

Docket Nos. 50-237
and 50-249

DEC 21 1973

Am 016

Commonwealth Edison Company
ATTN: Byron Lee, Jr.
Vice President
P. O. 767
Chicago, Illinois 60690

Gentlemen:

By letter dated June 25, 1973 you were requested to prepare and submit to the Commission, environmental technical specifications for Dresden Nuclear Power Station Units 2 and 3. You submitted "Appendix B Environmental Technical Specifications for Dresden Nuclear Station Units 2 and 3" by letter dated November 8, 1973. We have reviewed your submittal and find that it does not satisfy our requirements as outlined in previous discussions with your staff.

Enclosed is general guidance for your environmental technical specification (part A) and specific requirements and comments (part B). In addition, discussions have been held with your staff concerning necessary modifications to your submittal.

Accordingly, you are requested to resubmit the proposed environmental technical specification in accordance with the enclosed comments, and discussions with your staff. In addition, we will need to know your schedule for submitting the proposed discharge structure design for approval, for completion of the maximum radwaste recycle modification and for commencing closed cycle operations.

In order to maintain our licensing review schedule, we will need your submittal, consisting of three signed originals and 40 copies, by January 25, 1974. Please inform us within seven (7) days after receipt of this letter of your confirmation of this date or of a proposed alternate.

Sincerely,

Original signed by
D. R. Muller

Daniel R. Muller, Assistant Director
for Environmental Projects
Directorate of Licensing

Enclosure:

As stated

OFFICE

cc: See next page

SURNAME

DATE

Dg

cc: Mr. John W. Rowe
Isham, Lincoln & Beale
One First National Plaza
42nd Floor
Chicago, Illinois 60670

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DATE		12/21/73			

ENCLOSURE

Part A

General Guidance for Dresden Environmental Technical Specification

The Environmental Technical Specifications should include:

- (1) Definition of key terms used in the specifications that are not defined in applicable regulations or guides or are not generally accepted terminology.
 - (2) Specification of (a) limiting conditions for operation which, if not exceeded, should result in an acceptable environmental impact and (b) their associated monitoring requirements.
 - (3) Specification of the environmental surveillance program necessary to assess the impact of plant operations on the environment. The program should include submission of reports to the AEC:
 - (a) on a semiannual basis, and
 - (b) when an observable effect on certain environmental parameters exceeds a specific level.
 - (4) Specification of administrative controls which relate to organization and management, procedures, review and audit, and records and reports which are necessary to assure the protection of the environment.
- * Technical Specifications imposed upon plant operation in the interest of the health and safety of the public are included as Appendix A of the operating license.

OUTLINE

1.0 DEFINITIONS

2.0 LIMITING CONDITIONS FOR OPERATION

2.1 Thermal

- 2.1.1 Maximum ΔT Across Condenser
- 2.1.2 Maximum Discharge Temperature
- 2.1.3 Maximum Btu/hr
- 2.1.4 Rate of Change of Discharge Temperature
- 2.1.5 Heat Treatment of Circulating Water System
- 2.1.6 Deicing Operations

2.2 Hydraulic

- 2.2.1 Intake Velocity
- 2.2.2 Discharge Velocity
- 2.2.3 Flow Rate Restrictions
- 2.2.4 Reservoir Drawdown

2.3 Chemical

- 2.3.1 Biocides
- 2.3.2 Corrosion Inhibitors
- 2.3.3 Suspended and Dissolved Solids
- 2.3.4 pH
- 2.3.5 Other Chemicals Which Affect Water Quality

2.4 Radioactive Discharge

OUTLINE

3.0 ENVIRONMENTAL SURVEILLANCE

3.1 Nonradiological Surveillance

3.1.1 Abiotic

a. Aquatic

- (1) Biocides
- (2) Corrosion Inhibitors
- (3) Dissolved Gases
- (4) Suspended and Total Dissolved Solids
- (5) Thermal Measurements
- (6) Erosion

b. Terrestrial

- (1) Soil Chemistry
- (2) Groundwater
- (3) Other Program Elements

3.1.2 Biotic

a. Aquatic

- (1) General Ecological Survey
- (2) Impingement of Organisms
- (3) Entrainment of Plankton, Eggs and Larval Forms

b. Terrestrial

- (1) General Ecological Survey
- (2) Other Surveys

c. Aerial

3.2 Radiological Environmental Monitoring

4.0 SPECIAL SURVEILLANCE AND STUDY ACTIVITIES

OUTLINE (Cont.)

5.0 ADMINISTRATIVE CONTROLS

- 5.1 Responsibility**
- 5.2 Organization**
- 5.3 Review and Audit**
- 5.4 Action to be Taken if a Limiting Condition for Operation is Exceeded**
- 5.5 Procedures**
 - 5.5.1 Procedures for Implementing Environmental Technical Specifications**
 - 5.5.2 Operating Procedures**
 - 5.5.3 Review of Procedures**
- 5.6 Plant Reporting Requirements**
 - 5.6.1 Routine Reports**
 - 5.6.2 Non-Routine Reports**
 - a. Radioactive Discharge**
 - b. Radiological Environmental Monitoring**
 - c. Nonradiological**
 - 5.6.3 Changes**
- 5.7 Records Retention**
 - 5.7.1 Plant Lifetime Retention**
 - 5.7.2 5 Year Retention**
- 5.8 Special Requirements**

Part B

Specific Comments for Dresden Environmental Technical Specifications

2.0 Limiting Conditions for Operation

Thermal

The thermal discharge from the plant during open cycle operation must be controlled. The applicable State Variance should be considered and a specification(s) should be developed that will prevent violating the intent of the State Standard as modified by the applicable variance. It is not sufficient to reference the State Standards or to ignore the thermal impact by pointing out the anticipated closed cycle operations.

Chemical

Chlorine - No residual chlorine is expected at the outfall due to intermittent chlorination and the long transit time in the cooling lake. This is based on the stated chlorination practices as defined in the Environmental Report. Excessive chlorination should be controlled by an appropriate specification at the condenser discharge during intermittent chlorination.

Other Chemicals - Referencing the State permit is not adequate. Those chemicals of importance as identified in the FES and the State Standards must be specifically covered in this section. Limits on DO reduction should also be included.

Radioactive Discharge

The specifications for the controlled release of radioactive effluents will be included in the Environmental Technical Specification. This section will be supplied in its entirety by the Staff. The Appendix A radiological Technical Specifications will be deleted when the Radiological Environmental Technical Specifications become effective.

3.0 Environmental Surveillance

Specific specifications should be included for Dike Surveillance, and Fog and Ice observations during initial closed cycle operations. Although the step by step procedure should not be presented, sufficient detail to characterize the purpose, method, frequency and technique utilized is required.

The conclusions and requirements outlined in section 6.0 of the FES have not been incorporated. This should be done. This section should follow the format of the example Previously provided to you. The Once Through-Open Cycle Mode is frequently mentioned. This is not adequately defined in section 1.0. If this means bypassing the lake, a full explanation must be provided. Our impact assessment has determined that only the Closed Cycle Mode is acceptable. The Technical Specifications should be written to permit Open Cycle operations only until completion of the maximum radwaste Recycle system.

This section needs considerable work to incorporate the requirements of section 6.0 of the FES, to meet the guidance previously provided to you and to be a consistent, easy to follow specification.

The radiological environmental monitoring as presently contained in Appendix A, is essentially complete. This section is presently under review by the staff. Any changes desired by the staff will be discussed with you at a future, as yet unscheduled Environmental Technical Specification meeting.

4.0 Special Surveillance and Study Activities

Specifications should be included for short term programs such as investigation of the 2 foot depression and the 4 inch diameter holes in the south dike and Thermal Plume measurements. Although the step by step procedures should not be presented, sufficient detail to characterize the purpose, method and schedule is required.

5.0 There must be a complete Administrative Controls section. The review and audit functions should be detailed as they will function at Dresden.

Those items considered necessary for inclusion in section 5.8 are listed below.

5.8 Special Requirements

Any physical or procedural changes that would affect these specifications shall be reported as described in Section 5.6.3a.

Specifications

5.8.1 Cooling System

- a The maximum design water-intake velocity shall not exceed 0.6 foot per second at the bar racks and 1.85 feet per second at the traveling screens.
- b Debris and fish washed from the traveling screens shall not be discharged into the receiving water.
- c The cooling system shall be operated in the closed cycle mode as soon as practical before December 1974.
- d The proposed discharge designs and supporting basis that will be determined from the model studies now in progress shall be submitted to the AEC for review and approval.

5.8.2 Chemical

- a If organic algicides are necessary to remove excess algal and aquatic weed growth in the Dresden cooling lake, copper sulfate in concentrations not to exceed $0.08 \text{ mg CuSO}_4 \cdot 5\text{H}_2\text{O}$ per liter may be used.
- b Procedures for the application of herbicides for transmission line right-of-way maintenance shall meet the following criteria:
 1. Use of 2,4-D and 2,4,5-T herbicides shall be limited to the stump and basal applications.
 2. The use of these herbicides shall be replaced by hand trimming and cutting in conservation, recreation, and residential areas.
 3. Herbicides shall not be applied immediately before, after or during a heavy rain or irrigation of cropland along the right-of-way.
 4. Herbicides shall not be applied within 100 feet of any body of water, nor in areas where contamination of water supplied is likely.
 5. Treatment with herbicides shall not be more often than once a Year.

6. Herbicides shall not be applied when winds are greater than 5 mph.
 7. No formulation shall be used whose dioxin contamination level exceeds 0.1 ppm.
 8. As soon as the Administrator of the Federal EPA issues standards for pesticide and herbicide applicators, all applications must be done by an individual meeting standards or under his immediate supervision.
- c Lake dredging shall not be removed from the perimeter of the lake.

5.8.3 Fog and Ice Control

- a An electronic sensor shall be used to measure and record the horizontal visibility next to the County Line road bed between the bridges over the cooling lake. The visibility detector automatically turns on two "Road Closed" signs (one north and one south of the bridges) whenever the visibility is less than 100 feet. For visibilities between 100 and 500 feet, two additional signs indicate "Fog Ahead - Reduce Speed to 20 mph". Fog fences have been installed along the road and high intensity strobe lights are placed along the center line of the road.