

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

May 29, 2009

Mr. Randy Beeman Town Manager Town of Hope Mills 5770 Rockfish Road Hope Mills, North Carolina 28348

RE:

Approval of Temporary Impoundment

Hope Mills Dam CUMBE-029 Cumberland County

Dear Mr. Beeman:

This letter is issued as a result of our meeting on May 26, 2009. It is further noted that the previous temporary approval to impound expired on March 31, 2009.

This letter constitutes Temporary Approval to Impound until July 15, 2009 for the purpose of developing and submitting to this office for approval, a monitoring plan including a scope of work for periodic inspection of the dam to assess performance pursuant to recent repair/replacement construction. The plan should include at a minimum the following work items:

- 1. Visual inspection of the Labyrinth spillway structure to determine long term effectiveness of crack repairs implemented by the Contractor.
- 2. Reading and interpreting data from the pressure gauges in the floor of the Labyrinth spillway structure.
- 3. Performance of a survey (three-point coordinate location) including 10 to 15 key location points on the As-Built survey to determine if structure movement is occurring.
- 4. Continued monitoring of the effect of vibration in the spillway on the dam itself and adjacent structures.

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- 5. Visual inspection of the earthen embankment portion of the dam. Read piezometer data and interpret this data over a period of time.
- 6. Visual inspection of the overall dam structure and the various components of the dam to determine general level of performance.
- 7. Issuance of a written, illustrated report of findings after each inspection, sealed by the Engineer of Record, and forwarded to the Land Quality Section (Section).

The monitoring program shall adhere to the following schedule for report issuance:

- 1. Perform periodic inspections and issue reports by the end of:
 - a. September, 2009
 - b. December, 2009
 - c. March, 2010
 - d. June, 2010
 - e. October, 2010
 - f. February, 2011
 - g. June, 2011
 - h. December 2011
 - i. June, 2012
 - j. December, 2012
 - k. June, 2013
- 2. Perform an inspection and issue a report after each major storm. The plan shall provide a proposed definition of the term "major storm".
- 3. Perform an inspection and issue a report at the request of the Section pursuant to Section staff noticing unusual conditions of concern.

Upon approval of the monitoring plan by the Section, a Conditional Certificate of Final Approval will be issued by the Division of Land Resources (Division) allowing operation of this dam until June 30, 2013. A condition of this approval will require the performance of the approved monitoring plan. Should the monitoring program indicate that the dam has performed in a satisfactory manner, an unconditional Certificate of Final Approval will be issued by the Division for operation of the dam.

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Please contact me by telephone at (919) 733 4574 should you or the Engineer of Record have any questions concerning this matter.

Sincerely,

Steven M. McEvoy, PE State Dam Safety Engineer

cc: Mr. Steve Cook, Land Quality Regional Engineer

Mr. Everette Knight, PE, McKim & Creed via Hazen and Sawyer

Surface Water Protection Supervisor

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