



# Environmental Qualification (EQ)

**EPM provides a full spectrum of services in support of Equipment Qualification programs including documentation development, configuration management, and in-depth assessments of EQ implementation processes, procedures and results. EPM's staff of engineers and consultants, who are experts in the complex programmatic and technical issues associated with EQ, help achieve and maintain compliance with governing regulations.**

*Master Equipment List:* EPM has developed a simple methodology to identify the EQ component list. This methodology is based on the plant's Q-list and involves four discrete steps:

- 1 Environmental Analysis
- 2 Systems Analysis
- 3 Component Analysis
- 4 Operational Analysis

This process provides a documented basis for the EQ component list and in all cases has resulted in elimination of components from the EQ program.

*EQ Documentation:* EPM has assisted several utilities in preparation and update of equipment qualification documents such as preparation of the equipment qualification records, qualified life calculations, and post-accident operating time calculations.

*Programmatic Audits:* EPM performs independent audits to evaluate the adequacy of records and management controls, the technical adequacy of work performed by outside consultants, and the appropriateness of current and proposed EQ program activities.

*Field Verifications:* EPM conducts field verifications to support work in equipment qualification to determine equipment compliance with documentation and commitments. EPM also supports Age Related Degradation Inspections of thermal aging mechanisms on electrical commodities for license renewal applications.

*300-Point EQ Checklist:* EPM has developed detailed inspection checklists and walkdown sheets that identify EQ Program gaps and provide specific recommendations for improvement and continued focus. The checklist addresses generic requirements and specific technical issues within each program element. Easily tailored to meet a client's specific needs, the checklist facilitates a complete EQ program evaluation. EPM's enhanced inspection walkdown sheets have been utilized by NRC regional inspectors in their assessments.

*Training:* EPM has composed EQ training materials and provided EQ training sessions for both utilities and regulators.

**Software:** EPM has developed powerful software tools, the Genesis Solution Suite®, for managing and analyzing plant information in order to increase efficiency and provide greater cost benefits. Milieu, one component of the Genesis Solution Suite®, is a complete EQ solution that provides a structured but flexible way to manage generic and plant-specific evaluations. The Milieu Exchange provides the ability to share generic evaluations between plants within the corporate umbrella and with external utilities. Milieu is a must for plants verifying equipment qualification for power up-rate and/or life extension programs.

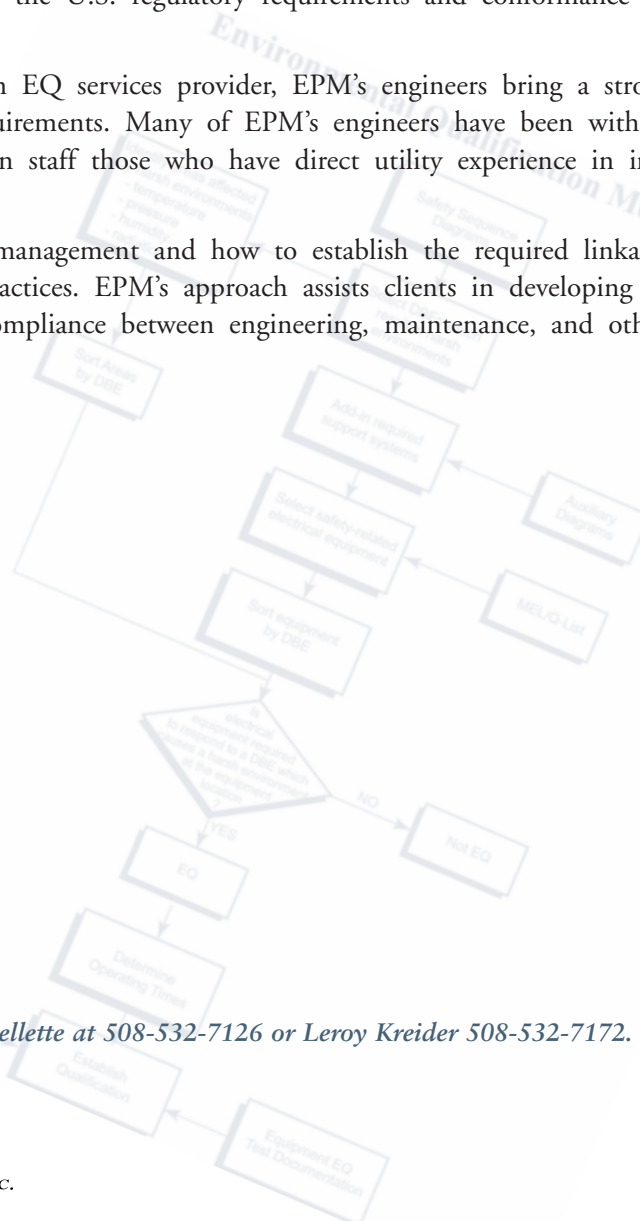
**Life Extension:** EPM provides life extension support services with respect to identification and analysis of equipment that is outside the scheduled replacement program (Aging Management Reviews).

## Why EPM ?

EPM has provided EQ services since the early 1980s. EPM was instrumental in the development of the EQ Rule and implementing guidance documents in use for U.S. nuclear plants. This afforded a solid foundation and detailed insight into the U.S. regulatory requirements and conformance issues concerning EQ programs.

Since EPM has been a long-term EQ services provider, EPM's engineers bring a strong foundation in the evolution of EQ regulatory requirements. Many of EPM's engineers have been with the company in excess of 15 years. EPM also has on staff those who have direct utility experience in implementing EQ programs at nuclear power plants.

EPM understands configuration management and how to establish the required linkages between the EQ program and utility business practices. EPM's approach assists clients in developing proper procedural controls to ensure continued EQ compliance between engineering, maintenance, and other departments within the organization.



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