USACE-NAVFAC Design Sample QA/QC Plan

20 selected pages (out of MHP)

Part 1: Project-Specific Quality Plan

Part 2: Quality Manual

Part 3: Submittal Forms

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PROJECT-SPECIFIC QUALITY PLAN

TABLE OF CONTENTS

The Project Quality Control Plan contents correspond with USACE / NAVFAC / AFCESA / NASA UFGS-01 45 00.00 10 (February 2010) Design Quality Control (DQC) Plan requirements.

K. Quality Controlled Design Features of Work

Design Plan

The DQC Manager prepares a project-specific design review plan that includes:

- A listing of company and customer stakeholders, reviews they will participate in, and how their input will be used to amended design requirements. The project organization chart Includes interfaces between various groups and personnel for producing and reviewing the design.
- Design output deliverables, including required drawings, and engineering calculations
- Identification of who will perform design output verification activities and the criteria they will use.
- The DQC Manager reviews the design process project plan with the customer and other interested parties. The customer approves the plan after any discrepancies are resolved and the plan is agreed upon. Design work may begin only after the customer approves the plan.

Design Feature of Work

Each design feature of work is subject to the three phases of control and completion inspection described in the next subsection.

A listing of project features of work is included on the Quality Control Feature of Work List is included as an exhibit in this subsection.

The DQC Manager identifies each phase of design feature of work that requires separate quality controls. Each feature of work triggers a set of requirements for quality control inspections before, during and after features of work.

Design controls are in place to assure the quality of designs for this project. A design plan is used to document the design control process. A Design Plan form exhibit is included in this subsection.

The first control point will be of the review of design inputs. The Designer of Record will assure that all necessary information is available to perform the required design work. The Designer of Record will also assure that expectations for design outputs are well defined.

Intermediate reviews will be carried out as indicated on the design control plan. The last review is the design output review.

A record of all reviews will be recorded on the Design Review form. A Design Review form exhibit is included in this subsection.

The President has appointed [DesignerRecordName] as the Designer of Record. [DesignerRecordName] will control the design process with specific quality responsibilities, duties, and the authority to carry them out. A record of the Designer of Record's appointment appears as in this plan as an exhibit in subsection E Appointment Letters.

[CompanyName]
Design Review Form

Version 20141002

Project ID	Project Name	Design Review Ref#	Date
[ProjectNumber]	[ProjectName]		

Review milestone:	Performing Department/Crew/Architect, Engineer, and Subcontractor:

Reference design documents under review

Item #	Title or Description	Version / Issue Date

Review recommendations

Item#	Recommendation (reference supporting documents)	[CompanyName] Acceptance/ Rejection Signature / Date:	Customer Acceptance/ Rejection Signature / Date:
		☐ Approved ☐ Disapproved	☐ Approved ☐ Disapproved ☐ Approval not required
		☐ Approved ☐ Disapproved	☐ Approved ☐ Disapproved ☐ Approval not required
		☐ Approved ☐ Disapproved	☐ Approved ☐ Disapproved ☐ Approval not required
		☐ Approved ☐ Disapproved	☐ Approved ☐ Disapproved ☐ Approval not required

L. PROCEDURES FOR PERFORMING THE THREE PHASES OF CONTROL

Three phases of control and a feature of work completion inspection will be performed for each defined feature of design work.

The controls and the forms that will be used to record control activities are included on table L-1.

Table L-1

Control	Form
Phase 1: Preparatory Phase	Preparatory Phase Checklist
Phase 2: Initial Phase	Initial Phase Checklist
Phase 3: Follow-up Phase	Contractor Quality Control Report
Feature of Work Completion Inspection	Feature of Work Inspection Form

Three Phases of Control and FOW Completion Inspection forms exhibits are included as an exhibit in this subsection.

PHASE 1: PREPARATORY PHASE

Phase 1 is the Preparatory Phase that plans quality for an upcoming feature of work. It includes a requirements review, site inspection (when necessary), and a preparatory meeting. Records of the preparatory phase of control are recorded on the Preparatory Phase Checklist included as exhibits in this subsection.

Procedures that will be used on this project to conduct the Phase I preparatory phase of control are as follows.

PREPARATORY FEATURE OF WORK QUALITY CONTROL PLANNING

In preparation for the start of an upcoming feature of work, the Design Engineer reviews an integrated and coordinated set of documents that collectively define quality requirements for the feature of work including:

- Objectives and acceptance criteria of the feature of work
- Quality standards that apply to the feature of work
- Work instructions, process steps, and product installation instructions that apply to the feature of work
- Shop drawings
- Submittals
- Tools and equipment necessary to perform the work

INITIAL PHASE CHECKLIST

SPEC SECTION	DATE

CONTRACT NO	DEFINABLE FEATURE OF WORK	SCHEDULE ACT NO.	INDEX #

PERSONNEL PRESENT

GOVERNMENT REP NOTIFIED _____ HOURS IN ADVANCE: YES ☐ NO ☐

NAME	POSITION	COMPANY/GOVERNMENT

PROCEDURE COMPLIANCE

IDENTIFIY FULL COMPLIANCE WITH PROCEDURES IDENTIFIED AT PREPARATORY. COORDINATE PLANS, SPECIFICATIONS, and SUBMITTALS.

COMMENTS: _____

PRELIMINARY WORK

ENSURE PRELIMINARY WORK IS COMPLETE and CORRECT. IF NOT, WHAT ACTION IS TAKEN?

WORKMANSHIP

ESTABLISH LEVEL OF WORKMANSHIP.

WHERE IS WORK LOCATED? _____

IS SAMPLE PANEL REQUIRED? YES ☐ NO ☐

WILL THE INIITAL WORK BE CONSIDERED AS A SAMPLE? YES ☐ NO ☐

(IF YES, MAINTAIN IN PRESENT CONDITION AS LONG AS POSSIBLE and DESCRIBE LOCATION OF SAMPLE) _____

RESOLUTION

RESOLVE ANY DIFFERENCES.

COMMENTS: _____

CHECK SAFETY

REVIEW JOB CONDITIONS USING EM 385-1-1 and JOB HAZARD ANALYSIS

COMMENTS: _____

OTHER

OTHER ITEMS OR REMARKS

_____
QC MANAGER DATE

QUALITY MANUAL

TABLE OF CONTENTS

7. PROCESS CONTROLS

HOW WORK IS CARRIED OUT

7.1. OVERVIEW

The design process plan defines how project work is to be done and approved for the overall project. The design process plan is communicated to all key personnel, architects, engineers, and subcontractors in a startup meeting. As the project proceeds, feature of work plans provide additional details of how each individual feature of work is carried out. Features of work planning meetings are used to communicate expectations of the feature of work plan to key personnel responsible for carrying out the feature of work.

7.2. PROJECT STARTUP AND QUALITY CONTROL COORDINATION MEETING

Prior to the commencement of work, the Project Design Manager holds a meeting to discuss and coordinate how project work will be performed and controlled. Key personnel from [CompanyName], architects, engineers, and subcontractors meet to review expectations for project quality results as well as quality assurance and quality control policies and procedures including:

- Key requirements of the project
- The Project Design Quality Control Plan
- Required quality inspections and tests
- The project submittal schedule
- Quality policies and heightened awareness of critical quality requirements
- Project organization chart and job responsibilities
- Methods of communication and contact information
- Location of project documents and records

7.3. WEEKLY QUALITY PLANNING AND COORDINATION MEETINGS

The Design Engineer conducts a meeting with key company, architect, engineer, and subcontractor personnel responsible for carrying out, supervising, or inspecting the work, and interested customer representatives.

The meeting is held on a nominal weekly schedule. During the meeting, the Design Engineer facilitates coordination among the participants, communication among the participants, and reinforces heightened awareness for critical requirements.

The Design Engineer maintains a record of the meeting event on the Daily Quality Control Report.

7.4. MONTHLY QUALITY CONTROL REPORT

When a monthly quality control report is required by the Project Quality Plan, the Design Engineer records a monthly status report. The report includes:

- A summary of work completed and work in progress
- Outstanding issues
- Issues resolved during the reporting period

- Outstanding potential change orders
- Project status with current project costs and estimated completion date
- A cost analysis summarizing actual costs to date and estimated future costs
- Project pictures as appropriate

9. NONCONFORMANCES AND CORRECTIVE ACTIONS

9.1. OVERVIEW

Should a nonconformance be identified by an inspection there is a systematic method to control the item, correct it, and ensure that project quality is not adversely impacted by the event.

A nonconformance is any item that does not meet project specifications or [CompanyName] Quality System requirements.

9.2. NONCONFORMANCES

9.2.1. MARKING OF NONCONFORMANCES AND OBSERVATIONS

When the DQC Manager, Design Engineer, inspector, or customer identifies a nonconformance or an observation, the item is quickly and clearly marked by tape, tag, or other easily observable signal to prevent inadvertent cover-up.

9.2.2. CONTROL THE CONTINUATION OF WORK

After the item is marked, the Design Engineer determines if work can continue in the affected area:

CONTINUE WORK: When continuing work does not adversely affect quality or hide the defect, work may continue in the affected area while the disposition of the item is resolved. The Design Engineer may place limitations on the continuation of work.

STOP WORK ORDER: When continuing work can adversely affect quality or hide the defect, work must stop in the affected area until the disposition of the item resolved. The Design Engineer identifies the limits of the affected area. The Design Engineer quickly and clearly identifies the boundaries of the stop work area.

9.2.3. NONCONFORMANCE REPORT

9.2.3.1. RECORDING OF NONCONFORMANCES

If nonconformances or observed items exist by the feature of work completion inspection, the Design Engineer or inspector records the nonconformances on a nonconformance report.

The Design Engineer sends the nonconformance report to the DQC Manager.

9.2.3.2. DQC MANAGER DISPOSITION OF NONCONFORMANCE REPORTS

When the DQC Manager receives a Nonconformance Report, he or she makes an assessment of the affect the reported nonconformance has on form, fit, and function. The DQC Manager may assign a disposition of either:

List of Included Forms

Military Forms:

- Preparatory Phase Checklist
- Initial Phase Checklist Form
- Contractor Production Report
- Contractor Quality Control Report
- Testing Plan and Log

Standard Forms:

- Point Of Contact List
- Project Organization Chart
- Project Quality Communications Plan
- Quality Manager Appointment Letter
- Project Manager Appointment Letter
- Superintendent Appointment Letter
- Personnel Certifications and Licenses
- Project Personnel Resumes
- Project Subcontractor and Supplier List
- Training Plan
- Training Log
- Regulatory Codes and Industry Standards
- Project Regulatory Building Codes
- Controlled Materials Form
- Metals Material Receiving Inspection Report
- Material Inspection and Receiving Report
- Inspection and Testing Standards
- Quality Inspection and Test Plan
- Test Equipment Calibration Plan and Log
- Quality Controlled Work Task List
- Daily Production Report
- Work Task Inspection Form
- Nonconformance Report
- Punch List
- Project Completion Inspection Form
- System Document Control Form
- Project Records Control Form
- Project Quality System Audit Form

[CompanyName]
Nonconformance Report

Version 20141002

Nonconformance Report Control ID	Project ID	Project Name
	[ProjectNumber]	[ProjectName]

Preparer Signature/ Submit Date	DQC Manager Signature / Disposition Date

Description of the requirement or specification	
Description of the nonconformance, location, affected area, and marking	
Disposition	☐Replace ☐ Repair ☐ Rework ☐ Use As-is
	Approval of disposition required by customer representative? Yes ☐ No ☐ Customer approval signature /date: _____
Corrective Actions	☐Corrective actions completed Name/Date:_____ Customer acceptance of corrective actions required? Yes ☐ No ☐ Name/Date:_____
Preventive Actions	
	☐Preventive actions completed Name/Date:_____

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