



U.S. Department  
of Transportation

**Pipeline and Hazardous  
Materials Safety  
Administration**

**March 10, 2023**

1200 New Jersey Avenue, SE  
Washington, DC 20590

DOT-SP 20402  
(SECOND REVISION)

**EXPIRATION DATE: 2027-02-28**

(FOR RENEWAL, SEE 49 CFR § 107.109)

1. GRANTEE: Orono Spectral Solutions Inc. (OSS)  
Hermon, ME
2. PURPOSE AND LIMITATION:
  - a. This special permit authorizes the manufacture and use of a testing device to determine the presence of the minimum water content in anhydrous ammonia. This special permit provides no relief from the Hazardous Materials Regulations (HMR) other than as specifically stated herein. The most recent revision supersedes all previous revisions.
  - b. The safety analyses performed in the development of this special permit only considered the hazards and risks associated with the transportation in commerce.
  - c. No party status will be granted to this special permit.
3. REGULATORY SYSTEM AFFECTED: 49 CFR Parts 106, 107 and 171-180.
4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR § 172.203(a) in that the special permit is not required to be indicated on the shipping paper; § 172.302(b) and (c) in that the special permit number marking requirements do not apply; and § 173.315(l)(5) in that an alternative test method is authorized as specified herein.
5. BASIS: This special permit is based on the application of Orono Spectral Solutions Inc. dated March 1, 2023 submitted in accordance with § 107.109.

Tracking Number: 2023034068

6. HAZARDOUS MATERIALS (49 CFR 172.101): Only an alternative test method for the testing of anhydrous ammonia, which requires a minimum 0.2 percent water before it can be packaged and offered for transportation in accordance with § 173.315(l)(5), is authorized.
7. SAFETY CONTROL MEASURES:
  - a. This special permit authorizes the use of OSS's "Standard Test Method for Water in Anhydrous Ammonia (0.2 to 0.5%) by Infrared Determination (Version 2017 - 03.2)" in place of CGA G-2.2, "Tentative Standard Method for Determining Minimum of 0.2 percent water in Anhydrous Ammonia," (IBR, see § 171.7) to determine the minimum water content in anhydrous ammonia authorized in 49 CFR § 173.315(l)(5).
  - b. OPERATIONAL CONTROLS:
    - (1) The alternative test must be performed in accordance with the procedures outlined in the protocol submitted by OSS, "Standard Test Method for Water in Anhydrous Ammonia (0.2 to 0.5%) by Infrared Determination (Version 2017 - 03.2)," on anhydrous ammonia that requires a minimum of 0.2 percent water prior to loading in specification MC 330 and MC 331 cargo tanks constructed of quenched and tempered ("QT") steel (see 49 CFR § 173.315(l)(5)).
    - (2) In addition, the following must be carried out each time tests are performed.
      - (i) Sampling and testing must be carried out in accordance with the procedures as outlined in OSS's "Standard Test Method for Water in Anhydrous Ammonia (0.2 to 0.5%) by Infrared Determination (Version 2017 - 03.2)," (Version 2017 - 03.2).
      - (ii) This test must be performed by trained users familiar with protocol and interpretation of results.
      - (iii) The infrared spectrophotometer must be calibrated, pursuant to the protocol submitted for assaying water concentration in ammonia, each day prior to testing actual samples and the records preserved.
      - (iv) Standards must be certified by OSS and be identifiable with a manufacturer's certificate that states when the standard is no longer usable for calibration (one year maximum before the standards must be recertified).
      - (v) The test must be carried out a minimum of 3 times for each batch of anhydrous ammonia being certified.

(vi) The material is suitable for loading if the results of all trials (3 tests minimum) are greater than or equal to the minimum required concentration of 0.2 percent water.

(vii) If the result of any trial is less than 0.2 percent water a new sample can be collected and analyzed using the same procedure.

(vii) Periodic analysis must be performed at the same frequency as specified in § 173.315(l)(2) through (4).

(ix) Records indicating the results of all trials and analysis must be retained for 2 years and must be available for inspection by a representative of the Department.

8. SPECIAL PROVISIONS:

a. This special permit authorizes an alternative test method to determine the presence of the minimum water content in anhydrous ammonia by any person or class of persons, in addition to the holder of this special permit, subject to the terms specified herein. However, no person may apply the test method authorized by this special permit unless that person maintains a current copy of this special permit and the test method identified in paragraph 7. above at each facility where the tests are performed for the purpose of determining the presence of the minimum water content in anhydrous ammonia for its transportation in commerce.

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

c. The requirements of 49 CFR §§ 172.203(a), 172.302(b) and 172.302(c) are waived unless another special permit is involved requiring the display of a special permit number.

d. Any changes to the protocol, submitted by the applicant at the time when this permit was requested, must be communicated, in writing, to the Office of Hazardous Materials Safety, and must be approved before use.

9. MODES OF TRANSPORTATION AUTHORIZED: Motor vehicle.

10. MODAL REQUIREMENTS: None as a condition of 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, 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 this 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 William Schoonover  
Associate Administrator for Hazardous Materials Safety

Address all inquiries to: Associate Administrator for Hazardous Materials Safety, Pipeline and Hazardous Material Safety Administration, U.S. Department of Transportation, East Building PHH-13, 1200 New Jersey Avenue, Southeast, Washington, D.C. 20590.

Copies of this special permit may be obtained by accessing the Hazardous Materials Safety Homepage at <https://www.phmsa.dot.gov/approvals-and-permits/hazmat/special-permits-search>. Photo reproductions and legible reductions of this special permit are permitted. Any alteration of this special permit is prohibited.

PO: Casey Chambers