

SEP 8 1970

H. R. Denton, Chief, Technical Support Branch
Division of Compliance

FLORIDA POWER AND LIGHT COMPANY, TURKEY POINT 3
DOCKET NO. 50-250

On August 24, 25, 1970 the author and J. M. Varela CO:II visited the U. S. Army Construction Research Laboratory (ACRL) in Champaign, Illinois. Our contacts were with Mr. E. Lotz, Chief of the Materials Laboratory, Dr. D. Berkerimer a specialist in concrete materials and Dr. J. Lott a specialist in fracture mechanics.

We discussed with the Laboratory personnel the facts on the concrete failure of the dome; gave them copies of the analyses on the water, cement, coarse and fine aggregates and the concrete cylinder breaks; and several pieces of the spalled concrete for testing purposes. A showing was held of the slides and motion pictures Mr. Varela took of the dome. It was made clear to ACRL that we wanted to investigate the material properties of the concrete; and it was not our intention that the Laboratory investigate the structural adequacy of the design. With the objective of the investigation defined, the following testing program was formulated:

1. Split tensile strength test.
2. Compression strength test.
3. Modulus of elasticity in compression.
4. Modulus of elasticity in tension.
5. Wet and dry cycle expansion characteristics.
6. Petrographic analysis of the aggregate.
7. Chemical analysis of the concrete for cement content determination.
8. Void volume determination.

For the above program additional samples of cement, coarse and fine aggregate, and concrete spalls from the dome were subsequently obtained by Region II and sent to ACRL.

18/CR/Staff 9/8/70
8305190335 710319
PDR ADDCK 05000250
A PDR

50-250-
Incident

H. R. Denton

- 2 -

SEP 8 1970

It was recommended by ACRL that if cores are taken on the dome by the licensee the coring should extend down to the eight inch structural slab.

Leon L. Beratan
Senior Structural Engineer
Technical Support Branch, CO

cc: A. Giambusso
L. Kornblith, Jr.
R. H. Engelken
J. P. O'Reilly
W. C. Siedle
J. M. Varela

OFFICE ▶	CO:TSB <i>L. L. B</i>					
SURNAME ▶	LLBeratan:dmb					
DATE ▶	9/3/70					