

**WHAT YOU CAN DO -**

These guidelines are not intended to be operating instructions or a maintenance manual. It is intended as a guide to encourage best management practices. You can help by distributing these guidelines and training your employees.

The following checklist has been prepared by fertilizer industry professionals and we are asking you to review your procedures and train your employees to ensure every possible precaution is being taken to minimize the potential for an NAR:

**Anhydrous Ammonia Tank Car Checklist**

Plant/Terminal: \_\_\_\_\_ Car Number: \_\_\_\_\_  
 Safety Valve Test Date Due: \_\_\_\_\_ Tank Test Date Due: \_\_\_\_\_  
 Stenciled Car Capacity: \_\_\_\_\_ kgs or lbs Lt. Weight: \_\_\_\_\_ kgs or lbs Net Capacity: \_\_\_\_\_ kgs or lbs  
 D.O.T. #: \_\_\_\_\_ D.O.T.-SP #: \_\_\_\_\_

**NOTE: NET LOAD MUST NOT EXCEED 2% OF THE TOTAL CAPACITY TEMPERATURE RELATED.**

PRIOR TO LOADING/UNLOADING		PRIOR TO RELEASING
<input type="checkbox"/> Locked	Derails	<input type="checkbox"/> Unlocked
<input type="checkbox"/> In Place	Blue Flags	<input type="checkbox"/> Removed
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Hand brake applied and wheel chocks in place?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Is there a dome seal pin with a chain attached?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Are the port hole covers in place?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Is the Thermowell cap tight?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
<input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> N/A	Is the Thermowell cap leaking?	<input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> N/A
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Are the sample lines tight and free of leaks?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Is the "A" liquid valve wrench tight and free of leaks?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Is the "A" liquid valve plug Teflon taped and wrench tight?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Is the "B" liquid valve wrench tight and free of leaks?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Is the "B" liquid valve Plug Teflon taped and wrench tight?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Is the vapor line wrench tight and free of leaks?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Is the vapor line plug Teflon taped and wrench tight?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
<input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> N/A	Is the safety valve leaking?	<input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> N/A
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Is the safety valve free of obstructions?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Is "Anhydrous Ammonia" legibly stenciled on both sides of the car with 4" letters?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Is "Inhalation Hazard" legibly stenciled on both sides of the car with 4" letters?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Is the gauging device and protection hood in operational condition?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Is the car equipped with 4 placard holders?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Have the prescribed placards been properly applied?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
<input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> N/A	Are there any concerns with the condition of the rail car exterior?	<input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> N/A
<input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> N/A	Are there any concerns with the rail car running gear?	<input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> N/A
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Does the car have double shelf couplers?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Is the car body properly grounded?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Are the load lines properly secured?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
<input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> N/A	Is there any reason why this car should not be loaded/unloaded or shipped?	<input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> N/A
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Is the dome sealed? Dome Seal #:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Is the spare cable seal inside the dome? Spare Seal #:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A

Specific Comments: \_\_\_\_\_



**There must be ZERO LEAKAGE of liquid or vapor after loading/unloading is complete and all valves must be closed tight.**

The car has been properly loaded/unloaded.

This car has passed final inspection on the day of releasing.

Signature of loader/unloader \_\_\_\_\_

Date \_\_\_\_\_

Signature of loader/unloader \_\_\_\_\_

Date \_\_\_\_\_

\_\_\_\_\_  
Detector Reading

Pass

Fail

## WHAT IS A NON-ACCIDENTAL RELEASE?

A non-accidental release (NAR) refers to an unintentional release of a hazardous material from a railroad tank car *NOT* associated with an accident or a derailment. Anhydrous ammonia rail tank car NAR's have been an on-going problem at loading and unloading facilities for some time.

The most common causes of anhydrous ammonia NARs are deteriorated O-rings; liquid line with missing valve or closure plug; liquid line with valve or closure plug left open; loose pressure plate connection; or deteriorated pressure plate gasket. In 2007, anhydrous ammonia rail cars had 43 NARs and in 2008 37 NARs. The majority of NARs are associated with receivers returning residue tank cars.

With over 50,000 tank cars of anhydrous ammonia shipped every year, reducing and eliminating NARs is a top priority in the fertilizer industry. The industry is committed to the secure and safe movement of our products and protecting the environment and the public.

2007	
43 NARs reported for anhydrous ammonia rail cars	
2008	
37 NARs reported for anhydrous ammonia rail cars	

## WHAT ARE THE CONSEQUENCES OF NARS

- Fines from the Department of Transportation between \$6-12,000 per incident. *49 CFR 107, Subpart D, Appendix A, Part G.5* – “offering a hazardous material for transportation in a package that leaks during conditions normally incident to transportation;”
- Fines from the railroads. These fines can range from \$3,000 per incident to \$10,000 in some instances;
- Shipment/train delays;
- Employee injuries;
- Evacuation costs;
- Environmental clean up;
- Public safety risk;
- Approximately \$20,000 to purge a leaking residue car;
- Approximately \$50,000 to trans-load a full leaking car;
- Bad press; and
- Cost of activating response teams.

## LEARN MORE -

### ADDITIONAL RESOURCES AVAILABLE

#### TANK CAR LOADING/UNLOADING

- DVD sponsored by TRANSCAER and the Association of American Railroads (AAR).
- Copies available free of charge from The Fertilizer Institute.

#### PAMPHLET 34

- Recommended Methods for the Safe Loading and Unloading of Non-Pressure General Service and Pressure Tank Cars.
- A copy of the pamphlet is available through the NAR Web site.

#### NAR WEB SITE

- For further information, visit <http://nar.aar.com>



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# LOADING/UNLOADING ANHYDROUS AMMONIA RAIL TANK CARS IN NORTH AMERICA

RECOMMENDED PRACTICES  
REDUCE AND ELIMINATE NON-ACCIDENTAL RELEASES

