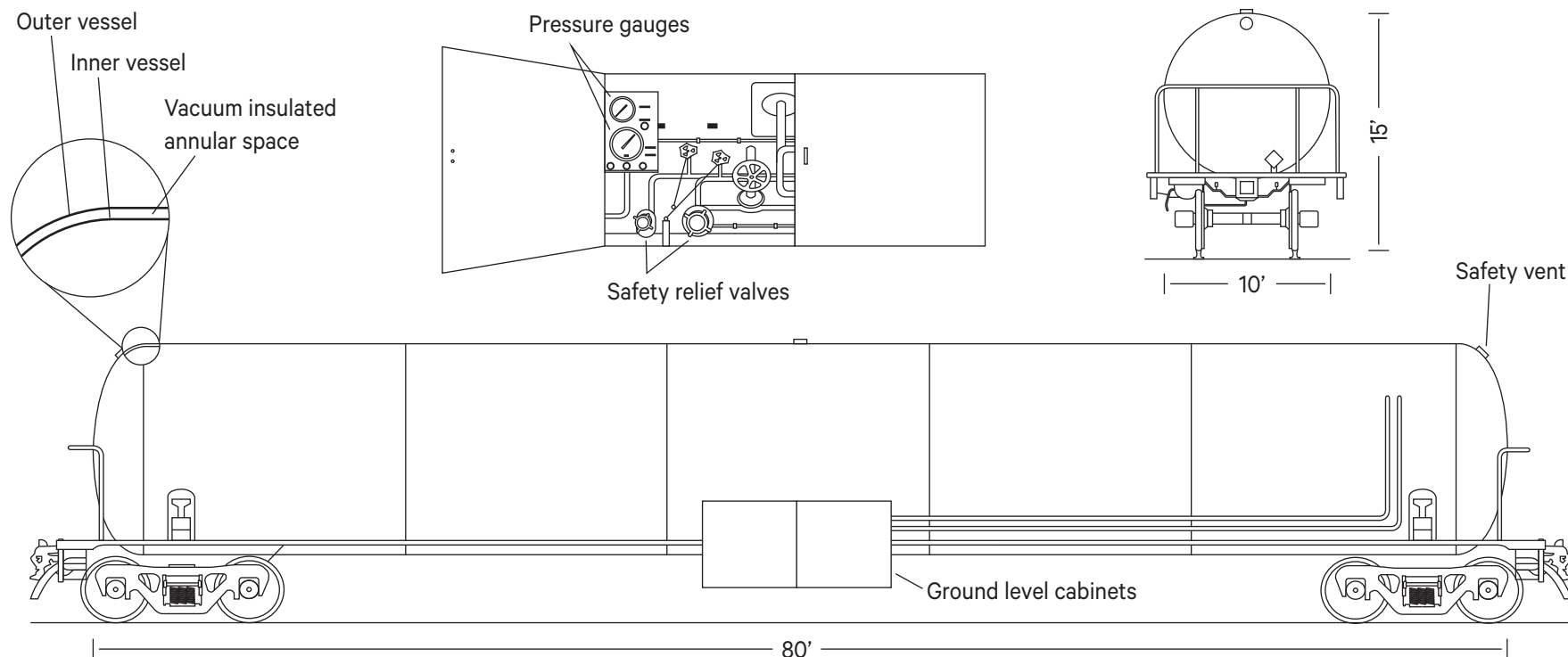


# DOT113 Tank Car



## Tank-within-a-tank design tank car

Commodity tank (inner vessel) constructed of stainless steel (ASTM A 240/A 240M, Type 304 or 304L). Outer jacket shell and heads (outer vessel) constructed of carbon steel.

This design increases the crashworthiness of the tank car as compared to a single vessel design tank car.

**Vacuum insulated annular space** between the inner and outer tanks that significantly reduces rate of heat leak from the atmosphere to the cryogenic material to keep the material cold and contained in the tank car

## Multiple pressure relief devices

- Two (2) reclosing pressure relief valves
- Two (2) non-reclosing safety vents

**Ground level cabinets** containing rupture discs, safety relief valves, and pressure gauges cabinet. This keeps all control piping and instruments easily accessible at ground level. This may be located closer to the ends of the tank car.

## Special Operating Requirements

- DOT-113s subject to specified handling instructions (Do Not Hump)
- Cryogenic flammable materials are "Time Sensitive" (20 Day Rule)
- Thermal integrity monitoring

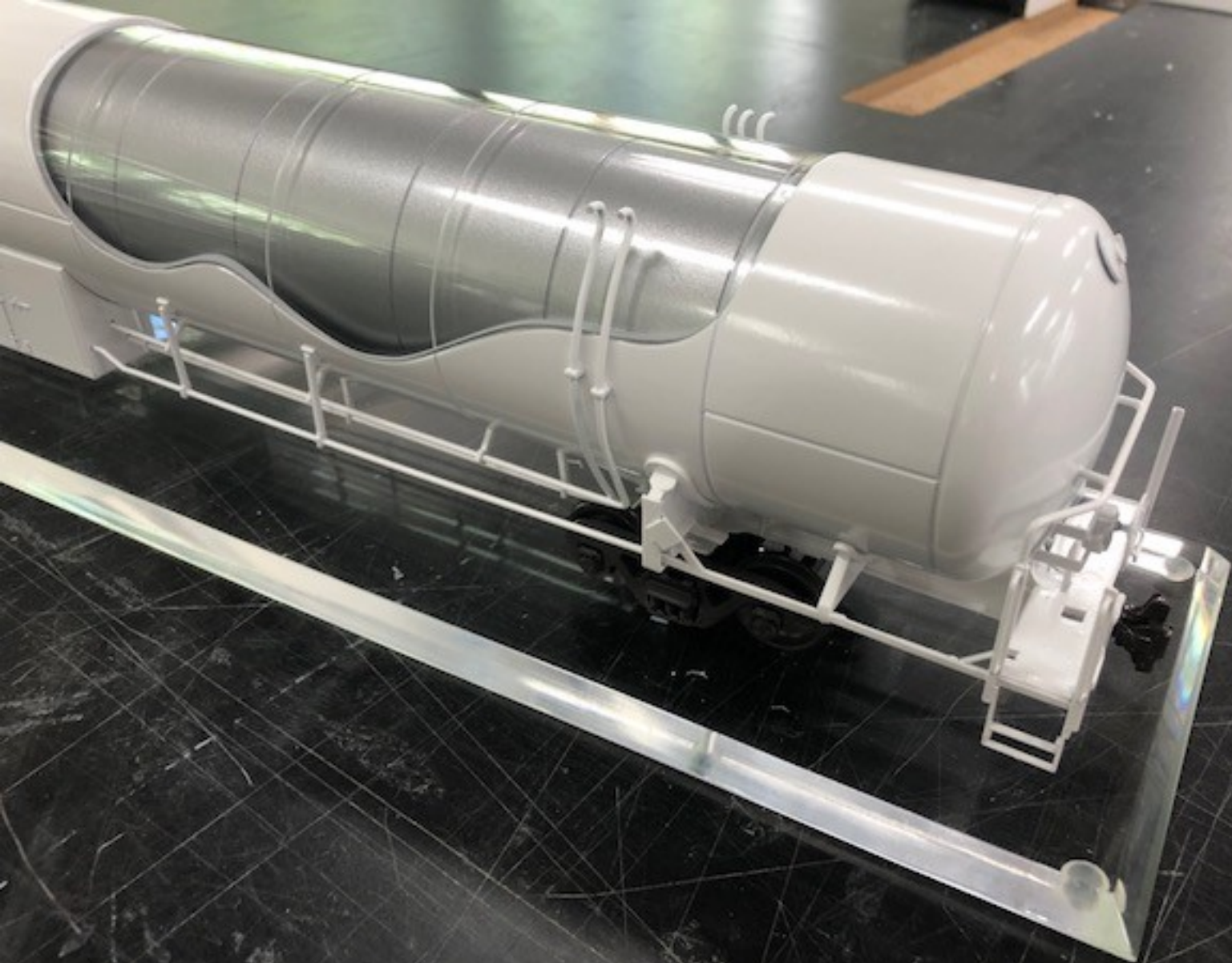
**CAUTION**  
PROTECT YOUR  
EYES BY WEARING  
EYE PROTECTION











## **TASK 2: STAKEHOLDER GROUPS NEEDS MAP**

All DOT outreach and education actions should be aimed at a relevant target audience. Appropriate outreach and education actions will vary based on the target audience. Many stakeholder groups listed have existing relationships and mechanisms in place to effectively spread safety messaging and subject matter expertise. For proposed transportation of LNG by rail, stakeholder groups and their needs can be organized in the following way.

### **EMERGENCY RESPONSE COMMUNITY**

The “Emergency Response Community” stakeholder group includes all first responders and others involved in emergency response actions. This group includes:

- 1) *Local Fire Rescue/Response Organizations* - any organization involved in the direct response efforts in the event of a LNG incident or release.
- 2) *Emergency Medical Technicians/Hospitals/Healthcare Organizations* - any organization involved in the treatment of individuals in the event of a LNG incident or release.
- 3) *Emergency Response Training Providers* - any organization involved in the training of the emergency response community, including response and healthcare organizations

*Needs:* General LNG knowledge; LNG response information; DOT-113 tank car information; Comprehensive LNG routing information; Training grants and resources; Relationships with Industry and Public.

### **PUBLIC**

The “Public” stakeholder group includes all members of the public. This group can be further delineated into two subgroups:

- 1) *Impacted Public Subgroup* – members of the public directly impacted by LNG rail transport, including members of the public who live around proposed rail routes.
- 2) *Public Interest Subgroup* – members of the public with an interest in LNG rail transport due to personal belief systems and views, including views on US energy, infrastructure, environmental, and fiscal policy.

*Needs:* General LNG knowledge; Basic LNG routing information (Impacted Subgroup); Relationships with Emergency Response Community.

### **INDUSTRY**

The “Industry” stakeholder group includes any domestic or international firms and organizations, as well as their trade association representatives, that are involved in the entire LNG value chain. This includes:

- 1) *LNG Firms* – firms, including investors, directly involved in all aspects of the LNG value chain;
- 2) *Tank Car Manufacturers* – all firms involved in the eventual manufacture of DOT-113 tank cars, the proposed railcar authorized to transport LNG by rail.
- 3) *Railroads* – all freight railroads over which LNG may be transported. Railroads are important partners with many industry stakeholders and emergency response organizations. Specific railroads include:
  - *Class I* – this group includes the seven Class I railroads in the US: BNSF Railway, Union Pacific, CSX Transportation, Norfolk Southern, Canadian National Railway, Canadian Pacific, and Kansas City Southern.
  - *Short Line and Regional* – this group includes the 560 short line and regional railroads that receive freight from Class I railroads for final delivery.
  - *Switching & Terminal (S&T)* – this group includes small railroads that operate in port and industrial areas by delivering freight or moving freight between other, larger railroads.



*Needs:* Relationships with Emergency Response Community and Government.

**GOVERNMENT**

The “Government” stakeholder group includes domestic and international bodies of government at all levels (i.e., local, state, federal). Specific stakeholders include:

- United States Department of Transportation
- United States Congress
- United States Coast Guard (USCG)
- Federal Emergency Management Agency (FEMA)
- State and Local Governments
- State Emergency Response Commissions (SERC)
- Foreign Governments

*Needs:* General LNG knowledge; LNG response information; DOT-113 tank car information (Congress); Comprehensive LNG routing information; Relationships with Industry, Public, and Emergency Response Community.

**ACADEMIA**

The “Academia” stakeholder group includes any academic communities with an interest in LNG transportation by rail. This stakeholder group may have broad interests and may publish research or conduct advocacy. Specific stakeholders include:

- The Transportation Research Board (TRB)
- Private or public educational institutions

*Needs:* Training grants and resources; Access to data or LNG transportation information; Relationships with Government, Industry, and Emergency Response Community.