

WOLF CREEK GENERATING STATION

UNIT NO. 1

ENVIRONMENTAL PROTECTION PLAN

(NON-RADIOLOGICAL)

November, 1984

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1.0 Objectives of the Environmental Protection Plan

The Environmental Protection Plan (EPP) provides for protection of nonradiological values during operation of Wolf Creek Generating Station. The principle objectives of the EPP are as follows:

- (a) Verify that the facility is operated in an environmentally acceptable manner, as established by the Final Environmental Statement-Operating License Stage; NUREG-0878 (FES-OLS), and other NRC environmental impact assessments.
- (b) Coordinate NRC requirements, assure they are suitably fulfilled and maintain consistency with other Federal, State and local requirements for environmental protection.
- (c) Keep NRC informed of the environmental effects of facility operation and of actions taken to control those effects.

Environmental concerns identified in the FES-OLS which relate to water quality matters are regulated by the NPDES permit issued by the State of Kansas.

2.0 Environmental Protection Issues

In the FES-OLS dated June, 1982, the staff considered the environmental impacts associated with the operation of Wolf Creek Generating Station (WCGS). Certain environmental issues were identified which required monitoring, study, or license conditions to resolve environmental concerns and to assure adequate protection of the environment.

2.1 Aquatic Issues

- (a) The impacts of Wolf Creek Generating Station operation on the aquatic environment of the John Redmond Reservoir - Neosho River system will be negligible during periods of normal and above-normal hydrologic conditions in the upstream watershed. However, should a severe and prolonged drought occur, the withdrawal of cooling-lake makeup water from the Redmond Dam tailwaters area would contribute to a marked drawdown of water in the reservoir and to reduced streamflow in the river, thus severely depleting available aquatic habitat and adversely affecting resident biota. (FES Section 5.5.2.1).
- (b) Some of the operational effects on aquatic organisms in the cooling lake will be locally severe. For example, periodically high concentrations of total residual chlorine in the vicinity of the cooling water discharge outlet is expected to cause appreciable mortality among aquatic organisms, especially during periods when temperatures in the area are insufficient to cause fish and other motile species to avoid the area. (FES Section 5.5.2.2).

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- (c) Cold shock effects on fish due to reactor shutdowns could cause significant mortality to aquatic species in the cooling lake. (FES Section 5.5.2.2).
- (d) Impingement and/or entainment impacts on aquatic biota are expected to be significant since the approach velocity of water flow to the facility are relatively high. (FES Section 5.5.2.2).
- (e) Discharge from the cooling lake to Wolf Creek is expected to influence the composition of aquatic communities immediately downstream from the discharge outlet, but aquatic biota of the of the Wolf Creek-Neosho River confluence will not be adversely affected by the discharge. (FES Section 5.5.2.3).

The NRC will rely on the State of Kansas for determination of the need for monitoring or permit limitations related to these and other aquatic issues.

2.2 Terrestrial Issues

- (a) That the composition and structure of vegetation in the 453 ha (1120 acre) exclusion zone will be selectively controlled to be compatible with the function and security of station facilities.
(FES-OLS: Section 5.5.1.1; Station Site)
- (b) That the vegetation within a buffer zone surrounding the cooling lake will be retained in or allowed to develop toward a natural state, i.e. naturally occurring biotic communities.
(FES-OLS: Section 5.5.1.1; Station Site)
- (c) That herbicides used for the maintenance of transmission line corridors will be limited to herbicides approved by the U.S. EPA and the State of Kansas at the time of such use.
(FES-OLS: Section 5.5.1.2; Energy-Transmission System)
- (d) That in the event a serious disease problem involving waterfowl attributable to station operation occurs, the actions specified in the reference will be initiated following technical evaluation if deemed necessary.
(FES-OLS: Section 5.5.1.1; Station Site)
- (e) The need for a wildlife monitoring program which includes a general survey program for waterfowl collision events be accomplished.
(FES-OLS: Section 5.5.1.2; Energy-Transmission System)

(f) The need for a fog monitoring program to document any potential increase in fogging due to the operation of the cooling lake heat dissipation system.

(FES-OLS: Section 5.4.1; Fog and Ice)

3.0 Consistency Requirements

3.1 Plant Design and Operation

The licensee may make changes in station design or operation or perform tests or experiments affecting the environment provided such activities do not involve an unreviewed environmental question and do not involve a change in the EPP*. Changes in station design or operation or performance of tests or experiments which do not affect the environment are not subject to the requirements of this EPP. Activities governed by Section 3.3 are not subject to the requirements of this Section.

Before engaging in additional construction or operational activities which may significantly affect the environment, the licensee shall prepare and record an environmental evaluation of such activity. Activities are excluded from this requirement if all measurable nonradiological environmental effects are confined to the on-site areas previously disturbed during site preparation and plant construction. When the evaluation indicates that such activity involves an unreviewed environmental question, the licensee shall provide a written evaluation of such activity and obtain prior NRC approval. When such activity involves a change in the EPP, such activity and change to the EPP may be implemented only in accordance with an appropriate license amendment as set forth in Section 5.3 of this EPP.

*This provision does not relieve the licensee of the requirements of 10 CFR 50.59.

A proposed change, test, or experiment shall be deemed to involve an unreviewed environmental question if it concerns: (1) a matter which may result in a significant increase in any adverse environmental impact previously evaluated in the FES-OL, environmental impact appraisals, or in any decisions of the Atomic Safety and Licensing Board; or (2) a significant change in effluents or power level or (3) a matter, not previously reviewed and evaluated in the documents specified in (1) of this Subsection, which may have a significant adverse environmental impact.

The licensee shall maintain records of changes in facility design or operation and of tests and experiments carried out pursuant to this Subsection. These records shall include written evaluations which provide bases for the determination that the change, test, or experiment does not involve an unreviewed environmental question or constitute a decrease in the effectiveness of this EPP to meet the objectives specified in Section 1.0. The licensee shall include as part of the Annual Environmental Operating Report (per Subsection 5.4.1) brief descriptions, analyses, interpretations, and evaluations of such changes, tests and experiments.

3.2 Reporting Related to the NPDES Permit and State Certification

Changes to, or renewals of, the NPDES Permit or the State certification shall be reported to the NRC within 30 days following the date the change or renewal is approved. If a permit or certification, in part or in its entirety, is appealed and stayed, the NRC shall be notified within 30 days following the date the stay is granted.

The licensee shall notify the NRC of changes to the effective NPDES Permit proposed by the licensee by providing NRC with a copy of the proposed change at the same time it is submitted to the permitting agency. The licensee shall provide the NRC a copy of the application for renewal of the NPDES permit at the same time the application is submitted to the permitting agency.

3.3 Changes Required for Compliance with Other Environmental Regulations

Changes in plant design or operation and performance of tests or experiments which are required to achieve compliance with other Federal, State, or local environmental regulations are not subject to the requirements of Section 3.1.

4.0 Environmental Conditions

4.1 Unusual or Important Environmental Events

Any occurrence of an unusual or important event that indicates or could result in significant environmental impact causally related to plant operation shall be recorded and promptly reported to the NRC within 24 hours followed by a written report per Subsection 5.4.2. The following are examples: excessive bird impaction events, onsite plant or animal disease outbreaks, mortality or unusual occurrence of any species protected by the Endangered Species Act of 1973, fish kills, increase in nuisance organisms or conditions, and unanticipated or emergency discharge of waste water or chemical substances.

No routine monitoring programs are required to implement this condition.

4.2 Environmental Monitoring and Management

Environmental monitoring and management activities shall be undertaken as outlined in Section 2 and as described in the following.

4.2.1 Fog Monitoring

A fog monitoring program shall be accomplished to document the frequency of occurrence of natural fog and future cooling lake operation induced fog through the first year of commercial operation of WCGS. A visometer and continuous recorder shall be utilized in a conservative location throughout the program.

4.2.2 Waterfowl Impaction

A general survey program shall be accomplished to document significant waterfowl collision events and determine if mitigation is warranted.

4.2.3 Land Management

There shall be a land management program instituted at WCGS to provide for revegetation, maintenance, and restoration of the WCGS site. This program shall attempt to achieve a balance between production and conservation values on site property through the implementation of conservation and wildlife management techniques. There shall be no reporting requirements associated with this condition.

5.0 Administrative Procedures

5.1 Review and Audit

The licensee shall provide for review and audit of compliance with the EPP. The audits shall be conducted independently of the individual or groups responsible for performing the specific activity. A description of the organization structure utilized to achieve the independent review and audit function and results of the audit activities shall be maintained and made available for inspection.

5.2 Retention of Program Documentation

Program documentation relative to the environmental aspects of plant operation shall be made and retained in a manner convenient for review and inspection. Program documentation shall be made available to NRC on request.

Documentation of modifications to plant structures, systems, and components determined to potentially affect the continued protection of the environment shall be retained for the life of the plant. All other information, data, and finalized reports relating to this EPP shall be retained for five years or, where applicable, in accordance with the requirements of other agencies.

5.3 Changes in Environmental Protection Plan

Request for change in the EPP shall include an assessment of the environmental impact of the proposed change and a supporting justification. Implementation of such changes in the EPP shall

not commence prior to NRC approval of the proposed changes in the form of a license amendment incorporating the appropriate revision to the EPP.

5.4 Plant Reporting Requirements

5.4.1 Routine Reports

An Annual Environmental Operating Report describing implementation of this EPP for the previous year shall be submitted to the NRC prior to May 1 of each year. The initial report shall be submitted prior to May 1 of the year following issuance of the operating license. The period of the first report shall begin with the date of issuance of the operating license.

The report shall include summaries and analyses of the results of the environmental protection activities required by Subsection 4.2 of this EPP for the report period, including a comparison with related preoperational studies, operational controls (as appropriate), previous non-radiological environmental monitoring reports, and an assessment of the observed impacts of plant operation on the environment. If harmful effects or evidence of trends towards irreversible damage to the environment are observed, the licensee shall provide a detailed analysis of the data and a proposed course of action to alleviate the problem.

The Annual Environmental Operating Report shall also include:

- (a) A list of EPP noncompliances and the corrective actions taken to remedy them.
- (b) A list of all changes in station design or operation, tests, and experiments made in accordance with Subsection 3.1 which involved a potentially significant unreviewed environmental issue.
- (c) A list of nonroutine reports submitted in accordance with Subsection 5.4.2.

In the event that some results are not available by the report due date, the report shall be submitted noting and explaining the missing results. The missing results shall be submitted as soon as possible in a supplementary report.

5.4.2 Nonroutine Reports

A written report shall be submitted to the NRC within 30 days of occurrence of nonroutine, unusual or important environmental event. The report shall (a) describe, analyze, and evaluate the event, including extent and magnitude of the impact and plant operating conditions, (b) describe the probable cause of the event, (c) indicate the action taken to correct the reported event, (d) indicate the corrective action taken to preclude repetition of the event and to prevent similar occurrences involving

similar components or systems, and (e) indicate the agencies notified and their preliminary responses.

Events reportable under this Subsection which also require reports to other Federal, State, or local agencies shall be reported in accordance with those reporting requirements in lieu of the requirements of this Subsection. The NRC shall be provided a copy of such report at the same time it is submitted to the other agency.