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OCT. 15 1975

Docket Nos. 50-329
and 50-330

Consumers Power Company
ATTN: Mr. S. H. Howell
Vice President
212 West Michigan Avenue
Jackson, Michigan 49201

Gentlemen:

Your letters of June 28, 1974 and July 3, 1975 requested a review of the implementation of certain Regulatory Guides at your Midland Plant Units 1 and 2. We have begun our review of the material you have submitted and our schedule for completion of this review is enclosed.

Please inform us within seven (7) days of receipt of this letter of your confirmation of this schedule or propose alternate dates. If you cannot meet our specified dates, it is likely that our overall schedule will have to be extended.

Please contact us if you have any questions regarding the enclosed schedule.

Sincerely,

Original Signed by
A. Schwencer

A. Schwencer, Chief
Light Water Reactors Branch 2-3
Division of Reactor Licensing

Enclosure:
Regulatory Guide Review
Schedule

cc: see page 2

8006090 670 A

A3

OFFICE ▶	RL:LWR 2-3	RL:LWR 2-3				
SURNAME ▶	SMacKay:pga	ASchwencer				
DATE ▶	10/15/75	10/15/75				

Form AEC-318 (Rev. 9-53) AECM 0240 ☆ U. S. GOVERNMENT PRINTING OFFICE: 1974-526-166

130.0 STRUCTURAL ENGINEERING BRANCH

130.1 Reg. Guide 1.10

In the proposed exception to the subject Regulatory Guide specify the criteria that will be followed by the Project Engineer to assure that the quality assurance and control will follow the general intent of the current revision of Reg. Guide 1.10, (Rev. 1, Jan. 2, 1973).

130.2 Reg. Guide 1.12

To respond to the basic concern of this guide, you should provide at least one triaxial response spectrum recorder at the reactor containment foundation level to measure the earthquake input response spectra.

130.3 Reg. Guide 1.15

(1) Reg. Position C.1.a:

We find that the proposed position is acceptable with the understanding that the frequency of testing for future construction will be as specified in Reg. Guide 1.15, viz. at least one full-diameter specimen from each bar size for each 50 tons or fraction thereof.

(2) Regulatory Position C.1.c:

Provide the criteria in sufficient detail that will show the intended use of the rejected material.

130.4 Reg. Guide 1.18

(1 & 2) Paragraph C.1:

Discuss the proposed exception to demonstrate that it would not be detrimental to the reliability of structural integrity test.

(3) Paragraph C3:

Provide the instrumentation for measuring the tangential deflection unless an alternate method of monitoring the deformation of openings is provided.

(4 & 5) Paragraph C5:

Provide sufficient information to make a determination whether the Midland Plant should be considered a prototype or not. The requirements pertaining to paragraph C.5 will be established on the basis of this determination.

(6 & 7) Paragraph C9 and C10:

We believe that there is no need for taking exceptions to the Guide at this time. However, the test reported should describe the weather conditions during the test and demonstrate that those conditions did not have a significant effect on the reliability of the test results.

(8) Paragraph C.12:

Provide a description of structural test prior to the actual tests as part of the application rather than as a separate report.

130.5 Reg. Guide 1.55

In order to show that you intend to meet the requirements of Reg. Guide 1.55, describe the Q/A program pertaining to periodic monitoring by the design engineering office to assure the correctness and conformance of the shop drawings to the design drawings. In your Q/A program describe the measures taken to assure that the construction joints are located in agreement with the intent of the designer.

130.6 Reg. Guides 1.19, 1.35, 1.60, 1.61, 1.92

The applicant's position is acceptable.

130.7 Reg. Guides 1.57, 1.90

These guides are not applicable to the Midland Plant.

321.0 HYDROLOGIC ENGINEERING

321.1 Reg. Guide 1.27

Please provide the following information so that we can perform an independent analysis to determine the adequacy of the emergency pond and verify your results.

(1) Meteorological Data

Case 1. Data based on historical regional measurements combining the worst recorded 30-day period (30-day average) of maximum difference between dry bulb temperature and dewpoint temperature, ΔT, and the highest wind speeds recorded during the same 30-day period such that the combination of ΔT and wind speeds occurring simultaneously results in the maximum amount of evaporation and drift loss. Provide average daily dry bulb temperature, wind speed and solar radiation for the 30-day period.

Case 2. Data based on the worst 1-day and worst 30-day periods of meteorological record in the region resulting in minimum heat transfer to the atmosphere and maximum plant intake temperature. Provide hourly dry bulb and dewpoint temperatures for the first day (worst 1 day) and daily dry bulb and dewpoint temperatures for the rest of the 30-day period. Also provide average daily wind speed and solar radiation for the 30-day period;

(2) Initial emergency pond temperature;

(3) Emergency pond geometry (and figure of pond) and normal operating level;

(4) Location on emergency pond intakes and discharges (locate on figure provide for item (3));

(5) The heat curve (in BTU/hour) for various times throughout the entire 30-day period.

321.2 REG GUIDE 1.59

Provide a list of structures, systems, and components necessary for cold shutdown and maintenance thereof. Identify each on a map showing the entire site. Estimate the elevation and duration of the Probable Maximum Flood (PMF) plus wind and wave (maximum) runup on each of the structures. Discuss the methods of waterproofing that you propose, and the advantages of this method when compared with other methods.

OCT. 15 1975

cc w/encl:
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OFFICE ▶						
SURNAME ▶						
DATE ▶						

OCT. 15 1975

ENCLOSURE

REGULATORY GUIDE

REVIEW SCHEDULE

MIDLAND PLANT UNITS 1 & 2

GROUP	SUBMITTAL	MEETING	STAFF COMMENTS	APPLICANT RESPONSE	EVALUATION
Electrical	7/21/75	11/13/75	12/15/75	1/13/76	2/19/76
Structural	8/28/75	9/23/75	10/16/75	11/13/75	12/18/75
Materials	9/11/75	10/20/75	11/10/75	12/8/75	1/2/76
Q.A.	10/15/75	11/14/75		2/17/76	3/2/76
Mechanical	10/21/75	11/18/75	12/9/75	1/6/76	2/10/76
Miscellaneous	11/21/75	12/19/75	1/9/76	2/6/76	3/12/76

321.3 (11.3) number of gas analyzers and control features at each location should be in accordance with the requirements for two independent measurements. One gas analyzer upstream and one gas analyzer downstream of the recombiners should not be construed as dual gas analyzers.

2. For systems involving pressurized storage tanks (excluding surge tanks), at least one gas analyzer should be between the storage tanks.

3. A single gas analyzer set to sequentially analyze several locations in a system should not be construed as dual gas analyzers, however, dual gas analyzers set to sequentially measure concentrations both upstream and downstream of a recombiner could be used to meet the criteria in 1 above.

4. Where two or more potentially explosive process streams are combined before entering a component, each stream, or the combination, should have dual gas analyzers. If gas analyzers are to be used to sequentially measure several points in a system not designed to withstand a hydrogen explosion, at least one gas analyzer which is continuously on stream is required. The continuous gas analyzer should be at a point common to streams measured sequentially; (i.e., should be sampling the combined stream).

Also, the gas analyzers should have daily sensor checks, monthly functional checks, and quarterly calibrations.

321.4 (11.4) The Werner and Pfleiderer Topical Report, "Radwaste Volume Reduction and Solidification System," No. WPC-VRS-1 (WP-001) that you referenced in the FSAR is presently being reviewed by the NRC staff and has not yet been accepted. As a licensing topical report you should state in the FSAR whether the design of your Solid Waste System will conform to the Werner and Pfleiderer Topical Report. Since there are outstanding issues with regard to this topical report, you should address these issues as follows:

321.1 (11.4)

a. Describe how the VRS controls the rate of evaporation to assure that overheating does not occur in the latter stage barrels and that the final radwaste-asphalt mixture will not contain free liquids.

b. Define any process conditions or limitations on the waste input to the VRS which might adversely impact the quality of the final asphalt product or produce noxious byproducts during processing. Specifically, address oil and detergent content in wastes, organic decontamination solutions or lab chemicals, temperature sensitive ion-exchange resins and required waste pretreatment.

c. You should commit to design the VRS to the criteria given in Branch Technical Position ETSB 11-3. In order to assure complete solidification of wastes and the absence of free liquid, provide a process control program which establishes a set of process parameters for operation of the VRS.

331.0 RADIOLOGICAL ASSESSMENT BRANCH

331.1 (12.5.2) Provide a detailed layout drawing of your change and locker facilities.

a. Show that you have made provisions for both male and female employees.

b. Show that your change and locker room facilities are sufficient to accommodate and provide services for an expected increased number of maintenance personnel present during major outages.

361.0 GEOSCIENCES BRANCH

361.1 (2.5) Provide a revised listing and map of epicenters so as to include (a) Canadian epicenters; and (b) instrumental and felt events recorded since 1973.

362.2 (2.5) Provide a map of proposed tectonic provinces in the site region and provide a justification for delineation of those provinces.

371.0 HYDROLOGIC ENGINEERING

371.1 (2.4) RSP Document that flooding of safety-related structures and/or equipment will not occur as a result of runoff from the local probably maximum precipitation (PMP). Your site drainage facilities and roofs of buildings are designed to store or convey the runoff from the 100-year storm (or less).

It is our position that the facility (including roof design) shall be designed to safely handle the runoff from the PMP. If it cannot be documented that the water level is below entrances to safety-related structures or equipment, document the other forms of protection that will be provided.

371.2 (2.4) Provide details of the site drainage system and appurtenant structures, including the sizes, types, locations, slopes, capacities, cross-sections, and other details of all culverts, ditches, channels, intakes, and roof drains.

371.3 (2.4) Document that use of the rational formula to determine local runoff is conservative, especially the use of 10-minute times of concentration, the use of rainfall intensities of 6.1 in./hr, and the use of runoff coefficients of 0.4. Provide a detailed site grading map showing the directions of flow to specific watercourses and/or culverts.

371.4 (2.4) Provide information to show how the 24-hour PMP of 13.0 inches for 2400 square miles was derived from Hydrometeorological Report #33, "Seasonal Variation of Probable Maximum Precipitation East of the 105th Meridian for Areas from 10 to 1000 Square Miles and Durations of 6, 12, 24, and 48 hours" (1956). It is not clear how this was accomplished, since this report covers areas up to 1000 square miles.

371.5 (2.4) Provide information used to develop the unit hydrograph shown on Figure 2.4-7. The information should include, but not be limited to the following:

1. All available rainfall data for each major flood-producing storm for rainfall stations in the Tittabawassee Basin.

2. All available stream hydrograph data for major floods for stream gages in the basin.

3. Detailed maps of the basin showing topography, drainage areas, stream lengths, and stream slopes.