

SSPC: The Society for Protective Coatings

COMMENTARY ON QUALIFICATION PROCEDURES

1. HISTORY OF QP STANDARDS

This commentary is for information only and is not part of SSPC-QP 1, QP 2, QP 3, QP 4, QP 5, QP 6, QP 7, QP 8, QP 9, QS 1 or QN 1. SSPC currently develops six types of consensus standards, one type being the "Qualification Procedure," or QP. QPs are published procedures, developed by SSPC technical committees through a consensus process, which define a sequence of actions or functions a contracting firm or inspection firm must meet to establish a level of competence or qualification. They are in essence models for coatings industry-specific Quality Management Systems or QMS. This commentary will summarize the current QP Quality System standards and explain how they can be used to (1) improve the process of qualifying a contractor or inspection firm to perform work and (2) provide a QMS for the contractor or inspection firm to improve its coating and related processes in order to reduce costly rework, latent defects, and become more productive and efficient.

The first five qualification procedures, QP 1, QP 2, QP 3, QP 6, and QP 8 were developed by SSPC to form the basis of administrative certification programs designed to provide facility owners and specifying architects, engineers and coating specification writers with a tool to use when evaluating the qualifications of contractors who apply protective coatings in the field or shop. Because of the onerous task of reviewing submittals and evaluating contractors on site and the annual volume of industrial and marine painting projects contracted each year, SSPC established these certification programs as a service to the facility owner or its consulting engineer representative who otherwise would lack the staff and time to review applications and visit contractors on site to qualify them in accordance with QP 1, 2, 3, 6, or 8. Facility owners can use QP 1, 2, 3, 6, or 8 certifications as a basis for an independent, third party evaluation of the primary capabilities of the contractors they place on bid lists or hire for painting, metallizing, or polymer surfacing installation over concrete.

QP 4 was developed by SSPC to provide facility owners with a standard to measure the qualifications of demolition and repair contractors who remove or disturb hazardous coating in the process of cutting or repairing previously painted steel. SSPC does not currently offer an independent certification program to QP 4.

QP 5 was developed by SSPC to provide owners with a standard with which to evaluate the qualification of companies who provide coating and lining inspection services. QS 1 provides owners who require a higher level of quality control for their projects with a standard against which a contractor's

quality system may be evaluated. QS 1 is intended to supplement QP 1, QP 3, QP 6 or QP 8 requirements.

QP 7 establishes criteria for preliminary qualification of contractors who intend to apply for certification to an industrial or architectural/commercial coating contractor certification program but have less than 12 months experience (or no experience) in field application of industrial or architectural/commercial protective coatings.

QN 1 was developed by SSPC to qualify contractors and paint shops that perform coating work in or for nuclear power plants. QN 1 is based on a compilation of ASTM consensus documents developed by and for the nuclear power industry and is not an SSPC consensus standard.

2. SUMMARY OF SSPC QUALIFICATION PROCEDURES

2.1 SSPC-QP 1, STANDARD PROCEDURE FOR EVALUATING PAINTING CONTRACTORS (FIELD APPLICATION TO COMPLEX INDUSTRIAL AND MARINE STEEL STRUCTURES): SSPC issued the first version of QP 1 in September 1989, after consensus on its content was reached by SSPC's Technical Committee for Applicator Prequalification. QP 1 was reviewed and reissued in August 1998, February 2008, and most recently in September 2013.

QP 1 is essentially the basis for SSPC's Painting Contractor Certification Program (PCCP), also established in 1989. The PCCP is an administrative program set up by SSPC to independently evaluate industrial painting contractors against the requirements of QP 1 and other QPs.

The QP 1 procedure identifies four function areas of the contractor's quality system that have to be evaluated: management procedures; technical capabilities; quality control procedures; and safety, health, and general environmental compliance procedures. The objective of using the certification is to determine whether the painting contractor has the capability to perform surface preparation and coating application in the field (i.e., on site) on complex industrial steel structures such as bridges, storage tanks, power generation facilities, ships and offshore platforms, and other industrial and marine structures.

Once SSPC determines, through its evaluation process, that a contracting firm meets the requirements of QP 1, SSPC issues a certificate to that effect. The evaluation process consists of a review of detailed submittals and an on-site audit at both the contractor's business offices and an operating job site. Facility owners, specifying architects and engineers, and others who hire industrial/marine painting contractors for coating work in the field can then use this certification as part

of the prequalification process for evaluating bids or proposals from contractors.

2.2. SSPC-QP 2, “STANDARD PROCEDURE FOR EVALUATING THE QUALIFICATIONS OF PAINTING CONTRACTORS TO REMOVE HAZARDOUS PAINT”:

SSPC issued QP 2 in late 1993 as an interim standard. A final version of QP 2 was issued in August 1995. The standard was revised in 2000 and again in 2009 by the SSPC C.3.5.B, Hazardous Paint Removal Qualification Technical Committee.

QP 2 is the basis for the QP 2 certification program, developed as a supplement to the QP 1 program in 1993 as part of PCCP's first expansion. As with QP 1, the consensus qualification procedure formed the basis of an administrative program to evaluate whether a contractor that met the requirements of QP 1 also had the capability to effectively manage the removal of hazardous (e.g. lead-, chromate-, arsenic- and cadmium-containing) paints from industrial steel and marine structures.

QP 2 establishes several categories of qualification based on the contractor's capability to remove, contain, and properly handle and store hazardous paint debris. In addition to meeting the requirements of QP 1, three more function areas of the contractor's quality system are evaluated. They include: management of hazardous paint removal operations; technical capabilities; and personnel qualifications and training as they relate to hazardous paint removal operations. QP 2 defines two categories of qualification, A and B, which are based on the use of negative air pressure in containment structures.

As with QP 1, contractors seeking QP 2 certification must provide a series of submittals to SSPC for review and acceptance and also undergo an audit at one of their active hazardous paint removal job sites. QP 2 is designed to be used side-by-side with QP 1 to evaluate painting contractors who must remove hazardous paint in conjunction with surface preparation and maintenance repainting operations.

2.3. SSPC-QP 3, “STANDARD PROCEDURE FOR EVALUATING THE QUALIFICATIONS OF SHOP PAINTING CONTRACTORS”:

QP 3 was developed by the SSPC Committee on Shop Coating Qualification and published in 1995. QP 3 defines a procedure for evaluating shop painting organizations (e.g. shipyard paint departments, structural steel and miscellaneous metal parts fabrication shops; blast and paint shops) that apply industrial protective coatings in a permanent, stationary facility or shop. The requirements for QP 3 are similar to those for QP 1, except that QP 3 requirements are applicable to shop coating operations.

SSPC also set up an administrative program in 1996 to evaluate shops against the requirements of QP 3. Facility owners and others who contract for shop painting services use this program to evaluate the capabilities of the paint shop. QP 3 establishes several qualification categories based on the degree to which the shop can isolate coating operations from outdoor weather conditions and control ambient conditions.

SSPC revised its QP 3 procedure and administrative certification program in 1999 to coordinate its program with that of the American Institute of Steel Construction (AISC), which certifies structural steel fabrication shops that apply protective coatings in the shop after fabrication of new structural steel. In 2010, SSPC and AISC developed a joint standard, SSPC QP 3/AISC 420.10, that sets the standard for shop painting of protective coatings on steel and metal substrates and is used by both organizations to evaluate the qualifications of paint shops. The AISC Sophisticated Paint Endorsement (SPE) program is recognized by SSPC as an equivalent to SSPC's QP 3 program. While SSPC's QP 3 program is a stand-alone program, AISC's Sophisticated Paint Endorsement can only be achieved by fabrication shops that also hold AISC steel fabricator certification.

2.4 SSPC-QP 4, “STANDARD PROCEDURE FOR EVALUATING THE QUALIFICATIONS OF CONTRACTORS DISTURBING HAZARDOUS PAINT DURING DEMOLITION AND REPAIR WORK”:

SSPC-QP 4, developed by SSPC Technical Committees C.5.3., Removal of Hazardous Coatings and C.3.5, Applicator Prequalification, was issued by SSPC in 1997. It is similar to QP 1, QP 2 and QP 3 in that it establishes a consensus procedure to evaluate the capability of a general contractor to invoke appropriate worker and environmental protection programs while disturbing hazardous (e.g. lead based) paint incidental to demolition or repair work.

QP 4 is intended to evaluate contractors who are not painting contractors but who disturb hazardous paint in conjunction with non-painting work such as bridge demolition or structural repair. A painting contractor certified to QP 2 also meets the requirements of QP 4 and thus is also capable of performing such demolition and repair work.

QP 4 differs from QP 1, 2 and 3 in one important aspect: SSPC does not offer an administrative certification program to evaluate general contractors against the requirements of QP 4. This is primarily because SSPC does not normally provide services to repair and structural demolition contractors who tend to belong to other trade or professional associations that represent their interests.

The impetus for QP 4 came from bridge maintenance authorities who asked SSPC to develop a procedure that could be invoked in contracts to evaluate the capabilities of contractors that performed demolition work but did not repair or apply coatings. The intent of QP 4 is to ensure that demolition and repair contractors are capable of implementing the same worker and environmental protection programs on site as the painting contractors are required to do under QP 2.

2.5 SSPC-QP 5, “STANDARD PROCEDURE FOR EVALUATING THE QUALIFICATIONS OF COATING AND LINING INSPECTION AGENCIES”:

SSPC-QP 5, developed by the SSPC C.6 Group Committee on Education and Certification, was issued by SSPC in 1999. The QP 5 standard was revised in July 2012. It differs from the QP standards mentioned above in that it establishes a procedure