Oil & Gas Essentials QA/QC Plan Sample

Good for smaller projects and bid qualifications

Has All the Essential Elements of a well-founded Quality Control Plan

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PROJECT-SPECIFIC CONSTRUCTION QUALITY PLAN

TABLE OF CONTENTS

B. KEY ELEMENTS OF THE PIPELINE CONSTRUCTION QUALITY PLAN

Key elements of the [CompanyName] Quality Assurance/Quality Control Plan include:

Quality Management and Responsibilities. [CompanyName] 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. [CompanyName] 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. [CompanyName] 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. [CompanyName] 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 [CompanyName] Quality System requirements.
- Conduct annual company-wide audits to evaluate effectiveness of the [CompanyName] Quality System and improve its operation.

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

- 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.

COMPLIANCE WITH INDUSTRY CONSTRUCTION STANDARDS

Codes that may apply to this project include those listed below.

Regulatory Codes and Industry Standards

Division	Description	Reference Standard No.	Reference Standard Title
22	Corrosion protection coatings for buried pipe and fittings	NACE SP0169	Control of External Corrosion on Underground or Submerged Metallic Piping Systems
22	Installation of pipe hangers, inserts and supports	MSS SP-58	Pipe Hangers and Supports - Materials, Design and Manufacture, Selection, Application, and Installation
22	Beveling, alignment, heat treatment, and inspection of weld	ASME B31.1	Power Piping
22	Site Preparation, Excavation, and Backfill Specification	PIP CVS02100	Site Preparation, Excavation, and Backfill Specification
33	Gas piping installation	NFPA 54	National Fuel Gas Code
33	Pipe hanger and support installation	MSS SP-69	Pipe Hangers and Supports - Selection and Application
33	Welding of Pipelines	API 1104	Welding of Pipelines and Related Facilities Pipeline Segment

I. Construction Work Task Quality Inspections

[CompanyName] identifies a list of work tasks, phases of production, which will be quality controlled.

Work Tasks Series of Inspections

Each work Task is subject to a series of inspections; before, during, and after the work is complete. Each inspection verifies compliance with full scope of the relevant specifications; not limited to checkpoints for heightened awareness.

- The initial task-ready inspection occurs when crews are ready to start work 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 workmanship expectations. Work continues only when it does not adversely impact quality results.
- At completion of the Task an inspection verifies that work, materials, and tests have been completed in accordance with project quality requirements. When appropriate, functional tests are performed.

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

Special Process Inspections

The Quality Manager identifies special processes where the results cannot be verified by subsequent inspection or testing and determines if continuous work in process inspections are required. For these special processes, a qualified inspector continuously inspects the work process.

Material quality inspection and tests

Material quality inspections and tests ensure that purchased materials meet purchase contract quantity and quality requirements.

Daily Quality Control Report

The Superintendent records a summary of daily work activities. The report will include:

- Schedule Activities Completed
- General description of work activities in progress.
- Problems encountered, actions taken, problems, and delays
- Meetings held, participants, and decisions made
- Subcontractor and Supplier and Company Crews on site
- Visitors and purpose
- General Remarks
- Improvement Ideas
- Weather conditions

J. Quality Control of Corrections, Repairs, and Nonconformances

Should a problem occur in the quality of work, we systematically contain the issue and quickly make corrections. Our first action is to clearly mark the item by tape, tag, or other easily observable signal to prevent inadvertent cover-up.

Then we expedite a corrective action that brings the workmanship or material issue into conformance by repair, replacement, or rework. Previously completed work is reinspected for similar nonconformances. In the event that we cannot correct the item to meet contract specifications, the customer will be notified and customer approval of corrective actions is required before proceeding.

Fixing problems found is not sufficient. [CompanyName] systematically prevents recurrences to improve quality. First enhanced controls and management monitoring are put into place to assure work proceeds without incident. Then using a structured problem solving process, [CompanyName] identifies root causes and initiates solutions. Solutions may involve a combination of enhanced process controls, training, upgrading of personnel qualifications, improved processes, and/or the use of higher-grade materials. Follow-up ensures that a problem is completely resolved. If problems remain, the process is repeated.

Nonconformances and their resolution are recorded on a Nonconformance Report form. A Nonconformance Report form exhibit is included in this subsection.

[CompanyName]
Nonconformance Report

Version 20140707

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

Preparer Signature/ Submit Date	Quality 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:_____

List of Included Inspection Forms for Oil and Gas

From CSI Divisions

- HVAC
- Metals
- Plumbing

Forms:

- Air Outlets and Inlets
- Air Terminal Units
- Breechings/ Chimneys/ and Stacks
- Central Cooling Equipment
- Commissioning of HVAC
- Cooling Towers
- Facility Fuel-Oil Piping
- Facility Fuel-Storage
- Facility Natural-Gas Piping
- Furnaces
- Heating Boilers
- HVAC Air Cleaning Devices
- HVAC Ducts and Casings
- HVAC Fans
- HVAC Insulation
- HVAC Piping and Pumps
- HVAC Water Treatment
- Indoor Central-Station Air-Handling Units
- Instrumental and Control for HVAC
- Refrigerant Piping
- Testing/ Adjusting/ and Balancing for HVAC
- Metal Decking
- Metal Railings
- Metal Stairs
- Structural Steel Framing
- Plumbing Insulation
- Electric Domestic Water Heaters
- Facility Potable-Water Storage Tanks
- Facility Sanitary Sewerage
- Facility Storm Drainage
- Facility Water Distribution
- Fuel-Fired Domestic Water Heaters
- Plumbing Fixtures

Plumbing - Plumbing Insulation 22.07.00

Project:	Phase:	Contract#:	Subcontractor:	Crew:

Compliance Verification

- ☐ Compliance with initial job-ready requirements
- ☐ Compliance with material inspection and tests
- ☐ Compliance with work in process first article inspection requirements
- ☐ Compliance with work in process inspection requirements
- ☐ Compliance with Task completion inspection requirements
- ☐ Compliance with inspection and test plan
- ☐ Compliance with safety policies and procedures

Reported Nonconformances and incomplete items:

FTQ 2TQ *Heightened Awareness Checkpoints*

- ☐ ☐ Plumbing and equipment tested and operational before applying Insulation
- ☐ ☐ Area to be insulated is free of rust// scale// dirt// and moisture
- ☐ ☐ Adhesive/Anchors/Staples/Wrapping utilized is compatible with Insulation type
- ☐ ☐ Insulation through penetrations maintains fire rating of structure
- ☐ ☐ Insulation protected from chafe at all supports and contact points
- ☐ ☐ Insulation protected from weathering and moisture intrusion
- ☐ ☐ Operation of valves and actuators not hindered by insulation
- ☐ ☐ Insulation joints sealed
- ☐ ☐ Cladding applied in high abuse/traffic areas
- ☐ ☐ Openings/Holes caused by testing closed/repaired

FTQ Scores and Completion Sign-off

Field Mgmt.-91.45.01

Quality **5 4 3 2 1** *Notes:*

On-Time **5 4 3 2 1** *Notes:*

Safety **5 4 3 2 1** *Notes:*

Sign and date*: Cell # / ID #:: _____ Signed: _____ Date: _____

Task has been has been verified complete and in compliance with contract drawings and specifications except for non-conformances and incomplete items reported above.

Quality Score	*5 = 100% NO problems*	*4 = 1 minor problems*	*3 = Hotspot or 2-3 minor*	*2 = 6+ or major problems*	*1 = Excessive problems*
On-Time Score	*5 = On Time*	*4 = Late*	*3 = Late by 1 day*	*2 = Late by 2 days*	*1 = Late more than 2 days*
Safety Score	*5 = 100% NO problems*	*4 = 1 minor problem*	*3 = Hotspot or 2-3 minor*	*2= 4+ or major problem*	*1= Injury*

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