

Illinois



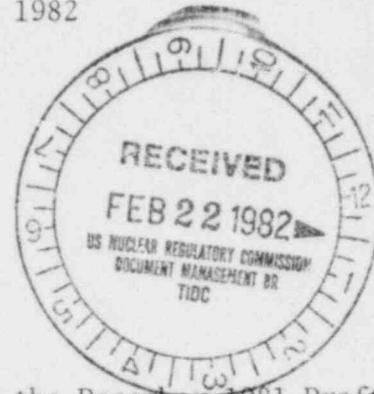
Department of Conservation

life and land together

605 WM. G. STRATTON BUILDING • 400 SOUTH SPRING STREET • SPRINGFIELD 62706
CHICAGO OFFICE - ROOM 100, 160 NO. LASALLE 60601
David Kenney, Director • James C. Helfrich, Assistant Director

February 19, 1982

Mr. J. H. Williams
Licensing Project Manager
Standardization and Special Projects Branch
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555



Dear Mr. Williams:

The Department has completed its review of the December 1981 Draft Environmental Statement related to the operation of Clinton Power Station, Unit No. 1, Docket No. 50-461.

As stated in Section 4.2.2 and 4.2.3, the Department and Illinois Power Company have reached agreement whereby 10,420 acres of the site has been opened to public use for year-round recreational activities including boating, fishing, hunting, camping, picnicking, wildlife viewing, hiking and other water sports. The Department is appreciative of Illinois Power Company's cooperation in providing these recreational facilities and opportunities to the citizens of Illinois.

As managers of these recreational facilities, we wish to bring to your attention the following information/problems/issues which we have encountered, or have become aware of, since the issuance of the Final EIS-Construction Phase in 1974. While we believe it is important these items are included in the final EIS-Operational Phase because of their relevance to the area's natural resources and the public's use and enjoyment of these resources, we do not believe they should deter from the anticipated issuance of an operating license to the Illinois Power Company for the start-up and operation of the Clinton Power Station, Unit 1. We are also confident that continued discussions between Illinois Power and the Department will lead to mutually satisfactory resolution of the problems/issues discussed here. These items are as follows:

- According to the Forward (p. XV) of the draft EIS, the purpose of the document is to report relevant new information that has become available subsequent to the issuance of the Final Environmental Statement-Construction Phase and to identify unresolved environmental issues or surveillance needs which are to be resolved. The Forward further states that no unresolved issues have been identified in this DEIS for the case of Clinton Power Station. The only surveillance needs identified were the monitoring of fog and ice and the temperature at the discharge point and at Salt Creek downstream of Lake Clinton.

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The probable occurrence of pathogenic amoebae (Nyglalaria fowleri) in the thermal discharge from the Clinton Power Station is a potentially serious issue which we believe should be addressed in the final EIS and an issue which may require monitoring after plant operation begins in early 1983.

Two studies (Tyndall et al. 1981 - EPRI¹; Tyndall et al. 1981 - NRC²) which tested for the presence of pathogenic amoebae between cooling waters of northern and southern electric power plants and control lakes in those areas both reported a statistically significant association between the presence of the thermophillic pathogenic amoebae and artificially heated water in northern states. We are particularly concerned because of four cooling lakes examined in Illinois during the course of those studies, three tested positive for the presence of pathogenic amoebae.

The recreational plan for Clinton lake was developed in conjunction with the Department and includes plans for a public swimming beach and bathhouse in the area of thermal influence, and allows water skiing throughout the thermal discharge zone. Summer temperatures in the discharge zone and at the beach are predicted to be within the range of 30-40°C, the range at which other northern cooling lakes (including three from Illinois) were found positive for the pathogen. Clinton Lake was opened to swimming and water skiing activities in 1979, so a historical pattern of use and economic development of the area has already been established.

Since the pathogenic amoebae is usually contracted by inhaling water through the nasal passages, participation in these activities may present potential health risks to individuals using Clinton Lake for these and other water-contact recreational purposes after plant start-up and thermal input begins in early 1983.

To guide us in our resolution of these concerns, we are soliciting expert opinions from knowledgeable persons and agencies both in and outside of Illinois regarding potential public health risks, if any, to individuals using Clinton and other Illinois cooling lakes for various types of public recreation. We have held discussions

¹Tyndall, R. L., E. Willaert, and A. R. Stevens, 1981
Pathogenic amoebae in power plant cooling lakes. Final Report to
Electric Power Research Institute. EA-1847. Research Project 1314-1.

²Tyndall, R. L., E. Willaert, and A. R. Stevens, 1981
Presence of pathogenic amoebae in power plant cooling waters.
Final Report for the period October 15, 1977, to September 30, 1979.
Oak Ridge National Laboratory Pub. No. 1623 prepared for U.S. Nuclear
Regulatory Commission.

with the Illinois Environmental Protection Agency and the Illinois Department of Public Health. Based on these discussions to date, it is our understanding that direct water contact, e.g., swimming, skiing, etc. may result in a very small risk of contracting a severe form of meningoencephalitis caused by the amoebae *Naegleria*. Growth of the pathogenic form of this organism is enhanced by warm temperatures, such as may occur after the plant becomes operational, and direct water contact under such conditions may result in a risk of acquiring this infection at a rate which a staff member of the Centers for Disease Control of the Public Health Service has estimated at less than 1 in 2.5 million persons. We will continue to monitor new information as it becomes available and we are available for further consultations concerning this issue.

- . In Section 4.3.4.2, p. 4-20 an annual stocking program is implied with regard to walleye, hybrid striped bass and tiger musky. These supplemental stockings will not necessarily be annual, but will be governed by management needs and fish availability.
- . It should be noted in Section 4.3.5, p. 4-21 that a river otter track and slide was discovered in February of 1977. The river otter is an Illinois threatened mammal.
- . In Section 5.3.1.1, p. 5-2 it is stated, "During an average year the September flow in Salt Creek downstream of Lake Clinton will consist only of the minimum reservoir release of 142 L/s (5 cfs)." True, the low flow of record was an estimated .6 cfs at the dam (.7 at the Rowell gage x .886)¹ and the 7-10 flow is an estimated 2.4 cfs at the dam site. These flows, by definition, do not even approach an annual frequency and do not represent September flows. The average monthly flow for September, 1970-77, was 98 cfs at Rowell, an estimated 86.8 cfs at the dam site. The minimum release stated in the DEIS in effect is 5.8% of the naturally occurring flow. The 5 cfs release approximates the lowest one day flow occurring in the eight Septembers, 1970-77 - a flow of 5.1 cfs on September 7, 1976 - a flow occurring once out of 240 September days.

Since filling of the lake was completed in May, 1978, flow releases have frequently and for extended periods been 16.8 cfs or less - 50% of water year 1980, 30% of water year 1979, and 34% of water year 1978 after May, or 39% of the time. Prior to dam construction, a flow of 16.8 cfs or less was experienced only 23.5% of the time. It is reasonable to assume that this 66% increase in duration of lower flows has already impacted Salt

¹Illinois Power's multiplier to convert Rowell gage readings to dam site readings.

Creek below the dam. However, flows of 5 cfs have not yet been experienced since lake filling, although 8-11 cfs releases have been common (24.3% of the time) with up to 21 days duration. During September, 1978-80, 51% of the flow releases were in the 8.9 - 10.6 range, with up to 14 days duration, and releases were less than 8.0 cfs only 3% of the days.

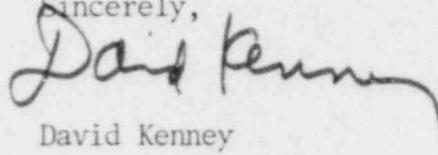
At this time we lack the instream flow studies needed to recommend scheduled flow releases; however, we believe they should approximate 19 cfs to minimize fishery impacts downstream. The Department intends to work with Illinois Power to clarify and resolve the reservoir release questions.

- . The Department takes exception to the concept of the need for "...forced dispersal of waterfowl from the area by repeated disturbance using aircraft, boats, and other scare tactics...." as a result of inadequate food sources (p. 5-11, Sec. 5.5.1.1). We are of the opinion that no such action is warranted inasmuch as traditional migration patterns will dictate that in periods of food supply shortages, waterfowl will continue on their southerly migration.
- . We recommend clarification of line 12, paragraph 2, p. 5-11, Section 5.5.1.1. Does "development of disease pathogens" refer to wildlife diseases or human diseases?
- . In Section 5.5.1.2, p. 5-11 a discussion of periodic clearing of vegetation along transmission lines and rights-of-way is presented. It should be noted that in this Department's opinion hand trimming, cutting and use of herbicides are all viable methods of accomplishing this task. We recognize the effectiveness of certain herbicides for brush control and where applicable utilize them to create early successional habitats conducive to upland birds and mammals and see no reason to prohibit their use (FES-CP4.5.2., Item 5b).
- . Section 5.5.2, p. 5-11 discusses potential impacts on the aquatic ecosystem. We note there is no discussion concerning the loss of predatory fish (particularly walleye, hybrid-striped bass, and tiger musky) over the spillway during the periods of high water. These species do not reproduce naturally in the lake and must be restocked each year at considerable expense. During 1981 the Department estimated that more than a thousand hybrid-striped bass in the 5 to 6 pounds range escaped over the Clinton Lake Spillway. The loss of these supplementally stocked predatory species can be prevented by spillway screening. Spillway screens would insure that these large predators stay in the lake where they are a major asset and prevent them from entering the stream where they may have an adverse impact on other stream fishes. We are aware spillway screens may pose other management problems; therefore, full discussions between Illinois Power and our Department are anticipated before a strategy for problem resolution is derived.

- . We recommend deletion of "sport" in line 3, p. 5-12. The sentence would then read, "as part of the fishery management ...".
- . In Section 5.5.2.3, 2nd paragraph, p. 5-12 the term "stocked game species" is used. We would recommend that this be changed to "stocked experimental species".

The Department appreciates the opportunity to comment and we look forward to receiving copies of the final EIS.

Sincerely,



David Kenney

DK:RWL:ss

cc: Illinois State Clearinghouse
Illinois Power Co. - Gene Robinson
Illinois Environmental Protection Agency
Illinois Department of Public Health