

April 5, 1985

MEMORANDUM

TO: Charles
FROM: Jim
SUBJECT: Proposed Wake Stone Berm Expansion

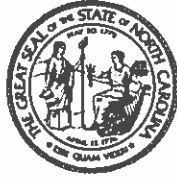
Rick Hazard, Allen Jeffreys, and I met John and Ted Braton of Wake Stone on April 2, 1985 at Wake Stone's request to discuss extending the berm along the park property boundary.

The berm may be extended to the south (toward the Interstate) or to the north. Although Parks & Recreation has expressed an interest in extending the berms, they do have concern about the timing of the berm construction and Wake Stone's utilization of the nearly filled area to be located adjacent to the berm extension. Parks and Recreation are considering Wake Stone's proposal and will be in touch with us within a week.

Wake Stone also wants to significantly raise one of their freshwater lake dams and will provide the engineering plans, etc. in accordance to the Dam Safety Law.

/cj

cc: John Holley



RECEIVED

APR 20 1985

LAND QUALITY SECTION

State of North Carolina
Department of Natural Resources and Community Development
Division of Parks and Recreation
512 North Salisbury Street • Raleigh, North Carolina 27611

James G. Martin, Governor
S. Thomas Rhodes, Secretary

April 16, 1985

Dr. William W. Davis
Director

MEMORANDUM

TO: Mr. Stephen G. Conrad, Director
Division of Land Resources

FROM: Alan R. Eakes, Deputy Director *Alan*
Division of Parks and Recreation

SUBJECT: Wake Stone - Triangle Quarry

This is in response to the recent verbal request by Wake Stone concerning the extension of the berm located on the east side of the project adjacent to William B. Umstead State Park.

On April 2, 1985, Ric Hazard of my staff accompanied Jim Simons in a field investigation of this request. I have evaluated the Wake Stone request, and present the following conclusions.

We have no objection to the extension of the berm southward. We understand that the berm extension will be at the same height as the original berm, and will be tied into the 410' contour. This section will necessitate the elimination of the small pond located in this area. In view of the drainage problems and clearing within the 50' buffer along the boundary that occurred during the construction of the original berm, we strongly recommend that this extension be properly engineered to avoid similar problems. Drainage through the existing pond must be provided at adequate grades to prevent ponding/stagnant water; and no activities (clearing, drainage, earth moving etc.) should be permitted within the 50' buffer.

This southern berm extension should reduce several problems associated with Wake Stone activities in this immediate area



To: Stephen Conrad
Page 2
April 16, 1985

(i.e. noise and night-lighting, both of which probably exceed Wake County zoning performance standard limits, attributed to the equipment and truck storage area).

One of the park's peak seasons is from April to mid-June. Therefore, in order to reduce noise impacts to park visitors arising from the berm extension/construction activities on our boundary, we request that this work be limited to permitted quarry operating hours, and that this work (inclusive of clearing and pond draining) not be started until mid-June.

We view the proposals for the northern end of the berm (new dam, filling to elevation 385', northern berm extension) as clear modifications of permit no. 92-10. These activities extend into the "10-year buffer", and do not meet the exception criteria defined on page 4 of their permit:

"The only exceptions to these undisturbed buffers of natural vegetation are:

- A. The construction of berms as approved by the Department for visual and noise screening.
- B. The installation of drainage and sedimentation controls to protect the Crabtree Creek."

Although G.S. 74-52 permit modification procedures should be followed in this regard, even with compliance with G.S.74-52, we would recommend that the permit not be modified to allow the above changes.

The express purpose of the new dam is to increase process water supply; the filling and northern berm extension are only justified by the need to remove and store overburden. This filling and berm work will not provide any substantial noise or visual screening, and in fact, as a result of the amount of vegetation to be moved, would increase noise and visual problems.

We have noticed a substantial amount of quarry dust accumulation recently in the picnic area. Although this accumulation is probably partially attributable to a lack of rainfall, we request that you investigate this problem, and take appropriate action.

TO: Stephen Conrad
Page 2
April 16, 1984

Thank you for the opportunity of participating in the review of this request by Wake Stone. We are trying to be fair about this situation, however, we remain very firm in our intent to protect the park from any additional impact, especially as related to the hard-won permit conditions.

ARE/RBH/atw

cc Mr. Richard B. Hazard

May 15, 1985

MEMORANDUM

TO: Alan Eakes, Parks & Recreation

FROM: Steve Conrad SAC

SUBJECT: Wake Stone - Triangle Quarry

Thank you for your memo of April 16, 1985 concerning proposed berm construction at the Wake Stone Triangle Quarry adjacent to the Reedy Creek area Umstead State Park.

An additional inspection of the proposed berm construction area was made by Jim Simons on May 2, 1985 to investigate your concern of quarry dust accumulation in the picnic area. The inspection was made just prior to the rain later that day.

A significant amount of dust was found to be covering many leaves on the trees. It was also noted that walking through the wooded area near the picnic tables and the toilet buildings kicked up dust in the ground litter. It is not known how long this dust had accumulated or what portion of the dust may be due to natural causes. However, the majority of the dust was a grayish cover similar to dust that could be expected from the quarry.

Ted Bratton of Wake Stone was immediately notified of this inspection and was given a sample of the leaves with dust.

In view of this amount of dust being found, we agree that any future disturbance (including berm constructing) adjoining the park boundary should be carefully reviewed. Consequently, Wake Stone will be notified that the southern berm expansion can be allowed since it will hopefully reduce noise and night-lighting in that area as you indicated. However, northern berm expansion or other disturbance in that area of the quarry will require additional study.

Concerning the existing dust, it is hoped that the dust accumulation noted during the May 2 inspection is an isolated incident due to the unusually dry March and April. We will try to monitor this situation. However, we would appreciate the assistance of your park staff in alerting us to any future quarry dust accumulation so that appropriate action can be taken.

We will contact your Division should Wake Stone wish to further pursue plans for berm construction.

SC/JD/cj

cc: John Holley

July 8, 1985

MEMORANDUM

TO: William W. Davis, Director
Division of Parks & Recreation

FROM: Stephen G. Conrad, Director
Division of Land Resources

SUBJECT: Wake Stone Quarry adjacent to Umstead State Park

Thank you for your memo of June 4, 1985 concerning the Wake Stone Quarry adjacent to William B. Umstead State Park.

I would appreciate being advised when any new findings or reports have been completed concerning the quarry monitoring adjacent to the Park.

Wake Stone has indicated a willingness to modify the plans for the berm extension to the north to make the plans more acceptable. Jim Simons of my staff has contacted your staff concerning these proposed changes.

In any event, the operator has indicated that they wish to pursue plans for the dam construction at the edge of the 10 year permit limit and the northward berm extension along the park boundary. Consequently, we will appreciate your assistance in the review of any modification of Wake Stone's plans and in providing justification should the plans still be found to have adverse impact to the park.

SGC:JDS/kpe

cc: Jim Simons
John Holley

Wake Stone Corporation

Locations
U. S. 64 East, Raleigh, N.C.
I-40 at Harrison Ave., Cary, N.C.

RECEIVED

OCT 1 1985

Quarry Phone Numbers:
919/266-9266—Knightdale
919/467-4300—Triangle (Cary)
919/682-7331—Triangle (Durham)

Business Office Address:
P. O. Box 190
Knightdale, N.C. 27545
919/266-9266

September 30, 1985

Mr. James D. Simons
Land Quality Section
Dept. of Natural Resources & Community Development
PO Box 27687
Raleigh, NC 27611

REFERENCE: Mining Permit #92-10
Triangle Quarry

Dear Jim:

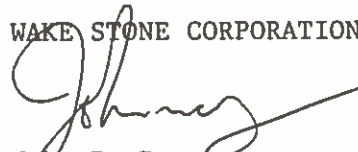
We wish to make a formal request to modify our Triangle Quarry Mining Permit so as to allow us to affect a small area of property inside the temporary ten year buffer area. As we have discussed, we propose to extend the eastern berm to the north approximately one hundred twenty feet in order to screen a picnic area from our operation. Also, we will construct a new dam between two existing ponds as shown on the enclosed drawing. The new dam will serve to increase the amount of water storage which we need for rinsing water as well as dust control, and provide better erosion control.

We have discussed these projects with Rick Hazzard in the Parks Dept. and understand that they do not object to either one.

If you have any questions, please give me a call.

Sincerely,

WAKE STONE CORPORATION




John R. Bratton
President

JRB/ppw

Enclosure

October 2, 1985

MEMORANDUM

TO: Ric Hazard, Parks & Recreation
FROM: Jim Simons, Land Quality 
SUBJECT: Proposed Cary Quarry Dam Construction

Wake Stone Corporation has applied to amend their Cary Quarry Mining permit to include dam construction that would extend beyond the current boundary of the 10 year permit. The proposed dam would be for a freshwater supply.

I am enclosing a copy of a drawing that shows the proposed dam construction and the berm extension along the park boundary that we have discussed. The berm extension can be accomplished within the current permit.

However, we would appreciate Parks & Recreation review and comment of the proposed berm construction and dam construction. I believe that the drawing indicates what John Bratton has discussed with us.

Please advise if I can help answer any questions.

JS/cj

cc: Charles Gardner
John Holley



State of North Carolina
 Department of Natural Resources and Community Development
 Division of Parks and Recreation
 512 North Salisbury Street • Raleigh, North Carolina 27611

James G. Martin, Governor
 S. Thomas Rhodes, Secretary

November 26, 1985

Dr. William W. Davis
 Director

MEMORANDUM

TO: Mr. Stephen G. Conrad, Director
 Division of Land Resources

FROM: William W. Davis, Ph.D. *William W. Davis*

SUBJECT: Proposed Cary Quarry Dam Construction

RECEIVED
 DEC 2 '85
 DIV. OF LAND RES.

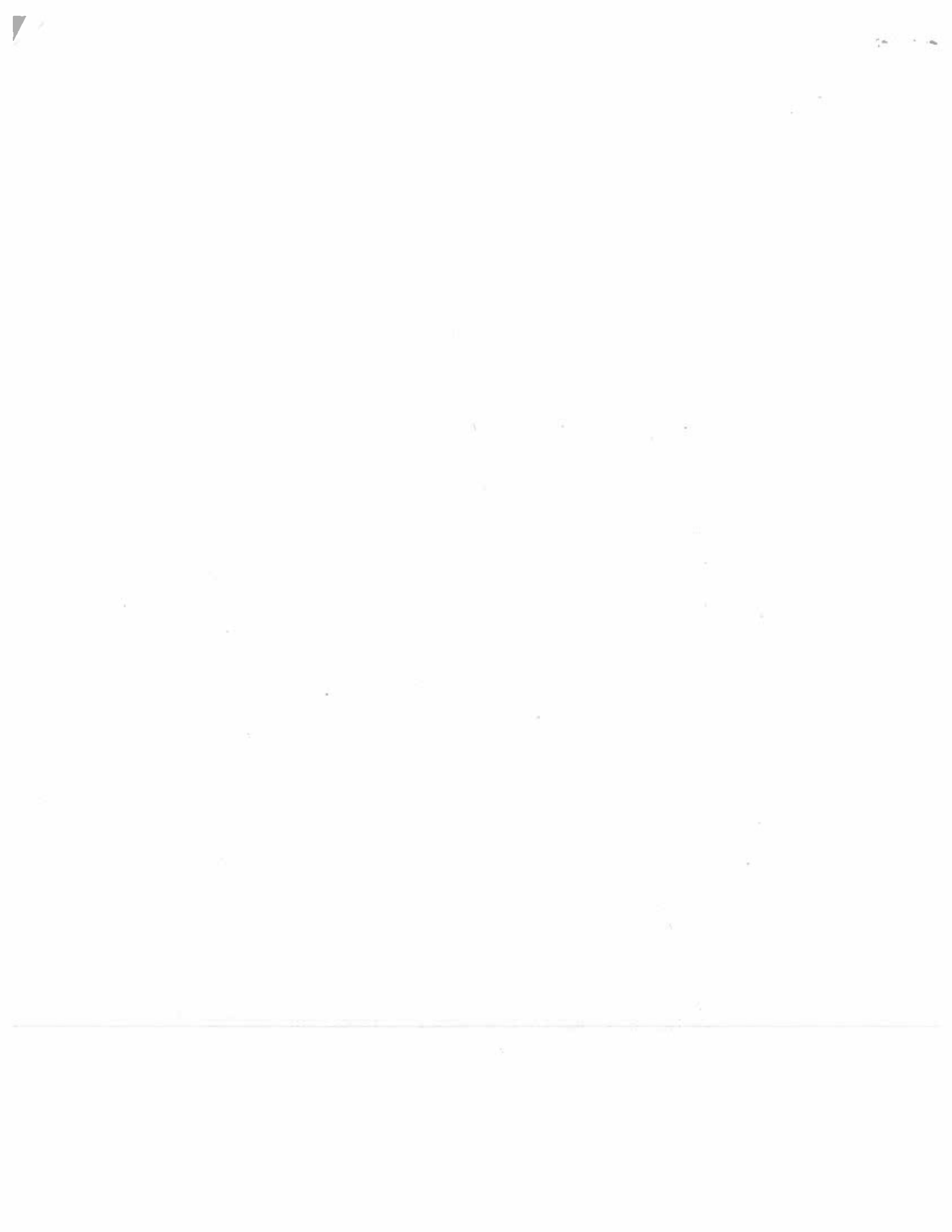
The Division of Parks and Recreation has reviewed the request by Wake Stone Corporation for an amendment to their mining permit. This amendment proposes dam construction that would extend beyond the current boundary of the 10 year permit.

As you are aware, both the permanent and the ten-year buffers were established to protect William B. Umstead State Park from quarry induced impact. Although the dam construction will probably involve less than an acre within the buffer, there is a potential for an increase in noise and aesthetic impacts to the park.

Prior to the approval of this amendment, we recommend the following:

1. Wake Stone should be required to complete all work on the berm adjacent to the park prior to beginning construction of the dam (increasing the height of the berm, lengthening the berm to the north, and seeding and revegetating all disturbed surfaces).
2. Wake Stone should be required to demonstrate that there are no alternatives to the buffer infringement (such as moving the dam to the south [out of the buffer] increasing its height, inundating the pond to the east, and reducing or eliminating the fill proposed for the south end of the new pond. *upstream outlet*)

10050 access to cable



Stephen Conrad
Page 2
November 26, 1985

3. As a minimum, the amount of buffer to be used by the dam should be replaced. Adding approximately 40 feet to the width of the buffer adjacent to the park north of the berm and running to the permanent Crabtree Creek buffer would constitute a suitable buffer replacement.
4. The road along the top of the dam should be realigned to be completely south of the existing 10 year buffer line.
5. The possibility of adding a 10 foot high berm on the dam should be explored (adding a 10 foot berm immediately adjacent, and to the north of the edge of the roadway on top of the dam). *trucks on dam*
6. Edge of clearing limits should be staked in the field, mapped and included in the permit amendment, and enforced during construction. *timber - clear*
7. All disturbed areas in the dam area not contributing to the dam's structural integrity should be revegetated in a manner similar to that performed on the existing berm adjacent to the park.
8. Leeway should be provided in the wording of the amendment approval to allow the Department the right to request additional measures if the park realizes increased impacts (noise, aesthetic, dust etc.) resulting from this dam and pond construction.

Thank you for the opportunity of reviewing this permit amendment proposal. I am confident that you and your staff will continue to attempt to safeguard the park from adverse impact. If you have any questions, or need additional information, please feel free to contact us.

WWD/RBH/atw

cc: Alan R. Eakes
Richard B. Hazard

Noise down valley





State of North Carolina
Department of Natural Resources and Community Development
Division of Parks and Recreation
512 North Salisbury Street • Raleigh, North Carolina 27611


James G. Martin, Governor
S. Thomas Rhodes, Secretary

January 21, 1986

Dr. William W. Davis
Director

MEMORANDUM

TO: Mr. Stephen G. Conrad, Director
Division of Land Resources

FROM: William W. Davis, Ph.D. 

SUBJECT: Proposed Cary Quarry Dam Construction

The Division of Parks and Recreation has further reviewed the request by the Wake Stone Corporation for an amendment to their mining permit. Approval of this amendment would permit the construction of a dam that would extend beyond the current boundary delineated by the 10 year permit. We understand that Wake Stone, without written authorization, has cleared the land necessary to allow construction of this dam.

We have a great number of reservations about this intrusion into the 10 year buffer. Through the course of the initial permit review, permit denial, appeal hearings, and permit condition development proceedings, the intent of the Department was to prevent, and then minimize the quarry's adverse impacts to William B. Umstead State Park. The establishment of the permanent buffer and the 10 year permit lines were principle means for attempting to achieve this impact reduction. Therefore, we view the maintenance of the integrity of these buffers as a priority tool for protecting the park. Any modification of these buffers should not be considered except in the rarest of cases. Even then, a realignment of the permit area/buffer lines should be allowed only after Wake Stone proves that there are no alternatives to the buffer infringement, and that the action would not result in any additional impacts to the park.

RECEIVED

JAN 23 1986

DIV. OF LAND RES.

MEMO TO: Stephen Conrad
Page 2
January 21, 1986

Your staff feels reasonably assured that both of these conditions have been met. Nonetheless, we feel that the physical loss of a section of buffer, along with its reduction of impact (noise, dust, aesthetics) buffering capability must be followed by compensation.

The permit amendment which allows the dam to extend past the 10 year permit line, if approved, must be conditioned by the following compensation:

1. All work on the berm adjacent to the park (extension of the berm to the north and south, increasing the height of the berm by 15 feet) shall be completed within one year of the date the permit amendment is approved. All fill used to increase the berm height shall be placed on the west side of the berm, and should not disturb the stabilized east side.
2. After construction of the dam and the additions to the berm are completed, the road across the top of the dam should be blocked to prevent all but emergency vehicle passage.
3. After the dam and spillway construction is completed and stabilized, the total area beyond the 10 year permit line that was disturbed by these activities should be replaced by the designation of compensatory, undisturbed permanent buffer. In assessing the long term protection needs of the park and Crabtree Creek, we recommend that the replacement buffer be designated in the northwest corner of the property adjacent to Crabtree Creek, as shown on the attached map.

The clearing that Wake Stone performed removed an approximately 300 foot wide mature, mixed pine/hardwood vegetative screen. We have discussed the feasibility of placing a noise barrier along the top of the dam with the Department of Transportation. Based on 1982 bid prices, a 10' high tongue and groove treated wood wall would cost between \$40 - \$60 per linear foot. The high cost of this alternative would probably prohibit its implementation. DOT strongly recommends the development of earthen berms as the all-around best method for reducing noise. Therefore, to provide compensatory noise protection, we request that:

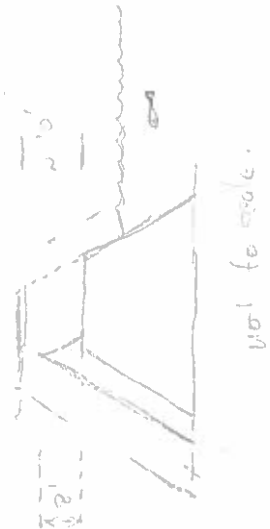
MEMO TO: Stephen Conrad
Page 3
January 21, 1986

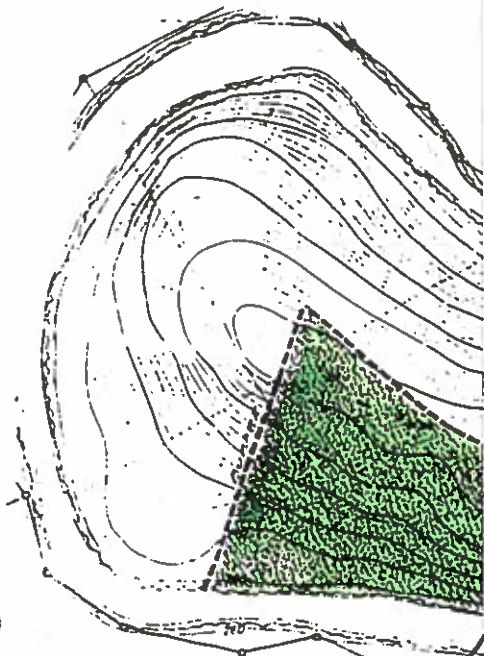
4. Either through redesign or re-siting of the dam, raise the top elevation of the dam to 450', while maintaining the water elevation at 433' as designed. The additional 10' of vertical "free board" should provide an adequate noise screen; we recommend its development even if it would encroach on, and consume a portion of the pond below (north of) the dam.

The amount of time and effort our staff's have spend on this permit modification is indicative of the degree of importance we have placed on protecting William B. Umstead from additional quarry impact. I thank you for your continued assistance.

WWD/RBH/atw

cc: Alan R. Eakes
Phil McKnelly
Richard B. Hazard





PERMANENT
BUFFER LINE

4.

AREA OF REPLACEMENT
BUFFER - TO BE DESIGNATED
"PERMANENT BUFFER"

3.

REPAIR DAM OF NORTHERN
POND AT THIS TIME IF
REPAIRS WILL BE NEEDED
AT ANY TIME DURING
PERMIT PERIOD.

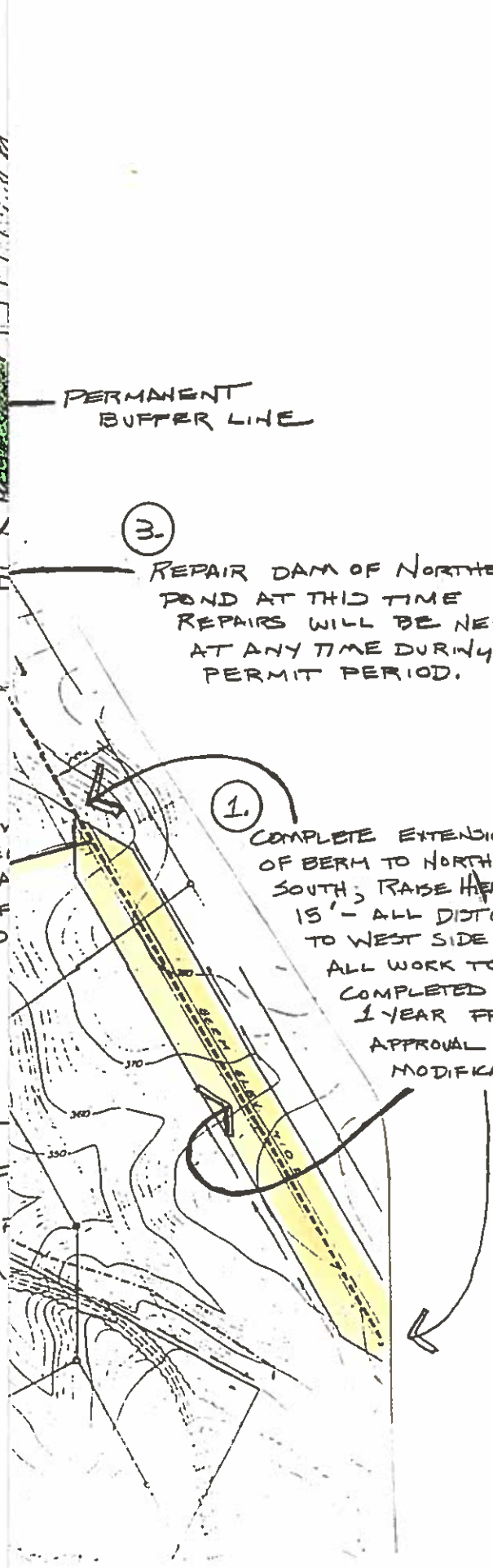
2.

NEW
YEAR
DAM
F
D

1.

COMPLETE EXTENSION
OF BERM TO NORTH &
SOUTH; RAISE HEIGHT
15' - ALL DISTURBANCE
TO WEST SIDE ONLY.
ALL WORK TO BE
COMPLETED BY
1 YEAR FROM
APPROVAL OF
MODIFICATION.

RECOMMENDATIONS FOR
CONCERNING PROPOSED
PERMIT MODIFICATION



NORTH CAROLINA DEPARTMENT OF NATURAL
RESOURCES AND COMMUNITY DEVELOPMENT

Date 11 23/86 1986

To: Charles - Jim

From: SLC

Remarks: _____

Are there the conditions
that were mutually
agreed on? If so, please
prepare an appropriate
response memo to use
power for me - Thanks

ACTION

- | | |
|---|--|
| <input type="checkbox"/> Note and file | <input type="checkbox"/> Note, initial and forward |
| <input type="checkbox"/> Note and return to me | <input type="checkbox"/> Your comments, please |
| <input type="checkbox"/> Note and see me about this | <input type="checkbox"/> For your information |
| <input type="checkbox"/> For your approval | <input type="checkbox"/> Prepare reply for my signature |
| <input type="checkbox"/> Per our conversation | <input type="checkbox"/> Prepare information for me to reply |
| <input type="checkbox"/> Per your request | <input type="checkbox"/> Please answer, with copy to me |
| <input type="checkbox"/> Return with more details | <input type="checkbox"/> To be filed |

IMPORTANT

To _____

Date _____ Time _____

WHILE YOU WERE OUT

M _____

of _____

Phone _____

AREA CODE NUMBER EXTENSION

TELEPHONED		PLEASE CALL	
CALLED TO SEE YOU		WILL CALL AGAIN	
WANTS TO SEE YOU		URGENT	
RETURNED YOUR CALL			

Message _____

Signed

February 4, 1986

MEMORANDUM

TO: William W. Davis, Ph.D.
Parks & Recreation Division

FROM: Stephen G. Conrad, Director ^{SGC}
Land Resources Division

SUBJECT: Proposed Cary Quarry Dam Construction

Thank you for your memo of January 21, 1986 addressing your concerns about the proposed Wake Stone dam construction extending beyond the 10 year permit boundary.

We have discussed these concerns with your staff. We do believe that we should further inspect the existing dam north of the 10 year permit boundary to determine its adequacy since repair of this dam would require considerable clearing of buffer for repair and access.

The concerns of your January 21, 1986 memo and possible compensation were conveyed directly to Mr. John R. Bratton of Wake Stone Corporation on January 28, 1986. Mr. Bratton indicated that he would review this matter and contact us. We will notify your office of any new development.

Thank you for your assistance.

SGC/JDS/cj

cc: John Holley

Wake Stone Corporation

RECEIVED

MAR 11 1986

Locations
U. S. 64 East, Raleigh, N.C.
I-40 at Harrison Ave., Cary, N.C.

LAND QUALITY SECTION

*to look for P&R
3/13*

Quarry Phone Numbers:
919/266-9266—Knightdale
919/467-4300—Triangle (Cary)
919/682-7331—Triangle (Durham)

Business Office Address:
P. O. Box 190
Knightdale, N.C. 27545
919/266-9266

March 6, 1986

Mr. James D. Simons
Land Quality Section
Dept. of Natural Resources and
Community Development
P. O. Box 27687
Raleigh, NC 27611

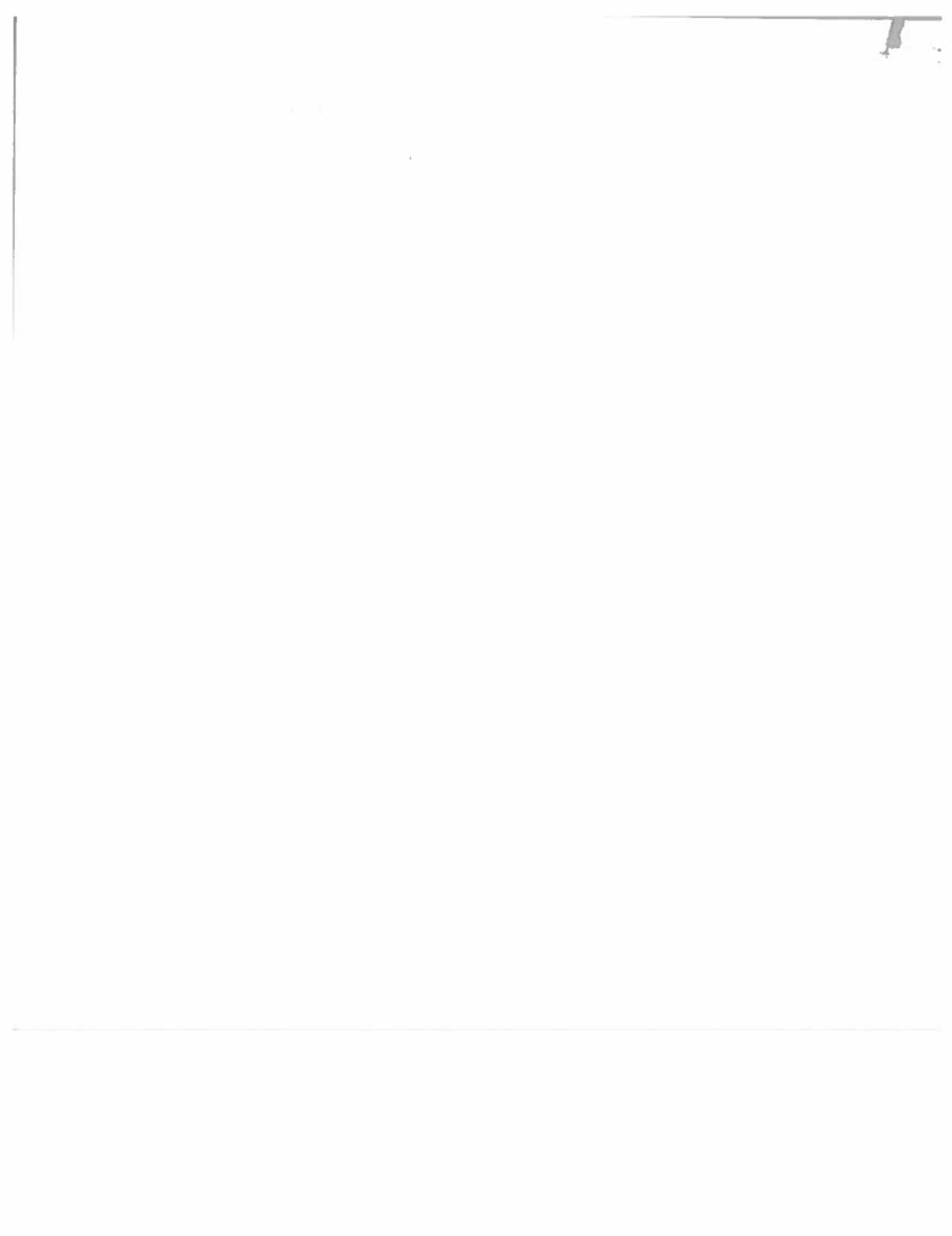
Dear Jim:

This letter is in reference to our meeting on March 5, 1986, at Triangle Quarry and our discussion of the amendment to our mining permit which would allow construction of a new dam.

As of today's discussion, it is our understanding that the amendment to our permit is conditioned by the following compensation to the Parks Department:

1. Wake Stone Corporation agrees to raise the elevation of the berm on its eastern boundary by approximately 15 feet. Fill used in raising the berm will be placed on the west side of the existing berm to minimize disturbance to the east side of the berm. This work will be completed in as timely a manner as possible.
2. The elevation of the proposed dam will be raised to approximately the 350' elevation either in total height or by establishing a 10' berm on the north side of the dam. The water elevation will remain at elevation 333' as designed. *3/14 - will do both*
3. Wake Stone Corporation will consider designating additional buffer areas on its western boundary at such time as the Parks Department acquires adjacent property.

As has always been our policy, we will be happy to try to resolve any other problems or concerns which might arise during or after completion of this work.



Mr. James D. Simons
March 6, 1986
Page 2

If our agreeing to these conditions is, in fact, sufficient to allow an amendment to our permit, please notify us as soon as possible. Also, if you have any questions concerning our understanding of today's meeting, please let me know.

Yours truly,

WAKE STONE CORPORATION

A handwritten signature in dark ink, appearing to read "John R. Bratton", written over a horizontal line.

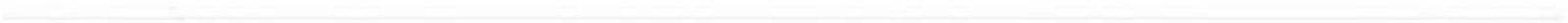
John R. Bratton
President

JRB/aar



11

12





State of North Carolina
Department of Natural Resources and Community Development
Division of Land Resources
512 North Salisbury Street • Raleigh, North Carolina 27611

James G. Martin, Governor
S. Thomas Rhodes, Secretary

April 4, 1986

Stephen G. Conrad
Director

MEMORANDUM

TO: Dr. William W. Davis, Director
Division of Parks & Recreation

FROM: Mr. Stephen G. Conrad, Director *SGC*
Division of Land Resources

SUBJECT: Amendment to Wake Stone Cary Quarry Mining Permit

I am attaching a draft copy of the Wake Stone Cary Quarry mining permit amendment allowing construction of a water supply dam within the 10 year permit buffer for your review. The amendment was added to condition no. 3 on page 4 of the permit. Also attached is a copy of the cover letter to Wake Stone for additional clarification.

Members of your staff and my staff met with Wake Stone on March 5, 1986 to discuss the proposed dam construction. Pursuant to the concerns noted in your memo of January 21, 1986 to me, Wake Stone has agreed to do the following:

- (1) Raise the elevation of the berm on its eastern boundary by approximately 15 feet by filling on the west side of the berm to minimize disturbance on the park side. This work will be completed in as timely a manner as possible.
- (2) Raise the elevation of the proposed dam to approximately 350 MSL and establish a 10 foot high berm on the north side of the dam. The water elevation will remain at elevation 333. Although the road across the dam will not be blocked, Wake Stone has indicated a willingness to take additional measures to reduce noise if this becomes a problem.
- (3) Consider designating additional buffer areas on its western boundary if Parks and Recreation acquires the adjoining property.

I would appreciate your response to the proposed amendment as soon as possible.

SGC/JDS/cj

cc: John Holley



State of North Carolina
Department of Natural Resources and Community Development

Division of Land Resources
512 North Salisbury Street • Raleigh, North Carolina 27611

James G. Martin, Governor
S. Thomas Rhodes, Secretary

Stephen G. Conrad
Director

April 21, 1986

Mr. John R. Bratton, President
Wake Stone Corporation
P.O. Box 190
Knightsdale, North Carolina 27545

Re: Amendment to Cary Quarry Mining Permit
Permit No. 92-10 - Wake County

Dear Mr. Bratton:

Your request dated September 30, 1985 to amend the Cary Quarry mining permit to allow construction of a dam within the 10 year interim buffer has been reviewed in consultation of the Division of Parks and Recreation.

The proposed amendment is approved conditional to the mitigation measures outlined in your letter to Mr. James D. Simons dated March 6, 1986 and to compliance with The Dam Safety Law of 1967. The mitigation measures outlined are:

1. Wake Stone Corporation agrees to raise the elevation of the berm on its eastern boundary by approximately 15 feet. Fill used in raising the berm will be placed on the west side of the existing berm to minimize disturbance to the east side of the berm. This work will be completed in as timely a manner as possible.
2. The elevation of the proposed dam will be raised to approximately the 350' elevation and will establish a 10' berm on the north side of the dam. The water elevation will remain at elevation 333' as designed.
3. Wake Stone Corporation will consider designating additional buffer areas on its western boundary at such time as the Parks Division acquires adjacent property.

I am enclosing an amended copy of the mining permit. Please note the modification of operating condition no. 3, page 4 which addresses the dam construction. It is not necessary to amend the permit to raise the elevation of the berm as this is already allowed under condition 9B (page 7).

Mr. John R. Bratton
Page 2
April 21, 1986

As requested, we are also changing the name of the quarry from Cary Quarry to Triangle Quarry.

We appreciate your cooperation in continuing your efforts to reduce possible impact to Umstead State Park and look forward to working with you in the future.

Very truly yours,

Stephen G. Conrad

Stephen G. Conrad

SGC/JDS/cj

Enclosure

cc: Dr. William W. Davis
Mr. John Holley



file in mining

State of North Carolina
Department of Natural Resources and Community Development
Division of Land Resources
512 North Salisbury Street • Raleigh, North Carolina 27611

James G. Martin, Governor
S. Thomas Rhodes, Secretary

May 12, 1986

Stephen G. Conrad
Director

Mr. John Bratton
Wake Stone Corporation
P. O. Box 190
Knightdale, N. C. 27545

RE: Approval to Construct
Wake Stone Triangle Quarry Dam
Wake County

Dear Mr. Bratton:

This is in response to your submission on April 15, 1986 of plans and design data for the subject proposed dam in Wake County on an unnamed tributary of Crabtree Creek in compliance with the Dam Safety Law of 1967. These plans have been reviewed by concerned State agencies and their comments have been received. These plans have been prepared under the supervision of John W. Johnson, P.E. of Olsen Associates, Inc.

This letter constitutes approval of Wake Stone Corporation's proposal to construct the subject dam according to the plans submitted to this Division on April 15, 1986 with the following stipulations:

1. Project construction shall be supervised by John W. Johnson, P.E.
2. During construction the Division of Land Resources may require such progress reports as is deemed necessary.
3. Upon completion of the project, John W. Johnson, P.E. shall inspect the completed work and upon finding (1) that the work has been done as specified, (2) and the dam is safe, shall file with the Division of Land Resources "As-Built" drawings and a certificate stating that the work has been completed in accordance with approved plans, specifications and other requirements.
4. The low level drain valve must be installed at the upstream end of the low level drain conduit.



*

Wake Stone Triangle Quarry Dam
Page Two

5. No water shall be impounded behind the dam until after final approval is issued by the Division of Land Resources for operation of this dam.
6. You must notify John Holley, P.E., Raleigh Regional Office, P. O. Box 27687, Raleigh, N. C. 27611 ten days before the start of construction.

The Dam Safety Law requires that project construction commence within one year from the date of this approval letter, or the approval is void.

Very truly yours,

Stephen G. Conrad

Stephen G. Conrad

SGC:gf

cc: Mr. John Holley
✓ Mr. Jim Simons
Mr. John Johnson

