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September 27, 1983

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

Subject: Dresden Station Unit 2
Full Term Operating License
(FTOL)
NRC Docket No. 50-237

Reference (a): L. O. DelGeorge letter to H. R. Denton
dated September 23, 1981.

Dear Mr. Denton:

The purpose of this letter is to provide additional information on Dresden Station Unit 2 to allow the issuance of a full term operating license for forty years from the original provisional operating license (POL) issued on December 22, 1969. The NRC's past practice has been to issue an operating license for a term of 40 years which was backdated to the issuance of the construction permit rather than with the issuance of the operating license itself. Reference (a) presented a legal basis that supports our request for issuance from the POL and although written for LaSalle County Station is also applicable here.

The planned life for Dresden Station Unit 2 is forty years of commercial service on the Commonwealth Edison network. The siting, design and operations for Dresden Station were all planned for that lifetime with conservative margin added to assure its accomplishment. In anticipation of long service life from nuclear generating stations, Commonwealth Edison purchased and operates a uranium mine and milling subsidiary to retain the long-term economic advantage that nuclear generation has over alternate power generation methods. For both our new and our operating nuclear units, that economic advantage is expected to remain favorable and to endure over a period exceeding the forty-year life of Dresden or the planned life of new generating stations currently under construction.

The original Dresden Unit 2 specifications for equipment such as pump casings, valve bodies, heat exchangers, tanks, etc. state a design life objective of 40 years with due allowance for corrosion, erosion, and material fatigue. Dresden Unit 2 piping was designed in accordance with the Power Piping Code USAS B31.1.0-1967, which requires a wall thickness allowance for corrosion and erosion. The provided allowance on Dresden Unit 2 is based on a design life of 40 years in accordance with the original design specifications. Piping code stress allowables were based on a conservative number of cyclic thermal loads.

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The specification for the containment structure stated the intended life of the new plant was to be 40 years and all design and construction were performed accordingly. This specification also addressed the governing codes and standards, the original design conditions, design loads and load combinations in consideration of this 40 year life span. Although the design criteria and specification of the reinforced concrete and structural steel did not specifically address design life span, the design and construction codes implied a 40 year span. There is ample evidence that structures designed and constructed to similar requirements have performed well over 40 years or more.

Dresden Station Unit 2 has participated in the Mark I Containment Short and Long Term Programs. The goal of these programs was to upgrade the station for the new design conditions affecting especially the torus, its internal and external attachments, and the safety/relief valve lines. As a result of this re-analysis and the subsequent modifications, the containment and associated structures and piping have a greater margin of safety now than they had at the time of original construction. The Dresden Station structures were specifically designed or have been evaluated to show they can sustain cyclic effects over a 40 year life span. As part of the Mark I Long Term Program, the containment and associated structures and piping were also re-evaluated for the loads due to pipe break accidents inside containment and modified as required to assure that these newly defined loads were within code allowable stresses. The welded plate steel containment, i.e., Drywell, Torus, and vent system was designed and constructed without a corrosion allowance and was therefore coated. The coating inside Torus is inspected every outage for deterioration due to high humidity, and is maintained as required.

Dresden Station Unit 2 has also been evaluated under the Systematic Evaluation Program (SEP) to current regulatory requirements (10 CFR 50, Appendix A Design Criteria, Standard Review Plans, NRC Regulatory Guides and NUREG's). Some of the important conclusions are:

- The NRC consultant Senior Seismic Review Team (SSRT), after a review of the seismic design of the Dresden structures, concluded that these structures will be capable of performing adequately during postulated seismic events and that the plant could be safely shutdown in the event of a Safe Shutdown Earthquake (SSE).

- The NRC Staff after their review of the seismicity of the Dresden area, has concluded that the original magnitude for the Safe Shutdown Earthquake could be reduced, thus increasing the conservatism of the design basis for structures and equipment.

- The review of industrial and transportation hazards to the Standard Review Plan concluded that the probability of such hazards is acceptably low.

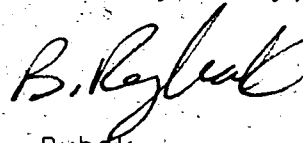
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- Dresden Station structures have also been reviewed for the effect of external environmental hazards such as wind, tornado missiles and flood. The conclusion is that the probability of these hazards damaging Dresden structures is acceptably low.

The Dresden Station structures as they exist today after a service life of approximately 13 years, are in excellent condition and show no signs of distress which cannot be explained by an engineering assessment. These structures can be expected to be serviceable for the full 40 years. The current NRC accepted Inservice Inspection (ISI) program monitors the status of plant equipment and piping in a periodic inspection program. Appraisals of life limited equipment have resulted in surveillance and maintenance requirements to maintain the qualification objectives throughout the Dresden Unit 2 lifetime. Operability tests to certify the availability of safety equipment for operations, i.e. limiting conditions of operation (LCOs), are a part of the Dresden Unit 2 Technical Specifications. Safety margins established by the Technical Specifications setpoints acknowledge the original 40 year design. The context of operational safety includes the entire 40 year design life of the plant. Though operational procedures may change, their basis is the Technical Specifications and the engineering design of the plant as analyzed in the Dresden FSAR. The operational term of that basis is 40 years from initial startup. Dresden Unit 2 had availability factors of 0.92 in 1980, 0.60 in 1981 due to refueling outage, and again 0.92 in 1982. The combination of conservative design, extensive performance evaluation, continuing modification programs, plus surveillance and maintenance practices enable Commonwealth Edison to confidently expect 40 years of operational service from Dresden Unit 2. Furthermore, we believe that a request for issuance of an operating license of 40 years from the date of the POL is consistent with the Atomic Energy Act and NRC regulations.

If there are any further questions regarding this matter, please contact this office.

Yours very truly,



B. Rybak
Nuclear Licensing Administrator

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cc: R. Gilbert - NRR
NRC Resident Inspector - Dresden