

September 15, 2006



U.S. Department  
of Transportation

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

**Pipeline and Hazardous  
Materials Safety Administration**

DOT-SP 11580  
(TWELFTH REVISION)

EXPIRATION DATE: August 31, 2010

(FOR RENEWAL, SEE 49 CFR § 107.109)

1. GRANTEE: Columbiana Boiler Company, LLC  
Columbiana, Ohio
2. PURPOSE AND LIMITATIONS:
  - a. This special permit authorizes the manufacture, mark, sale and use of non-DOT specification stainless steel cylinders conforming to all regulations applicable to DOT specification 4BW, except as specified herein, for use in transporting materials authorized under 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 §§ 173.40(a), 173.158(b), (g), and (h), 173.192(a), 173.201(c), 173.202(c), 173.203(c), 173.226(a), 173.227(a), 173.336 and 175.3 in that a non-DOT specification cylinder is not authorized, except as specified herein.
5. BASIS: This special permit is based on the application of Columbiana Boiler Company dated September 5, 2006, submitted in accordance with § 107.109.

6. HAZARDOUS MATERIALS (49 CFR § 172.101):

<b>Hazardous Material Description</b>			
<b>Proper Shipping Name</b>	<b>Hazard Class/ Division</b>	<b>Identification Number</b>	<b>Packing Group</b>
Toxic liquids, flammable, organic, n.o.s. (50% anhydrous hydrazine and 50% unsymmetrical dimethylhydrazine)	6.1	UN2929	I Hazard Zone B
Dimethylhydrazine, unsymmetrical	6.1	UN1163	I Hazard Zone B
Dinitrogen tetroxide	2.3	UN1067	Hazard Zone A
Hydrazine, anhydrous	8	UN2029	I
Methylhydrazine	6.1	UN1244	I Hazard Zone A
Nitric acid <i>other than red fuming, with more than 70 percent nitric acid</i>	8	UN2031	I
Nitric acid <i>other than red fuming, with not more than 70 percent nitric acid</i>	8	UN2031	II
Those materials authorized to be transported in DOT Specification 4BW cylinders	As Appropriate	As Appropriate	As Appropriate

**The provisions of 49 CFR 172.101, Column 9B apply to air shipments made under the terms of this special permit.**

7. SAFETY CONTROL MEASURES:

a. PACKAGING - Packaging prescribed is a non-DOT specification steel cylinder conforming with the general requirements for specification cylinders (§ 178.35) and DOT Specification 4BW (§ 178.61), except as follows:

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§ 178.35(b) *Inspection by whom and where.*

(1) Inspections and verifications must be performed by a third party. The third party inspector must either be a National Board Authorized Inspector or an inspector approved in writing by the Associate Administrator for Hazardous Materials Safety, in accordance with Subpart I of Part 107 of the Hazardous Materials Regulations.

(2) \* \* \*

§ 178.35(f) *Marking.*

(1) Marking on each cylinder stamped as follows:

(i) "DOT-SP 11580" must be marked in place of "DOT-4BW" followed by the service pressure.

\* \* \*

§ 178.61(b) *Authorized steel.* Material of construction must be SA240 type 304L or type 316L stainless steel.

§ 178.61(d) *Manufacture.*

(1) \* \* \*

(2) Circumferential seam welds must be full penetration butt welds with full 100% radiograph inspection.

§ 178.61(g) *Heat treatment.* Cylinders need not be heat treated.

§178.61(i) *Hydrostatic test.*

(1), (2), (3), and (4) \* \* \*

(5) A one-time, first article hydrostatic test, to four times the marked service pressure without bursting, is required for initial qualification of each cylinder design type. For the purposes of this test, cylinders of the same wall thickness,

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diameter, and material grade are of the same design type.

§ 178.61(j) *Physical tests.* Physical tests are not required.

b. TESTING -

(1) For the transportation of dinitrogen tetroxide, liquefied and nitric acid, cylinders must be inspected and tested as required in NASA Kennedy Space Center Procurement Specification 81K05262.

(2) Cylinders must be requalified in accordance with the requirements of § 180.209 applicable to DOT 4BW cylinders.

c. OPERATIONAL CONTROLS -

(1) The transport pressure must be limited to 50 psig.

(2) The following additional requirements apply for the transportation of dinitrogen tetroxide, liquefied and nitric acid:

(i) Cylinders must be in conformance with NASA Kennedy Space Center Procurement Specification 81K05262;

(ii) Cylinders must be in conformance with § 173.40 except as follows:

(A) § 173.40(c)(1). Connections must be straight threads with controlled root radius straight threads (thread form symbol UNJ) in accordance with Military Specification MIL-S-8879. Female ports must be UNJ straight threads and must meet Military Standard MS33649. The sealing gasket must be polytetrafluoro-ethylene or Kalrez 1045 preformed packing per Military Standard MS9956. Preformed packing must be deformed in assembly only once; reassembly must require a new preformed packing; and

(B) § 173.40(c)(2). Valves must be quarter turn ball valves with secondary stem containment stem seals of a NASA approved

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design. Prior to filling, or at a minimum frequency of one year, a bubble leak check must be performed on all mechanical joints at a minimum of 200 psig. Prior to cylinder refill, or at a five-year frequency, whichever is greater, valves must have all soft good materials (such as seats, packing, and o-rings) replaced, valves must be cleaned, and valves must be leak-tested at rated pressure at all joints and across the seat.

(iii) Cylinders may not be equipped with safety relief devices. Cylinders must be equipped with a detachable protective housing for the loading and unloading valves.

(3) Manufacturing, testing, and inspection of prescribed cylinders must be in accordance with The Columbiana Boiler Company Quality Assurance Manual on file with the Office of Hazardous Materials Special Permits and Approvals.

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 a registration symbol designated by the Office of Hazardous Materials Special Permits and Approvals for a specific manufacturing facility.

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- 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. Transportation of Division 2.1 (flammable gases) and Division 2.3 (toxic gases which are poisonous by inhalation) are not authorized aboard cargo vessel or aircraft unless specifically authorized in the Hazardous Materials Table (§ 172.101).
- g. Transportation of oxygen by aircraft is only authorized when in accordance with § 172.102(c)(2) Special Provision A52 and §§ 175.85(h) and (i).
- h. Packagings permanently marked 'DOT-E 11580', 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 11580'.
- i. Shipping papers displaying 'DOT-E 11580' may continue to be used until October 1, 2007, provided the special permit remains valid.
9. MODES OF TRANSPORTATION AUTHORIZED: Motor vehicle, rail freight, cargo vessel, cargo aircraft only (See paragraphs 8(f) and (g) for restrictions).
10. MODAL REQUIREMENTS: A current copy of this special permit must be carried aboard each cargo vessel, aircraft or motor vehicle used to transport packages covered by this special permit. The shipper shall furnish a copy of this special permit to the air carrier before or at the time the shipment is tendered.
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.

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- 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, 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

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Address all inquiries to: Associate Administrator for Hazardous Materials Safety, Pipeline and Hazardous Materials Safety, 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)  
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PO: CWF/AM