

## CONSTRUCTION SPECIFICATION

### **94. CONTRACTOR QUALITY CONTROL**

#### 1. SCOPE

The work shall consist of developing, implementing, and maintaining a quality control system to ensure that the specified quality is achieved for all materials and work performed.

#### 2. EQUIPMENT AND MATERIALS

Equipment and materials used for quality control shall be of the quality and condition required to meet the test specifications cited in the contract. Testing equipment shall be properly adjusted and calibrated at the start of operations and the calibration maintained at the frequency specified. Records of equipment calibration tests shall be available to the Engineer at all times. Equipment shall be operated and maintained by qualified operators, as prescribed in the manufacturer's operating instructions, the references specified and as specified in Section 10 of this specification. All equipment and materials used in performing quality control testing shall be as prescribed by the test standards referenced in the contract or in Section 10.

All equipment and materials shall be handled and operated in a safe and proper manner and shall comply with all applicable regulations pertaining to their use, operation, handling, storage, and transportation.

#### 3. QUALITY CONTROL SYSTEM

Method 1 The Contractor shall develop, implement and maintain a system of quality control to provide the specified material testing and verification of material quality prior to use. The system activities shall include procedures to verify adequacy of completed work, initiate corrective action to be taken and document the final results. The identification of the quality control personnel and their duties and authorities shall be submitted to the Contracting Officer in writing within 15 calendar days after notice of award.

Method 2 The Contractor shall develop, implement and maintain a system adequate to achieve the specified quality of all work performed, material incorporated and equipment furnished prior to use. The system established shall be documented in a written plan developed by the Contractor and approved by the Contracting Officer. The system activities shall include the material testing and inspection needed to verify the adequacy of completed work and procedures to be followed when corrective action is required. Daily records to substantiate the conduct of the system shall be maintained by the Contractor. The quality control plan shall cover all aspects of quality control and shall address, as a minimum, all specified testing and inspection requirements. The plan provided shall be consistent with the planned performance in the Contractor's approved construction schedule. The plan shall identify the Contractor's on-site quality control manager and provide an organizational listing of all quality control personnel and their specific duties. The

written plan shall be submitted to the Contracting Officer within 15 calendar days after notice of award. The Contractor shall not proceed with any construction activity which requires inspection until the written plan is approved by the Contracting Officer.

All Methods The quality control system shall include, but not be limited to, a rigorous examination of construction materials, processes and operation, including testing of materials and examination of manufacturer's certifications as required, to verify that work meets contract requirements and is performed in a competent manner.

#### 4. QUALITY CONTROL PERSONNEL

Method 1 Quality control activities shall be accomplished by competent personnel. A competent person is: one who is experienced and capable of identifying, evaluating, and documenting that materials and processes being used will result in work that complies with the contract; and, who has authority to take prompt action to remove, replace, or correct such work or products not in compliance. Off-site testing laboratories shall be certified or inspected by a nationally recognized entity. The Contractor shall submit to the Contracting Officer, for approval, the names, qualifications, authorities, certifications, and availability of the competent personnel who will perform the quality control activities.

Method 2 Quality control activities shall be accomplished by competent personnel who are separate and apart from line supervision and who report directly to management. A competent person is: one who is experienced and capable of identifying, evaluating, and documenting that materials and processes being used will result in work that complies with the contract; and, who has authorization to take prompt action to remove, replace, or correct such work or products not in compliance. Off-site testing laboratories shall be certified or inspected by a nationally recognized entity. The Contractor shall submit to the Contracting Officer, for approval, the names, qualifications, authorities, certifications, and availability of the competent personnel who will perform the quality control activities.

#### 5. POST-AWARD CONFERENCE

The Contractor shall meet with the Contracting Officer prior to the beginning of any work and discuss the Contractor's quality control system. The Contracting Officer and the Contractor shall develop a mutual understanding regarding the quality control system.

#### 6. RECORDS

The Contractor's quality control records shall document both acceptable and deficient features of the work and corrective actions taken. All records shall be on forms approved by the Contracting Officer; legible; and dated and signed by the competent person creating the record.

Unless otherwise specified in Section 10 of this specification, records shall include:

- a. Documentation of shop drawings including date submitted to and date approved by the Contracting Officer, results of examinations, any need for changes or modifications, manufacturer's recommendations and certifications, if any, and signature of the authorized examiner.
- b. Documentation of material delivered including quantity, storage location, and results of quality control examinations and tests.
- c. Type, number, date, time, and name of individual performing of quality control activities.
- d. The material or item inspected and tested, the location and extent of such material or item, and a description of conditions observed and test results obtained during the quality control activity.
- e. The determination that the material or item met the contract provisions and documentation that the Engineer was notified.
- f. For deficient work the nature of the defects, specifications not met, etc., corrective action taken and results of quality control activities on the corrected material or item.

## 7. REPORTING RESULTS

The results of Contractor quality control inspections and tests shall be communicated to the Engineer immediately upon completion of the inspection or test. Unless otherwise specified in Section 10, the original plus one copy of all records, inspections, tests performed and material testing reports shall be submitted to the Engineer within one working day of completion. The original plus one copy of documentation of materials delivered shall be submitted to the Engineer prior to the use of the material.

## 8. ACCESS

The Contracting Officer and the Engineer shall be given free access to all testing equipment, facilities, sites, and related records for the duration of the contract.

## 9. PAYMENT

Method 1 For items of work for which lump sum prices are established in the contract, payment will be made as the work proceeds, after presentation by the Contractor of invoices showing related costs and evidence of charges by suppliers, subcontractors, and others for furnishing supplies and work performed. If the total of such payments is less than the lump sum contract price for this item, the remaining balance will be included in the final contract payment. Payment of the lump sum contract price will constitute full compensation for completion of the work.

Payment will not be made under this item for the purchase cost of materials and equipment having a residual value.

Method 2 For items of work for which lump sum prices are established in the contract, payment will be prorated and paid in equal amounts on each monthly estimate. The number of months used for prorating shall be the number estimated to complete the work. The final month's prorate amount will be made with the final payment. Payment as described above will constitute full compensation for completion of the work.

Payment will not be made under this item for the purchase cost of materials and equipment having a residual value.

All Methods The following provisions apply to all methods of payment. Compensation for any item of work described in the contract but not listed in the bid schedule will be included in the payment for the item of work to which it is made subsidiary. Such items and the items to which they are made subsidiary are identified in Section 10.