**Reviewers: Remove Sec 3.2.1 or 3.2.2 if section does not apply.**

 CHLORIDE REMEDIATION SURFACE PREPARATION 11/30/15

**1.0 Description.** This work shall consist of performing chloride remediation during the surface preparation and before recoating or overcoating with the required coating system to the specified surfaces of the structural steel.

**2.0 Material.**  All material shall be in accordance with Division 1000, Material Details, and specifically as shown below.

| **Item** | **Section** |
| --- | --- |
| Structural Steel Construction | 712 |
| Paint for Structural Steel | 1045 |
| Coating of Structural Steel | 1081 |

**3.0 Construction Requirements.**

**3.1 Specified Surfaces.** All exposed and accessible surfaces of the structural steel, as specified on the bridge plans, shall have the chloride remediation process performed.

**3.2 Surface Preparation.**

**3.2.1 Recoating.** Surface preparations for the recoating of structural steel shall be in accordance with Sec 1081 and as follows in this job special provision.

**3.2.2 Overcoating.** Surface preparations for the overcoating of structural steel shall be in accordance with Sec 1081 and as follows in this job special provision.

**3.3 Chloride Remediation.** Before any required blast cleaning, surface preparation procedures and processes shall remove chlorides from the surfaces. When a chemical soluble chloride remover is used, a letter from the coating manufacturer shall be provided to the engineer indicating the chemical soluble chloride remover shall not adversely affect the performance of the coating system. Methods of chloride removal may include, but are not limited to, steam cleaning or pressure washing with or without a chemical soluble chloride remover as approved by the coating manufacturer and scrubbing before initial coating removal. The contractor shall provide the proposed procedures for chloride remediation to the engineer for review.

**3.4** **Chloride Testing.** Upon completion of the chloride remediation process and prior to any required blast cleaning, the contractor shall use cell methods of field chloride extraction and test procedures accepted by the engineer, (e.g., silver dichromate), to test representative surfaces that were previously rusted, (e.g., pitted steel), for the presence of remaining chlorides. Remaining chloride levels shall be no greater than 30 µg/cm2 as read directly from the surface without any multiplier applied to the results. The testing shall be performed and the results acceptable to the engineer prior to coating each day. A minimum of five tests per 1000 ft2 shall be completed. If chloride levels detected are greater than 30 µg/cm2, the surfaces shall be recleaned and retested at the same frequency. If acceptable chloride levels are detected on three consecutive days, the test frequency may be reduced to one test per 1000 ft2 provided the chloride remediation process remains unchanged. If unacceptable results are encountered or the methods of chloride remediation are changed, the contractor shall resume testing at a frequency of five tests per 1000 ft2.

**3.5** **QA Testing by the Engineer.** The engineer reserves the option to test blasted surfaces for chlorides. Chlorides after blasting and blow down shall be less than 7 µg/cm2. Areas that are not equal to, or below, these criteria will need to be re-washed, brush blasted, and retested. The engineer will measure chloride contamination by using a Surface Contamination Analysis Kit, marketed by KTA-Tator Inc. or an equivalent analytical process.

**4.0 Method of Measurement.** Method of measurement will be in accordance with Sec 712.

**5.0 Basis of Payment.** Basis of payment will be in accordance with Sec 712. Payment for the above described work, including all material, equipment, labor and any other incidental work necessary to complete this item, will be considered completely covered by the contract unit price for Chloride Remediation Surface Preparation.