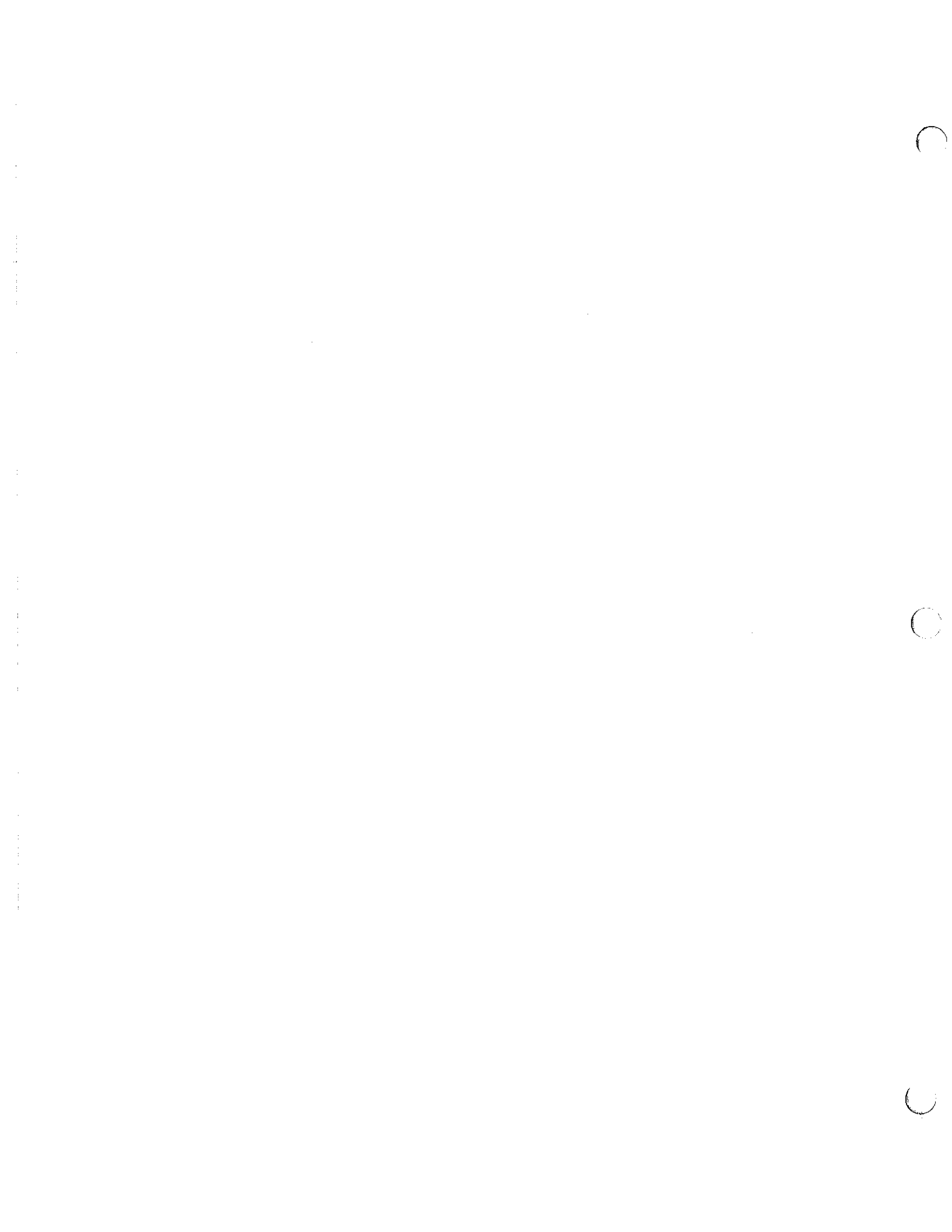
The road to achieving recommended air quality guideline levels

The goal of the guideline is for all countries to achieve recommended air quality levels. Conscious that this will be a difficult task for many countries and regions struggling with high air pollution levels, WHO has proposed interim targets to facilitate stepwise improvement in air quality and thus gradual, but meaningful, health benefits for the population.

Almost 80% of deaths related to PM_{2.5} could be avoided in the world if the current air pollution levels were reduced to those proposed in the updated guideline, according to a rapid scenario analysis performed by WHO. At the same time, the achievement of interim targets would result in reducing the burden of disease, of which the greatest benefit would be observed in countries with high concentrations of fine particulates (PM_{2.5}) and large populations.

Note to editors

Whilst not legally-binding, like all WHO guidelines, AQGs are an evidence-informed tool for policy-makers to guide legislation and policies, in order to reduce levels of air pollutants and decrease the burden of disease that results from exposure to air pollution worldwide. Their development has adhered to a rigorously defined methodology, implemented by a guideline development group. It was based on evidence obtained from six systematic reviews that considered more than 500 papers. The development of these global AQGs was overseen by a steering group led by the WHO European Centre for Environment and Health.

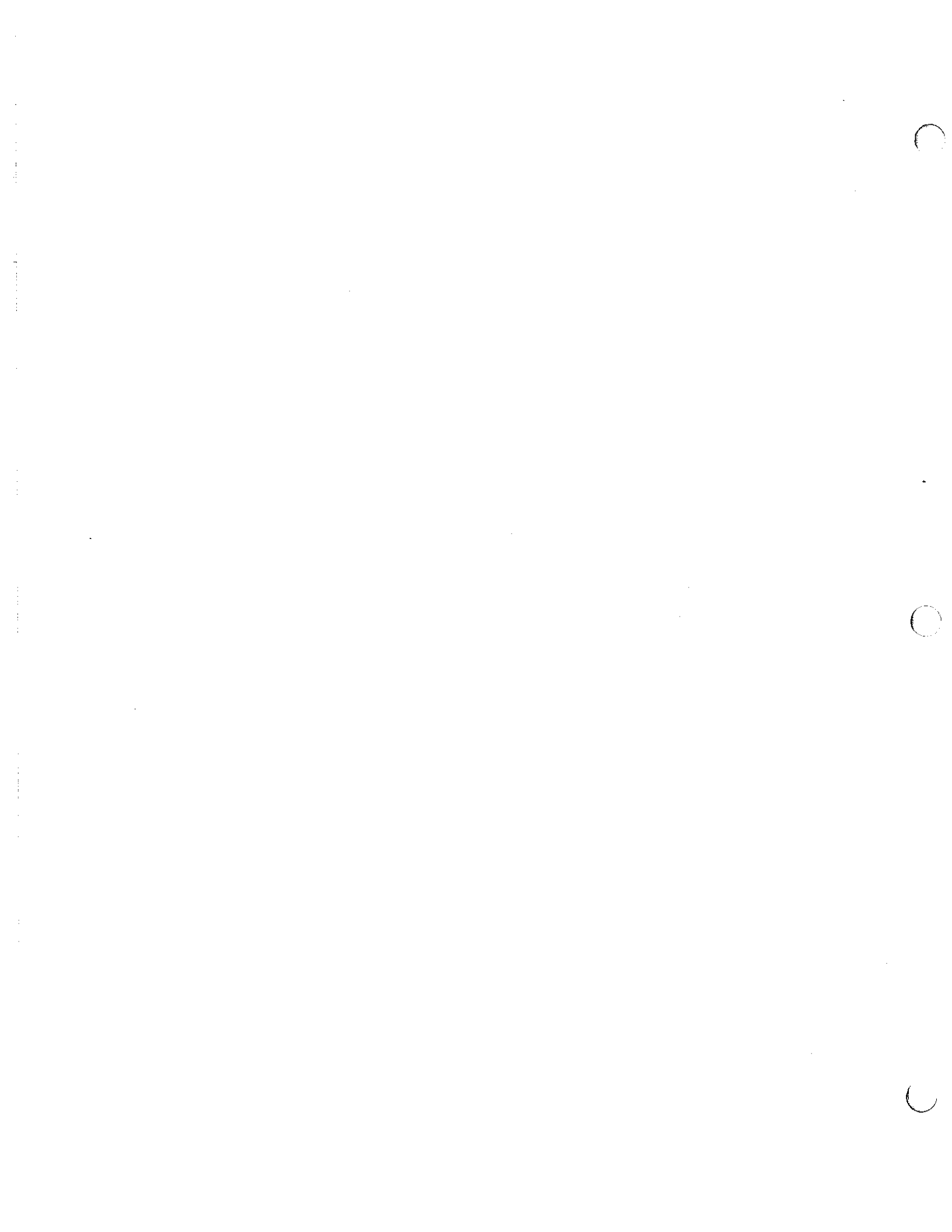


From: [Stacey Rose](#)
To: [SVC_DENR.DAO.publiccomments](#)
Subject: [External] Carolina Sunrock - Prospect Hill Quarry and Distribution Center
Date: Wednesday, September 22, 2021 2:18:55 PM

CAUTION: External email. Do not click links or open attachments unless you verify. Send all suspicious email as an attachment to Report Spam.

I grew up in Prospect Hill. My family's home is still there and we visit often. I am very concerned about the impact of the proposed quarry and asphalt plant in Prospect Hill. The people of Prospect Hill would like to continue to live with clean air and quality water. The noise, pollution, and general upheaval that the quarry and plant would bring to Prospect Hill is abysmal. Sunrock's proposal would upset the community of Prospect Hill and the way of life that people are used to.

Please reject Sunrock's proposal for a quarry in Prospect Hill and reject the asphalt plant.



From: [Kyle Warren-Love](#)
To: [SVC_DENR.DAO.publiccomments](#)
Subject: [External] Carolina Sunrock – Prospect Hill Quarry and Distribution Center.
Date: Wednesday, September 22, 2021 4:38:01 PM

CAUTION: External email. Do not click links or open attachments unless you verify. Send all suspicious email as an attachment to Report Spam.

To whom it may concern,

I am writing this email to request you DENY the current application by Carolina Sunrock for the Prospect Hill Quarry and Distribution Center. I have lived in Prospect Hill for my entire life. At 27, I've seen many of the areas in North Carolina change drastically that I hold close to my heart. One of my favorite things about Prospect Hill, and Caswell County as a whole, is the ability to leave the smog and the noise of the city of Raleigh, where I currently work. Yes, I drive an hour to my job because I love the quiet and cleanliness of my rural home and land. I do know it is inevitable that Caswell County will grow but it should not be at the expense of our quality of life. I want to bring industries that truly care about the land where I live, as much as I care about it. I do not want an industry that is only interested in the destruction of our water quality and quantity, our air quality, and our way and quality of life.

Thank you for your time.

Kyle Warren-Love
Prospect Hill Resident
Prospect Hill Voter
Prospect Hill Land Owner



From: [Carla Massengill](#)
To: [SVC_DENR.DAO.publiccomments](#)
Subject: [External] Carolina Sunrock—Prospect Hill Quarry and Distribution Center
Date: Wednesday, September 22, 2021 4:50:28 PM

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My name is Carla Massengill and my family owns farm land in Prospect Hill. I am extremely worried about the proposed quarry and asphalt plant in Prospect Hill.

I grew up going to Prospect Hill to visit my extended family and to celebrate holidays and milestones which we still do to this day--and a lot of time is spent outside. It is very disturbing to me that this company's quarry and the asphalt plant has the potential to ruin our serene environment. I want my daughter to enjoy Prospect Hill like I did for decades to come so please reject Sunrock's proposal!!

Thank you
Carla Massengill



From: [Carla Massengill](#)
To: [SVC_DENR.DAO.publiccomments](#)
Subject: [External] Carolina Sunrock-Prospect Hill Quarry and Distribution Center
Date: Wednesday, September 22, 2021 4:53:02 PM

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My name is Elizabeth Massengill and my family owns farm land in Prospect Hill. I want to enjoy Prospect Hill like my mother and grandmother did for many years to come. I am very upset about the proposed quarry and asphalt plant in Prospect Hill.

I do not want the quarry and asphalt plant in Prospect Hill. Please reject Sunrock's proposal

Thank you
Elizabeth Massengill

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From: [Patricia Warren](#)
To: [SVC_DENR.DAO.publiccomments](#)
Subject: [External] Carolina Sunrock – Proposed Prospect Hill Quarry and Distribution Center
Date: Wednesday, September 22, 2021 4:56:04 PM

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I read the following public comments during the Public Hearing Carolina Sunrock – Proposed Prospect Hill Quarry and Distribution Center

According to the Draft Environmental Justice Report, *Carolina Sunrock, LLC. – Prospect Hill Quarry and Distribution Center* written by the NC Department of Environmental Quality and dated August 9, 2021, "*Environmental justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies (US EPA).*"

The Report examines Caswell County in a multitude of specific conditions in the categories of Race and Ethnicity, Age Groups and Sex, Disability, Household Income, Per Capita Income as well as Poverty. The great majority of conditions examined indicate concerning disparities when compared to the State.

The report goes on to recognize that "Caswell County is designated as a Tier 1 county by the NC Department of Commerce. Tier 1 counties encompass the 40 most distressed counties based on average unemployment rate, median household income, percentage growth in population, and adjusted property tax per capita."

Environmental Justice is not served when the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies can be usurped by an entity that has the financial means to do so by causing fear of reprisal and enormous financial hardships on an already impoverished community with the possible effect of rendering it mute. This can have profound effects well beyond the 1-mile radius and the Census Tracts upon which this Report centers. I ask you to consider these facts and deny the air permit application from Carolina Sunrock.

Thank you,
Pat Warren
36 Main St
Prospect Hill, NC 27314
--

Pronouns: she/her/hers

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C

C

From: [Peter Christopher](#)
To: [SVC_DENR.DAO.publiccomments](#)
Subject: [External] Carolina Sunrock Prospect Hill Quarry and Distribution Center.
Date: Wednesday, September 22, 2021 5:32:24 PM

CAUTION: External email. Do not click links or open attachments unless you verify. Send all suspicious email as an attachment to Report Spam.<<mailto:report.spam@nc.gov>>

Greetings DAQ,

Unfortunately, I could not be with you on the 21 September video chat regarding the above mentioned subject. My partner and I are among the dozens now being punished by a SLAPP lawsuit for pointing out the inequities in applications brought forth for county approvals and bringing it to the attention of relevant state, county and federal parties. We are sued because we are correct and not going anywhere.

I sincerely hope those in charge of environmental protection protect the environment. In legal parlance, we just might have to make law on this one.

Best health,

Peter Christopher
1181 Wilson Road
Hurdle Mills, NC 27541
336-599-1139



From: [Stephen Pietsch](#)
To: [SVC_DENR.DAO.publiccomments](#)
Subject: [External] Carolina Sunrock - Prospect Hill
Date: Wednesday, September 22, 2021 7:40:27 PM

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To Whom It May Concern:

Originally, being notified of the quarry and distribution center in such close proximity to a "protected" location was Alarming. I could not understand how it could possibly be allowed by our State and Local Government.

I am one of '**the 55**' being sued for expressing concerns.

The stress has been devastating to my family and has become unbearable at times. I imagine that is true for many other neighbors as well.

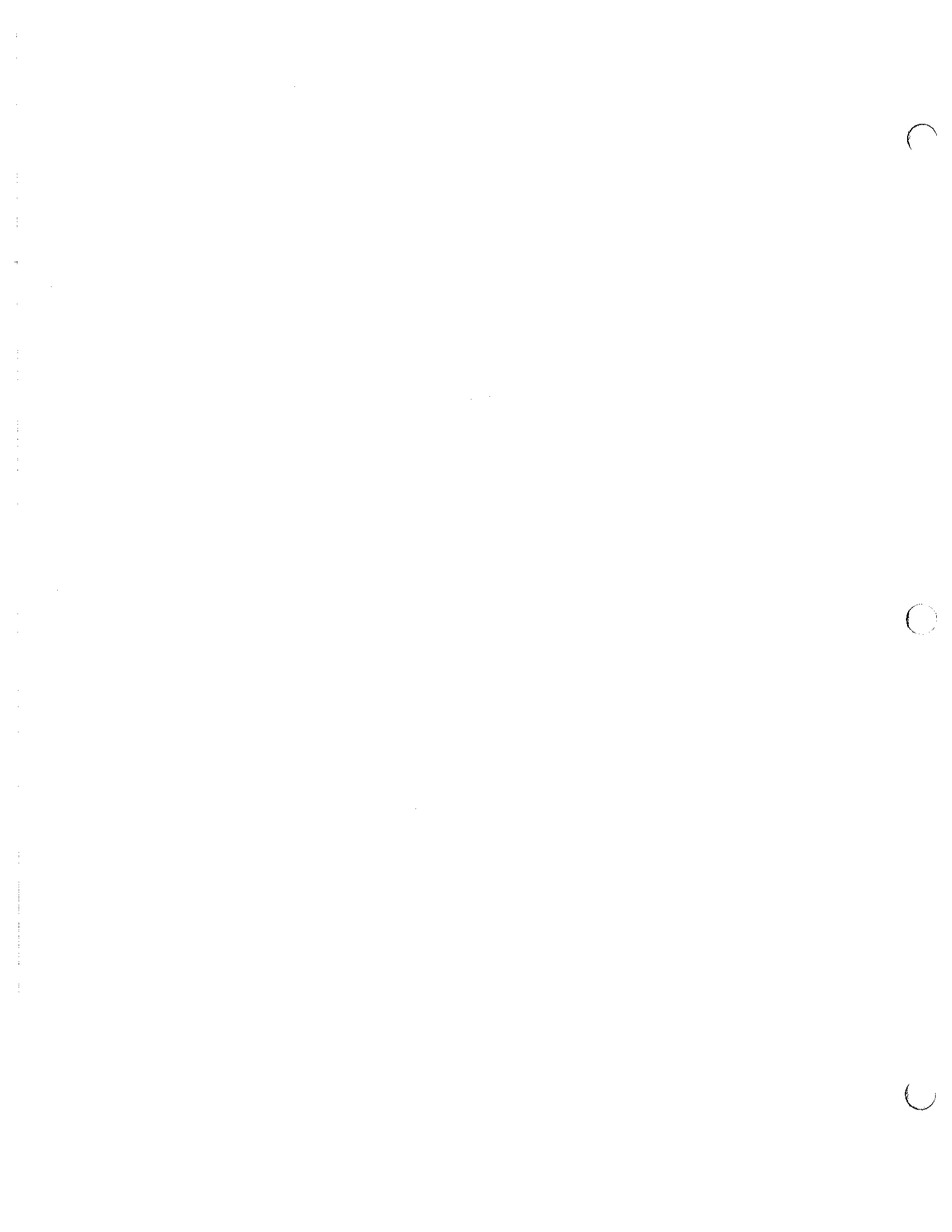
I respectfully request and pray that you and everyone involved with this project **Strongly** consider all of our community's concerns and any you would have.

Please keep Public Health and Safety your **TOP Priority**.

I also want to express my **Deepest Appreciation** to the **Hundreds** of people who have stepped up to help with efforts to **Protect Caswell** and Our Precious Environment.

Thank you,

Virginia Pietsch



From: [Ed Dougherty](#)
To: [SVC_DENR.DAO.publiccomments](#)
Subject: [External] Carolina Sunrock – Prospect Hill Quarry and Distribution Center
Date: Thursday, September 23, 2021 9:52:25 AM
Attachments: [DAO comments 9-21.docx](#)
[BREDL asphalt factsheet.pdf](#)

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Please find the attached documents:

- Ed Dougherty Public Comments 9/21/21
- BREDL; Asphalt Fact Sheet, Contaminants of Concern



DAQ Permit hearing, Tuesday 9/21 public comments, Sunrock Prospect Hill Quarry

From:

Ed Dougherty

2685 Ridgeville Road

Prospect Hill, NC 27314

To Whom it may concern,

As with any project with this great a potential impact on the health and safety of a community, public input is critically important to the review process as is demonstrated by tonight's hearing. In this case that entire process is being threatened and stifled by a current Legal action intended to limit public participation and punish citizens for acting in their own interest and that of their neighbors. I am one of 55 citizens along with my wife that are being forced to defend ourselves against such an action.

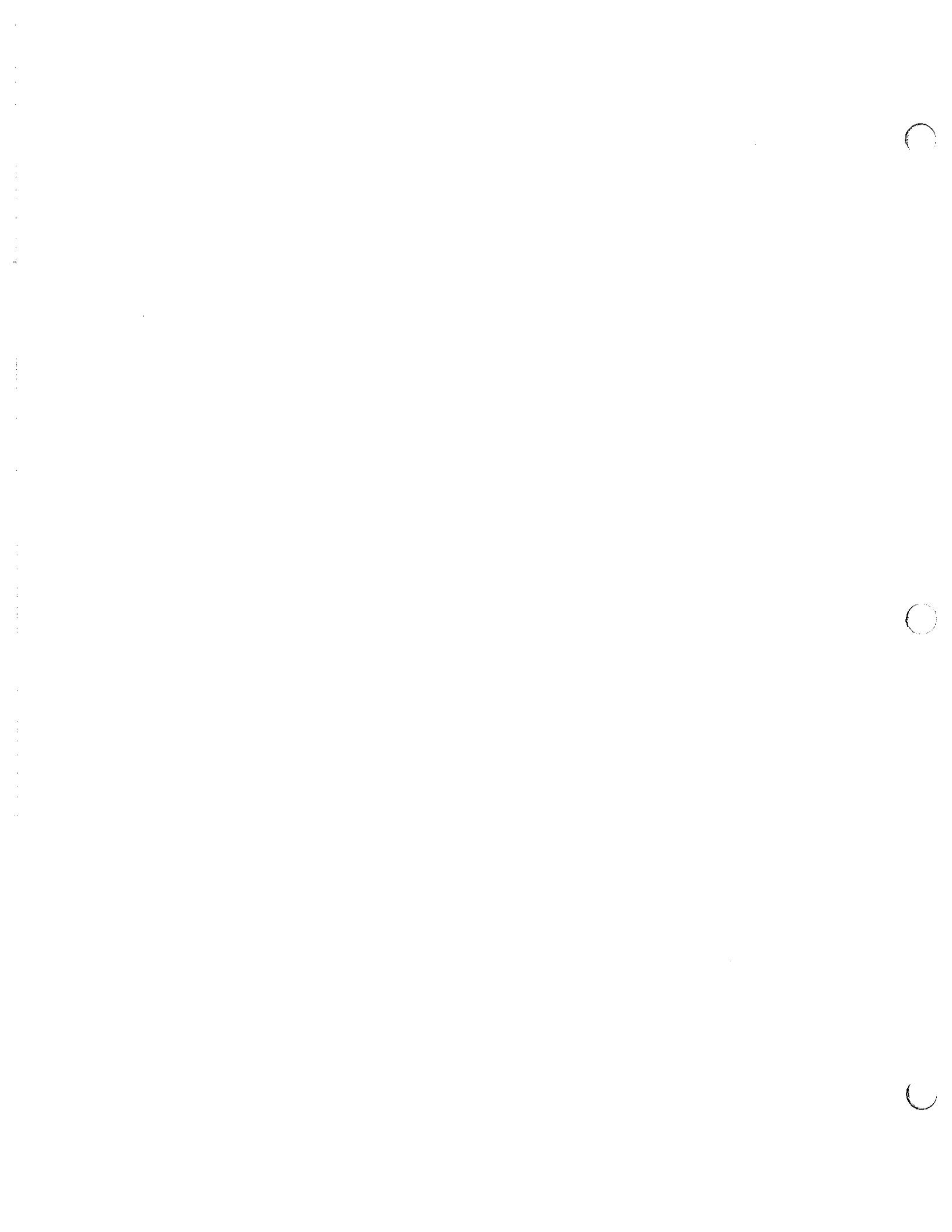
Earlier this year we filed an appeal of permit with the Caswell County Watershed review board, as is our "right to petition" our County Government, following all established procedures. For that participation we are now the bring sued by the applicant. Were it not for this lawsuit our appeals would have been heard and settled months ago.

The cost to defend ourselves and the personal stress that this lawsuit is having on ourselves and our community is certainly of concern but the bigger issue is the chilling effect that it is having with citizens that might otherwise opine. Citizens are rightfully intimidated and afraid to speak lest they also end up being sued. This is antithetical to the process and is of course being done by design. Our opinions matter and should be heard. The health and safety of the Community matters and should be protected. Our rights as citizens matter and they should be honored and preserved.

Others will speak this evening to the technical defects of these permits and of the far-reaching health threats that these projects pose. My ask to the NCDAQ is to deny the permits based on the facts being presented and the concerns being raised. It does not appear that Sunrock has done much more than change its modeling assumptions and that a project this agency denied last year should not be allowed without meaningful change to protect the community and again should be denied at this time.

Thank you,
Ed Dougherty

Attachment: An overview of 7 toxic substances released from asphalt processing facilities and their known effects on human health



BLUE RIDGE ENVIRONMENTAL DEFENSE LEAGUE

www.BREDL.org PO BOX 88 Glendale Springs, North Carolina 28629 BREDL@skybest.com (336) 982-2691 office (336) 977-0852 cell

ASPHALT PLANTS CONTAMINANTS OF CONCERN:

An overview of 7 toxic substances released from asphalt processing facilities and their known effects on human health

Asphalt plants are sources of air pollution that may emit significant levels of both particulate matter and gaseous volatile organic compounds (VOCs). These pollutants are considered to be dangerous to human health. Some VOCs are also suspected carcinogens or cancer-causing agents (*Fact Sheet: Information Regarding Asphalt Concrete Plants*, number 5, November 1996, Ohio EPA, Division of Air Pollution Control Small Business Assistance Program).

No two asphalts are chemically alike. The chemical makeup of asphalt depends on the chemical content of the original crude petroleum from which it is made. Other manufacturing methods which alter the chemical makeup of asphalt include asphalt cement additives, higher operating temperatures, and the use of recycled asphalt paving cause increases in toxic emissions (Letter to Dr. Ernest Fuller, Division of Air Quality, Raleigh Regional Office, from Louis Zeller, BREDL, re: Tar Heel Paving DRAFT permit #08977R00, March 12, 2001).

The following are examples of seven pollutants typically found at various levels in emissions from asphalt plants - hydrogen sulfide, benzene, chromium, formaldehyde, polycyclic aromatic hydrocarbons (PAHS), cadmium and arsenic - and the known effects of these substances on human health:

Hydrogen sulfide (H₂S). Hydrogen sulfide is a poisonous, colorless gas that is associated with the characteristic smell of rotten eggs. Exposure tends to be a problem in communities located near certain types of industrial sites that release hydrogen sulfide. People who live near an industrial facility that emits hydrogen sulfide may be exposed to higher levels of hydrogen sulfide. Exposure to hydrogen sulfide occurs from breathing contaminated air or drinking contaminated water. Hydrogen sulfide remains in the air for about 18 hrs. after which it changes into sulfur dioxide and sulfuric acid. Hydrogen sulfide may also be released as a liquid waste from an industrial facility. It is not known whether children are more sensitive to hydrogen sulfide than adults nor is it known if hydrogen sulfide causes birth defects (*ToxFAQs for Hydrogen Sulfide*, Agency for Toxic Substances and Disease Registry, July 2006, CAS #7783-06-04.)

Exposures to high concentrations of hydrogen sulfide may result in respiratory distress, pulmonary edema, nervous system depression, neurobehavioral effects, tissue hypoxia, cardiovascular effects, unconsciousness and death. Exposure to lower concentrations of hydrogen sulfide can result in less severe neurological and respiratory effects such as incoordination, loss of smell, nasal symptoms, sore throat, cough, and dyspnea. Some evidence suggests that people with asthma may be overly sensitive to hydrogen sulfide, and impaired function has been observed in people with asthma who were exposed to low levels of hydrogen sulfide.

One community exposure study found an increased prevalence of eye irritations in residents exposed to low levels of hydrogen sulfide. Numerous case reports suggest that high exposures to respiratory arrest and pulmonary edema can occur after a brief exposure to hydrogen sulfide. Although most people recover after exposure to hydrogen sulfide many individuals report permanent or persistent neurological effects including headache, poor concentration ability and attention span, impaired short memory and motor function (*Toxicological Profile for Hydrogen Sulfide*, US Department of Health and Human Services, Agency for Toxic Substances and Disease Registry, 2006).

Benzene. Benzene, also known as benzol, is a colorless liquid with a sweet odor. Benzene is a known carcinogen or cancer-causing agent. Benzene enters the body through the lungs, gastrointestinal tract, and across the skin. Brief exposure (5-10 minutes) to very high levels of benzene in air can result in death. Lower levels of exposure can cause drowsiness, dizziness, rapid heart rate, headaches, tremors, confusion, and unconsciousness. Continuous exposure to benzene can lead to anemia and excessive bleeding, and may be harmful to the immune system by increasing the chance for infection and perhaps lowering the body's defense against cancer.

Exposure to benzene has been associated with development of a particular type of leukemia called acute myeloid leukemia (AML). The Department of Health and Human Services, the International Agency for Cancer Research and the EPA has determined that benzene causes cancer.

Exposure to benzene may be harmful to human reproductive organs. Benzene can pass from the mother's blood to a fetus, but it is not known what effects exposure to benzene might have on the developing fetus in pregnant women or on fertility in men. However, studies with pregnant animals show that breathing benzene has harmful effects on the developing fetus. These effects include low birth weight, delayed bone formation, and bone marrow damage.

Children can be affected by benzene exposure in the same ways as adults, and is not known if children are more susceptible to benzene poisoning than adults (*Public Health Statement for Benzene, Draft for Public Comment*, Agency for Toxic Substances and Disease Registry, September 2005, CAS#: 71-43-2).

Chromium. Chromium is a naturally occurring element found in rocks, animals, plants, soil, and in volcanic dust and gases. Chromium cannot be tasted and has no odor. Chromium is present in the environment in several different forms. The most common forms are chromium(0), chromium(III), and chromium(VI), also known as hexavalent chromium.

Chromium(VI) and chromium(0) are usually produced by industrial processes. Breathing high levels of chromium(VI) can cause irritation to the nose, such as runny nose, nosebleeds, and ulcers and holes in the nasal septum. Chromium(VI) at high levels can damage the nose and can cause cancer. Ingesting large amounts of chromium(VI) can cause stomach upsets and ulcers, convulsions, kidney and liver damage, and even death. Skin contact with certain chromium(VI) compounds can cause skin ulcers. Some people are extremely sensitive to chromium(VI) or chromium(III). Allergic reactions consisting of severe redness and swelling of the skin have been noted (*ToxFAQs for Chromium*, Agency for Toxic Substances and Disease Registry, February 2001, CAS#: 7440-47-3).

Formaldehyde. Formaldehyde is a nearly colorless gas with a pungent, irritating odor even at very low concentrations (below 1 ppm). Formaldehyde is a potent sensitizer and a probable human carcinogen or cancer-causing agent. Formaldehyde is an eye, skin, and respiratory tract irritant; inhalation of vapors can produce narrowing of the bronchi and accumulation of fluid in the lungs.

Children may be more susceptible than adults to the respiratory effects of formaldehyde. Even fairly low concentrations of formaldehyde can produce rapid onset of nose and throat irritation, causing cough, chest pain, shortness of breath, and wheezing. Higher exposures can cause significant inflammation of the lower respiratory tract, resulting in swelling of the throat, inflammation of the windpipe and bronchi, narrowing of the bronchi, inflammation of the lungs, and accumulation of fluid in the lungs (*Medical Management Guidelines for Formaldehyde*, Agency for Toxic Substances and Disease Registry, CAS#: 50-00-0, updated 11/02/06).

Polycyclic aromatic hydrocarbons (PAHS). Polycyclic aromatic hydrocarbons (PAHs) are a group of over 100 different chemicals that are formed during the incomplete burning of coal, oil and gas, garbage, or other organic substances and found in coal tar, crude oil, creosote, and roofing tar. The Department of Health and Human Services has determined that some PAHs may reasonably be expected to cause cancer. Some people who have breathed or touched mixtures of PAHs and other chemicals for long periods of time have developed cancer.

Certain PAHs have caused cancer in laboratory animals when they breathed air containing them (lung cancer), ingested them in food (stomach cancer) or had them applied to their skin (skin cancer). PAHs are found in air attached to dust particles, and can enter water through discharges can enter water from industrial and wastewater treatment plants where they can move through soil to contaminate groundwater. The PAH contents of plants and animals may be much higher than PAH contents of soil or water in which they live (*ToxFAQs for Polycyclic Aromatic Hydrocarbons (PAHs)*, Agency for Toxic Substances and Disease Registry, September 1996).

Cadmium. Cadmium is an element that occurs naturally in the earth's crust. Pure cadmium is a soft, silver-white metal that attaches to small particles in the air. People who live near hazardous waste sites or factories that release cadmium into the air have the potential for exposure to cadmium in air.

Breathing air with very high levels of cadmium can severely damage the lungs and may cause death. Breathing air with lower levels of cadmium over long periods of time (for years) may result kidney disease, lung damage and fragile bones. Data on human exposure to cadmium is limited, but studies show that rats that breathed in cadmium developed lung cancer, liver damage and changes in the immune system. Female rats and mice that breathed high levels of cadmium had fewer litters, babies with more birth defects than usual, reduced body weight, babies born with behavioral problems and learning disabilities.

As a conservative approach, and based on the limited human data and the studies in rats, the United States Department of Health and Human Services (DHHS) has determined that cadmium and cadmium compounds may reasonably be anticipated to be carcinogens. The International Agency for Research on Cancer (IARC) has determined that cadmium is carcinogenic to humans. The EPA has determined that cadmium is a probable human carcinogen by inhalation (*Public Health Statement for Cadmium*, Agency for Toxic Substances and Disease Registry, July, 1999, CAS # 1306-19-0).

Arsenic. Arsenic occurs naturally in soil and minerals and it therefore may enter the air, water, and land from wind-blown dust and may get into water from runoff and leaching. Arsenic released from power plants and other combustion processes is usually attached to very small dust particles. These dust particles settle to the ground or are washed out of the air by rain. Arsenic attached to dust may stay in the air for many days and travel long distances. Ultimately, most arsenic ends up in the soil or sediment. Children may also be exposed to arsenic by eating dirt, skin contact with soil or water that contains arsenic, or through inhalation. If you breathe air that contains arsenic dust, particles of arsenic-contaminated dust may settle onto the lining of the lungs.

Inorganic arsenic is usually found in the environment combined with other elements such as oxygen, chlorine, and sulfur. Arsenic combined with carbon and hydrogen is referred to as organic arsenic. Long-term oral exposure to inorganic arsenic can result in a pattern of skin changes called "corns" or "warts" on the palms, soles, and torso that may develop into skin cancer. Swallowing arsenic has also been reported to increase the risk of cancer in the liver, bladder, kidneys, prostate, and lungs. The Department of Health and Human Services (DHHS) has determined that inorganic arsenic is known to cause cancer. The International Agency for Research on Cancer (IARC) has determined that inorganic arsenic is carcinogenic to humans. The EPA also has classified inorganic arsenic as a known human carcinogen.

Breathing high levels of inorganic arsenic will result in a sore throat, irritated lungs and the potential to develop lung cancer. This has been seen mostly in workers exposed to arsenic at smelters, mines, and chemical factories, but also in residents living near smelters and chemical factories. People who live near waste sites with arsenic may have an increased risk of lung cancer as well. High doses of an organic arsenic compound may result in nerve injury, stomach irritation or other effects.

All health effects observed in adults are of potential concern in children. Children may be more susceptible to health effects from inorganic arsenic than adults, and there is evidence that suggests that long-term exposure to arsenic in children may result in lower IQ scores (*Public Health Statement for Arsenic, Draft for Public Comment, Agency for Toxic Substances and Disease Registry, September 2005, CAS#: 7440-38-2*).

From: lharris@hiddenvoices.org
To: [SVC DENR.DAQ.publiccomments](#)
Cc: [Abraczinskas, Michael](#)
Subject: [External] Request to Deny DAQ permit to Carolina Sunrock
Date: Thursday, September 23, 2021 11:19:39 AM
Attachments: [September 23 Letter to DAQ.pdf](#)

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September 23, 2021

To the DAQ:

I'm submitting this letter to request the DAQ deny the permit for Carolina Sunrock. During the recent hearing, a Sunrock employee stated that this site and permit had been highly scrutinized. The reason that this site and its permitting has been so scrutinized is precisely because the company is not welcome here. This facility will harm areas in not one, not two, but three counties, and the facilities are clearly not in alignment with DAQ's mission to "protect and improve" the air quality in our state.

Additionally, the notices about the facility were not placed in Orange County; those commissioners knew nothing about the plans to locate three asphalt plants, three truck mix concrete batch plants, and a 600 acre quarry on the edge of the county. Only now are residents well within the stated range of air pollutants learning of this plan.

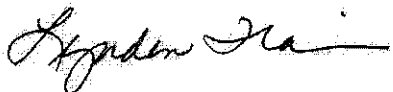
Many of the residents feel, and not without reason, that the whole system is set up to exploit the already poor and underserved. This is a county full of poor and elderly residents. There is little access to health care. Almost half the residents lack internet access. And yet, these are the citizens who will bear the burden if this permit is approved, the very people who can least afford an additional burden. These residents hold out no hope that the government will protect the rights of citizens over the profit of a corporation. They are cowed, but not surprised, by the recent spate of lawsuits targeting citizens who dare to speak up. At the very least, DAQ should wait for the outcome of these legal proceedings before making a decision.

It's hard for an average reader to keep up with the obfuscations of this company, but it seems clear that Sunrock is playing a shell game, shifting information and data, breaking up the original facility into multiple facilities in order to skirt regulations, and on and on.

I leave it to the scientists to speak to the data regarding particulate matter, benzene, toxic chemicals, and the rest. This area has some of the cleanest air and water in the state and the idea that it would be permissible to destroy that without regard for citizen welfare is horrifying to those of us who chose to live here precisely because of those qualities. I fail to see how this move in any way aligns with "protecting and improving."

Thank you for your consideration of all these point. Again, please deny this permit.

Best regards,



Lynden Harris

Lynden Harris

Director, Hidden Voices www.hiddenvoices.org

Right Here, Right Now: Life Stories from America's Death Row (Duke University Press, April 2021)

2020-21 A Blade of Grass Fellow

2020 North Carolina Playwriting Fellow

2020 Ann Atwater Theater Award

September 23, 2021

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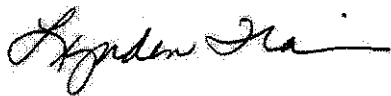
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Thank you for your consideration of all these point. Again, please deny this permit.

Best regards,



Lynden Harris

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From: marcia.mcnelly
To: SVC_DENR.DAQ.publiccomments
Subject: [External] "Carolina Sunrock LLC – Prospect Hill Quarry and Distribution Center"
Date: Thursday, September 23, 2021 11:48:19 AM

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September 23, 2021 Public Hearing

TO: North Carolina Department of Environmental Quality, Division of Air Quality (DAQ)
DAQ.publiccomments@ncdenr.gov

FROM: Written comments submitted by Randy Hester and Marcia McNally, 752 Tom Bowes Road, Hurdle Mills, NC 27541, rthester@frontier.com, mmcnally@centurylink.net

RE: "Carolina Sunrock LLC – Prospect Hill Quarry and Distribution Center"

1238 Wrenn Road Prospect Hill, NC 27314 Caswell County Application ID: 1700017.21A

We write to ask that Carolina Sunrock's request for an air quality permit for the proposed Prospect Hill quarry and distribution center be denied.

By denying the first air quality permit application for this quarry operation, the State of North Carolina (DAQ) indicated the quarry impacts from pollutants would be greater than stated by Sunrock. We see nothing in the new application that indicates that it would be otherwise. Our 200-acre working farm is on Lake Roxboro, across the lake from the proposed quarry. As such we believe the quarry project will negatively affect us and/or use of our property. Our pasture land, which is being grazed, is within ½ mile of the quarry property. The air quality impacts of this project on vegetation, including grazing and forest, have not been determined, can be significant, and may threaten our farm operation.

Responding to citizen concerns, the Person County Board of Commissioners in recent months has taken action to more assertively protect farmland from large-scale industrial development that diminishes agricultural production. There is finally recognition that agricultural land use is essential for a sustainable future, and that the location and scale of farmland must be preserved. The commissioners recently denied two rezoning requests that would have removed large tracts of land from farmland protection. We are heartened by this. Industrial uses should not be allowed except in designated zones and not in prime farm and forest lands. This is an overriding issue of statewide and national importance, and depends on State oversight in concert with county protections.

We have placed our farm in the Person County Voluntary Agricultural District. The farm will eventually go to a land conservation organization with the expectation that it would be conserved for wildlife habitat. In the last 10 years we have stabilized most of the buildings because of the farmstead's historic value. The house we live in is a farm building over 100 years old and is largely original. There is also an art museum on the property which houses a significant collection of outsider art that tells about the life of an African-American family during the Jim Crow era. The farm/museum is an important historic site and educational center. See: shortylawsonmuseum.org.

We also ask that DAQ look closely at various changes to Sunrock's proposed plant facilities and site plan suggested in the back-and-forth between DAQ and Sunrock when DAQ asked for more information. For example, in response to DAQ's Ray Stewart's question about moving the power generators Sunrock stated that, "Since the original submittal there have been many updates to the site plan layout." Do these changes to the site plan mean that Sunrock needs to go back to Caswell County for new permits? In its air quality permit application Sunrock provides no evidence that all County permits are up-to-date given these changes. The County's SNIA permit required blueprints that we assume are now out-of-date. Sunrock also proposes to include a rap crusher. Does this show up on either of the permits the County issued? If not, isn't this a problem? Further, does the addition of a rap crusher require that some of the already-issued permits by the State need to be reconsidered?

Finally, we would like to state that we are among the dozens of citizens who have vigilantly watchdogged this project and are now being punished by Sunrock by being named in a lawsuit related to Caswell County permits. We will not be harassed, and will continue to speak out to ensure long-term environmental protection of this area. It is every person's right **and an essential component of North Carolina's environmental review process to do so.**

From: Keval Kaur Khalsa
To: SVC_DENR.DAQ.publiccomments
Subject: [External] Carolina Sunrock – Prospect Hill Quarry and Distribution Center
Date: Thursday, September 23, 2021 12:27:48 PM
Attachments: PastedGraphic-1.png

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Greetings,

My name is Keval Kaur Khalsa. Together with my son, I own property at 272 Flint Ridge Road in Prospect Hill, NC. I write to request that you **deny** Carolina Sunrock's permit application for a Prospect Hill Quarry and Distribution Center for the following reasons:

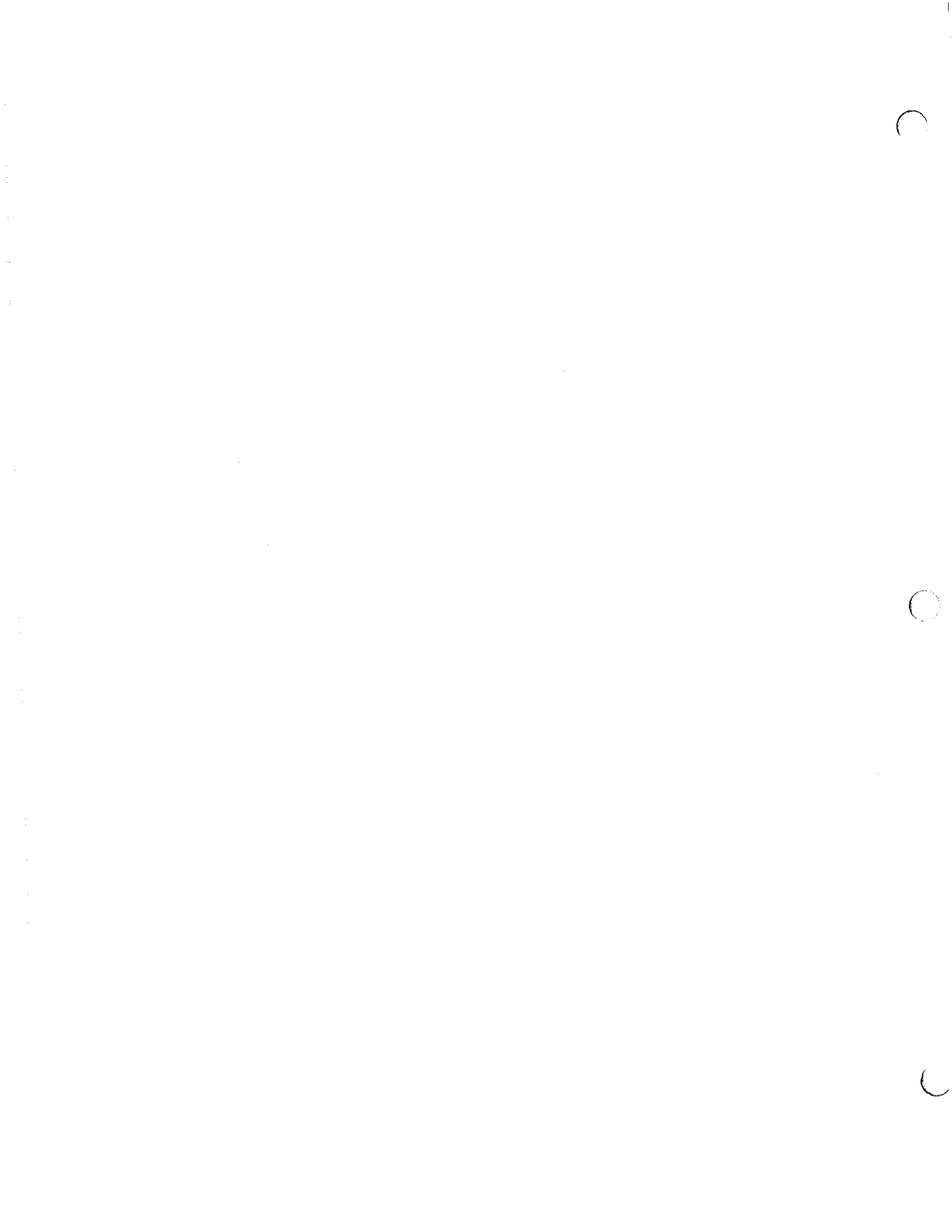
1. Carolina Sunrock is suing 55 of my neighbors for exercising their right to object to a local permit that was issued by our county Planning Director. This is intimidation in its most flagrant and reprehensible form, and should not be tolerated.
2. Changes, correspondence and attachments to the air permit application and DAQ review were not made available to the public prior to this week's hearing and comment period. Additionally, materials presented for public review are not presented clearly and in a way that the average citizen (without an advanced technical degree) can understand them. The materials for public review do not adequately describe the facility. All of these factors point to a process that lacks transparency and fairness.
3. Information re: numerous pollution controls are absent from the application, including regular inspection of fabric filters in baghouses, type of fuel oil to be used, controlling fugitive dust and process generated emissions, odor emissions, noise emissions and light pollution.
4. I strenuously object to the release of the toxic air pollutants formaldehyde, mercury, nickel, arsenic and benzene that would be allowed by the DAQ air permit. All five of these toxins have known severe adverse health effects.

Caswell County is a beautiful rural agricultural and recreational area. An asphalt quarry and distribution center will cause irreparable damage to the county's land and residents, and I again request that you deny this permit application.

Respectfully submitted,

Keval Kaur Khalsa

Keval Kaur Khalsa
Professor Emerita, Dance Program
Duke University
Durham, NC
danceprogram.duke.edu
Preferred Pronouns: she/her/hers



From: [Richard Lonon](#)
To: [SVC_DENR.DAO_publiccomments](#)
Subject: [External] Subject: Re: Carolina-Sunrock proposed quarry in Prospect Hill, NC
Date: Thursday, September 23, 2021 12:56:32 PM

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Dear DAQ,

The Division of Air Quality mission statement is *“to protect and improve the outdoor air quality of North Carolina. DAQ works 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.”*

I request DAQ to do just that and deny this air permit application from Carolina Sunrock.

I come here tonight very concerned. **The applicant is suing 55 neighbors when they exercised their right to object to a local permit that was issued by our county Planner. The lawsuit is seen as intimidation and has had a chilling effect on people wanting to come forward and speak out against the projects.**

As I and others have pointed out in previous submitted comments, the application is incomplete, contains errors, has contradicting information, and omits critical information for review. Also, it has substantially changed since original submission through revision after revision. DAQ should demand an accurate, complete application from Carolina Sunrock.

Richard Lonon,
9602 Art Rd., Cedar Grove, NC - 2 miles from Prospect Hill.



From: Ann Moss Joyner
To: SVC_DENR.DAO_publiccomments
Subject: [External] Sunrock permits in Caswell County: Propect Hill and Anderson
Date: Thursday, September 23, 2021 2:26:14 PM

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- 1. Comment:** I request DAQ deny this air permit application from Carolina Sunrock.
- 2. Comment:** I tried to participate in the public hearing held earlier this week, but our internet was apparently insufficient, as I could never get any audio of the proceedings. I believe you need to hold another public hearing, in Caswell County, in person, properly distanced for the virus, requiring masks.
- 3. Comment:** I am concerned and actually outraged over the news that Sunrock is suing area residents as they have objected to a permit issued by a Caswell County Planner. The lawsuit is clearly meant as intimidation is anti-democratic and anti-environment. Please look into this tactic and do not consider any application while such legal action is underway.
- 4. Comment:** As I understand it, the application is incomplete, contains errors, has contradicting information, and omits critical information for review. Also, it has substantially changed since original submission through revision after revision. DAQ should demand an accurate, complete application from Carolina Sunrock. In reality, Carolina Sunrock is planning to come to Caswell county with 3 asphalt plants, 3 truck mix concrete batch plants, and a 630-acre rock quarry site in a small geographic area. The planned activities will pollute our air, our land, and our water with particulate matter and toxic chemicals. Moreover, the traffic generated will overwhelm NC 86, NC 147, NC 49 and Efland Cedar Grove Road, as Sunrock's trucks take their products to the Triangle and the Triad. Sunrock's initial plan - to construct a single facility, would have exceeded DAQ's requirements. Thus, Sunrock is now applying for multiple "smaller" facilities, but the effect is the same on the local community. We urge you to treat all company facilities in the area as it was originally intended — as one facility, and measure their output accordingly.
- 5. Comment:** DAQ denied the 2019 air permit application because NO2 exceeded NAAQS limits. The public deserves to know why the same level of nitrogen oxides (NOx) is now acceptable.
- 6. Caswell County** has introduced a High Impact Development Ordinance (HIDO) and Sunrock is challenging this in court. Please delay DAQ decision on the air permit until after a court ruling in the lawsuit.

Thank you very much.

--

Ann Moss Joyner
Cedar Grove Institute for Sustainable Communities, Inc.
919-563-5899 office
919-563-4109 home
919-619-7978 cell

From: susie
To: SVC_DENR.DAO.publiccomments
Subject: [External] Carolina Sunrock
Date: Thursday, September 23, 2021 2:51:45 PM

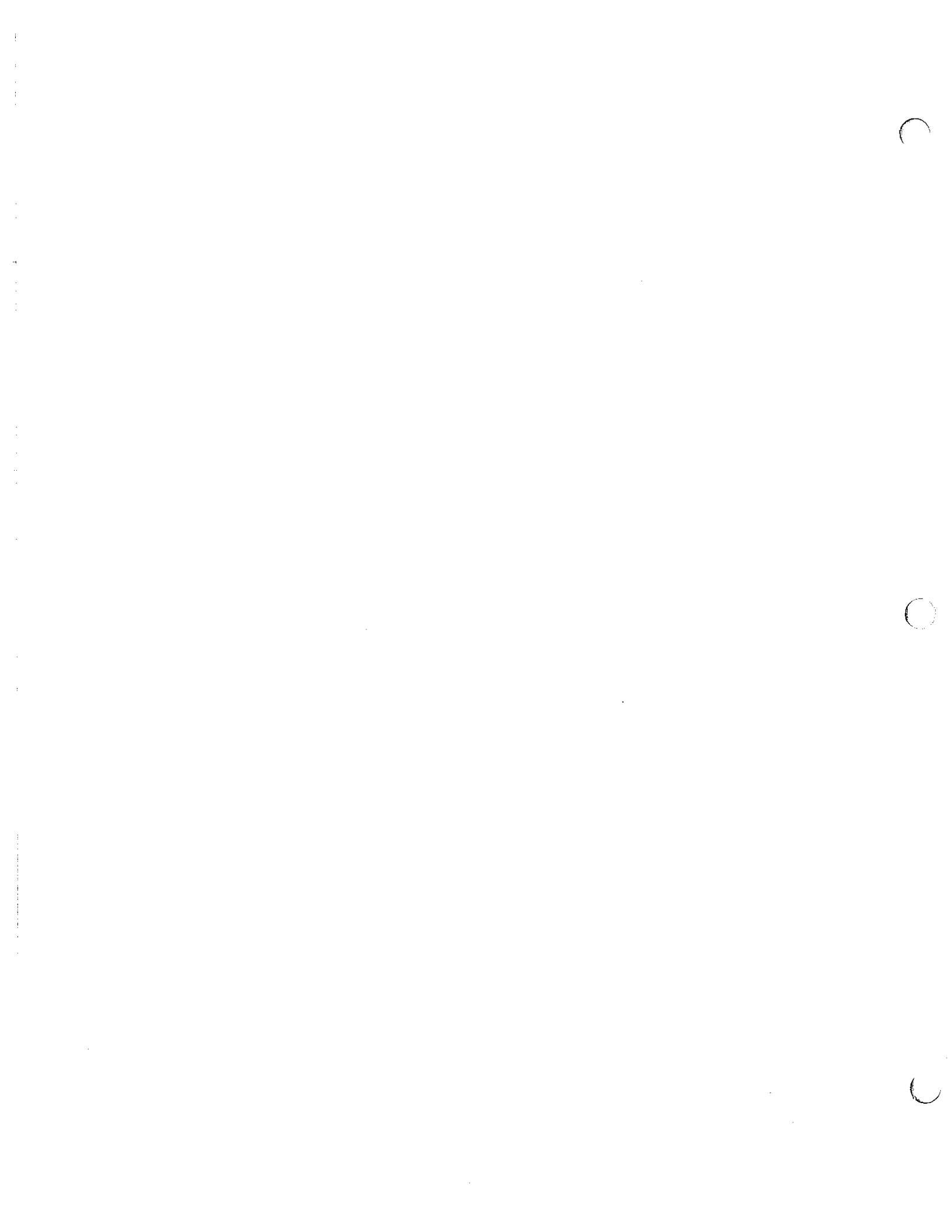
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From: [Daisha Williams](#)
To: [SVC_DENR.DAO.publiccomments](#)
Subject: [External] Carolina Sunrock – Prospect Hill Quarry and Distribution Center
Date: Thursday, September 23, 2021 3:07:16 PM
Attachments: [Carolina Sunrock – Prospect Hill Quarry and Distribution Center.pdf](#)

CAUTION: External email. Do not click links or open attachments unless you verify. Send all suspicious email as an attachment to Report Spam.

Hello,

Attached are my comments for the Carolina Sunrock LLC – Prospect Hill Quarry and Distribution Center permit, numbered 10694R00.

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CleanAIRE NC 	DAISHA WILLIAMS Environmental Justice Manager CleanAIRE NC O 704.307.9528, Ext. 113 M 910.650.4934 www.CleanAIREnc.org 
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Zaynab Nasif
Department of Air Quality
217 West Jones Street
Raleigh, NC 27603

Re. NC DAQ Air Permit No. 10694R00 - Carolina Sunrock, LLC., Prospect Hill Quarry and Distribution Center

Hello, my name is Daisha Williams and I am the Environmental Justice Manager for Clean AIRE NC. This document serves as my public comment on the new permit application for Carolina Sunrock's Prospect Hill Quarry and Distribution Center to demonstrate compliance with NAAQS, numbered 10694R00.

As part of the application process, air modeling was done in order to demonstrate compliance for the proposed Prospect Hill Quarry and Distribution Center after getting denied last year. However, this air modeling failed to analyze the cumulative impacts from a nearby Carolina Sunrock facility (Facility ID:1700015, Air Permit number: 10529R01). Thus, we are requesting that that this draft permit be denied until cumulative impacts from other Sunrock facilities are assessed and determined within this new permit application.

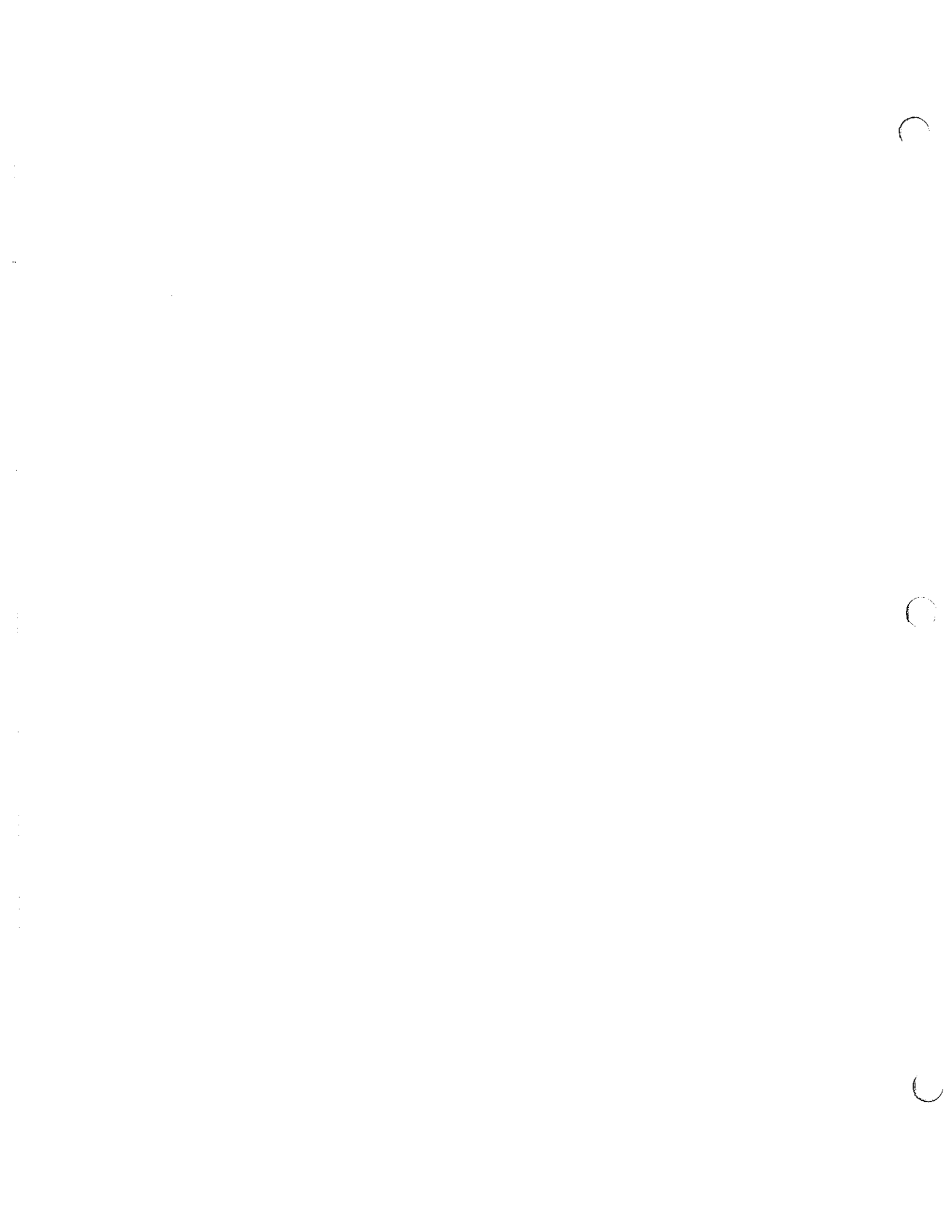
The proposed facility will emit harmful toxic pollutants such as benzene, particulate matter, arsenic, mercury, cadmium, among several others. With an already existing facility spewing similar pollutants, this highlights the need for a cumulative impact assessment. It is the combination of these effects, and any resulting environmental degradation, that should be the focus of this analysis.

We are also requesting for an extension of the public comment period. Carolina Sunrock clearly has high interest in Caswell County, as they are also applying for a permit in Anderson. Due to the volume of proposed facilities, DAQ needs to allow more time for impacted residents to review the appropriate documents for all proposed sites. These are the communities that will have to bear the brunt of air pollution, dust, noise, truck traffic, and exposure to harmful toxins. Therefore, DAQ should extend the comment period and facilitate a process in which community members are made aware of and participate in decisions that will fundamentally affect their quality of life.

DAQ has the opportunity to make a decision that improves the lives of vulnerable North Carolina communities. Updated adequate monitoring which addresses cumulative impacts would help to equip the surrounding community against exposure. Thus, we urge you to do everything in your power to protect public health when issuing air permits for facilities that demonstrate harm in an already sensitive area. Thank you for your attention to these very important issues. We look forward to continuing to work with you to make North Carolina a cleaner, more prosperous state.

Sincerely,

Daisha Williams
Environmental Justice Manager



From: Farmstead Health
To: [SVC_DENR.DAQ.publiccomments](#)
Subject: [External] DELAY PERMIT!
Date: Thursday, September 23, 2021 3:31:13 PM

CAUTION: External email. Do not click links or open attachments unless you verify. Send all suspicious email as an attachment to Report Spam.

- 1. Comment:** I request DAQ deny this air permit application from Carolina Sunrock.
- 2. Comment:** I tried to participate in the public hearing held earlier this week, but our internet was apparently insufficient, as I could never get any audio of the proceedings. I believe you need to hold another public hearing, in Caswell County, in person, properly distanced for the virus, requiring masks.
- 3. Comment:** I am concerned and actually outraged over the news that Sunrock is suing area residents as they have objected to a permit issued by a Caswell County Planner. The lawsuit is clearly meant as intimidation is anti-democratic and anti-environment. Please look into this tactic and do not consider any application while such legal action is underway.
- 4. Comment:** As I understand it, the application is incomplete, contains errors, has contradicting information, and omits critical information for review. Also, it has substantially changed since original submission through revision after revision. DAQ should demand an accurate, complete application from Carolina Sunrock. In reality, Carolina Sunrock is planning to come to Caswell county with 3 asphalt plants, 3 truck mix concrete batch plants, and a 630-acre rock quarry site in a small geographic area. The planned activities will pollute our air, our land, and our water with particulate matter and toxic chemicals. Moreover, the traffic generated will overwhelm NC 86, NC 147, NC 49 and Efland Cedar Grove Road, as Sunrock's trucks take their products to the Triangle and the Triad. Sunrock's initial plan - to construct a single facility, would have exceeded DAQ's requirements. Thus, Sunrock is now applying for multiple "smaller" facilities, but the effect is the same on the local community. We urge you to treat all company facilities in the area as it was originally intended — as one facility, and measure their output accordingly.
- 5. Comment:** DAQ denied the 2019 air permit application because NO2 exceeded NAAQS limits. The public deserves to know why the same level of nitrogen oxides (NOx) is now acceptable.
- 6. Caswell County** has introduced a High Impact Development Ordinance (HIDO) and Sunrock is challenging this in court. Please delay DAQ decision on the air permit until after a court ruling in the lawsuit.

Thank you!
Susan
Farmstead Health Supply
P.O. Box 985
Hillsborough, NC 27278
farmsteadhealth@gmail.com

From: [Bernadette Pelissier](#)
To: [SVC_DENR.DAO.publiccomments](#)
Subject: [External] Carolina Sunrock LLC Proposed Air Quality Permit
Date: Thursday, September 23, 2021 3:31:29 PM

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Thank you for allowing me to make comments on the Carolina Sunrock LLC proposal in Caswell County.

First of all, let me note your mission statement: *“to protect and improve the outdoor air quality of North Carolina. The Division of Air Quality works 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.”*

I find it appalling that Carolina Sunrock is suing neighbors who are objecting to issuing them a permit. What would happen if every company sued residents who object to a proposal? Is Carolina Sunrock trying to set a precedent to intimidate individuals from expressing concerns about projects which may damage their health or the health of their land?

It is clear that Carolina Sunrock is asking for permission to release toxic chemicals at a rate which is unhealthy for the neighbors and surrounding farms. Many have submitted comments detailing this issue.

If you do not deny the permit, at the very least I ask that the Division of Air Quality should not take any further action on this application until after a court ruling in the lawsuit.

Respectfully,

Bernadette Pelissier
Persimmon Hill Farm

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From: [Andrea Castillo](#)
To: [SVC_DENR.DAQ.publiccomments](#)
Cc: jconner@cbsattorneys.com; [Wendy Harpel](#)
Subject: [External] Carolina Sunrock – Prospect Hill Quarry and Distribution Center
Date: Thursday, September 23, 2021 3:46:27 PM
Attachments: [image001.png](#)
[2021.09.23 Carolina Sunrock Comment Letter Final.pdf](#)

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Please see attached correspondence from James L. Conner, in connection with the above referenced matter.

Thank you,
Andrea

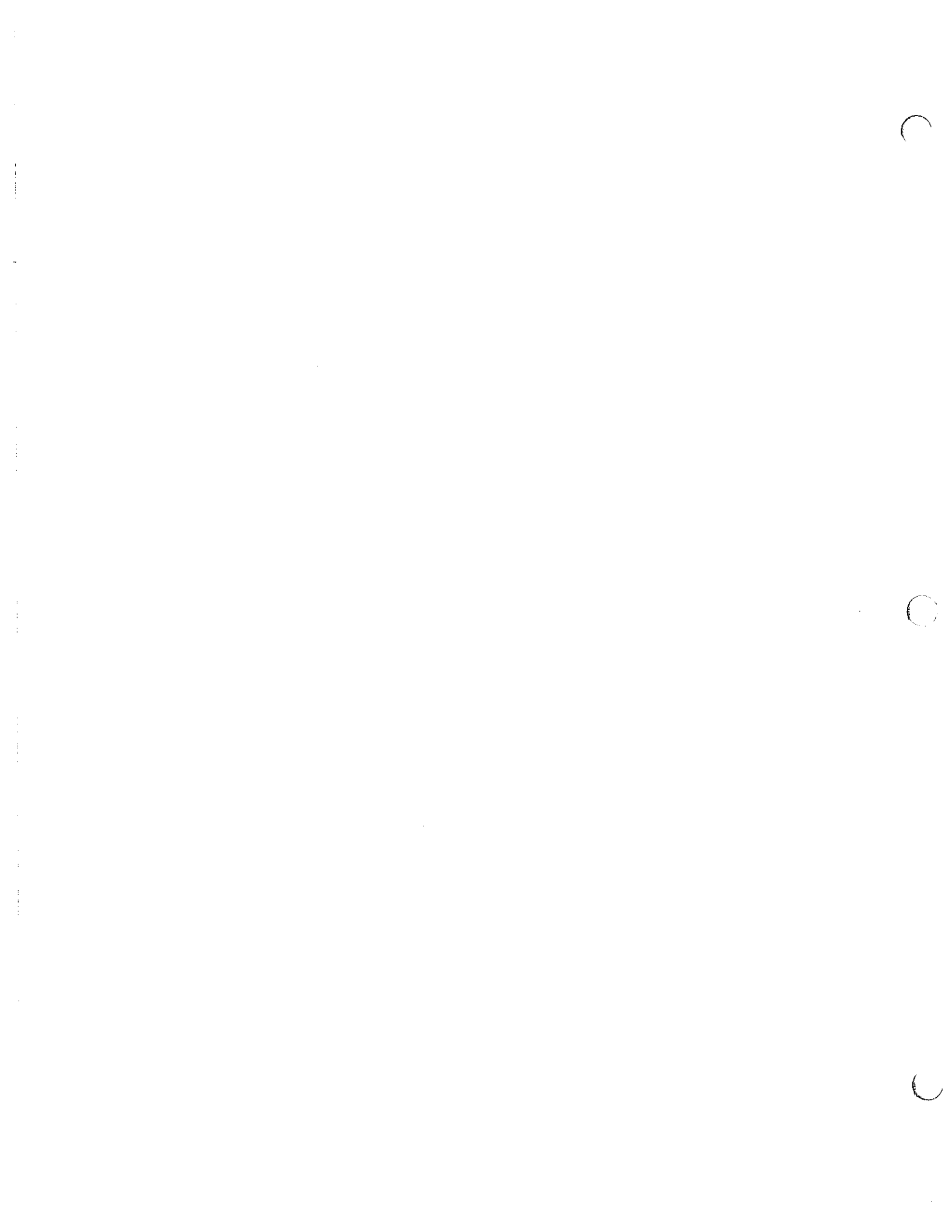
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**CALHOUN
BHELLA &
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ATTORNEYS &
COUNSELORS AT LAW

September 23, 2021

Via Electronic Mail

North Carolina Division of Air Quality
Winston-Salem Regional Office
450 West Hanes Mill Road, Suite 300
Winston-Salem, NC 27105
DAQ.publiccomments@ncdenr.gov

Re: Proposed Air Quality Permits for Carolina Sunrock LLC's Prospect Hill Facility

Dear Permit Officer:

We appreciate the opportunity to submit comments regarding Carolina Sunrock LLC's ("Applicant's") proposed air quality permit for the Prospect Hill (Air Permit No.10694R00) facility ("proposed facility"). My firm represents dozens of Caswell County residents and property owners, and persons who reside in close proximity to the Caswell County border. As the Division of Air Quality ("Division") may already know, there is ongoing litigation related to separate Caswell County permits for the Applicant's proposed facility. In that litigation, the Applicant has sued 57 community members and the local chapter of the NAACP, as well as subpoenaed individuals who were not named as defendants. Accordingly, many community members are hesitant to provide comments on this proposed air quality permit for fear that the Applicant may take additional legal action against them for doing so. For this reason, this letter aims to communicate some of the concerns that have been expressed to the undersigned, and to reiterate certain comments that were provided in response to the previous draft permit (Air Permit No. 10641R00). Please accept these comments for consideration in your final decision regarding the proposed permit.

Community members remain deeply concerned about the residents and businesses within the county and surrounding areas that stand to be negatively impacted by the proposed facility. Their concern is based on the known public and environmental health degradation associated with the criteria and toxic air pollutants that the proposed facilities will emit, and the fact that the permit regulates—but still allows—the community to be exposed to these harmful pollutants. Commenters also are concerned that heavy traffic from the proposed facilities will strain the county's rural infrastructure at local residents' and business' expense. Further, Commenters are

JAMES L. CONNER II
PARTNER



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dismayed that the draft permit does not sufficiently limit emissions since the Division has considered the project in isolation rather than aggregated with nearby facilities to reflect the collective facilities' true nature as a single source.

We urge the Division to delay issuing the draft permit, formally conduct a source aggregation analysis, and reissue the draft permit for public notice and comment only if the concerns explained in this letter have been addressed. We also urge the Division to require the Applicant to provide additional, corrected emissions information as described below.

I. Background

Caswell County is a predominantly rural county, with over 99% of its population living in rural areas.¹ Not surprisingly, over 40% of the county's total acreage is comprised of farmland acres,² and the majority of residents and businesses depend on private wells for drinking water. Like other rural communities across the state and nation, Caswell County already faces economic and public health stressors all too common in rural areas. As the Draft Environmental Justice Report points out, the North Carolina Department of Commerce ranks Caswell County as a Tier 1 county, meaning that it ranks among the 40 most distressed counties of North Carolina's 100 counties based on the average unemployment rate, median household income, percentage growth in population, and adjusted property tax base per capita.³ Caswell County was a Tier 2 community in 2019.

Also noted in the Draft Environmental Justice Report ("Report") is the fact that Caswell County ranks 73rd in health factors (health behaviors, clinical care, social and economic factors, and physical environment), and 78th in overall health outcomes (length of life and quality of life) based on 2021 data. This data shows a decrease in both health factors and overall health outcomes as compared to the 2020 rankings.⁴ These economic and health trends are especially concerning given the sensitive receptors surrounding the proposed facility, some of which are identified in the Report.

¹ North Carolina Department of Commerce, *Caswell County (NC) County Profile* (March 2020), available at <https://accessnc.nccommerce.com/DemoGraphicsReports/pdfs/countyProfile/NC/37033.pdf>.

² N.C. Cooperative Extension & UNC School of Government, *An Agricultural Inventory of Caswell County, North Carolina* (Sept. 2010), available at <https://ced.sog.unc.edu/wp-content/uploads/2010/11/CaswellCountyInventory2010.pdf>.

³ Available at <https://www.nccommerce.com/grants-incentives/county-distress-rankings-tiers>.

⁴ University of Wisconsin Population Health Institute & Robert Wood Johnson Foundation, *County Health Rankings & Roadmaps* (2020), available at <https://www.countyhealthrankings.org/app/north-carolina/2020/rankings/caswell/county/outcomes/overall/snapshot>; https://www.countyhealthrankings.org/sites/default/files/media/document/CHR2020_NC_0.pdf.

Based upon the DEQ Environmental Application Tracker⁵ and the Division's Air Quality GIS/Facility Mapping Tool,⁶ the county currently is home to relatively few permitted and proposed facilities, which helps it to maintain a relatively safe and healthy environment for its residents and businesses despite other stressors. Of note is Duke Energy's Roxboro Plant, a coal-fired power plant located in the northeastern part of Caswell County, that emits many of the same criteria and toxic air pollutants as asphalt plants.⁷ As of the date of this letter, the proposed Burlington North and Prospect Hill facilities represent 2 out of 7 projects with pending permits, and are the only 2 awaiting air quality permits.⁸ Of facilities with existing air quality permits, Carolina Sunrock's already-permitted facility at 4266 Wrenn Road in Prospect Hill (Air Permit No. 10529R01) is 1 of 3 permitted facilities.⁹ If the pending permits are approved, Carolina Sunrock would represent half of all Division-permitted facilities in the county—a significant change for this community.

Residents and business owners have made clear that they wish to protect their community from the proposed facilities' negative impacts that threaten their health and livelihoods. During the North Carolina Division of Energy, Mineral and Land Resources' ("DEMLR's") public hearing for Carolina Sunrock's Prospect Hill mining permit,¹⁰ over 200 concerned citizens explained how the 426-acre quarry, which would supply the facility currently under review by the Division, would harm their health, the surrounding environment, and their livelihoods.¹¹ Put differently, the majority of citizens who will be most affected by the proposed facility are threatened, not encouraged, by the Applicant's intended industrial expansion.

⁵Available at

<https://ncdenr.maps.arcgis.com/apps/webappviewer/index.html?id=888c0ccbd48b4c7dacd96a1bf60d5b46>.

⁶Available at

<https://ncdenr.maps.arcgis.com/apps/webappviewer/index.html?id=6ad5e0c5b5984419a76375eb4fdd6dfe>.

⁷ See Air Quality Permit No. 01001T56 (Nov. 27, 2018),

<https://files.nc.gov/ncdeq/Coal%20Ash/documents/Coal%20Ash/air-quality/Roxboro-7300029-permit-010001T56.pdf>.

⁸ Available at

<https://ncdenr.maps.arcgis.com/apps/webappviewer/index.html?id=888c0ccbd48b4c7dacd96a1bf60d5b46>.

⁹ Available at

<https://ncdenr.maps.arcgis.com/apps/webappviewer/index.html?id=6ad5e0c5b5984419a76375eb4fdd6dfe>.

¹⁰ DEQ, *State Seeks Public Feedback on Carolina Sunrock Mining Permit* (Oct. 18, 2019), available at <https://deq.nc.gov/news/press-releases/2019/10/18/state-seeks-public-feedback-carolina-sunrock-mining-permit>.

¹¹ State Representative Graig Meyer, *We Must Protect Our Rural Communities. Help Me Do It.* (Nov. 13, 2019), available at <https://www.graigmeyer.com/2019/11/we-must-protect-our-rural-communities-help-me-do-it/>.

The proposed facility represents an unprecedented industrial expansion for Caswell County, and one being considered despite its questionable necessity and certain negative impacts.

II. Concerns with the Draft Permit for the Prospect Hill Facility

The health effects of criteria pollutant and toxic air pollutant emissions from asphalt plants are well known and well documented.¹² Health effects include respiratory, cardiovascular, neurological, and carcinogenic health impacts in humans and animals.¹³ Likewise, it is well known that there are multiple exposure pathways for air pollution, making it a potential threat to air, land, and water quality:

After release of a stressor in ambient air, it can be dispersed through ambient air and/or deposited on plants, soil, or surface water. Air pollutants can either be deposited directly onto the surface of water or land (direct deposition) or be deposited and transported to other media (e.g., through run off) (indirect deposition). Eventually, all particles in the ambient air are deposited (dry deposition) or washed out (wet deposition) to aquatic or terrestrial systems (e.g., soil and plants). Contaminants could be subsequently transferred to other environmental media or biota.¹⁴

For these reasons, it is imperative that the Division addresses the cumulative impacts Carolina Sunrock's proposed facilities and existing permitted facility will have when their emissions are considered together. At the very least, the Division must conduct a source aggregation analysis for the Prospect Hill facility, taking into account its permit terms, close proximity to the proposed Burlington North facility, and impacts paired with those attributable to Carolina Sunrock's permitted facility located at 4266 Wrenn Road.

Source aggregation refers to when the Environmental Protection Agency ("EPA") or state agency considers multiple activities or facilities to be collectively permitted as a single source, and emissions from each activity or facility are aggregated.¹⁵ EPA's test for determining whether multiple activities or facilities should be considered a single source for Title V and/or Prevention of Significant Deterioration ("PSD") permitting

¹² See, e.g., CDC, National Institute for Occupational Safety and Health, *Asphalt Emissions Including Fumes*, <https://www.cdc.gov/niosh/topics/asphalt/default.html> (last visited Sept. 19, 2021); CDC, *Air Pollutants*, <https://www.cdc.gov/air/pollutants.htm> (last visited Sept. 19, 2021).

¹³ *Id.*

¹⁴ EPA, *EPA EcoBox Tools by Exposure Pathways – Air*, <https://www.epa.gov/ecobox/epa-ecobox-tools-exposure-pathways-air> (last visited Sept. 19, 2021).

¹⁵ Anne L. Idsal, EPA Acting Assistant Administrator, *Interpreting "Adjacent" for New Source Review and Title V Source Determinations in All Industries Other Than Oil and Gas* (Nov. 26, 2019), available at https://www.epa.gov/sites/production/files/2019-12/documents/adjacent_guidance.pdf.

consists of three parts: determining that the activities or facilities 1) are under common control; 2) have the same two-digit Standard Industrial Classification ("SIC")¹⁶ code; and 3) are co-located, meaning located on adjacent or contiguous properties.¹⁷

Interestingly, the Division's regulations seemingly anticipate the type of analysis necessary to properly account for multiple facilities' cumulative, or aggregated, impacts. The Division defines "facility" in its 02D and 02Q rules as "all pollutant-emitted activities, except transportation facilities, that are located on one or more adjacent properties under common control."¹⁸

Following years of uncertainty and litigation regarding the term "adjacent," EPA published a final memorandum for EPA Regions 1-10 and state permitting authorities in late 2019 that clarifies what EPA understands this word to mean, and suggests that state agencies follow this guidance while retaining their own discretion in making case-by-case determinations.¹⁹ Per EPA:

Therefore, in sum, for purposes of making source determinations for NSR and title V, EPA interprets the term "adjacent" to entail physical proximity between properties. From this point forward, EPA will consider properties that do not share a common boundary or border, or are otherwise not physically touching each other, to be "adjacent" only if the properties are nevertheless nearby, side-by-side, or neighboring (with allowance being made for some limited separation by, for example, a right of way). This is inherently a case-specific inquiry where determining the appropriate distance at which two properties are proximate enough to reasonably be considered "adjacent" may vary depending on the nature of the industry involved. Therefore, EPA is not here establishing or recommending a "bright line," or specifying a fixed distance, within which two or more properties will be deemed (or presumed) by EPA to be in close enough physical proximity to be considered "adjacent." In each case, this determination should ultimately approximate the "common sense notion of a plant."²⁰

Although EPA issued this guidance to encourage consistency among permitting agencies, it also emphasizes that state agencies are not bound by EPA's interpretations.²¹ Ultimately, the Division must interpret its own regulations in issuing final permits such that they reflect a "common sense notice of a plant."

Both proposed facilities and the permitted facility at 4266 Wrenn Road undoubtedly meet the first two criteria. Both the proposed and permitted Prospect Hill

¹⁶ Available at <https://cfpub.epa.gov/rblc/index.cfm?action=PopUp.SIC>.

¹⁷ *Id.*, *supra* note 15.

¹⁸ 15A NCAC 02D .0101(16); 15A NCAC 02Q .0103(15).

¹⁹ *Id.*

²⁰ *Id.*

²¹ *Id.*

facilities on Wrenn Road undoubtedly meet the third criterion. Although it is less clear whether the Burlington North proposed facility should be aggregated, the Division must undertake the source aggregation analysis to confirm and document its final permitting decisions. Further, fugitive emissions must factor into this analysis for both proposed facilities.²²

With respect to the permit application itself, it appears that the Applicant's emissions calculations provided in Form D1 may not accurately reflect actual total emissions for the facility. The applicant's 2019 and 2021 applications provide emissions information differently which makes apples-to-apples comparisons of emissions data difficult. For example, Appendix A1 in the 2019 application provided emissions totals for the Prospect Hill Quarry and Distribution Center alone, whereas Appendix A1 in the 2021 application appears to combine emissions for both the Prospect Hill and Burlington North facilities. The 2021 emissions totals also do not include a column for potential emissions with synthetic minor limits, and do not provide the totals for criteria pollutants and TAPs in the same table, which would have allowed for easy comparison of emissions differences by the public. Based on the information provided, however, it appears that emissions for particular HAPs, including formaldehyde, may have increased beyond what may be attributable to using ultra-low sulfur diesel ("ULSD") for the asphalt cement heaters—the only change noted by the Applicant in the 2021 application. Commenters request that the Division require the applicant to provide updated emissions totals for the Prospect Hill facility that allow for comparison with the Applicant's 2019 numbers, and that this information be provided to the public along with the other permit documents. Commenters also request that the Division provide an explanation for the apparent emissions increases and whether those are wholly attributable to the use of ULSD.

Further, Commenters are concerned about the concentration of emissions that might accumulate at the property boundaries, or "fence lines," of the Prospect Hill proposed facility given its location relative to the permitted facility at 4266 Wrenn Road and neighboring non-industrial properties. As the draft permit for the Prospect Hill proposed facility notes, the Division regulates emissions to the regulated property's boundary or fence line. For any non-industrial properties or public areas (e.g., Wrenn Road itself) that border both Prospect Hill facilities, it is entirely possible that the cumulative, concentrated emissions coming from the Prospect Hill facilities will in fact surpass allowable criteria pollutant standards and toxic air pollutant acceptable ambient levels. With respect to neighboring properties, however, it is difficult to precisely determine the boundaries of the proposed facilities in relation to each other and in relation to Carolina Sunrock's existing permitted facility located at 4266 Wrenn Road.²³

²² 40 C.F.R. § 51.166(b)(1); *see also* John S. Seitz & Eric Schaeffer, Potential to Emit (PTE) Guidance for Specific Source Categories (Apr. 14, 1998), available at <https://www.epa.gov/sites/production/files/2015-08/documents/lowmarch.pdf>.

²³ For reasons that are not obvious to Commenters, the permitting documents for the facility located at 4266 Wrenn Road also provides the street address of 57 Wrenn Road.

What is known is that together these facilities will comprise hundreds of acres in close proximity.²⁴ Although mapping the street addresses associated with each unpermitted and permitted facility confirms that they are closely located to each other, there is a need for maps that clearly show the parcels and project boundaries of each project individually, and in relation to each other. These maps also should include a scale showing distance between facility boundaries. The Division should request that Carolina Sunrock provide these maps to the Division and the public before any final permitting decisions are made. Providing these maps will ensure that those involved with and/or affected by the proposed facilities have full, transparent information.

III. Related Concerns

As described above, the deposition from the proposed facilities' air emissions stands to threaten Caswell County's farmlands, surface waters, and groundwaters. That is particularly concerning given the county's reliance on agricultural and forestry production and private wells, and its long history of high-quality soils and groundwater.²⁵ Within 1 mile of the proposed facilities exist cattle grazing operations, where deposition of airborne pollutants on grasses will impact the purity and safety of meat and milk from those cattle. Also within 1 mile of the proposed facilities are strawberry farms, which are particularly susceptible to the types of pollutants emitted by asphalt plants.²⁶ In addition, Caswell County residents outside of the Town of Yanceyville's Public Works Department's service boundary are dependent on private wells for their drinking water.

Air emissions and resulting deposition also pose a threat beyond those sensitive receptors and sensitive populations identified in the Draft Environmental Justice Report. For example, United Support Services, Inc., a licensed Alternative Family Living facility located at 1262 Tom Bowes Road in Hurdle Mills, houses disabled adults. This sensitive group would be exposed to increased criteria pollutants and toxic air pollutants if the draft permit were approved.

Commenters are similarly concerned about the Division finalizing the draft permit for the Prospect Hill proposed facility *before* DEMLR has issued a final mining permit since the extent of the activities allowed under the mining permit (e.g., operating hours

Clarifying whether both addresses belong to the same facility would assist the community in fully assessing the scope and extent of Carolina Sunrock's facilities.

²⁴ Based on available information, Carolina Sunrock either owns or leases real property in Caswell County under the following names: Carolina Sunrock LLC, Caswell Properties LLC, Prospect Hill Farms LLC, and Investment Tree LLC. Accordingly, all parcels that will be included within each facility's project boundaries must be included in the yet-to-be-provided maps regardless of owner or lessor name.

²⁵ E.g., Jerry Dorsett & Gerry Cohn, *Caswell County Farmland Protection Plan* (2013), available at <https://caswell.ces.ncsu.edu/wp-content/uploads/2013/07/Caswell-County-Farmland-Protection-Plan1.pdf?fw=no>; NCDHHS, *Contaminant Maps by County* (2011), available at https://epi.dph.ncdhhs.gov/oe/wellwater/by_county.html.

²⁶ Dr. Gerald Brust, *Air Pollution Effects on Vegetables* (Mar. 13, 2013), <https://extension.umd.edu/learn/air-pollution-effects-vegetables>.

and annual quarry production) necessarily will affect the terms of the air quality permit. The Division should delay finalizing the draft permit until the mining permit's terms are finalized. Adopting this approach would give the Division an opportunity to incorporate more complete information in its permitting decision, and consequently protect neighboring properties. Of particular concern is the Lake Roxboro recreational area, owned by the City of Roxboro, that is contiguous with the proposed quarry's eastern project boundary.²⁷ At present, it is difficult to envision a scenario where Carolina Sunrock could operate under the pending mining and air permits without substantially degrading the Lake Roxboro property to a point of rendering it unsuitable for its current uses. Under this scenario, North Carolina's Mine Safety and Health Act may require denial of the pending mining permit for having a "significantly adverse effect on the purposes of a publicly owned park."²⁸

Finally, Commenters doubt that the actual need for additional asphalt capacity in Caswell County and surrounding areas exists. North Carolina already is home to over 150 asphalt facilities,²⁹ and recent budget constraints have resulted in projected declines in road infrastructure maintenance and construction.³⁰

IV. Conclusion

In summary, Commenters respectfully request that the Division take the following actions with respect to the draft permit for the Prospect Hill proposed facility:

- Perform a source aggregation analysis, and re-issue the draft permit for notice and comment in light of necessary aggregation;
- Require Carolina Sunrock to provide additional necessary information before further consideration is given to issuance of the permit;
- Delay permit issuance until DEMLR has issued a final mining permit;

²⁷ See

<https://files.nc.gov/ncdeq/Energy%20Mineral%20and%20Land%20Resources/Land%20Quality/Mining/alamance-aggregates-llc/Sheet-3-Permit-Boundary-Map-Sunrock-24X36.pdf>.

²⁸ N.C. Gen. Stat. § 74-51(d)(5); *Clark Stone Co., Inc. v. N.C. Dep't of Env't & Natural Res.*, 164 N.C. App. 24, 29-30 (2004) (holding that the Department properly revoked a mining permit for operations that would have had significant adverse impacts on the Appalachian Trail).

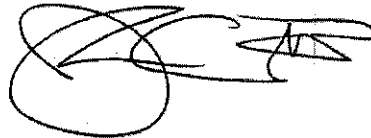
²⁹ DEQ, *Asphalt Plants*, <https://deq.nc.gov/about/divisions/air-quality/air-quality-permits/asphalt-plants> (last visited Sept. 19, 2021); Carolina Asphalt Pavement Association, *Map of Member Asphalt Plants*, http://www.carolinaasphalt.org/aws/CAPA/pt/sp/asphalt_plants (last visited Sept. 19, 2021).

³⁰ Richard Stradling, *NCDOT Announces Layoffs and Construction Delays as Coronavirus Outbreak Saps Revenue* News & Observer, Apr. 21, 2020, available at <https://www.newsobserver.com/news/local/article242155496.html>.

- Consult with other Divisions within DEQ and the Department of Health and Human Services with permitting or other regulatory authority over the full range of activities and impacts that the proposed facility will entail; and
- Deny the permit application unless the above concerns are adequately addressed; alternatively, if the concerns are addressed then reissue the draft permit for public notice and comment.

Thank you for the opportunity to comment on this important matter, and please do not hesitate to contact me if you have any questions about the above comments. We welcome the opportunity to engage with the Division of Air Quality on these permitting issues.

Sincerely,

A handwritten signature in black ink, appearing to read 'James L. Conner, II', with a large circular flourish on the left side.

James L. Conner, II
Partner
Calhoun, Bhella & Sechrest, LLP



From: Rob and Cheri Bowers
To: SVC_DENR.DAQ.publiccomments
Subject: [External] Deny Carolina Sunrock air quality permit
Date: Thursday, September 23, 2021 4:02:21 PM

CAUTION: External email. Do not click links or open attachments unless you verify. Send all suspicious email as an attachment to Robert Spear.

Dear Department of Air Quality.

I ask that you deny Carolina Sunrock's air quality permit. This company is **suing 55 neighbors when they exercised their right to object to a local permit that was issued by our county Planner. The lawsuit is seen as intimidation and has had a chilling effect on people wanting to come forward and speak out against the projects.**

Carolina Sunrock is planning to come into our county with 3 asphalt plants, 3 truck mix concrete batch plants, and a 630-acre rock quarry site. The planned activities will pollute our air, our land, and our water with particulate matter and toxic chemicals. Some chemicals will be released from smokestacks at toxic levels higher than considered healthy for humans and will require DAQ permits to do so. Carolina Sunrock is requesting permission to pollute these toxic chemicals at maximum rates that are much higher than they will produce too. Carolina Sunrock estimated they will pollute a total of **238 pounds per year of benzene** from their entire facility, however, you are drafting a permit to allow them to pollute **854 pounds per year from just the asphalt drum**. Allowing the facility to pollute over three and a half times more than they estimated does not improve the outdoor air quality of North Carolina or protect its citizens. DAQ should not permit toxic chemicals at these high rates and should restrict them as much as possible to protect the environment and our citizens. We are organic farmers and this is very upsetting to us affects on our crops.

In addition, Caswell is a poor county, with elderly residents, little access to health care, and with nearly half the residents lack internet access with very little way to protest a huge corporation.

Please deny this permit. Please!

Cheri Bowers
Whitted Bowers Farm
Cedar Grove, NC 27231
c: 919.619.5782
www.whittedbowersfarm.com

Our organic blueberry u-pick is now closed for the 2021 season.



From: [Rob Bowers](#)
To: [SVC_DENR.DAO_publiccomments](#)
Subject: [External] Sunrock LLC Proposed Air Quality Permit
Date: Thursday, September 23, 2021 4:36:41 PM

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Thank you for the opportunity to voice my concerns about the Sunrock LLC Proposed Air Quality Permit. I believe this permit should be denied for the following reasons:

1. Carolina Sunrock is planning to come into Caswell county with three asphalt plants, three truck mix concrete batch plants, and a 630-acre rock quarry site. The planned activities will pollute our air, our land, and our water with particulate matter and toxic chemicals. Some chemicals will be released from smokestacks at toxic levels higher than considered healthy for humans. The mission of the DAQ is *"to protect and improve the outdoor air quality of North Carolina. DAQ works 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."* Approval of the Sunrock Air Quality Permit would run counter to the stated public mission of the DAQ.
2. The application is incomplete, contains errors, has contradicting information, and omits critical information for review. Importantly, it has substantially changed since the original submission after subsequent revisions. DAQ should require, if not demand, an accurate, complete application from Carolina Sunrock.
3. Sunrock's initial plan to construct a single facility was in violation of DAQ requirements. Sunrock is now applying for multiple smaller facilities, but the effect is the same on the community, and on air quality. All company facilities in the area should be treated as one facility, and their output and impact should be measured cumulatively.
4. DAQ denied the 2019 air permit application because NO₂ exceeded NAAQS limits. Why would the same level of nitrogen oxides (NO_x) now be deemed acceptable?
5. Sunrock is suing area residents because they have exercised their civic rights afforded them via statute. The lawsuits are designed to intimidate. Sunrock's tactics are bullying, malicious, and anti-democratic. The application should not be actively considered until the legal action has run its course.
6. The facility will have detrimental effects on northern Orange residents as well as southern Person residents. Residents of these counties should be afforded the opportunity for public hearings as well.

Thank you for your consideration.

Rob Bowers



From: Sally Greene
To: SVC_DENR.DAO_publiccomments
Subject: [External] Carolina Sunrock LLC Proposed Air Quality Permit – Prospect Hill
Date: Thursday, September 23, 2021 6:29:46 PM

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To the Division of Air Quality:

I join my friends and neighbors in Caswell and Orange County to ask that you deny the air permit application from Carolina Sunrock.

In addition to all of the good reasons that others are offering, as a member of the Orange County Board of Commissioners I am puzzled to point out that my board received no formal notice of the hearings.

Had we been informed of the opportunity to be heard, we surely would have conveyed the concerns of our constituents, for the proposed asphalt plant will definitely have a negative effect on the quality of life of many Orange County residents. That impact will be felt in the heavy truck traffic coming into and out of Orange county on Hwy. 86 and Efland Cedar Grove Road, as well as, more critically, the toxic pollutants whose range will extend for miles from the site. Everyone who stands to be impacted by this project deserves a chance to inform your decisionmaking with their perspectives.

I urge you to deny the permit. Alternatively, please consider continuing the hearing with proper notice to Orange County residents and elected officials so that our voices may be heard.

Sincerely yours,
Sally Greene

--
Sally Greene, Orange County, N.C. Commissioner-at-large
sallygreene.org
[@gosallygreene](https://twitter.com/gosallygreene)
919-260-4077

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From: Gay Gasper Pleasant
To: SVC_DENR.DAQ.publiccomments
Subject: [External] CarolinaSunrockProspectHillQuarryandDistributionCenter
Date: Thursday, September 23, 2021 7:55:52 PM

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To the DAQ:

I am a resident of Prospect Hill and am representing myself.

My husband and I are members of the Methodist Church directly across from the proposed Sunrock Quarry. We also live 1/2 mile from the proposed asphalt plant on Wrenn Road (which should never have been approved).

This application and all future air permit applications related to this project in our area should be denied.

First of all, when all of Sunrock's asphalt plants proposed for our county are taken into consideration, the cumulative level exceeds what should be allowed. Look on a map how close the proposed asphalt plants at the main quarry and the Wrenn Road facility are to one another!

Secondly, as far as the application under consideration is concerned - the 2nd try by Sunrock - there have been requests from community members for emails and other communications that might impact the approval or denial if pointed out. We have not had enough details prior to the hearing to find all of these discrepancies.

Third, Sunrock has filed a lawsuit against a group of neighbors who rightfully and lawfully petitioned our county planner regarding a watershed permit he issued. The outcome of this legal action may affect the project. This is just the latest example of the behavior our community has witnessed from this company, beginning from when an entity registered with the state as "Prospect Hill Farms LLC" got property here (sharing a registered address in Raleigh with Carolina Sunrock but with an LLC name that would enable them to fly under the radar without raising public attention in those legal notices in the newspaper).

Finally, I MUST OBJECT to the format in which the hearing was held. Many

of us in Caswell have poor internet connections; I tried to listen to the hearing on my computer, and noticed that MANY speakers were not able to communicate and be heard. If this had been held in person, the impact would have better reflected the high level of opposition to this development in the Prospect Hill (and Anderson) communities.

Thank you again for your consideration in this matter.

Gay Pleasant
1268 Painter Road
Prospect Hill, NC 27314

From: [Pamela Schwingl](#)
To: [SVC_DENR.DAO.publiccomments](#)
Subject: [External] Carolina Sunrock Suit against residents speaking up about a permit
Date: Thursday, September 23, 2021 8:27:46 PM

CAUTION: External email. Do not click links or open attachments unless you verify. Send all suspicious email as an attachment to ReportSpam.

First of all, I request DAQ deny the air permit application from Carolina Sunrock. The internet for the public hearing held this week was insufficient; for this reason a second public hearing in Caswell County would be in order. This is not a way to conduct business.

That sunrock is suing residents for objecting to the permit issued by a Caswell County planner is unacceptable. It is the basest form of intimidation. Please look into this kind of tactic and do not consider any application which this legal action is underway.

As I understand it, the Sunrock application is incomplete, contains errors, has contradicting information, and omits critical information for review. Also, it has substantially changed since original submission through revision after revision. DAQ should demand an accurate, complete application from Carolina Sunrock.

Their plan is to bring 3 asphalt plants, 3 truck mix concrete batch plants, and a 630-acre rock quarry site into a very small small geographic area.. The planned activities will pollute our air, our land, and our water with particulate matter and toxic chemicals. Moreover, the traffic generated will overwhelm NC 86, NC 147, NC 49 and Efland Cedar Grove Road, as Sunrock's trucks take their products to the Triangle and the Triad.

Sunrock's initial plan - to construct a single facility, would have exceeded DAQ's requirements. Thus, Sunrock is now applying for multiple "smaller" facilities, but the effect is the same on the local community. We urge you to treat all company facilities in the area as it was originally intended — as one facility, and measure their output accordingly.

Pam Schwingl and Patrick Mann

5 miles south of Prospect Hill site.

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Carolina Sunrock Public Comments (received by VoiceMail)

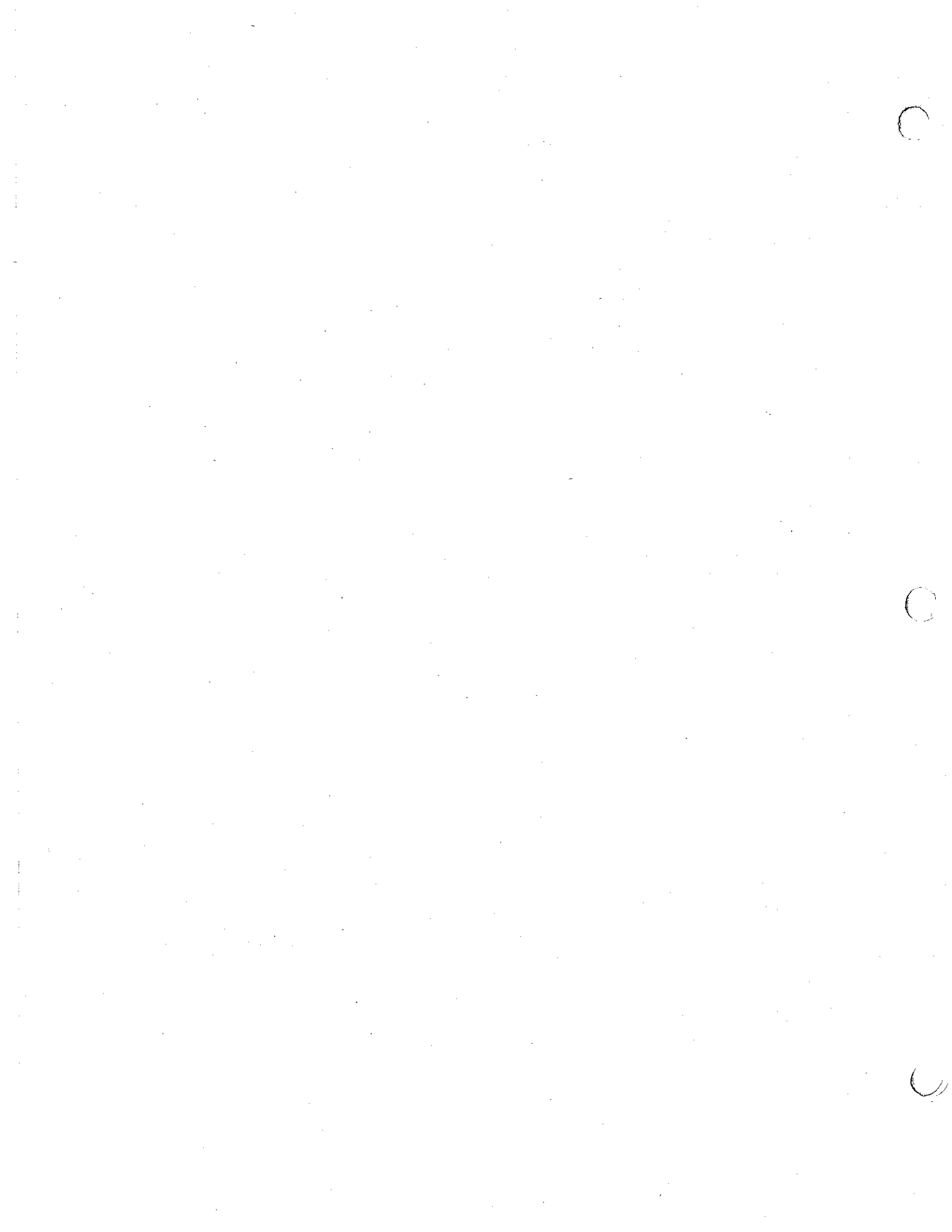
Prospect Hill

Tuesday 9/21/21

Good afternoon, my name is Dr. Martinelli, I'm calling to stop the deadly polluting of the Prospect Hill community by Carolina Sunrock and their asphalt plant and quarry cement plant and distribution center. We must never forget that they began by befriending the community and now are suing the very same people. We will not submit to being poisoned by the pollutant that Carolina Sunrock business will bring to our air, soil, wells, and our homes. Stop Carolina Sunrock. Stop Carolina Sunrock. Thank you.

9/21/21

Hello, this is my statement for my Carolina Sunrock Prospect Hill Quarry and Distribution Center hearing that will be held tonight on 9/21. My name is Dawn Dougherty(?). I reside at 2685 Ridgeville Road in Prospect Hill, NC directly across the street from from the proposed quarry and asphalt plant site. I am speaking today to ask the DEQ to please deny the Carolina Sunrock permits to operate in Prospect Hill. I am one of the 55 Prospect Hill residents defending myself against the lawsuit filed against us by the company. Based on this, there were many people who would have been speaking today but are scared to speak at all as the company has well-known tactics to silence their opposition and limit public participation. We are attempting to exercise our right in appealing to Caswell County to deny this permit that we felt were wrongly issued. When we were first notified of this project, Sunrock told us that it wanted to be good neighbors with us. This is a line that they use in their own press releases as well. I'm not sure where in the world this is neighborly, but certainly not in my world. We are extremely concerned about this site as we live in a 130-year old home, that is not insulated well or air-tight. My husband and I are gardeners, and we grow much of our own organic food. I own a small (??) business and I grow some of my own herbs for my business and was hoping to expand my growing business as well as my hobby farm. Our plan is to also become beekeepers and possibly raise chickens. I am holistic healer, a business I hope to grow here as well. I see clients and students in my home. My husband is also a renowned flute maker, and we depend on clean air to be able to play these instruments. Air quality is a huge concern because of these things and potential cancer-causing airborne particulates getting into my home, breathed by us, my clients, and our animals, as well as being outside for any amount of time to grow food, a garden will be impossible if this potentially destructive operation is allowed here. Our neighbors and many residents of Caswell county, our vegetables, livestock, chicken, tobacco, and hemp farmers depend on clean air and clean products. As well as our Asian population, many of whom have breathing issues. As an agriculture and recreational county, we need clean air and water here and we have no recourse if it is polluted. If I were to stay here in my home, the only future I see for myself and my husband is potentially fighting lung cancer or other severe health issues, as we are directly across the street from the proposed site of the quarry, asphalt plant, and concrete facility. The blasting and silica dust alone is enough to pollute my air on a daily basis, not to mention the mix toxic chemicals pumped out constantly from the asphalt plants. This company wants to operate asphalt plants 10 miles of each other – why? Because of the pollution from these operations, the air quality of Caswell County will suffer greatly if this is to be allowed. Based on this company's history of using the court to intimidate and silence, we do not trust to be "good neighbors." I am asking that DAQ deny these permits for Carolina Sunrock, and I thank you for your time.



**Carolina Sunrock, LLC. – Prospect Hill
Quarry and Distribution Center
Draft Environmental Justice Report**

North Carolina Department of Environmental Quality
August 9, 2021

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1 Introduction

Environmental justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies (US EPA). This evaluation examines the demographic and environmental conditions in Caswell and Person Counties, census tracts 9306 and 9206.01, and the one-mile radius around the property boundary of the proposed Carolina Sunrock, LLC. – Quarry and Distribution Center facility. Finally, the demographics of the entire state of North Carolina are also considered as they compare to both the county and local census tract and radius settings.

An Environmental Justice (EJ) Snapshot was prepared in August 2020, at the beginning of the previous application process. The EJ Snapshot was distributed to interested community members (if known) and published on the DEQ website with the relevant permit application. The purpose of the EJ Snapshot was to encourage comments and suggestions from the surrounding community, industry, and environmental groups throughout the comment period at that time. The public hearing and accompanying comment period was extended three times in 2020 due to COVID-19, community concerns, and inclement weather. Carolina Sunrock LLC did not receive a permit from the Division of Air Quality in 2020, so has reapplied for a similar permit. Public comments will be considered throughout the remainder of the comment period to inform the final version of this EJ Report.

2 Environmental Justice Evaluation

The Department has assessed the permit applications and the potential impact on communities surrounding the sites associated with the requested permit applications. Carolina Sunrock LLC. submitted two separate permit applications for two locations. This Draft EJ Report only includes information regarding the Quarry and Distribution Center Facility. Please review the accompanying Draft EJ Report for information on the Burlington North Facility. Accordingly, the Draft EJ Report will include:

- The permit application submitted by Carolina Sunrock, LLC for the Quarry and Distribution Center
- Facility emissions overview
- Study of area demographics (determined by utilizing the US EPA Environmental Justice tool (EJSCREEN) <https://ejscreen.epa.gov/mapper/> and current, available census data. <https://data.census.gov/cedsci/>)
- Comparison of local area demographics to both county and statewide census data
- County health assessment for all counties
- Sensitive receptors surrounding the facility
- Local industrial sites surrounding the facility (using the NCDEQ Community Mapping System <https://ncdenr.maps.arcgis.com/apps/webappviewer/index.html?id=1eb0fbe2bcfb4cccb3cc212af8a0b8c8>).

Demographics for Caswell and Person counties, as well as the state, will be compared to the local level data (census tracts and project radius) to identify any disparities surrounding the project area. Using standard environmental justice guidelines from the EPA and National

Environmental Policy Act (NEPA) documentation, the following conditions will be flagged as potentially underserved communities:

- 10% or more in comparison to the county or state average
- 50% or more minority
- 5% or more in comparison to the county or state average for poverty

3 Proposed Project

Carolina Sunrock, LLC. has submitted permit applications for two proposed sites in Caswell County, North Carolina. One is a hot mix asphalt and concrete batch plant, while the other is a quarry, hot mix asphalt plant, concrete batch plant, and distribution center. They are located approximately nine miles apart from each other. This Draft EJ Report only includes information regarding the Quarry and Distribution Center Facility. Please review the accompanying Draft EJ Report for information on the Burlington North Facility.

The proposed site of Carolina Sunrock LLC-Prospect Hill Quarry and Distribution Center, will include a rock quarry with associated stone processing equipment, hot mix asphalt plant, and concrete batch plant. The site also includes diesel and propane/natural gas-fired reciprocating internal combustion engine (RICEs) to power site equipment. The proposed quarry will include crushing, conveying and screening equipment, to be controlled by wet suppression. The proposed asphalt plant will include a 250 tons per hour maximum capacity drum-type dryer/mixer with an 80 million BTU per hour maximum heat input capacity burner capable of combusting propane, natural gas, No. 2/4 fuel oils, and recycled No. 2 fuel oil. Particulate matter emissions from the mixer will be controlled by a bagfilter. The plant will include 5 hot mix asphalt storage silos, asphalt truck loadouts, and a Recycled Asphalt Pavement (RAP) crushing, screening and conveying system. Primary site power will be provided by three natural/gas propane-fired generators equipped with catalytic oxidation systems. Additional diesel engines will provide mechanical energy for quarry equipment.

Potential emissions of criteria and hazardous air pollutants (after emissions controls and permit limits are taken into account) are shown in Table 2.¹

Table 1. Prospect Hill Quarry and Distribution Center Facility Emissions Overview

Pollutant	Potential Emissions (with controls and permit limits, tons/year)
PM	113.73
PM ₁₀	41.92
PM _{2.5}	13.63
SO ₂	25.27
NO _x	45.26
CO	99.38
VOC	43.93
HAP _{Total}	4.08
HAP _{Highest} (Formaldehyde)	0.956

¹ Accurate as of August 6, 2021. Values may change due to modifications to the permit throughout the permitting process.

4 Geographic Area

The proposed facility, Carolina Sunrock LLC- Prospect Hill Quarry and Distribution Center, is located at 1238 Wrenn Road Prospect Hill, NC 27314 (Figure 1). The highest off-site ambient air impacts will occur at the plant fence line. A one-mile radius was used to evaluate the local demographics and socioeconomics of the surrounding community and help inform public outreach efforts.



Figure 1. Quarry and Distribution Center facility location with one-mile radius.

The proposed facility would be located in Caswell County. Caswell County is designated as a Tier 1 county by the NC Department of Commerce. The one-mile buffer surrounding the Quarry and Distribution Center includes land in Person County, which is designated as Tier 2 county. According to the Department of Commerce, Tier 1 counties encompass the 40 most distressed counties based on average unemployment rate, median household income, percentage growth in population, and adjusted property tax per capita. Tier 2 counties encompass the next 40 counties based on this ranking system.

The one-mile radius used in this analysis is encompassed by two census tracts. The facility site is located in Census Tract 9306 in Caswell County. The one-mile buffer for the Quarry and Distribution Center enters Census Tract 9206.01 in Person County (Figure 2). Census tracts are small, relatively permanent statistical subdivisions of a county with a unique numeric code (US Census Bureau). None of the census tracts analyzed fall within a state designated tribal statistical area for this location.

5 Regional and Local Settings

The following sections on race and ethnicity, age and sex, disability, poverty, household income, and Limited English Proficiency (LEP) populations are based on US Census Bureau data, first at a state and county level (regional setting), and then at a census tract and project radius level (local setting). The surrounding census tracts included are those that overlap into the one-mile radius. Demographics of the counties will be compared to the local level data to identify any disparities surrounding the project area. Using standard environmental justice guidelines from the EPA and NEPA documentation, the following conditions will be flagged as potentially underserved communities:

1. 10% or more in comparison to the county or state average
2. 50% or more minority
3. 5% or more in comparison to the county or state average for poverty

For example, if a census tract has 35% of the population classified as low income but the county consists of 30% low income, the census tract would exceed the county average by 16.7% and thus be flagged as a potential area of concern. For this report, census data from 2010 and census data estimates from 2011-2015 and 2013-2017 were used. 2010 Census Bureau data is real data gathered every ten years, whereas the estimates from the more recent years are modeled based on the real data. For the data gathered from the 2013-2017 and 2011-2015 estimates, the margin of error (MOE) has been included. This value is a measure of the possible variation of the estimate around the population value (US Census Bureau). The Census Bureau standard for the MOE is at the 90% confidence level and may be any number between 0 and the MOE value in either direction (indicated by +/-).

5.1 Race and Ethnicity

Regional Setting

According to the 2010 US Census Data Table 9: Hispanic or Latino, and Not Hispanic or Latino By Race, North Carolina's population totaled 9,535,483 individuals (Table 2). The three most common racial groups across the state were White (68.5%), Black or African American (21.5%) and Hispanic or Latino (of any race) at 8.4%.

Caswell County had a total population of 23,719 individuals (Table 2). Person County had a total population of 39,464 individuals. The three most common racial or ethnic groups within both counties were White (62.5% and 68.3%), Black or African American (33.8% and 27.0), and Hispanic or Latino (3.1% and 4.0%). In Caswell County and Person County, the Black or African American Population (33.8% in Caswell, 27.0% in Person) were greater than 10% different when compared to the state (21.5%).

Table 2. Regional Setting - Race and Ethnicity

Race and Ethnicity	North Carolina		Caswell County		Person County	
	Population	%	Population	%	Population	%
Total Population	9,535,483	100	23,719	100.0	39,464	100.0
White	6,528,950	68.5	14,819	62.5	26,968	68.3
Black or African American	2,048,628	21.5	8,020	33.8	10,646	27.0
American Indian or Alaska Native	122,110	1.3	85	0.4	266	0.7
Asian	208,962	2.2	60	0.3	116	0.3
Native Hawaiian and Other Pacific Islander	6,604	0.1	4	0.0	4	0.0
Some other Race	414,030	4.3	350	1.5	868	2.2
Two or More Races	206,199	2.2	381	1.6	596	1.5
HISPANIC OR LATINO (of any race)	800,120	8.4	744	3.1	1,593	4.0
Mexican	486,960	5.1	607	2.6	1,195	3.0
Puerto Rican	71,800	0.8	42	0.2	94	0.3
Cuban	18,079	2.3	17	0.1	33	0.1
Other Hispanic or Latino	223,281	2.3	78	0.3	271	0.7

Source: US Census Bureau, 2010 Census
 All **bolded** cells indicate a difference that is greater than 10% when compared to the State

Local Setting

According to the 2010 US Census Data Table 9: Hispanic or Latino, and Not Hispanic or Latino By race or ethnicity, the largest population within Census Tract 9306 in Caswell County was White at 70.3%, followed by Black or African American at 25.8%, and Hispanic or Latino at 3.2%. The Black or African American population (25.8%) was greater than 10% different compared to the state (21.5%). The largest population within Census Tract 9206.01 in Person County was White at 68.5%, followed by Black or African American at 24.2% and Hispanic or Latino at 8.0%. The population of Some other Race (5.3%) was greater than 10% different when compared to both the county (2.2%) and the state (4.3%).

The largest population in the one-mile radius surrounding the Quarry and Distribution Center was White at 81.0% (which is greater than 10% when compared to the state at 68.5%), followed by Black or African American (15.0%) and Hispanic (3.0%) (Table 3).

Table 3. Local Setting: Quarry and Distribution Center – Race and Ethnicity

	Project Area-1 Mile		Census Tract 9306 Caswell County		Census Tract 9206.01 Person County	
Total Population	183	100.0	4,790	100.0	5,133	100.0
White	149		3,367	70.3	3,518	68.5
Black or African American	27	15.0	1,238		1,243	
American Indian or Alaska Native	0	0.0	20	0.2	25	0.5
Asian	0	0.0	8	0.2	6	0.1
Native Hawaiian and Other Pacific Islander	0	0.0	0	0.0	0	0.0
Some other Race	4	2.0	84	1.8	270	
Two or More Races	2	1.0	73	1.5	71	1.4
HISPANIC OR LATINO (of any race)	6	3.0	151	3.2	413	8.0
Mexican			113	2.4	360	7.0
Puerto Rican			17	0.4	13	0.3
Cuban			0	0.0	2	0.0
Other Hispanic or Latino			21	0.4	38	0.7
Source: US Census Bureau, 2010 Census						
All [redacted] cells indicate a difference that is greater than 10% when compared to the State						
All [redacted] cells indicate a difference that is greater than 10% when compared to the county and the State						

5.2 Age and Sex

Regional Setting

According to the 2010 US Census Data Table P 12: Sex by Age, North Carolina had a total population of 9,535,483 individuals (Table 4). The largest percentage of the total state population (63.1%) was between the ages of 18 and 64, followed by under 18 years (23.93%), and 65 years and older (12.94%).

Caswell County has a total population of 23,719 individuals. The largest percentage of the total population (63.56%) was between the ages of 18 and 64, followed by under 18 years (20.61%) and 65 years and older (15.83%).

Person County has a total population of 39,464 individuals. The largest percentage of the total population (61.72%) was between the ages of 18 and 64, followed by under 18 years (23.09%) and 65 years and older (15.19%).

In both counties, for both male and female subgroups, as well as the population overall, the populations of 65 years and older is greater than 10% different when compared to the state.

Table 4. Regional Setting- Age Groups and Sex

Subject	North Carolina		Caswell County		Person County	
	Number	Percent	Number	Percent	Number	Percent
Total Population	9,535,483	100	23,719	100	39,464	100
Under 5 years:	632,040	6.63	1,181	4.98	2,369	6
Under 18 years:	2,281,635	23.93	4,889	20.61	9,114	23.09
18 to 64 years:	6,019,769	63.13	15,075	63.56	24,357	61.72
65 years and older:	1,234,079	12.94	3,755	15.83	5,993	15.19
Male	4,845,492	100	12,074	100	19,437	100
Under 5 years:	322,871	6.95	602	4.99	1,186	6.2
Under 18 years:	1,167,303	25.13	2,537	21.01	4,662	24.36
18 to 64 years:	2,954,233	63.59	7,935	65.72	11,946	62.42
65 years and older:	523,956	11.28	1,602	13.27	2,529	12.92
Female	4,889,991	100	11,645	100	20,027	100
Under 5 years:	309,169	6.32	579	4.97	1,183	5.82
Under 18 years:	1,114,332	22.79	2,352	20.2	4,452	21.9
18 to 64 years:	3,065,536	62.69	7,140	61.31	12,411	61.06
65 years and older:	710,123	14.52	2,153	18.66	3,464	17.04

Source: US Census Bureau, 2010 Census
 All **bolded and shaded** cells indicate a difference that is greater than 10% when compared to the State

Local Setting

According to the 2010 US Census Data Table P 12: Sex by Age, Census Tract 9306 had a total population of 4,790 individuals (Table 5). The largest percentage of the total population (62.78%) was between the ages of 18 and 64, followed by under 18 years (20.63%), and 65 years and older (16.60%). The total population, as well as the female subgroup have a population of 65 years and older that is greater than 10% different than the state. The male subgroup has a population of 65 years and older that is greater 10% different than the county and the state.

Census Tract 9206.01 had a total population of 5,133 individuals. The largest percentage of the total population (60.84%) was between the ages of 18 and 64, followed by under 18 years (23.51%), and 65 years and older (15.64%). The total population, as well as the male and female subgroups have a population of 65 years and older that is greater than 10% different than the state.

Table 5. Local Setting- Age Groups and Sex

Subject	Census Tract 9306, Caswell County		Census Tract 9206.01 Person County	
	Number	Percent	Number	Percent
Total Population	4,790	100	5,133	100
Under 5 years:	246	5.14	365	7.11
Under 18 years:	988	20.63	1,207	23.51
18 to 64 years:	3,007	62.78	3,123	60.84
65 years and older:	795	16.60	803	15.64
Male:	2,407	100	2,431	100
Under 5 years:	132	5.48	181	7.45
Under 18 years:	535	22.23	582	23.94
18 to 64 years:	1,511	62.78	1,525	62.73
65 years and older:	361	15.00	324	13.33
Female:	2,383	100	2,702	100
Under 5 years:	114	4.78	184	6.81
Under 18 years:	453	19.01	625	23.13
18 to 64 years:	1,496	62.78	1,598	59.14
65 years and older:	434	18.21	479	17.73

Source: US Census Bureau, 2010 Census

All **bolded and orange** cells indicate a difference that is greater than 10% when compared to the State

All **bolded and blue** cells indicate a difference that is greater than 10% when compared to the county and the State

EJSCREEN identified an approximate population of 225 in the 1-mile radius surrounding the Quarry and Distribution Center facility. The largest population was 18+ years, followed by 0-17 years at 21% (Table 6).

Table 6. Project Radius- Age Groups and Sex

Subject	1-mile (Quarry and Distribution Center)	
	Number	Percent
Total Population	225	100
0-4 years	9	5
0-17 years	38	21
18+ years	145	79
65+ years	33	18
Source: US Census Bureau, 2010 Census		

5.3 Disability

Regional Setting

According to the 2013-2017 American Community Survey 5-Year Estimates, Table S1810 Disability Characteristics from the US Census Bureau, the state of North Carolina had an estimated total population of 9,845,238 noninstitutionalized citizens. Of those individuals, an estimated 13.7% (MOE +/- 0.1%) had a disability. The largest population of disabled civilians were 75 years and over (51.0%, MOE +/- 0.5%). The second largest population was the 65 years to 74 years at 27.2% (MOE +/- 0.3%). By race, American Indian and Alaskan Native had the highest estimated disability rate of 18.3% (MOE +/- 0.7%). Black or African American, White, and Native Hawaiian and Other Pacific Islander were the next three highest population estimates with disabilities in North Carolina, at 15.1% (MOE +/-0.2%), 14.0% (MOE +/- 0.1%), and 11.6% (MOE +/- 0.6%), respectively (Table 7).

Caswell County had an estimated total population of 21,970 noninstitutionalized citizens. Of those, an estimated 19.7% (MOE +/- 2%) had a disability. The largest population of disabled civilians were 75 years and over (60.9%, MOE +/- 7.2%) followed by 65 years to 74 years (32.4%, MOE +/-6%). By race, residents of Two or more races had the highest estimated disability rate (50.9%, MOE +/-31%). All populations, excluding American Indian and Alaska Native, Native Hawaiian and Other Pacific Islander, some other race, Hispanic or Latino, and 5 to 17 years displayed estimates that were greater than 10% different when compared to the state.

Person County had an estimated total population of 38,813 noninstitutionalized citizens. Of those, an estimated 19.1% (MOE +/-0.7%) had a disability (Table 8). The largest population of disabled civilians were 75 years and over (66.3%, MOE +/- 5.7%) followed by 65 years to 74 years (25.3, MOE +/-5.6%). By race, Black or African American residents had the highest estimated disability rate (23.6%, MOE +/-3.3%). The following population groups displayed estimates that were greater than 10% different when compared to the state: total civilian noninstitutionalized, male, female, white alone, Black or African American alone, American Indian and Alaska Native alone, two or more races, 18-34 years, 35 to 64 years, and 75 years and older.

Table 7. Regional Setting- Disability

Subject	North Carolina						Caswell County					
	Total		With a Disability		Percent with a Disability		Total		With a Disability		Percent with a Disability	
	Estimate	Margin of Error (%)	Estimate	Margin of Error (%)	Estimate	Margin of Error (%)	Estimate	Margin of Error (%)	Estimate	Margin of Error (%)	Estimate	Margin of Error (%)
Total civilian noninstitutionalized population	9,845,238	1,883	1,344,677	9,296	13.7%	0.1	21,970	136	4,339	445		2.0
SEX												
Male	4,734,744	2,356	644,157	5,756	13.6%	0.1	10,738	191	2,216	264		2.5
Female	5,110,494	1,611	700,520	5,791	13.7%	0.1	11,232	96	2,123	275		2.4
RACE AND HISPANIC OR LATINO ORIGIN												
White alone	6,805,260	7,679	950,044	7,928	14.0%	0.1	13,885	214	2,594	350		2.5
Black or African American alone	2,101,735	5,025	316,325	4,035	15.1%	0.2	7,202	228	1,573	257		3.7
American Indian and Alaska Native alone	114,961	1,802	20,994	862	18.3%	0.7	23	26	0	22	0.0%	61.8
Asian alone	266,672	1,954	13,149	763	4.9%	0.3	130	22	35	32		24.5
Native Hawaiian and Other Pacific Islander alone	5,842	533	678	170	11.6%	3	32	38	0	22	0.0%	52.4
Some other race alone	308,809	7,341	15,461	1,136	5.0%	0.3	429	184	0	22	0.0%	7.3
Two or more races	243,959	5,401	28,026	1,407	11.5%	0.5	269	163	137	106		31
Hispanic or Latino (of any race)	895,338	953	53,910	1,944	6.0%	0.2	806	27	10	15	1.2%	1.9
AGE												
Under 5 years	603,917	730	5,099	590	0.8%	0.1	1,080	35	22	33		3.1
5 to 17 years	1,682,039	807	95,840	2,124	5.7%	0.1	3,253	38	169	71	5.2%	2.2
18 to 34 years	2,190,572	2,241	144,807	3,125	6.6%	0.1	4,018	103	300	110		2.8
35 to 64 years	3,894,704	2,076	560,147	6,001	14.4%	0.2	9,350	140	2,003	321		3.4
65 to 74 years	895,249	1,047	243,488	2,801	27.2%	0.3	2,651	47	859	155		6
75 years and over	578,757	1,013	295,296	2,759	51.0%	0.5	1,618	56	986	122		7.2

Table 8. Regional Setting- Disability cont'd

Subject	Person County					
	Total		With a Disability		Percent with a Disability	
	Estimate	Margin of Error (+/-)	Estimate	Margin of Error (+/-)	Estimate	Margin of Error (+/-)
Total civilian noninstitutionalized population	38,813	147	7,419	656		0.7
SEX						
Male	18,759	134	3,824	445		2.4
Female	20,054	145	3,595	436		2.2
RACE AND HISPANIC OR LATINO ORIGIN						
White alone	26,437	313	4,730	512		1.9
Black or African American alone	10,488	293	2,471	363		3.3
American Indian and Alaska Native alone	322	80	66	37		13
Asian alone	60	51	2	4	3.3%	7.4
Native Hawaiian and Other Pacific Islander alone	18	32	0	25	0.0%	69.9
Some other race alone	722	317	19	28	2.6%	4.5
Two or more races	766	279	131	81	17.1%	10.8
Hispanic or Latino (of any race)	1,611	22	47	51	2.9%	3.2
AGE						
Under 5 years	2,147	106	17	27	0.0%	1.3
5 to 17 years	6,352	108	358	138	5.6%	2.2
18 to 34 years	7,049	115	685	191	9.7%	2.7
35 to 64 years	16,480	126	3,558	456	21.6%	2.8
65 to 74 years	4,140	64	1,048	235	25.3%	5.6
75 years and over	2,645	103	1,753	164	66.0%	5.7
Source: US Census Bureau, ACS 5-year Estimates (2013-2017)						
All bolded and orange highlighted cells indicate a difference that is greater than 10% when compared to the State						

Local Setting

According to the 2013-2017 American Community Survey 5-Year Estimates, Table S1810 Disability Characteristics from the US Census Bureau, Census Tract 9306 in Caswell County had an estimated total population of 5,005 noninstitutionalized citizens (Table 9). Of those individuals, an estimated 15.4% (MOE +/- 4.2%) had a disability. The largest population of disabled civilians were 75 years and over (69.2%, MOE +/- 20.8%). The second largest population was the 65 years to 74 years at 35.5% (MOE +/- 14%). By race, Black or African American residents had the highest estimated disability rate of 19.6% (MOE +/- 12%). The following population groups had estimates that were greater than 10% when compared to the state: total civilian noninstitutionalized population, male, Black or African American alone, 35-64 years, and 65-74 years. The population group 75 years and older had an estimate that was greater than 10% when compared to the county and to the state.

Census Tract 9206.01 in Person County had an estimated total population of 5,346 noninstitutionalized citizens. Of those individuals, an estimated 24% (MOE +/- 6.3%) had a disability. The largest population of disabled civilians were 75 years and over (78.5%, MOE +/- 12.2%). The second largest population was Black or African American at 33.9% (MOE +/- 13.8%). The population group 18-34 years had an estimate that was greater than 10% different when compared to the state. The following population groups had estimates that were greater than 10% when compared to the state and the county: total civilian noninstitutionalized population, male, female, White, Black or African American, 5-17 years, 35-64 years, and 75 years and over.

Table 9. Local Setting- Disability

Subject	Census Tract 9306, Caswell County						Census Tract 9206.01, Person County					
	Total		With a Disability		Percent with a Disability		Total		With a Disability		Percent with a Disability	
	Estimate	Margin of Error (%)	Estimate	Margin of Error (%)	Estimate	Margin of Error (%)	Estimate	Margin of Error (%)	Estimate	Margin of Error (%)	Estimate	Margin of Error (%)
Total civilian noninstitutionalized population	5,005	493	769	227		4.2	5,346	644	1,285	284		6.3
SEX												
Male	2,556	270	436	142		5.5	2,542	341	690	178		7.5
Female	2,449	286	333	123	13.6%	4.5	2,804	392	595	190		7.5
RACE AND HISPANIC OR LATINO ORIGIN												
White alone	3,697	377	517	199	14.0%	5.3	3,525	580	832	208		7.5
Black or African American alone	1,289	312	252	165	19.6%	12	1,275	301	432	200		13.8
American Indian and Alaska Native alone	0	17	0	17	-	**	0	17	0	17	-	**
Native Hawaiian and Other Pacific Islander alone	8	16	0	17	0.0%	100	0	17	0	17	-	**
Native Hawaiian and Other Pacific Islander alone	0	17	0	17	-	**	0	17	0	17	-	**
Some other race alone	0	17	0	17	-	**	358	338	0	17	0.0%	8.7
Two or more races	11	22	0	17	0.0%	89.4	188	177	21	33	11.2%	23.5
Hispanic or Latino (of any race)	33	39	0	17	0.0%	51.6	557	311	0	17	0.0%	5.7
AGE												
Under 5 years	324	93	0	17	0.0%	9.5	343	162	0	17	0.0%	9
5 to 17 years	854	199	25	28	2.9%	3.4	824	307	68	74		8
18 to 34 years	1,094	209	30	47	2.7%	4.3	1,027	212	78	69		6.7
35 to 64 years	1,959	270	378	150		7.2	2,062	267	620	228		11
65 to 74 years	592	135	210	104		14	495	146	52	66	10.5%	14
75 years and over	182	69	126	65		20.8	595	143	467	145		12.2

Source: US Census Bureau, American Community Survey (5-year estimates)
 All **bolded** and **orange** highlighted cells indicate a difference that is greater than 10% when compared to the State
 All **blue** highlighted cells indicate a difference that is greater than 10% when compared to the County and State

5.4 Poverty

Regional Setting

According to the Census Table S1701, Poverty Status in the Past 12 Months, 2013-2017 American Community Survey 5-Year Estimates, from the US Census Bureau, North Carolina had an estimated population of 9,783,738, with 16.1% (MOE +/- 0.2%) below the poverty level (Table 10). Across all subjects, Some other race had the highest percent living below the poverty level at 32.0% (MOE +/- 1.4%). The next three subjects with the highest poverty level were Hispanic or Latino at 30.1% (MOE +/- .8%), American Indian and Alaska Native at 26.2% (MOE +/- 1.5%), and Black or African American at 24.9% (MOE +/- .4%). The age group with the highest population below poverty was under 18 (22.9%, MOE +/- 0.4%), followed by 18 to 64 (15.3%, MOE +/- 0.2%).

Caswell County had an estimated population of 21,870 with 21.3% (MOE +/-2.9%) living below the poverty level. Across all subjects, two or more races had the highest percent living below the poverty level at 65.4% (MOE +/- 7.4%). The next subjects with the highest poverty level were Some other race at 59.2% (MOE +/- 32.2%) and Hispanic or Latino at 56.1% (MOE +/- 19.9%). All subject groups had a greater than 5% difference when compared to the state, excluding Native Hawaiian and Other Pacific Islander and American Indian and Alaska Native.

Person County had an estimated population of 38,697 with 18.1% (MOE +/-2.6%) living below the poverty level. Across all subjects, Some Other Race had the highest percent living below the poverty level at 68.7% (MOE +/- 26.2%). The next subjects with the highest poverty level were Hispanic or Latino at 37.8% (MOE +/- 19.8%) and under 18 at 29.1% (MOE +/- 5.6%). The following subject groups had a greater than 5% difference when compared to the state: overall population, under 18, 65 years and over, male, female, Black or African American, Some other Race, and Hispanic or Latino (Table 11).

Table 10. Regional Setting- Poverty

Subject	North Carolina						Caswell County					
	Total		Below poverty level		Percent below poverty level		Total		Below poverty level		Percent below poverty level	
	Estimate	Margin of Error +/-	Estimate	Margin of Error +/-	Estimate	Margin of Error +/-	Estimate	Margin of Error +/-	Estimate	Margin of Error +/-	Estimate	Margin of Error +/-
Population for whom poverty status is determined	9,783,738	1,751	1,579,871	17,833	16.1	0.2	21,870	156	4,666	650		2.9
AGE												
Under 18	2,256,186	1,865	516,821	9,185	22.9	0.6	4,233	76	1,449	312		7.2
18 to 64	6,053,546	1,090	923,859	9,663	15.3	0.4	13,368	144	2,471	395		2.9
65 years and over	1,474,006	881	139,191	2,754	9.4	0.2	4,269	56	746	199		4.6
SEX												
Male	4,733,269	2,259	694,126	9,539	14.7	0.2	10,709	189	2,255	378		3.5
Female	5,050,469	2,443	885,745	10,217	17.5	0.2	11,161	115	2,411	368		3.3
RACE AND HISPANIC OR LATINO ORIGIN												
White	6,776,691	7,591	845,573	13,639	12.5	0.2	13,814	220	2,263	503		3.7
Black or African American	2,077,559	4,736	517,071	8,162	24.9	0.4	7,188	227	1,950	365		5.1
American Indian and Alaska Native	114,751	1,804	30,017	1,757	26.2	1.5	23	26	4	7	17.4	36.9
Asian	262,596	1,970	33,282	2,248	12.7	0.9	130	22	29	41		31.8
Native Hawaiian and Other Pacific Islander	5,886	537	1,097	297	18.6	4.9	32	38	0	22	0.0	52.4
Some other race	305,431	7,334	97,609	5,276	32.0	1.4	429	184	254	204		32.2
Two or more races	240,824	5,455	55,222	2,570	22.9	1	254	162	166	165		43.5
Hispanic or Latino	894,810	1,312	268,985	7,035	30.1	0.8	806	27	452	160		19.9
All individuals below:												
50 percent of poverty level	688,118	10,757					1,965	538				
125 percent of poverty level	2,094,292	20,441					5,709	679				
150 percent of poverty level	2,596,452	22,139					6,652	697				
185 percent of poverty level	3,291,075	23,334					8,328	753				
200 percent of poverty level	3,571,557	25,056					9,398	764				

Table 11. Regional Setting- Poverty cont'd

Subject	Person County					
	Total		Below poverty level		Percent below poverty level	
	Estimate	Margin of Error +/-	Estimate	Margin of Error +/-	Estimate	Margin of Error +/-
Population for whom poverty status is determined	38,697	190	6,998	992		2.6
AGE						
Under 18	8,342	118	2,429	466		5.6
18 to 64	23,570	99	3,793	620	16.1	2.6
65 years and over	6,785	132	776	200		2.9
SEX						
Male	18,680	138	3,045	548		2.9
Female	20,017	155	3,953	598		3.0
RACE AND HISPANIC OR LATINO ORIGIN						
White	26,330	313	3,397	836	12.9	3.1
Black or African American	10,515	298	2,950	613		5.8
American Indian and Alaska Native	322	80	30	41	9.3	11.5
Asian	60	51	0	25	0.0	38.3
Native Hawaiian and Other Pacific Islander	0	25	0	25	-	**
Some other race	722	317	496	330	68.0	26.2
Two or more races	748	282	125	96	16.7	13.0
Hispanic or Latino	1,605	31	607	319		19.8
All individuals below						
50 percent of poverty level	2,537	659				
125 percent of poverty level	9,575	1,029				
150 percent of poverty level	11,526	1,005				
185 percent of poverty level	14,694	1,196				
200 percent of poverty level	15,165	1,233				
Source: American Community Survey 5-year Estimates, 2013-2017						
All [redacted] cells indicate a difference that is greater than 5% when compared to the State						

Local Setting

According to the Census Table S1701, Poverty Status in the Past 12 Months, 2013-2017 American Community Survey 5-Year Estimates, from the US Census Bureau, Census Tract 9306 in Caswell County had an estimated population of 4,956 with 22.3% (MOE +/-7.5%) living below the poverty level (Table 12). Across all subjects, Asian (100%, MOE +/- 100%) and two or more races (100% MOE +/- 89.4%) had the highest percent living under the poverty level. The next subjects with the highest poverty level were Hispanic or Latino at 69.7% (MOE +/- 50.5%), and under 18 at 39.8% (MOE +/- 17.2%). The following subject groups had a greater than 5% difference when compared to the county and the state: under 18, male, white, Black or African American, American Indian and Alaska Native, Asian, Two or more races, and Hispanic or Latino. The following groups had a greater than 5% difference when compared to the state: total population, 18 to 64 years, and female.

Census Tract 9206.01 in Person County had an estimated population of 5,264 with 24.4% (MOE +/-9.1%) living below the poverty level. Across all subjects, some other race had the highest percent living below the poverty level at 76.3% (MOE +/- 48%). The next subjects with the highest poverty level were under 18 at 59.4% (MOE +/- 19.5%), and Hispanic or Latino at 49% (MOE +/- 48.7%). The following subject groups had a greater than 5% difference when compared to the county and state: total population, under 18, 18 to 64, male, female, white, Some other race, and Hispanic or Latino. The population of Black or African American residents had a greater than 5% difference when compared to the state.

Table 12. Local Setting- Poverty

Subject	Census Tract 9306, Caswell County						Census Tract 9206.01, Person County					
	Total		Below poverty level		Percent below poverty level		Total		Below poverty level		Percent below poverty level	
	Estimate	Margin of Error +/-	Estimate	Margin of Error +/-	Estimate	Margin of Error +/-	Estimate	Margin of Error +/-	Estimate	Margin of Error +/-	Estimate	Margin of Error +/-
Population for whom poverty status is determined	4,956	496	1,106	401		7.5	5,264	587	1,283	556		9.1
AGE												
Under 18	1,129	210	449	239		17.2	1,085	335	644	321		19.5
18 to 64	3,053	354	587	224		6.9	3,089	367	549	292		8.8
65 years and over	774	124	70	59	9.0	7.6	1,090	154	90	66	8.3	6.3
SEX												
Male	2,556	270	616	289		10.6	2,491	322	572	237		8.2
Female	2,400	293	490	191		7.4	2,773	365	711	353		11.1
RACE AND HISPANIC OR LATINO ORIGIN												
White	3,648	380	705	303		8	3,443	526	643	401		10.4
Black or African American	1,289	312	382	261		17.5	1,275	301	367	233		14.2
American Indian and Alaska Native	0	17	0	17	-	**	0	17	0	17	-	**
Asian	8	16	8	16		100	0	17	0	17	-	**
Native Hawaiian and Other Pacific Islander	0	17	0	17	-	**	0	17	0	17	-	**
Some other race	0	17	0	17	-	**	358	338	273	341		48
Two or more races	11	22	11	22		89.4	188	177	0	17	0.0	15.8
Hispanic or Latino	33	39	23	32		50.5	557	311	273	341		48.7
All individuals below:												
50 percent of poverty level	414	250					549	380				
125 percent of poverty level	1,148	402					1,675	550				
150 percent of poverty level	1,238	413					1,784	554				
185 percent of poverty level	1,418	430					2,285	540				
200 percent of poverty level	1,862	515					2,348	536				

Source: American Community Survey 5-year Estimates, 2013-2017
 All [shaded] cells indicate a difference that is greater than 5% when compared to the State
 All [shaded] cells indicate a difference that is greater than 5% when compared to the county and the State

5.5 Household Income

Regional Setting

The following table was compiled using data from the Census Table S1901, Income in the Past 12 Months (in 2017 Inflation-Adjusted Dollars) 2013-2017 American Community Survey 5-Year Estimates for North Carolina. The North Carolina household income range with the highest percent was \$50,000 to \$74,999, at 18.1%. The median household income was \$50,320 and the mean income was \$70,523 (Table 13).

The household income range for Caswell County with the highest percent was \$50,000 to \$74,999 at 16.7% (MOE +/- 2.6%). The median income was \$39,428 and the mean income was \$52,548. All income ranges less than \$50,000 had percentages that were more than 10% higher than the state ranges. The household income range for Person County with the highest percent was \$50,000 to \$74,999 at 18.0% (MOE +/- 2.3%). The median income was \$44,921 and the mean income was \$58,792. The income ranges from \$15,000 to \$34,999 had percentages that were more than 10% higher than the state ranges.

Table 13. Regional Setting- Household Income

Subject	North Carolina		Caswell County		Person County	
	Households		Households		Households	
	Estimate	Margin of Error (+/-)	Estimate	Margin of Error (+/-)	Estimate	Margin of Error (+/-)
Total	3,874,346	8,789	9,160	276	15,772	340
Less than \$10,000	7.3%	0.1		2	7.6%	1.8
\$10,000 to \$14,999	5.8%	0.1		2.5	5.9%	1.4
\$15,000 to \$24,999	11.1%	0.1		2.3		2.2
\$25,000 to \$34,999	11.0%	0.1		2.2		1.9
\$35,000 to \$49,999	14.5%	0.1		2.7	14.3%	2.1
\$50,000 to \$74,999	18.1%	0.1	16.7%	2.6	18.0%	2.3
\$75,000 to \$99,999	11.8%	0.1	10.4%	2.1	12.7%	1.6
\$100,000 to \$149,999	11.7%	0.1	7.1%	1.7	10.1%	1.7
\$150,000 to \$199,999	4.4%	0.1	2.4%	1.2	2.5%	0.9
\$200,000 or more	4.3%	0.1	1.9%	1.1	1.5%	0.8
Median income (dollars)	50,320	204	39,428	2,039	44,921	2,487
Mean income (dollars)	70,523	287	52,548	3,820	58,792	4,201
Source: US Census, ACS 5-year Estimates 2013-2017. All shaded cells indicate a difference of greater than 10% increase when compared to the state.						

Local Setting

The household income range for Census Tract 9306 in Caswell County with the highest percent was \$50,000 to \$74,999 at 19.1% (MOE +/- 7.2%). The median income was \$55,975 and the mean income was \$62,498 (Table 14). The income range \$10,000 to \$14,999 had percentages that were more than 10% higher than the state ranges. The household income range for Census

Tract 9206.01 in Person County with the highest percent was \$50,000 to \$74,999 at 21.6% (MOE +/- 7.3%). The median income was \$42,927 and the mean income was \$56,516. The income ranges \$15,000 to \$24,999 and \$50,000 to \$74,999 had percentages that were more than 10% higher than the state and county averages.

Table 14. Local Setting- Household Income

Subject	Census Tract 9306, Caswell County		Census Tract 9206.01, Person County	
	Households		Households	
	Estimate	Margin of Error (+/-)	Estimate	Margin of Error (+/-)
Total	1,821	190	2,088	150
Less than \$10,000	6.0%	6.2	2.2%	2.1
\$10,000 to \$14,999		5.4	5.3%	4.5
\$15,000 to \$24,999	12.0%	4.8		7
\$25,000 to \$34,999	9.3%	4.6	10.8%	5.8
\$35,000 to \$49,999	11.4%	5.1	14.5%	5.5
\$50,000 to \$74,999	19.1%	7.2		7.3
\$75,000 to \$99,999	15.5%	7.1	12.9%	5.7
\$100,000 to \$149,999	10.8%	5.4	4.7%	4.1
\$150,000 to \$199,999	3.5%	3.8	1.7%	2.3
\$200,000 or more	2.7%	3.4	1.4%	1.6
Median income (dollars)	55,795	15,776	42,927	12,697
Mean income (dollars)	62,498	10,639	56,516	10,442

Source: US Census, 2013-2017 ACS 5-Year Estimates.
 All highlighted cells indicate a difference that is greater than 5% when compared to the state.
 All highlighted cells indicate a difference that is greater than 5% when compared to the county and the state.

In the one-mile radius from the Quarry and Distribution Center, the household income range with the highest percent was less than \$75,000+ at 38%, followed by \$50,000-\$75,000 at 20%.

Table 15. Project Radius- Household Income

Subject	1-mile (Quarry and) Distribution Center	
	Households	
	Estimate	Percent
Total	70	100.0%
Less than \$15,000	9	12.0%
\$15,000 to \$25,000	8	12.0%
\$25,000 to \$50,000	13	18.0%
\$50,000 to \$75,000	14	20.0%
\$75,000+	27	38.0%

Source: EJSCREEN. US Census, 2013-2017 ACS 5-year Estimates

Per Capita Income

Per Capita Income data was obtained through the Census Table B19301, Per Capita Income in the Past 12 Months (In 2017 Inflation-Adjusted Dollars), 2013-2017 American Community Survey 5-Year Estimates. The North Carolina per capita income estimate was \$28,123. The estimates for the counties are: \$21,692 in Caswell County and \$24,477 in Person County. The estimates for the census tracts are: \$22,753 (9306) and \$22,621 (9206.01). Both the county and the census tracts had a lower Per Capita Income compared to the state (Table 16).

The EJSCREEN analysis also provided per capita income estimates for the one-mile buffer surrounding facility sites. The buffer around the Quarry and Distribution Center has an estimated per capita income of \$30,248.

Table 16. Per Capita Income

Location	Subject	Per Capita Income in Last 12 Months (Dollars)
North Carolina	Per Capita Income Estimate	\$28,123
	Per Capita Income Margin of Error +/-	130
Caswell County	Per Capita Income Estimate	\$21,692
	Per Capita Income Margin of Error +/-	1,521
Person County	Per Capita Income Estimate	\$24,477
	Per Capita Income Margin of Error +/-	1,776
Census Tract 9306 Caswell County	Per Capita Income Estimate	\$22,753
	Per Capita Income Margin of Error +/-	3,182
Census Tract 9206.01 Person County	Per Capita Income Estimate	\$22,621
	Per Capita Income Margin of Error +/-	4,352
Project Area 1-mile Quarry and Distribution Center	Per Capita Income Estimate	\$30,148
	Per Capita Income Margin of Error +/-	***

Source: American Community Survey 5-year Estimates, 2013-2017

6 Limited English Proficiency (LEP)

Per the Safe Harbor Guidelines, should an LEP Group be identified during the permit application process, written translations of vital documents for each eligible LEP language group that constitutes five percent or includes 1,000 members (whichever is less) of the population of persons eligible to be served or likely to be affected or encountered. If there are fewer than 50 persons in a language group that reaches the five percent trigger, then DEQ will not translate vital written materials, but instead will provide written notice in the primary language of the LEP language group of the right to receive competent oral interpretation of those written materials, free of cost. The safe harbor provisions apply to the translation of written documents only. Safe

harbor guidelines are per the EPA guidance for LEP persons and implemented by DEQ when deemed appropriate.

Seven potential LEP language groups were identified during this initial screening of demographic data (Table 17). However, none of the language groups identified in this screening reached the 5% threshold. If larger LEP groups are identified during the site visit or specific translation requests are received, then DEQ will revisit the Safe Harbor Guidelines.

Table 17. Limited English Proficiency

Language Spoken at Home	Census Tract 9806, Caswell County		Census Tract 9208-01, Person County	
	Estimate	Margin of Error	Estimate	Margin of Error
Total:	4,576	+/-420	4,682	+/-465
Speak only English	4,536	+/-407	4,306	+/-413
Spanish or Spanish Creole:	40	+/-59	321	+/-239
Speak English "very well"	14	+/-22	219	+/-158
Speak English less than "very well"	26	+/-56	102	+/-110
German:	0	+/-12	0	+/-12
Speak English "very well"	0	+/-12	0	+/-12
Speak English less than "very well"	0	+/-12	0	+/-12
Vietnamese:	0	+/-12	0	+/-12
Speak English "very well"	0	+/-12	0	+/-12
Speak English less than "very well"	0	+/-12	0	+/-12
Tagalog:	0	+/-12	0	+/-12
Speak English "very well"	0	+/-12	0	+/-12
Speak English less than "very well"	0	+/-12	0	+/-12

Source: American Community Survey 5-year Estimates, 2011-2015

7 County Health

The University of Wisconsin Population Health Institute, in collaboration with the Robert Wood Johnson Foundation, calculated a County Health Rankings system for all the States in the United States (www.countyhealthrankings.org). This ranking is based on health outcomes (such as lifespan and self-reported health status) and health factors (such as environmental, social and economic conditions). According to this 2021 report, out of all 100 counties in North Carolina (with 1 indicating the healthiest), Caswell County ranks 73rd in health factors and 78th in health outcomes and Person County ranks 53rd in health factors and 73rd in health outcomes. (Figure 3).

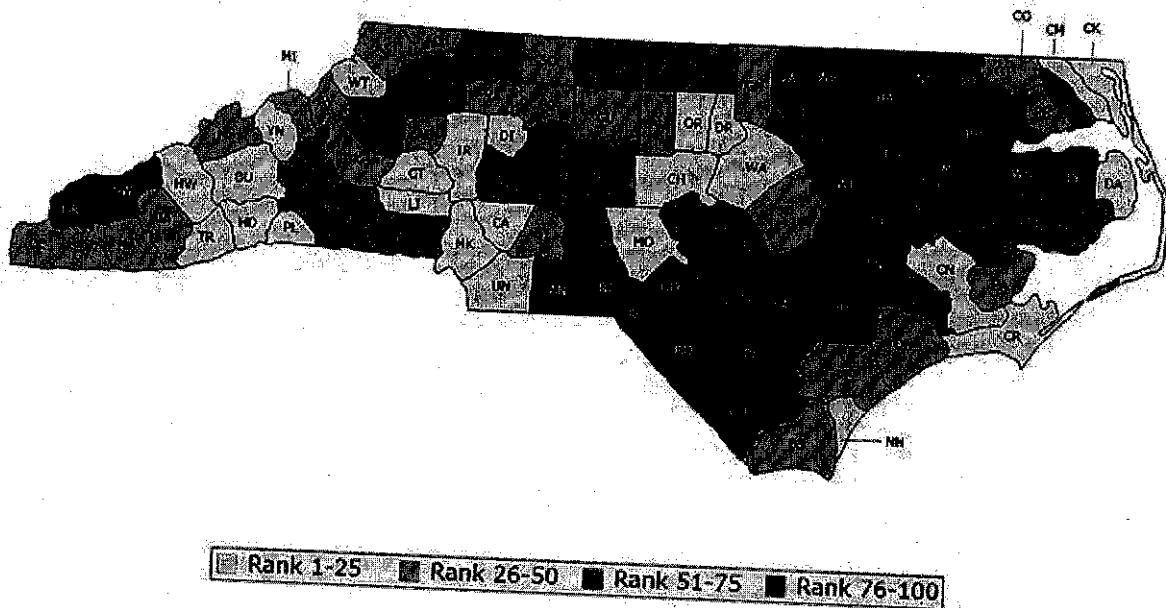


Figure 3. County Health Rankings for Health Factors in North Carolina provided by University of Wisconsin Public Health Institute.

According to the NC DEQ Community Mapping System Environmental Justice Tool, Table 18 demonstrates the rates of death due to various causes in the counties surrounding the proposed facility, as compared to the state.

Table 18. Health Outcomes

Cause of Death	Caswell	Person	North Carolina
Cancer	198.7	178.5	169.1
Heart Disease	169.6	155.6	163.7
Stroke	37.6	33.2	43.1
Cardiovascular Disease	218.8	200.9	221.9
Diabetes	27.9	29	22.8

Source: NCDEQ 2020 EJ Tool

8 Local Sensitive Receptors

The Environmental Protection Agency suggests that sensitive receptors include, but are not limited to, hospitals, schools, daycare facilities, elderly housing, and convalescent facilities. These are areas where the occupants are more susceptible to the adverse effects of exposure to toxic chemicals, pesticides, and other pollutants. Extra care must be taken when dealing with contaminants and pollutants in close proximity to areas recognized as sensitive receptors. For instance, children and the elderly may have a higher risk of developing asthma from elevated levels of certain air pollutants than a healthy individual aged between 18 and 64.

Within the one-mile project radius from the Quarry and Distribution Center, the following potential sensitive receptors were identified (Figure 4)

- Bethel United Methodist Church
- Lea Bethel Baptist Church

Additional sensitive receptors may be identified during the permit application process, such as during the field reconnaissance visit or through public comment.

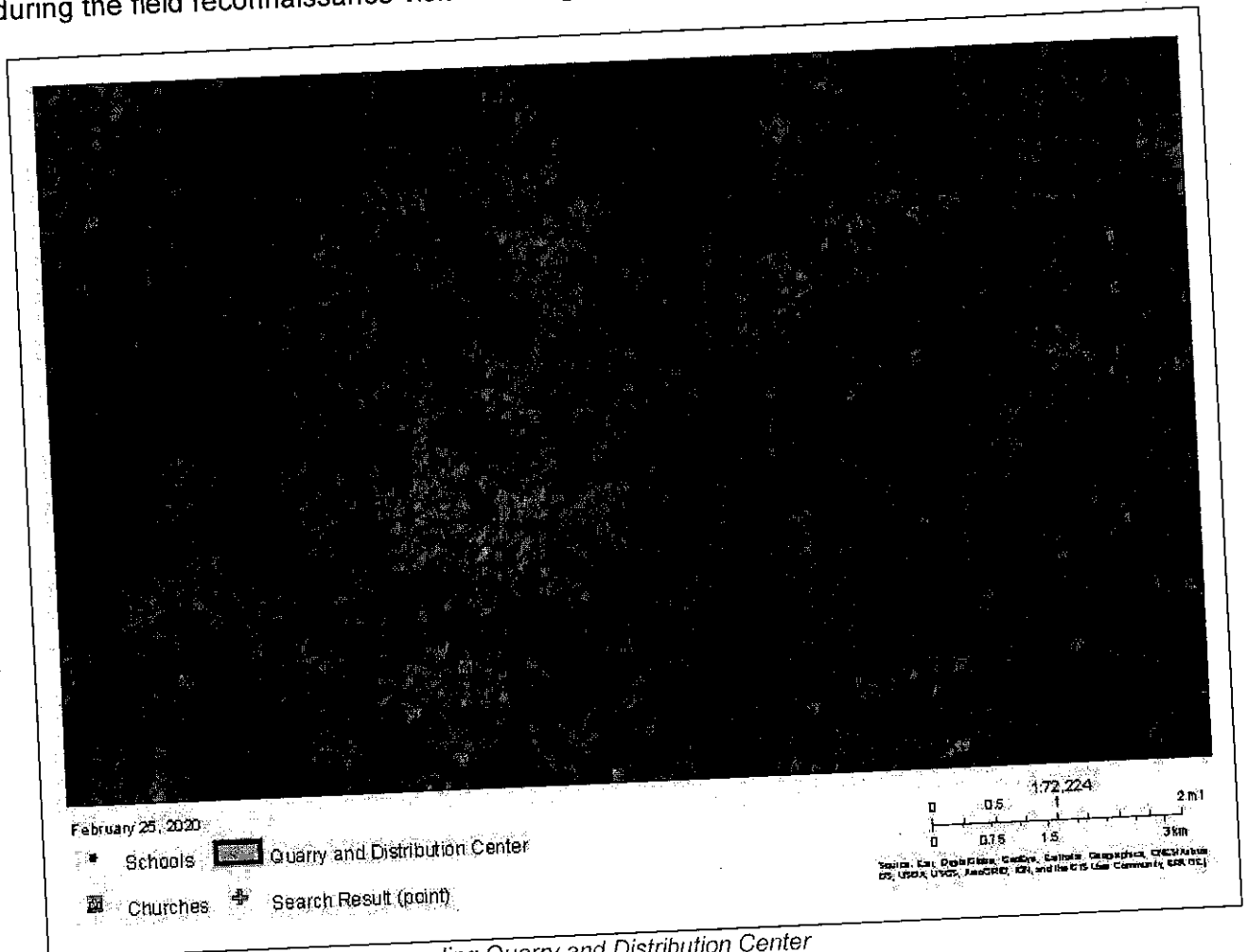


Figure 4. Sensitive receptors surrounding Quarry and Distribution Center

9 Local Industrial Sites

Within the one-mile radius, there are no other² facility permits or incident reports (as of August 4, 2021) (Figure 5).

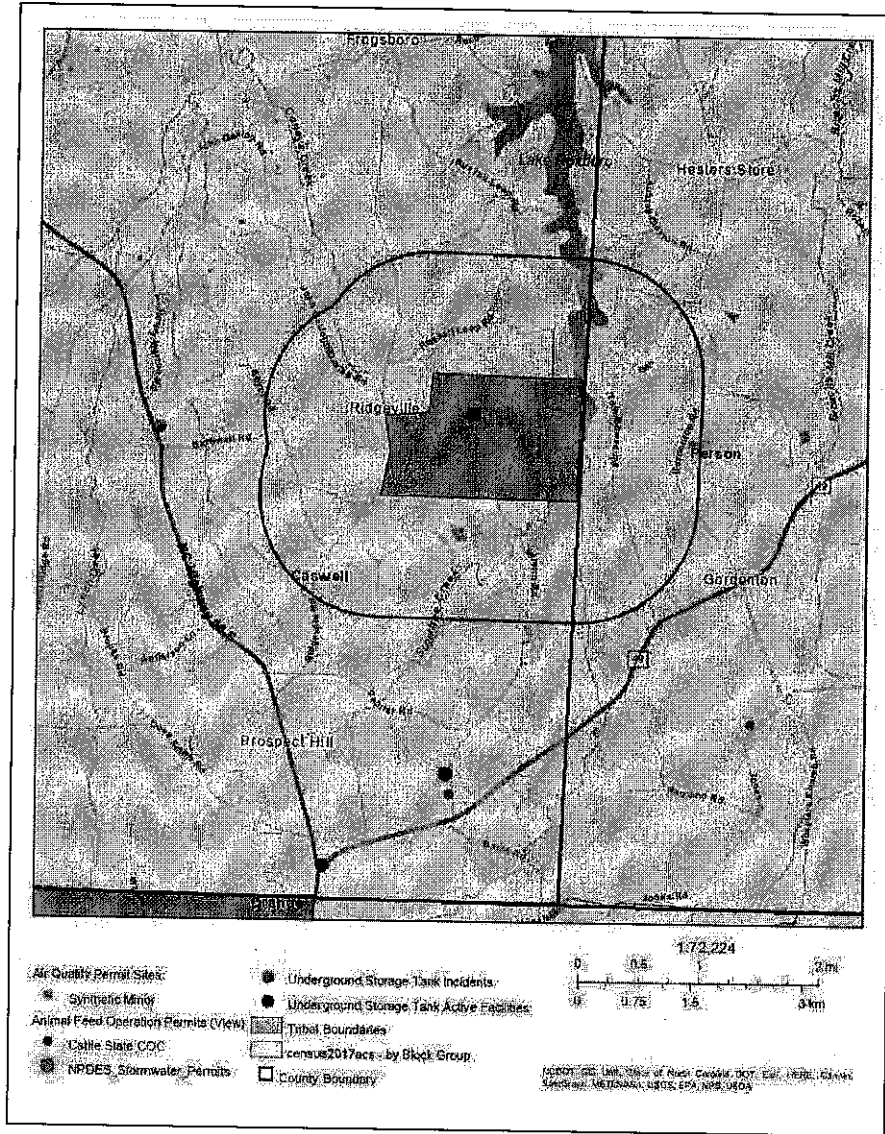


Figure 5. Permitted facilities and incidents with the one-mile radius surrounding the Quarry and Distribution Center.

² There is one NPDES Permit belonging to the facility itself.

10 Conclusion

Environmental justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies (US EPA). This report examined the demographic and environmental conditions in the state of North Carolina, Caswell, and Person counties, census tracts 9306 and 9206.01, and the one-mile radius around the Carolina Sunrock LLC, proposed Quarry and Distribution Center Potential emissions rates outlined in the permit application and county level health data were also included, as well as data from the NCDEQ Community Mapping System.

It is important to keep in mind that based on the available data, the following limitations of this report: census data is from 2010 and may be outdated; the more recent census data through 2017 are estimates; EJSCREEN does not provide all of the data categories that were used in this analysis so the census tracts data and county data cannot be compared to the radius used surrounding the facility boundary for all criteria; census tracts can still be large areas and do not allow for exact locations of each population; some of the census tracts slightly overlap with the one-mile radius; and the Department cannot determine which populations may be located in that small amount of overlap around the facility.

The project area data from the census tracts and one-mile radius generally do not deviate from state estimates for race and ethnicity. The surrounding census tracts display a population of individuals over 65 years old that is higher than the state average.

Both of the census tracts display overall poverty estimates that are greater than 10% different than the state and the county. Both census tracts have the largest population within the \$50,000 to \$74,900 range for household income. The project radius estimate has the largest population falling in the \$75,000+ income bracket. Both census tracts display a per capita income lower than the state, and slightly lower than the county. The one-mile radius surrounding the Quarry and Distribution Center displays a per capita income estimate higher than the state.

Caswell County ranks 71th in health factors and 64th in health outcomes. Person County ranks 51st in health factors and 51st in health outcomes.

There were no permitted facilities or incidents within one mile of the proposed facility.

Based on this Draft EJ Report, the following outreach will be conducted:

- Extra attention will be given to ensure language data is accurate and that translation or interpretation will be considered if more LEP populations are identified at any point throughout the process.
- The list of sensitive receptors will be consulted while considering additional outreach options that may best fit this community's needs.
- Known community leaders will be consulted including community members, community groups who indicated significant interest during the 2020 permitting process.

NOTICE FOR REMOTE PUBLIC HEARING
AIR PERMIT APPLICATION FOR:
CAROLINA SUNROCK LLC – PROSPECT HILL QUARRY AND DISTRIBUTION CENTER

The North Carolina Department of Environmental Quality, Division of Air Quality (DAQ), is providing notice of a scheduled public hearing by teleconference to accept comments on a draft air permit. Internet access is not required to participate in the public hearing.

DAQ hereby gives notice that the following company, Carolina Sunrock LLC, has submitted a permit application to construct and operate a quarry, asphalt and concrete batch plant at its Prospect Hill location. The proposed project would be classified as a synthetic minor facility.

Carolina Sunrock LLC – Prospect Hill Quarry and Distribution Center
1238 Wrenn Road
Prospect Hill, NC 27314
Caswell County
Application ID: 1700017.21A

If you wish to speak at the public hearing, you must register by 4:00 p.m. on September 21. To register, please visit: <https://bit.ly/3jthnIa> or call (919) 618-0968.

Event title: Public Hearing for Carolina Sunrock LLC – Prospect Hill Quarry and Distribution Center

Date and Time: September 21, 2021 at 6 p.m.

Phone: US TOLL +1-415-655-0003, **Access Code** 161 805 4856

WebEx Link: <https://bit.ly/3rW9FdA>

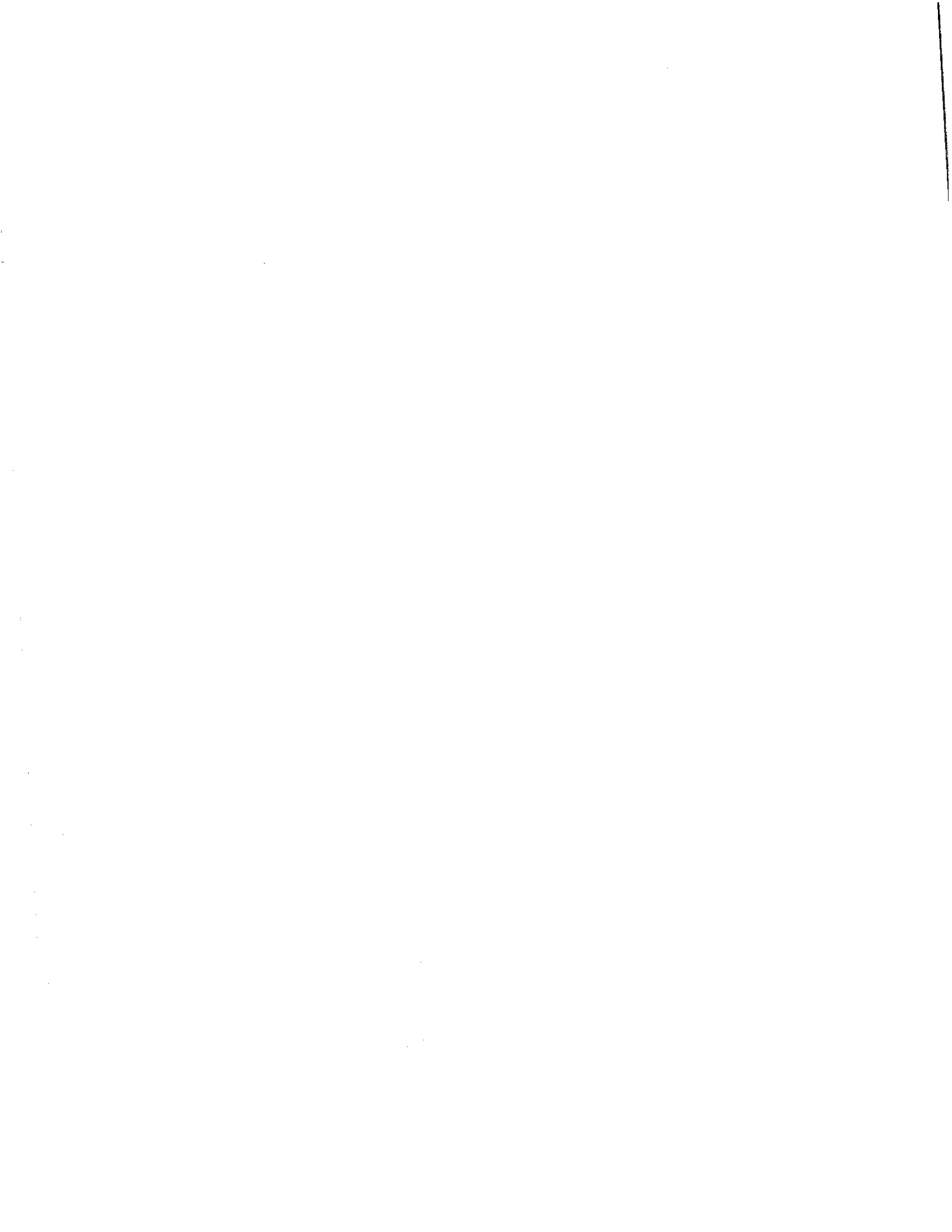
Event Password: NCDAQ

Member of the public may participate by phone or online. To comment by phone, when your name is called, press *3 so the moderator can identify and open your line. Once you have made your comment, please press *3 to end your comment.

Copies of all data and the applications submitted by Carolina Sunrock LLC are available for public inspection on our website at <https://deq.nc.gov/carolina-sunrock> or in person by appointment only at:

Winston-Salem Regional Office
450 West Hanes Mill Road, Suite 300
Winston-Salem, NC 27105

For those who are unable to attend or who experience technical difficulties, comments can also be submitted by email to DAQ.publiccomments@ncdenr.gov with the subject line "Carolina



Sunrock – Prospect Hill Quarry and Distribution Center.” Comments may also be submitted via voicemail message at (919) 707-8726. Comments will be accepted until September 23, 2021 at 5 p.m.

The Division is also providing public notice of an Alternate Hearing Date of Monday, September 28, 2021. In the event of a postponement due to extraordinary circumstances such as severe weather interfering with the Division’s ability to conduct the hearing, the public hearing will be held on the Alternate Hearing Date using the same procedures described above for the hearing on September 28. Any notice of postponement shall be posted on the Division’s website at <https://deq.nc.gov/carolina-sunrock>. If the Alternate Hearing Date is required, the comment period will remain open until September 30, 2021 at 5 p.m.

More information can be found at <https://deq.nc.gov/carolina-sunrock>.

