

NRC PDR



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

NOV 16 1978

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:

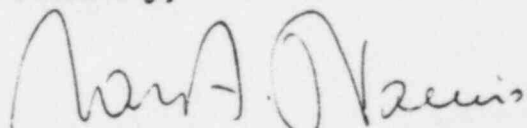
In order that we may continue our review of your application for operating licenses for the Midland Plant, Unit Nos. 1 and 2, additional information is required as indicated in the enclosure to this letter.

To avoid any delay in our review a completely adequate response should be submitted by December 8, 1978. Please inform us within seven days after receipt of this letter of your confirmation of the schedule or furnish us an alternate date for submittal so that we may reschedule our review accordingly.

Your reply should consist of three signed originals and 147 additional copies as a sequentially numbered supplement to your Environmental Report. Please forward 41 copies and retain the remaining 109 for future use.

If you have any questions concerning the requested information, please contact Mr. Oliver D. T. Lynch, Jr., Environmental Project Manager at (301) 492-8438.

Sincerely,

  
Wm. H. Regan, Jr., Chief  
Environmental Projects Branch 2  
Division of Site Safety and  
Environmental Analysis

Enclosure:  
Request for Additional  
Information

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cc: Myron M. Cherry, Esq.  
One IBM Plaza  
Chicago, Illinois 60611

The Honorable Curt Schneider  
Attorney General  
State of Kansas  
Topeka, Kansas 66612

Irving Like, Esq.  
Reilly, Like and Schneider  
200 West Main Street  
Babylon, New York 11702

James A. Kendall, Esq.  
Currie and Kendall  
135 North Saginaw Road  
Midland, Michigan 48640

Judd L. Bacon, Esq.  
Consumers Power Company  
212 West Michigan Avenue  
Jackson, Michigan 49201

Lee Nute, Esq.  
Michigan Division-The Dow  
Chemical Company  
47 Building  
Midland, Michigan 48640

Michael I. Miller  
Isham, Lincoln & Beale  
1 Forst National Plaza  
Chicago, Illinois 60603

Mr. Stephen Gadler  
2120 Carter Avenue  
St. Paul, Minnesota 55108

Mrs. Mary Sinclair  
5711 Summerset Street  
Midland, Michigan 48640

Ronald J. Cook  
U. S. Nuclear Regulatory Commission  
P. O. Box 1927  
Midland, Michigan 48640

MIDLAND PLANT, UNIT NOS. 1 & 2  
DOCKET NOS. 50-329 AND 50-330  
REQUEST FOR ADDITIONAL INFORMATION

Question 1

In subsection 2.1.1.3, it is stated that the exclusion area boundary (and the perimeter fence where the exclusion area boundary is within the perimeter fence) is used to establish the technical specification limits for the release of gaseous effluents (for complying with 10 CFR 50 App. I design objective dose limits). However, in Subsection 2.1.1.3.1, it is stated that two parcels of property owned by Dow Chemical Company are included within the exclusion area--the wastewater treatment pond west of the containments across Bullock Creek and the Clarifier area north of the containments across the Tittabawassee River.

We observe that although access to these parcels by Dow's personnel for whatever purposes will possibly be infrequent and controlled by Dow Security personnel, the Dow personnel entering the two parcels at any time will be regarded as non-radiation workers, i.e., as members of public whose activity inside the exclusion area boundary is not connected with the nuclear power plant's operation. As such, permissible radiological exposure to the Dow's personnel inside the exclusion area boundary will be subject to the design objective dose limits of 10 CFR 50, Appendix I. Therefore, please provide in tabular form:

- a. Locations (distances and directions) which are likely to be occupied by Dow personnel (including any Dow Security personnel) inside the exclusion area boundary.
- b. Annual occupancy (number of hours per year) of a worker at each of the locations described in item(a) above.

Question 2

It is not clear as to how the edible weights of fish as given in Table 5.2-19 were determined. Please provide the calculational steps that would result in the edible weights of fish caught in Table 5.2-19 using the data from Section 2.1.3.4 as stated in footnote (b) of the table.

Question 3

As stated in footnote to ER Table 5.2-13 the radioactivity concentrations in the liquid effluents at the plant discharge location are calculated assuming an annual average discharge rate of 43 cfs. About 43 cfs is indeed the average of the discharge rates given in the ER Table 5.2-14.

However, a different discharge rate, namely 53 cfs, is used for similar purposes in the FSAR Section 11.2.3 and FSAR Table 11.2-9. Please explain this apparent inconsistency.

Question 4

Please provide reasons for:

- a. The following discrepancies between the values of doses to the maximum individual from liquid pathways as given in the ER Table 5.2-20 and FSAR Table 11.2-10:

Organ	ER	FSAR
Adult Liver	1.72 mrem/yr-unit	1.2 mrem/yr-unit
Adult T. Body	1.25 mrem/yr-unit	0.87 mrem/yr-unit

- b. The following discrepancies between the values of doses to maximum individual from gaseous pathways as given in the ER Table 5.2-22 and FSAR Table 11.3-25 (both with open terrain correction):

Organ	ER	FSAR
Child Thyroid 8 mi. WSW	.36 mrem/yr-unit	.24 mrem/yr-unit
Infant Thyroid Cow at 3.37 mi. E	.26 mrem/yr-unit	.37 mrem/yr-unit
Infant Thyroid Goat at 5 mi. ESE	.50 mrem/yr-unit	.18 mrem/yr-unit

Question 5

Please explain the discrepancy between the direct radiation doses to the construction workers as given in the ER Subsection 4.4.1 and FSAR Subsection 12.4.4.1:

	ER	FSAR
Workforce Exposure	20.13 man-rem/yr	45.7 man-rem/yr
Average Individual Exposure	26.5 mrem/yr	75.5 mrem/yr

Question 6

Please provide the appropriate weighted average direction and distance of the locations of the construction workers who will be exposed to the gaseous effluent during the period of construction of one unit while the other unit is operational. Also provide the total number of man-hours for which the construction force will be exposed to this gaseous effluent.

Question 7

In Tables 6.1.9 and 6.2A-3-10 the values of lower level of detection (LLD) of I-131 in water and food products are much higher than those in the Branch Technical Position (1977), An Acceptable Radiological Environmental Monitoring Program (which is applicant's reference No. 12 on page 6.1R-2 of ER) of Radiological Assessment Branch. Please provide the basis for these higher values.

Question 8

For the purposes of independent checks and quality assurance the Environmental Monitoring the Branch Technical Position cited above requires that the laboratories of the licensee or licensee's contractors which perform analyses shall participate in the EPA's Environmental Radioactivity Laboratory Intercomparison Studies Program or equivalent program. Please indicate your plans for such participation.