

## **1.0 INTRODUCTION AND SUMMARY**

### **1.1 INTRODUCTION**

Construction of Calvert Cliffs Units 1 and 2 was authorized by the Atomic Energy Commission (AEC) by issuance of Construction Provisional Permits CPPR-63 and CPPR-64 in Docket Numbers 50-317 and 50-318 on July 7, 1969. Unit 1 went into commercial operation in May 1975, and Unit 2 in April 1977.

On July 11, 1967, the AEC published in the Federal Register the Proposed General Design Criteria for Nuclear Power Plants. Prior to the issuance of the construction permit, Calvert Cliffs submitted the Preliminary Safety Analysis Report (PSAR) in which was reflected this plant's design intent based on these criteria. Design and construction proceeded accordingly. The Final Safety Analysis Report (FSAR) was submitted in support of the application for a license to operate the plant. Revision 0 of the Updated Final Safety Analysis Report was submitted in July 1982, and has been periodically revised since then.

Subsequent to the initial startup of both units, 10 CFR Part 50, Appendix A containing 64 general design criteria was issued. These criteria reflected the original 70 criteria with revisions and regrouping. Design changes and modifications for Calvert Cliffs are evaluated for consistency with the proposed criteria except where specific Appendix A criteria have been required by the Nuclear Regulatory Commission (NRC).

The Nuclear Steam Supply System (NSSS) for both units is identical, utilizing pressurized water reactors supplied by Combustion Engineering, Inc. (CE). The NSSS includes a control element assembly (CEA)-type reactor core with two steam generators (SGs), two reactor coolant loops and four reactor coolant pumps (RCPs). The geometry of the core is essentially identical to that used for the Main Yankee Atomic Power Station (Docket Number 50-309). The reactor coolant loops are very similar to those in the Palisades Plant (Docket number 50-255). The SGs are Babcock & Wilcox, Canada replacement steam generators. The replacement reactor vessel closure heads (RVCHs) were supplied by Babcock & Wilcox, Canada.

An initial license was requested to operate each of the facilities at a core thermal output of 2,560 megawatts (MWt). An increase in power to 2700 MWt was authorized by license amendments (References 1 and 2). Rated thermal power was once again increased to 2737 MWth as part of a measurement uncertainty recapture modification which was approved by Reference 3. Site parameters and major systems and components, including the engineered safety features (ESFs) and containment structures, have been evaluated for operation at the higher power level. The postulated incidents considered in Chapter 14 are also evaluated at the higher power level.

Over the time the plant has been operated, numerous modifications have been made. In some cases, these changes were submitted to, and approved by, the NRC through the license amendment process. In other cases, changes were implemented under the provisions of 10 CFR 50.59 with notification to the Commission after the fact.

Each revision to the Updated Final Safety Analysis Report is intended to reflect, within the limitations of the report format, the configuration and operation of the plant at the end of the refueling outage preceding the revision date, as required by 10 CFR 50.71.

On the basis of the information presented in this FSAR and referenced material, Calvert Cliffs Nuclear Power Plant (CCNPP) concludes that CCNPP Units 1 and 2 were designed and constructed and are operated without undue risk to the health and safety of the public.

### 1.1.1 REFERENCES

1. Letter from D. K. Davis (NRC) to A. E. Lundvall, Jr. (BGE), dated September 9, 1977, Amendment No. 24 to Facility Operating License No. DPR-53 for Unit No. 1
2. Letter from D. K. Davis (NRC) to A. E. Lundvall, Jr. (BGE), dated October 19, 1977, Amendment No. 9 to Facility Operating License No. DPR-69 for Unit No. 2
3. Letter from D. V. Pickett (NRC) to J. A. Spina (CCNPP), dated July 22, 2009, Calvert Cliffs Nuclear Power Plant, Unit Nos. 1 and 2 - Amendment Re: Measurement Uncertainty Recapture Power Uprate (TAC Nos. MD9554 and MD9555) (Amendment Nos. 291/267)