January 20, 2020

Mr. Doug Musick
Manager, Weights and Measures Program
Kansas Department of Agriculture
11320 Research Park Drive
Manhattan, KS 66502

Dear Mr. Musick,

I am writing you to share concerns and opposition to the proposals (FLR 20.2 and FLR 20.3) that were submitted to the National Conference of Weights and Measures. ICM Inc. has a long history in the design and operation of ethanol production facilities. We see great potential for ethanol to expand and improve not only the US gasoline market fuels, but also generate new markets with improvements in the production of protein from the current distillers dried grain (DDG's), which is a co-product of the ethanol production. ICM has a history of promoting sustainable agriculture through innovation.

Ethanol is a high performance, high octane fuel which is proven both on the road, as well as on the race track. Ethanol also provides a significant benefit for improving air quality by reducing toxic aromatic contents of gasoline, and promoting a cleaner combustion than traditional E0 gasoline. Based on market survey data, the US has transitioned from E0 gasoline (no ethanol) to today's gasoline containing 10 percent ethanol. As a result, ethanol reduced aromatics in US gasoline by more than 6 billion gallons annually. As an economical source of octane, oil refineries readily accepted ethanol as component of gasoline.

These two proposals by API are unnecessary since the addition of just 5% ethanol has no impact for vehicles approved to fuel with E15. This proposal also duplicates regulatory language found in current Federal CFR's, and places additional burden on state government personal with no technical justification or support. E15 is one of the most tested gasoline-ethanol blends and EPA has already set a robust compliance program that includes misfueling.

ICM has invested significant time, money and resources over the past 10 years to understand fuel composition and variation of gasoline found in today's market. ICM has also researched the need for cleaner, higher octane fuels for the future. We take issue with the presentation by API, dated 10-7-2019, on NCWM's website that repeatedly mentions proposals to protect consumers. If API is truly concerned with protecting consumers, we suggest that API looks more closely at the variation of aromatics in gasoline.

Aromatics vary in the US gasoline market from 5 to 45 percent by volume based on recent gasoline surveys. Aromatics come with a host of concerns that not only apply directly to the consumer, but also to air quality. Consider the following facts about aromatics:

1. Variation of Aromatics have the greatest impact in damaging seals, hose, gaskets and plastics. Further ASTM D910 correctly identified that lower carbon number aromatics can affect elastomers to a greater extent.

2. The fluctuation of aromatics and the variation between summer and winter fuels can alter the vehicles computer Long Term Fuel Trims (LTFT) more than the variation of simply adding 10 or 15 percent ethanol.
3. Aromatics have the highest incomplete combustion tendencies compared to any other component of gasoline including ethanol.
4. Aromatic VOC emissions have the highest contribution (both tailpipe and evaporative) to ozone and Secondary Organic Aerosols (SOA) which, in urban areas, are a significant portion of PM2.5 emissions.
5. Aromatics, especially higher distillation aromatics that increase the T80/T90 temperatures in the ASTM D86 test method, are increasing in recent years which increases the carbon build up on both fuel injectors and intake values in direct fuel injected engines. This is raising vehicle maintenance cost as well as increasing emissions.

API has a history of funding studies conducted by the Coordinated Research Council (CRC) that are bias against ethanol due to the blending of test fuels. Multiple studies that include several CRC studies have blended test fuels that create a worse blendstock related to both performance and emissions when ethanol is added. Many of API's concerns related to ethanol are unfounded based on real world fuels. At the same time, concerns about aromatics are going unreported.

These proposals by API are without merit. We strongly urge you to oppose the API proposals by identifying these items to be "withdrawn" from consideration at the National Conference of Weights and Measures Interim Meeting the week of January 27th, 2020.

Thank you for your consideration. Please feel free to contact me with comments or questions.

Respectfully submitted,

Steve Vander Griend
ICM Inc.
310 N. First Street
Colwich KS. 67030
316-977-6222

cc: Craig Van Buren, Chair, National Conference on Weights and Measures
Via email: vanburenc9@michigan.gov

Don Onwiler, Executive Director, National Conference on Weights and Measures
Via email: don.onwiler@ncwm.com