

NORTH CAROLINA DIVISION OF AIR QUALITY**Application Review****Issue Date: July 26, 2021****Region:** Raleigh Regional Office
County: Wake
NC Facility ID: 9200409
Inspector's Name: Thomas Harris
Date of Last Inspection: 07/16/2021
Compliance Code: 3 / Compliance - inspection

Facility Data			Permit Applicability (this application only)
Applicant (Facility's Name): Wake Stone Corporation - Triangle Quarry			SIP:
Facility Address: Wake Stone Corporation - Triangle Quarry 222 Star Lane Cary, NC 27513			NSPS:
SIC: 1423 / Crushed And Broken Granite			NESHAP:
NAICS: 212313 / Crushed and Broken Granite Mining and Quarrying			PSD:
Facility Classification: Before: Small After: Small			PSD Avoidance:
Fee Classification: Before: Small After: Small			NC Toxics:
			112(r):
			Other:
Contact Data			Application Data
Facility Contact	Authorized Contact	Technical Contact	Application Number: 9200409.21A
Hunter Bratton Superintendent (919) 677-0050 222 Star Lane Cary, NC 27513	Samuel T. Bratton Chief Executive Officer (919) 266-1100 P.O. Box 190 Knightdale, NC 27545	Cole Atkins Geologist/Environmental Specialist (919) 266-1100 P.O. Box 190 Knightdale, NC 27545	Date Received: 04/30/2021
			Application Type: Renewal
			Application Schedule: State
			Existing Permit Data
			Existing Permit Number: 04386/R15
			Existing Permit Issue Date: 08/30/2013
			Existing Permit Expiration Date: 07/31/2021
Review Engineer: Dena Pittman			Comments / Recommendations:
Review Engineer's Signature: Dena Pittman		Date: 07/26/2021	Issue 04386/R16 Permit Issue Date: 07/26/2021 Permit Expiration Date: 06/30/2029

1. Purpose of Application:

Wake Stone Corporation – Triangle Quarry is permitted for quarrying operations in Wake County. The facility submitted an application for permit renewal.

Note: Quarries can be exempt from permitting however, Wake Stone wishes to maintain their air permit.

2. Application Chronology:

April 30, 2021

A renewal application was received at the RRO. The application packet contained the A form (signed by the Responsible Official), an emissions inventory for CY 2020 including the signed Certification Form and the supporting calculations, equipment listing, and flow diagram. **Clock started.**

May 8, 2021

An acknowledgement letter was sent to Mr. Theodore Bratton, CEO, noting the application contained all the required elements and had been accepted for processing.

July 14, 2021

I called Cole Atkins to discuss the difference in previous and current emissions inventory and potential emissions for the facility as noted in the previous review. I asked Mr. Atkins to confirm if all sources have wet suppression for dust control, which he expressed in the application. I explained that one of the conveyors in the previous review was listed as dry instead of wet. He said that should be marked as wet. In addition, we discussed the differences in the inventories, and he said that the production was much lower

in the CY2020 inventory. Another difference in the inventories is that the previous inventory only listed emissions from the crushers and did not include emissions from the screens and conveyors.

July 15, 2021

I discussed with Mr. Atkins about providing an overly conservative emissions summary based on operating the equipment at the maximum throughput rate for a period of 8,760 hours per year. I emailed Cole Atkins and asked if he could provide a copy of that spreadsheet for use as backup for the potential emissions for the facility that is noted in the permit review. Mr. Atkins sent me an email with the potential emissions spreadsheet attached.

3. New Equipment/Change in Emission and Regulatory Review:

The only alterations to the permitted sources since the permit was last issued were the “like-for-like” replacements of Screens S1 in 2015 and S3 in 2017, and the removal of the diesel-powered pit pump generator in 2013. These changes are addressed in the equipment listing enclosed in the renewal application packet.

During a permit renewal, the permit is reviewed to address whether the regulations listed are still applicable, if applicable regulations should be added, and whether conditions need to be removed or revised to reflect current rule language.

Regulatory Review:

- 2D .0202, Permit Renewal and Emission Inventory Requirement: The Permittee shall request a permit renewal at least 90 days prior to the expiration date of this permit, which is updated with this renewal to June 30, 2029. In addition to the renewal application, the Permittee shall submit the air pollution emission inventory report for the 2028 calendar year at least 90 days prior to the expiration of the permit.
 - Compliance with this regulation is to be expected.
 - This condition was updated during this renewal to reflect the updated emissions inventory criteria.
- 2D .0510, Particulate Control Requirement from Sand, Gravel, or Crushed Stone Operations: The Permittee shall not cause, allow, or permit any material to be produced, handled, transported, or stockpiled without taking measures to reduce to at minimum any particulate matter from becoming airborne to prevent exceeding the ambient air quality standards beyond the property line for particulate matter, both PM₁₀ and total suspended particulates (TSP). The Permittee shall control process-generated emissions from crushers with wet suppression and from conveyors, screens, and transfer points such that the applicable opacity standards are not exceeded.
 - Compliance will be determined during inspections. The facility uses wet suppression to control all process-generated particulate emissions; therefore, compliance with this condition is expected.
- 2D .0521, Control of Visible Emissions: Visible emissions from the emission sources manufactured after July 1, 1971, which applies to all sources currently at the facility, shall not exceed 20 percent opacity when averaged over a six-minute period.
 - Compliance will be determined during inspections. The facility uses wet suppression to control all process-generated particulate emissions; therefore, compliance with this condition is expected.
- 2D .0521, Control of Visible Emissions: Visible emissions from the emission sources manufactured as of July 1, 1971, shall not exceed 40 percent opacity when averaged over a six-minute period.
 - Compliance will be determined during inspections. The facility uses wet suppression to control all process-generated particulate emissions; therefore, compliance with this condition is expected.
- 2D .0524, New Source Performance Standards, Subpart OOO: The Permittee is required to notify the Regional Supervisor, DAQ, in writing of the actual date of initial start-up of an affected source, postmarked within 15 days after such date. Affected sources at the facility have varying emission limits for PM and Visible Emissions depending on when the source commenced construction. The Permittee shall perform monthly periodic inspections to check that water is flowing to discharge spray nozzles in the wet suppression systems. If the Permittee finds that water is not flowing properly during an inspection of the water spray nozzles, they shall initiate within 24 hours corrective action. Each inspection of the water spray nozzles, including the date of each inspection and any corrective actions taken, shall be recorded in a logbook, which shall be maintained on-site and made available to DAQ personnel upon request. Within 60 days after achieving the maximum production rate of each affected source, but no later than 180 days after the initial start-up of the affected source, the Permittee shall conduct the required performance test(s) and submit two copies of a written report of test(s) to the Regional Supervisor, DAQ.
 - Compliance will be determined during inspections. The facility uses wet suppression to control all process-generated particulate emissions; therefore, compliance with this condition is expected.

- **2D .0535, Notification Requirement:** The Permittee shall notify the Director or his designee of any occurrence of excess emissions that lasts for more than four hours that results from a malfunction, a breakdown or process or control equipment or any other abnormal condition by 9:00 a.m. Eastern time the next business day.
 - Compliance will be determined during inspections.
- **2D .0540, Particulates from Fugitive Dust Emission Sources Control Requirement:** The Permittee shall not cause or allow fugitive dust emissions to cause or contribute to substantive complaints or excess visible emissions beyond the property boundary.
 - Compliance will be determined during inspections and any potential complaint investigations.
- **2D .0605, Quarry Equipment Reporting:** The Permittee shall maintain on-site an equipment list and a plant (or flow) diagram of all equipment covered under this permit. The equipment list shall include a description of each source, a unique ID number, the date the equipment was manufactured, and dates any required testing occurred. In addition, the list and diagram shall bear the date when the current list and diagrams were revised.
 - Compliance will be determined during inspections. The facility submitted their most up-to-date equipment list and plant diagram with this application, and they both contained all of the requirements.
- **2D .1806, Control and Prohibition of Odorous Emissions:** The Permittee shall not operate the facility without implementing management practices or installing and operating odor control equipment sufficient to prevent odorous emissions from the facility from causing or contributing to objectionable odors beyond the facility's boundary.
 - Compliance will be determined during inspections and any potential complaint investigations.

4. NSPS, NESHAPS, PSD, and Attainment Status:

- NSPS: Subpart OOO. See discussion under 2D .0524 above.
- NESHAPS: None
- This facility is a minor source for PSD purposes.
- 112r does not apply to this facility.
- Wake County is in attainment.

5. Facility Wide Air Toxics:

This facility has never triggered an air toxics evaluation. The facility only emits particulate matter, which is not a source of toxic air pollutants.

6. Compliance Status:

This facility has no Notices of Deficiency or Violation on record. The facility was found in compliance with their air quality permit during their last inspection on July 16, 2021 conducted by Thomas Harris.

7. Facility Emissions Review:

The potential Title V emissions for this renewal application were provided by the facility. These emissions are an overly conservative estimate since they are based on maximum capacity of 8,760 hours per year. The emissions are shown in the following table.

Facility Emissions Summary	
Pollutant	Potential Title V Emissions (tpy)
TSP	92.3
PM-10	33.4
PM-2.5	4.24

The 2020 calendar year emissions inventory used the emissions factors from AP-42 Table 11.19.2-2. The emissions reported in their application have been reviewed and appeared to be correct. The facility-wide actual emissions for the calendar year 2020 are as follows:

2020 Emissions Inventory Summary

Pollutant	Actual Emissions (tpy)
TSP	4.71
PM-10	1.70
PM-2.5	0.20

This facility is correctly classified as a Small for fee purposes.

8. Summary of Permit Changes:

- Permit renewed with new expiration date and CY2028 Emissions Inventory criteria in the updated condition 2D .0202.
- Permit condition previously listed under Rule 2D .0501 was updated and is now listed under Rule 2D .0605.
- Permit condition previously listed under Rule 2D .0510 describing the existing primary crusher as a “jaw crusher rated at 1620 tons per hour at a 16-inch crusher setting” was removed.
- Permit condition for Rule 2D .0521 was updated to better reflect the rule language.

9. Conclusions, Comments, and Recommendations:

I recommend issuance of Permit No. 04386R16.

Permit Coordinator: Dena Pittman Date: 07/26/2021
Dena Pittman, P.E.

Regional Supervisor:  Date: 7/26/2021
Taylor Hartsfield, EIT, CPM