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QUALITY CONTROL

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****
NOTE: This guide specification covers the requirements for inspections, test reports, and contractor obligations for establishing effective quality assurance procedures for NASA.

Adhere to UFC 1-300-02 Unified Facilities Guide Specifications (UFGS) Format Standard when editing this guide specification or preparing new project specification sections. Edit this guide specification for project specific requirements by adding, deleting, or revising text. For bracketed items, choose applicable item(s) or insert appropriate information.

Remove information and requirements not required in respective project, whether or not brackets are present.

Comments, suggestions and recommended changes for this guide specification are welcome and should be submitted as a Criteria Change Request (CCR).
****

PART 1 GENERAL

1.1 SUMMARY

The requirements of this section apply to and are a component part of each section of the specifications.

1.2 ADMINISTRATIVE REQUIREMENTS

Notify the Government [24] [_____] hours before work will begin at the site.

Notify the Contracting Officer when work is suspended for [_____] calendar days or longer. Do not resume work without notifying the Contracting Officer.

Notify the Contracting Officer at least [_____] hours before backfilling or encasing any underground utility.

1.3 SUBMITTALS

****

NOTE: Review Submittal Description (SD) definitions in Section 01 33 00 SUBMITTAL PROCEDURES and edit the following list, and corresponding submittal items in the text, to reflect only the submittals required for the project. The Guide Specification technical editors have classified those items that require Government approval, due to their complexity or criticality, with a "G." Generally, other submittal items can be reviewed by the Contractor's Quality Control System. Only add a "G" to an item, if the submittal is sufficiently important or complex in context of the project.

For Army projects, fill in the empty brackets following the "G" classification, with a code of up to three characters to indicate the approving authority. Codes for Army projects using the Resident Management System (RMS) are: "AE" for Architect-Engineer; "DO" for District Office (Engineering Division or other organization in the District Office); "AO" for Area Office; "RO" for Resident Office; and "PO" for Project Office. Codes following the "G" typically are not used for Navy, Air Force, and NASA projects.

The "S" classification indicates submittals required as proof of compliance for sustainability Guiding Principles Validation or Third Party Certification and as described in Section 01 33 00 SUBMITTAL PROCEDURES.

Choose the first bracketed item for Navy, Air Force and NASA projects, or choose the second bracketed item for Army projects.

****

Government approval is required for submittals with a "G" or "S" classification. Submittals not having a "G" or "S" classification are [for Contractor Quality Control approval.][for information only. When used, a code following the "G" classification identifies the office that will review the submittal for the Government.] Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Preconstruction Submittals

Quality Assurance (QA) Plan; G[, [____]]

SD-06 Test Reports

Quality Control Data; G[, [____]]

Quality Control Coordinating Actions; G[, [____]]

Quality Control Training; G[, [____]]

Inspection Records; G[, [____]]

Letters of Authority or Delegation; G[, [____]]

Field Tests; G[, [____]]

Factory Tests; G[, [____]]

SD-07 Certificates

Quality Representative Qualifications

Special Certifications

Monthly Performance Report

1.4 QUALITY CONTROL

1.4.1 Quality Representative Qualifications

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NOTE: Use the following paragraph if the Contractor elects to retain an independent Quality Representative.
****

[Submit to the Contracting Officer for approval. Quality Representative may be assigned to more than one contract provided that the assigned contracts are located at the same site.

When approval or certification of special processes, operating personnel, and special equipment or procedures is required by the specifications, obtain necessary approvals or special certifications prior to starting the work.

]1.4.2 Quality Control Requirements

Provide a quality control program that includes: selection of construction materials and sources; suppliers; subcontractors; on-site and off-site fabrication of Contractor-furnished assemblies; on-site and off-site assembly; erection; work procedures; workmanship; inspection; and testing.

Provide document systems ensuring that quality provisions of the contract schedule, specifications, and drawings have been performed.

1.4.2.1 Management and Organization

Designate a Quality Program Manager within the on-site organization whose sole responsibility is the day-to-day on-site management and direction of the Quality Program.

Ensure that the Quality Program Manager reports to the Contractor's management and has the necessary authority to discharge contractual responsibilities.

1.4.2.2 Identification and Data Retrieval

Provide an identification and data retrieval system identifying all records, drawings, submittals, and equipment by referencing the following:

a. Contract Number

b. Contract Specification Number

c. Contract Drawing Number

d. Submittal Document Number

e. Contract Change Number

f. Contractor's Drawing Number System

1.4.2.3 Procurement

Assume responsibility for controlling procurement sources and those of the subcontractors to ensure that each purchase meets quality requirements.

1.4.2.4 Receiving Inspection System

Maintain a site receiving inspection system that ensures that procured materials and equipment are inspected and tested.

Ensure that receiving inspection records accompany each procurement delivery to the construction site. Maintain records of site receiving inspections.

Show defects, discrepancies, dispositions, and waivers. Include evidence of Government source inspection within the records.

1.4.2.5 Nonconforming Articles and Material Control

Control nonconformances discovered by the Contractor, subcontractors, suppliers, or Government quality representatives to prevent the use of affected products and to correct deficient operations.

a. Provide a "nonconformance" report for each instance comprising:

(1) A unique and traceable number.

(2) Identification of the nonconforming article or material.

(3) A description of the nonconformance and the applicable requirement.

(4) Cause or reason for the nonconformance.

(5) Remedial actions taken or recommended.

(6) Disposition of the nonconforming article or material.

b. Identify and mark each nonconforming article for removal from the work area.

c. Monitor and correct deficient operations.

1.4.2.6 Fabrication, Process, and Work Control

Ensure compliance of requirements in contract specifications and drawings with procedures and controls.

Establish in-process inspections, to ensure compliance with quality requirements.

[Special processes may include plating, anodizing, nondestructive testing, welding, and soldering.

]1.4.2.7 Quality Control Records

Maintain Quality Control records at a central on-site location.

Maintenance of quality control records does not provide relief from submitting samples, test data, detail drawings, material certificates, or other information required by each section in the specification.

Ensure that each record is identified and traceable to specific requirements in the specifications and drawings.

1.4.2.8 Drawings and Change Control

Maintain a drawing control system to provide revised drawings and ensure removal of obsolete drawings from work areas. Control changes involving interface with other work areas, or affecting materials controlled by others. Integrate this system with the document requirements of the contract.

Clearly identify drawings needing changes and along with associated drawings that require revision. Maintain the updated drawings. Use for fabrication and inspection drawings that have been approved, or approved as noted, by the Contracting Officer.

1.4.3 Quality Inspections

1.4.3.1 Government Inspections

Work performed under this contract is subject to inspection by the Contracting Officer. Changes to the specifications or drawings will not be allowed without written authorization of the Contracting Officer.

When the Contracting Officer determines that inspected work needs to be corrected, allow the Contracting Officer [24] [_____] [hours] [_____] to complete reinspection of the corrected work.

Notify the Contracting Officer in writing before backfilling or encasing any [underground] utility so that work may be inspected. Failure to notify the Contracting Officer before backfill or encasement occurs will require the work to be uncovered at no additional cost to the Government.

The Contractor's Quality Program is subject to evaluation, review, and verification as determined by the Contracting Officer. Contractor will be notified in writing of any noncompliance and will be given [_____] calendar days to correct identified deficiencies.

1.4.3.2 Contractor's Quality Inspections

Implement an inspection system that documents and indicates quality control through records of inspections, tests, and procedures.

Include or identify the following within the Quality Assurance System:

a. The representative responsible for on-site communication and operation of the inspection program.

b. Purchasing control system documenting project procurement to drawings, specifications, and approved submittals.

c. A receiving inspection system documenting inspections for each procurement.

d. Documentation for handling and disposing of nonconforming components and materials.

e. Inspection records for each specific section of the specification and drawings.

f. Identification of tests to be performed, test procedures, records, and independent organizations used.

g. Documentation that shows certification or recertification of procedures.

h. Management of Government-furnished equipment, components, and materials.

i. Calibration of gages, tools, measuring instruments, and independent laboratories used.

Establish a system of scheduled or random audits to ensure task completion.

1.4.4 Field Services

1.4.4.1 Responsibility for Inspection and Testing

Assume responsibility for all inspections and tests and for the accompanying documentation. Use independent inspection and testing laboratories or services as approved by the Contracting Officer.

Assume responsibility for tests of construction materials performed by an approved independent testing laboratory.

1.4.4.2 Inspection and Test Records

Provide on-site records of each inspection and test performed throughout the life of the contract, including factual evidence that the required inspections or tests have been performed, which include the type and number of inspections or tests involved, identification of operators and inspectors, result of inspections or tests, nature of defects, causes for rejection, proposed remedial action, and corrective actions taken.

Ensure that all inspection records, test procedures, test results, and associated forms are verified by and provided to the Contracting Officer. Submit final test data with a cover letter/sheet clearly marked with the system name, date, and the words "Final Test Data[- Forward to the Systems Engineer/Condition Monitoring Office/Predictive Testing Group for inclusion in the Maintenance Database"].

Notify the Government at least [_____] days before scheduled inspections and tests.

1.5 DELIVERY, STORAGE, AND HANDLING

Provide controls, procedures and documentation with each shipment, that meet requirements of each section of the specifications.

With each shipment, include documentation required by the contract along with specifications necessary to identify, store, preserve, operate, and maintain the items shipped.

PART 2 PRODUCTS

2.1 SYSTEM DESCRIPTION

2.1.1 Quality Assurance (QA) Plan

Submit a QA Plan that addresses the following:

a. Description of the authority, responsibilities, and coordinating procedures of on-site/off-site quality assurance personnel, including those QA personnel not under direct control of the Contractor.

b. List of personnel designated to accomplish the work required by the contract.

c. An appendix with a copy of each form, report format, or similar record to be used in the Quality Assurance Plan.

d. The organization that handles construction contract activities.

e. The operational plan for establishing and reviewing work controls, fabrication controls, certifications, and documentation of quality control operations, inspections, and test records, including those for subcontractors.

f. The methods used during the procurement cycle (order to delivery) for those materials or equipment that require source inspections, shop fabrications, or similar operations located separately from the work site.

g. Description of on-site personnel training.

h. Certifications of personnel, procedures, processes, and equipment.

i. Nondestructive testing (NDT) requirements.

j. Identification of independent certifying and testing laboratories.

2.1.2 Records

Include all quality control data; factory tests or manufacturer's certifications; quality control coordinating actions; records of quality control training and certifications; and routine hydrostatic, electrical continuity, grounding, welding, line cleaning, field tests, and similar tests. Ensure that quality records are available for examination by the Contracting Officer.

Furnish legible copies of the test and inspection records to the Contracting Officer. Ensure that records cover work placement traceable

to the contract schedule, specifications and drawings, and that records are verifiable.

2.1.2.1 Narrative Description

Submit for approval, the narrative description of an inspection system that provides for compliance with the quality requirements and technical criteria of the contract within [7] [_____] calendar days after notice to proceed.

2.1.2.2 Monthly Performance Report

Submit a monthly summary of the quality operations. Identify inspections made, tests performed, nonconformances found, corrective actions taken, status of plans/procedures being developed, and status of open items/problems in work.

2.1.2.3 Letters of Authority or Delegation

Submit to the Contracting Officer letters of authority or delegation outlining the authority and responsibilities of quality control personnel along with a copy of the letter of delegation that defines delegated duties and responsibilities.

[2.1.2.4 Off-Site Inspection and Control

In-process inspection records and control away from the job site may be used as evidence of quality of materials/work and may reduce further inspection or testing after delivery to the job site.

]PART 3 EXECUTION

Not Used

-- End of Section --