

Soil/Structure Interaction Problems

1. Soil Settlement

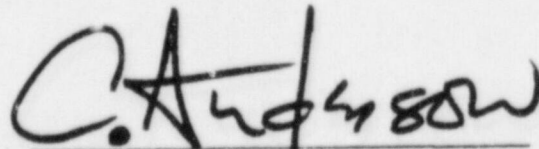
Foundation settlement consists primarily of two parts, primary and secondary settlement. Primary settlement is usually used for design in this country and secondary is ignored. Just the opposite is the practice in Europe.

These two parts of total settlement are often roughly about the same amount. It appears that in this case especially the Diesel Generator Building (DGB)-secondary settlement has not been considered. I believe settlement for the DGB is not yet completed, but will continue for some years causing further stress and cracking to the building.

2. Structural Integrity

The DGB is excessively cracked from differential settlement. This cracking will continue for some years. The structure consists of roof girders spanning to bearing walls. These bearing walls provide a box structure; however, in the case of the DGB and the Service Water Building, the classical box structure has been modified in the roof, in the floor, and especially in some walls where the box stiffness of these walls has been greatly reduced by large structural holes and cracks. The stiffness of the structure has been largely lost leaving the building without the degree of rigidity that certain representatives of Consumers Power Company have told me is there. I assure you that it is not.

Both buildings lack structural integrity today. The settling, the cracking and the further loss of structural integrity can only continue.



Dr. Charles Anderson, P. E., Esquire
A A Engineering
9213 Bois Avenue
Vienna Virginia

8510080367 850930
PDR FOIA
BRUNNER85-602 PDR

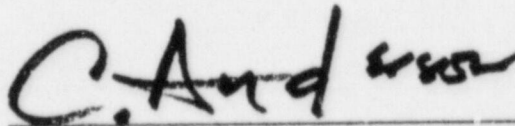
Professional Qualifications: B.C.E., University of Minn., Civil Engineering, M.S.C.E., University of Minn., PhD., University of Minn., ^{Foundation} Soils Engineering, B.S., University of New Mexico, Geology, M.S.C.E., University of Mexico, Soils Engineering, Post Doctoral Studies, University of Calif. at Berkeley, Geotechnical Engineering, J.D., Georgetown Law School, Law, Own Consulting Firm, A A Engineering, 9213 Bois Avenue, Vienna, Virginia, Twenty years experience in civil design and inspection of construction, author of 6 books on construction, and served on State Board of Registration of California.

STATEMENT BY DR. CHARLES ANDERSON, P.E., ESQ.
Before the Advisory Committee on Reactor Safeguards
May 20-21, 1982

Addendum # 1, May 20, 1982

Consumers' 11:00 a.m., May 20, 1982 statement, "Dr. Anderson mistook the second floor as the roof, " is not factually correct nor is it relevant to the contention "...stiffness of the structure has been largely lost..." in the first paragraph of section "Structural Integrity". The "box stiffness" referred to by me on May 20, 1982 as being reduced is in fact due, in part, to the horizontal structural plates at the top of the building.

It is my contention that Consumers' statement is either incompetent or intentionally malicious.

A handwritten signature in black ink, appearing to read "C. Anderson", written over a horizontal line.

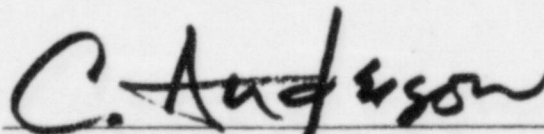
Dr. Charles Anderson, P.E., Esquire
A A Engineering
9213 Bois Avenue
Vienna, Virginia

STATEMENT BY DR. CHARLES ANDERSON, P.E., ESQ.
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Addendum # 2, May 21, 1982

After 3 days of being jerked around and lied to by Consumers Power Co., having been denied requested access to the Midland site, having had Consumers distort my May 20, 1982 statements before the ACRS, realizing fully Consumers general lack of good faith in their desperate situation, it is time to draw the bottom line on the Diesel Generator Building:

- . Consumers erred in the placement of the fill.
- . Dr. Peck erred in the pre-loading of the fill with the DGB already constructed. As a result, the structure has cracked extensively, and yet secondary settlement has not been arrested.
- . The building has lost its essential structural integrity and is now exposed to continued settlement and additional structural cracking.
- . The function of the building apparently cannot be changed and is critical to the site.
- . The building cannot reasonably be made to structurally satisfy its critical function considering the troublesome site history.
- . The building can only be replaced to resolve the problem of public safety.



Dr. Charles Anderson, P.E., Esquire
A A Engineering
9213 Bois Avenue
Vienna, Virginia