

5795 North River Road  
Freeland, MI 48623  
May 20, 1982

D. C. Fischer  
Members ACRS

re: Midland Nuclear Plant

Dear Mr. Chairman:

As an intervenor in the ongoing OM-OL hearing, I have studied the soil settlement and QA issues over the last two years regarding the Midland Nuclear Plant. I was unable to attend the ACRS meeting in Washington April 29, 1982, but I have reviewed Consumer's and the NRC soils input to that meeting.

Based on their presentations, I have a brief statement to make covering some important issues which I believe have been misrepresented or overlooked regarding soil settlement. (The page and exhibit numbers referenced therein are from the OM-OL hearing transcript. I will gladly provide the documents themselves, if so directed by this committee for their review.)

I respectfully request the opportunity to similiary critique statements made by the NRC and Consumer's Power Co. at the ACRS meetings today and tomorrow. I would like to be able to present my position in writing, or otherwise before this committee at the conclusion of these meetings.

Sincerely,

*Barbara Stamiris*

Barbara Stamiris

cc

Encl. none

INTERVENOR RESPONSE TO CONSUMERS POWER COMPANY'S  
4-19-82 SUMMARY OF SOILS RELATED ISSUES FOR ACRS

According to Consumer's summary, soils related problems were initially identified in July, 1978, when excessive settlement of the Diesel Generator Building (DGB) was noted. Yet the evidentiary record of the soils settlement hearing shows that the soils related problems were identified in late 1977, prior to the October 1977 commencement of the DGB.

Consumer's own March 15, 1982, findings (p. 221) admit that, "evidence existed in 1977, which if given different weight, would have revealed the plant wide soils conditions in time to have prevented the problems which now confront us." The soils evidence available prior to DGB construction consisted of: 1) the August 1977 Administration Building grade beam settlement, 2) knowledge of site wide U. S. Testing failures (p. 1312-1314) and 3) F77-32 Audit findings revealing Q soil placement deficiencies as a result of a review of some 2000 soils records. (see attachments). Consumers not only chose to proceed in the face of this information in 1977, but continues to defend these actions and decisions in 1982.

During the spring resumption of construction at the DGB, scribe settlement markers were placed from March to May, 1978. According to the NRC inspector, construction survey crews were unable to close a traverse while placing some of the upper building elevations, and this caused them to look to the settlement monitoring program (p. 2375). The settlement monitoring reading of July, 1978, confirmed the excessive settlement. The building was about 60% complete at this time, but construction continued until late August when ultimate lifetime settlement values of the FSAR were exceeded and the settlement was first written up as a non-conformance (I&E 78-20).

Although Consumer's discussed the Administration Building settlement problem with its soil consultants in the fall of 1978 (p. 4075), they withheld this information from the NRC during their soils investigations (p. 2595) despite the identical soil specifications for the two areas (I&E 78-20).

Consumer's states that "after a thorough review of the options available, the applicant elected to institute a surcharge loading program, which subsequently was started in January 1979." Yet Consumer's own documents reveal that surcharge instrumentation was purchased in October 1978. The instrumentation was installed, construction of the DGB resumed, electrical duct banks were released, and sand surcharge application began, in November 1978. (Stamiris exhibits 8, 7, & 30). These activities and other documented statements confirm that the only alternative option (according to CPC consultants 11-7-78), 'Removal and Replacement,' was never seriously considered in 1978.

In fact Consumer's 1979 reply to NRCs 50.54f question 21 defends their choice of the Preload option over Removal and Replacement as "the least costly feasible alternative for corrective action. Also construction of the structure can continue while the surcharge load is being applied. Thus, this alternative will minimize the impact on the construction schedule." As a part of this same response, Consumer's believed that the preload option would avoid costly dewatering.

Hindsight confirms that the very costs and delays Consumer's sought to avoid in 1977 and in 1978 have multiplied as the issue of the DGB integrity remains unresolved in 1982.

Unfortunately Consumer's cannot learn from these past mistakes, because they do not consider them to be mistakes, as Consumer's present Q. A. management defends and justifies these decisions as valid in 1982.

In 1979 and 1980, having full knowledge of soil settlement problems, the push to proceed with construction continued. Bechtel's own Kepler-Tregoe Analysis of 1979 identified the EWST and Auxiliary Building R.B.A. as having soils deficiencies

(Stamiris exhibit 29). But these deficiencies were judged insignificant, and construction began on the questionable soils.

The loading of the BWST's was undertaken in 1980 as a soils proof test. But when overstress and cracking resulted in 1981, the problem was called a design deficiency by Consumer's. (NRC's J. Kane and Consumer's own consultant R. Kennedy, however, have called the problem soils related.)

Further unconservative decisions took place regarding soil settlement matters in 1978 and 1979 as numerous consultant suggestions were not followed or were changed regarding such things as: 1) failure to break up the mudmat at the DGB prior to preload, 2) failure to grout gaps prior to release of electrical duct banks, 3) failure to cut underlying condensate line until stress resulted, and 4) failure to delay filling of cooling pond till after surcharge was complete, which affected piezometric measurements. (Stamiris 12-10-81 finding p. 50-66).

The measurement of the DGB surcharge effect was further compromised when Consumer's chose to eliminate what it termed "anomolous" Sondex data in 1979 (p. 3455-7, Stamiris exhibit 14). Although Consumer's consultants recommended laboratory tests at the DGB to justify bearing capacity (which was not expected to be at issue), they advised against the use of laboratory tests (borings) as early as November, 1978 to confirm preload results, because of their potential for unpredictable results.

Unconservative soils work decisions and a tendency to push ahead are still evident today in the soils remedial work at the Auxiliary Building as evidenced in I&E Reports 82-05 and 82-06, as well as the negative S.A.L.P. assessment regarding soils work present April 20, 1982, by the NRC.

*Barbara Stamiris*