

## Anhydrous Ammonia Storage Facility Inspection Checklist

FIRM NAME (As Licensed or Producer)		LOCATION (City/State)				DATE	
<b>INSTRUCTIONS: UNLESS OTHERWISE NOTED, Note work order requirements by entering "X" in the boxes.</b> <b>PERIODIC INSPECTION REQUIRED-</b> MN Rules 1513.0180, Subpart 13., requires that pressure relief devices (PRDs — hydrostats and pressure relief valves) receive a periodic visual external inspection to determine that PRDs: (A.) are free of evidence of tampering, damage, corrosion, or foreign matter that might prevent proper operation; (B.) are free of leakage when subject to pressures below the minimum allowable start to discharge setting; (C.) has a properly secured rain cap or other device to avoid entry of moisture or other matter into the relief valve outlet; and (D.) has an open weep hole to permit moisture to escape (weep holes - only for pressure relief valves)							
<b>MN CITATION</b>	<b>SITE IDENTIFICATION / LICENSING / RIGHT TO KNOW TRAINING</b>	<b>SAFETY EQUIPMENT (1513.0040)</b>					
1513.0380	1. LEGIBLE SIGN AT SITE WITH SITE ID, ADDRESS, PHONE #S OF SITE AND AFTER HOURS STAFF.	7. TWO FULL FACE NH3-RATED GAS MASKS REQUIRED					
	<b>REQUIREMENTS</b>	8. FOUR CURRENTLY DATED NH3-RATED CANISTERS REQUIRED					
18C.415	2. CURRENT FERTILIZER LICENSE AND FERTILIZER LICENSE POSTING REQUIRED	<b>CANISTER DATES:</b>					
18C.235	3. INCIDENT RESPONSE PLAN REQUIRED	9. PAIR NH3-RATED GLOVES AND GOGGLES REQUIRED					
1513.0040	4. SAFETY & COMPETENCY TRAINING REQUIRED	10. PAIR NH3-IMPERVIOUS RAINSUIT / SLICKER / BOOTS REQUIRED					
	<b>TANK LOCATION</b>	11. SAFETY EQUIPMENT NOT ACCESSIBLE AND MAINTAINED					
1513.0340	5. IF TWO+ TANKS; TANKS NOT AT LEAST 5 FT APART	12. ACCESSIBLE DELUGE SHOWER + PLUMBED EYE WASH <b>OR</b> A MINIMUM OF 150+ GALLON CLEAN WATER IN AN OPEN TOP CONTAINER REQUIRED					
1513.0130	6. TANK(S) LOCATED AT LEAST 50 FT FROM WELL/OPEN SOURCE OF DRINKING WATER	13. ARE GLOVES/GOGGLES WORN WHEN HANDLING NH3 AND DURING MAINTENANCE					
<b>TANKS IDENTIFICATION / LOCATION</b>							
1513.0130	14. Clean area within 10 ft. of tank(s) of weeds, combustible materials, and materials not required for facility operation and access to emergency personnel and vehicles.						
	<b>Nos. 15 - 18; Sides of each tank or outer sides of a group of tanks</b>	<b>TANK PAINTING / MARKINGS / PLACARDING</b>					
1513.0220	15. Tank(s) requires painting						
1513.0360	16. "Anhydrous Ammonia" 4-inch letters						
1513.0360	17. "Inhalation Hazard" 4-inch letters						
1513.0360	18. "1005" placards						
1513.0360	19. Guaranteed grade analysis; one area per tank						
1513.0140	20. System openings ID required for liquid / vapor phases						
<b>TANK NAMEPLATE SPECIFICATIONS</b>							
1513.0140	21. Tank manufacturer						
1513.0140	ASME construction code symbols						
1513.0140	Tank Serial No. & Contract No.						
1513.0140	National Board No.						
1513.0140	Year or Date Built						
1513.0140	Plant Manufactured						
1513.0140	Tank PSI Rating @ °F		°F =		°F =		°F =
1513.0140	Overall length (OL) & Outside diameter (OD)	OL=	OD=	OL=	OD=	OL=	OD=
1513.0140	Tank Gallonage Sq. Ft. Area & CFM Required	Gallonage=		Gallonage=		Gallonage=	
		Sq. Ft.=	CFM=	Sq. Ft.=	CFM=	Sq. Ft.=	CFM=
1513.0140	Head and shell metal thickness (inches)	Hd=	Shell=	Hd=	Shell=	Hd=	Shell=
1513.0120	22. Noncode welding on tank						
	<i>R = Repair RP = Replacement</i>	<b>TANK FOUNDATION / SUPPORTS / SADDLE CONTACTS (1513.0340)</b>					
23. Support / foundation type		Supports:	Foundation:	Supports:	Foundation:	Supports:	Foundation:
24. Tank support(s) R / RP required Saddle corrosion contacts (SC)							
25. Saddle support covers 1/3 circumference of newly installed / relocated tank							
26. Tank LESS THAN 18 inches from ground level?							
<b>TANK APPURTENANCES</b>							
1513.0140	27. 85% fixed liquid level gauge						
1513.0140	28. Magnetic / float liquid level gauge	% liquid level=		% liquid level=		% liquid level=	
1513.0320	29. 0-400 PSI / NH3-rated pressure gauge	PSI=		PSI=		PSI=	
1513.0190	30. Temperature Gauge	°F =		°F =		°F =	
1513.0320	31. Excess Flow Valve before each shutoff valve in tank	Main Liq.	GPM=	GPM=	GPM=	GPM=	GPM=
		Liq. Return	GPM=	GPM=	GPM=	GPM=	GPM=
		Vapor	GPM=	GPM=	GPM=	GPM=	GPM=
<b>PIPING &amp; PIPING APPURTENANCES (System)</b>							
1513.0160	32. NH3-rated pipe / fittings required						
1513.0160	33. Eliminate leaks in system						
1513.0160/0370	34. Traffic protection (tanks, piping, etc.)						

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<b>TANKS IDENTIFICATION / LOCATION</b>											
<b>PIPING &amp; PIPING APPURTENANCES (System)</b>											
... continued from pg 1											
1513.0160	35. Provision for expansion / contraction required										
1513.0150	36. Shutoff valves installed incorrectly										
1513.0370	37. Unlocked main tank valves or fenced area when unattended.										
1513.0160	38. Noncode welding on NH3 piping										
1513.0180	39. (Periodic inspection required) List area(s) between each pair of liquid and vapor shutoff valves <b>LACKING</b> 350-400 PSI / NH3-RATED HYDROSTAT (S), CLEANING (C), RAINCAP (RC)										
<b>PUMPING / COMPRESSOR / METER SYSTEM APPURTENANCES</b>											
1513.0200	40. Compressor &/or pump brand/size, motor size, RPM speed										
	41. 0-400 PSI / NH3-rated pressure gauge			<input type="checkbox"/> Discharge side of liquid pump before or near the pressure actuated bypass valve/line <input type="checkbox"/> Both sides of compressor							
1513.0200	42. <b>TESTING REQUIRED:</b> Pressure actuated bypass valve(s) at the discharge side of pump(s) takes the full flow capacity of the pump at an acceptable pressure differential (PSID) and without undue stress on pump(s)/motor(s).			Bypass ID:		Bypass PSI:		Static PSI:		PSID: (Bypass PSI - Static PSI)	
				Bypass ID:		Bypass PSI:		Static PSI:		PSID: (Bypass PSI - Static PSI)	
				<b>Any undue stress on pump(s) &amp; motor(s)? =</b>							
	43. Meter(s)			<input type="checkbox"/> 250 psi/NH3 rated <input type="checkbox"/> Equipped to prevent measurement of vapor							
<b>UNLOADING RISERS</b>											
1513.0	<b>RISER IDENTIFICATION / LOCATION</b>										
1513.0200	44. Circle each riser valve without a properly sized excess flow valve			Liquid	Type =						
				Vapor	Type =						
Note in #41 if Fisher Snappy Joe Emergency Shutoff Valve does not have an extra outer spring    Emergency shut-off valve (ESV) with bulthead = ESVB; Tripod = T											
1513.0200	45. Type of pull away device Circle pull away device that is <b>NOT</b> adequate - Impeded, leaky, etc.			Liquid							
				Vapor							
1513.0180	46. (Periodic inspection required) Each hose riser <b>NOT</b> protected with a 350-400 PSI hydrostat: Cleaning (C); Raincap (RC)			Liquid							
				Vapor							
1513.0180	47. NH3-rated hose out of condition			Liquid							
1513.0310				Vapor							
1513.0370	48. Unlocked hose-end valve when unattended										
1513.0370	49. Traffic protection for riser area(s)										
<b>RAIL &amp; TRUCK UNLOADING AREA</b>				<b>RAIL UNLOADING AREA</b>				<b>TRUCK UNLOADING AREA</b>			
Note in #'s 50 & 51 if Fisher Snappy Joe Emergency Shutoff Valve does not have an extra outer spring											
1513.0200	50. Liquid unload piping requires backcheck (BC) or other suitable flow protection (Excludes ESV's)							Location		Location	
1513.0200	51. Vapor unload requires properly sized excess flow valve or other suitable flow protection (Excludes ESV's)										
1513.0180	52. (Periodic inspection required) Liquid & vapor unload hose(s) requires 350-400 PSI / NH3-rated hydrostat(s); Cleaning (C); Raincap (RC)			Liquid =		Vapor =		Liquid =		Vapor =	
1513.0170	53. NH3 rated hoses for unload area out of condition			Liquid =		Vapor =		Liquid =		Vapor =	
1513.0200	54. Adequate truck unload bulkhead required										
1513.0640	55. Rail = Caution signs <b>required</b> for placement on tracks to warn of connections?			Rail = Wheel chokes <b>required</b> for use in unloading car(s)?							
1513.0200	56. Rail = Tank cars and Truck transports = NOT unloaded into an approved / permitted fixed storage facility?										
<b>MANIFOLDS &amp; PRESSURE RELIEF VALVES - PRV'S - PERIODIC INSPECTION REQUIRED (1513.0180 &amp; 1513.0330)</b>											
<b>TANK IDENTIFICATION / MANIFOLD &amp; PRV LOCATION</b>											
1513.0330	57. Brand of manifold(s) (C = Continental; RD/RM = Rego Duoport/Multiport; ST = Squibb Taylor)										
1513.0330	58. R/RP manifold(s) - Properly operates?										
1513.1100	59. UL CFM/Air rating of manifold(s)										
	CFM required (See #19)										
1513.0180	60. Up / down stream restrictions										
1513.0370	<b>ID / LOCATION OF PRV'S</b>										
1513.0180	61. PRV Brand (C = Continental; RL/RS = Rego-large/small; ST = Squibb Taylor)										
1513.0180	62. Periodic inspection performed										
1513.1100	63. CFM rating of PRV's										
1513.0180	64. PRV's NH3 and 250 PSI-rated										
1513.0180	65. PRV Installation records maintained										
1513.0180	66. Replace out-of-date / out-of-condition PRV										
1513.0180	67. PRV Cleaning (C); Raincap (RC) Required										