1. **GRANTEE:** L. N. D., Incorporated  
   Oceanside, NY

2. **PURPOSE AND LIMITATIONS:**
   
a. This special permit authorizes the manufacture, marking, sale and use of non-DOT specification packagings described as hermetically sealed electron tube radiation sensors for use in the transportation in commerce of Division 2.2 and Division 2.1 materials. 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 development of this special permit only considered the hazards and risks associated with transportation in commerce. The safety analyses did not consider the hazards and risks associated with consumer use, use as a component of a transport vehicle or other device, or other uses not associated with transportation in commerce.

c. In accordance with 49 CFR 107.107(a) party status may not be granted to a manufacturing permit. These packaging may be used in accordance with 49 CFR 173.22a.

3. **REGULATORY SYSTEM AFFECTED:** 49 CFR Parts 106, 107 and 171-180.
4. **REGULATIONS FROM WHICH EXEMPTED:** 49 CFR § 173.302a in that non-DOT specification pressure vessels are not authorized except as specified herein.

5. **BASIS:** This special permit is based on the application of L.N.D, Incorporated dated June 16, 2022 and submitted in accordance with § 107.109.

6. **HAZARDOUS MATERIALS (49 CFR 172.101):**

<table>
<thead>
<tr>
<th>Hazardous Materials Description</th>
<th>Hazard Class/Division</th>
<th>Identification Number</th>
<th>Packing Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Argon, compressed</td>
<td>2.2</td>
<td>UN1006</td>
<td>N/A</td>
</tr>
<tr>
<td>Carbon dioxide</td>
<td>2.2</td>
<td>UN1013</td>
<td>N/A</td>
</tr>
<tr>
<td>Helium, compressed</td>
<td>2.2</td>
<td>UN1046</td>
<td>N/A</td>
</tr>
<tr>
<td>Krypton, compressed</td>
<td>2.2</td>
<td>UN1056</td>
<td>N/A</td>
</tr>
<tr>
<td>Neon, compressed</td>
<td>2.2</td>
<td>UN1065</td>
<td>N/A</td>
</tr>
<tr>
<td>Nitrogen, compressed</td>
<td>2.2</td>
<td>UN1066</td>
<td>N/A</td>
</tr>
<tr>
<td>Xenon, compressed</td>
<td>2.2</td>
<td>UN2036</td>
<td>N/A</td>
</tr>
<tr>
<td>Compressed gas, n.o.s. (mixtures of gases listed with or without 5% or less methane or carbon dioxide)</td>
<td>2.2</td>
<td>UN1956</td>
<td>N/A</td>
</tr>
<tr>
<td>Methane, compressed</td>
<td>2.1</td>
<td>UN1971</td>
<td>N/A</td>
</tr>
<tr>
<td>Hydrogen, compressed</td>
<td>2.1</td>
<td>UN1049</td>
<td>N/A</td>
</tr>
<tr>
<td>Propane, compressed</td>
<td>2.1</td>
<td>UN1978</td>
<td>N/A</td>
</tr>
</tbody>
</table>

7. **SAFETY CONTROL MEASURES:**

   a. **PACKAGING:** Packagings prescribed are non-DOT specification, metal, single trip, inside containers, described as hermetically sealed electron tube radiation sensors. Radiation sensors may not exceed a volume of 853 cubic inches water capacity. The maximum design (operating) pressure must be 412 psig. The design burst pressure of the radiation sensor must be at least 4 times the design pressure, or 3 times the design pressure.
pressure if equipped with a pressure relief device. Each radiation sensor must be constructed of stainless steel, aluminum, or titanium and must conform to LND calculations and drawings on file with the Office of Hazardous Materials Safety. Each radiation sensor must be visually inspected and vacuum leak checked using a helium mass-spectrometer leak detector prior to filling.

b. **OPERATIONAL CONTROLS:**

   (1) Each radiation sensor must be shipped in a strong outside packaging capable of withstanding a minimum drop test of four feet without breakage of the radiation sensor or rupture of the outside packaging.

   (2) If repackaged, packagings used to ship larger equipment containing radiation sensors covered by this special permit must be strong outside packagings providing equivalent protection for the devices as specified in paragraph 7.b.(1) of this special permit.

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 either (1) marked with the name of the manufacturer and location (city and state) of the facility at which it is manufactured or (2) marked with a registration symbol designated by the Office of Hazardous Materials Safety for a specific manufacturing facility.

   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) are not authorized aboard aircraft unless specifically authorized in the Hazardous Materials Table (49 CFR 172.101).
9. **MODES OF TRANSPORTATION AUTHORIZED**: Motor vehicle, rail freight, cargo vessel, cargo aircraft only, and passenger-carrying aircraft (see paragraph 8.f. of this special permit for modal 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 must furnish a current 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:

   - All terms and conditions prescribed in this special permit and the Hazardous Materials Regulations, 49 CFR Parts 171-180.
   - 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.
   - 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 -- OHMSPA, in writing, of any incident involving a package, shipment or operation conducted under terms of this special permit.

Issued in Washington, D.C.:

[Signature]

for William Schoonover
Associate Administrator for Hazardous Materials Safety


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: ae