

## Fire Protection Office (FPO) Division of Responsibilities (DOR) for Construction

**V= verify W = witness**

This table clarifies the assigned duties and responsibilities for new construction and significant modification inspections associated with the IBC, IEBC, NFPA, DOE O 420.1C, and the LANL ESM. This table represents the minimum expectations; additional witnessing and observation can be performed by either party indicated as desired.

**BI** = IBC Inspector (LBO) - **FP** = Fire Protection Inspector (FPO)  
**EI** = Electrical Inspector (OSHISH) - **STUP** = Start-Up & Commissioning (LANL)

**V = Verify:** The act of checking by an independent qualified person that an installed SSC, feature, test result, or process conforms to established criteria. In this context this would typically be performed by review of test documents, installation records, or other supporting information required to be generated by the Project.

**W = Witness:** The act of on-site observing by an independent qualified person an installation and/or testing of an SSC, feature, or process to verify conformance with established criteria. In this context it would require physical presence and visual observation of the activity while it is taking place. If a physical presence is not possible or safe, alternative means can be used if feasible and approved.

V or V/W	INSPECTION	BI/EI Insp.	FP
----------	------------	-------------	----

### Fire Protection Water Supply Systems

<b>V</b>	1.	Underground piping materials, size and routing per design documents	<b>BI</b>	
<b>V</b>	2.	Restraint methods (thrust blocks, retaining fittings) per design documents	<b>BI</b>	
<b>V</b>	3.	Appurtenances (hydrants, valves, etc.) and locations per design documents <div style="text-align: right; margin-right: 20px;">During installation:</div> <div style="text-align: right; margin-right: 20px;">At final:</div>	<b>BI</b>	<b>FP</b>
<b>W</b>	4.	Hydrostatic (leak) testing of piping	<b>BI</b>	
<b>V/W</b>	5.	Flushing of underground piping	<b>BI</b>	
<b>V/W</b>	6.	Hydrant flushing, dry barrel drainage, and fire flow verification	<b>BI</b>	
<b>V</b>	7.	Backfill and compaction methods per design documents	<b>BI</b>	
<b>V</b>	8.	Review/Approve Contractor's Material and Test Certificate		<b>FP</b>

### Fire Sprinkler System Installation

<b>V</b>	1.	Pipe materials, routing, and size per design documents	<b>BI</b>	
<b>V</b>	2.	Piping is properly supported per design documents	<b>BI</b>	
<b>V</b>	3.	Piping is properly braced (seismic restraints installed per design documents)	<b>BI</b>	
<b>V</b>	4.	Anchor bolt installations for supports per design documents	<b>BI</b>	
<b>V/W</b>	5.	Hydrostatic (leak) test of piping	<b>BI</b>	
<b>V/W</b>	6.	Pneumatic (leak) test of Dry Pipe system	<b>BI</b>	
<b>V/W</b>	7.	Flushing of underground piping connections	<b>BI</b>	
<b>V</b>	8.	Proper clearances between piping and adjacent commodities	<b>BI</b>	
<b>V</b>	9.	Sprinkler heads are properly installed (type, orifice size, orientation, coverage, temperature rating, etc.) <div style="text-align: right; margin-right: 20px;">During installation:</div> <div style="text-align: right; margin-right: 20px;">At final:</div>	<b>BI</b>	<b>FP</b>

## Fire Protection Office (FPO) Division of Responsibilities (DOR) for Construction

**V= verify W = witness**

V or V/W	INSPECTION		BI/EI Insp.	FP
<b>V/W</b>	10.	Flow testing (alarm testing) of system piping  During installation: At final:	<b>BI</b>	<b>FP</b>
<b>V</b>	11.	Proper installation of system components (valves, alarm valves, trim, alarm devices, supervisory air, backflow prevention, drains, gauges and other appurtenances) per design documents  During installation: At final:	<b>BI</b>	<b>FP</b>
<b>V</b>	12.	Proper signage, labels and flow arrows on piping and components  During installation: At final:	<b>BI</b>	<b>FP</b>
<b>V</b>	13.	Proper methods for freeze protection (anti-freeze loops, dry and preaction configurations, etc.)		<b>FP</b>
<b>V/W</b>	14.	Backflow prevention device(s) forward flow and back flow testing and certification (IAW O&M 406)	<b>BI</b>	
<b>V</b>	15.	Review/Approve Contractor's Material and Test Certificate		<b>FP</b>

### Fire Pump Installation

<b>V</b>	1.	Pipe materials, routing, and size per design documents	<b>BI</b>	
<b>V</b>	2.	Piping is properly supported per design documents	<b>BI</b>	
<b>V</b>	3.	Piping is properly braced (seismic restraints installed per design documents)	<b>BI</b>	
<b>V</b>	4.	Anchor bolt installations for supports per design documents	<b>BI</b>	
<b>V/W</b>	5.	Hydrostatic (leak) test of piping	<b>BI</b>	
<b>V/W</b>	6.	Flushing of suction piping connections	<b>BI</b>	
<b>V</b>	7.	Proper clearances between piping and adjacent commodities	<b>BI</b>	
<b>V</b>	8.	Field installed normal AC power wiring conforms to NFPA 70	<b>EI</b>	
<b>V</b>	9.	Field installed fire alarm wiring conforms to NFPA 72	<b>BI</b>	
<b>V</b>	10.	Pump appurtenances are properly installed per design documents  During installation: At final:	<b>BI</b>	<b>FP</b>
<b>V/W</b>	11.	Flow testing of fire pump, comparison to shop curve  During installation: At final:	<b>BI</b>	<b>FP</b>
<b>V</b>	12.	Proper signage, labels and flow arrows on piping and components  During installation: At final:	<b>BI</b>	<b>FP</b>

## Fire Protection Office (FPO) Division of Responsibilities (DOR) for Construction

**V= verify W = witness**

V or V/W	INSPECTION		BI/EI Insp.	FP
V/W	13.	Fire Alarm testing of system devices  During installation: At final:	BI	FP
V/W	14.	Sequence of operation testing of system  During installation: At final:	BI	FP
V/W	15.	Testing of pump engine / motor		FP
V/W	16.	Backflow prevention device(s) forward flow and back flow testing and certification (IAW O&M 406)	BI	
V	17.	Review/Approve Contractor's Material and Test Certificate		FP

### Fire Detection and Alarm Systems

V	1.	Proper routing of FA (fire alarm) conduit, raceway, etc.	BI	
V	2.	Proper support of FA conduit, raceway, etc.	EI	
V	3.	System components are installed in proper locations and at proper heights per design documents  During installation: At final:	BI	FP
V	4.	FA conductors/cabling installed per design documents	BI	
V	5.	Proper voltage of FA conductors	BI	
V	6.	Field installed normal AC power wiring conforms to NFPA 70	EI	
V	7.	Field installed FA wiring conforms to NFPA 72	BI	
V	8.	Wiring and termination to control panels and field devices are properly routed and landed per design documents	BI	
V	9.	Continuity and/or meggar testing of conductors/cable	BI	
W	10.	Proper functionality of fire alarm system devices  During installation: At final:	BI	FP
V	11.	Size and type of batteries per design documents (and calculations)  During installation: At final:	BI	FP
W	12.	Proper functionality of fire alarm system logic and control functions per design documents		FP
W	13.	Proper fire alarm system control logic, including auxiliary functions per design documents		FP
W	14.	Proper remote reporting to CAS		FP

**Fire Protection Office (FPO) Division of Responsibilities (DOR) for Construction**

**V= verify W = witness**

<b>V or V/W</b>	<b>INSPECTION</b>		<b>BI/EI Insp.</b>	<b>FP</b>
<b>V</b>	15.	Authorization to Energize issued	<b>EI</b>	<b>FP</b>
<b>V</b>	16.	Review/Approve NFPA 72 Record of Completion		<b>FP</b>

**Special Extinguishing Systems**

<b>V</b>	1.	Pipe routing and size per design documents	<b>BI</b>	
<b>V</b>	2.	Piping is properly supported per design documents	<b>BI</b>	
<b>V</b>	3.	Piping is properly braced (seismic restraints installed per design documents)	<b>BI</b>	
<b>V</b>	4.	Anchor bolt installations for supports per design documents	<b>BI</b>	
<b>V/W</b>	5.	Hydrostatic/ Pneumatic (leak) test of piping	<b>BI</b>	
<b>V</b>	6.	Proper clearances between piping and adjacent commodities	<b>BI</b>	
<b>V</b>	7.	Discharge nozzles are properly installed (type, orifice size, orientation, coverage, obstructions, etc.)  During installation: At final:	<b>BI</b>	<b>FP</b>
<b>V/W</b>	8.	System actuation and alarm testing  During installation: At final:	<b>BI</b>	<b>FP</b>
<b>V</b>	9.	Proper installation of system components (valves, agent storage containers, alarm devices, supervisory devices, gauges and other appurtenances) per design documents  During installation: At final:	<b>BI</b>	<b>FP</b>
<b>V</b>	10.	Proper signage, labels and flow arrows on piping and components  During installation: At final:	<b>BI</b>	<b>FP</b>
<b>V</b>	11.	Proper functionality of control system logic and control functions, releasing panel, auxiliary functions (fan shutdown, power shunt-trip, door closure, damper closure, pre-discharge alarms, abort stations, etc.) per design documents		<b>FP</b>
<b>V</b>	12.	Review/Approve Contractor's Material and Test Certificate		<b>FP</b>

## Fire Protection Office (FPO) Division of Responsibilities (DOR) for Construction

V= verify W = witness

V or V/W	INSPECTION	BI/EI Insp.	FP
----------	------------	-------------	----

### Building Construction Features, Walls/Barriers

V	1.	Fire-rated floor and roof systems are constructed per design documents	BI	
V	2.	Roof systems/covering assemblies are installed per design documents	BI	
V	3.	Fire-rated walls/barriers constructed per design documents	BI	
V	4.	Fire-rated walls/barriers labeled/stenciled with appropriate rating	BI	
V	5.	Through penetration firestop system installations in walls/barriers per design documents	BI	

### Fire Doors / Fire Windows

V	1.	Doors/windows, frames and hardware have proper rating, properly close and latch, are labeled per design documents	BI	
V/W	2.	Doors/windows properly operate (release, close, latch) when inter-locked with fire detection and alarm system		FP

### Fire-Proofing/Coatings

V	1.	Fire-proofing installed per manufacturer's instructions	BI	
V	2.	Patches and repairs to fire-proofing are installed properly	BI	

### Elevators

V/W	1.	Elevators are programmed properly for fire safety (recall floors, shut-trip, interlock with fire alarm system)		FP
-----	----	--	--	----

### HVAC

V	1.	Fire/smoke dampers and duct smoke detectors are installed per design documents	BI	
V/W	2.	HVAC fan shutdown upon duct smoke detector activation and/or other control requirement via fire detection and alarm system		FP
V/W	3.	Smoke damper controls function per design documents, inter-locked with fire alarm system		FP
W	4.	Proper setting (fusible link temp) and operation of fire dampers		FP

### Emergency Lighting/EXIT Signage

V	1.	Installation in accordance with design documents (configuration with lighting, mounting, locations)	BI	
V/W	2.	Satisfactory testing/commissioning	STUP	FP

### Portable fire extinguishers

V	1.	Installation/placement and appropriateness with hazards in accordance with design documents  <div style="text-align: right;">During installation: At final:</div>	BI	FP
---	----	---	----	----

**Fire Protection Office (FPO) Division of Responsibilities (DOR) for Construction**

**V= verify W = witness**

---

Approved by:	Jason Kemp (FP)	Tim Donovan (ES-FE)	Felix Sandoval (CEI OSHISH)
			Determination: Unclassified