ILLINOIS POWER COMPANY

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L32-82(02-19)-L
500 SOUTH 27TH STREET, DECATUR, ILLINOIS 62525

February 19, 1982

Mr. James R. Miller, Chief
Standardization & Special Projects Branch
Division of Licensing
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Dear Mr. Miller:

Reference: Letter 12/28/81, J. R. Miller, NRC to L. J. Koch, IP, Subject: Issuance of Draft Environment Statement for the Clinton Power Station, Unit 1-NUREG-0854.

This is in reply to the referenced letter. Illinois Power Company has completed its evaluation of NUREG-0854, "Draft Environmental Statement Related to the Operation of Clinton Power Station, Unit No. 1." Attached are our comments for your consideration relative to your issuance of the Clinton Final Environmental Statement.

Please do not hesitate to contact us if you have any questions concerning our comments.

Sincerely,

G. E. Wuller
Supervisor - Licensing
Nuclear Station Engineering

GEW:mr

cc: Mr. J. H. Williams, NRC Clinton Project Manager
Mr. J. C. Lehr, NRC Environmental Engineering Branch
Mr. H. H. Livermore, NRC Resident Inspector

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ATTACHMENT February 19, 1982

Illinois Power Company Comments On
Draft Environmental Statement
Related to the Operation of
Clinton Power Station Unit No. 1 (NUREG-0854)

This attachment includes all the comments made by Illinois Power Company on the U. S. Nuclear Regulatory Commission's Draft Environmental Statement, related to the operation of Clinton Power Station, Unit No. 1 (Docket No. 50-461-NUREG-0854, December 1981). The comments are prefixed by the page number, section number and paragraph, as applicable, of the Draft Environmental Statement to which they refer.

1. Page iii, Lines 17 - 20

   This sentence states, "under certain meteorological conditions, the plant will have to be operated at reduced power levels..."

   To present an accurate and fair abstract, "certain meteorological conditions" should be further qualified. The applicant provided information (CPS-ER-OLS) that indicated these conditions can be considered the one in 50-year drought.

   The applicant also provided information that the thermal standards are based on thermal modeling results based on conservative assumptions. Therefore, we propose the subject sentence to read: "Under certain meteorological conditions (1 in 50-year drought), the plant may have to be operated at reduced power levels based on the results of thermal modeling."

2. Page vi, Item 4a

   The reference should be changed from Illinois-Missouri Power Pool to Ill-Mo Pool.

3. Page vi, 4c

   "All the water for operating the plant will come from Salt Creek." This statement is incorrect and should be modified to read, "All the water for operating the plant will come from Lake Clinton."

4. (A.) Page vi, 4f

   We propose the sentence read, "Under certain meteorological conditions (1 in 50-year drought), the plant may have to be operated at reduced power levels based on the results of thermal modeling."

   (B.) Page vi, Item 4h

   See IP comment #31 (page 6) regarding conclusions from drainage study.

5. Page xv, 3rd paragraph, Line 11

   "...two surveillance needs..., temperatures at the discharge point and at Salt Creek downstream of Lake Clinton."

   It is our current understanding that the NRC does not institute OL

conditions that are to be monitored or tracked by another federal or state agency. In this instance, discharge temperatures to the lake and Salt Creek are carefully considered when the Illinois Environmental Protection Agency issues an NPDES permit for this facility. Therefore, NRC should delete these surveillance needs in order to avoid potential conflicts with other agencies' requirements and to avoid regulating an area which is the principal concern of another agency.

6. Page 2-1, 2nd paragraph

It is stated that the 1980 initial in-service date for Clinton Unit 1 was based on an expected annual average rate of peak load growth for 1975-1985 of 10%. After reviewing past peak load forecasts, we were unable to confirm that a growth rate as high as 10% was ever forecast.

7. Page 2-2, 1st paragraph

In the NRC's production cost analysis it was assumed that all replacement energy would be produced by coal-fired units in the event that Clinton Unit 1 was not in operation. Our production cost analysis shows that some of the replacement energy would be produced by oil-fired units.

8. Page 2-4, Section 2.4, 4th paragraph

The reference to Illinois-Missouri Power Pool should be changed to Ill-Mo Pool.

9. Page 4-2, 2nd and 3rd paragraphs

A. In paragraph 2: "Unit 2 reactor building" should read "Unit 2 containment building."

B. In paragraph 3 it is stated that "The heater bay has been located along the northwestern side of the turbine building (ER-OL, p. 3.1-1) rather than the northeastern side."

The heater bay was never located or intended to be on the northeast side of the turbine building. There was a typographical error in the CPS-ER (Construction Permit Stage).

10. Page 4-4, Section 4.2.3 Water Use, 2nd paragraph, first sentence, add:

"...waterfowl hunting and other water-based recreational activities."

11. Page 4-5, first three lines

To provide a more accurate statement, use the following: "Groundwater use by the project will be limited to the Clinton Power Station Visitors Center and recreational areas during operation. Use of groundwater at these locations will be minimal and should have no effect on local or regional hydrology."

12. Page 4-6, Section 4.2.6.1 Chemicals

Makeup and Potable Water Treatment

Plant makeup and potable water will be taken from Lake Clinton and then treated by prechlorination, clarification and solids removal -- using alum or sodium aluminate and a coagulant aid, lime softening, and sand filtration. Plant makeup water will undergo further treatment using carbon filtration and demineralization (ER-OL, Secs. 3.3.4.1 and 3.6.2).

13. Page 4-6, Section 4.2.6.1, 2nd paragraph

This paragraph should be rewritten to more accurately describe this treatment facility. Our suggested rewrite follows:

"Wastes generated during backwash cleaning of the sand and carbon filters, removal of sludge from the clarification basins, lime softener blowdown, and demineralizer regeneration and condenser cleaning will be routed to two wastewater treatment ponds, located southwest of the plant near the edge of Lake Clinton, with a total capacity of about 1.9×10^4 m^3 (5.0×10^6 gal). The supernatant effluent from the wastewater treatment ponds will be neutralized by addition of acid, caustic, or lime and then sand filtered before discharge to Lake Clinton. If the quality of wastewater does not meet NPDES effluent limitations (Appendix B) provisions have been made for routing the sand filter effluent back to the wastewater treatment ponds. The sludge collected in the wastewater treatment ponds will be dredged as necessary and transported offsite to a licensed landfill (ER-OL, Sec. 3.6.4). Although the wastewater treatment ponds will not be lined, infiltration of seepage from the ponds into the aquifers in the vicinity of the station will be impeded by the low permeability (less than 10^{-5} cm/s) of the rock and soils in the site area (ER-OL, Sec. 2.4.3.4)."

14. Page 4-7, Scale Control, 2nd paragraph, line 5

"...the sedimentation ponds..." are more accurately described as "a single wastewater treatment pond."

15. Page 4-8, Section 4.2.6.2, 2nd paragraph

In the last sentence 1955 is stated as having the "hottest summer" in 23 years of record. The 1955 meteorological conditions correspond to the 1 in 50-year drought.

16. Page 4-12, 4.2.6.3, Sanitary Wastes

Several design capacities have been changed. Thus, this paragraph should be rewritten as follows:

"The sanitary waste treatment scheme given in Section 3.7.1 of the FES-CP remains valid. The only change is the design capacity, which

has been increased from 142 m^3/day (37,500 gal/day) to 161 m^3/day (42,500 gal/day), primarily to meet the needs of an increased labor force. The normal operation work force is expected to be about 350 people for one-unit operation (ER-OL, Response to Question 310.1). The staff has determined that based on a water usage rate of 1.5 x 10^{-6} m^3/s (35 gal/day) per person (Ref. 13), the design capacity of the sanitary system is sufficient."

17. Page 4-12, Section 4.2.7 Power-Transmission Systems

Change the last sentence to read: "The three power transmission lines which have been added have a total length of about 92 km (57 mi), and the associated corridors occupy approximately 367 ha (906 acres)."

18. Page 4-16, Table 4.4

Nitrate is monitored and should be added to the list of nutrients.

19. Page 4-17, Section 4.3.3.1

A. Average minimum temperature in January is given as 6°C(35°F) and average maximum as 32°C(50°F) in July.

These should be changed to: "Average minimum temperature in January is -6°C(21°F) and average maximum as 32°C(90°F).

B. It is stated that: Tornadoes, have been reported in Illinois "404 times during 1953-1971. Thus an average of 21 tornadoes per year can be expected statewide."

It is customary to use longer period of data when reporting such weather phenomenon. An average of 10 tornado occurrences per year were reported based on the period of record 1916-1969. The reference for this data is: J. W. Wilson and S. A. Chagnon, Jr. "Illinois Tornadoes," Circular 103, Illinois State Water Survey, Urbana, Illinois, 1971.

20. Page 4-19, Section 4.3.3.2, paragraph 3, lines 7 and 8

This sentence implies that the federal NAAQS (.12 ppm) for ozone is frequently exceeded when it is the state standard (.08 ppm) that has several exceedances. The sentence should read: "For ozone, the hourly Illinois standard is frequently exceeded, however, the federal standard is never exceeded."

21. Page 4-20, 4.3.4.2 Aquatic Section, 2nd paragraph, line 5

Reference to weedy areas should be modified as follows:

"Weedy areas are scattered throughout the shallow sections of the lake but beginning in 1980 and during 1981 major portions of these weedy areas have naturally receded and no longer exist. Even with reduced weedy areas, the brushy areas provide preferred habitat for several fish species and thermal refuges will be available for the

maintenance of fish populations during maximum thermal discharge periods (Sec. 5.5.2.3)."

22. Page 4-20, 4.3.4.2 Aquatic Section, 3rd paragraph, 2nd sentence

This sentence should be rewritten as follows: "A stocking program to maintain the recreational fishery in the lake has been established under the management of IDOC subject to the approval of the applicant."

The word "annual" has been deleted as it does not accurately describe the stocking program. Fish will be stocked in response to management plans for each species and in response to the availability of fish.

23. Page 4-20, 4.3.4.2, Aquatic Section, 3rd paragraph, 4th line

Insert "experimental" after "Stocked" and elsewhere to read:

"Stocked experimental game species include the tiger musky (northern pike x muskellunge), walleye and the striped bass x white bass hybrid. Since these hybrid species are infertile and natural reproduction is not expected to maintain the walleye population, the experimental game species may be restocked depending on the outcome of their introduction to a cooling lake."

It should also be noted that Illinois Power expects, based on other cooling lake situations, to have a self-sustaining population of native species in addition to the "experimental" species. Both of these groups of fishes will provide for a diverse sport fishery in Lake Clinton.

24. Page 4-22, Section 4.3.7

Change:

A. "Clinton (1980 population 7953)" to "1980 population 8014"

B. "Farmer City (1980 population 2225)" to "1980 population 2252"

C. "Dewitt County grew by a total of 970 persons from 1970 to 1980 from 16,975 to 17,945 persons" to Dewitt County grew by a total of 1,133 persons from 1970 to 1980 from 16,975 to 18,108 persons"

D. "Weldon (1980 population 543)" to "1980 population 531"

25. Page 4-22, 3rd paragraph, 1st line

This sentence needs further clarification since all "sites" are still on the station property. We suggest the following: "Six of the 18 sites described in the 1973 report remain essentially undisturbed on the station property."

26. Page 5-2, 5.3.1.2 Groundwater

To provide a correct statement, please modify the first sentence as

follows: "Groundwater will not be used during station operation except at the Visitors Center and in recreational areas."

27. Page 5-3, 3rd paragraph, 6th line

Add "if discharged without prior treatment" after "in the lake."

If treatment is conducted or if another condenser cleaning agent is used, then the sentence in lines 6, 7, and 8 is not applicable and should be deleted. Regardless, the NPDES limit of 0.1 mg/l is incorrect; it should be 1.0 mg/l.

28. Page 5-4, Table 5.1, Table Title

Change "settling pond" to wastewater treatment ponds or place a footnote at bottom of table to read "wastewater treatment ponds."

29. Page 5-5 Groundwater

The applicant is presently conducting groundwater monitoring for lake water intrusion at 10 locations; 3 on the site and 7 off-site. Water wells at the various recreational areas are also monitored during the season (about April through November). No monitoring of groundwater at the wastewater treatment pond is being conducted.

If well monitoring for lake water intrusion is to be continued during the operational phase, the applicant requests this requirement be placed in the environmental protection plan (EPP) rather than in the FES. Future developments may dictate modifications to this monitoring program. It seems more appropriate to place these types of monitoring requirements in the EPP with other environmental requirements.

30. Page 5-5, 5.3.2.2 Thermal, 1st paragraph, last sentence

This statement should be changed to indicate these are modeled conditions and the station may have to be derated in this "worst summer for the period of record." The sentence should read as follows: "The staff has subsequently determined, based on modeled conditions, that under 1955 meteorological conditions (worst summer for the period of record), Unit 1 may have to be operated at reduced power (78%) for several days during the summer..."

31. Page 5-9, 1st full paragraph

This paragraph needs to be updated. A study completed by M & E/ Alstot, March & Guillou, Inc. for Illinois Power Company, dated July, 1981, addresses the upper Salt Creek drainage concern. The conclusions of that study are:

"Principal results of the five year gaging program, three years in the pre-construction phase and two years in the post-construction phase, are summarized as follows:

1. Information provided in Sections "B" and "C" contained in this report specifically shows that the channel

improvements and the maintenance of reservoir levels have, for rates of stream flow which occurred in the five year period, had the following results:

a. On Salt Creek in the vicinity of the Iron Bridge gaging station, the elevation of flood flows has been reduced from a small amount to as much as 1.2 feet. In no case is there evidence that the Clinton Reservoir has increased flood levels.

b. On Trenkle Slough, the channel improvements completed at no expense to the Trenkle Slough Drainage District, have resulted in a general lowering of water surface elevations, and at high flows the amount of lowering of the water surface exceeds two feet.

c. On Salt Creek, in the vicinity of Farmer City, the elevation of the flood flows has been reduced between 2.5 and 4.0 feet, with the larger number pertaining to the higher flood flows. In no case is there evidence that the Clinton Reservoir has increased flood levels.

2. The work performed under the agreement dated December 2, 1976 between Illinois Power Company and Trenkle Slough Special Drainage District has accomplished its stated objectives in improving the efficiency of the District's drainage system and offsetting any possible adverse effects of the Clinton Reservoir thereon."

The information from this study will be included in a forthcoming Supplement No. 3 to the Clinton Environmental Report-Operating License Stage (CPS-ER-OLS) to provide some additional updating information.

32. Page 5-10, 2nd and 3rd paragraphs

Illinois Power has already committed to resolve fog problems with IDOT. Therefore, the NRC should not make requirements that are potentially conflicting with what the state may require, especially with respect to specific recommendations on mitigative measures.

33. Page 5-11, 1st full paragraph regarding waterfowl dispersion

Since the lake will be open to fishing and waterfowl hunting during winter months once CPS becomes operational, we can foresee no reason to use additional "scare tactics" to move waterfowl. The recreational users with boats will disperse the waterfowl.

34. Page 5-11, 2nd half of 1st full paragraph, regarding disease pathogens

A state agency (IDOC) has accepted responsibility to manage the recreational facilities at Clinton. This would include waterfowl disease outbreaks if they should happen to occur. The IDOC has

prepared a waterfowl disease contingency plan for the lake and the applicant strongly believes the NRC should not make additional or potentially conflicting requirements in this area. Therefore, the requirement should be deleted as a state agency is already active in this area.

35. Page 5-11, 5.5.1.2, Transmission System

The FES (CP stage) prohibits brush spraying of transmission lines on recreational lands at Clinton (page 4-13). Section 5.5.1.2 does not change this unnecessary requirement despite our proposed modification in the ER-OLS and our letter specifically requesting modification to the construction permit. Complete references are:

1) Page 5.5-1 and 5.5-2, Section 5.5.2 Vegetation Control CPS-ER-OLS,

2) Letter from L. J. Koch (IPC) to Dr. H. R. Denton (NRC) dated August 31, 1981, U-0286, L20-81(08-31)-L.

It is therefore requested that these changes be incorporated into this section of the FES so brush spraying under transmission lines on recreational lands is allowed.

36. Page 5-12, top paragraph continued from page 5-11, Line 2

Sentence should be reworded as follows: "Additionally, impingement losses that will occur may be partially offset by stocking of forage and game fish if needed as part of the sport fishery management program for the lake."

37. Page 5-12, 1st paragraph regarding NPDES permit

The Illinois Environmental Protection Agency has jurisdiction over the NPDES permit for the station; therefore, this statement should be deleted.

38. Page 5-12, last sentence

This sentence should be deleted. The experimental game species have been stocked to evaluate their potential to provide an additional sport fishery in a cooling lake and to study their temperature tolerances under actual field conditions. A reevaluation of the fishery management plan after thermal addition will address the desirability of a continued stocking program for these species.

39. Page 5-13, 1st paragraph, last sentence

"Stocked game species" has been used by the staff to mean the experimentally stocked species throughout this statement. In this instance, "stocked" must be changed to "native" as the experimentally stocked game species may not be stocked in the future, depending on the future fishery management plan objectives and the success of the experimental species in a cooling lake environment.

40. Page 5-13, 1st paragraph, 4th sentence

This sentence should read: "Although more thermally sensitive species may be adversely affected during hot weather, the ecological balance of the lake will not be affected."

41. Page 5-29, 2nd paragraph

The radiological monitoring programs have been designed and implemented for CPS Unit 1 with the cognizance of the NRC Regulatory Guide 4.1, Rev. 1, "Program for Monitoring Radioactivity in the Environs of Nuclear Power Plants" (Ref. 46), and considering the guidance contained in the Radiological Assessment Branch Technical Position, Rev. 1, November 1979, "An acceptable Radiological Environmental Monitoring Program" (Ref. 47).

42. Page 5-29, 5th paragraph

Change first sentence to read: "The applicant states that their Radiological Environmental Monitoring Program has been patterned after the Branch Technical Position of the U.S. NRC, "An Acceptable Radiological Environmental Monitoring Program," dated March, 1978."

43. Page 5-30, Table 5.6

Several minor revisions to the table are in order as listed below. This changed information will be included in the forthcoming Supplement No. 3 to the Clinton Environmental Report - Operating License Stage.

1) For air sampling method - add: "at 41 locations."

2) For wellwater sample method - change three locations to two.

3) Add: Drinking water - one location - same parameters and sample frequency as wellwater.

4) For fish - change sample method to: "Electroshocker/Net, one location."

44. Page 5-37, 1st paragraph, 4th sentence

This sentence should read: "The secondary containment gas control boundary which includes fuel building and parts of the auxiliary building, encloses the primary containment, the spent fuel pool, and other auxiliary equipment."

45. Page 5-60, 3rd paragraph, reference to acid rain

There exists no scientifically proven evidence which supports the theory that sulfur dioxide emissions cause acid rain. There is no firm evidence that rain has become more acidic over the past 30 years either. Therefore, the staff should not conclude that sulfur dioxide emissions "lead to environmental and ecological damage through

the phenomenon of acid rain."

46. Page 6-4, 6.4.1, 2nd paragraph

Any potential limitation on power output based on thermal discharge criteria must be qualified as possibly occurring in the 1955 modeled case, which was the worst in 50-year drought example.