Bulk Storage Checklist

Container

	Painting of container	9.141(a)(1)
	Lettering of container	9.140(g)
	Container inlet and outlet connections labeled vapor or liquid	5.7.8.5
	Manufactures nameplate condition	9.129
	AG Container(s) installation (Horizontal)	6.6.3
	(Horizontal with attached supports)	6.6.3.3(a)
	(Vertical)	6.6.4
	UG Container installation	6.6.6
	Mounded container installation	6.6.6.3
	Container distance requirements	6.3.1
	Container protection (tampering/vehicular)	9.140(a)
	(fencing specification)	9.140(b)
	(guardrail specification)	9.140(d)
	No covering over container or over transport loading or unloading areas	9.141(f)

Container Appurtenances

	All container appurtenances accessible	6.6.1.5
	Pressure relief valve installation	6.7.2
	Pressure gauge requirement >2000gal.	5.7.8.6
	Temperature gauge requirement >4000gal.	5.7.4.4
	Liquid level gauging devices	5.7.5
	Container openings 1 1/4 inch or greater shall be equipped with pneumatic internal valve or double back check filler valve or positive shutoff valve in combination with back flow check valve or pneumatic ESV within 4 feet of existing positive shutoff valve on individual containers >4,000 gal and on all sites installed after Feb 1, 2006 with aggregate capacities ≥ 4,001 gal	5.7.4.4
*	Exception: container openings exclusively serving stationary appliances or equipment may have excess flow valve and shutoff valve as close as practical to the container	
	Container openings less than 1 1/4 inch shall be equipped with pneumatic internal valve or double back flow check filler valve or positive shutoff with excess flow valve or a back flow check valve	5.7.4.4
	All internal valves pneumatically controlled	5.7.4.2
	All internal valves equipped for remote closure and automatic shutoff using thermal actuation with thermal element within 5 feet of internal valve	5.7.4.2
	Size of container opening can be reduced by use of only one bushing	9.403 5.7.7.1(6)

Emergency controls

Piping System

	Liquid LP gas piping design pressure	5.9.1.4
	Piping materials	5.9.3
	Tubing materials	5.9.3
	Pipe fittings material	5.9.4
	Pipe and fittings min. design rating	5.9.4.1
	Metallic Pipe joining method requirements	6.9.3.5
	Minimize the number of fittings used	6.9.3.7
	Piping system protected with flexible connectors from expansion, contraction, jarring, vibration and settling.	6.9.3.9
	Aboveground piping supported/protected	6.9.3.10
	Flexible connectors ≥ 3/4", stainless steel flex, maximum length 60"	9.143(g) or 6.9.6.2
	Excess flow valve in in pipe opening when piping size is reduced	5.7.8.1(h)
	Hydrostatic relief valve in closed sections of liquid piping(400-500 psig rating)	6.13

Bulkhead/ESVs

	Vertical Bulkhead required on all new sites installed after 2/1/01, and shall include pneumatic ESVs or back check flow valve on aggregate capacities ≥ 4,001 gallons	9.143(a)
	Pneumatic ESVs within 4 ft of bulkhead and stainless steel connector < 36 inches installed between bulkhead and ESVs	9.143(a)(1)
	ESVs activate in the event of a pull-away	9.143(a)(2)
	Vertical Bulkhead required on all old sites by 2/1/03, and shall include pneumatic ESVs or back check flow valve on aggregate capacities ≥ 4,001 gallons	9.143(b)
	Vertical Bulkhead and ESV exception	9.143(c)
	Bulkhead requirements	9.143(d)
	Max of 2 transfer hoses per pipe riser	9.143(d)(2)
	Liq.& Vapor transfer hose ends capped	9.143(d)(3)
	Bulkhead 10 feet from containers	9.143(d)(4)
	Bulkhead construction requirements	9.143(d)(7)
	12 inch pipe risers on bulkhead	9.143(d)(7)(E)i
	Breakaway loading arm in lieu of 12" riser	9.143(d)(8)
	Bulkhead exemption for sites ≥ 4,001 gal	9.143(i)
	Bulkhead guardrail protection installation	9.140(d)(4)
	3 feet between bulkhead and guardrail	9.140(d)(5)
	The two guardrail end posts protecting the bulkhead, shall be located 24" to 36" at 45* angles to the nearest corner of the bulhead	9.140(d)(5)
	Stainless steel flex connectors between bulkead & ESV's, max length 36".	9.143(g)

Electrical/Lighting

18 lb fire extinguisher required	3.10.2.4
Sites installed after 2/1/01 shall have the ESVs and internal valves interconnected into one emergency shutoff location	9.143(a)(5)
Emergency shuoff location 25-100 feet from ESV in the path of egres from the ESV	9.143(e)
Emergency shutoff location labeled (Propane Emergency Shutoff) and visible from point of transfer.	9.143(g)
ESVs and internal valves shall be kept in working order	9.143(f)
Thermo (fire) actuation of internal valves where thermal element is within 5 ft of internal valve	5.7.4.2.(d)(1)

Hoses

Leaking or damaged hose shall be immediiately repaired or removed from service	7.2.4
Hose continuously marked LP-GAS, PROPANE, 350 PSI WORKING PRESSURE & manufacturer's name or trademark	5.9.6.4(a)

Pump/Compressors

Pump installation	6.17.2
Stainless steel flex connectors connected to a pump, max length 36".	6.17.2.2
Compressor installation	6.17.3
Stainless steel flex connectors connected to a compressor, max length 36".	6.17.3
Electrical requirements	6.22.2
Lighting required for night operations	6.18.5

Point of Transfer

Distance requirements from the point of transfer	6.5.4

Misc

Form 500 required for installations that are ≥ 10,000 gal aggregate capacity.	9.101(c)(1)(a)
Documented annual testing of internal valves, ESVs, and backflow check valves	9.143(a)(4)
Fire extinguisher (18 lb)	6.25.4.2
Corrsion protection of all metallic equipment & components that are buried or mounded	6.16.1
Combustible Material (10 ft. clearance)	6.4.5.2
20 ft. from liquids with flash points<200*F	6.4.5.5
System piping designed to prevent debris from impeding action of valves and other components. Retroactive by 7/1/2011	6.18.5
Locks for valves on unfenced installations	9.140(d)(1)
Maintenace	9.113

Telephone Numbers

Certified employee's and/or operations suppervisor's telephone # (3/4" letters)	9.17(a)(3)
24-hr emergency telephone # (2" letters)	9.140(g)(8)