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DOCKET NUMBER 50-329/330-OL
PROD & UTIL. FAC.

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USNRC

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

'86 DEC 12 P3:05

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

OFFICE OF SECRETARY
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In the Matter of)	
)	
CONSUMERS POWER COMPANY)	Docket Nos. 50-329 OM & OL
)	50-330 OM & OL
(Midland Plant, Units 1 and 2))	

NRC STAFF RESPONSE TO
LICENSING BOARD'S QUESTIONS OF DECEMBER 3, 1986

In a Memorandum and Order of December 3, 1986, the Licensing Board directed the Staff to provide responses, as appropriate, to three questions raised by the Board in relation to Consumers Power Company's request to terminate the Midland operating license proceeding.

The Staff's responses to the Board's questions and the affidavit of Gary B. Staley, hydraulic engineer, who prepared the Staff's responses, are attached to this pleading.

Respectfully submitted,

Ann P. Hodgdon
Counsel for NRC Staff

Dated at Bethesda, Maryland
this 11th day of December, 1986

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NRC STAFF RESPONSES TO LICENSING BOARD'S
QUESTIONS IN ITS MEMORANDUM AND ORDER OF DECEMBER 3, 1986

Q1. The first of these items concerns the structures supported by underpinning. The November 14, 1986 report states (at p. 7) that "if the cooling pond is ever re-filled, something will have to be done to the partially completed underpinning to alleviate the possibility of soil washouts (the positive gradient would induce flow to the excavated area, thus possibly making the building unstable)." See also October 28, 1986 inspection report, at p. 3. We understand that the cooling pond would be re-filled in the event the site were to be used (as currently proposed by CPC) for a gas-fired cogeneration facility. The Board wishes to be apprised:

- a. In addition to possible soil washouts, would there be other concerns about standing water in the excavation?
- b. What steps are appropriate to alleviate these conditions?
- c. In particular, in the event that the site is used for a gas-fired cogeneration facility, will the dewatering be continued?
- d. Has CPC committed itself (or will it commit itself) to taking such steps, if the pond were to be re-filled?

RESPONSE

The NRC staff's environmental assessments address offsite environmental effects. The status of the Midland Plant's auxiliary building underpinning/foundation could not lead to any adverse environmental impacts offsite. This being the case, any concern for the auxiliary build-

ing foundation is a safety concern. Other federal agencies (such as OSHA) are responsible for new construction and alternate uses.

a. From an environmental viewpoint, the soil washout under the turbine building could lead to the development of "sinkholes" outside the fenced excavated area that workers or visitors could fall into. However, such an occurrence is a very low probability event. The Staff is not aware of any other environmental concerns as long as the foundation excavation is adequately fenced.

b. Since the "conditions" are contingent on future actions by CPC, the only appropriate steps would be commitments from CPC that are tied to its future plans, whatever they may be. If CPC relinquishes control of the site, the excavation should be backfilled.

c. The Staff does not consider it appropriate to respond to this question.

d. The Staff does not consider it appropriate to respond to this question.

Q2. The second of these items concerns the emergency cooling water reservoir (ECWR). The November 14, 1986 inspection report states (at p. 13) that "if CPCo were to completely abandon this site, it would be necessary to provide a gravity drain for this portion of the pond [the ECWR] to preclude eutrophication and an undesirable mosquito breeding habitat." The report adds that "[t]his regulatory responsibility should be assumed by the MDNR [Michigan Department of Natural Resources] under the revised NPDES Permit."

The Board wishes to be apprised:

- a. What are the elevations in ft. msl of the bottom of the ECWR and the normal level of the Tittabawassee River near the cooling pond? Is the difference in levels (if any) sufficient to assure that a gravity drain will produce the desired result?

- b. What is the difference in levels (if any) in the event of flooding up to the level of the probable maximum flood? Would a gravity drain work in that event, and with what results? In that connection, the SER lists the probable maximum flood at el. 631.5 ft. msl and (with wind-wave runup) at el. 635.5 ft. msl. See SER § 2.4.3.1.
- c. Does the MDNR have jurisdiction to impose such a condition in the event the Midland site is completely abandoned prior to any industrial use?
- d. Has CPC committed itself (or will it commit itself) to install such a gravity drain in the event of complete site abandonment?

RESPONSE

a. The bottom of the Emergency Cooling Water Reservoir (ECWR) is at elevation 596 ft. msl (FSAR Section 2.4.8). The bed of the Tittabawassee River in this vicinity is 582 to 584 ft. msl (FSAR Figure 2.4-17). Average monthly flows in the Tittabawassee River are between 500 and 3600 cfs (ER Table 2.4.2). A low flow rating curve (discharge vs stage) for the river is not immediately available; however, a site topographic map indicates that the normal water level in the river is about elevation 595 ft. msl. Therefore, the ECWR would drain under normal river flow conditions. If there is a problem with drainage from the ECWR during normal river flow conditions, then the alternative would be to backfill all or a portion of the excavated pond area or install a flap gated outlet to preclude river flow from entering the ECWR.

b. During high flows on the Tittabawassee River, the river water would flow into the ECWR and the main pond through the subject gravity drain (unless gated) and the gated main pond outlet (outlet 001) if the gate is open. The depth of ponding in the ECWR and the main pond would be contingent on the size of the pond outlets and the duration of the river flood. The process of partially filling and emptying the cooling

pond with river water would result in some silt deposition in the pond and some fish would probably be trapped on the emptying cycle.

It appears that the best alternative would be to backfill the ECWR with soil and provide positive drainage through the main pond outlet. This alternative would have no adverse environmental impacts offsite and it may also be the least costly alternative other than doing nothing.

c. By telecommunication of 12/4/86, the Michigan Department of Natural Resources (MDNR) advised the NRC staff that MDNR lacks the authority to require the CPC to provide gravity drainage or backfill for the ECWR prior to abandoning the site. The MDNR did not indicate what, if any, Michigan agency has such authority. However, the NRC staff understands that the State of Michigan may be filing a response in which this matter is addressed.

d. The Staff does not consider it appropriate to respond to this question.

Q3. Since both of the foregoing conditions depend upon the next usage of the site, does CPC intend (or will it commit itself) to inform the Staff when (a) it begins construction of the gas-fired facility, (b) it places such facility into operation, and (c) in the alternative, it determines not to pursue its plans for a gas-fired facility and, as a result, determines to abandon the facility or convert it to another industrial use.

CPC and the Staff (and other parties who wish to do so) should provide responses to these questions in the same time frame as established above for commenting on the Environmental Assessment. (Copies of this Memorandum and Order are being provided to CPC and the Staff on December 3, 1986, and are being express-mailed to Ms. Sinclair and the State of Michigan that same date.)

RESPONSE

The Staff does not consider it appropriate to respond to this question.