



# PIPELINE INDUSTRY ULSD TESTING NEEDS

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# Testing Needs

- **Must have sulfur test equipment with narrow reproducibility**
  - EPA designated test ASTM D6428 method has reproducibility of +/- 16 ppm
  - Pipelines cannot establish a pipeline specification for oversight
    - Typical specification is Reg. Limit + Enforcement Tolerance – Reproducibility
    - Without a specification, refiners do not know what sulfur level to invest for
  - **Narrow repeatability is not enough**
    - Tests are done at a variety of locations - by a variety of instruments, technicians and labs
    - Product quality depends on reliable testing

# Testing Needs (Con't)

- **Must have in-line testing equipment**
  - **Suitable test equipment is not available**
  - **Define cut points**
    - Sulfur changes much more rapidly than gravity
    - Protective cuts will increase interfaces and transmix
  - **Control contamination that happens during transit**
    - Terminals could be loading transports from the pipeline delivery tank
    - Just In Time inventory can't wait for tank certification
  - **Test equipment must be quick and robust**
    - An “OK” – “Not OK” indication