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June 27, 1984

Mr J J Harrison, Chief
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MIDLAND ENERGY CENTER
MIDLAND DOCKET NOS 50-329, 50-330
LOAD TEST FOR 1 AND 1A SERVICE WATER
PUMP SYSTEM
FILE 0485.16 SERIAL CSC-7950

Notes of 6/25/84 telecon between NRR Region III to discuss Service Water Pump Structure (SWPS) Plate Load Test.

Participants

R. Landsman, Region III
J. Mooney*
K. Razdan
D. Sibbald
R. Wheeler
(*Part time)

PURPOSE

The purpose of this telecon was to discuss NRC's comments on CPCo submittal for SWPS Plate Load Test (JAMooney letter to JJHarrison, Serial CSC-7886 dated June 13, 1984).

SUMMARY

The following is a summary of NRC's comments and CPCo's responses which were concurred to by R. Landsman.

NRC'S COMMENT #1

After the seating loads, for the first few load increments, the load should be held for sufficient time so that settlement vs log time plot flattens out. Sufficient settlement readings shall be taken to accomplish this.

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CPCO RESPONSE

Agreed.

NRC'S COMMENT #2

To reduce the effect of confinement, the size of the plate should be reduced from 30" to 21".

CPCO RESPONSE

CPCo indicated that per ASTM 1196, Sec 4.2, the size of the pit is required to be 4 times the diameter of the plate to eliminate any affect of confinement. However CPCo agreed to change the diameter of the plate to 21" to perform the test.

NRC'S COMMENT #3

The settlement readings should be made relative to the nearest deep seated bench marks (DSB) instead of using the SWPS as a reference mark.

CPCO RESPONSE

Agreed.

NRC'S COMMENT #4

A sample of the soil below the plate should be saved in a jar.

CPCO RESPONSE

Agreed to preserve a soil sample after the load test is performed.

NRC'S COMMENT #5

The plate should be leveled to a tolerance of 1/16" instead of 1/8". A very thin layer of fine sand should be sprinkled before placing the plate.

CPCO RESPONSE

Agreed.

NRC'S COMMENT #6

The readings in the dial gauges should be taken to an accuracy better than \pm 50 psi.

CPCO RESPONSE

The readings will be taken to an accuracy of \pm 25 psi by interpolation.

CPCo also stated that since the size of plate is smaller, they may change the load increment to 5% or 10% of the estimated ultimate design strength instead of the 3.3% as stated in the June 13, 1984 CPCo letter.

NRC'S COMMENT #7

A copy of Drawing C-2039 should be provided to J. Kane.

CPCO RESPONSE

CPCo has provided the drawing to J. Kane.

NRC'S COMMENT #8

With respect to Note C-1 Drawing C-2036-4, the dead load of the plate, jacks etc. should be accounted for in the final report.

CPCO RESPONSE

CPCo agreed.

NRC'S COMMENT #9

The maximum load to which the plate is loaded before starting the decrements should be changed to correspond to 130% of the maximum predicted net design bearing pressure.

CPCO RESPONSE

CPCo agreed to revise the loading to 130% of the net maximum design bearing pressure. The maximum bearing, approx 15 k.s.f., occurs for the seismic condition.

NRC'S COMMENT #10

The jack calibration should be included in the load test report.

CPCO RESPONSE

CPCo agreed.

NRC'S COMMENT #11

The measured settlements of the plate, during the load test should be compared to predicted settlements based on the modulus used in the design.

CPCO RESPONSE

CPCo indicated that before the test, they will have available a set of plots of E vs settlements for various bearing pressures.

NRC'S COMMENT #12

- a. It seems that the constant $K = \frac{0.95}{\pi}$ from NAVDOC DM-7, is missing from the equation stated in the letter.
- b. What value of μ will be used?
- c. The "E" should be calculated for calculated design bearing pressure.

CPCO RESPONSE

- a. CPCo stated that the constant should be $\frac{0.95}{\pi} \times 4 = 1.21$, and agreed to modify the formula in the letter by this factor.
- b. CPCo stated that a $\mu=0.5$, which is the value for undrained condition, will be used.
- c. CPCo indicated that as stated in the June 13 letter, E will be calculated for the design net bearing pressure under service loads. (Not loads including seismic since "E" value for seismic condition is determined by the shear wave velocity).

NRC'S COMMENT #13

With reference to Drawing C-2036-2, it seems that there is some friction between the lateral bracing and the sides of the excavation pit.

CPCO RESPONSE

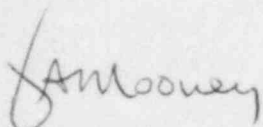
The jacks are located at the bottom of the strut, therefore all the load is transferred to the plate.

NRC'S COMMENT #14

R. Landsman should be provided a set of data sheets, which will be used to record the test results, before the test is started.

CPCO RESPONSE

CPCo agreed.



JAM/KBR/klw

CC Administrator, Region III
 DSHood, NRR Project Manager, Washington
 Midland Project Manager, Region III
 Midland Resident Inspector, Midland