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Subject: Stack Located Within 5L of Dam

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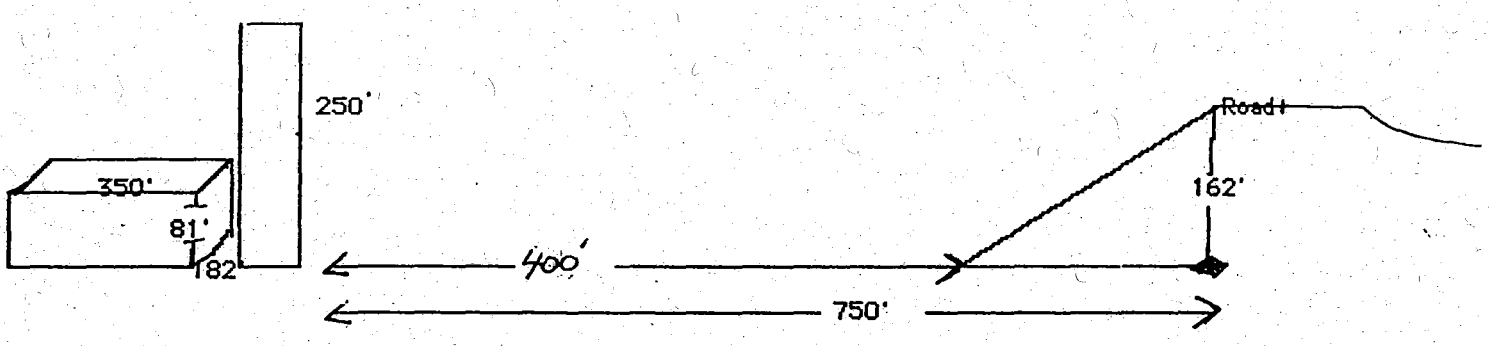
A power plant in South Carolina is located at the base of a dam that is about one mile long. Two stacks of 250 feet are located adjacent to the power house building whose dimensions are 350 by 182 feet by 81 feet high. The stack closest to the dam is 400 feet from the dam base and 750 feet from the top of the dam. A public road runs across the top of the dam. See enclosed diagram for a not to scale drawing of plant location. A terrain map of area is also enclosed.

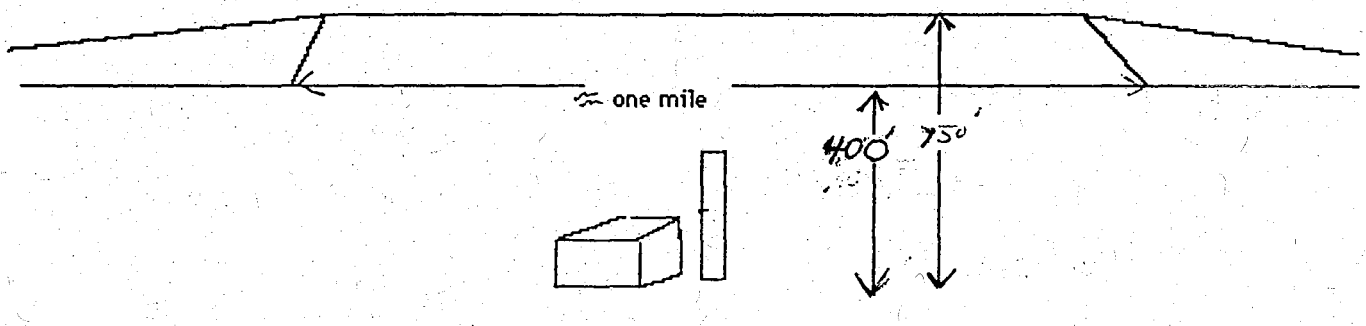
Should the dam structure be treated strictly as terrain for modeling purposes or should the dam be considered a building with a given height and width requiring the calculation of an equilivent diameter for input into the ISC model.

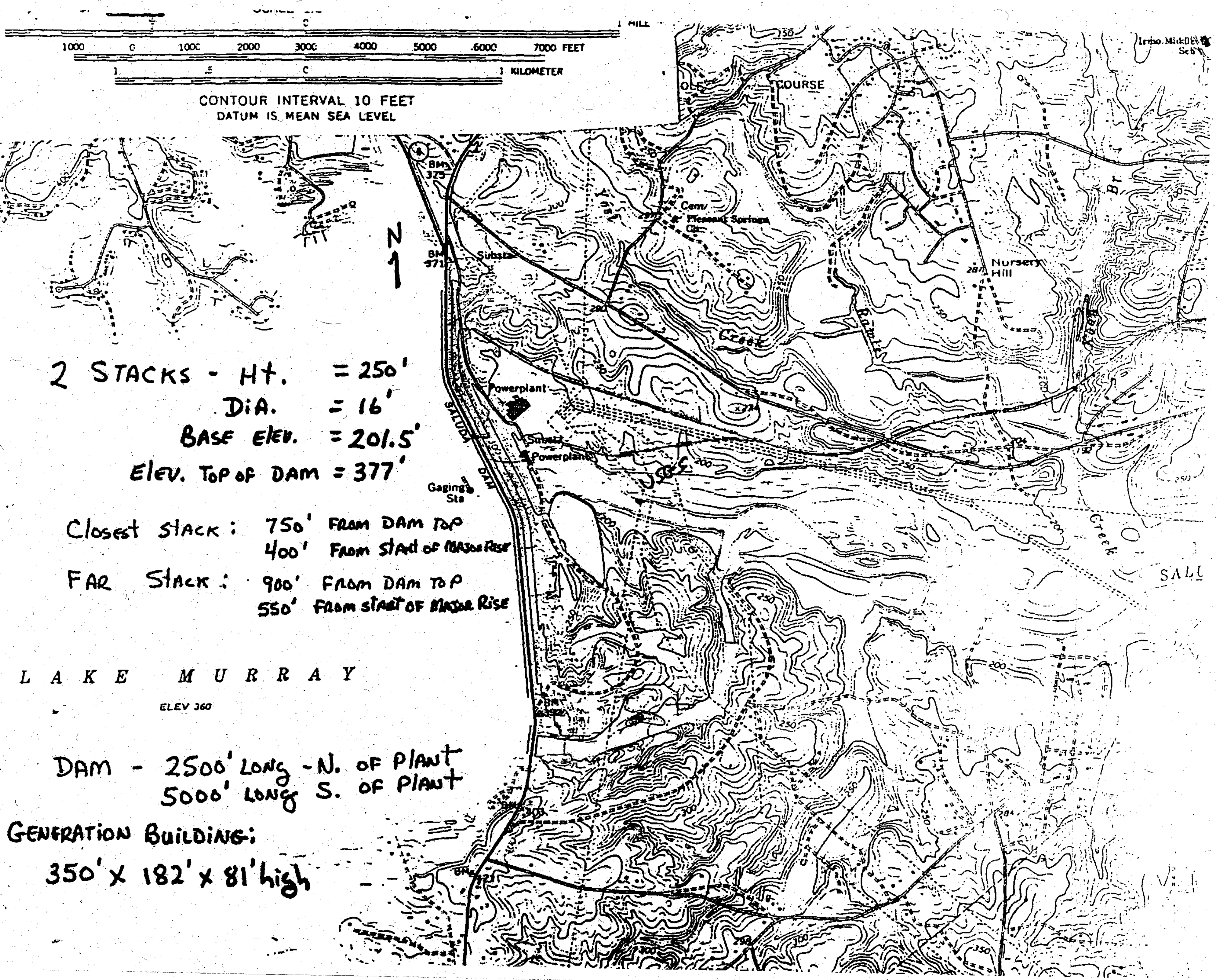
I do not have a strong recommendation on which way to proceed, but would probably be inclined to treat the dam as any other terrain feature due the horizontal dimension involved. On the other hand, the dam in the down-wind direction does appear to satisfy the Schulman-Schire downwash criteria.

Since there are several sources of this nature located in South Carolina, I believe the Clearinghouse should make a determination on how to proceed with the modeling.

Enc (2)


250'
350'
81'
182'
400'
750'
Road
162'


one mile
400'
750'


1000 0 1000 2000 3000 4000 5000 6000 7000 FEET
1 .5 0 1 KILOMETER
1 MILE
CONTOUR INTERVAL 10 FEET
DATUM IS MEAN SEA LEVEL
N
2 STACKS - Ht. = 250'
DiA. = 16'
BASE ELEV. = 201.5'
ELEV. TOP OF DAM = 377'
Closest STACK: 750' FROM DAM TOP
400' FROM START OF MAJOR RISE
FAR STACK: 900' FROM DAM TOP
550' FROM START OF MAJOR RISE
LAKE MURRAY
ELEV 360
DAM - 2500' LONG - N. OF PLANT
5000' LONG S. OF PLANT
GENERATION BUILDING:
350' X 182' X 81' high
SALUDA DAM
Powerplant
Substa
Gaging Sta
Pleasant Springs Ch
Cem
Creek
Nursery Hill
COURSE
Irmo Middle Sch
Br
SALU