

March 17, 2006



U.S. Department  
of Transportation

400 Seventh Street, S.W.  
Washington, D.C. 20590

**Pipeline and  
Hazardous Materials  
Safety Administration**

DOT-SP 11749  
(SEVENTH REVISION)

(FOR RENEWAL, SEE 49 CFR § 107.109)

1. GRANTEE: (See individual authorization letter)
2. PURPOSE AND LIMITATION:
  - a. This special permit authorizes the use of acoustic emission testing as an alternative method for performing structural integrity inspections and tests when qualifying DOT Specification tank cars and non-DOT specification tank cars used for the transportation of hazardous materials. This special permit provides no relief from any Hazardous Materials Regulation (HMR) other than as specifically stated herein.
  - b. The safety analyses performed in development of this special permit only considered the hazards and risks associated with transportation in commerce.
  - c. Unless otherwise stated herein, this special permit consists of the special permit authorization letter issued to the grantee together with this document.
3. REGULATORY SYSTEM AFFECTED: 49 CFR Parts 106, 107 and 171-180.
4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR § 172.203(a) in that marking the special permit number on the shipping paper is waived; § 172.302(c) in that marking the special permit number on the tank cars is waived; § 173.22a(a) and (b) for special permit availability requirements; and § 180.509(e) in that alternate testing is not authorized, except as specified herein.

5. BASIS: This special permit is based on the application of Union Tank Car Company dated March 6, 2006 in accordance with § 107.109.
6. HAZARDOUS MATERIALS (49 CFR § 172.101):

Hazardous Materials Description			
Proper Shipping Name	Hazard Class/ Division	Identification Number	Packing Group
Hazardous materials authorized in tank cars	As appropriate	As appropriate	As appropriate

7. SAFETY CONTROL MEASURES:

a. PACKAGING: Packaging prescribed are DOT Specification tank cars, or tank cars built to an Association of American Railroad (AAR) specification that are used for the transportation of hazardous materials.

b. TESTING:

1. In addition to the non-destructive examination methods specified in § 180.509(e), a tank car facility may use acoustic emission as an alternative test method to determine one or more of the welds are in proper condition.

2. Each person who qualifies a tank car under the terms of this special permit must comply with:

(i) the latest issue of the AAR "Procedure for Acoustic Emission Evaluation of Tank Cars and IM101 Tanks", including Annex Z; or

(ii) an alternative procedure approved in writing by the Associate Administrator for Safety, Federal Railroad Administration (see paragraph 10.c for mailing address).

3. Each person who qualifies a tank car under the terms of this special permit must comply with the requirements listed in the AAR Manual of Standards and

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Recommended Practices, Section C, Part III,  
Specifications for Tank Cars M-1002, Appendix T.

4. When appropriate, the applicant must use calculation, laboratory test evidence, stress analysis, or comparative non-destructive testing of representative tank car designs, to establish and support the adequacy and sensitivity of the acoustic emission instrumentation, the test procedure, and the cumulative signal strength category (damage detection rating system). For each car tested, minimum detectable defect sizes must be determined for the principal structural areas of interest to the structural integrity inspection.

5. The twist test specified in Annex Z may not be used to qualify the integrity of welds inboard of the body bolster except as authorized in paragraph 7.b.2(ii).

c. MARKING:

1. After successfully passing an acoustic emission test, the tank must be marked "AE" followed by the year of the tank qualification in the Qualified Column of the stencil specified in the AAR, Specification for Tank Cars, Specification M-1002, Appendix C.

2. Tank cars previously marked "DOT-SP 11749", "DOT-SP 11747" or DOT-SP 11824" may remain marked until the next tank car qualification.

8. SPECIAL PROVISIONS:

a. In accordance with the provisions of Paragraph (b) of § 173.22a, persons may use the packaging authorized by this special permit for the transportation of hazardous materials specified in paragraph 6, only in conformance with the terms of this special permit. The tank car special permit holder or party conducting testing under the terms of this special permit must inform the offeror, at the time of delivery, that the tank car has been qualified with an alternative test method and, if requested, must furnish a copy of the current special permit to the offeror.

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- b. For each tank that is tested under the terms of this special permit, the following must be retained and made available to FRA and the AAR Tank Car Committee, upon request:
1. Records as required by the "Procedure for Acoustic Emission Evaluation of Tank Cars and IM-101 Portable Tanks."
  2. Any calculations, laboratory test evidence, stress analysis, or comparative nondestructive testing of representative tank car designs, used to establish and support the adequacy and sensitivity of the acoustic emission instrumentation, the test procedure, the cumulative signal strength category (damage detection rating system), representative car design type grouping, and minimum detectable defect sizes.
- c. The shipping paper notation requirements of § 172.203(a) are waived.
- d. A current copy of this special permit must be maintained at each facility where the car is qualified under the terms of this special permit.
- e. Packagings permanently marked 'DOT-E 11749', prior to October 1, 2007 may continue to be used under this special permit for the remaining service life of the packaging or until the special permit is no longer valid. Packagings marked on or after October 1, 2007 must be marked 'DOT-SP 11749'.
9. MODES OF TRANSPORTATION AUTHORIZED: Rail freight.
10. MODAL REQUIREMENTS:
- a. At least thirty days prior to the first two AE tests performed by the grantee or a party to the special permit, the holder or party to the special permit performing the test must file with the Staff Director, Hazardous Materials Division, Federal Railroad Administration the results of stress analysis, test procedures, supporting documentation.
  - b. At least thirty days prior to the first two tests performed by a third party on behalf of the holder or party to this special permit, the holder or party to the special

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permit must provide to the Staff Director, Hazardous Materials, FRA, the test procedures, a copy of the completed AAR Form B-1 (Subcontractor Evaluation Sheet).

c. Testing must be conducted only by facilities approved by the Federal Railroad Administration for acoustic emission testing of tank cars. Requests for approval must be addressed to:

Hazardous Materials Division  
Federal Railroad Administration  
RRS-12, Mail Stop 25  
1120 Vermont Avenue, N.W.  
Washington, D.C. 20590

11. COMPLIANCE: Failure by a person to comply with any of the following may result in suspension or revocation of this special permit and penalties prescribed by the Federal hazardous materials transportation law, 49 U.S.C. 5101 et seq:

- o All terms and conditions prescribed in this special permit and the Hazardous Materials Regulations, 49 CFR Parts 171-180.
- o Persons operating under the terms of this special permit must comply with the security plan requirement in Subpart I of Part 172 of the HMR, when applicable.
- o Registration required by § 107.601 et seq., when applicable.

Each "Hazmat employee", as defined in § 171.8, who performs a function subject to this special permit must receive training on the requirements and conditions of this special permit in addition to the training required by §§ 172.700 through 172.704.

No person may use or apply this special permit, including display of its number, when the special permit has expired or is otherwise no longer in effect.

Under Title VII of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU)- 'The Hazardous Materials Safety and Security Reauthorization Act of 2005' (Pub. L. 109-59), 119 Stat. 1144 (August 10, 2005), amended the Federal hazardous materials transportation law by changing the term 'exemption' to 'special permit' and authorizes a special

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permit to be granted up to two years for new special permits and up to four years for renewals.

12. REPORTING REQUIREMENTS: Shipments or operations conducted under this special permit are subject to the Hazardous Materials Incident Reporting requirements specified in 49 CFR §§ 171.15 - Immediate notice of certain hazardous materials incidents, and 171.16 - Detailed hazardous materials incident reports. In addition, the grantee(s) of this special permit must notify the Associate Administrator for Hazardous Materials Safety, in writing, of any incident involving a package, shipment or operation conducted under terms of this special permit.

Issued in Washington, D.C.:



for Robert A. McGuire  
Associate Administrator  
for Hazardous Materials Safety

Address all inquiries to: Associate Administrator for Hazardous Materials Safety, Pipeline and Hazardous Materials Safety Administration, Department of Transportation, Washington, D.C. 20590. Attention: PHH-31.

Copies of this special permit may be obtained by accessing the Hazardous Materials Safety Homepage at [http://hazmat.dot.gov/sp\\_app/special\\_permits/spec\\_perm\\_index.htm](http://hazmat.dot.gov/sp_app/special_permits/spec_perm_index.htm) Photo reproductions and legible reductions of this special permit are permitted. Any alteration of this special permit is prohibited.

PO: SCHOONOVER/AM