



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

JUN 13 1979

Docket Nos.: 50-329  
50-330

MEMORANDUM FOR: Steven A. Varga, Chief, Light Water Reactors Branch No. 4,  
Division of Project Management

FROM: Darl Hood, Project Manager, Light Water Reactors Branch  
No. 4, Division of Project Management

SUBJECT: NOTICE OF MEETING WITH CONSUMERS POWER COMPANY, NRC I&E  
AND NRR CONCERNING SOILS SETTLEMENT AT THE MIDLAND PLANT SITE

WEDNESDAY, JULY 18

Date & Time: ~~Tuesday, July 10, 1979~~  
~~10:00 a.m.~~  
9:00

Location: ~~Room P 114, Phillips Building, Bethesda, Maryland~~  
ROOM 6110 - MARYLAND NATL. BANK BUILDING

Purpose: To discuss abnormal settlement of fill and structures at  
Midland Plant site.

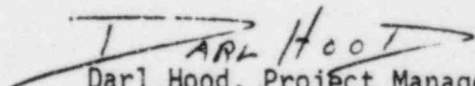
Participants: NRC

J. Knight, et.al. Jim Henderson  
D. Hayes (I&E) F. Schauer  
G. Gallagher (I&E) L. Heller  
W. Haass

Consumers Power Company

G. Keeley, et.al.

Bechtel Associates

  
Darl Hood, Project Manager  
Light Water Reactors Branch No. 4  
Division of Project Management

cc: See next page

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PDR FOIA  
RICE84-96 PDR

REISSUE

NOTE CHANGES

Consumers Power Company

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~~JUN 13 1979~~

7/3/79

MEETING NOTICE DISTRIBUTION

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P. Collins  
T. Speis  
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C. Heltemes

ACRS (16)  
L. Crocker  
H. Berkow  
Project Manager D. Hood  
Attorney, ELD  
IE (3)  
SD (7)  
Licensing Assistant M. Service  
Receptionist  
L. Rubenstein  
L. Soffer

J. Knight  
S. Hanauer  
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G. Lear  
M. Spangler  
V. Benaroya  
R. Jackson  
L. Hulman  
H. Ornstein  
J. LeDoux, IE  
IE Region III  
Principal Staff Participants:  
D. Hayes, IE Region III  
G. Gallagher, IE Region III  
R. Lipinski  
L. Heller  
~~D. Gillen~~  
J. Gilray  
R. Stephens  
L. Reiter  
F. Cherny  
W. Lovelace  
S. Kari  
J. Henderson  
F. Schauer

REISSUE

PLEASE NOTE CHANGES

AGENDA

MEETING WITH NRC ON MIDLAND PLANT FILL STATUS AND RESOLUTION

July 18, 1979

9:00 a.m.

NRC, Bethesda, Maryland

- 1.0 INTRODUCTION (G. Keeley)
  
- 2.0 PRESENT STATUS OF SITE INVESTIGATIONS (T. Cooke)
  - 2.1 Meetings with Consultants and Options Discussed (Historical)
  - 2.2 Investigative Program
    - A. Boring Program
    - B. Test Pits
    - C. Crack Monitoring and Strain Gauges
    - D. Utilities
  - 2.3 Settlement
    - A. Area Noted
    - B. Preload
    - C. Instrumentation
  - 2.4 Recent Revisions
    - A. Deletion of Chemical Grout
    - B. Decision for Site Dewatering
  
- 3.0 REMEDIAL WORK IN PROGRESS OR PLANNED
  - 3.1 Diesel Generator Structures (T. Thiruvengadam)
  - 3.2 Service Water Pump Structures
  - 3.3 Tank Farm
  - 3.4 Diesel Oil Tanks
  - 3.5 Underground Facilities
  - 3.6 Auxiliary Building and FW Valve Pits (C. Gould)
  - 3.7 Liquefaction Potential (S. Afifi)
  - 3.8 Dewatering (R. Loughney)

4.0	ANALYTICAL INVESTIGATION	
4.1	Structural Investigation	(T. Johnson)
4.2	Seismic Analysis	(T. Johnson)
4.3	Structural Adequacy with Respect to PSAR, FSAR, etc.	(T. Johnson)
4.4	Soils Summary	(S. Afifi)
5.0	CONSULTANT'S STATEMENT	(R. Peck)
6.0	SCHEDULE	(T. Cooke and G. Keeley)
6.1	Preload Removal	
6.2	Auxiliary Building	
6.3	Tank Farm	
6.4	Service Water Building	
6.5	Site Dewatering	
6.6	Overall Impact	
7.0	CAUSE INVESTIGATION	(P. Martinez)
7.1	Analysis	
7.2	Possible Causes	
7.3	Most Probable Cause	
8.0	QA/QC ASPECTS	(D. Horn)
8.1	Corrective Actions	
8.2	Q-list Fill Resumption	
9.0	LICENSING ACTIVITIES AND CHANGES TO FSAR	(G. Keeley)

- 50 55 e  
 → 50 54 2  
 → Slope Analysis  
 → IFE Reports



Attendees 7/18/79

<u>Name</u>	<u>Organization</u>
<del>Carl Hood</del>	DPH/NRP/NRC
T. E. JOHNSON	BECHTEL Power Corp.
P. A. MARTINEZ	BECHTEL POWER CORP.
G. S. Keeley	Consumers Power Co.
KARL WIEDNER	BECHTEL POWER CORP
DONALD E. HORN	CONSUMERS POWER Co.
Don Rial	Bechtel Ann Arbor
WALTER R. FERRIS	Bechtel, San Francisco
HOWARD WAHL	BECHTEL-ANN ARBOR
A. B. Arnold	Bechtel, San Francisco
P. B. PECK	Consultant, Bechtel
R. Hochstetler	Consultant, Bechtel
B. Dhan	Bechtel - Ann Arbor
FRANK J. HSIAU	BECHTEL - ANN ARBOR
S. S. AFIFI	Bechtel - Ann Arbor
D. Zuker	APRS
THIRU THIRUVENGADAN	CONSUMERS POWER Co. Jackson MI
G. H. GOULD	CONSULTANT, BECHTEL.
RICHARD HOEFLING	NRE STAFF
D. W. HAYES	NRC / IE: RTII
Daniel M. Gillen	NRC / NRP, Geosciences
G. GALLAGHER	NRC / IE: RTII
J. B. Houderson	IE / HQ
R. E. LIPINSKI	NRC / DSS / SEB
J. Gilray	NRC / QAB.

Peter TAM	ACRS
GARY RICHARDSON	BECHTEL POWER CORP.
A. J. BOOS	" " "
FRANZ SCHAUER	SEB, NRC
Ignace Heller	USNRC - GB
L. S. RUBENSTEIN	NRC/DPM
JOHN R. DAVIE	BECHTEL - BAITHERSBURG
TC COOKE	CONSUMERS POWER Co



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

June 14, 1979

MEMORANDUM FOR: Darl Hood, LPM  
Light Water Reactors Branch No. 4, DPM

FROM: Daniel M. Gillen, Geotechnical Engineer  
Geotechnical Engineering Section  
Geosciences Branch, DSS

THRU: Lyman W. Heller, Leader *LWH*  
Geotechnical Engineering Section  
Geosciences Branch, DSS

SUBJECT: MIDLAND SITE VISIT TO INSPECT TEST PIT PROGRAM

On Thursday, June 7, 1979, J. P. Knight, L. Heller, R. Lipinski, and I visited the Midland 1 & 2 plant site for a general tour of the structures founded on the plant fill, and an inspection of the test pit program in progress.

After a short introductory meeting we accompanied representatives of Bechtel and Consumers Power Company on a tour of the Category I structures to be effected by plant fill remedial work. These included the diesel generator building, service water pumphouse, auxiliary building railroad bay, auxiliary building control room and electrical penetration areas, diesel generator fuel oil storage tanks, and borated water storage tanks.

During the afternoon, while J. P. Knight and R. Lipinski were engaged in discussions with Bechtel and Consumer's structural personnel, L. Heller and I were conducted on an inspection of the test pits in the plant fill and other open excavated areas. Three test pits were observed in various stages of completion (TP #'s 2, 3 and 4). We observed Goldberg, Zoino and Dunicliff personnel sampling and performing density tests in test pit #4 adjacent to the service water pumphouse. We also visited Goldberg, Zoino and Dunicliff's on site soils testing facilities.

A brief departure meeting was held for comments and questions that had arisen during the inspection tour. A list of applicant personnel contacted during our tour is attached.

*Daniel M. Gillen*

Daniel M. Gillen, Geotechnical Engineer  
Geosciences Branch, DSS

Enclosure:  
As stated

cc: See next page

~~79-8020132~~

*390*



Darl Hood

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cc: w/enclosure  
J. Knight  
R. Jackson  
L. Heller  
R. Lipinski  
D. Gillen

List of Contacts

Bechtel: S. Afifi  
P. A. Martinez  
A. Boos  
P. E. Johnson  
B. Dhar  
C. Weidner

Consumers Power Company: C. A. Hunt  
R. M. Wheeler  
T. C. Cooke  
D. E. Horn  
D. Sibbald



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

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JAN 12 1979

DOCKET NOS. 50-329  
50-330

APPLICANT: Consumers Power Company

FACILITY: Midland Plant, Units 1 & 2

SUBJECT: SUMMARY OF DECEMBER 4, 1978 MEETING ON STRUCTURAL  
SETTLEMENTS

On December 4, 1978, the NRC staff met in Midland, Michigan with Consumers Power Company (CPCO), Bechtel Associates, and consultants in geotechnical engineering to discuss excessive settlement of the Diesel Generator (DG) Building and pedestals, and settlement of other seismic Category I structures. These technical discussions followed a site tour on December 3, 1978 during which the NRC staff observed each of these structures. Attendees for the tour and technical discussions are listed in Enclosure 1. Enclosure 2 is the agenda used during the technical discussion.

1. Background

Pursuant to 10 CFR 50.55(e), CPCO notified Region III of the Office of Inspection and Enforcement (I&E) on September 7, 1978, that settlement of the Midland DG Building foundation and generator pedestals was greater than expected and that a soils boring program had been started to determine the cause and extent of the problem. An interim status report was provided I&E by CPCO's letter of September 29, 1978. I&E conducted inspections on this matter on October 24-27, 1978 and issued inspection report number 50-329/78-12; 50-330/78-12.

2. History

The Bechtel representative identified the Category I structures and the type of material supporting the structure:

- a. Containment - Glacial Till
- b. Borated Water Storage Tank - Plant Fill
- c. Diesel Generator Building and Pedestal - Plant Fill
- d. Auxiliary Building - Part Glacial Till & Part Plant Fill
- e. Service Water Intake - Glacial Till (Completed portion only)  
- Plant Fill (Small portion yet to be constructed)

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The settlement monitoring program began in June 1978; to date the measured settlements are as follows:

Containment - 1/4" to 5/8" over last 1-1/2 years

Auxiliary Building - Approximately 1/8" (central portion)

Service Water Pump House - 0 to 1/8"

Diesel Generator Building - 3 to 4" since footing was poured October 1977 and walls in Spring 1978.

The four electrical duct banks rising into the DG Building, and which extend downward into the glacial till, were cut loose to remove the settlement restriction on the north side of the DG Building. When the duct banks were cut loose, settlement on the order of 2" occurred on the north side of the DG Building at a rapid rate. The east wall exhibited rapid settlement (1/8" in one week), but the west wall showed very little subsequent settlement. This indicates that the east wall was being held up by the duct pedestal.

### 3. Soils Exploration

Bechtel discussed the soil exploration program, including the boring program and laboratory testing of the foundation materials. The conclusion that was made by Bechtel is that the material varies across the site in strength properties, i.e., unconfined compressive strength from 200 PSF to 4000 PSF and shear strength from 100 PSF to 2000 PSF. The soils classification ranged from C1 to M1.

Bechtel also discussed possible causes based on input from a consultant, Dr. R. Peck. Some of these causes were:

- (1) Variable quality of material used in the plant fill, however, the quality control records do not indicate the variation.
- (2) Fill may have been placed on the dry side of optimum moisture, and then when the water table rose inundating the fill, the material may have become "soft."
- (3) Initial fill may have been placed satisfactorily but after installing pipe trenches and duct banks, the fill may have been disturbed.

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4. Consultants Perspective

Dr. R. B. Peck stated the following:

- a. The compacted fill is comprised mainly of glacial till and was excavated from the cooling pond area.
- b. Evidence exists from the Dutch cone curve that the looser and softer areas are limited to local zones or lenses.
- c. Water content is higher than at the time the fill was placed. Settlement of the till has been occurring since original placement of fill, accelerated by increased moisture content resulting from filling of the discharge cooling pond. Soil settlement is occurring under its own weight and the added weight of the building is believed to be insignificant.
- d. The DG Building would probably not have settled as much if the material had not been so wet (moisture content is high).
- e. Bearing capacity is not a problem for the footings.
- f. Short of removing all the fill above the hard glacial till, a "preload" program would be the best approach. The preload purpose would be to consolidate the fill materials.
- g. The settlement with the preload would tend to be rapid (a few weeks to a few months).
- h. The preload is a necessary first step even though other measures might be necessary.
- i. The main unknown is what might happen to the rate of settlement as the water table rises and saturates the fill.
- j. Preloading would occur in early 1979 and the sand used as the surcharge would be removed in mid-1979.

Mr. C. J. Dunnicliff of Goldberg, Zoino, Dunnicliff & Associates described the instrumentation program to monitor the settlement of the foundation material and structures during the preload. The purpose of the instrumentation is to determine if the surcharge is doing its job of consolidation and if it is causing any harm to the structures or utility lines under and around the building.



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- a. Instrumentation for the structure will include optical survey measurements as well as monitoring of cracks using electrical devices. Four locations for the electrical devices have been chosen; two on the exterior of the east wall of the DG Building and two on the west wall of bay number four in the DG Building. A mapping of cracks will be developed.
- b. Foundation monitoring will include devices to measure settlement and pore water pressure. A total of 60 anchors will be installed (20 groups of 3 at different elevations). A total of 40 piezometers are to be installed to measure the pore water pressure.

The consultants indicated that 6" settlement would not be a surprise and that up to as much as 18" could occur. The preload will be made up of 15 to 20 feet of sand piled in and around the DG Building. No more than a 5-foot differential in the sand level between bays would be permitted.

The NRC questioned the effect of settlement and preloading on the condensate lines located under the DG Building. Fixed points for the piping, such as the Turbine Building wall, are also of interest for the potential of cantilever effects. Bechtel explained that the 20-inch condensate lines are encased in 24-inch lines surrounded by concrete and resting in well compacted sand. Instrumentation will be included to monitor the condensate lines. The possibility of cutting the lines loose at the DG Building and the Turbine Building is also being studied. The condensate lines have no safety-related function for the Midland design.

The NRC also expressed concern for the effect of settlement on the fuel oil lines under the building. CPCO stated that re-routing of lines can be readily accommodated if necessary. This matter is also under review.

The NRC Resident Inspector asked for a list of the equipment, with a discussion of the compacting capability and limitations of each, used for compacting the fill for the DG Building from elevation 618 to 628 feet. Bechtel will provide this information.

#### 5. Program Status

Bechtel summarized the activities completed, in progress, and planned for the future:

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a. Activities Completed

- (1) Boring program
- (2) Isolation of the electrical duct banks on the north side of the DG Building

b. Activities in Progress (or soon to be initiated)

- (1) Foundation settlement monitoring program
- (2) Preload instrumentation program
- (3) Actual preload of the structure and foundation
- (4) Filling the cooling pond to maximum elevation (Elevation 627)
- (5) Complete construction of the rest of the DG Building structure

c. Activities Planned

- (1) After removal of the surcharge, assure contact between footings and soil foundation material
- (2) Verify utilities and structure integrity

6. Project Schedule

Bechtel presented the following project schedule information:

Construction is 58% completed as of November 1978  
Engineering is 80% complete  
Structural concrete is 97% complete  
Fuel load target date is November 1980  
Earliest requirement for one diesel generator is January 1980  
Current completion date for one diesel generator is January 1980  
Latest date for one diesel generator is June 1980

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Bechtel emphasized that the installed instrumentation will show when the preload surcharge may be removed and therefore the present schedule is somewhat tentative. Most settlement is predicted to occur rapidly as the area is being preloaded and frequent readings will be taken during this period and used as a basis for further projections. The rate of settlement will decrease thereafter and the total settlement is expected to be reached within a few months.

CPCO stated that if necessary, temporary diesels could be used during preoperational testing prior to fuel loading and that this matter is presently under study.

7. Response to Open Items in NRC Inspection Report

Bechtel addressed the open items included in NRC inspection report Nos. 50-329/78-12 and 50-330/78-12. CPCO stated that a written response would be sent to I&E Region III to resolve the conflict between the FSAR and site implementing procedures:

- a. Conflict between FSAR Table 2.5-14 and Table 2.5-10 regarding the description of fill material and what was actually used in the random fill: Bechtel stated that this conflict was an oversight and that an FSAR amendment would be issued. The NRC staff stated that any such amendment should address both the previous and the adjusted entries such that the basis for the previous staff review is not obscured in the documentation.
- b. Conflict between FSAR Table 2.5-21 and Bechtel Specification C-210 regarding number of passes for compaction: Bechtel stated that FSAR Table 2.5-21 is for the embankments for the cooling pond dikes.
- c. FSAR Section 3.8.5.5 regarding expected settlement: Bechtel stated that 1/2-inch indicated in the FSAR was a mistake and that the FSAR would be amended to correct this mistake.
- d. Conflict between FSAR Figure 2.5-47 and project drawing regarding foundation elevation: Bechtel stated the elevations in the FSAR was also a mistake and would be corrected.
- e. Conflict in Bechtel Specification C-210 regarding compactive effort: Bechtel stated that Field Change Request C-302 dated 10/31/75 clarified this conflict and permitted the "Bechtel Modified Protector" using 20,000 ft-lbs compactive effort rather than the ASTM standard of 56,000 ft-lbs.



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- f. Conflict between Dames & Moore recommendation regarding lift thickness of 6 to 8 inches and the Bechtel specification permitting up to 12 inches: Bechtel stated that the greater depth permitted by their specification should not matter because of performance qualification tests. However, the NRC was then informed that the test qualifications performed were for Zone 1 clay only, and that no test qualifications on the random fill material using 12 inches was performed to qualify such lift thicknesses. Dr. Peck stated that the thicker the layer, the more differences in compaction through the thickness of the layer would occur.
- g. Tolerance of  $\pm 2\%$  in moisture content permitted in Bechtel Specification C-210: Bechtel stated that this tolerance is in line with industry practice.

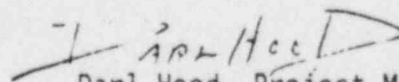
Dr. Peck was asked his view on this  $\pm 2\%$  tolerance. He stated that the important question is " $\pm 2\%$  of what material." Since the material used in the fill was variable, the  $\pm 2\%$  tolerance could cause a problem if the material is not consistent.

- h. Cracks in the building structure: Bechtel stated that all cracks greater than the ACI 318-71 limit would be identified and repaired after the preload program.
- i. FSAR question 362.2: Bechtel stated that the answer had been sent to NRC via FSAR revision 15 in November 1978.

CPCO stated that the reply to the inspection report is in process, and that the reply will include copies of all data, slides, and drawings presented during this meeting.

In concluding remarks, CPCO stated its intent to proceed with the preloading program as described during the meeting.

In its closing comments, the NRC staff stated that the proposed solution is at the risk of the applicant and that NRC intends to review and evaluate this matter in accordance with the original compaction requirements as set forth in the commitments in the PSAR. The staff also stated that while attention to remedial action is important, determination of the exact cause is also quite important for verifying the adequacy of the remedial action, assessing the extent of the matter relative to other structures, and in precluding repetition of such matters in the future.



Darl Hood, Project Manager  
Light Water Reactors Branch 4  
Division of Project Management

Enclosures:  
As stated

JAN 12 1979

Consumers Power Company

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ENCLOSURE 1

JAN 12 1979

ATTENDEES DECEMBER 4, 1978 MEETING

P. A. Martinez, Bechtel  
Karl Wiedner, Bechtel  
\* S. S. Afifi, Bechtel  
R. B. Peck, Bechtel Consultant  
\* W. R. Ferris, Bechtel  
M. O. Rothwell, Bechtel  
\* D. B. Miller, CPCO - Project  
\* J. P. Betts, Bechtel  
W. L. Barclay, Bechtel  
\* A. J. Boos, Bechtel  
G. L. Richardson, Bechtel  
\* D. E. Horn, CPCO - QA  
W. R. Bird, CPCO-QA  
\* R. M. Wheeler, CPCO - PMO  
\* C. A. Hunt, CPCO - Engineering Services  
D. E. Sibbald, CPCO Project  
John Dunicliff, Bechtel Consultant  
\* Austin Marshall, Bechtel - Geotech  
\* Y. K. Lin, Bechtel - Geotech  
\* B. C. McConnel, Bechtel - Geotech  
\* B. Dhar, Bechtel  
\* N. Swanberg, Bechtel  
\* Darl Hood, NRC LPM  
\* Gene Gallagher, NRC Region III (I&E)  
\* Daniel Gillen, NRC/NRC Geosciences  
\* Lyman Hiller, NRC/NRR Geosciences  
\* Ronald Cook, NRC Resident Inspector

\*Present during both the 12/3/78 site tour and the 12/4/78 meeting.

Enclosure 2

SUBJECT: CPCo Midland Plant Units 1 & 2  
Diesel Generator Building

JAN 12 1979

Meeting with NRC at Midland

DATE: December 4, 1978

AGENDA

- I. Introduction by CPCo
- II. History by Bechtel (N. Swanberg)
  - a. Plant description
  - b. Settlement monitoring program
  - c. Brief history of site fill placement
  - d. Settlement of Category 1 structure
  - e. Settlement of diesel generator building and pedestals
  - f. Review settlement data and drawings (SK-C-620/623)
  - g. Consultants
- III. Soil Exploration by Bechtel (S. Afifi)
  - a. Soil borings
  - b. Dutch cone penetrations
  - c. Laboratory tests
  - d. Possible causes
- IV. Consultant's Recommendation by Dr. R.B. Peck and C.J. Dunnicliff
  - a. Preload
  - b. Instrumentation
- V. Status report by Bechtel (B.C. McConnell)
  - a. Activities completed
  - b. Activities in progress
  - c. Activities planned for future
    - 1) Corrective action
    - 2) FSAR conformance
- VI. Schedule by Bechtel (P. Martinez)
  - a. Overall project
  - b. Impact on project schedule
  - c. Schedule for remedial measures

VII.

Responses to open items in NRC Inspector's report dated 11/17/78 by Bechtol (B. Dhar)

JAN 12 1979

- a. Responses to Gallagher's concerns:
- 1) Conflict between FSAR Table 2.5-14 and Table 2.5-10 regarding fill material description
  - 2) Conflict between FSAR Table 2.5-21 and Specification C-210 regarding required number of passes for compaction
  - 3) FSAR Section 3.8.5.5 - expected settlement
  - 4) Conflict between FSAR Figure 2.5-47 and project drawing regarding foundation elevation
  - 5) Conflict in Specification C-210 regarding compactive effort in test method
  - 6) Conflict between consultant's recommendation and Specification C-210 regarding lift thickness
  - 7)  $\pm 2\%$  tolerance in moisture content permitted in Specification C-210
  - 8) Cracks in the building structure
- b. FSAR Question 362.2 (Section 2.5.4.5.1)

VIII.

Closing Comments by CPCo

*Don't take  
- comments??  
289.*

*J. Knight  
Copies for Bosnah  
Jackson & Schauer*

AUG 24 1979

MEMO TO FILE

FROM: D. Hood, Project Manager, Light Water Reactors Branch No. 4, DPM

SUBJECT: INTERNAL MEETING ON STATUS OF MIDLAND SOILS SETTLEMENT

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On August 16, 1979, members of NRR, I&E Headquarters and OEID met to discuss the status of the staff's review of the soils settlement matter at the Midland site. The purpose was to determine the status of the staff's decision pursuant to 10 CFR 50.54f (which is applicable to construction permits by 10 CFR 50.55(c).) The principal background documents to date are listed in Enclosure 1. Meeting attendees are listed in Enclosure 2.

Mr. Knight reported that the principal technical solutions proposed by the applicant for the major structures appears to be basically sound such that, properly implemented, they can be expected to provide for adequate structural foundation support. He noted, however, that certain details of the applicant's reply were not sufficient and further information will be required from the applicant. For example, the details of the applicant's load combination calculations and stress limits applicable to differential settlement, NRR's need for a more quantitative assessment to determine that nozzle loads transmitted from settled pipes to the attached valves, pumps, tanks, etc will remain within ASME Code allowables, and a more thorough monitoring program to follow actual performance during operation. These findings and further requests are being documented and will be completed in late August.

Messrs Haass and Gilray of QAB noted that some instances of poor performance in QA areas revealed in the I&E investigation report indicates that additional QA measures beyond those typically imposed by the NRC may be warranted. QAB's review is in its final stages of documentation and should be completed before the end of August.

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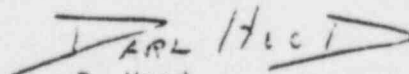
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Mr. Thornburg noted I&E is continuing its review of the performance aspects of the QA program and considering the soils settlement matter in relation to the reports of QA deficiencies in other areas. Mr. Thornburg anticipates that I&E will reach its conclusions by mid-September 1979.

OELD referenced a Memorandum and Order from ASLB dated August 2, 1979 which asks for clarification of the staff's position regarding consideration of the diesel generator building settlement issue. The board cannot determine from the staff's response whether the staff simply prefers not to issue a partial SER or whether there are other considerations making early consideration of this issue impossible or impractical. Mr. Omstead will prepare a reply clarifying the staff's DES schedule and explaining why isolation of the DG building issue is not practical.

Mr. Rubenstein described the approach which DPM will take in arriving at an NRC position on the technical qualification findings for the SER. The approach is that defined in a W. Haass memo dated 12/15/78, which calls for inputs from QAB, I&E, DOR and DPM.

Mr. Vassallo emphasized the need for timely decisions to be reached by the staff and for similar status meetings in the near future.

  
D. Hood



ENCLOSURE 1

BACKGROUND DOCUMENTATION

Background Documentation relevant to NRR's 10 CFR 50.54(f) requests dated March 21, 1979 include the following: The applicant's reply dated April 24, 1979, was revised May 31, 1979 (revision 1), and July 9, 1979 (revision 2). Further information was supplied by the applicant during meetings attended by both I&E and NRR on March 5 and July 18, 1979. In addition, certain information was requested by NRR technical branches as part of the FSAR review prior to issuance of the 10 CFR 50.54(f) requests and are replied to through FSAR amendments. Site visits by NRR staff to observe settlement were made March 6 and June 7, 1979, and December 3, 1978. NRR participation with I&E results from a Transfer of Lead Responsibility which was distributed to technical review branches as part of a technical assistance request dated November 27, 1978.

Background documentation directed to I&E includes a 50.55(e) notification by the applicant dated September 29, 1978, for which six interim reports have been issued to date (November 7, 1978; December 21, 1978; January 5, 1979; February 23, 1979; April 30, 1979; and June 25, 1979). I&E has conducted a preliminary investigation and has documented its summary findings, along with the applicant's discussion of these findings, in a letter to the applicant dated March 15, 1979. Enforcement actions due to potential material-false statements in the FSAR as may be applicable to some of these I&E findings are presently under internal review, assisted by NRR staff as appropriate.

ENCLOSURE 2

ATTENDEES

J. Knight  
D. Skovholt  
W. Haass  
D. Vassallo  
S. Varga  
L. Rubenstein  
D. Hood  
H. Thornburg  
R. Shewmaker  
R. Backman  
W. Omstead  
R. Lieberman  
J. Gilray  
J. Spraul

Wed August 1 10:00 am

Meeting Midland

→ Memo from Region III requesting technical & legal advice on whether to proceed w/ false statements

- What is materiality?

- Any statement which would mislead and cause investor or receiver to make decisions of different nature implies influence

Meeting Deal, Heller, Hiller, Lipsitz

- Re: April 3 Memo of Attachment

⇒ Summary of intent & interpretation