

NORTH ANNA ENVIRONMENTAL COALITION

DISTRIBUTED TO ACRS MEMBERS

P.O. BOX 3951
CHARLOTTESVILLE, VIRGINIA 22903
RECEIVED
June 21, 1977 (804)293-6039

JUN 23 PM 3 13

Mr. Ragnwald Muller
Senior Staff Assistant
Advisory Committee on Reactor Safeguards
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

RECEIVED
JUN 24
REACTOR SAFEGUARDS

Dear Mr. Muller:

As we discussed on the telephone, enclosed is a copy of Dr. Segovia's complete letter to the Coalition of May 22, 1977.

I hope you have since been able to find the transcript of the March-April, 1974 Show Cause hearing on North Anna's faulting at which Dr. Segovia testified. You will note that he mentions a second visit to the site with Professor John E. Foss in the Soils Division at the University of Maryland at which "the critical trenches were covered" and thus no adequate study could be made. (At that time, the major interest in saprolite related to age-dating of the fault more than to compressibility and settling, although the latter was noted by Dr. Segovia.)

Dr. Robert Mueller's Show Cause testimony dealt in part with the effect of a hot water impoundment upon the circulation of groundwater and its effect upon mineral stabilities at the site. It appears that even a few degrees change in temperature can make itself felt in foundation conditions. (An excerpt from Dr. Mueller's testimony is enclosed.)

The late Dr. John Funkhouser, geologist who identified faulting at North Anna in Unit #1 in 1970, expressed concern about groundwater in his prepared testimony for the 1974 Show Cause hearing, particularly about leakage beneath the reactor. A copy of his testimony is enclosed.

The combination of groundwater and unstable saprolite have caused problems at mining activities in the vicinity of North Anna. A local geologist described to the Coalition what happened there during an effort to sink a shaft: "The saprolite became

8508220501 850722
PDR FOIA
BELL85-363 PDR

C/6
F6

mobile and flowed into the shaft." He stressed the fact that disturbed saprolite becomes "messy and mobile" and its bearing strength changes.

ACRS consultants might find it useful to talk with the geologists who have worked recently in mining activities near the North Anna site and to inquire into the reasons for the recent near cessation of all activity.

USGS geologists might also have a substantive contribution to make in regard to the groundwater and unstable saprolite problems at North Anna.

They might wish to study the reasons rock anchors are now required for North Anna Units 3 and 4, per NRC LER OUTPUT of May 20, 1976:

"DESIGN DEFICIENCY. Lack of adequate safety margins for earthquake forces and uplift forces due to water under structure. Rock anchors added to integrate foundation with rock."

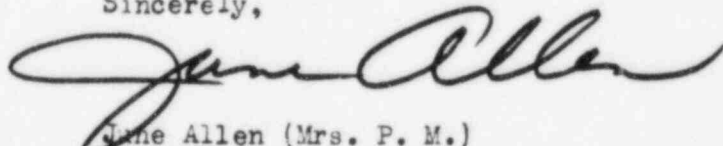
Might there be a relationship between this problem in Units 3 and 4 and the groundwater ~~excess~~ in Unit 1? If there is problem water beneath the structures for Units 3 and 4, is there not a comparable problem with Units 1 and 2? We have been trying since last November to clarify that relationship.

I do hope the trip to North Anna on June 23 will be a good and profitable one. I wish that Dr. Segovia were in the country and might accompany you.

If I do not hear from you to the contrary, I shall assume that you will copy the enclosed materials for the North Anna Subcommittee and for Drs. Richart and Philbrick.

Thank you for your professional assistance.

Sincerely,



June Allen (Mrs. P. M.)
President, NAEC

Enc.: Segovia letter 5/22/77
Mueller testimony excerpts 3/74
Funkhouser testimony 3/74
VEPCO groundwater letter 3/15/76