True Vapor Pressure of Crude Oils
A Look at Issues and Possibilities

COQA Meeting – Houston, TX

March 1, 2012
Problem Statement

- Vapor pressure is becoming a more critical product characteristic
- Vapor pressure regulations stem from various agencies
  - Requirements are not consistent on a per agency basis
- Commercial requirements may not mesh with regulatory requirements
- The need for greater certainty in determining the Reid and True Vapor Pressures is apparent
Assessment Of The Problem

- The various methods for determining Vapor Pressure all have issues that need to be addressed
  - D5191 needs provisions that recognize the unique challenges crude oils present
    - Lack of requirement to rinse the measuring cell
    - Needs provisions for acceptable rinse solvents
    - Undefined time for equilibration
  - D2879 requires an unacceptable degassing step
  - D6377 development did not include the range of crude oils that are in commerce today
- The algorithms in AP42 have the same issues relative to the scope of application
Possibility To Establish Certainty

- Today’s instruments can measure vapor pressure at temperatures of interest
  - They can be programmed across a wide temperature range
  - Eliminates the need for the AP42 correlations
- A standard for TVP determinations is essential
- Regulatory agencies are seeking input to enhance their models to provide a better platform
- Industry organizations have the resources and expertise to refine crude oil measurement
Steps Needed

- Gain consensus that the value derived from establishing True Value Pressure with certainty is worth the effort.
- Develop a plan that engages other industry organizations and environmental agencies.