

DMCC Software Quality Assurance Guidance for Meteorological Software
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In 2005, the U.S. Department of Energy (DOE) established strict software quality assurance (SQA) requirements for safety software, including consequence assessment software used for hazard assessments and safety analyses. These evaluations often utilize meteorological data supplied by DOE site-based meteorological programs. However, the DOE has not established SQA guidance for this type of safety-related meteorological software. To address this gap, the DOE Meteorological Coordinating Council (DMCC), in conjunction with the DOE Subcommittee on Consequence Assessment and Protective Actions (SCAPA), is developing SQA guidance for meteorological software that is used to support safety and safety-related applications. This guidance should be of interest to the DOE, the nuclear power industry, and other public- and private-sector organizations. The goal of the DMCC SQA guidance is to capture the main themes presented in the DOE SQA requirements for safety software but allow a much greater degree of “grading” in determining exactly what specific SQA activities are needed for meteorological software.

The emphasis of the DMCC SQA guidelines is on the following key work elements:

- 1) software design and implementation documentation
- 2) configuration management
- 3) verification and validation testing
- 4) procurement and supplier management
- 5) problem reporting and corrective actions

When implemented, the DMCC SQA guidelines should provide the developers and users of meteorological software with a fair degree of assurance that their software is reliable, documented, and tested. The level of effort required to meet these SQA guidelines should not put an undue burden on meteorological system software developers or users.