

June 5, 2012



U.S. Department  
of Transportation

East Building, PHH-30  
1200 New Jersey Avenue S.E.  
Washington, D.C. 20590

**Pipeline and Hazardous  
Materials Safety Administration**

DOT-SP 14437  
(THIRD REVISION)

EXPIRATION DATE: May 31, 2016

(FOR RENEWAL, SEE 49 CFR § 107.109)

1. GRANTEE: Columbiana Boiler Company, LLC  
Columbiana, OH
2. PURPOSE AND LIMITATIONS:
  - a. This special permit authorizes the manufacture, marking, sale and use of a non-DOT specification cylinder (pressure vessel) conforming with all requirements applicable to a DOT specification 106A500W multi-unit tank car tank except as specified herein, for the transportation in commerce of the material authorized by this special permit. This special permit provides no relief from the Hazardous Materials Regulations (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.
3. REGULATORY SYSTEM AFFECTED: 49 CFR Parts 106, 107 and 171-180.
4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR §§ 173.3 and 173.314 in that a non-DOT specification pressure vessel is not authorized except as specified herein.
5. BASIS: This special permit is based on the application of Columbiana Boiler Company, LLC dated May 22, 2012 submitted in accordance with § 107.109.

6. HAZARDOUS MATERIALS (49 CFR § 172.101):

<b>Hazardous Materials Description</b>			
<b>Proper Shipping Name</b>	<b>Hazard Class/ Division</b>	<b>Identification Number</b>	<b>Packing Group</b>
Ammonia, anhydrous	2.3	UN1005	N/A Hazard Zone D
Chlorine	2.3	UN1017	N/A Hazard Zone B
Sulfur dioxide	2.3	UN1079	N/A Hazard Zone C
Those materials authorized to be transported in DOT Specification DOT 106A Containers	As appropriate	As appropriate	As appropriate

7. SAFETY CONTROL MEASURES:

a. PACKAGING - Packaging prescribed is a non-DOT specification pressure vessel designed, manufactured, and tested in accordance with Columbiana Boiler Company, LLC drawing number 102303-1, the supporting documentation on file with the Office of Hazardous Materials Special Permits and Approvals (OHMSPA) and with DOT Specification 106A500W (§§ 179.300 and 179.301) except as modified by the terms of this special permit and meeting the following requirements:

(1) Pressure vessels must be manufactured using equipment and processes adequate to ensure that each pressure vessel produced conforms to the requirements of this special permit. Pressure vessels must be cylindrical, circular in cross section, of welded steel with electric-arc welded longitudinal seam. The pressure vessel must have: an outside diameter (nominal) of 76.2 cm (30 inches), an overall length

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(nominal) of 207 cm and 225 cm (81.5 inches and 88.5 inches); and a bursting pressure not less than 86.18 bar (1250 psi).

(2) Head material of construction must be ASTM A-516-70/ASME SA-516 Grade 70 normalized. Shell material of construction must be ASTM A-516-70/ASME SA-516 Grade 70.

(3) The minimum thickness after forming of the body shells must be 7.14 mm (0.281 inch). The welded joint efficiency for the longitudinal joint in these pressure vessels is 1.0. The welded joint efficiency for the head to shell girth joints in these pressure vessels is 0.45 accounting for no radiography.

(4) Each tank head must be formed convex to pressure and must be fusion-welded to the tank shell. It must be one piece, hot formed in one heat so as to provide a straight flange at least 38.1 mm (1.5 inches) long. Each tank head must have a snug drive fit into the shell for the fusion-welding of the head to body shell. The minimum thickness after forming of each head must be sufficient to meet the test requirements of § 179.300-16, and the thickness required in § 179.300-8(b) for threading.

(5) All welding, weld procedures, postweld heat treatment procedures, and operators used to fabricate pressure vessels under this special permit must be in compliance with and qualified under the requirements of Appendix W of the Association of American Railroads Manual of Standards and Recommended Practices, Specifications for Tank Cars (Appendix W) or ASME VIII Div 1. Heat treatment must be accomplished after all forming and welding operations.

(6) Tank fittings must be protected as provided in § 179.300-12.

(7) Valves for venting, loading and unloading must comply with the requirements of § 179.300-13 except that threaded connections directly to the head are required.

(8) Attachments must be in compliance with § 179.300-14.

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(9) Safety relief devices must meet the requirements of § 179.300-15.

b. TESTING -

(1) Test shall be as required in § 179.300-16.

(2) The longitudinal shell joints and head to body shell girth joints must be 100% radiographed on each pressure vessel. Circumferential welds in tanks less than 914 mm (36 inches), inside diameter need not be radiographed. Radiographic records for each vessel must be maintained by the manufacturer for 5 years after the date of manufacture.

(3) Safety relief devices must meet the requirements of § 179.300-15.

(4) Periodic retest and inspection - Each pressure vessel must be retested and inspected in accordance with § 180.519 as specified for DOT 106A500. The retest and reinspection must be performed by a facility which holds a current retester identification number issued by the Associate Administrator for Hazardous Materials Safety.

c. INSPECTION - Compliance with the requirements of §§ 179.300-19 and 179.300-20, is required before production of containers under this special permit.

d. OPERATIONAL CONTROLS -

(1) Pressure vessel design must allow application of the Chlorine Institute's Emergency Kit "B".

(2) Repair of welded couplings and re-threading is authorized.

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 the hazardous materials specified in paragraph 6, only in conformance with the terms of this special permit.

b. A person who is not a holder of this special permit, but receives a package covered by this special permit, may reoffer it for transportation provided no modifications or changes are made to the package and it is offered for transportation in conformance with this special permit and the HMR.

c. A current copy of this special permit must be maintained at each facility where the package is offered or reoffered for transportation.

d. Each packaging manufactured under the authority of this special permit must be marked with the DOT registered Approval number issued by the Office of Hazardous Materials Special Permits and Approvals for a specific manufacturing facility in accordance with the Approval Requirements stated in paragraph 7c.

e. A current copy of this special permit must be maintained at each facility where the package is manufactured under this special permit. It must be made available to a DOT representative upon request.

f. Pressure vessels manufactured under this special permit must be in conformance with Columbiana Boiler Company, LLC's drawing number 102303-1, except that whenever a provision of this special permit is in conflict with the drawing, Columbiana Boiler Company, LLC must comply with the conditions of this special permit and make appropriate revisions to the drawing(s). Revisions to drawings must be prepared by the manufacturer and be requested by the Independent Inspector (IIA) of record. Later drawings and revisions are considered a part of this special permit when requested by the IIA and approved in writing under the provisions of § 173.300a.

g. MARKING - Each pressure vessel must be marked by stamping permanently and plainly in letters and figures at least 9.525mm (3/8 inch) high into the metal of valve end chime as follows:

DOT SP-14437/34.47 Bar

A516/WC XXXXXX

DOT Registration Approval Number/Serial No.

Independent Inspection Agency Registered Mark/Test Date

Note: Variations to the required marking must be approved in writing by the Associate Administrator for Hazardous Materials Safety.

h. OHMSPA may require the testing under prescribed conditions of any pressure vessel when probable cause appears for suspecting that a pressure vessel is in an unsafe operating condition in accordance with the requirements specified in § 180.509(b).

i. Any pressure vessel not used for the transport of the hazardous materials authorized under this special permit for a period of 1 year or more must be successfully retested and inspected in accordance with § 180.519 as specified for DOT 106A500 prior to being returned to hazardous material transportation service.

9. MODES OF TRANSPORTATION AUTHORIZED: Motor vehicle, rail freight and cargo vessel.
10. MODAL REQUIREMENTS: A current copy of this special permit must be carried aboard each motor vehicle and cargo vessel used to transport packages covered by this special permit.
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, 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 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 -- OHMSPA, in writing, of any incident involving a package, shipment or operation conducted under terms of this special permit.

Issued in Washington, D.C.:



for Dr. Magdy El-Sibaie  
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.

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