

# Panashield, Inc.

*Updating Older Anechoic  
Chambers*

# Discussion Points

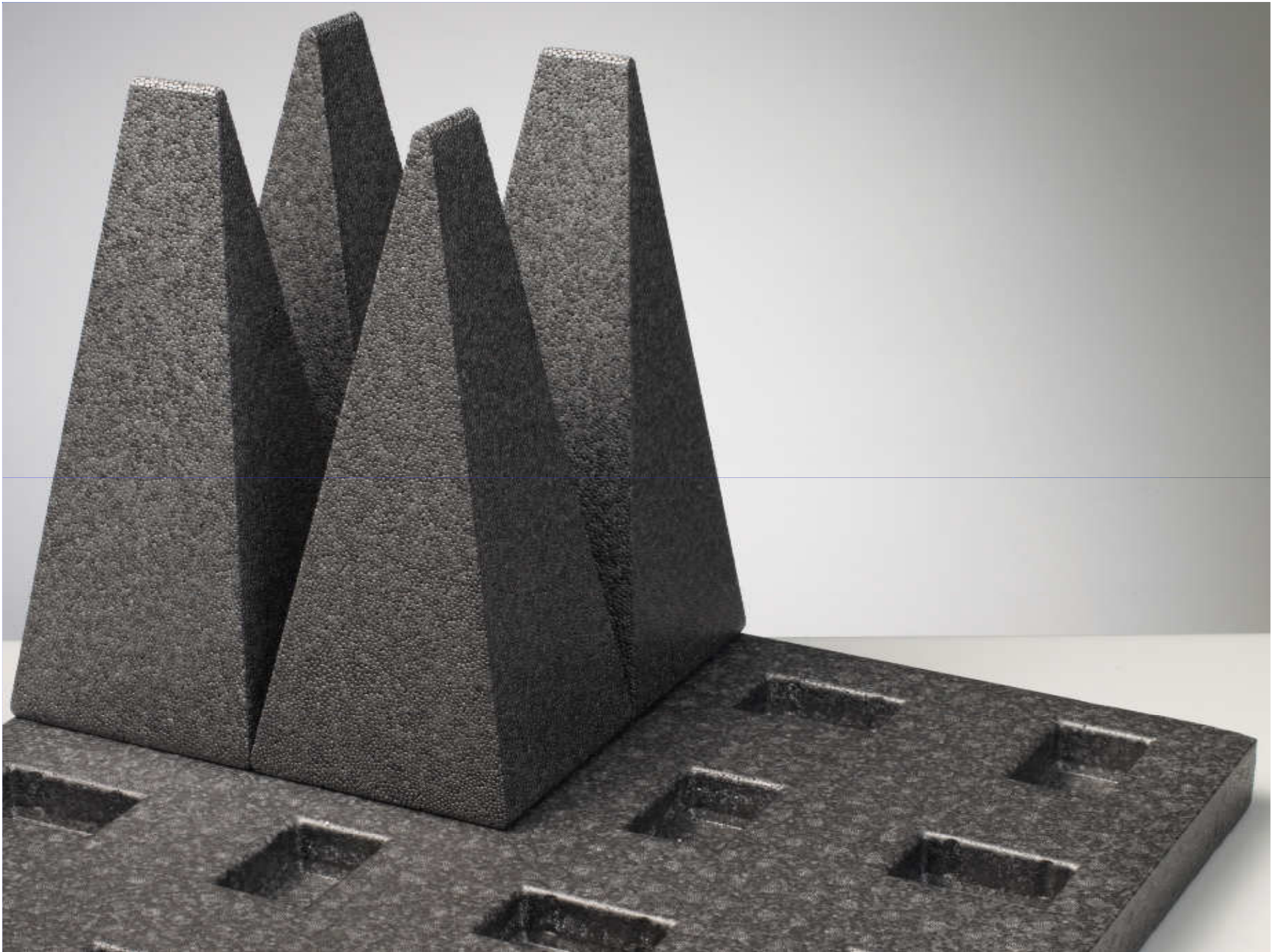
- There are some very old rooms out there!
- Standards Evolve
- New Absorber Materials/Compositions
- Key Upgrade Considerations

# Standards Evolve


- MIL 461/DO-160 Chamber Requirements
- Commercial Immunity – EN 61000-4-3
- Evolving Emissions – C 63.4 & .5
- > 1 GHz – CISPR 16-1-4
- CISPR 25 Automotive

# New Absorber Compositions

- **Ferrites – Tiles, Layering, Grid**
- **Hybrids**
  - **< 1 GHz**
  - **>1 GHz**



# **Key Issues in Anechoic Chamber Upgrade Implementation**



# Initial Chamber Requirements

- Chamber Type: 3m CAC \_\_\_\_\_ 3m SAC \_\_\_\_\_  
5m SAC \_\_\_\_\_ 10m SAC \_\_\_\_\_

APM \_\_\_\_\_ MIMO/CTIA \_\_\_\_\_

Reverb \_\_\_\_\_

- Pre-compliant \_\_\_\_\_ Compliant \_\_\_\_\_  
Bore Sight \_\_\_\_\_ Combo \_\_\_\_\_

- Standards: CISPR 16-1-4 \_\_\_\_\_ CISPR 25 \_\_\_\_\_  
IEC 4-3 \_\_\_\_\_ FCC \_\_\_\_\_ CTIA \_\_\_\_\_  
MIL 461 \_\_\_\_\_ DO-160 \_\_\_\_\_

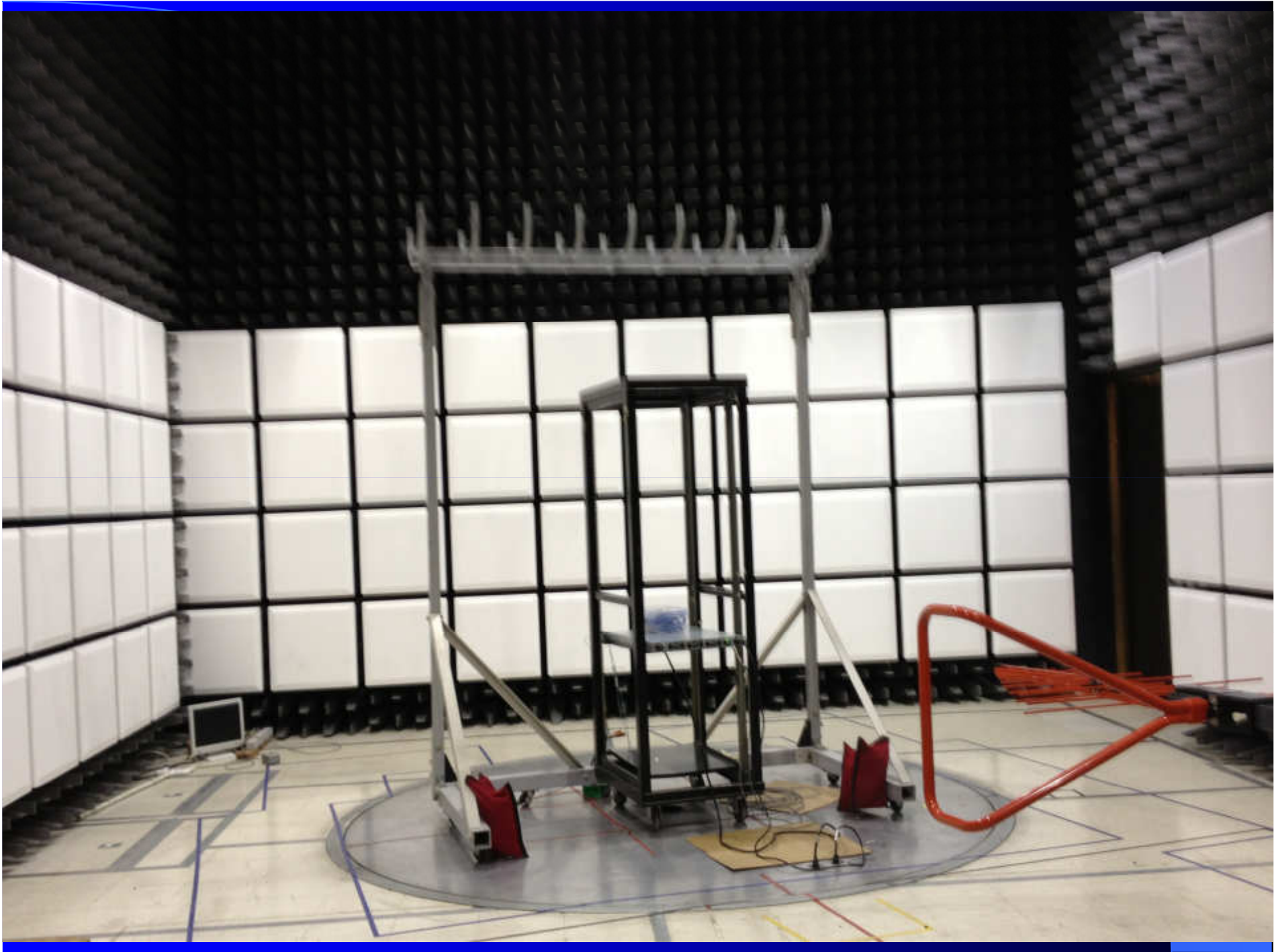
# Existing Chamber

- Shield to Shield Size: L \_\_\_ W \_\_\_ H \_\_\_ Raised Floor \_\_\_
- Existing Structure: \_\_\_\_\_
- Existing Fire Suppression: \_\_\_\_\_
- Parent Building Height: \_\_\_\_\_ Drawing Available \_\_\_\_\_
- Existing Doors: \_\_\_\_\_
- Threshold/Ramps: \_\_\_\_\_
- Existing Lighting: \_\_\_\_\_ Upgrade to LED: \_\_\_\_\_
- Work Area Access and staging: \_\_\_\_\_



# Upgraded Chamber Requirements

- Performance Requirements:  
NSA +/- \_\_\_\_\_ QZ Diameter \_\_\_\_\_ Meters;  
Path Length \_\_\_\_\_ Meters
- CISPR sVSWR \_\_\_\_\_ dB QZ Dia \_\_\_\_\_ Meters
- Uniform Field 1.5m by 1.5m Yes \_\_\_\_\_ No \_\_\_\_\_  
Other \_\_\_\_\_
- Improved MIL 461/DO-160 \_\_\_\_\_
- APM (Various) \_\_\_\_\_



# MIL 461E and D0160 Test Chambers



**Questions?**