



North Carolina Department of Environment and Natural Resources  
**Division of Land Resources**  
Land Quality Section

James D. Simons, PG, PE  
Director and State Geologist

Beverly Eaves Perdue, Governor  
Dee Freeman, Secretary

November 24, 2010

Mr. David Lee  
Wake Stone Corporation  
PO Box 190  
Knightdale, North Carolina 27545

RE: Permit No. 92-10  
Triangle Mine  
Wake County  
Neuse River Basin

Dear Mr. Lee:

Your recent request to have the above referenced mining permit modified has been approved. The modification is to increase the affected acreage at this site to 156.6 acres as indicated on the Site Plan Maps last revised November 22, 2010. The modification includes the construction of a stockpile area contiguous to the existing plant and stockpile yard and includes the installation and maintenance of all associated erosion and sediment control measures. A copy of the modified permit is enclosed.

The conditions in the modified permit were based primarily upon the initial application. Modifications were made as indicated by the modification request and as required to insure compliance with The Mining Act of 1971. The expiration date, mine name and permit number shall remain the same as before the modification. I would like to draw your particular attention to the following conditions where minor additions or changes were made: Operating Condition Nos. 3K, 4E, 7A, and 12B and Reclamation Condition Nos. 3 and 5.

The issuance of a mining permit and/or any modification to it does not supersede local zoning regulations. The responsibility of compliance with any applicable zoning regulations lies with you.

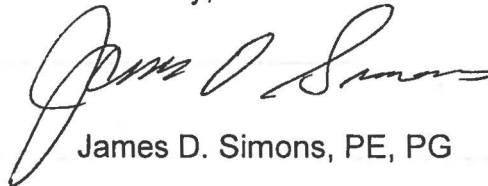
As a reminder, your permitted acreage at this site is 223 acres and the amount of land you are approved to disturb is 156.6 acres.

Please be aware that Mining Permit No. 92-10 expires April 20, 2011. If your company wishes to continue mining operations at this site after April 20, 2011, a renewal request must be submitted prior to said date.

Mr. Lee  
Page Two

Please review the modified permit and contact Ms. Judy Wehner, Assistant Mining Specialist, at (919) 733-4574 should you have any questions concerning this matter.

Sincerely,

A handwritten signature in black ink, appearing to read "James D. Simons", is written over a horizontal line.

James D. Simons, PE, PG

JDS/jw

Enclosures

cc: Mr. John Holley, PE  
Ms. Shannon Deaton - WRC, w/permit  
Mr. William Gerring-Mine and Quarry Bureau, w/o enclosures

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**DEPARTMENT OF ENVIRONMENT  
AND NATURAL RESOURCES**

**DIVISION OF LAND RESOURCES**

**LAND QUALITY SECTION**

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**P E R M I T**

for the operation of a mining activity

In accordance with the provisions of G.S. 74-46 through 68, "The Mining Act of 1971," Mining Permit Rule 15A NCAC 5 B, and other applicable laws, rules and regulations

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Permission is hereby granted to:

Wake Stone Corporation

Triangle Quarry

Wake County - Permit No. 92-10

for the operation of a

Crushed Stone Quarry

which shall provide that the usefulness, productivity and scenic values of all lands and waters affected by this mining operation will receive the greatest practical degree of protection and restoration.

MINING PERMIT EXPIRATION DATE: April 20, 2011

In accordance with the application for this mining permit, which is hereby approved by the Department of Environment and Natural Resources hereinafter referred to as the Department, and in conformity with the approved Reclamation Plan attached to and incorporated as part of this permit, provisions must be made for the protection of the surrounding environment and for reclamation of the land and water affected by the permitted mining operation. This permit is expressly conditioned upon compliance with all the requirements of the approved Reclamation Plan. However, completed performance of the approved Reclamation Plan is a separable obligation, secured by the bond or other security on file with the Department, and may survive the expiration, revocation or suspension of this permit.

This permit is not transferable by the permittee with the following exception: If another operator succeeds to the interest of the permittee in the permitted mining operation, by virtue of a sale, lease, assignment or otherwise, the Department may release the permittee from the duties imposed upon him by the conditions of his permit and by the Mining Act with reference to the permitted operation, and transfer the permit to the successor operator, provided that both operators have complied with the requirements of the Mining Act and that the successor operator agrees to assume the duties of the permittee with reference to reclamation of the affected land and posts a suitable bond or other security.

In the event that the Department determines that the permittee or permittee's successor is not complying with the Reclamation Plan or other terms and conditions of this permit, or is failing to achieve the purposes and requirements of the Mining Act, the Department may give the operator written notice of its intent to modify, revoke or suspend the permit, or its intent to modify the Reclamation Plan as incorporated in the permit. The operator shall have right to a hearing at a designated time and place on any proposed modification, revocation or suspension by the Department. Alternatively and in addition to the above, the Department may institute other enforcement procedures authorized by law.

### Definitions

Wherever used or referred to in this permit, unless the context clearly indicates otherwise, terms shall have the same meaning as supplied by the Mining Act, N.C.G.S. 74-49.

### Modifications

April 1, 1991: This permit has been modified to include three pit expansions, the construction of a pit perimeter road, and the construction of the visual barrier berm along the 250 foot permanent buffer zone as indicated on the revised Site Plan and supplemental information dated February 14, 1991.

February 5, 1992: This permit has been modified to include and require compliance with the January 20, 1992 blast and rock slide investigative report prepared by Wake Stone Corporation in its entirety.

October 11, 1996: This permit has been modified to allow the shipping of material after 1:00 PM on Saturdays until such time as the Umstead State Park reopens or the repair of the Raleigh Outer Loop Project near RDU Airport is completed, whichever comes first.



November 24, 2010: This permit has been modified to increase the affected acreage at this site to 156.6 acres as indicated on the Site Plan Maps last revised November 22, 2010. The modification includes the construction of a stockpile area contiguous to the existing plant and stockpile yard and includes the installation and maintenance of all associated erosion and sediment control measures.

#### Expiration Date

This permit shall be effective from the date of its issuance until April 20, 2011.

#### Conditions

This Permit shall be subject to the provisions of the Mining Act, N.C.G.S. 74-46, et. seq., and to the following conditions and limitations:

#### OPERATING CONDITIONS:

##### 1. Wastewater and Quarry Dewatering

- A. Any wastewater processing or mine dewatering shall be in accordance with the permitting requirements and rules promulgated by the N.C. Environmental Management Commission.
- B. Any storm water runoff from the affected areas at the site shall be in accordance with any applicable permit requirements and regulations promulgated by the Environmental Protection Agency and enforced by the N.C. Environmental Management Commission. It shall be the permittee's responsibility to contact the Division of Water Quality to secure any necessary storm water permits or other approval documents.

##### 2. Air Quality and Dust Control

- A. Any mining related process producing air contaminant emissions including fugitive dust shall be subject to the requirements and rules promulgated by the N.C. Environmental Management Commission and enforced by the Division of Air Quality.
- B. The provisions of Air Quality Permit No. 4386 shall be followed.
- C. The permanent access (plant entrance) road shall be paved from the scale house to SR 1790. During quarry operation, water trucks or other means that may be necessary shall be utilized to prevent dust from leaving the permitted area.
- ~~D.~~ The permittee shall cooperate with DOT in paving SR 1790 from the entrance to the quarry to the intersection of SR 1790 and SR 1654.
- E. Dust suppression systems shall be used throughout the plant to control dust.

- F. Drill holes dust shall be controlled by wetting or other means.
  - G. Dust control at the crushers and screens shall be maintained by the use of water sprays.
  - H. A water spray shall be provided for highway haul trucks.
  - I. Washed stone shall be stockpiled within the part of the designated plant area which is closest to the park.
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### 3. Buffer Zones

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- A. Any mining activity affecting waters of the State, waters of the U. S., or wetlands shall be in accordance with the requirements and regulations promulgated and enforced by the N. C. Environmental Management Commission.
- B. Sufficient buffer shall be maintained between any affected land and any adjoining waterway or wetland to prevent sedimentation of that waterway or wetland from erosion of the affected land and to preserve the integrity of the natural watercourse or wetland.
- ~~C.~~ The dotted line labeled as buffer along the northern permit boundary and along the eastern boundary is the permanent buffer as designated by the Mining Commission (see Site Plan dated March 10, 1981).
- ~~D.~~ An undisturbed buffer of existing natural vegetation shall be maintained between the mining disturbance and both Crabtree Creek and Umstead Park property as indicated by the "permanent buffer" shown on the site plans dated March 10, 1981 and February 14, 1991 with the exception of the installation of the two vegetated earthen berms as specified by the revised Site Plan dated February 14, 1991.
- ~~E.~~ An undisturbed buffer zone of existing natural vegetation shall also be maintained between the top of the bank of Crabtree Creek and any mining disturbance within the 10 year permit area. The buffer zone shall be of sufficient width to prevent offsite sedimentation and to preserve the integrity of the natural watercourse. In any event, the buffer shall meet the US Corps of Engineers requirement for Crabtree Creek Watershed.
- ~~F.~~ A minimum buffer zone of 100 feet shall be maintained between Crabtree Creek and the new pit expansions along the west side of the mine site as delineated on the revised Site Plan and supplemental information dated January 14, 1991 and approved in the mining permit on April 1, 1991.
- ~~G.~~ A minimum buffer zone of 50 feet shall be maintained between Crabtree Creek and the outer edge of the perimeter haul road that runs along the western edge of the existing pit denoted as "Pit Expansion Initiated During 1989".

C. H.  
I.

A minimum buffer zone of 250 feet shall be maintained between any mining activity and Crabtree Creek along the north side of the mine site.

A minimum buffer zone of 100 feet shall be maintained between any mining activity and both the Umstead Park property and adjoining property along the east and south sides of the mine site, respectively.

X.

The only exceptions to the above referenced undisturbed buffers of natural vegetation are as follows:

1. The construction of berms as approved by the Department for visual and noise screening.
2. The installation of drainage and erosion and sedimentation control measures as approved by the Department to protect Crabtree Creek.
3. The construction of a water supply dam as shown on drawings submitted in a permit modification request dated September 30, 1986 and approved by the Department.

K.

All buffer zones shown on the Site Plan Maps last revised November 22, 2010 shall be maintained to protect adjoining property. These buffer zones, with the exception of the installation of required sediment control measures and approved earthen berms, shall remain undisturbed.

#### 4. Erosion and Sediment Control

- A. Adequate mechanical barriers including, but not limited to diversions, earthen dikes, check dams, sediment retarding structures, rip rap pits, or ditches shall be provided in the initial stages of any land disturbance and maintained to prevent sediment from discharging onto adjacent surface areas or into any lake, wetland or natural watercourse in proximity to the affected land.

X.  
B.

The existing lakes shall be used to trap sediment from initial mining disturbances. The spillways of the existing lakes shall be further stabilized as necessary to prevent erosion of the spillway from runoff from the affected lands. The embankments of the existing lakes shall be improved if necessary to ensure the stability of the embankments.

~~C~~ The three pit expansions, the construction of the pit perimeter road, and the construction of the visual barrier berm along the 250 foot permanent buffer zone shall be conducted according to the revised Site Plan and supplemental information dated February 14, 1991 with the following stipulations: (1) that Sediment Basin "C" be constructed as an arched stone filter, (2) as Culvert No. 3 requires a headwater depth of at least five feet, the minimum elevations of the top of the road fill shall be set at elevation of the top of the road fill shall be set at elevation 292, (3) temporary diversions TD-1A, TD-1B, and TD-7B shall be provided with a temporary liner (straw with net recommended as a minimum), (4) the minimum stone thickness of Class B stone for all rip-rap lined ditches shall be 22 inches (Class A stone could be used for all rip-rap lined ditches in lieu of Class B stone due to the low velocities and small discharges), and (5) all overburden cut slopes shall be graded to a 1 ½ to 1 slope or flatter.

~~B~~ D. All mining activities, including the installation and maintenance of all erosion and sedimentation control measures, shall be conducted as indicated on the Site Plan Map dated March 1, 2001.

~~E~~ E. All mining activities associated with the construction of a stockpile area contiguous to the existing plant and stockpile yard, including the installation and maintenance of all associated erosion and sediment control measures, shall be conducted as indicated on the Site Plan maps last revised November 22, 2010 and supplemental information received by the Land Quality Section on October 29, 2010 and November 23, 2010.

~~C~~ F. An erosion and sediment control plan(s) shall be submitted to the Department for approval prior to any land disturbing activities not indicated on the revised erosion control plan or mine maps submitted with the approved application for a mining permit and any approved revisions to it. Such areas include, but are not limited to, expansion outside of the approved pit area, creek crossings, or expansion of overburden or waste disposal areas.

## 5. Groundwater Protection

Groundwater monitoring wells shall be installed and monitored as deemed appropriate by the Department.

## 6. Noise Abatement

All reasonable precautions shall be taken to minimize the impacts of operational noise upon Umstead Park. Said measures shall include, but not be limited to the following:

- A. Noise barriers between the park boundary and the crushers and screening towers to minimize noise levels at the park shall be provided from the onset of the operation. Noise barriers may be enclosures, walls, bins, structures, stockpiles or natural terrain. In the event there is disagreement over the required noise control measure, the final design and placement of noise barriers shall be determined by qualified noise and engineering consultants mutually agreed upon by both parties.
- B. The plant shall be located at the lowest feasible elevation.
- C. The plant shall be designed so that the primary crusher can be relocated in the pit at the earliest possible date.
- D. The chutes used in processing shall be rubberized.
- E. Compressors with noise abatement enclosures (currently called whispered compressors) shall be used with track drills to open the quarry. Once the quarry is opened, either hydraulic or down-in-the-hole drills shall be used to further reduce noise.
- F. Pit haul trucks shall be equipped to exhaust through the beds of the trucks to muffle engine noise.
- G. Conveyors rather than trucks shall be used for stockpiling material.
- H. The quarry and stone process operations shall be operated on Monday through Friday and shall not be operated on the following recognized holidays: New Years Day, Easter Monday, Fourth of July, Labor Day, Thanksgiving Day, and Christmas Day. A reasonable amount of hauling of processed stone from the stockpile areas is permitted until 1:00 PM on Saturdays but hauling shall not be done at any other time on weekends or on holidays without prior approval from the Department.

7. Processing Plant Location

- A. The processing and stockpiling facilities shall be located as indicated on the Site Plan Maps last revised November 22, 2010.
- B. The plant shall be located to place the processing and stockpiling activities at the lowest possible elevation to reduce visibility and noise impacts on Umstead State Park.
- C. The location of the pit shall be such that once the overburden is removed, the quarry excavating equipment (i.e., compressor and drill, shovels, and trucks) can be placed at an elevation lower than the surrounding natural ground in the initial phases of quarrying.

8. Graded Slopes and Fills

- A. The angle for graded slopes and fills shall be no greater than the angle which can be retained by vegetative cover or other adequate erosion control measure, structure, or device. In any event, exposed slopes or any excavated channels, the erosion of which may cause off-site damage because of siltation, shall be planted or otherwise provided with groundcover, devices or structures sufficient to restrain such erosion.
- B. Overburden cut slopes along the perimeter of the quarry opening shall be graded to a minimum 2 horizontal to 1 vertical or flatter and shall be stabilized within 60 days of completion. Furthermore, a minimum ten (10)-foot-wide horizontal safety bench shall be provided at the top of the rock and at the toe of any overburden slope.

9. Surface Drainage

The affected land shall be graded so as to prevent collection of pools of water that are, or likely to become, noxious or foul. Necessary structures such as drainage ditches or conduits shall be constructed or installed when required to prevent such conditions.

10. Blasting

**The operator shall monitor each blast with a seismograph located at a distance no farther than the closest off site regularly occupied structure not owned or leased by the operator.** A seismographic record including peak particle velocity, air overpressure, and vibration frequency levels shall be kept for each blast (except as provided under Operating Condition Nos. 8B and 8D of this permit). The following blasting conditions shall be observed by the mine operator to prevent hazard to persons and adjacent property from surface blasting:

A. Ground Vibration With Monitoring:

In all blasting operations, the maximum peak particle velocity of any component of ground motion shall not exceed Figure 1 (below) at the immediate location of any regularly occupied building outside of the permitted area such as a dwelling house, church, school, or public, commercial or institutional building.

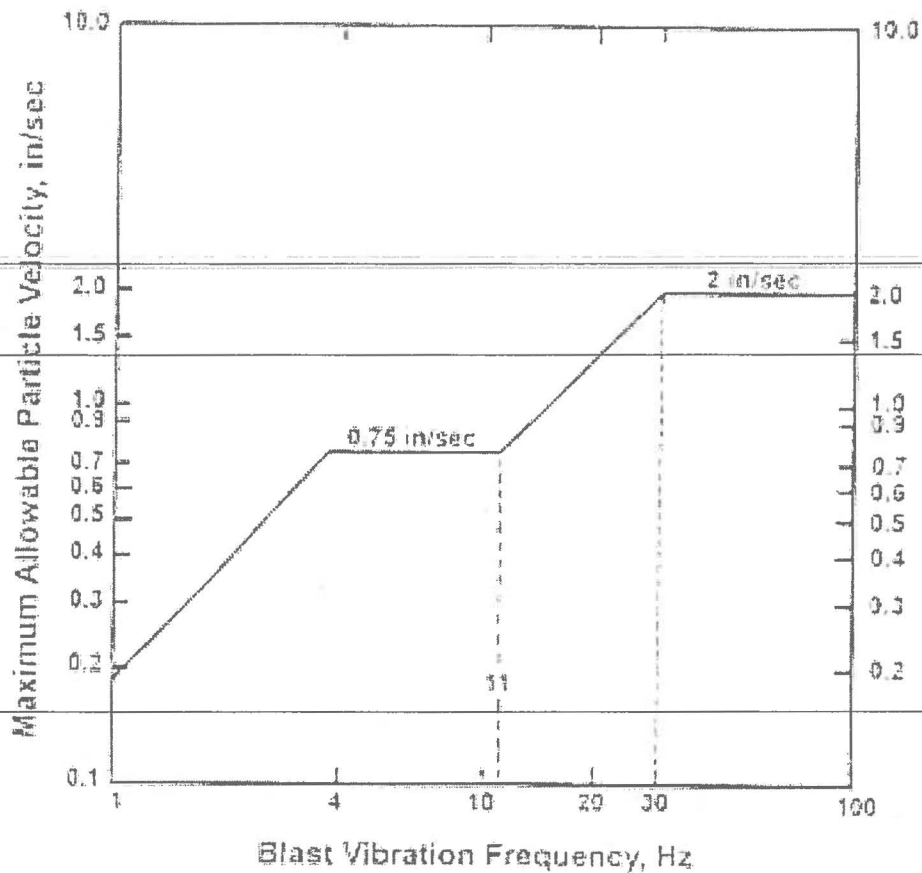


Figure 1 Alternative blasting level criteria  
(Source modified from figure B-1, Bureau of Mines R18507)

B. Ground Vibration Without Monitoring:

In the event of seismograph malfunction or other condition which prevents monitoring, blasting shall be conducted in accordance with the following formulas:

$$W = (D/D_s)^2 \quad D_s = \frac{D}{W^{1/2}}$$

$$V = 160(D_s)^{-1.6}$$

W = Maximum charge weight of explosives per delay period of 8.0 milliseconds or more (pounds).

D = Distance from the blast site to the nearest inhabited building not owned or leased by the mine operator (feet).



$D_s$  = Scaled distance factor.

$V$  = Peak Particle Velocity (inches per second).

The peak particle velocity of any component shall not exceed 1.0 inch per second, for the purposes of this Section.

C. Air blast With Monitoring:

Air blast overpressure resulting from surface blasting shall not exceed 129 decibels linear (dBL) as measured at the immediate location of any regularly occupied building not owned or leased by the operator outside of the permitted area such as a dwelling house, church, school, or public, commercial or institutional building, unless an alternate level based on the sensitivity of the seismograph microphone as specified below is being used:

<u>Lower Frequency Limit of Measuring System, in Hz</u>	<u>Max Level, in dBL</u>
0.1 Hz or lower-flat response	134 peak
2.0 Hz or lower-flat response	133 peak
6.0 Hz or lower-flat response	129 peak

D. Air blast Without Monitoring:

In the event of seismograph malfunction or other condition which prevents monitoring, blasting shall be conducted in accordance with the following formulas:

$$U = 82 (D/W^{0.33})^{-1.2}$$

To convert U (psi) to P (dBL):

$$P = 20 \times \log (U/2.9 \times 10^{-9})$$

Confined Air blast/Overpressure (dBL)  
for quarry situation:

$$A = P - 35$$

U = Unconfined air overpressure (pounds per square inch).

W = Maximum charge weight of explosives per delay period of 8.0 milliseconds or more (pounds).

D = Distance from the blast site to the nearest inhabited building not owned or leased by the mine operator (feet).

P = Unconfined air overpressure (decibels).

A = Air blast or air overpressure for typical quarry situations (decibels).



The air blast/overpressure shall not exceed 129 decibels, for the purposes of this Section.

E. Record Keeping:

The operator shall maintain records on each individual blast describing: the total number of holes; pattern of holes and delay of intervals; depth and size of holes; type and total pounds of explosives; maximum pounds per delay interval; amount of stemming and burden for each hole; blast location; distance from blast to closest offsite regularly occupied structure; and weather conditions at the time of the blast. Records shall be maintained at the permittee's mine office and copies shall be provided to the Department upon request.

F. Excessive Ground Vibration/Air blast Reporting:

If ground vibration or Air blast limits are exceeded, the operator will immediately report the event with causes and corrective actions to the Department. Use of explosives at the blast site that produced the excessive reading shall cease until corrective actions approved by the Department are taken. However, blasting may occur in other approved areas within the permitted boundary. Authorization to blast at the blast site may be granted at the time of the verbal reporting of the high ground vibration or high air blast reading if the circumstances justify verbal approval. Failure to report will constitute a permit violation.

G. Flyrock Prevention:

The operator shall take all reasonable precautions to ensure that flyrock is not thrown beyond areas where the access is temporarily or permanently guarded by the operator. Failure to take corrective measures to prevent flyrock and repeated instances of flyrock shall be considered a violation of the Mining Permit.

H. Flyrock Reporting:

Should flyrock occur beyond the permitted and guarded areas, the operator shall immediately report the incident to the Department. Further use of explosives on the mine site shall be suspended until the following actions have been taken:

1. A thorough investigation as to the cause(s) of the incident shall be conducted.
2. A report detailing the investigation shall be provided to the Department within 10 days of the incident. The report shall, at a minimum, document the cause(s) of the incident along with technical and management actions that will be taken to prevent further incidents. The report shall meet with the approval of the Department before blasting may resume at the mine site.

I. Studies:

The operator shall provide to the Department a copy of the findings of any seismic studies conducted at the mine site in response to an exceedence of a level allowed by these blasting conditions. The operator shall make every reasonable effort to incorporate the studies' recommendations into the production blasting program.

J. Notice:

The operator shall, when requested by the Department, give 24-hour advance notice to the ~~Land Quality Section Regional Office~~ prior to any blast during a period for which notice is requested.

- K. Regarding blasting activities conducted to lower the haul road along the western boundary of the "Pit Expansion Initiated During 1989" area and Crabtree Creek, all of the corrective actions/steps outlined in the blast and rock slide investigation report prepared by Wake Stone Corporation dated January 20, 1992 shall be followed. In addition, any areas disturbed as a result of the previous rock slide and its subsequent removal shall be restored to its natural, pre-disturbed state or an alternative acceptable to the Department.

11. High Wall Barrier

A physical barrier consisting of large boulders placed end-to-end or fencing shall be maintained at all times at the ~~mining permit~~ boundary to prevent inadvertent public access. In addition, a minimum 10 foot wide horizontal safety bench shall be provided at the junction between the top of rock and the toe of any overburden cut slope.

*high wall*

*or otherwise suitable barrier materials*

12. Visual Screening

- A. Existing vegetation shall be maintained between the mine and public thoroughfares to screen the operation from the public. Additional screening methods, such as constructing earthen berms, shall be employed as deemed appropriate by the Department.

*(C)* B.

Vegetated earthen berms shall be located and constructed as shown on the Site Plan Maps last revised November 22, 2010. In addition to grasses, long leaf and/or Virginia pines or other acceptable evergreen species shall be planted as deemed appropriate by the Department to improve visual and noise buffering.

~~C.~~ The operation shall be situated to optimize natural screening of the operation from public view from Interstate 40 and Umstead State Park property. The visual screening plan shall include maintaining undisturbed buffer areas of natural vegetation as shown on the site plan dated March 10, 1981. Additionally a vegetated earthen berm shall be constructed east of the processing plant and stockpile area as shown on the revised site plan dated March 10, 1981 and February 14, 1991. Visual screening such as vegetated earthen berms and/or evergreen trees shall be placed as necessary to supplement natural screening.

~~D.~~ A vegetated earthen berm shall be constructed between the Wake Stone Corporation plant and the western boundary of Umstead State Park as shown on Wake Stone Corporation's site plan dated March 10, 1981 and February 14, 1991.

~~E.~~ Berm dimensions shall be no less than indicated on Wake Stone Corporation's site plans dated March 10, 1981 and February 14, 1991 and may be higher and longer than shown.

~~F.~~ The side slopes of all berms shall be graded to a two horizontal to one vertical or flatter and revegetated on the sides and top with grasses and evergreen trees. The toe of the berm shall not encroach on the park property boundary and shall be at least 50 feet from the boundary. The alignment of the berm may vary from the approved site plans is necessary to provide the 50 feet of undisturbed land between the park boundary and the toe of the berm and assuring an acceptable angle for the slope of the berm.

G. Other berms may be required as mining progresses to reduce the noise and visual impact upon Umstead State Park.

#### 11. Plan Modification

The operator shall notify the Department in writing of the desire to delete, modify or otherwise change any part of the mining, reclamation, or erosion/sediment control plan contained in the approved application for a mining permit and any approved revisions to it. Approval to implement such changes must be obtained from the Department prior to on-site implementation of the revisions.

#### 12. Refuse Disposal

A. No on-site disposal of refuse or other solid waste that is generated outside of the mining permit area shall be allowed within the boundaries of the mining permit area unless authorization to conduct said disposal has first been obtained from both the Division of Waste Management and the Land Quality Section, Department of Environment and Natural Resources. The method of disposal shall be consistent with the approved reclamation plan.

B. Mining refuse as defined by G.S. 74-49 (14) of The Mining Act of 1971 generated on-site and directly associated with the mining activity may be disposed of in a designated refuse area. All other waste products must be disposed of in a disposal facility approved by the Division of Waste Management. No petroleum products, acids, solvents or their storage containers or any other material that may be considered hazardous shall be disposed of within the permitted area.

C. For the purposes of this permit, the Division of Land Resources considers the following materials to be "mining refuse" (in addition to those specifically listed under G.S. 74-49 (14) of the N.C. Mining Act of 1971):

1. on-site generated land clearing debris
2. conveyor belts
3. wire cables
4. v-belts
5. steel reinforced air hoses
6. drill steel

D. If mining refuse is to be permanently disposed within the mining permit boundary, the following information must be provided to and approved by the Division of Land Resources prior to commencement of such disposal:

1. the approximate boundaries and size of the refuse disposal area;
2. a list of refuse items to be disposed;
3. verification that a minimum of 4 feet of cover will be provided over the refuse;
4. verification that the refuse will be disposed at least 4 feet above the seasonally high water table; and
5. verification that a permanent vegetative groundcover will be established

### 13. Annual Reclamation Report

An Annual Reclamation Report shall be submitted on a form supplied by the Department by February 1 of each year until reclamation is completed and approved.

### 14. Bonding

The security, which was posted pursuant to N.C.G.S. 74-54 in the form of a \$500,000.00 blanket bond, is sufficient to cover the operation as indicated in the approved application. This security must remain in force for this permit to be valid. The total affected land shall not exceed the bonded acreage.

### 15. Archaeological Resources

Authorized representatives of the Division of Archives and History shall be granted access to the site to determine the presence of significant archaeological resources.

## APPROVED RECLAMATION PLAN

The Mining Permit incorporates this Reclamation Plan, the performance of which is a condition on the continuing validity of that Mining Permit. Additionally, the Reclamation Plan is a separable obligation of the permittee, which continues beyond the terms of the Mining Permit.

The approved plan provides:

### Minimum Standards As Provided By G.S. 74-53

1. The final slopes in all excavations in soil, sand, gravel and other unconsolidated materials shall be at such an angle as to minimize the possibility of slides and be consistent with the future use of the land.
2. Provisions for safety to persons and to adjoining property must be provided in all excavations in rock.
3. All overburden and spoil shall be left in a configuration which is in accordance with accepted conservation practices and which is suitable for the proposed subsequent use of the land.
4. No small pools of water shall be allowed to collect or remain on the mined area that are, or are likely to become noxious, odious or foul.
5. The revegetation plan shall conform to accepted and recommended agronomic and reforestation practices as established by the North Carolina Agricultural Experiment Station and the North Carolina Forest Service.
6. Permittee shall conduct reclamation activities pursuant to the Reclamation Plan herein incorporated. These activities shall be conducted according to the time schedule included in the plan, which shall to the extent feasible provide reclamation simultaneous with mining operations and in any event, provide reclamation at the earliest practicable time after completion or termination of mining on any segment of the permit area and shall be completed within two years after completion or termination of mining.

### RECLAMATION CONDITIONS:

1. Provided further, and subject to the Reclamation Schedule, the planned reclamation shall be to allow the quarry excavation to fill with water, provide a permanent barricade (fence) along the top of any high wall, and grade and revegetate any areas in unconsolidated material.
2. The specifications for surface gradient restoration to a surface suitable for the planned future use are as follows:

- A. All areas of unconsolidated material such as overburden or waste piles shall be graded to a 2 horizontal to 1 vertical or flatter slope and terraced as necessary to insure slope stability.
  - B. Any settling ponds and sediment control basins shall be backfilled, graded, and stabilized or cleaned out and made into acceptable lake areas.
  - C. The processing, stockpile, and other disturbed areas neighboring the mine excavation shall be leveled and smoothed.

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  - D. Compacted surfaces shall be disced, subsoiled or otherwise prepared before revegetation.

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  - E. No contaminants shall be permanently disposed of at the mine site. On-site disposal of waste shall be in accordance with Operating Conditions Nos. 12.A. through D.
  - F. The affected land shall be graded to prevent the collection of noxious or foul water.
  - G. Any diverted or re-established drainage channels shall be restored to a stable condition.
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3. Revegetation Plan:

Disturbed areas shall be permanently revegetated according to the following provisions:

Site Preparation: The land surfaces shall be graded and/or shaped as necessary to create grades applicable to the subsequent use of the site, but in no case will any slope greater than 26 degrees in unconsolidated material be left. Loose rock, woody material and other obstructions that would interfere with the establishment of vegetation planned for the site shall be removed and either buried or properly disposed of off-site in accordance with Operating Condition Nos. 12A through D above. Surface runoff shall be controlled by terraces or diversions to allow discharge through protected outlets.

Lime and Fertilizer: Lime and fertilizer shall be applied in accordance with soil test result or at a rate of 2,000 lbs/acre of lime and 1000 lbs/acre of 10-20-20 fertilizer.

Seedbed Preparation: Lime and fertilizer shall be mixed with the soil to a depth of three to four inches where conventional equipment can be used. On slopes steeper than about 2:1, soils shall be grooved or scarified along the contour to provide for retention of seeds and nutrients on the slope until germination and growth is started. On steep slopes not accessible to seeding equipment, seed, nutrients and mulch, shall be applied by hand.



Revegetation: Typical seed mixtures to be utilized include fescue-rye, fescue-rye-lespedeza, and fescue-lespedeza, where the lespedeza used may be Korean or Kobe or Sericea. All rye species to be utilized shall be rye grain rather than rye grass. In fall or spring plantings, seeding mixtures shall utilize 100 lbs. Fescue and 50 lbs. Rye per acre to be planted. Late spring plantings in certain areas may contain up to 40 lbs. Kobe/Korean per acre where desirable to supplement natural deer browse. Sericea lespedeza shall be utilized at a rate of 20 to 40 lbs. per acre in combination with Fescue when planting excessively droughty soils or steep slopes. When using lespedeza species in fall plantings, non-scarified seed shall be utilized. Scarified seed shall be utilized in spring plantings. Newly seeded areas shall be mulched with unchopped small grain straw applied at a rate of 1.5 to 2 tons per acre, or until approximately 75% of the soil is hidden.

Loblolly pines (or other acceptable evergreen species) and red cedar seedlings shall be planted at selected sites to provide visual screens and revegetation. Evergreen seedling plantings shall be done on a staggered 4 feet by 4 feet pattern.

Maintenance: Plant placement and other maintenance that may be required to establish vegetative cover appropriate to the reclamation plan for this site shall be carried out until vegetation is properly established.

Whenever possible, disturbed areas should be vegetated with native warm season grasses such as switch grass, Indian grass, bluestem and gamma grass.

In addition, the permittee shall consult with a professional wildlife biologist with the N.C. Wildlife Resources Commission to enhance post-project wildlife habitat at the site.

#### 4. Reclamation Plan:

Reclamation shall be conducted simultaneously with mining to the extent feasible. In any event, reclamation shall be initiated as soon as feasible after completion or termination of mining of any mine segment under permit. Final reclamation, including revegetation, shall be completed within two years of completion or termination of mining.

#### 5. Donation to State

This provision is pursuant to Wake Stone Corporation's offer to donate the quarry site to the State as part of its reclamation plan.

The term "quarry site" shall include the entire pit as it exists after quarrying has been completed, a strip extending at least 50 feet back from the top of the slope of the pit on all sides, and a reasonable area to connect the pit and surrounding strip to the Park, constituting a total area of at least 75 acres.

During the option period, Wake Stone Corporation shall have the right to encumber all of its remaining property from time to time by mortgage, deed of trust or other security agreement then in common use for the purpose of securing one or more bona fide obligations of Wake Stone Corporation, such as the payment of money or the providing of any goods or services. The option to the State shall be subordinate to each such encumbrance in the same manner and to the same extent as if such option has been recorded after the restoration of each such encumbrance.

The right of the State to exercise its option shall be subject to:

- A. Wake Stone Corporation not being prohibited by the US Government, State of North Carolina, Wake County, any municipality having jurisdiction, or by any other court from removing from Wake Stone Corporation's property all quarryable stone which is outside of the buffer zones referred to in Operating Condition No.3 of this permit. The requirements by the State that Wake Stone Corporation comply with laws and rules and regulations generally applicable to stone quarrying shall not be deemed a prohibition of quarrying for the purpose of the option agreement.
- B. The operation of a quarry on Wake Stone Corporation's property for a minimum period of five years.

The conveyance of the quarry site, if approved by the State, shall be by deed containing the usual covenants of warranty and conveying the quarry site free and clear of all encumbrances except those existing at the time of Wake Stone Corporation's purchase, and valorem taxes at the time of conveyance (which shall be prorated), and such drainage and utility easements as shall have been installed in connection with the development of the property.

The option may include such other terms as are mutually acceptable to the State and Wake Stone Corporation.

The method by which the quarry site may be donated to the State is as follows: ~~Upon acquisition of the land by Wake Stone Corporation (by exercise of its option to purchase),~~ Wake Stone Corporation will grant to the State an option which, if exercised by the State, will require that Wake Stone Corporation convey a fee simple title to the quarry site to the State. The State shall have no obligations to exercise its option to accept a conveyance of the quarry site.

The terms and conditions of the option shall be as follows:

- A. When all quarryable stone has been removed from all of the land and belonging to or under the control of Wake Stone Corporation during the period of it quarrying operations and which lies between Umstead State Park and Interstate Highway 40, it shall be the duty of Wake Stone Corporation to notify the State of this fact. Upon receipt of such notice, the State shall have six months within which it may elect to have Wake Stone Corporation convey the quarry site to the



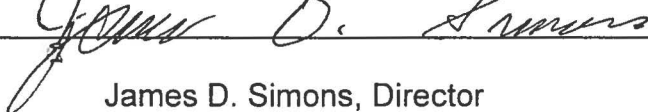
State. If the State elects to have Wake Stone Corporation convey the quarry site to the State, it shall notify Wake Stone Corporation of such election within said six month period. All notices shall be by certified mail and return receipt requested. If the State fails to make election within said six month period or shall elect not to accept a conveyance of the quarry site, the option shall be thereupon terminate and Wake Stone Corporation shall have no further obligation to convey the quarry site to the State.

B. If all quarryable stone is not removed, the right of the State to acquire the quarry site shall accrue at the end of 50 years from the date quarrying commences or 10 years after quarrying operations have ceased without having been resumed, whichever is sooner, and notices shall be exchanged at that time in the same manner and with the same time limitations as set forth in Paragraph A above.

C. Until the option has expired, Wake Stone Corporation shall not encumber by mortgage or deed of trust of any of the area designated "BUFFER AREA" on Wake Stone Corporation's site plan dated February 17, 1981, revised March 10, 1981 and February 14, 1991 (and the Site Plan Map dated March 1, 2001 and Site Plan Maps last revised November 22, 2010), except for purchase money security interests.

The terms and conditions relating to the donation are placed herein to prescribe generally the boundaries of the Wake Stone Corporation offer. The acceptance by the State is subject to approval by the Department of Administration and the council of State and the ascertaining that the offer is in accord with the laws of the State and lawfully adopted rules and regulations. Further, the Department's analysis of the conditions of the land to be transferred will be in accordance with the criteria identified in the "Principles' Governing the Establishment of Extension and Development of State Parks, State Recreation Areas and State Natural Areas."

This permit, issued May 13, 1981, modified April 15, 1986, renewed and modified April 1, 1991, modified February 5, 1992 and October 11, 1996 and renewed April 20, 2001, is hereby modified the 24th day of November, 2010 pursuant to G.S. 74-52.

By: 

James D. Simons, Director  
Division of Land Resources  
By Authority of the Secretary  
Of the Department of Environment and Natural Resources