



BRAVO QATAR QUALITY CONTROL PLAN

Quality Control and Process Plan



KEY ELEMENTS OF THE FLOOR QUALITY PLAN:

Key elements of Bravo Qatar Quality Assurance/Quality Control Plan include.

Quality Management and Responsibilities. Bravo Qatar fully integrates its quality management system into the organizational structure and performance management systems for each project. We:

- ❖ Maintain a documented quality system consisting of a quality manual with policies and procedures.
- ❖ Tightly control exceptions to the quality system so company standards are applied uniformly to every project
- ❖ Systematically maintains quality system documents and records.

Quality Control Personnel. Bravo Qatar fully integrates its quality management system into the organizational structure and performance management systems for each project. We:

- ❖ Appoint a Quality Manager, Superintendent, and Project Manager to each project, each with well-defined quality responsibilities and the authority to carry them out.
- ❖ Have well-defined quality responsibilities for every employee with specific quality responsibilities for key job positions.
- ❖ Plan project quality records and documentation that will be maintained.
- ❖ Tightly control exceptions to the quality system so company standards are applied uniformly to every project.
- ❖ Enforce policies that monitor work conditions before and during work so that quality results are assured.

Project Quality Coordination and Communication. Bravo Qatar tightly controls the construction process to ensure quality results. We:

- ❖ Plan quality communications through meetings, reporting requirements, and points of contact.
- ❖ Have a project startup meeting to communicate project goals and expectations.
- ❖ Conduct preparatory meetings in advance of each scheduled work task to communicate requirement details and coordinate work activities.

Quality Assurance Surveillance. Bravo Qatar audits the quality system to assure it is operating effectively. We:

- ❖ Audit the operation of the quality system on each project for conformance to the Project Quality Assurance/Quality Control Plan and the Bravo Qatar Quality System requirements.
- ❖ Conduct annual company-wide audits to evaluate effectiveness of the Bravo Qatar Quality System and improve its operation.

Employee Qualifications. Bravo Qatar ensures that only knowledgeable, capable employees carry out the planning, execution, and control of our projects. We:

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- ❖ Identify employee qualification requirements, including licensing requirements, training qualifications, responsibilities, and authority for each job position.
- ❖ Train field employees on quality standards and procedures for their job position.
- ❖ Validate employee capabilities before they are assigned to carry out quality job responsibilities.
- ❖ Review ongoing employee qualifications and evaluate quality practices and performance as part of the employee performance management process.

Qualification of Subcontractors and Suppliers. Bravo Qatar purchases only from subcontractors and suppliers that consistently meet Bravo Qatar standards for quality. We:

- ❖ Clearly define outside organization qualification requirements including licensing requirements, compliance with specific quality standards, quality responsibilities, qualification of personnel and quality improvement processes.
- ❖ Validate capabilities to meet project quality requirements at planned production levels.
- ❖ Verify ongoing quality performance.

Project-Specific Quality Standards. Bravo Qatar clearly defines standards and specifications that apply to each project. We:

- ❖ Identify all relevant regulations, codes, and industry standards.
- ❖ Identify specifications for materials that meet contract as well as regulatory requirements.
- ❖ Specify quality and certification requirements for materials and equipment that affect quality.
- ❖ Identify special requirements for calibration of quality measuring devices.
- ❖ Supplement the contract and published standards with Bravo Qatar quality standards as required to reduce quality risks and assure quality results.

Inspections and Test Plan. Bravo Qatar quality inspection processes ensure that all work activities comply with the documented standards and specifications. We:

- ❖ Identify inspections and tests required by contract specifications and industry standards.
- ❖ Record the result of each quality inspection and test.
- ❖ Use independent laboratories certified by nationally recognized accreditation agencies

Work Task Quality Inspections. Bravo Qatar quality inspection processes ensure that all work activities comply with the documented standards and specifications. We:

FLOOR PROJECT QUALITY SPECIFICATIONS

Fulfilling customer contract expectations is a primary objective of the Bravo Qatar Quality System. To ensure that customer expectations will be fulfilled, Bravo Qatar clearly defines the requirements for each contract before it is approved.

The Project Manager ensures that the information in customer contracts clearly defines customer expectations and that the necessary details are provided to set requirements for construction. Bravo Qatar personnel and subcontractors and suppliers are accountable for compliance to standards-based written specifications.



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To achieve expectations reliably and consistently, specifications are clearly spelled out, not only for results but also for processes. Specifications apply to materials, work steps, qualified personnel and subcontractors and suppliers, safe work rules, and environmental work conditions.

Standards ensure that results are specified rather than left to discretionary practices. All Bravo Qatar construction activities comply with generally accepted good workmanship practices and industry standards.

WORK TASK QUALITY INSPECTIONS

Bravo Qatar identifies a list of work tasks which will be quality controlled. Each work task is subject to a series of inspections; before, during, and after completion.

Each inspection verifies compliance with full scope of the relevant specifications; not limited to inspection form checkpoints.

The initial work task-ready inspection occurs when work is ready to start and ensures that work begins only when it does not adversely impact quality results.

Incoming material inspections verify that materials are as specified and meet all requirements necessary to assure quality results.

Work-in-process inspections continuously verify that work conforms to project specifications and quality expectations. Work continues only when it does not adversely impact quality results.

At completion of the work task an inspection verifies that work has been completed in accordance with project quality requirements.

Inspection results are recorded and maintained as part of the project files.

The Quality Manager identifies each Task that is a phase of construction that requires separate quality controls to assure and control quality results. Each Task triggers a set of requirements for quality control inspections before, during and after work tasks.

Independent quality audits are conducted to verify that the task quality controls are operating effectively.

Construction projects may execute a work task multiple times in a project, in which case a series of quality inspections are required for each work task.

Independent quality control audits are conducted to verify that the task quality controls are operating effectively.

IDENTIFICATION OF QUALITY INSPECTED WORK TASKS

A listing of project work tasks is included on the Quality Control work task List and included as an exhibit in this subsection.

REQUIRED INSPECTIONS FOR EACH WORK TASK

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Each work task is subject to a series of inspections before, during, and at completion as described below.

Results of inspections are recorded.

PREPARATORY SITE INSPECTION

The project manager and his team perform a quality inspection of the work area and:

- ❖ Assesses completion of required prior work.
- ❖ Verifies field measurements.
- ❖ Assures availability and receiving quality inspection status of required materials.
- ❖ Identifies any nonconformances to the requirements for the task to begin.
- ❖ Identifies potential problems

TASK-READY INSPECTIONS

For each work task, the Superintendent or a qualified inspector performs job-ready quality inspections to ensure that work activities begin only when they should begin. Job-ready quality inspections verify that conditions conform to the project quality requirements.

WORK IN PROCESS QUALITY INSPECTIONS

For each work task, the Superintendent or a qualified inspector performs an initial work in process inspection when the first representative portion of a work activity is completed.



HOW WORK IS CARRIED OUT

1. OVERVIEW

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

2. PROJECT STARTUP AND QUALITY CONTROL COORDINATION MEETING

Prior to the commencement of work, the Project Manager holds a meeting to discuss and coordinate how project work that will be performed and controlled. Key personnel from Bravo Qatar, subcontractors and suppliers 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 Quality Assurance/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.

3. PREPARATORY PROJECT QUALITY ASSURANCE/QUALITY CONTROL PLAN PLANNING

3.1 WORK TASK REQUIREMENTS REVIEW

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

- ❖ Objectives and acceptance criteria of the work task.
- ❖ Quality standards that apply to the work task.
- ❖ Work instructions, process steps, and product installation instructions that apply to the work task.
- ❖ Shop drawings.
- ❖ Submittals.
- ❖ Tools and equipment necessary to perform the work.
- ❖ License, certification, or other qualification requirements of personnel assigned to work.



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- ❖ Required records of the process and resulting product.
- ❖ The subcontractor contracted to perform the work, if applicable.
- ❖ Customer contract requirements.
- ❖ Required quality inspections and tests.
- ❖ Method for clearly marking nonconformances to prevent inadvertent use.
- ❖ Location of quality system records and documents.
- ❖ Personnel training.

3.2 PREPARATORY SITE INSPECTION

The project manager also performs a quality inspection of the work area and:

- ❖ Assesses completion of required prior work.
- ❖ Verifies field measurements.
- ❖ Assures availability and receiving quality inspection status of required materials.
- ❖ Identifies any nonconformances to the requirements for the work task to begin.
- ❖ Identifies potential problems.

3.3 WORK TASK PREPARATORY QUALITY PLANNING MEETINGS

Prior to the start of a work task, the project manager conducts a meeting with key company, subcontractor personnel responsible for carrying out, supervising, or inspecting the work, and interested customer representatives.

During the meeting, the Superintendent communicates the work task quality requirements and reinforces heightened awareness for critical requirements. Topics for a work task quality plan meeting include:

- ❖ Conflicts that need resolution.
- ❖ Required quality documents and a verification of availability to personnel carrying out, supervising, or inspecting the work task.
- ❖ Record keeping requirements and the availability of necessary forms.
- ❖ Review methods and sequences of installation.
- ❖ Special details and conditions.
- ❖ Standards of workmanship.
- ❖ Heightened awareness of critical quality requirements.
- ❖ Quality risks.
- ❖ Work tasks quality inspection form.

3.4 WEEKLY QUALITY PLANNING AND COORDINATION MEETINGS

The project manager conducts a meeting with key company, subcontractor, and supplier personnel responsible for carrying out, supervising, or inspecting the work, and interested customer representatives.

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The meeting is held on a nominal weekly schedule. During the meeting, the Superintendent facilitates

coordination among the participants, communication among the participants, and reinforces heightened awareness for critical requirements. The project manager maintains a record of the meeting event on the Daily Quality Control Report.

NONCONFORMANCES AND CORRECTIVE ACTIONS

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 Bravo Qatar Quality System requirements.

2. NONCONFORMANCES

2.1 MARKING OF NONCONFORMANCES AND OBSERVATIONS.

When the Quality Manager, Superintendent, 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.

2.2 CONTROL THE CONTINUATION OF WORK

After the item is marked, the project manager 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 project manager 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 Superintendent identifies the limits of the affected area. The project manager quickly and clearly identifies the boundaries of the stop works area.

3. NONCONFORMANCE REPORT

3.1 RECORDING OF NONCONFORMANCES

If nonconformances or observed items exist by the work task completion inspection, the project manager or inspector records the nonconformances on a nonconformance report. The project manager sends the nonconformance report to the Quality Manager.

3.2 QUALITY MANAGER DISPOSITION OF NONCONFORMANCE REPORTS

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