Certification of Contractors & Paint Shops for Nuclear Power Plant Work

SSPC 2012

NRC Headquarters – Rockville, MD

April 27, 2012

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SSPC
The Society For Protective Coatings

SSPC Background

- SSPC established Industrial Painting Contractor Certification Program (1989) to improve qualifications of contractors
- Program Value – provide facility owners with a 3rd party, independent assessment of a contractor's primary technical capabilities and coatings Quality Management System (QMS)
- Capabilities assessed through annual audits

Current Programs (applicable to the power generation industry)

- QP 1 - field work (steel structures)
- QP 2 – hazardous paint removal (field)
- QP 3* – shop painting
- QP 6 – metallizing (thermal spray application)
- QP 8 – coating concrete
- QP 9 – commercial/architectural painting

* Audits conducted based on joint American Institute of Steel Construction (AISC) and SSPC Shop qualification standard

Auditing

- Contractors / Shops audited annually (announced and unannounced, when feasible)
- Additional audits for major corrective action follow ups, customer complaints
- Audits based on consensus standards developed by SSPC Technical Committees

  (SSPC is an ANSI-accredited standards developer)

Why Nuclear?

- Facility Owners have difficulty finding qualified painting contractors and painters to perform coating work within their plants
- New construction presents challenges in finding qualified shops to paint equipment

Nuclear Industry Initiative

- Expand current SSPC program to include the assessment of certified firms for Service Levels I and III coating work for the Nuclear Power Plants using established ASTM / ANSI standards, NRC guidelines and plant specific requirements

- Intended to augment regulatory compliance audits (i.e. NUPIC) by providing a third party technical evaluation of the coating firm's capabilities to perform safety-related coating work

- In-depth evaluation to include QA programs, implementing procedures, inspector certification, contractor's / shop's coating processes, and applicator qualification

Program Goals

- Develop a more qualified work force to perform coating application in nuclear plants
  - > Reduce qualification failure rate
- Assist architects/engineers in obtaining quality paint (using qualified paint systems) on new equipment
- Cut the cost of rework

Benefits to Nuclear Facility Owners

- Provide nuclear facility owner with a list of pre-qualified firms
- Reduce time and resources required by owners/operators to evaluate contractors
- Provide 3rd party annual auditing to monitor contractor operations at no cost to owners
- Supplement audits performed by NUPIC

Program Development

- Develop a standard procedure (QN-1) based on:
  - 10CFR50 Appendix B
  - Reg Guide 1.54
  - ANSI Standards (N5.9, N45.2, N101.2, N101.4)
  - ASTM Standards (D3843, D4227, D4228, D4286, D4537)
  - NQA-1
  - NUPIC Audit Criteria

Status of the Program

- Performed trial audits of two coating contractors and one shop currently performing safety-related coating work to help define the scope of the program
- Presentation of the program to NIAC in 2011 received positive feedback
- Draft program reviewed in early 2012 by SSPC Nuclear Coating Initiatives Committee

NRC Presentation

- Present the program to the NRC to provide an understanding of the program and its benefits to the nuclear industry
- Solicit feedback on how to make the program most beneficial to the U.S. nuclear industry

Nuclear Utilities Coating Council

- NUCC member utilities have expressed interest in the certification program as a tool to evaluate contractors and shops performing safety-related coating work

- Several utilities interested in SSPC developing a program to qualify painters per the requirements of ASTM D4228 (steel) and D4227 (concrete)

Certified Applicator Specialist Program

- Applicator Certification Standard (ACS) developed by SSPC to certify contractor personnel to perform surface preparation and coating application to steel and concrete structures
- CAS program can be expanded for the qualification of applicators for Service Levels I and III coating work in accordance with ASTM D4227 and D4228
- Nuclear CAS program (including instruction on health physics) could help prepare workers for nuclear qualification, reducing failure rate

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Thank you

Any questions?