

APPENDIX B

TO FACILITY OPERATING LICENSE NO. NPF-23

COMMONWEALTH EDISON COMPANY
BYRON STATION UNITS 1 & 2
DOCKET NOS. 50-454 AND 50-455

ENVIRONMENTAL PROTECTION PLAN
(NONRADIOLOGICAL)

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BYRON STATION

UNITS 1 AND 2

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 the nuclear facility. 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 (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 construction and 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 way of the licensee's NPDES permit.

2.0 Environmental Protection Issues

In the FES-OL dated April 1982, the staff considered the environmental impacts associated with the operation of the two unit Byron Station. 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.

Aquatic matters are addressed by the effluent limitations, monitoring requirements and the Section 316(b) demonstration requirement contained in the effective NPDES permit issued by the Illinois Environmental Protection Agency. The NRC will rely on this agency for regulation of matters involving water quality and aquatic biota.

2.2 Terrestrial Issues

The terrestrial issues raised by the staff in the FES-OL were:

- (1) Potential impacts of cooling tower emissions on the terrestrial environment (FES-OL Section 5.5.1.1).

(2) Potential increased noise level impacts in the vicinity of the station
(FES-0L Section 5.12).

NRC requirements with regard to the terrestrial issues are specified in
Subsection 4.2 of this EPP.

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 [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, 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 Environmental Monitoring

4.2.1 Aerial Remote Sensing

Vegetative communities of an area of approximately 1 km radius centered at the Byron Station shall be aeriaily photographed using false color infrared film in order to detect and assess the effect, or lack of effect, related to cooling tower drift deposition.

Photographs will be taken at a scale of 1 inch to 500 feet to provide the necessary detail to enable identification of vegetative damage over relatively small areas of terrain. Some circumstances may warrant inspection of photographs discerning individual trees. Photographs shall be compared with baseline

to ascertain changes in vegetation. A consulting plant pathologist will examine and analyze the photographs to determine possible stressed foliage based on color signature differences. The consulting plant pathologist will conduct a field survey of suspect areas to identify the cause of any stressed vegetation that may be present.

The aerial photographic monitoring will be done between August 15 and September 15 once before the station goes into operation and during the first summer after the station has been in operation for one year. The program shall be repeated in the August 15-September 15 interval once the following year and alternate years for three 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 interpretive analyses of environmental effects, if any. In addition one set of color transparencies encompassing the 1 km radius of the cooling tower will be submitted.

4.2.2 Confirmatory Sound Level Survey

Surveys shall be conducted to quantify the operational sound levels that exist at various locations around the site. The operational sound level surveys shall be conducted as soon as practicable during the operational phase of the facility, when the cooling towers are operating with their design water flow rates. Surveys shall be conducted for both one unit normal operation and again for two-unit normal operation.

For each of the surveys, sound level data shall be collected at several sites, the exact number and location to be selected by the licensee after consideration of (1) existing onsite and nearby offsite noise sources and barriers, and (2) noise sensitive land uses in the site vicinity (e.g., residences, schools, churches, cemeteries, hospitals, parks).

Each survey shall include data collected from each sampling site during the time of the year when foliage of deciduous trees is present and also from the time of year when such foliage is largely absent. Data collected from each sampling site shall encompass both the daytime and the nighttime periods. Sampling shall include the identification of pure tones, if any, emanating from plant equipment during the operational phase.

The selection, calibration and use of equipment, conduct of the surveys, and the analysis and reporting of data shall conform to the provisions of the applicable American National Standards Institute Standards. The conduct of the surveys shall be similar such that the results are comparable.

The results of the surveys conducted under this program shall be summarized, interpreted and reported in accordance with Section 5.4.1 of this EPP. The results shall include, for each sampling location for each survey, the daytime and nighttime equivalent sound levels, octave band sound, and the range of sound levels recorded. A description of the pure tones found, if any, and their sources shall also be included in the results.

The final report of this program shall present a brief assessment by the licensee of the environmental impact of plant operation on the offsite acoustic environment, and shall describe the proposed mitigative measures, if any, to be taken to reduce the impact of plant noise levels on the offsite environment. This report shall also contain a list of all noise-related complaints or inquiries received by Commonwealth Edison Company concerning the Byron Station subsequent to issuance of the operating license along with a description of the action taken by CECO to resolve these complaints or inquiries.

This program shall terminate upon completion of the collection of the specified sound level data for each phase and submission of an acceptable final report.

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 station 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 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 mitigating action.

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 a nonroutine event. The report shall (a) describe, analyze, and evaluate the event, including extent and magnitude of the impact, and plant operating

characteristics, (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.