



Commonwealth Edison
One First National Plaza, Chicago, Illinois
Address Reply to: Post Office Box 767
Chicago, Illinois 60690

June 24, 1982

Paul O'Connor
Project Manager
Operating Reactors Branch No. 5
Division of Licensing
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Subject: Dresden 2
SEP Topic: II-4D, Stability of Slopes
and II-4.F, Settlement of Foundations
and Buried Equipment

NRC Docket 50-237

Reference: (a) NRC telecopy dated 6/10/82 from
G. Cwalina (SEP Integrated assessment Project Mgr.)
to S. Powers (CECo).

Mr. O'Connor:

Per site visit on 6/16/82 with Paul O'Connor, Jacob Phillips (NRC), Sam Powers (CECo) and Ray Nelson (Sargent & Lundy Consulting Engineers) information was obtained and submitted based on Reference (a). The following information was transmitted to the NRC:

- (a) Preliminary Foundation Investigation, Dresden Generating Station (Unit 1), Pittsburg Testing Laboratory, San Francisco, Order No. SF-2778, August 1955.
- (b) Additional Core Drilling at Dresden Nuclear Power Station Site, Pittsburg Testing Laboratory, December 1955.
- (c) Core Drilling and probings at Dresden Nuclear Power Station Site, Pittsburg Testing Laboratory, November 1956.
- (d) M-1D (no. Rev., dated 3/29/76) Plant Development Plan, Dresden Station Units 1, 2 & 3.
- (e) Article 6 and 7 - Sargent & Lundy Standard Form 1714 for Class I-RC FI fill.
- (f) Sargent & Lundy Specification K-2181, Intake and Discharge Canals and Miscellaneous Substructures work.
- (g) Item 7 (Reference a):

Provide the basis for your statement in response to NRC question 2 (reference 5) that "If it is postulated that the slopes may liquify . . . the volume of material that could displace into the canals would not be great enough to cause blockage".

A035

Response:

The slopes in the overburden materials are cut 3:1. The maximum height of the slope is 6 feet along the intake and discharge canals. These slopes lie above the normal water level elevation 505 feet.

If it is assumed that the soil overlying the rock along one side of the canal should liquify and that the slope flattens to 6:1 (one half its original steepness), approximately 50 cubic feet of soil per foot of canal length could displace into the canal. Most of this material would fall at the base of the canal wall and only cause a temporary reduction in cross section. If this material were distributed across the canal width of 55 feet, it would only raise the canal bottom approximately one foot or a maximum of 2 feet with simultaneous occurrence on each side of the canal.

Liquefaction can only potentially occur during the SSE event and if the soil materials are saturated. This will require site water levels well above the normal water level of 505 feet in the river and canals. At these water elevations, the potential one to two feet reduction in the depth of the canals would have little effect on the amount of water available for use in the station operation.

Per Jacob Phillips (NRC) the following additional structural drawings showing reactor building foundations, condensate storage tanks and diesel fuel oil tanks are being submitted:

- B-19: (Rev. M, dated 6/8/66) Building Excavation Plan & Sections, Dreaden Unit 2.
- B-187: (Rev. K, dated 9/26/67) Reactor Building Foundation Plan - El. 476'-6" South Area.
- B-188: (Rev. E, dated 9/2/66) Reactor Building Foundation Plan -El. 476'-6" North Area.
- B-192: (Rev. C, dated 9/2/66) Reactor Building Foundation Section A-A.
- B-480: (Rev. B, dated 9/1/70) Miscellaneous Outdoor Foundations Sheet 1.
- B-481: (Rev. D, dated 1/25/74) Miscellaneous Outdoor Foundations Sheet 2.
- B-500: (Rev. H, dated 4/4/67) Building Excavation Plan & Sections, Dresden Unit 3.

Please address any questions you may have concerning this matter to this office.

One (1) signed original and forty (40) copies of this transmittal have been provided for your use.

Very truly yours,



T.J. Rausch
Nuclear Licensing
Administrator Boiling
Water Reactors.

SPPJ/rmr
2023D

cc: RIII Resident Inspector, Dresden
Gregg Cwalina, SEP Integrated Assessment Project Mgr. (w/attachment)