



Department Decision

**Air Quality Synthetic Minor Construction Permit
Permit No. 0640-0080-CA**

**Luck Stone – Chester Quarry
Route 9 East
Chester, South Carolina 29706**

March 31, 2020

In accordance with the 1976 Code of Laws of South Carolina, as amended, including SC Code Section 44-1-60(D), a Department Decision has been made to issue Air Quality Synthetic Minor Construction Permit No. 0640-0080-CA to the above-named permittee. This permit was previously placed on public notice and open for public comment from October 16, 2019, through December 4, 2019. A public hearing was held by SC DHEC's Bureau of Air Quality on November 19, 2019, to receive oral and written comments on the proposed project. Adverse public comments were received by SC DHEC during the comment period. Comments received during the formal comment period regarding air quality issues have been addressed in SC DHEC's *Responses to Comments on Air Quality* document attached to this Department Decision. SC DHEC's decision to issue this permit has been made after consideration and a complete review of the following: the air permit application, applicable state and federal air quality regulations, comments and concerns made at the public hearing and all other comments received within the required time frame, the public hearing transcript, and all other pertinent information.

This Department Decision regarding Air Quality Synthetic Minor Construction Permit No. 0640-0080-CA includes the following; a) the issued permit (Attachment A) which meets the requirements of all applicable air quality regulations; b) a summary of the project, permit, and applicable regulations as outlined in the Statement of Basis (Attachment B); and c) a summary of the comments made by concerned citizens regarding air quality issues and responses by the Bureau of Air Quality, as outlined in the *Responses to Comments on Air Quality Permit No. 0640-0080-CA* (Attachment C). This Department Decision (including attachments) will be included in SC DHEC's administrative record for this permit decision.

**Steve McCaslin, P. E., Director
Air Permitting Division
Bureau of Air Quality**

Attachment A

**Air Quality Synthetic Minor Construction Permit
Permit No. 0640-0080-CA**



Bureau of Air Quality Synthetic Minor Construction Permit

**Luck Stone – Chester Quarry
Route 9 East
Chester, South Carolina 29706
Chester County**

In accordance with the provisions of the Pollution Control Act, Sections 48-1-50(5), 48-1-100(A), and 48-1-110(a), the 1976 Code of Laws of South Carolina, as amended, and South Carolina Regulation 61-62, Air Pollution Control Regulations and Standards, the Bureau of Air Quality authorizes the construction of this facility and the equipment specified herein in accordance with the plans, specifications, and other information submitted in the construction permit application received on August 28, 2019, as amended. All official correspondence, plans, permit applications, and written statements are an integral part of the permit. Any false information or misrepresentation in the application for a construction permit may be grounds for permit revocation.

The construction and subsequent operation of this facility is subject to and conditioned upon the terms, limitations, standards, and schedules contained herein or as specified by this permit and its accompanying attachments.

Permit Number: 0640-0080-CA
Issue Date: March 31, 2020

**Steve McCaslin, P. E., Director
Air Permitting Division
Bureau of Air Quality**

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RECORD OF REVISIONS	
Date	Description of Changes

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A. PROJECT DESCRIPTION

Permission is hereby granted to construct a new 550 tph crushed granite processing plant. It will consist of stone crushing, conveying, screening, and washing operations.

B.1 – EQUIPMENT FOR EMISSION UNIT 01 – STONE CRUSHING

Equipment ID	Equipment Description	Capacity	Subject to NSPS Subpart 000	Control Device ID	Emission Point ID
P1	Portable 3044 Jaw Plant	550 tph	Yes	WS	V1
P4	Kodiak Cone Crusher	550 tph	Yes	WS	V11

B.2 – EQUIPMENT FOR EMISSION UNIT 02 – STONE CONVEYING

Equipment ID	Equipment Description	Capacity	Subject to NSPS Subpart 000	Control Device ID	Emission Point ID
P1a	54" x 46' Under Jaw Conveyor	550 tph	Yes	WS	V2
P2	30" x 13'6" Under Grizzly Reject Conveyor	550 tph	Yes	WS	V4
P3a	30" x 13'6" Triple Deck Screen Conveyor	550 tph	Yes	WS	V6
P3b	30" x 13'6" Triple Deck Screen Conveyor	550 tph	Yes	WS	V7
P3c	30" x 13'6" Triple Deck Screen Conveyor	550 tph	Yes	WS	V8
P3d	42" x 50' Triple Deck Screen Feed Conveyor	550 tph	Yes	WS	V9
P3e	60" x 50' Triple Deck Screen Under Conveyor	550 tph	Yes	WS	V10
P4a	48" x 20" Under Cone Conveyor	550 tph	Yes	WS	V12
P6	36" x 60' Stackable Plus Conveyor	550 tph	Yes	WS	V13
P7	36" x 60' Stackable Plus Conveyor	550 tph	Yes	WS	V14
P8	36" x 60' Stackable Plus Conveyor	550 tph	Yes	WS	V15
P9	36" x 60' Stackable Plus Conveyor	550 tph	Yes	WS	V16
P10	36" x 60' Stackable Plus Conveyor	550 tph	Yes	WS	V17
P11	36" x 95' Portable Radial Stacking Conveyor	550 tph	Yes	WS	V18
P12	36" x 100' Pinnacle Conveyor	550 tph	Yes	WS	V19
P13	48" x 65' Transfer Conveyor	550 tph	Yes	WS	V20
P14	36" x 30' Channel Flame Conveyor	550 tph	Yes	WS	V21
P15	30" x 80' Portable Radial Stacking Conveyor	550 tph	Yes	WS	V22
P16	30" x 120' Telestacker Conveyor	550 tph	Yes	WS	V23
P17a	48" x 32' Under Screen Conveyor	550 tph	Yes	WS	V25

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B.3 – EQUIPMENT FOR EMISSION UNIT 03 – STONE SCREENING

Equipment ID	Equipment Description	Capacity	Subject to NSPS Subpart 000	Control Device ID	Emission Point ID
P1b	52" x 20" VGF Screen	550 tph	Yes	WS	V3
P3	7' x 20' Triple Deck Screen	550 tph	Yes	WS	V5
P17	6' x 20' Double Deck Screen	550 tph	Yes	WS	V24

B.4 – EQUIPMENT FOR EMISSION UNIT 04 – STONE STORAGE, DRILLING, TRANSPORT, MISC.

Equipment ID	Equipment Description	Capacity	Subject to NSPS Subpart 000	Control Device ID	Emission Point ID
Tload	Final Product Truck Loading	550 tph	No	WS	V26
Drill	Drilling Inside the Quarry	550 tph	No	WS	V27
HaulLoad	Truck Loading at the Quarry	550 tph	No	WS	V28
MS	Material Storage	550 tph	No	WS	Material Storage

B.5 – EQUIPMENT FOR EMISSION UNIT 05 – STONE WASHING

Equipment ID	Equipment Description	Capacity	Subject to NSPS Subpart 000	Control Device ID	Emission Point ID
BF	Belt Feeder	550	No	WS	EBF
TC	Transfer Conveyor	550	No	WS	ETC
WP	Wash Plant	550	No	WS	EWP
CC-01	Chip Conveyor	550	No	WS	ECC-01
CC-02	Course Conveyor	550	No	WS	ECC-02
IC	Intermediate Conveyor	550	No	WS	EIC
SC	Sand Conveyor	550	No	WS	ESC

B.6 CONTROL DEVICES

Control Device ID	Control Device Description	Pollutant(s) Controlled
WS	Wet Suppression (water spray valves, water trucks equipped w/ water hose)	PM, PM ₁₀ , PM _{2.5}

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C. LIMITATIONS, MONITORING AND REPORTING CONDITIONS

Condition Number	Conditions
C.1	<p>Equipment ID: All Control Device ID: All</p> <p>(S.C. Regulation 61-62.1, Section II.J.1.g) A copy of the Department issued construction and/or operating permit must be kept readily available at the facility at all times. The owner or operator shall maintain such operational records; make reports; install, use, and maintain monitoring equipment or methods; sample and analyze emissions or discharges in accordance with prescribed methods at locations, intervals, and procedures as the Department shall prescribe; and provide such other information as the Department reasonably may require. All records required to demonstrate compliance with the limits established under this permit shall be maintained on site for a period of at least 5 years from the date the record was generated and shall be made available to a Department representative upon request.</p>
C.2	<p>Emission Unit ID: 01, 02, 03 Control Device ID: WS</p> <p>For any source test required under an applicable standard or permit condition, the owner, operator, or representative shall comply with S.C. Regulation 61-62.1, Section IV - Source Tests.</p> <p>Unless approved otherwise by the Department, the owner, operator, or representative shall ensure that source tests are conducted while the source is operating at the maximum expected production rate or other production rate or operating parameter which would result in the highest emissions for the pollutants being tested. Some sources may have to spike fuels or raw materials to avoid being subjected to a more restrictive feed or process rate. Any source test performed at a production rate less than the rated capacity may result in permit limits on emission rates, including limits on production if necessary.</p> <p>The owner or operator shall comply with any limits that result from conducting a source test at less than rated capacity. A copy of the most recent Department issued source test summary letter, whether it imposes a limit or not, shall be maintained with the operating permit, for each source that is required to conduct a source test.</p> <p>Site-specific test plans and amendments, notifications, and source test reports shall be submitted to the Manager of the Source Evaluation Section, Bureau of Air Quality.</p>
C.3	<p>Emission Unit ID: All Control Device ID: All</p> <p>(S.C. Regulation 61-62.5, Standard No. 4, Section VIII) Particulate matter emissions shall be limited to the rate specified by use of the following equations:</p> <p style="text-align: center;">For process weight rates less than or equal to 30 tons per hour $E = (F) 4.10P^{0.67}$ and For process weight rates greater than 30 tons per hour</p>

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C. LIMITATIONS, MONITORING AND REPORTING CONDITIONS

Condition Number	Conditions				
	<p style="text-align: center;">$E = (F) 55.0P^{0.11} - 40$</p> <p style="text-align: center;">Where E = the allowable emission rate in pounds per hour P = process weight rate in tons per hour F = effect factor from Table B in S.C. Regulation 61-62.5, Standard No. 4</p> <p>For the purposes of compliance with this condition, the process boundaries are defined as follows:</p> <table border="1" style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <thead> <tr style="background-color: #e0e0e0;"> <th style="width: 70%;">Process/Equipment IDs</th> <th style="width: 30%;">Max Process Weight Rate (ton/hr)</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">Crushed Stone Processing (including storage piles)</td> <td style="text-align: center;">550</td> </tr> </tbody> </table>	Process/Equipment IDs	Max Process Weight Rate (ton/hr)	Crushed Stone Processing (including storage piles)	550
Process/Equipment IDs	Max Process Weight Rate (ton/hr)				
Crushed Stone Processing (including storage piles)	550				
C.4	<p>Emission Unit ID: All Control Device ID: All</p> <p>(S.C. Regulation 61-62.5, Standard No. 4, Section IX) Where construction or modification began after December 31, 1985, emissions from these sources (including fugitive emissions) shall not exhibit an opacity greater than 20%, each.</p>				
C.5	<p>Emission Unit ID: All Control Device ID: All</p> <p>(S.C. Regulation 61-62.5, Standard No. 4, Section X) All non-enclosed operations shall be conducted in such a manner that a minimum of particulate matter becomes airborne. In no case shall established ambient air quality standards be exceeded at or beyond the property line. The owner/operator of all such operations shall maintain dust control of the premises and any roadway owned or controlled by the owner/operator by paving or other suitable measures. Oil treatment is prohibited.</p> <p>(S.C. Regulation 61-62.6) Fugitive particulate matter (PM) emissions from material handling, process equipment, control equipment, or storage piles will be minimized to the maximum extent possible. This will include proper maintenance of the control system such as scheduled inspections, replacement of damaged or worn parts, etc. Fugitive emissions from dust buildup will be controlled by proper housekeeping and/or wet suppression.</p> <p>Compliance with non-enclosed operations and fugitive dust requirements shall be demonstrated by developing a facility-wide fugitive dust control plan for controlling fugitive emissions from process operations, truck traffic, storage piles, and any other areas within the permitted facility where fugitive dust emissions can be generated. The plan shall be developed and submitted to the Director of Air Permitting for approval 180 days prior to the start of operation. The owner/operator shall implement the plan within 30 days of approval and create a schedule for its periodic review and update. The plan shall be kept and maintained on-site with a record of revisions. The plan shall address and/or contain at a minimum the following:</p>				

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C. LIMITATIONS, MONITORING AND REPORTING CONDITIONS

Condition Number	Conditions
	<ol style="list-style-type: none"> 1. Water Trucks <ol style="list-style-type: none"> a. Weekly operation and maintenance checks of water trucks b. Operating scenarios for water truck failures or inadequacies c. Dates the water trucks did not operate and the alternative(s) dust control method used 2. Truck Traffic <ol style="list-style-type: none"> a. Road speed limits b. Vehicle loading, off-loading, transportation or dumping of material procedures c. Spillage and residual materials clean-up procedures d. Weekly operation and maintenance checks of sprinklers e. Signage with respect to SC Code of Laws Sections 56-5-4100 and 56-5-4110 (which requires haul trucks transporting aggregate from all quarries to prevent the escape of materials loaded onto the vehicles) f. The roadway from the facility's entrance to the facility's scale house shall be paved to help further reduce fugitive dust 3. Storage Piles <ol style="list-style-type: none"> a. Material stock piling procedures 4. Process Equipment <ol style="list-style-type: none"> a. Weekly operation and maintenance checks of all plant equipment and enclosures b. Spillage and residual materials clean-up procedures c. Written guidelines on how to handle opacity problems <p>The owner/operator shall develop logs or use other approved methods to comply with the requirements of the plan.</p>
C.6	<p>The owner/operator shall operate its wet suppression system except as necessary for elevated material moisture content (i.e. rainfall).</p> <p>In case the wet suppression system is not operating properly, then a portable water spray system is acceptable for use until the permanent water spray system is back in proper operation. If a portable water system is not available, then the process shall be shut down until the permanent water spray system is back in proper operation.</p> <p>The owner/operator shall perform weekly inspections of all wet suppression related equipment including a check that water is flowing to discharge spray nozzles in the wet suppression system. The owner/operator must initiate corrective action within 24 hours and complete corrective action as expediently as practical if the owner/operator finds that water is not flowing properly during an inspection of the water spray nozzles. The owner/operator must record each inspection of the water spray nozzles, including the date of each inspection and any corrective actions taken in the logbook. The weekly inspections required in this condition meets the requirements of monthly inspections in 40 CFR 60.674(b).</p>
C.7	<p>Emission Unit ID: All Equipment/Control Device ID: All</p>

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C. LIMITATIONS, MONITORING AND REPORTING CONDITIONS

Condition Number	Conditions
	<p>(S.C. Regulation 61-62.1, Section II.G and Section II.E) This facility is a potential major source for PM and PM₁₀ emissions. The facility has agreed to federally enforceable operating limitations to limit its potential to emit to less than 250.0 tons per year for PM emissions to avoid PSD and less than 100.0 tons per year for PM₁₀ emissions to avoid Title V.</p> <p>The owner/operator shall show compliance with these limits by operating its control devices in accordance with the conditions of this permit. The logs required in this permit and records of any corrective actions taken shall be maintained on site. However, in the event of enforcement actions or complaints, the Department may require that these the logs be reported annually.</p>

D. SOURCES SUBJECT TO 40 CFR 60 SUBPART OOO

Condition Number	Condition
D.1	<p>Emission Unit ID: 01, 02, 03 Control Device ID: WS</p> <p>This facility is subject to the provisions of 40 CFR Part 60, New Source Performance Standards General Provisions, Subparts A and Standards of Performance for Nonmetallic Mineral Processing Plants, Subpart OOO. Existing affected sources shall comply with the applicable provisions by the compliance date specified in Subparts OOO. Any new affected sources shall comply with the requirements of these Subparts upon initial start-up unless otherwise noted.</p>
D.2	<p>Emission Unit ID: 01, 02, 03 Control Device ID: WS</p> <p>40 CFR 60.670(a)(1) Except as provided in paragraphs (a)(2), (b), (c), and (d) of this section, the provisions of this subpart are applicable to the following affected facilities in fixed or portable nonmetallic mineral processing plants: each crusher, grinding mill, screening operation, bucket elevator, belt conveyor, bagging operation, storage bin, enclosed truck or railcar loading station.</p> <p>40 CFR 60.670(e) An affected facility under paragraph (a) of this section that commences construction, modification, or reconstruction after August 31, 1983, is subject to the requirements of this part.</p>
D.3	<p>Emission Unit ID: 01, 02, 03 Control Device ID: WS</p> <p>(40 CFR 60.672(b)) Affected facilities must meet the fugitive emission limits and compliance requirements in Table 3 of this subpart within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup as required</p>

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D. SOURCES SUBJECT TO 40 CFR 60 SUBPART OOO

Condition Number	Condition												
	<p>under 40 CFR 60.11. The requirements in Table 3 of this subpart apply for fugitive emissions from affected facilities without capture systems and for fugitive emissions escaping capture systems.</p> <p>(40 CFR 60.672(d)) Truck dumping of nonmetallic minerals into any screening operation, feed hopper, or crusher is exempt from the requirements of this section.</p> <p>The owner or operator must meet the following fugitive emissions limit and must demonstrate compliance with these limits by conducting performance tests as listed below for:</p> <p>Screening operations, bucket elevators, transfer points on belt conveyors, bagging operations, storage bins, enclosed truck or railcar loading stations or from any other affected facility.</p> <table border="1" data-bbox="261 625 1516 1171"> <thead> <tr> <th data-bbox="261 625 889 989">Affected facilities that commenced construction, modification, or reconstruction after August 31, 1983 but before April 22, 2008...</th> <th data-bbox="889 625 1516 989">Affected facilities that commence construction, modification, or reconstruct on or after April 22, 2008</th> </tr> </thead> <tbody> <tr> <td data-bbox="261 989 889 1024">...</td> <td data-bbox="889 989 1516 1024">7 percent opacity</td> </tr> <tr> <td data-bbox="261 1024 889 1171">...</td> <td data-bbox="889 1024 1516 1171">An initial performance test according to 40 CFR 60.11 and 40 CFR 60.675; and Periodic inspections of water sprays according to 40CFR 60.674(b) and 60.676(b); ...</td> </tr> </tbody> </table> <p>The owner or operator must meet the following fugitive emissions limit and must demonstrate compliance with these limits by conducting performance tests as listed below for:</p> <p>Crushers at which a capture system is not used.</p> <table border="1" data-bbox="261 1356 1516 1724"> <thead> <tr> <th data-bbox="261 1356 889 1539">Affected facilities that commenced construction, modification, or reconstruction after August 31, 1983 but before April 22, 2008...</th> <th data-bbox="889 1356 1516 1539">Affected facilities that commence construction, modification, or reconstruct on or after April 22, 2008</th> </tr> </thead> <tbody> <tr> <td data-bbox="261 1539 889 1575">...</td> <td data-bbox="889 1539 1516 1575">12 percent opacity</td> </tr> <tr> <td data-bbox="261 1575 889 1724">...</td> <td data-bbox="889 1575 1516 1724">An initial performance test according to 40 CFR 60.11 and 40 CFR 60.675; and Periodic inspections of water sprays according to 40CFR 60.674(b) and 60.676(b); ...</td> </tr> </tbody> </table>	Affected facilities that commenced construction, modification, or reconstruction after August 31, 1983 but before April 22, 2008...	Affected facilities that commence construction, modification, or reconstruct on or after April 22, 2008	...	7 percent opacity	...	An initial performance test according to 40 CFR 60.11 and 40 CFR 60.675; and Periodic inspections of water sprays according to 40CFR 60.674(b) and 60.676(b); ...	Affected facilities that commenced construction, modification, or reconstruction after August 31, 1983 but before April 22, 2008...	Affected facilities that commence construction, modification, or reconstruct on or after April 22, 2008	...	12 percent opacity	...	An initial performance test according to 40 CFR 60.11 and 40 CFR 60.675; and Periodic inspections of water sprays according to 40CFR 60.674(b) and 60.676(b); ...
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...	7 percent opacity												
...	An initial performance test according to 40 CFR 60.11 and 40 CFR 60.675; and Periodic inspections of water sprays according to 40CFR 60.674(b) and 60.676(b); ...												
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...	12 percent opacity												
...	An initial performance test according to 40 CFR 60.11 and 40 CFR 60.675; and Periodic inspections of water sprays according to 40CFR 60.674(b) and 60.676(b); ...												
D.4	<p>Emission Unit ID: 01, 02, 03</p> <p>Control Device ID: WS</p>												

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D. SOURCES SUBJECT TO 40 CFR 60 SUBPART 000

Condition Number	Condition
	<p>(40 CFR 60.675(c)(1)) In determining compliance with the particulate matter standards in 40 CFR 60.672(b), the owner or operator shall use Method 9 of Appendix A-4 of this part and the procedures in 40 CFR 60.11, with the following additions:</p> <p style="padding-left: 40px;">(i) The minimum distance between the observer and the emission source shall be 4.57 meters (15 feet).</p> <p style="padding-left: 40px;">(ii) The observer shall, when possible, select a position that minimizes interference from other fugitive emission sources (e.g., road dust). The required observer position relative to the sun (Method 9 of Appendix A-4 of this part, Section 2.1) must be followed.</p> <p style="padding-left: 40px;">(iii) For affected facilities using wet dust suppression for particulate matter control, a visible mist is sometimes generated by the spray. The water mist must not be confused with particulate matter emissions and is not to be considered a visible emission. When a water mist of this nature is present, the observation of emissions is to be made at a point in the plume where the mist is no longer visible.</p> <p>(40 CFR 60.675(c)(3)) When determining compliance with the fugitive emissions standard for any affected facility described under 40 CFR 60.672(b), the duration of the Method 9 (40 CFR part 60, Appendix A-4) observations must be 30 minutes (five 6-minute averages). Compliance with the applicable fugitive emission limits in Table 3 of this subpart must be based on the average of the five 6-minute averages.</p>
D.5	<p>Emission Unit ID: 01, 02, 03 Control Device ID: WS</p> <p>(40 CFR 60.674(b)) The owner or operator of any affected facility for which construction, modification, or reconstruction commenced on or after April 22, 2008, that uses wet suppression to control emissions from the affected facility must perform monthly periodic inspections to check that water is flowing to discharge spray nozzles in the wet suppression system. The owner or operator must initiate corrective action within 24 hours and complete corrective action as expeditiously as practical if the owner or operator finds that water is not flowing properly during an inspection of the water spray nozzles. The owner or operator must record each inspection of the water spray nozzles, including the date of each inspection and any corrective actions taken, in the logbook required under 40 CFR 60.676(b).</p> <p style="padding-left: 40px;">...(2) If an affected facility that routinely uses wet suppression water sprays ceases operation of the water sprays or is using a control mechanism to reduce fugitive emissions other than water sprays during the monthly inspection (for example, water from recent rainfall), the logbook entry required under 40 CFR 60.676(b) must specify the control mechanism being used instead of the water sprays.</p>

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D. SOURCES SUBJECT TO 40 CFR 60 SUBPART OOO

Condition Number	Condition
	<p>(40 CFR 60.676(b)(1)) Owners or operators of affected facilities for which construction, modification, or reconstruction commenced on or after April 22, 2008, must record each periodic inspection required under 40 CFR 60.674(b), including dates and any corrective actions taken, in a logbook (in written or electronic format). The owner or operator must keep the logbook onsite and make hard or electronic copies (whichever is requested) of the logbook available to the Department upon request.</p>
D.6	<p>Emission Unit ID: 01, 02, 03 Control Device ID: WS</p> <p>(40 CFR 60.670(d))</p> <p>(1) 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 paragraph (d)(3) of this section.</p> <p>(2) An owner or operator complying with paragraph (d)(1) of this section shall submit the information required in 40 CFR 60.676(a).</p> <p>(3) An owner or operator replacing all existing facilities in a production line with new facilities does not qualify for the exemption described in paragraph (d)(1) of this section and must comply with the provisions of 40 CFR 60.672, 60.674 and 60.675.</p> <p>(40 CFR 60.676(a)) Each owner or operator seeking to comply with 40 CFR 60.670(d) shall submit to the Department the following information about the existing facility being replaced and the replacement piece of equipment.</p> <p>(1) For a crusher, bucket elevator, bagging operation, or enclosed truck or railcar loading station:</p> <p style="padding-left: 20px;">(i) The rated capacity in megagrams or tons per hour of the existing facility being replaced.</p> <p style="padding-left: 20px;">(ii) The rated capacity in tons per hour of the replacement equipment.</p> <p>(2) For a screening operation:</p> <p style="padding-left: 20px;">(i) The total surface area of the top screen of the existing screening operation being replaced</p> <p style="padding-left: 20px;">(ii) The total surface area of the top screen of the replacement screening operation.</p> <p>(3) For a conveyor belt:</p> <p style="padding-left: 20px;">(i) The width of the existing belt being replaced</p> <p style="padding-left: 20px;">(ii) The width of the replacement conveyor belt.</p> <p>(4) ...</p>
D.7	<p>Emission Unit ID: 01, 02, 03 Control Device ID: WS</p>

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D. SOURCES SUBJECT TO 40 CFR 60 SUBPART OOO

Condition Number	Condition
	<p>(40 CFR 60.676(f)) The owner or operator of any affected facility shall submit written reports of the results of all performance tests conducted to demonstrate compliance with the standards set forth in 40 CFR 60.672 of this subpart, including reports of opacity observations made using Method 9 (40 CFR part 60, Appendix A-4) to demonstrate compliance with 40 CFR 60.672(b).</p> <p>(40 CFR 60.676(g)) The owner/operator of any wet material processing operation that processes saturated and subsequently processes unsaturated materials, shall submit a report of this change within 30 days following such change. At the time of such change, this screening operation, bucket elevator, or belt conveyor becomes subject to the applicable opacity limit in 40 CFR 60.672(b) and the emission test requirements of 40 CFR 60.11 if it meets the 40 CFR 60 Subpart OOO applicability requirements.</p> <p>(40 CFR 60.676(h)) The subpart A requirement under 40 CFR 60.7(a)(1) for notification of the date construction or reconstruction commenced is waived for affected facilities under this subpart.</p> <p>(40 CFR 60.676(i)) A notification of the actual date of initial startup of each affected facility shall be submitted to the Department</p> <ol style="list-style-type: none">(1) For a combination of affected facilities in a production line that begin actual initial startup on the same day, a single notification of startup may be submitted by the owner or operator to the Department. The notification shall be postmarked within 15 days after such date and shall include a description of each affected facility, equipment manufacturer, and serial number of the equipment, if available.(2) For portable aggregate processing plants, the notification of the actual date of initial startup shall include both the home office and the current address or location of the portable plant.

E. AMBIENT AIR STANDARDS REQUIREMENTS

Condition Number	Conditions
E.1	Air dispersion modeling (or other method) has demonstrated that this facility's operation will not interfere with the attainment and maintenance of any state or federal ambient air standard. Any changes in the parameters used in this demonstration may require a review by the facility to determine continuing compliance with these standards. These potential changes include any decrease in stack height, decrease in stack velocity, increase in stack diameter, decrease in stack exit temperature, increase in building height or building additions, increase in emission rates, decrease in distance between stack and property line, changes in vertical stack orientation, and installation of a rain cap that impedes vertical flow. Parameters that are not required in the determination will not invalidate the demonstration if they are modified. The emission rates used in the determination are

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E. AMBIENT AIR STANDARDS REQUIREMENTS

Condition Number	Conditions
	<p>listed in Attachment - Emission Rates for Ambient Air Standards of this permit. Higher emission rates may be administratively incorporated into Attachment - Emission Rates for Ambient Air Standards of this permit provided a demonstration using these higher emission rates shows the attainment and maintenance of any state or federal ambient air quality standard or with any other applicable requirement. Variations from the input parameters in the demonstration shall not constitute a violation unless the maximum allowable ambient concentrations identified in the standard are exceeded.</p> <p>The owner/operator shall maintain this facility at or below the emission rates as listed in Attachment - Emission Rates for Ambient Air Standards, not to exceed the pollutant limitations of this permit. Should the facility wish to increase the emission rates listed in Attachment - Emission Rates for Ambient Air Standards, not to exceed the pollutant limitations in the body of this permit, it may do so by the administrative process specified above. This is a State Only enforceable requirement.</p>

F. PERIODIC REPORTING SCHEDULE

Compliance Monitoring Report Submittal Frequency	Reporting Period (Begins on the startup date of the source)	Report Due Date
Quarterly	January-March April-June July-September October-December	April 30 July 30 October 30 January 30
Semiannual	January-June April-September July-December October-March	July 30 October 30 January 30 April 30
Annual	January-December April-March July-June October-September	January 30 April 30 July 30 October 30

Note: This reporting schedule does not supersede any federal reporting requirements including but not limited to 40 CFR Part 60, 40 CFR Part 61, and 40 CFR Part 63. All federal reports must meet the reporting time frames specified in the federal standard unless the Department or EPA approves a change.

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G. REPORTING CONDITIONS

Condition Number	Conditions
G.1	Reporting required in this permit, shall be submitted in a timely manner as directed in the Periodic Reporting Schedule of this permit.
G.2	All reports and notifications required under this permit shall be submitted to the person indicated in the specific condition at the following address: <p style="text-align: center;">2600 Bull Street Columbia, SC 29201</p> The contact information for the local Environmental Affairs Regional office can be found at: <p style="text-align: center;">http://www.scdhec.gov</p>
G.3	The owner/operator shall submit written notification to the Director of Air Permitting of the date construction is commenced, postmarked within 30 days after such date.
G.4	Unless elsewhere specified within this permit, all reports required under this permit shall be submitted to the Manager of the Technical Management Section, Bureau of Air Quality.
G.5	<p>(S.C. Regulation 61-62.1, Section II.J.1.c) For sources not required to have continuous emission monitors, any malfunction of air pollution control equipment or system, process upset, or other equipment failure which results in discharges of air contaminants lasting for one (1) hour or more and which are greater than those discharges described for normal operation in the permit application, shall be reported to the Department within twenty-four (24) hours after the beginning of the occurrence and a written report shall be submitted to the Department within thirty (30) days. The written report shall include, at a minimum, the following:</p> <ol style="list-style-type: none"> 1. The identity of the stack and/or emission point where the excess emissions occurred; 2. The magnitude of excess emissions expressed in the units of the applicable emission limitation and the operating data and calculations used in determining the excess emissions; 3. The time and duration of excess emissions; 4. The identity of the equipment causing the excess emissions; 5. The nature and cause of such excess emissions; 6. The steps taken to remedy the malfunction and the steps taken or planned to prevent the recurrence of such malfunction; 7. The steps taken to limit the excess emissions; and, 8. Documentation that the air pollution control equipment, process equipment, or processes were at all times maintained and operated, to the maximum extent practicable, in a manner consistent with good practice for minimizing emissions. <p>The initial twenty-four (24) hour notification should be made to the Department's local Environmental Affairs Regional office.</p> <p>The written report should be sent to the Manager of the Technical Management Section, Bureau of Air Quality and the local Environmental Affairs Regional office.</p>

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H. PERMIT EXPIRATION AND EXTENSION

Condition Number	Conditions
H.1	<p>(S.C. Regulation 61-62.1, Section II.A.4 and S.C. Regulation 61-62.1, Section II.J.1.f) Approval to construct shall become invalid if construction:</p> <ul style="list-style-type: none">a. is not commenced within 18 months after receipt of such approval;b. is discontinued for a period of 18 months or more; orc. is not completed within a reasonable time as deemed by the Department. <p>The Department may extend the construction permit for an additional 18-month period upon a satisfactory showing that an extension is justified. This request must be made prior to the permit expiration. This provision does not apply to the time period between construction of the approved phases of a phased construction project; each phase must commence construction within eighteen (18) months of the projected and approved commencement date.</p>
H.2	<p>This provision does not apply to the time period between construction of the approved phases of a phased construction project; each phase must commence construction within 18 months of the projected and approved commencement date.</p>

I. PERMIT TO OPERATE

Condition Number	Conditions
I.1	<p>(S.C. Regulation 61-62.1 Section II.F.2) The owner/operator or professional engineer in charge of the project shall certify that, to the best of his/her knowledge and belief and as a result of periodic observation during construction, the construction under application has been completed in accordance with the specifications agreed upon in the construction permit issued by the Department.</p>
I.2	<p>If construction is certified as provided in S.C. Regulation 61-62.1 Section II.F.2, the owner or operator, may operate the source in compliance with the terms and conditions of the construction permit until the operating permit is issued by the Department.</p>
I.3	<p>If construction is not built as specified in the permit application and associated construction permit(s), the owner/operator must submit to the Department a complete description of modifications that are at variance with the documentation of the construction permitting determination prior to commencing operation.</p> <p>Construction variances that would trigger additional requirements that have not been addressed prior to start of operation shall be considered construction without a permit.</p>
I.4	<p>(S.C. Regulation 61-62.1, Section II.F.3) The owner or operator shall submit a written request to the Director of Air Permitting for a new or revised operating permit to cover any new or altered source postmarked within 15 days after the actual date of initial startup of each new or altered source.</p> <p>The written request for a new or revised operating permit must include, as a minimum, the following information:</p> <ul style="list-style-type: none">i. A list of sources that were placed into operation.ii. The actual date of initial startup of each new or altered source.

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J. GENERAL CONDITIONS

Condition Number	Conditions
J.1	The permittee shall pay permit fees to the Department in accordance with the requirements of S.C. Regulation 61-30, Environmental Protection Fees.
J.2	<p>In the event of an emergency, as defined in S.C. Regulation 61-62.1, Section II.L, the owner or operator may document an emergency situation through properly signed, contemporaneous operating logs, and other relevant evidence that verify:</p> <ol style="list-style-type: none"><li data-bbox="331 667 1531 741">1. An emergency occurred, and the owner or operator can identify the cause(s) of the emergency;<li data-bbox="331 741 1531 772">2. The permitted source was at the time the emergency occurred being properly operated;<li data-bbox="331 772 1531 877">3. During the period of the emergency, the owner or operator took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit; and<li data-bbox="331 877 1531 1098">4. The owner or operator gave a verbal notification of the emergency to the Department within 24 hours of the time when emission limitations were exceeded, followed by a written report within 30 days. The written report shall include, at a minimum, the information required by S.C. Regulation 61-62.1, Section II.J.1.c.i through viii. The written report shall contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken. <p>This provision is in addition to any emergency or upset provision contained in any applicable requirement.</p>
J.3	<p>(S.C. Regulation 61-62.1, Section II.O) Upon presentation of credentials and other documents as may be required by law, the owner or operator shall allow the Department or an authorized representative to perform the following:</p> <ol style="list-style-type: none"><li data-bbox="331 1283 1531 1356">1. Enter the facility where emissions-related activity is conducted, or where records must be kept under the conditions of the permit.<li data-bbox="331 1356 1531 1430">2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit.<li data-bbox="331 1430 1531 1503">3. Inspect any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.<li data-bbox="331 1503 1531 1602">4. As authorized by the Federal Clean Air Act and/or the S.C. Pollution Control Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit or applicable requirements.
J.4	(S.C. Regulation 61-62.1, Section II.J.1.a) No applicable law, regulation, or standard will be contravened.
J.5	(S.C. Regulation 61-62.1, Section II.J.1.e) Any owner or operator who constructs or operates a source or modification not in accordance with the application submitted pursuant to S.C. Regulation 61-62.1 or with the terms of any approval to construct, or who commences construction after the effective date of S.C. Regulation 61-62.1 without applying for and receiving approval hereunder, shall be subject to enforcement action.

ATTACHMENT - Emission Rates for Ambient Air Standards

Luck Stone - Chester Quarry

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The emission rates listed herein are not considered enforceable limitations but are used to evaluate ambient air quality impact. Until the Department makes a determination that a facility is causing or contributing to an exceedance of a state or federal ambient air quality standard, increases to these emission rates are not in themselves considered violations of these ambient air quality standards (see Ambient Air Standards Requirements).

AMBIENT AIR QUALITY STANDARDS - STANDARD NO. 2						
Emission Point ID	Emission Rates (lbs/hr)					
	PM₁₀	PM_{2.5}	SO₂	NO_x	CO	Lead
V1	0.297	--	--	--	--	--
V2	0.025	--	--	--	--	--
V3	0.407	--	--	--	--	--
V4	0.025	--	--	--	--	--
V5	0.407	--	--	--	--	--
V6	0.025	--	--	--	--	--
V7	0.025	--	--	--	--	--
V8	0.025	--	--	--	--	--
V9	0.025	--	--	--	--	--
V10	0.025	--	--	--	--	--
V11	0.297	--	--	--	--	--
V12	0.025	--	--	--	--	--
V13	0.025	--	--	--	--	--
V14	0.025	--	--	--	--	--
V15	0.025	--	--	--	--	--
V16	0.025	--	--	--	--	--
V17	0.025	--	--	--	--	--
V18	0.025	--	--	--	--	--
V19	0.025	--	--	--	--	--
V20	0.025	--	--	--	--	--
V21	0.025	--	--	--	--	--
V22	0.025	--	--	--	--	--
V23	0.025	--	--	--	--	--
V24	0.407	--	--	--	--	--
V25	0.025	--	--	--	--	--
V26	0.055	--	--	--	--	--
V27	0.044	--	--	--	--	--
V28	0.009	--	--	--	--	--
Customer Roads	0.23	0.02	--	--	--	--
Haul Roads	0.09	0.01	--	--	--	--
Material Storage	0.31	0.04	--	--	--	--

ATTACHMENT - Emission Rates for Ambient Air Standards

Luck Stone - Chester Quarry

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AMBIENT AIR QUALITY STANDARDS - STANDARD NO. 2						
Emission Point ID	Emission Rates (lbs/hr)					
	PM₁₀	PM_{2.5}	SO₂	NO_x	CO	Lead
Mining and Material Handling (Combined)	V2 thru V28	0.35	--	--	--	--

Attachment B

Statement of Basis Permit No. 0640-0080-CA



STATEMENT OF BASIS
Page 1 of 4
 BAQ Air Permitting Division

Company Name:	Luck Stone – Chester Quarry	Permit Writer:	Lance Davis
Permit Number:	0640-0080-CA	Date:	March 31, 2020

DATE APPLICATION RECEIVED: August 28, 2019

FACILITY AND PROJECT DESCRIPTION

Luck Stone – Chester Quarry (the “facility”) is proposing to construct a new crushed stone processing plant capable of processing 550 tons per hour. The facility will consist of crushers, screens, conveyors, a wash process, storage piles, truck hauling/loading, and customer roads. The wash process is considered a totally wet process and therefore has no emissions associated with it. The facility will also be equipped with a wet suppression system entailing water spray valves for process equipment (crushers, screeners, conveyors) and a water truck equipped with a water hose for roads and storage piles.

The facility will also have a 550 kW portable diesel generator that will not require an air construction permit as it will not remain at any single site at the facility for more than 12 consecutive months and meets the exemption criteria detailed in B.2.ii(a). The proposed diesel generator will not be considered a stationary unit as it will be a non-road and portable unit. The proposed generator will also meet EPA’s Tier IV requirements and the emissions are reflected as such. The de-watering pumps associated with the facility are electric ones and are considered exempt from an air construction permit.

SOURCE TEST REQUIREMENTS

Emission unit IDs 01, 02, and 03 require an initial source test in accordance with 40 CFR 60.11 and 40 CFR 60.675.

SPECIAL CONDITIONS, MONITORING, LIMITS

The facility is requesting federally enforceable limits of less than 100.0 TPY of PM₁₀ for Title V avoidance and less than 250.0 TPY of PM and PM₁₀ for PSD avoidance.

This facility is permitted at a maximum process weight rate of 550 tons per hour. At controlled emission rates using wet suppression, the facility will meet the PSD and Title V limitations detailed above. To ensure the PSD and Title V limitations are being met, weekly monitoring of the wet suppression systems is required and is to be recorded and kept on-site for inspection. Any instances of any corrective actions must be noted. If there are any questions of compliance, these records will be requested and reviewed by the Department.

Should the wet suppression system not be operating properly, a portable water spray system is to be used until the permanent water spray system is back in proper operation. If a portable water system is not available, then the process shall be shut down until the permanent water spray is back in proper operation.

TOTAL PROJECT EMISSIONS						
Pollutant	Uncontrolled		Controlled		PTE*	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
PM	91.93	402.69	8.524	37.36	6.834	<250.0
PM ₁₀	32.684	143.15	3.074	13.47	2.454	<100.0
PM _{2.5}	4.804	21.05	0.454	1.97	0.454	1.97
SO ₂	0.009	0.039	--	--	0.009	0.039
CO	4.24	18.59	--	--	4.24	18.59
NO _x	0.49	2.12	--	--	0.49	2.12
VOC	0.23	1.01	--	--	0.23	1.01



STATEMENT OF BASIS
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 BAQ Air Permitting Division

Company Name:	Luck Stone – Chester Quarry	Permit Writer:	Lance Davis
Permit Number:	0640-0080-CA	Date:	March 31, 2020

MINING AND MATERIAL HANDLING EMISSIONS						
Pollutant	Uncontrolled		Controlled		PTE*	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
PM	80.51	352.65	6.81	29.84	6.81	<250.0
PM ₁₀	29.20	127.91	2.43	10.64	2.43	<100.0
PM _{2.5}	4.42	19.37	0.35	1.54	0.35	19.37

*The lb/hr PTE rates for the facility are based off the controlled rates as these emissions were demonstrated by air dispersion modeling.

MATERIAL STORAGE EMISSIONS (FUGITIVE)						
Pollutant	Uncontrolled		Controlled		PTE	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
PM	0.612	2.678	--	--	0.612	2.678
PM ₁₀	0.306	1.339	--	--	0.306	1.339
PM _{2.5}	0.044	0.192	--	--	0.044	0.192

HAUL/PLANT ROAD EMISSIONS (FUGITIVE)						
Pollutant	Uncontrolled		Controlled		PTE	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
PM	10.79	47.25	1.08	4.73	1.08	47.25
PM ₁₀	3.15	13.80	0.32	1.38	0.32	13.80
PM _{2.5}	0.32	1.38	0.03	0.14	0.03	1.38

550 kW Portable Diesel Generator (Tier 4 Certified Engine)						
Pollutant	Uncontrolled		Controlled		PTE	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
PM	0.024	0.106	--	--	0.024	0.106
PM ₁₀	0.024	0.106	--	--	0.024	0.106
PM _{2.5}	0.024	0.106	--	--	0.024	0.106
SO ₂	0.009	0.039	--	--	0.009	0.039
CO	4.24	18.59	--	--	4.24	18.59
NO _x	0.49	2.12	--	--	0.49	2.12
VOC	0.23	1.01	--	--	0.23	1.01

OPERATING PERMIT STATUS

The facility will be issued a new general conditional major operating permit for nonmetallic processing plants.

REGULATORY APPLICABILITY REVIEW	
Regulations	Comments/Periodic Monitoring Requirements
Section II.E – Synthetic Minor	Applicable – The facility is requesting federally enforceable limits of less than 100.0 TPY of PM ₁₀ for Title V avoidance and less than 250.0 TPY of PM. Because mining



STATEMENT OF BASIS
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 BAQ Air Permitting Division

Company Name:	Luck Stone – Chester Quarry	Permit Writer:	Lance Davis
Permit Number:	0640-0080-CA	Date:	March 31, 2020

REGULATORY APPLICABILITY REVIEW	
Regulations	Comments/Periodic Monitoring Requirements
	is not one of the 28 listed source categories for PSD or Title V, fugitive emissions are not included in determining potential to emit.
Standard No. 1	Not Applicable – The facility does not have any fuel burning operations.
Standard No. 3 (state only)	Not Applicable – The facility does not combust waste.
Standard No. 4	Applicable – Section VIII: Based on a process weight rate of 550 tons/hour, the allowable PM emission rate is 70.1 lb/hr. Section IX: All sources shall not exhibit an opacity greater than 20%. Section X : The facility is subject to this section for all non-enclosed operations.
Standard No. 5	Not Applicable – The permitted facility does not emit VOC and was not in existence until after July 1, 1979 and July 1, 1980.
Standard No. 5.2	Not Applicable – The portable generator associated with this permit is considered exempt.
Standard No. 7	Not Applicable – The facility is requesting a PSD avoidance limit of less than 250.0 TPY of PM and PM ₁₀ .
61-62.6	Applicable – Fugitive PM emissions are controlled by wet suppression and should not emit undesirable levels of PM.
40 CFR 60 and 61-62.60	Applicable – Subpart A: The facility is subject to this Subpart. Subpart OOO: Emission Unit IDs 01, 02, and 03 are subject to this Subpart. Not Applicable – Subpart IIII: The facility will have a 550 kW diesel engine. It will not be subject to this Subpart because the non-road, non-stationary engine is considered portable. Subpart JJJJ: The facility does not have a stationary spark ignition internal combustion engine.
40 CFR 63 and 61-62.63	Subpart ZZZZ: The facility will have a 550 kW diesel engine. It will not be subject to this Subpart because the non-road, non-stationary engine is considered portable.

Explanation of Synthetic Minor and PSD Limits					
Permit ID	Equipment ID	Permit Issue Date	Pollutant	Emission Limit (TPY)	Explanation
CA	All	March 31, 2020	PM PM ₁₀	<250.0	The facility is requesting a <250.0 TPY PM emission limit to avoid PSD.
CA	All	March 31, 2020	PM ₁₀	<100.0	The facility is requesting a <100.0 TPY PM ₁₀ emission limit to avoid TV.



STATEMENT OF BASIS
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 BAQ Air Permitting Division

Company Name:	Luck Stone – Chester Quarry	Permit Writer:	Lance Davis
Permit Number:	0640-0080-CA	Date:	March 31, 2020

Standard No. 4 Allowable					
Process	Process Weight Rate (tons/hr)	PM Allowable (lb/hr)	Uncontrolled Emissions PM (lb/hr)	Controlled Emissions PM (lb/hr)	Monitoring
Mining and Material Handling	550	70.1	80.51	6.81	No monitoring required. The PM controlled rates are below the allowable PM limit.

AMBIENT AIR STANDARDS REVIEW	
Regulations	Comments/Periodic Monitoring Requirements
Standard No. 2	See modeling summary dated September 20, 2019.
Standard No. 7.c	
Standard No. 8 (state only)	

PUBLIC NOTICE

This construction permit has undergone a 30-day public notice period, in accordance with SC Regulation 61-62.1, Section II.N to establish synthetic minor limits. The comment period was open from October 16, 2019 to December 4, 2019. The draft construction permit and draft statement of basis were placed on the BAQ website during the comment period. Comments were received during the comment period.

ADDITIONAL PUBLIC PARTICIPATION

The Bureau of Land and Waste Management and the Bureau of Air Quality held a joint public meeting on October 17, 2019. The two bureaus also held a public hearing on November 19, 2019. Both events were hosted at the Gateway Convention Center located in Richburg, South Carolina.

Condition C.5.2.f was added to the air permit based on comments received concerning roadway dust caused by trucks.

SUMMARY AND CONCLUSIONS

It has been determined that this source, if operated in accordance with the submitted application, will meet all applicable requirements and emission standards.

Attachment C

**Response to Comments
Permit No. 0640-0080-CA**

**South Carolina Department of Health and Environmental Control
Bureau of Air Quality**

**Response to Comments
Public Notice #19-058-GCM-C
Luck Stone – Chester Quarry
Permit Number 0640-0080-CA**

The following is the SC Department of Health and Environmental Control's (DHEC) Bureau of Air Quality (Department) response to the comments made and issues raised during the formal comment periods held October 16, 2019 through December 04, 2019 regarding the draft Luck Stone – Chester Quarry synthetic minor construction permit. The written comments received regarding the draft permit are available for viewing at the SC DHEC Columbia office located at 2600 Bull Street, Columbia, SC 29201, or hardcopies can be requested by contacting our Freedom of Information Office at (803) 898-3817.

Air Pollution Impacts - Comments were received regarding air pollution impacts to air quality, health impacts to the general population and sensitive individuals (including nearby schools, neighborhoods, places of worship, golf course, etc.), impacts to wildlife and other animals and impacts to creeks and vegetation from the proposed operation.

Federal and state air quality regulations are established to be protective of public health, using scientific data and human health risk exposure. These regulations include setting standards for ambient air and setting emission limits, controls and/or operational requirements for industrial facilities.

The Clean Air Act requires the U.S. Environmental Protection Agency (EPA) to establish National Ambient Air Quality Standards (NAAQS) for six common pollutants ("criteria" pollutants) considered harmful to public health and the environment. There are two types of NAAQS: primary standards and secondary standards. Primary standards are set to protect public health, including the health of sensitive populations such as asthmatics, children, and the elderly. Secondary standards are set to protect public welfare, such as protection against decreased visibility, and damage to animals, crops, vegetation, and buildings. National ambient standards have been set for the pollutant of concern from this project, particulate matter. Particulate matter (PM) consists of particulate matter less than 10 micrometers in diameter (PM₁₀) and particulate matter less than 2.5 micrometers in diameter (PM_{2.5}).

The EPA is also required to designate areas of the country as nonattainment when monitoring information shows pollutant concentrations exceed (or violate) a set standard. There are no nonattainment areas in South Carolina for PM₁₀ or PM_{2.5}.

In accordance with South Carolina air quality regulations, “no permit to construct or modify a source will be issued if emissions interfere with attainment or maintenance of any state or federal standard.” Luck Stone – Chester Quarry (facility) operations were evaluated to determine if the emissions would interfere with attainment of the NAAQS. An air quality analysis was performed using an EPA-approved air dispersion computer model to simulate how the facility’s maximum emissions will be dispersed into the atmosphere surrounding the proposed site. This simulation used official National Weather Service Meteorological data from the Rock Hill – York County Airport that was processed and quality assured by Department staff meteorologists. This meteorological data was determined to be representative of the weather conditions that would be observed at the facility site, including those weather conditions that would produce the worst-case pollutant concentrations in the community surrounding the proposed site. The maximum facility PM₁₀ concentration from the computer model was added to background (monitored) pollutant concentrations. The EPA-approved model demonstrated compliance with the NAAQS for PM₁₀ without including trees or other vegetation as a buffer (a worst-case scenario). Air dispersion modeling for PM_{2.5} was not conducted because the facility evaluated its emissions and determined that controlled emissions of PM_{2.5} would be below threshold levels requiring an air quality analysis. The emissions of PM_{2.5} at levels below the de minimis threshold level demonstrates that no violation of the national ambient standard will occur.

Citizen Panel Board – Comments were received requesting a citizen panel board.

Ben Thompson with Luck Stone responded to the request for a citizen panel board in an e-mail to Donna Moye dated February 13, 2020:

“Luck Stone Corporation has committed to work with the community to establish a Community Interest Engagement Group (CIEG). The offered CIEG will be comprised of residential entity representation (Homeowner Association/HOA or equivalent) within a two mile radius of the subject property and individual adjoining property owners. This group will meet at minimum on a quarterly basis or as determined by the CIEG. The CIEG will focus discussions on ongoing activities, future development planning, and to mutually share community opportunities for collaboration.”

Use of Cayce City Hall Monitoring Data and On-Site Monitoring – A commenter expressed concern about the distance of the Cayce City Hall site to the Luck Stone Chester Quarry (Quarry) and the use of data from the 2013 to 2015 period to establish background PM₁₀ levels and asked why the applicant or DHEC cannot monitor at the proposed site to provide more recent data at the facility itself for establishing background levels.

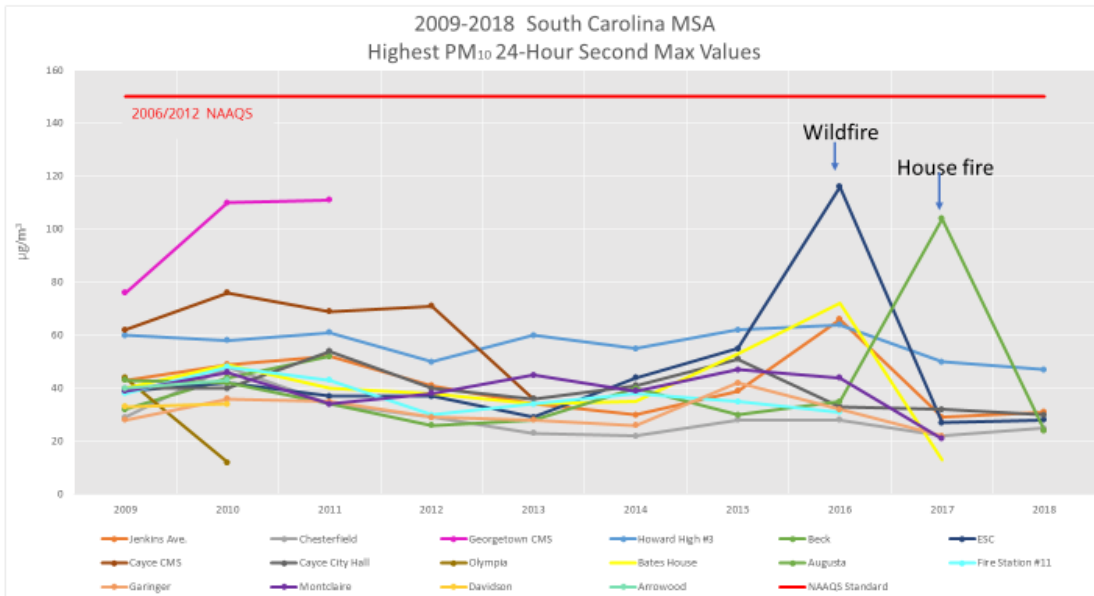
EPA and SC DHEC modeling guidance prescribe that representative background concentrations should be added to any facility modeled concentrations in order to estimate the total concentration of a pollutant in the area surrounding the facility. The estimated total concentration should then be compared to the appropriate National Ambient Air Quality Standard (NAAQS) to determine compliance of the new sources. EPA guidance states that if there are no monitors located in the vicinity of the new or modifying source, a “regional site” may be used to determine background concentrations. This is because it is not necessary for a monitor to be located in every county to have an idea of the local air quality.

A regional site is one that is located away from the area of interest but is impacted by similar or adequately representative sources. The determination of whether a background monitoring site is representative is based on several factors, the most important being the proximity of the background data site to the facility and a comparison of the land use (urban/suburban/rural) as well as the proximity of nearby industrial facilities and population centers to the facility site vs. the background site. One of the main strategies of ambient air monitoring is to locate monitoring sites in the areas where pollutant concentrations are expected to be highest (worst case), so areas with fewer sources of air pollution are reasonably expected to have better air quality. The Cayce City Hall monitoring site, located in the Columbia urban area, is in an area that is expected to have higher particulate concentrations than less urban and industrialized areas of the state.

There are two PM₁₀ particulate monitoring sites that are about the same relative proximity to the Luck Stone Chester Quarry (Quarry). The Cayce City Hall and the Chesterfield sites are both about 80+ km from the Quarry. As mentioned, the Cayce City Hall site is located in an urban, industrialized area with a wide assortment of particulate sources in the surrounding area. The Chesterfield site is located in an isolated, rural area with no significant particulate sources located within 10 km of the site. Compared to the Quarry location, the Cayce City Hall site has significantly more particulate sources, both permitted and unpermitted (no permit required). This can

be seen in a comparison of the PM₁₀ emissions inventories of Chester County (Quarry location) vs. Lexington County (Cayce City Hall location). The most recent data available for the 2014 year indicates a Chester County inventory of 3,936 tons of PM₁₀ vs. a Lexington County inventory of 12,209 tons of PM₁₀. By comparison, the 2014 Chesterfield inventory was 5951 tons of PM₁₀. Note that, while there has been some fluctuation in the inventories of all three counties, data available since 2008 indicate that both Chesterfield and Lexington County PM₁₀ inventories are higher than that of Chester County, with Lexington having the highest PM₁₀ emissions of the three counties by far. All indications are that, when available, more recent inventory data will confirm the same relative PM₁₀ emissions by county. Thus, while an argument could be made that the Chesterfield site is representative of the relatively rural area the Quarry is located in, the Cayce City Hall site was chosen as a representative, and more conservative (worst case), site for estimating PM₁₀ background. The use of the Cayce City Hall PM₁₀ in the PM₁₀ NAAQS assessment for the Luck Stone Chester Quarry permit is entirely consistent with EPA and SC DHEC guidance.

There is no prescribed time limitation for ambient monitoring data to be considered representative for use in a NAAQS compliance demonstration, although the practice is to use data that is as recent as possible. When the air dispersion modeling for the Quarry was performed, the 2013 to 2015 data was the most recent complete data set available to the applicant for the Cayce City Hall site. It was entirely appropriate that this data was used in that NAAQS assessment as PM₁₀ ambient monitoring data (see figure below) shows statewide PM₁₀ ambient concentrations have remained basically flat over the past ten-year period. The only exceptions to this were instances where a wildfire and house fire in the vicinity of the Greenville and Augusta monitoring sites caused a spike in concentrations that did not appreciably affect the data at the other sites or the overall trend. Also, it is worth noting that the use of the available 2013 to 2015 data from any of the monitoring sites in the state would result in total concentrations that meet the PM₁₀ NAAQS.



In addition, a review of the most recent data now available from the 2016-2018 period shows a background PM₁₀ 24-hr design value concentration of 33 µg/m³ for the representative/conservative Cayce monitoring site. This value is lower than the 2013-2015 background concentration used in the Quarry modeling. As a result, the modeling would demonstrate NAAQS compliance using either data set.

Based on the above, there is no need to obtain background data from the Quarry location in order to make a decision on whether the facility will be able to comply with the PM₁₀ NAAQS. As mentioned, it is acceptable under EPA guidance to use data from a representative regional background site. In addition, based on the data discussed above, it can be assumed that any background data to be collected at the Quarry location would yield lower PM₁₀ concentrations than the Cayce City Hall data used in the air dispersion modeling compliance demonstration.

Use of off-site or on-site monitors (specifically Special Purpose Monitors (SPM), modular air quality monitors). – Comments were received requesting both off-site and on-site air quality monitors to ensure pollutant concentrations after the facility has begun operating are within an acceptable level.

Consistent with federal regulations, the Department relies on its stationary network of ambient air monitors to continuously monitor air quality throughout the state. Monitoring stations in South Carolina’s ambient air monitoring network are

specifically located to represent ambient pollution levels in a diverse set of geographical areas. In accordance with 40 Code of Federal Regulations (CFR) Part 58, Appendix D, ambient air monitors are required to be placed in areas with the highest population, or where the highest pollutant concentrations are expected to occur. The Department annually reviews the monitoring network to make sure the minimum requirements and the needs of the air program are met. If the ambient monitors in the monitoring network demonstrate the air pollutant concentrations are lower than the levels set by the national health-protective standards, then it is reasonable to expect that the air pollutant concentrations in other areas are also lower than the national standards.

The Department has operated an air quality monitoring network in South Carolina since 1959. The monitoring network currently includes 34 PM₁₀ and PM_{2.5} monitors and samplers at 15 sites across the state.¹ These monitors and samplers are used to assess South Carolina's air quality and determine compliance with the NAAQS and state ambient air quality standards. All monitors in South Carolina show attainment with all current air quality standards.

There is also historical PM₁₀ monitoring data available for granite quarries. This monitoring was conducted by a contractor for a Columbia area quarry between 2003 and 2008. SC DHEC technical staff periodically checked performance and accuracy of the monitors. This monitoring data showed that ambient air quality standards were met. The maximum permitted production rate at the proposed Luck Stone quarry is less than at the Columbia area quarry. Additionally, SC DHEC conducted ambient PM₁₀ monitoring near two granite quarries in Columbia due to concerns about PM₁₀ concentrations in adjacent communities. The monitoring was conducted at one site from 1991 to 2012 and from 1991 to 2010 at the other site. The results of that monitoring showed ambient concentrations less than half of the health-based standards for PM₁₀ in the area around both quarries at the time the monitoring was discontinued.

Based on air dispersion modeling showing compliance with the PM standards, permit requirements to control PM emissions, and historical information indicating compliance with the PM ambient standards at other mining sites, the Department expects the facility will meet State and Federal ambient air quality requirements.

¹ www.scdhec.gov/environment/your-air/ambient-air-monitoring-network

Use of a Field Analysis of Silica Tool (FAST) On-Site as a means to monitor Silica

- A commenter suggests that the Field Analysis of Silica Tool (FAST) using Fourier Transform Infrared (FTIR) analyzers could be deployed by the facility to ensure the Quarry stays within exposure limits for silica and proactively protect health.

The FTIR analyzer the commenter speaks of is an occupational safety analyzer that is designed to provide information on worker exposure. The commenter notes that FAST is a “beta” tool, meaning it is still under development. More importantly, neither the FTIR analyzer nor the FAST software are EPA-approved methods for measuring ambient concentrations of particulate matter (in which Silica is a constituent). Also, as discussed further below, EPA has determined that regulating silica exposure using the existing PM standards is protective of public health. As such, FAST tools are not used in air quality permitting or to determine whether or not a facility is complying with the NAAQS.

However, the facility did perform an air quality analysis using EPA-approved air dispersion modeling software that shows predicted particulate matter emissions from the facility will meet the applicable NAAQS. This air dispersion modeling was performed using official National Weather Service Meteorological data from the nearby Rock Hill – York County Airport. The air dispersion modeling showed that predicted particulate concentrations at the facility boundary and beyond would meet the applicable health-based NAAQS under all wind conditions, including during periods of high winds.

Chester County attainment determination – A comment was received requesting the technical basis for the determination that Chester is in attainment without monitoring stations located in Chester. The comment also questions whether Chester may potentially be in nonattainment due to the addition of several industries since the 2007 removal of an ozone monitor and being “dangerously close” to nonattainment in 2006-2007.

With respect to the technical basis for the determination of Chester county’s attainment status, EPA guidance states that if there are no monitors located in the vicinity of the new or modifying source, a “regional site” may be used to determine background concentrations. This is because it is not necessary for a monitor to be located in every county to have an idea of the local air quality. Use of a representative background concentration compared to the NAAQS is appropriate to make the determination of Chester County’s attainment status. Please see the “Use of Cayce

City Hall Monitoring Data and On-Site Monitoring” section above for more information.

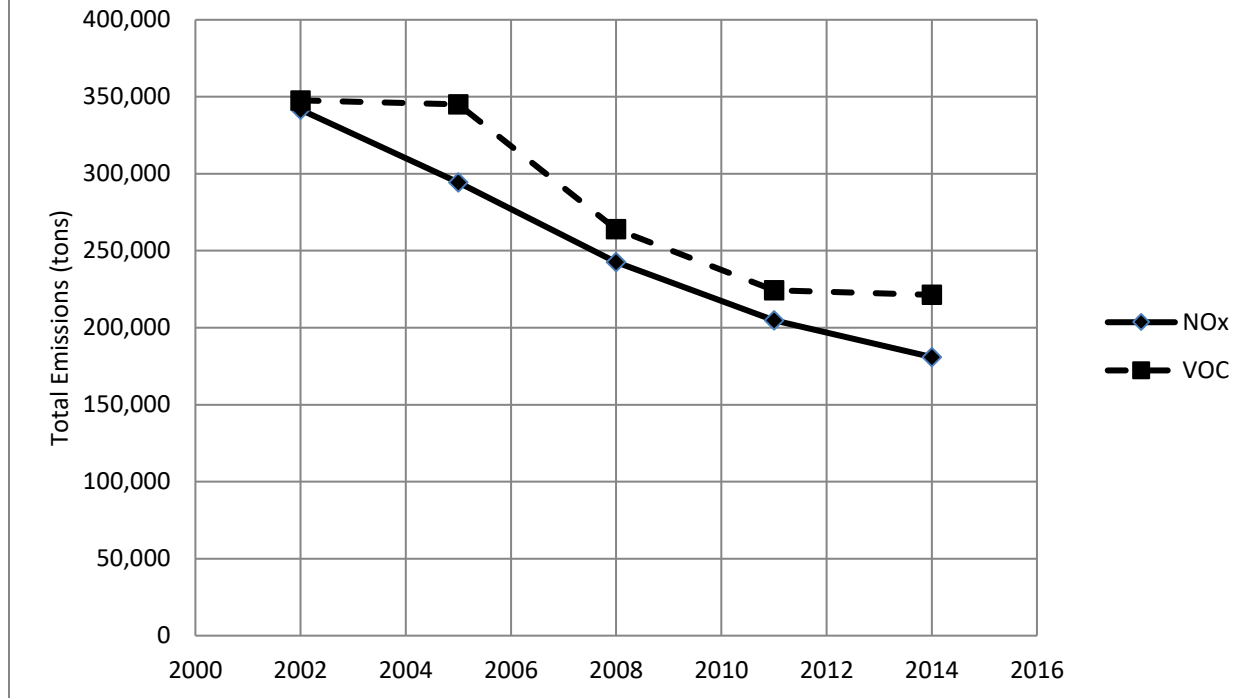
Regarding Chester County being “dangerously close to going into nonattainment status” in late 2006 and early 2007, it is important to note that the monitor (previously site ID 45-023-0002) removed in 2007 from Chester County was monitoring ozone data only, not the pollutant of concern, PM. The ozone monitor in Chester County had concentrations close to the NAAQS standard, but the county was not in danger of being designated nonattainment at that time. The Chester monitor was removed in 2007 as the entire monitoring network was realigned. There was a statistical comparison done between the Union, Chester, and York monitors. It was determined that the Chester monitor would not violate the NAAQS (including the 2008 standard that was established after the realignment), so it was removed from the network.

With respect to ozone, all counties in South Carolina are currently designated as attainment/unclassifiable. Estimated emissions of ozone precursors (NO_x and VOCs) from this facility are not anticipated to affect South Carolina’s NAAQS compliance status. Below is an excerpt from the South Carolina Air Quality Implementation Plan (SIP), Ozone Infrastructure Certification for the 2015 8-hour ozone NAAQS:

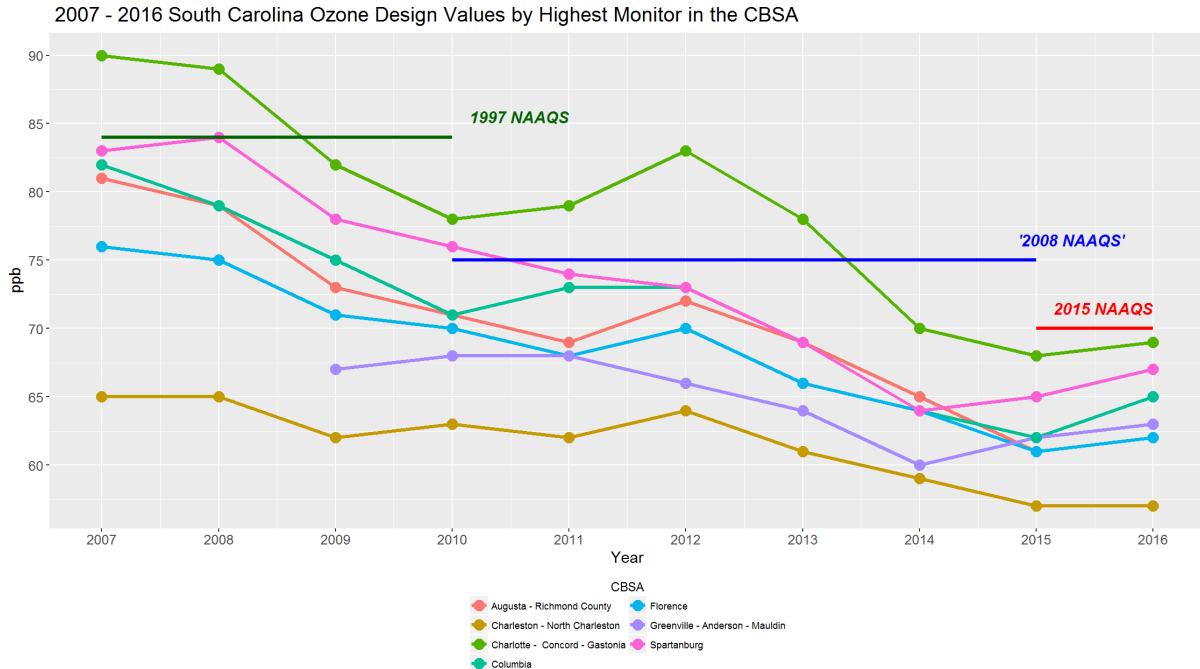
Recent Trends in South Carolina NO_x and VOC Emissions, and 8-hour Ozone Design Values:

The figure below shows South Carolina's total NO_x and VOC emissions from the National Emissions Inventory (NEI) for the years 2002, 2005, 2008, 2011, and 2014. These totals include emissions from point and nonpoint sources, fires, and onroad and nonroad mobile sources. Sources for the data are the 2002 NEI, 2005 v2 NEI, 2008 v3 NEI, 2011 v1 NEI, and 2014 v1 NEI.

South Carolina Total Emissions from NEI, 2002-2014



Between 2002 and 2014, South Carolina saw a 47% reduction in total annual NO_x emissions, as well as a 36% reduction in total annual VOC emissions. These emissions reductions reflect the success of federal and state air regulations, and are mirrored in the reduction of ozone design values over a similar period, as seen in the figure below. The Department believes that ozone precursor emissions in South Carolina have recently declined, and will continue to decline, because of the continuing decline in the use of coal-fired EGUs, greater use of natural gas in industrial and utility boilers, and turnover in the fleet to favor newer, lower NO_x-emitting, mobile sources.



For the multistate Charlotte NC-Rock Hill SC Core-based Statistical Area (CBSA), over the period 2007-2016, the 8-hour ozone design value decreased by 23%, meeting both the 2008 ozone NAAQS and the more stringent 2015 ozone NAAQS. For the Spartanburg CBSA which lies entirely in South Carolina, the 8-hour ozone design value declined by 19% over the same period. Every CBSA in South Carolina saw an improvement in ozone design values over this nine-year period, again reflecting the success of state and federal regulations in reducing the precursors essential to tropospheric ozone formation.

Travel Distance of Respirable Dust – Comments were received regarding the travel distance of respirable dust and any potential health risks due to travel distance.

It is well known that respirable dust, i.e. PM₁₀, can travel many miles from the source of the PM₁₀ emissions. That said, the Quarry submitted air dispersion modeling that demonstrates the emissions from the Quarry will meet the PM₁₀ NAAQS of 150 µg/m³ as calculated for a 24-hr averaging period. The NAAQS are established by EPA based on scientific data and human health risk exposure to be protective of public health, including the health of sensitive populations such as asthmatics, children, and the elderly.

As is normal with most facilities, the air dispersion modeling indicates the highest total predicted concentration (including the conservative 42 µg/m³ Cayce City Hall background concentration) of 123 µg/m³ will occur at the facility boundary. The PM₁₀

emissions are diluted as they are dispersed in the area surrounding the facility and quickly decrease with distance from the Quarry. Within several hundred meters, the predicted PM₁₀ concentrations from the facility decrease to less than 10 µg/m³ (less than 52 µg/m³ including the background concentration). Within 2 km of the Quarry, the predicted PM₁₀ concentrations fall to near ambient concentrations. Thus, while the emitted respirable dust may travel many miles from the Quarry, air dispersion modeling indicates the total predicted concentrations, which include a conservative background concentration, will be well less than the PM₁₀ NAAQS of 150 µg/m³ at the facility boundary and beyond. It is worth noting that the air dispersion modeling analysis conservatively assumes the facility will operate at maximum capacity continuously for 24 hours/day, every day, which is both unrealistic and physically impossible. When the facility is in actual operation, we expect actual air quality to be better than what has been predicted in the air quality analysis. Thus, public health, including the health of sensitive populations like vulnerable adults with chronic conditions, seniors, and children, will be protected.

Wet Suppression System – Comments were received regarding the wet suppression system, including concern that there is a lack of description of the system, how the system will be used, and the frequency and nature of independent DHEC oversight of implementation of the wet suppression systems.

Each piece of crushing, screening, and conveying equipment at the Quarry will be equipped with a water spray valve that will dampen aggregate as needed (i.e. sprays will not be on during a rainstorm or while a piece of equipment is not operating) to help suppress dust as the aggregate is being processed and then conveyed to a respective storage pile. The storage pile will be sprayed by a hose connected to a water truck to further prevent fugitive dust. On-site roads will also be a source of fugitive dust that will require the use of water trucks. The use of the water hose on the water truck and the water truck itself will help suppress fugitive PM from storage piles and on-site roads. This wet suppression equipment is identified in the permit and statement of basis.

Luck Stone's application states the following:

"Wet suppression on the mine hauling roads and customer access roads will be accompanied by spray from mobile water trucks. Each crusher, screen, and conveyor will be equipped with wet suppression valves. The wet suppression system will be operating by the control room. Water spray valves will be activated prior to the initiation of operations. Operation of the water spray valves will be controlled in

order to minimize water use such as closing water spray valves on non-operating equipment.”

Condition C.6. of the construction permit requires:

“The owner/operator shall operate its wet suppression system except as necessary for elevated material moisture content (i.e. rainfall).

In case the wet suppression system is not operating properly, then a portable water spray system is acceptable for use until the permanent water spray system is back in proper operation. If a portable water system is not available, then the process shall be shut down until the permanent water spray system is back in proper operation.

The owner/operator shall perform weekly inspections of all wet suppression related equipment including a check that water is flowing to discharge spray nozzles in the wet suppression system. The owner/operator must initiate corrective action within 24 hours and complete corrective action as expediently as practical if the owner/operator finds that water is not flowing properly during an inspection of the water spray nozzles. The owner/operator must record each inspection of the water spray nozzles, including the date of each inspection and any corrective actions taken in the logbook...”

During a phone conversation with the facility’s air permit consultant, the consultant was able to confirm that storage pile fugitive emissions will be controlled with water trucks equipped with a spray hose. Please see the “Dust/Fugitive Particulate Matter Emissions” and “Fugitive Dust Control Plan” sections below for more information on DHEC’s oversight in the implementation of the wet suppression system.

Crystalline Silica and Other Lung Diseases - Comments were received regarding adverse health effects from the facility’s air pollutant emissions. Specifically, concern was expressed about exposure to crystalline silica, which is a component of granite dust.

Crystalline silica is found abundantly in the earth’s crust and is a component of granite, sand, soil, and other minerals. Several daily activities such as travelling on dry-dirt roads and wind blowing across dry or sandy areas expose people to low concentrations of silica.

Silicosis is a disease associated with long term exposure to very high concentrations of silica in the workplace. Occupational regulations were developed to protect workers from exposure to silica above certain levels.

In 1996, the EPA evaluated the scientific information available on occupational exposure to silica, which included the medical histories of thousands of miners, as well as available information regarding ambient exposure to silica. They concluded that healthy individuals exposed to non-occupational silica concentrations are adequately protected by the NAAQS for particulate matter, which was $50 \mu\text{g}/\text{m}^3$ at that time.² Since then, the EPA has strengthened PM standards to be more protective of public health and the environment. Air dispersion modeling has shown the facility's PM_{10} concentration is below the current standard. Air dispersion modeling for $\text{PM}_{2.5}$ was not conducted because the controlled emissions of $\text{PM}_{2.5}$ for the facility are below threshold levels requiring an air quality analysis.

The EPA has adopted a health benchmark level for crystalline silica; however, based on its evaluation of non-occupational exposure to silica, it has determined that regulating silica exposure using the existing PM standards is protective of public health. Therefore, the EPA has not set a NAAQS for silica nor included it on its list of Hazardous Air Pollutants (HAP). As with the majority of states, SC DHEC regulations focus on control measures in the permitting process and rely on the EPA's conclusion that regulating particulate emissions, a component of which is silica, is protective of public health.

Exposure to silica dust is largely an occupational concern. Both the Occupational Safety and Health Administration (OSHA) and the Mine Safety and Health Administration (MSHA) regulate occupational exposure to silica. Silica is recognized as a carcinogen and silicosis is a disease associated with long term exposure to very high concentrations of silica in the workplace. Occupational regulations were developed to protect workers from exposure to silica above certain levels. While worker exposure limits are set to protect workers, measures used to reduce

² "...[A] thorough analysis of the most extensive occupational studies available, each of which examined the medical histories of thousands of miners, suggests that the cumulative risk of silicosis among these South Dakotan, Canadian, and 8-9 South African miners from exposures at or below 1 mg crystalline silica/m years is close to 0%. ³ Using a high estimate of 10% for the crystalline silica fraction in PM from U.S. metropolitan 10 areas, 1 mg crystalline silica/m years is the highest CSE expected from continuous lifetime exposure at or below the annual PM NAAQS of $50 \mu\text{g}/\text{m}^3$. Thus, current data suggest that, for healthy individuals not compromised by other respiratory ailments and for ambient environments expected to contain 10% or less crystalline silica fraction in PM_{10} , maintenance of the $50 \mu\text{g}/\text{m}^3$ annual NAAQS for PM should be adequate to protect against silicotic effects from ambient 10 crystalline silica exposures." (US Environmental Protection Agency, 1996)

exposure for workers (for example, wet suppression) also reduce air emissions and off-site impacts. Some of the permit requirements, like requiring dust from the crushing, screening and conveying processes to be controlled through wet suppression, reduce both workplace exposures and air emissions. The permit also requires fugitive dust emissions to be minimized through the use of wet suppression, water trucks, paving of roads, and other measures.

Dust/Fugitive Particulate Matter Emissions – Comments were received regarding particulate matter (PM emissions), including fugitive PM emissions at the proposed facility. These comments inquired about health impacts, dust on public and facility-owned roads, dust during high levels of wind, dust on homes, plants, and animals, oversight of reporting/maintenance and effectiveness of dust suppression.

Particulate matter (PM) emissions from the operating equipment and the on-site roads are required to be controlled in accordance with air quality regulations. These regulations limit PM emissions and opacity (amount of light blocked by dust particles). Air dispersion modeling demonstrated that PM pollutant concentrations did not exceed the NAAQS, which are protective of public health and the environment. For health impact information, please see the “Air Pollution Impacts” section above.

Using wet suppression to control PM emissions is required by the air permit. The crushed stone processing plant (crushers, screens, conveyor systems) is regulated under the federal EPA New Source Performance Standard for Nonmetallic Mineral Processing Plants, 40 CFR Part 60, Subpart OOO, as well as State standards. These regulations require the use of wet suppression and require maintenance, inspections and, if necessary, corrective action on that control equipment. Water trucks (or other dust control measure) will be used to control fugitive road and storage pile emissions. When dust suppression is conducted in accordance with this permit, it is effective in controlling dust emissions. To further reduce the potential for dust/dirt, Luck Stone has committed to paving the road from the entrance to the facility on Route 9 to the scale house. This additional stipulation has been added to the Fugitive Dust Control Plan. For further information on impacts from truck traffic, see “Truck Traffic” section below.

The facility must also develop and implement a comprehensive Fugitive Dust Control Plan (plan) to ensure fugitive dust emissions are minimized. The plan requires the facility to identify fugitive emission sources, detail what steps will be taken to minimize emissions, record any excessive dust events and take corrective action to

mitigate emissions during any excess fugitive emission episode. This plan must be submitted to the Department for approval 180 days prior to start of operations. The plan shall address fugitive emissions from the crushed stone plant, truck traffic, storage piles and any other potential source of fugitive dust emissions.

The air construction permit requires the facility to conduct weekly inspections on the wet suppression related equipment to ensure they are operating properly. This data is required to be recorded in a log book. During the Department's unannounced air inspections, the inspectors review all required records, observe the facility's processes while in operation, make visual emission observations, verify that the equipment onsite matches those listed in the current permit, and review any other pertinent information. Aside from unannounced inspections, inspections will also occur on a complaint-driven basis. Any alleged violations are detailed in the inspection report and referred to the Department's Enforcement Section.

Fugitive Dust Control Plan – A question was received asking why the Fugitive Dust Control Plan (Please see the "Dust/Fugitive Particulate Matter section above) is submitted and reviewed 180 days prior to operation and not prior to issuance of a construction permit.

Condition C.5 of the air construction permit requires the following in a Fugitive Dust Control Plan:

"Compliance with non-enclosed operations and fugitive dust requirements shall be demonstrated by developing a facility-wide fugitive dust control plan for controlling fugitive emissions from process operations, truck traffic, storage piles, and any other areas within the permitted facility where fugitive dust emissions can be generated. The plan shall be developed and submitted to the Director of Air Permitting for approval 180 days prior to the start of operation. The owner/operator shall implement the plan within 30 days of approval and create a schedule for its periodic review and update. The plan shall be kept and maintained on-site with a record of revisions. The plan shall address and/or contain at a minimum the following:

1. Water Trucks
 - a. Weekly operation and maintenance checks of water trucks
 - b. Operating scenarios for water truck failures or inadequacies
 - c. Dates the water trucks did not operate and the alternative(s) dust control method used
2. Truck Traffic
 - a. Road speed limits

- b. Vehicle loading, off-loading, transportation or dumping of material procedures
 - c. Spillage and residual materials clean-up procedures
 - d. Weekly operation and maintenance checks of sprinklers
 - e. Signage with respect to SC Code of Laws Sections 56-5-4100 and 56-5-4110 (which requires haul trucks transporting aggregate from all quarries to prevent the escape of materials loaded onto the vehicles)
 - f. The roadway from the facility's entrance to the facility's scale house shall be paved to help further reduce fugitive dust.
3. Storage Piles
- a. Material stock piling procedures
4. Process Equipment
- a. Weekly operation and maintenance checks of all plant equipment and enclosures
 - b. Spillage and residual materials clean-up procedures
 - c. Written guidelines on how to handle opacity problems

The owner/operator shall develop logs or use other approved methods to comply with the requirements of the plan.”

Fugitive dust considerations and requirements are specific to each site and as such fugitive dust plans require accurate, site-specific detail on how dust, truck traffic, process equipment, etc. at the facility will be controlled and maintained. Prior to the issuance of a construction permit, the specific details required for the plan may not be known for certain by the facility at that time.

A comment was also received requesting that the draft Fugitive Dust Control Plan be made available to the public and that the review process should consider public comments on the proposed plan prior to acceptance by DHEC. The Fugitive Dust Control Plan is not a state or federal regulatory requirement. The Fugitive Dust Control Plan permit requirement serves as a means to facilitate DHEC review of facility-proposed procedures for demonstrating compliance with fugitive dust related state regulations (South Carolina Regulations 61-62.5 Standard No. 4, and South Carolina Regulation 61-62.6). The public comment period on the draft air construction permit gives the opportunity to comment directly on the condition (Condition C.5 of the draft construction permit) that details the criteria for developing a fugitive dust control plan and what must be included. The plan will be subject to Department review and approval, and, once approved, may be viewed on the Luck Stone web page.

Truck Traffic – Comments were received regarding the impacts from increased truck traffic, including emissions and the safety concerns for existing roads and bridges due to the increased volume of truck traffic.

The Department regulates the fugitive dust from roads within the facility; however, the Department does not have the authority to regulate truck traffic on the public roads. Tailpipe emissions from mobile sources are regulated by the EPA under the authority of the Clean Air Act. The permit requires the facility's roadways to be paved and/or treated (such as the use of water sprays) to minimize dust. The facility must also develop and implement a comprehensive fugitive dust control plan to ensure fugitive dust emissions are minimized.

Within the dust control plan, signage with respect to SC Code of Laws Sections 56-5-4100 and 56-5-4110 shall be posted on site. To promote safety from hauling, these laws require that haul trucks transporting aggregate from quarries to prevent the escape of materials loaded onto vehicles, escaped substances or cargo be cleaned from highways, and that loads and covers be firmly attached. To further reduce the potential for dust on public roads, the facility has committed to paving the roadway from the entrance to the facility to the scale house. This additional requirement has been added to the Fugitive Dust Control Plan and is also within the mine operating permit for the facility.

Proximity to Residences, Schools, and Land Value – Comments were received concerning the location of the facility relative to residential areas and personal property.

All zoning decisions are made at the local level by a city or county zoning authority, usually before a permit request is submitted to the Department. The Department cannot dictate where a facility locates or factor property value impacts into permitting decisions. However, as noted above in the "Air Pollution Impact" section, the facility demonstrated using an EPA approved air dispersion model that it would not cause or contribute to any violation of ambient air quality standards. Please contact your local city or county council representatives for more information on how to get involved in local zoning and planning issues.

Background Noise Levels – Comments were received concerning background noise levels of the facility and related operations.

The Department does not have any noise standards in its air quality regulations and therefore lacks authority to base a permit decision on noise levels. However, excessive noise levels not usual for a site should be reported to the SC DHEC regional office. This could be an indication that equipment is not operating properly. Additionally, Chester County has local noise ordinances that may be found within *The Code of Ordinances of the County of Chester, South Carolina* (Chapter 38, Article II, Section 38-29 – “Noise”).

In addition, Mark Williams with Luck Companies submitted the following response in an e-mail dated February 14, 2020, regarding concerns of noise:

“Luck Companies is committed to proactively addressing noise generated through their activities by several mitigation tactics.

The operator shall use Best Management Practices (BMPs) to minimize noise from the mine site. Vegetated earthen berms and buffers are used on-site to minimize noise beyond the mine permit area. Other BMPs shall include, at a minimum, proper maintenance of mufflers on equipment (trucks, trackhoes, pumps, etc.) and consideration of special buffering measures if planning to operate equipment during nighttime hours. The operating plant shall be located in an area where topography and buffers assist in minimizing noise impacts to adjoining parcels. Additionally and when possible, Luck Companies will work to exceed regulatory compliance standards set by MSHA through identification and implementation of potential engineering controls to further reduce noise. Where approved by regulators, Luck Companies shall employ broad band back-up alerts on all company-owned mobile equipment.”

Further, the DHEC mining permit requires the facility to use best management practices to minimize noise. Please see the Luck Stone mining permit for more information.

Community/Quality of Life - Comments were received regarding the potential impacts to the community’s way of life.

A community’s quality of life can be impacted both positively and negatively by a variety of factors. The Department does not have the authority to base permit decisions on these factors. Furthermore, as noted above, the Department does not have the authority to dictate where a facility locates or make zoning decisions. The permit decision is based on the Department’s technical review of the permit application and the applicable air regulations and standards in place at the time of

the Department's review. As mentioned previously in the *Air Pollution Impacts* Section, these air quality regulations are set to protect public health and the environment.

General Opposition and Support – SC DHEC received several comments requesting denial of the permit.

The Department appreciates all comments made regarding Luck Stone. However, the Department does not have the authority to make permitting decisions based on community, business, employee and customer approval or disapproval of the company/facility. The Department's decision is based on the Department's technical review of an application and the regulatory requirements in place at the time of the Department's review.

Other Sources of Air Emissions – Comments were received regarding dust directly related to blasting and its associated particulate matter emissions and dust control.

The emission factors used to calculate the potential to emit for Luck Stone are from the EPA-developed document, *AP-42: Compilation of Air Emission Factors (AP-42)*. Section 11.19.2 covers crushed stone processing and does not include emission factors for excavating or particulate matter generated from blasting.

Although there are no known emission factors for blasting for stone quarries, blasting is typically done while primary crushing and hauling are not in operation. The blast area must be cleared before the blast and cannot resume until the blasting contractors have inspected the blast area and determined the area safe to re-enter. This operational shutdown typically lasts approximately 30 minutes while the actual blast occurs in less than one minute. The emissions created from blasting are offset by the cessation of emissions from primary crushing and hauling during that blasting period.

The air permit does not address blasting activities, as such activities at a quarry are regulated by the South Carolina Mining Act. The comments related to blasting were considered by the BLWM as part of the review of the mining permit application.

Request for Elaboration on "Synthetic Minor" – A comment was received requesting more detail on what a Synthetic Minor construction permit is.

On October 22, 2019, Lance Davis with the Bureau of Air Quality responded with an email to the commenter. By way of summary, a synthetic minor construction permit

is one where the facility agrees to federally enforceable limitations on the amount of pollutants that may be emitted to avoid "major source" levels under Prevention of Significant Deterioration (PSD) and Title V regulations. In this case, the pollutants of discussion are PM and PM10. For PM, the defined major threshold is 250.0 tons per year (TPY) for PSD applicability. For PM10, the defined major threshold is 100.0 TPY for Title V applicability and 250.0 TPY for PSD applicability. Through its air quality permit, the Quarry has agreed to federally enforceable operating limitations to limit its potential to emit to less than the above-referenced thresholds for PSD and Title V for PM and PM10. Based on use of required controls (including wet suppression), actual controlled emissions are estimated to be well below these thresholds.