ENSAA Cask Multimodal Transportation Test and Related Structural Modeling and Analysis
Routing of Instrumented Cask & Assemblies
(Transportation Triathlon)

1) Heavy-haul truck from within Spain ~ June 14, 2017
2) Coastal sea shipment from Santander to large northern European port ~ June 27, 2017
3) Ocean transport from Europe to Baltimore
4) Commercial rail shipment from Baltimore to Pueblo, Colorado ~ Aug 3, 2017
5) Testing completed at the Transportation Technology Center, Inc.
6) Return trip to ENSA, September 5, 2017
How Do Stresses on Fuel During Normal Conditions of Transport Compare to Failure Limits?

Transporting Spent Nuclear Fuel

McConnell et al, 2016, SNL and PNNL
Could Vibrations or Shocks Result in Fatigue Failure?

CONCLUSIONS

The realistic stresses fuel experiences due to vibration and shock during normal transportation are far below yield and fatigue limits for cladding. We have recently gathered actual rail data which most likely will be the prevailing transportation mode.