



KANSAS GAS AND ELECTRIC COMPANY

GLENN L KOESTER
VICE PRESIDENT, NUCLEAR

March 15, 1982

Mr. Harold R. Denton, Director
Office of Nuclear Reactor
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555



KMLNRC 82-176
Re: Docket Number STN 50-482
Subj: Wolf Creek Draft Environmental Statement
Comments

Dear Mr. Denton:

The draft environmental statement on Wolf Creek requested any comments to be filed no later than 45 days after notice of its availability. Transmitted herewith are KG&E's comments on the Draft Environmental Statement (NUREG-0878) related to the operation of Wolf Creek Generating Station, Unit No. 1.

Yours very truly,

Glenn L Koester

GLK:bb
Attach

cc: Mr. J.B. Hopkins (2)
Division of Project Management
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Mr. Thomas Vandel
Resident NRC Inspector
Box 311
Burlington, Kansas 66839

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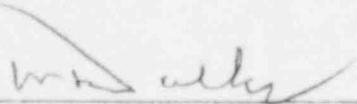
OATH OF AFFIRMATION

STATE OF KANSAS)
) SS:
COUNTY OF SEDGWICK)

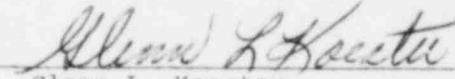
I, Glenn L. Koester, of lawful age, being duly sworn upon oath, do depose, state and affirm that I am Vice President - Nuclear of Kansas Gas and Electric Company, Wichita, Kansas, that I have signed the foregoing letter of transmittal, know the contents thereof, and that all statements contained therein are true.

KANSAS GAS AND ELECTRIC COMPANY

ATTEST:



W.B. Walker, Secretary

By 

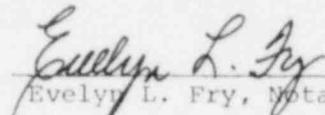
Glenn L. Koester
Vice President - Nuclear

STATE OF KANSAS)
) SS:
COUNTY OF SEDGWICK)

BE IT REMEMBERED that on this 15th day of March, 1982, before me, Evelyn L. Fry, a Notary, personally appeared Glenn L. Koester, Vice President - Nuclear of Kansas Gas and Electric Company, Wichita, Kansas, who is personally known to me and who executed the foregoing instrument, and he duly acknowledged the execution of the same for and on behalf of and as the act and deed of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my seal the date and year above written.





Evelyn L. Fry, Notary

My Commission expires on August 15, 1984.

Kansas Gas and Electric Company
Comments on Wolf Creek Draft
Environmental Statement
(Operating License Stage)

<u>Page</u>	<u>Section, Table or Figure</u>	<u>Comment</u>
-	ER(OLS) Chap. 1, 8, 9 & 11	ER(OLS) pages in Chapters 1, 8, 9 and 11 were revised extensively in January 1982 to reflect a later inservice date for WCGS, revised plant costs and revised plant ownership. DES sections which refer to ER(OLS) material in these chapters should be updated.
vii, 4-21, 5-14, 5-15	Summary and Conclusions, 4.3.5, 5.6	<p>The DES(OL) states: "State-listed species that would be adversely affected by severe, drought induced low-flows in the Neosho River include the Neosho madtom, blue sucker, and warty-backed mussel, if present" (page vii); and "Reductions of riffle habitat during low-flow conditions would adversely affect population of the small Neosho madtom" (page 5-15).</p> <p>The FES(CP) states that "...while there is a reduction of flow during some portions of the period-of-record drought, there would have been no change in the down-river flow during the worst part of the drought because the water surface in the John Redmond Reservoir, naturally, would have been below the conservation level. In this case, water is released downstream only for the previous water rights and for water quality purposes which are the same with or without the presence of Wolf Creek Generating Station" (pages 5-2 and 5-3, FES-CP). The DES(OL) should be modified to be consistent with this conclusion from the FES(CP).</p> <p>The DES(OL) also states "...the presence of the warty-back mussel in the Neosho River immediately downstream from the John Redmond dam</p>

Comments on Wolf Creek Draft (cont'd)

<u>Page</u>	<u>Section, Table or Figure</u>	<u>Comment</u>
		<p>is not established. However, if present, this species would also be adversely affected by decreased available habitat and sedimentation during low-flow conditions" (page 5-15); and "The 1975-1979 benthic survey data prepared for the applicant include organisms reported as "unidentified" or "immature" unionids, some of which may have been warty-backed mussels" (page 4-21).</p> <p>The Applicants feel it is extremely unlikely that the "unidentified" and "immature" unionids collected during surveys were warty-backed mussels due to the fact that additional surveys haven't collected any identifiable warty-backed mussels.</p> <p>The presence of the warty-backed mussel in the Neosho River downstream (e.g. Neosho Falls) of WCGS has been verified by others. However, the Applicants feel that despite this fact, adverse effects during low-flow conditions from all causes would be minimized by the preference of this species for mud bottoms in pool areas and oxbows (Murray and Leonard, 1962). Due to their relative depth, these habitat types are affected to a lesser degree by low flows than are riffles.</p> <p><u>REFERENCE</u></p> <p>Murray, H. D. and A. B. Leonard. 1962. Handbook of Unionid Mussels in Kansas. Univ. of Kan. Mus. Natl. Hist. Misc. Publ. No. 28. pp 184.</p>
1-1	1.1	KEPCo's six percent ownership in
2-4	2.4	WCGS is equal to 69 MW.

Comments on Wolf Creek Draft (cont'd)

<u>Page</u>	<u>Section, Table or Figure</u>	<u>Comment</u>
2-1	2.1	Suggest the second sentence in the last paragraph on this page be changed to read: "Although KEPCo has complied with the financial aspects of ownership in WCGS, KEPCo's system reliability is largely dependent upon the resources of other utilities due to the integrated nature of the Cooperative's load. Therefore, KEPCo will not be analyzed separately."
2-2	2.2	Applicants' estimate for decommissioning WCGS is \$42 million in 1978 dollars [See ER(OLS) page 5.8-3].
6-4	6.4.2.1	
2-4	2.4	Suggest the second sentence in the first paragraph of this section be changed to read: "KEPCo will not be analyzed separately since KEPCo's system reliability is largely dependent upon the resources of other utilities due to the integrated nature of the Cooperative's load."
4-2	4.2.1	Item 5. The Emergency Operations Facility (EOF) - Simulator Complex has been renamed the Education Center.
4-7	4.2.6.1	The DES states that 100 percent sulfuric acid will be added to the circulating water to control scaling. The Applicants are planning to use 66°Be H ₂ SO ₄ [ER(OLS) Section 3.6.2.1, page 3.6-2 ⁴].
4-14	4.3.1.1	As of March 5, 1982, the cooling lake water level was 1080.4 ft. MSL.
5-12	5.5.2.1	The makeup water screenhouse fish impingement study will be submitted to the NRC by March 19, 1982.

Comments on Wolf Creek Draft (cont'd)

<u>Page</u>	<u>Section, Table or Figure</u>	<u>Comment</u>
5-2	5.3.1.1	<p>The DES(OL) Section 5.3.1.1 alludes to the maximum pumping rate for the makeup water to the cooling lake as 120 cfs (page 5-2). However, the Applicants have obtained water permits from the Department of Agriculture allowing a maximum pumping rate of 170 cfs, which includes water from the natural flow of the river. Additionally, the Applicants have obtained water contract 76-2 for water from John Redmond Reservoir storage (Kansas Water Resources Board) which authorizes withdrawal of 120 cfs or as mutually agreed. To date, agreement between Kansas Water Resources Board and the Applicants has been reached for a maximum withdrawal rate of 140 cfs. This value represents a maximum daily rate. However, the amount of water pumped is not to exceed a running average rate of 41 cfs per day. The running average rate is to be calculated on a quarterly basis.</p>
5-13	5.5.2.2	<p>Copper should not be listed as a corrosion product to be discharged to the cooling lake. DES(OL) 4.7 states that copper releases are expected to be negligible.</p>
5-13	5.5.2.2	<p>In DES(OL) Section 5.5.2.2, the staff concludes that there could be significant mortality of aquatic biota in the discharge area due to chlorination of the circulating water. This determination appears to have been based on two factors. The first factor is the planned treatment schedule of three one-half hour treatments per day which will result in total residual chlorine (TRC) levels during those periods of 0.68 to 1.08 mg/l. The second factor for this conclusion is the reference of 0.01 mg/l TRC which was stated to be unsafe for many aquatic organisms (U.S. EPA., 1976).</p>

Comments on Wolf Creek Draft (cont'd)

<u>Page</u>	<u>Section, Table or Figure</u>	<u>Comment</u>
		<p>The Applicant feels the extent of chlorine effects have been overstated by the staff. This position is supported by the following information. The value cited, 0.01 mg/l TRC, is based on continuous dosing (no criteria for intermittent exposure are given by the reference). The value is also conservative since it is based on very sensitive species and assumes that the predominant residual in the effluent is free chlorine (Edison Electric Institute, 1977). Baseline monitoring data collected in accordance with our preoperational environmental program as outlined in ER(OLS) Table 6.1-3 indicates that makeup/cooling lake water contains relatively high concentrations of ammonia and other nitrogenous compounds. These compounds readily combine with chlorine to form combined-residual chlorine [ER(CPS) Section 3.6.3 and ER(OLS) RQ 291.5] which will be the predominant residual in the circulating water. These forms of chlorine have been shown to be less toxic than free chlorine (Ward-1976, Heath-1977).</p>

Additionally, it has been proven that fish can detect and avoid both sub-lethal and lethal chlorine concentrations, even at low temperatures (Cherry et al, 1979). Finally, the affected area of the cooling lake has been conservatively estimated to be forty acres [ER(OLS) Section 5.1.3.2.1.6, page 5.1-14] and exclusions of fish from this area, if it occurs, would not constitute a significant impact on resident fish populations.

REFERENCES

Cherry, D. S., S. R. Larrich, J. D. Giattina, K. C. Dickson and I. Cairus, Jr. 1979. The avoidance responses of the common shiner to

Comments on Wolf Creek Draft (cont'd)

<u>Page</u>	<u>Section, Table or Figure</u>	<u>Comment</u>
		<p>total and combined residual chlorine in thermally influenced discharges. <u>in</u>: Energy and Environmental Stress in Aquatic Systems. Edited by Thorp and Whitfield. Dept. of Energy Conference 771114. 1979.</p> <p>Edison Electric Institute. 1977. Analysis of U.S. Environmental Protection Agency chlorine and temperature quality criteria for water. Volumes I and II.</p> <p>Heath, A. G. 1977. Toxicity of intermittent chlorination to freshwater fish: influence of temperature and chlorine forms. <u>in</u>: Indiana and Michigan Power Co. Report on Acceptable Levels of Chlorine Discharge.</p> <p>Quality Criteria for Water. 1976. U.S. Environmental Protection Agency, Washington, D.C.</p> <p>Ward, R. W., R. D. Griffin, G. M. DeGraeve and R. A. Stone. 1976. Disinfection efficiency in residual toxicity of several wastewater disinfectants. Vol. 1. Grandville, Michigan USEPA Ecological Research Series. EPA-600/2-76-156.</p>
5-18	5.8	The operating staff is now estimated to be 325 persons including guard [ER(OLS) Section 8.1.2.1].
5-44	5.9.4.4(2)	A KG&E survey conducted in 1980 of the population within the LPZ determined that there were less than 70 persons. Also, the 1980 Census population of Emporia was 25,287.
5-62	5.9.4.5(6)	Replacement power for Wolf Creek is estimated to be primarily from coal-fired generation by the NRC. KG&E's replacement fuels are gas and oil [ER(OLS) page 1.3-3]. KCPL would utilize a fuel mixture which is primarily coal but does also use gas and oil.

Comments on Wolf Creek Draft (cont'd)

<u>Page</u>	<u>Section, Table or Figure</u>	<u>Comment</u>
C-7	Table C-3	The liquid effluent source terms of Table C-3 of the DES(OL) do not closely coincide with the liquid effluent source terms of ER(OLS) Table 5.2-2 (updated in Rev. 3). Table C-3 does not appear to reflect the changes made in the recycle evaporator condensate demineralizer to reduce the cesium activities by using a mixed bed resin versus an anion resin only. Recognition of these changes would reduce cesium levels by about one half.