

December 17, 2019

Ms. Judith A. Wehner  
NCDEQ  
512 N. Salisbury St.  
Raleigh, NC 27699

RE: Proposed Alamance Quarry and Construction Materials Quarry  
Alamance County  
Cape Fear River Basin

Dear Ms. Wehner,

We have reviewed your letter of June 21, 2019 requesting additional information. We have revised and/or added the appropriate information that was requested. Please review the below and included information to see that it is satisfactory. Should there be any more additional requests, please reach out directly and we will ensure that it is provided timely.

Sincerely,

Chad Threatt

## **Revised Information to North Carolina Environmental Quality Questions 1 Through 6**

- Send certified mail; return receipt requested letters to Duke Power Company and Colonial Pipeline outlining the proposed access across the rights-of-way. Provide copies of said letters and signed return receipts.
  - Please see the attached certified mail receipt and letters.
  
- Provide a thorough geologic investigation of the site that outlines any fractures, dikes, rock type, radon presence etc. See the comments provided by the NC Geological Survey. Determine the location of the diabase dikes in the area by acceptable methods, such as magnetometer.
  - Please see the attached Geologic and Geophysical Investigation report from Timothy W. Clark, P.G.
  
- Provide results of an on-site pump test and modeling of ground water movement. Determine the possible impact of the diabase dikes may have on the area ground water wells with respect to the dewatering activities. Revise the ground water monitoring plan to include the requested studies. Note that conditions may be placed in any issued permit that will require well replacement or deepening of impacted wells.
  - Please see the attached report from Groundwater Management Associates. Inc.
  
- See the Attachment 1 provided to this office by Colonial Pipeline Company regarding blasting operations. Note that any permit issued will require adherence to the recommendations and may contain additional conditions required by the Department.
  - We are communicating with Colonial Pipeline to meet their request.
  
- See the enclosed comments from the Winston Salem Regional Office regarding the erosion and sediment control plan review submitted with the application. Address all of these issues.
  - Please see the below remarks to the Winston Salem Regional Office comments.
  
- Provide a construction sequence and staged seeding for the overburden storage area.
  - Please see the attached updated plans.

## **Comments to Winston Salem Regional Office Questions 1 Through 22**

- Sediment skimmer basins must be designed for the 25-year storm. As submitted, the sediment skimmer basins have been designed for the 10-year storm. Please revise.

- All Skimmer basins have been resized for a 25-year storm (I=8.02 in/hr.)
- Auxiliary spillways for sediment skimmer basins may not be shown within fill material for each basin.
  - Majority of the spillways are now in the cut areas. Skimmer 6, 7, 11, 22, and 25 all have spillways in fill material because the skimmer outlet pipe had constraints (stream buffer, property line, etc.) which required the bottom elevation to be raised, resulting in a basin that is in fill.
- Please provide match lines on sheets C301A through C301F
  - Match lines added to drawing.
- Final plans submitted for review may not be stamped “Preliminary – Not for Construction”.
  - The “Not for Construction” note has been removed
- A detailed construction sequence must be shown on sheet C301B for the installation of the proposed 24’ arch span culvert and the proposed retaining wall. The construction sequence must include sediment controls for areas adjacent to the stream during the culvert placement and retaining wall construction. Also, particular attention must be given to maintain the stream buffers for the maximum duration possible during culvert placement. Construction drawings must also show fill placement on either side of the stream as the road fill retaining walls are brought to final grade.
  - Construction sequence has been added along with additional erosion control measures. Additionally, all backfill for the wall and roadway will be clean washed stone for the entire length of the walls.
- No sediment control measures have been shown for the proposed fence clearing around the perimeter of the property. Please provide acceptable sediment control measures for these areas.
  - Added silt fence on the down-slope side of security fencing.
- Please note the following comments addressing permanent ditch placement and stabilization:
  - All proposed ditches must be assigned a specific number (i.e., #1, #2, #3, etc.) corresponding to the design calculations. In addition, a schedule must be provided on the detail sheets of the plans showing each proposed ditch and methods for stabilization
    - Design calculations have been numbered; also, added ditch numbers and a stabilization schedule to sheet C 301A and C402
  - The following proposed permanent ditches may not be constructed as shown with temporary diversions shown within the ditch line: (1) FES #1 to 6+50, (2) FES #2 to 6+50, (3) 7+00 to 14+00 (West), (4) 8+50 to 14+00 (East), (5) Access road (East side) 14+00 to stream buffer, (6) Access road (West side) 14+00 to stream buffer, (7) Access road (East side) 17+50 to 20+00, (8) Access road (West side) stream buffer to 20+00.

- Removed the temporary diversions and relocated the skimmer basins so that the ditches flow into the temporary skimmer basins
    - An adequate sediment control measure must be placed at the outlet of the access road ditch (East side) stations 18+50 to stream buffer.
      - Skimmer basin intercepts all flow from ditch
    - An adequate sediment control measure must be placed at the outlet of the ditch from the outlet of sediment skimmer basin #8 to the stream buffer. Note: the drainage for this ditch is 4.86 acres, which would necessitate the use of sediment skimmer basin.
      - Outlet ditch will only have flow during events in which skimmer 8 utilizes the emergency spillway.
    - An adequate sediment control measure must be placed at the outlet of the ditch from the outlet of sediment skimmer basin #11 to the stream buffer. Note: the drainage for this ditch is 3.58 acres, which would necessitate the use of sediment skimmer basin.
      - Ditch has been removed and skimmer 11 has been shifted and upsized.
    - Adequate sediment control measures are needed at the outlets of ditches discharging toward Clark Road. In addition, a rock check dam will need to be placed in the ditch along Clark Road below the outlet of FES#2.
      - Skimmers now intercept all flow from ditches. Also, a check dam was added downstream of FES 2.
    - Ditches adjacent to sediment skimmer basins #4, #5, #6, and #7 are required to discharge into the sediment skimmer basins. As shown, discharges are routed around the basins.
      - Relocated Skimmers to intercept all upslope ditch flows
- No adequate sediment control measures have been shown below the fill slope north east of proposed sediment skimmer basin #7. In addition, proposed fill in this area is shown within the proposed temporary diversion berm, which is not acceptable.
  - Changed grading in area, which eliminated the need for additional sediment control measures.
- It appears that permanent storm water control measures will be needed within the proposed plant areas located west of the proposed pit excavation. In addition, the temporary diversion berms that have been shown will not function properly on fill material and cannot be properly maintained throughout the grading process.
  - Per our phone conversation on 7/15/19, no permanent storm water measures will be necessary as the site will be permanently stabilized after construction activities. Sheet flow will be provided in a stable manner through the preserved stream buffers.
- Proposed baffles within sediment skimmer basins must be located such that runoff entering each basin will be filtered through three baffles. Please reevaluate baffle placement and the temporary diversion berm configuration such that this requirement may be properly addressed.
  - Baffles were reevaluated and moved to ensure flow through three baffles is possible; please see sheet C 302.

- It appears that sediment skimmer basin #13 could be relocated further to the east (back uphill) so that additional areas below the basin would not have to be cleared. In addition, the temporary diversion berms leading to sediment skimmer basin #13 may not be shown directing site runoff over constructed fill slopes.
  - Basin 13 has been moved uphill; a temporary slope drain with temporary diversions at the top of the slope have been added
  
- Please provide reasoning to support the clearing of additional areas as noted below:
  - Areas below the proposed temporary diversions around sediment skimmer basin #23.
    - It is all within the mine area
  - Areas around sediment skimmer basin #25.
    - Within the mine area
  - Areas shown as being graded below sediment basin #1.
    - Clearing is necessary for fence installation, basin installation, pipe installation and spillway installation. Additional cleared area is also needed for access and maintenance of skimmer.
  - Areas around sediment skimmer basin #2.
    - Construction for temporary diversions, skimmer basin, silt fence, security fence, and access for maintenance.
  - Areas around sediment skimmer basin #3.
    - Construction for temporary diversions, skimmer basin, silt fence, security fence, and access for maintenance.
  - Areas around sediment skimmer basin #12.
    - Construction for temporary diversions, skimmer basin, silt fence, security fence, and access for maintenance.
  - Areas around sediment skimmer basin #14.
    - Construction for temporary diversions, skimmer basin, silt fence, security fence, 8' berm and access for maintenance.
  - Areas around sediment skimmer basin #15, also ensure that discharge from FES#4 is directed into skimmer basin #15.
    - Construction for temporary diversions, skimmer basin, silt fence, security fence, 8' berm and access for maintenance.
  - Areas around sediment skimmer basin #26.
    - Within the Mine area.
  - Areas around sediment skimmer basin #27.
    - Within the Mine area
  - Areas around sediment skimmer basin #24 (Note: clearing has been shown through the 50' undisturbed buffer below sediment skimmer basin #24).
    - The Owner has changed the mining limits. Clearing will not occur within the 50' stream buffer.
  
- Provide sediment control measures for the perimeter fence installation through the 50' undisturbed buffer zone shown on sheet C3O1E.
  - Fence to clear span the jurisdictional area.

- On sheet C3O1E, sufficient sediment control measures must be shown on the south side of the processing area (east of sediment skimmer basin #12). The temporary diversion berm that has been shown will not function as intended because it will not have positive drainage toward sediment skimmer basin #12. Also, areas have been shown graded such that they will be directed into the 50' undisturbed buffer zone, which is not acceptable.
  - Added an additional skimmer basin and modified temporary diversions.
- At numerous locations on the plan the disturbed limits have encroached into the proposed 50' buffer zone. Please amend the plans to show no encroachments into the 50' buffer zone. Due to weight of plotted lines it appears that it crosses the into the 50' buffer. After closer review all contours tie out just outside of 50' buffer.
  - Additional notes on C301 have been added to instruct contractors to stay out of 50' stream buffer
- No sediment control measures have been provided for the "emergency access road". It appears that this area will need to be disturbed to have proper drainage for vehicle access.
  - Access road will not be graded or altered other than the addition of 8" ABC stone.
- An acceptable sediment control measure is needed below the north side of the proposed 8' tall berm shown on sheet C3O1E. The proposed check dam is not an acceptable sediment control measure.
  - Existing Contours are sloping towards the stream buffer. The drainage area is minimal; therefore, the stone outlets and sediment fence will suffice in this particular location per our phone conversation on 7/15/19.
- Acceptable sediment control measures must be shown below the construction of proposed tailings pond #2. Silt fence shown below this measure is not an acceptable sediment control measure. In addition, basin construction is encroaching into the 50' undisturbed buffer zone.
  - Tailing pond #2 has been relocated and re-graded
- Additional silt fence outlets must be shown below the 8' proposed berm on sheet C3O1C.
  - Added additional stone outlets.
- A number of the temporary berms shown on the plan do not appear to be "temporary" structures. Any "temporary" diversion berms used for permanent storm water conveyance must be accompanied by design calculations and construction details.
  - All diversions shown on the plan are temporary. Once construction activities are complete the berms are to be removed and the site stabilized to ensure sheet flow across site into stream buffers
- Provide elevations for the temporary diversion berm upstream of FES#9 to show that the diversion will actually direct runoff into skimmer basin #8 and not through the pipe inlet at

FES#9. Should this not be the case, calculations for skimmer basin #22 will need to be revised for the additional drainage area.

- Skimmer #22 was upsized to accommodate the additional drainage area
- No sediment control measures have been shown west of the temporary diversion directing runoff into skimmer basin #10. Only a perimeter security fence has been shown below the basin.
  - Added additional silt fence. We appreciate your assistance to date with this project. If any additional items, beyond these comments are noted, hopefully, we can obtain an approval with modifications.