

Testing and Qualification Solutions

For New Nuclear Construction

CURTISS - WRIGHT

Commitment to Our Nation's Safety



Curtiss-Wright's Testing Capabilities

For over 30 years, Curtiss-Wright has played a vital role in supporting the nuclear power industry's safety-related hardware needs through Commercial Grade Dedication (CGD) and Equipment Qualification (EQ). This service is performed in-house at our Cincinnati, OH and Newmarket, ON facilities by staff with hundreds of years of combined experience. With over 50,000 hardware components qualified and dedicated, our CGD program maintains an extensive library of dedication plans, test reports, and component safety-basis characteristics. This repository of data represents decades of procedural experience and industry knowledge. Paired with our strong project management team, Curtiss-Wright has the solutions and capabilities to deliver on time and maintain schedule. We maintain robust quality programs and are regularly audited by NIAC, NUPIC, as well as the National Lab Sites and Tiered Suppliers.

With a team of industry experts, we continue to deliver cutting-edge solutions that support safe operations, equipment reliability, and regulatory compliance. As the nuclear industry advances, Curtiss-Wright remains ready and equipped to meet the evolving demands of Advanced Reactors and Small Modular Reactors.

Dedication Procedures

Curtiss-Wright follows a highly structured dedication process that adheres to the industry's most rigorous guidelines. This methodology begins with a dedication procedure that includes technical evaluation, definition of critical characteristics (based on safety function), acceptance criteria, customer specifications, and data sheets. Upon certification, the CGD team issues a testing report as well as a Certificate of Compliance (CoC). Our team can dedicate nearly any item, from raw materials, to complete systems including electrical and mechanical components.

Qualification Process

Curtiss-Wright's qualification process includes material evaluation and selection followed by an initial review of the product design for any risks and susceptibility. After the review, our team will define the test samples, design variations, and develop test plans and procedures. Once testing is complete, we will resolve any anomalies that may occur and provide a final qualification report.

Capabilities

- Commercial Grade Dedication
- Equipment Qualification
- Full-Scope Design Engineering
- Project Management
- Fabrication and Assembly
- Safety-Related Hardware and Replacement Parts
- Obsolescence Solutions

Qualification Capabilities

- LOCA
- HELB
- MSLB
- FMEA
- Humidity Aging
- Submergence Testing
- Thermal Aging
- Harsh Environment Testing
- Post-LOCA Submergence Testing
- LOCA Radiation
- Radiation Testing
- Mechanical/Electrical Cycling
- EMI/RFI Testing
- Seismic Testing

Quality Programs

- ASME NQA-1 2019
- 10CRF50 Appendix B
- 10CRF21
- CSA Z299
- CSA N285
- CSA B51
- CSA N289
- CSA N299.1
- ASME B31.1
- ASME Section IX
- IEEE 323, 334, 382, 344, 535
- IEC-60780
- C37.98
- N290. 13-05
- ANSI N45.2
- AWS
- NUPIC and NIAC audited

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