

APPENDIX B  
TO FACILITY OPERATING LICENSE NO. NPF-

CALLAWAY PLANT

UNIT 1

UNION ELECTRIC COMPANY

DOCKET NO. 50-483

ENVIRONMENTAL PROTECTION PLAN  
(NONRADIOLOGICAL)

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CALLAWAY PLANT  
UNIT 1

ENVIRONMENTAL PROTECTION PLAN  
(NON-RADIOLOGICAL)

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## 1.0 Objectives of the Environmental Protection Plan

The Environmental Protection Plan (EPP) is to provide for protection of nonradiological environmental values during operation of Callaway Plant. The principal objectives of the EPP are as follows:

- (1) Verify that the facility is operated in an environmentally acceptable manner, as established by the Final Environmental Statement - Operating License Stage NUREG-0813 (FES-OL), and other NRC environmental impact assessments.
- (2) Coordinate NRC requirements and maintain consistency with other Federal, State and local requirements for environmental protection.
- (3) Keep NRC informed of the environmental effects of facility operation and of actions taken to control those effects.

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

## 2.0 Environmental Protection Issues

In the FES-OL dated January, 1982, the staff considered the environmental impacts associated with the operation of Callaway Plant. Certain environmental issues were identified which required study or license conditions to resolve environmental concerns and to assure adequate protection of the environment.

### 2.1 Aquatic Issues

No specific aquatic issues were raised by the staff in the FES-OL.

### 2.2 Terrestrial Issues

The specific terrestrial issue raised by the staff in the FES-OL is the need to undertake a limited-term terrestrial monitoring program by means of infrared aerial photography with accompanying ground truth aimed at monitoring the impact of cooling tower drift on the local flora. (FES-OL: Section 5.5.1.6)

### 2.3 Cultural Resources

There is a need to protect the cultural resources sites which are located in the area of potential environmental impact related to the operation and maintenance of the plant and associated facilities, and which have also been identified in the survey as potentially eligible for the National Register of Historic Places. NRC requirements with regard to the cultural resources are specified in Subsection 4.3 of this environmental protection plan.



### 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 plant design, operation, performance of tests or experiments which do not affect the environment are not subject to 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.

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 as modified by staff's testimony, the Atomic Safety and Licensing Board, supplements to the FES, environmental impact appraisals, or in any decisions of the Atomic Safety and Licensing Board; or (2) a significant change in effluents or power level {in accordance with 10 CFR Part 51.5(b)(2)}; 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,

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

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, and 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 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 Aerial Remote Sensing

Vegetative communities of the site and vicinity within 1 kilometer of the cooling towers in all directions shall be aerially photographed to detect and assess the effect, or lack thereof, as related to cooling tower drift dispersions. Photography shall be done by aerial overflight during July 15 to September 15. Monitoring shall include a program of low altitude color infrared photography. The scale for full coverage shall be adequate to enable identification of vegetation damage over relatively small areas of terrain. Some circumstances may warrant inspection of photographs discerning individual trees. Such scale should be adequate to resolve impacted features.

Photographs shall be compared with baseline data to ascertain changes in vegetation. Photographic interpretations shall be verified by ground inspection surveys to confirm areas of stress and non-stress. This program shall require aerial photographic monitoring during the first July 15 - September 15 period after the plant has been in operation for one year and the program shall be repeated once the following year and alternate years for three (3) additional periods. A report shall be submitted as part of the annual report following each aerial photographic monitoring period. The report shall contain a description of the program results, and interpretative analyses of environmental impacts. Results reported shall contain information encompassing but not limited to the following: sampling date; time of day; film types; and one (1) set of resultant color transparencies encompassing an area within approximately a one kilometer (1 km) radius of the Unit 1 tower.



### 4.3 Cultural Resources

On May 23, 1984, the NRC received two reports related to the cultural resources survey of the Callaway site. The reports are entitled, "A Phase 1 Cultural Resources Survey and Assessment on Residual Lands at Union Electric Company's Callaway Nuclear Plant, Callaway County, Missouri, April 1984," and "A Cultural Resources Management Plan for Residual Lands at the Union Electric Company, Nuclear Power Plant, Callaway County, Missouri." The reports were prepared by American Resources Group, Ltd. and identified three cultural resource sites which are potentially eligible for the National Register and are located in the area of potential environmental impact related to the operation and maintenance of the plant and associated facilities.

The NRC requires the applicant to provide the NRC with information necessary to initiate a determination of eligibility request for sites 23CY20, 23CY352, and 23CY359. The applicant will prepare such information in consultation with the State Historic Preservation Officer (SHPO) and will obtain from the SHPO an opinion regarding the potential eligibility of the sites for inclusion in the National Register of Historic Places.

Upon receipt and review of the information, the NRC will forward the materials to the Keeper of the National Register for action. If the Keeper rules the sites are not eligible, the finding will be filed and this section of the EPP is fully satisfied with no further action required.

If the Keeper rules that any of the sites are eligible for the National Register, the NRC requires the applicant to provide the NRC with information necessary to complete a determination of effect which the operation and maintenance activities may have on the eligible sites. The applicant will follow the steps outlined in 36CFR 800.4 and 36CFR 800.3 in developing the information. Upon receipt of the information, the NRC, in consultation with the SHPO, will complete the determination of effect process. If the determination results in a no effect finding as provided in 36 CFR 800.4b, 1, the documentation will be filed and this section of the EPP is fully satisfied with no further action required.

If the determination results in an effect finding, this conclusion will be supported by an analysis and adequate documentation. An appropriate action program, which the applicant has developed in consultation with the SHPO and concurred in by the SHPO, should be included in the materials provided to the NRC. Upon review of the program, the NRC will forward the documentation to the Advisory Council on Historic Preservation (ACHP) for comment.



After ACHP comment is received by the NRC, the program will be revised, if necessary, to incorporate comments received. The applicant shall then proceed, in consultation with the SHPO, to implement the program. Upon completion of the program, a report shall be submitted to the NRC which will include a description of the results of the program and the disposition of data recovered (if applicable). Upon submittal of this report and acceptance by NRC, this section of the EPP is fully satisfied with no further action required.

The NRC will provide the Interagency Archeological Service (IAS) of the U.S. Department of Interior the two reports (survey and management plan) identified in Item A of this EPP and the review comments of the Missouri State Historic Preservation Office and the applicant's responses to the comments.

The IAS will be requested to review the information and present the NRC with an opinion as to the findings and the proposed course of action. If the NRC is advised by IAS that there are additional sites within the area of potential environmental impact related to the operation and maintenance of the plant and associated facilities which are potentially eligible for the National Register of Historic Places, the applicant will be required to furnish information for such sites as outlined in Item A of this section of the EPP.

## 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 Records Retention

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

Records of modifications to station structures, systems and components determined to potentially affect the continued protection of the environment shall be retained for the life of the station. All other records, data and logs 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

Requests for changes 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 calendar 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), and

previous non-radiological environmental monitoring reports, and an assessment of the observed impacts of the plant operation on the environment. If harmful effects or evidence of trends toward 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:

- (1) A list of EPP noncompliances and the corrective actions taken to remedy them.
- (2) 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 question.
- (3) 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 an unusual or important environmental event (see Section 4.1). 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 time it is submitted to the other agency.