

<b>Subject:</b>  <b>Software Quality Assurance</b>	<b>Effective Date:</b>  <b>Jan. 11, 2002</b>	<b>Initiated by:</b>  Head, Quality Assurance
	<b>Supersedes:</b>  <b>NEW</b>	<b>Approved:</b>  Director

Reference: DOE N 203.1, Software Quality Assurance

It is PPPL's policy that a Software Quality Assurance (SQA) Plan shall be developed for all administrative/business oriented software, scientific/engineering software governed by the requirements of 10 CFR Part 830, and process control software, e.g. Programmable Logic Control instructions. An SQA Plan is encouraged for software that supports research where the risks associated with failure are high, as determined by line management. Each Project, Department, or Division responsible for software that requires software quality assurance shall develop, document, and implement an applicable Software Quality Assurance (SQA) Plan. The SQA Plan must address the following:

- An identified focal point of contact, defined authorities, policies, procedures, training, adopted standards, and conventions.
- Graded application commensurate with
  - the safety, security, and risk involved in developing and using the software
  - the size, complexity, cost, degree of external impact, degree of customization, functions performed, and other factors important to the site's management
- Software lifecycle and associated processes, including testing, verification and validation, structured walkthroughs, peer reviews, inspections, and audits
- Training to meet current and future personnel skill needs in the area of SQA, software engineering, and software use
- Integration with PPPL Integrated Safety Management Program and the PPPL Institutional Quality Assurance Plan
- Systematic reviews to assure requirements of the SQA are implemented

The Institutional Quality Assurance Plan requires the concurrence of the Head, Quality Assurance for all such Plans.