McGILL • SCHNABEL [redacted]
A DIVISION OF SCHNABEL ENGINEERING ASSOCIATES, INC.

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PHONE 770-534-2886 • FAX 770-287-7480

August 4, 1998

[redacted]

Re: Raskarity Road Dam
SEA Project 987068

Dear [redacted]

Thank you for calling us to give you our opinion of the condition of the referenced dam. The following are our observations and recommendations.

LOCATION: The dam was constructed on a tributary of John's Creek in Forsyth County, Georgia some time between 1956 and 1968 for agricultural use. In the years since 1968 the area around the lake has been changed to residential use. The dam was used as a roadway to gain access to the east side of the lake. The roadway is named Raskarity Road.

DAM CLASSIFICATION: The dam is currently classified as a Category II dam and is not regulated by the Department of Natural Resources Safe Dam Section. Failure of this dam is not likely to cause the loss of life in a habitable facility downstream of the dam.

DAM PARAMETERS: The dam is approximately 250 feet long and is approximately 25 feet high. The lake has an approximate area of 6 acres at the normal pool elevation. The principal spillway consist of a corrugated metal pipe and riser. The outlet pipe is an 8 inch pipe. There is an emergency spillway on the east side of the dam. It is approximately 15 feet wide and about 2 feet above the current normal pool elevation. The embankment was constructed with an upstream slope of approximately 3:1 and a downstream slope of 2:1 or steeper. The dam has a top width of approximately 10 feet.

CONCERNS:

1. The downstream slope of the dam is of primary concern. There are several areas where slope failure has occurred. There are also trees growing on the back of the dam. The embankment appears to have been well compacted during construction. This is evident due to the minor seepage at the bottom of the downstream embankment. However the stability of the dam is in jeopardy due to the slope failures.

2. There is also a large population of muskrats around the lake. They will burrow into the upstream slope of the dam and can eventually create a seepage path through the dam. The vegetative growth (primarily alders) have provided a habitat for these animals in critical areas on the upstream face of the dam.

3. The riser in the lake has been modified. A PVC section was added to the riser. This could have been done to repair the corrugated metal riser or to increase the normal pool elevation of the lake.

4. The area downstream of the emergency spillway has been eroding. The eroded area or limit of headcut is approximately 40 to 50 feet downstream of the road. The entrance to the emergency spillway has considerable vegetation which will limit the hydraulic capacity of this emergency spillway.

RECOMMENDATIONS:

1. Stabilize the downstream slope of the embankment. This will require clearing and grubbing of the trees and vegetation from the existing slope and proposed construction area. New earthfill should be placed to stabilize the embankment. The slope of the new embankment should not be steeper than 2.5 horizontal to 1 vertical. The construction of this embankment may require extending the principal spillway pipe.

2. To minimize the muskrat population, the larger vegetation on the upstream face of the dam should be removed and the embankment maintained.

3. Maintain the vegetation at the entrance to the emergency spillway.

4. Provide a trashrack for the principal spillway riser and maintain it by removing any build-up trash around the riser.

5. Monitor the erosion downstream of the emergency spillway. This area may need to be stabilized if the head cut continues.

The repair of the dam may require a sedimentation and erosion control permit and a grading plan with specifications for contractors to price the work. The earthfill should be monitored by a geotechnical engineer or his representative. The outlet pipe of the principal spillway may need to be extended to allow for this new embankment. You may need a topographic survey of the dam and downstream area for plan preparation.

Please let me know if you have any questions concerning this letter.

Sincerely,

McGill·Schnabel

Gary R. Bailey, P.E.
Senior Vice President

GRB:fsl

BY GRB DATE 8-5-98
CHKD. BY ..... DATE .....
SUBJECT Raskarity Rd Dam

SHEET NO. 1 OF 1
JOB NO. .....