

[CompanyName]

Fire Suppression

Quality Assurance/Quality Control Plan

[ProjectName]

[ProjectNumber]

Management acceptance

This Construction Quality Assurance/Quality Control Plan has been reviewed and accepted.

Endorsed By: (Name / Title)	[QualityManagerName], Quality Manager		
Signature:	<i>[QualityManagerName]</i>	Date:	[Date]
Version	1.0	Notes	Initial Issue

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PROJECT-SPECIFIC FIRE SUPPRESSION QUALITY PLAN

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C. PROJECT QUALITY COORDINATION AND COMMUNICATION

[CompanyName] has regular, planned communications with customers, subcontractors, and suppliers to coordinate quality expectations, priorities, activities, and improvements.

The process begins when we hold a pre-construction meeting where we discuss how quality of the project will be controlled and the quality responsibilities of key personnel. We also coordinate a schedule for weekly production meetings, monthly quality management meetings, and protocols for telephone and internet communications.

Throughout the project, [CompanyName] holds preparatory meetings prior to the start of upcoming milestones, tasks, or phases of work. These meetings are attended by key company, subcontractor personnel responsible for carrying out, supervising, or inspecting the work, and interested customer representatives. We review quality requirements, coordinate quality inspections and hold points. In the process, we listen to each stakeholder to understand their concerns for critical details. We add the critical details to inspection checklists. We also train production personnel on these details in weekly and toolbox talk meetings.

[CompanyName] weekly team toolbox meetings deploy findings of the preparatory meeting to field personnel. The venue is used to train personnel on technical requirements, reinforce critical details for heightened awareness, and institute improvements to work methods. It is also a forum for team communications and coordination.

**[CompanyName]
Point of Contact List**

Project ID	Project Name	Preparer	Date
[ProjectNumber]	[ProjectName]	[ProjectManagerName]	

Company	Name	Job Position(s)	Phone Contact Numbers	Email
[CompanyName]	[PresidentName]	President		
[CompanyName]	[ProjectManagerName]	Project Manager		
[CompanyName]	[SuperintendentName]	Superintendent		
[CompanyName]	[QualityManagerName]	Quality Manager		
[CompanyName]	[SafetyManagerName]	Safety Manager		

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**[CompanyName]
Project Quality Communications Plan**

Project ID	Project Name	Preparer	Date
[ProjectNumber]	[ProjectName]		
Distribution of project organization chart and assigned responsibility and authority of the Project Manager, Quality Manager, and Superintendent:			
All personnel listed on contact list			
Points of contact list distribution:			
All personnel listed on contact list			
RFI response distribution:			
All personnel listed on contact list			
Project startup meeting participants, date, location:			
TBD			
Work task quality plan meeting participants, nominal location:			
TBD			
Weekly project communication meeting participants, and nominal day of week, time, and location:			
TBD			
Daily quality report distribution, frequency, and due date:			
Friday of every week for the previous 7 days			
Monthly project quality status report distribution and due date:			
Third day of every month			
Distribution of quality inspection and test records, and due date:			

Friday of every week for the previous 7 days

Nonconformance report distribution and customer approval authority:

Immediately

Location of project quality records storage and point of contact for records access:

In the job office trailer. Superintendent is point of contact

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E. PERSONNEL QUALIFICATIONS

[CompanyName] ensures that only knowledgeable, capable employees carry out the planning, execution, and control of the project.

We train our employees on quality standards and procedures based on project requirements as well as their job positions. Then we validate their capabilities before they are assigned to carry out their quality job responsibilities on the project. Ongoing monitoring of performance continually validates qualifications of each employee.

The Quality Manager qualifies employee capabilities to ensure that they are capable of completely carrying out their assigned quality responsibilities including the following capabilities:

- Knowledge of Company quality standards
- Knowledge of job responsibilities and authority
- Demonstrated skills and knowledge
- Demonstrated ability
- Demonstrated results
- Required training
- Required experience

The Quality Manager also evaluates independent contractor personnel on the same standards that apply to employees.

PERSONNEL CERTIFICATION REQUIREMENTS

Personnel certifications are required for the following:

Certification or License Title	Reference Standard No.	Reference Standard Title
Welders to structural steel	AWS D1.1/D1.1M	Structural Welding Code - Reinforcing Steel
Plumbers	DOL	Department of Labor
Plumbers	NITC	National Inspection Testing Certification
Plumbers	ABPA	American Backflow Prevention Association
Plumbers	IAPMO	International Association of Plumbing and Mechanical Officials

TRAINING

We train our employees on quality standards and procedures based on project requirements as well as their job positions. Then we validate their capabilities before they are assigned to carry out their quality job responsibilities on the project. Ongoing monitoring of performance continually validates qualifications of each employee.

After a training activity is completed, [CompanyName] keeps of record of both the training activity and the training participants.

G. FIRE SUPPRESSION PROJECT QUALITY SPECIFICATIONS

Fulfilling customer contract expectations is a primary objective of the [CompanyName] Quality System. To ensure that customer expectations will be fulfilled, [CompanyName] 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.

[CompanyName] personnel and subcontractors and suppliers are accountable for compliance to standards-based written specifications.

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 [CompanyName] construction activities comply with generally accepted good workmanship practices and industry standards.

COMPLIANCE WITH INDUSTRY FIRE SUPPRESSION STANDARDS

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

Description	Reference Standard No.	Reference Standard Title
Beveling, alignment, heat treatment, and inspection of weld	ASME B31.1	Power Piping
Soldered joints	ASME B31.5	Refrigeration Piping and Heat Transfer Components
ASTM D 2774 Standard Practice for Underground Installation of Thermoplastic Pressure Piping	ASTM D 2774	Standard Practice for Underground Installation of Thermoplastic Pressure Piping
PE piping installation	ASTM D 2774	Underground Installation of Thermoplastic Pressure Piping
Brazed joints	AWS B2.2/B2.2M	Specification for Brazing Procedure and Performance Qualification
DIP polyethylene encasement installation	AWWA C105/A21.5	Polyethylene Encasement for Ductile-Iron Pipe Systems
Steel pipe welding	AWWA C206	Field Welding of Steel Water Pipe
Disinfection of water mains	AWWA C651	Standard for Disinfecting Water Mains
Steel pipe installation	AWWA M11	Manual: Steel Water Pipe: A Guide for Design and Installation
PVC piping installation	AWWA M23	Manual: PVC Pipe - Design and Installation

[CompanyName] Quality Assurance/Quality Control Plan

Backflow preventers installation	ICC IPC	International Plumbing Code
Installation of pipe hangers, inserts and supports	MSS SP-58	Pipe Hangers and Supports - Materials, Design and Manufacture, Selection, Application, and Installation
Pipe hanger and support installation	MSS SP-69	Pipe Hangers and Supports - Selection and Application
Corrosion protection coatings for buried pipe and fittings	NACE SP0169	Control of External Corrosion on Underground or Submerged Metallic Piping Systems
Sprinkler system installation	NFPA 13	Standard for the Installation of Sprinkler Systems
Flush the piping system with potable water	NFPA 14	Standard for the Installation of Standpipes and Hose Systems
Installation of underground piping and fittings	NFPA 24	Standard for the Installation of Private Fire Service Mains and Their Appurtenances
Joints anchoring	NFPA 24	Standard for the Installation of Private Fire Service Mains and Their Appurtenances
Control and fire alarm wiring installation	NFPA 70	National Electrical Code
Site Preparation, Excavation, and Backfill Specification	PIP CVS02100	Site Preparation, Excavation, and Backfill Specification
Installation of High-Density Polyethylene (HOPE) Piping	PIP PNSC0036	Installation of High-Density Polyethylene (HOPE) Piping
Installation of plastic pipe where in compliance with NFPA	PPFA-01	Firestopping: Plastic Pipe in Fire Resistive Construction
PVC piping installation	UBPPA UNI-B-3	Recommended Practice for the Installation of Polyvinyl Chloride (PVC) Pressure Pipe (Nominal Diameters 4-36 Inch)

H. FIRE SUPPRESSION INSPECTION AND TEST PLAN

[CompanyName] identifies inspections and tests that will be performed during the project. A test report is completed for each test. The test reports are then used for monitoring compliance to the plan and tracking results.

If independent laboratories are required to perform tests or quality inspections, we ensure that the laboratories are certified by a nationally recognized testing accreditation organization as appropriate for the scope of the inspection or test.

The Quality Inspection and Test Plan form lists inspections and tests (other than work task inspections) that will be performed on this project.

Results of inspections and tests will be recorded on the Inspection and Test Form.

Form exhibits are included as an exhibit in this subsection.

INSPECTION AND TESTING FIRE SUPPRESSION STANDARDS

Inspection and testing standards that may apply to this project include those listed below.

Description	Reference Standard No.	Reference Standard Title
Plumbing pipe weldments	ASME B31.1	Power Piping
Low-pressure air tests for DIP pipelines	ASTM C 924M ASTM C 924	Installation of Ductile-Iron Water Mains and Their Appurtenances
Deflection testing for plastic pipe	ASTM D 2412	Determination of External Loading Characteristics of Plastic Pipe by Parallel-Plate Loading
Hydrostatic testing of DIP	AWWA C600	Installation of Ductile-Iron Water Mains and Their Appurtenances
Hydrostatic testing of steel pressure lines	AWWA C600	Installation of Ductile-Iron Water Mains and Their Appurtenances
Testing of concrete pressure lines	AWWA M9	Manual: Concrete Pressure Pipe
Vertical pump tests	HI 2.6	Vertical Pump Tests
Plumbing system tests	ICC IPC	International Plumbing Code
Hydrostatic testing	NFPA 14	Standard for the Installation of Standpipes and Hose Systems
Pressure & leakage testing of PVC	UBPPA UNI-B-3	Recommended Practice for the Installation of Polyvinyl Chloride (PVC) Pressure Pipe (Nominal Diameters 4-36 Inch)
Low-pressure air tests for PVC pipelines	UBPPA UNI-B-6	Recommended Practice for Low-Pressure Air Testing of Installed Sewer Pipe

**[CompanyName]
Inspection and Test Plan and Log**

Project Number	Project Name	
[ProjectNumber]	[ProjectName]	(All tests verified by Superintendent and/or QC Manager)

Item	Spec Section Number and Title	Applicable Standard	Inspections & Tests Description	Test and Inspection Methods	Number required	Time Schedule/Frequency	Inspection/Test By	Sample Req. Yes/No	Unique characteristics of QC Service
1.									
2.									
3.									
4.									
5.									
6.									
7.									
8.									
9.									
10.									
11.									
12.									
13.									
14.									
15.									

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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. If 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.

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[CompanyName] Nonconformance Report		
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	<input type="checkbox"/> Replace <input type="checkbox"/> Repair <input type="checkbox"/> Rework <input type="checkbox"/> Use As-is	
	Approval of disposition required by customer representative? Yes <input type="checkbox"/> No <input type="checkbox"/>	
	Customer approval signature /date: _____	
Corrective Actions	<input type="checkbox"/> Corrective actions completed Name/Date: _____	
	Customer acceptance of corrective actions required? Yes <input type="checkbox"/> No <input type="checkbox"/>	
	Name/Date: _____	
Preventive Actions		
	<input type="checkbox"/> Preventive actions completed Name/Date: _____	

LIST OF INCLUDED INSPECTION FORMS FOR FIRE SUPPRESSION

FROM CSI DIVISIONS

- Fire Suppression - 21

FORMS:

- Facility Fire-Suppression Water-Service Piping
- Fire Pumps
- Fire Suppression Sprinkler Systems
- Fire-Suppression Standpipes
- Fire-Suppression Water Storage

Fire Suppression - Facility Fire-Suppression Water-Service Piping 21.11.00

Project:	Phase:	Contract#:	Subcontractor:	Crew:
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<p><u>Compliance Verification</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Compliance with initial job-ready requirements <input type="checkbox"/> Compliance with material inspection and tests <input type="checkbox"/> Compliance with work in process first article inspection requirements <input type="checkbox"/> Compliance with work in process inspection requirements <input type="checkbox"/> Compliance with Task completion inspection requirements <input type="checkbox"/> Compliance with inspection and test plan <input type="checkbox"/> Compliance with safety policies and procedures <p>Reported Nonconformances and incomplete items:</p>	<p><u>FTQ 2TQ Heightened Awareness Checkpoints</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> <input type="checkbox"/> Piping pitched to allow complete drainage <input type="checkbox"/> <input type="checkbox"/> Piping not placed above electrical panels or switchgear <input type="checkbox"/> <input type="checkbox"/> Firestops installed at penetrations through fire partitions// fire walls// smoke partitions// or floors <input type="checkbox"/> <input type="checkbox"/> Penetrations through floor// exterior wall and roof sealed and made watertight <input type="checkbox"/> <input type="checkbox"/> Piping secured to prevent movement and chafe <input type="checkbox"/> <input type="checkbox"/> Piping bends and fittings restrained <input type="checkbox"/> <input type="checkbox"/> System pressure tested and without leaks <input type="checkbox"/> <input type="checkbox"/> Valves provided with tamper-proof seals <input type="checkbox"/> <input type="checkbox"/> Wet piping not exposed to freezing conditions <input type="checkbox"/> <input type="checkbox"/> Fire department connection type verified with Local Fire Department prior to product ordering and installation
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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.

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



For More Information:

Visit our Online Store at:

www.firsttimequalityplans.com

or

Contact: First Time Quality

410-451-8006

edc@firsttimequality.com