

UNITED STATES OF AMERICA  
ATOMIC ENERGY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of	)	
	)	
WISCONSIN PUBLIC SERVICE CORPORATION	)	
WISCONSIN POWER AND LIGHT COMPANY	)	Docket No. 50-305
AND	)	
MADISON GAS AND ELECTRIC COMPANY	)	
	)	
(Kewaunee Nuclear Power Plant)	)	

AFFIDAVIT IN SUPPORT OF  
MOTION FOR SUMMARY DISPOSITION

State of Maryland        )  
                                  ) ss  
County of Montgomery)

The undersigned, E. W. Daniels, being first duly sworn, hereby deposes and says as follows:

1.     A statement of by background and qualifications has been filed and is a part of the Docket in this matter .

2.     Contentions 6.2, 6.3.3, 6.3.4, 6.3.5, and 6.3.6

There are occasional lake herring (cisco) found in the Plant area, but the population is very low as indicated by the FES (p. II-49).

If any are present in juvenile or adult form, it is likely they will avoid the plume. There is no evidence of cisco spawning in the

Kewaunee area. The reasons for their scarcity are partly the result of overfishing, alewife competition, and lamprey predation. The long-jawed cisco is absent from the Kewaunee area and is essentially extinct in the lake.

The population of yellow perch in the lake near the Kewaunee Plant is low, (FES: p. II-49), and no spawning has been found. Information on perch populations in the area was obtained by the Wisconsin Department of Natural Resources (DNR), Bio-Test Laboratories, and Argonne National Laboratory. (ANL - 7860, part III of Radiol. phys. Div. Rept., 1971, p. 118.) It is the opinion of Wisconsin DNR personnel that yellow perch spawn in rivers. Conditions in the Kewaunee Plant area are not good for perch spawning. (FES: II-48-51; V-16,17,18.)

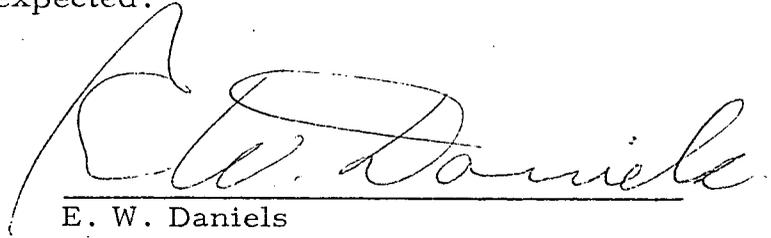
Adult fish including perch have much greater mobility than the benthic animals (as discussed, supra) and can avoid the plume or seek water temperatures which they prefer. Thus they can avoid any part of the plume that would cause adverse effects. At Point Beach, the Argonne Laboratory studies show that there are some yellow perch in the area, but no detrimental effects of the Plant have been found. (Argonne Annual Report, Radiological Physics Div., 1971, ANL-7860, Part III, pp. 118-120.)

Coho salmon are a pelagic species, i.e., a cold water fish, and are inshore during the summer only during an upwelling, (FES: II-22). The Preoperational monitoring program at Kewaunee shows very few Coho in the Kewaunee area. Some Coho have been found in the Point Beach area during operation. (Argonne Studies, ANL-7860, part III, pp. 118-120, 1971.) It was recently found by Argonne investigators that the body temperatures of Coho caught in the Point Beach plume area were within a degree or two of the preferred temperature of Coho. Thus, the fish are regulating their temperature either by locating themselves in a proper temperature region, or they are regulating physiologically, or both. Thus, the Coho apparently avoid the warmer part of the plume.

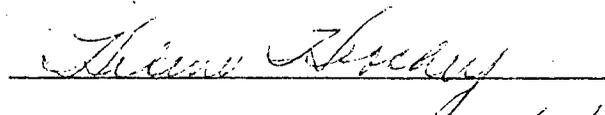
Brook trout are being stocked by the Wisconsin DNR and numerous fish have been taken at Point Beach. Ability of adult fish, including brook trout, to moderate body temperature by movement is a very important factor in predator-prey relationships, and this ability will work to their advantage. These fish can avoid warmed water, and they can take advantage of food organisms which may have been affected by the once-through system.

I do not anticipate any adverse effects of the Kewaunee Plant thermal plume on brook trout or other fish stocked in the lake that may be

present in the Kewaunee plant region. (FES, Table II-16.) Since the spawning of native fish in this area is low or absent, except possibly for alewives and smelt, adverse effects of the Kewaunee plume on native fish are likewise not expected.

  
E. W. Daniels

Subscribed to and sworn before  
me this 2nd day of February, 1973

  
My Commission expires 11/1/76