



Chris Ainscough, P.E. Senior Engineer 15013 Denver West Parkway National Renewable Energy Laboratory Golden, CO 80004 August 13, 2015

California Energy Commission Dockets Office, MS-4 Re: Docket No. 15-HYD-01 1516 Ninth Street Sacramento, CA 95814-5512

California Energy Commission

DOCKETED

15-HYD-01

TN # 76138

AUG 25 2015

To Whom It May Concern:

This letter is to provide feedback on Docket 15-HYD-01 §10(A) which states:

"Stations shall provide a method of continuously monitoring the gas stream such as an in-line analyzer to ensure that hydrogen quality meets SAE J2719 standards at the dispenser output.

It is absolutely essential that hydrogen stations guarantee the purity of the fuel they dispense. While we believe in-line detection is a direction that hydrogen station operators need to move, we are concerned that no applicants will be able to meet the requirement. There are no available in-line quality-monitoring devices that can test to the SAE J2719 standard. This requirement may result in either no responsive proposals, or proposals that appear responsive but are inaccurate in their claims. Either of these might delay the review or at worst could require a 2nd PON and proposal process, significantly delaying the deployment of stations to support the planned FCEV rollouts. See the H2FIRST report, "H2FIRST Hydrogen Contaminant Detector Task: Requirements Document and Market Survey."1

We suggest taking a risk-based approach, tied to the source of hydrogen, that measures "canary" species that are indicative of, and can alert an operator to, a larger contaminant issue. See the SAE J2719 committee's recent work on canary species found in Tables 4.1, 4.2 and 4.3 of 2719/1 TIR.

Sincerely,

Chris Ainscough, P.E.

Senior Engineer

Transportation & Hydrogen Systems Center National Renewable Energy Laboratory

Joseph Pratt, PhD Mechanical Engineer Advanced Energy RD&D Sandia National Laboratories

¹ Terlip, D., et. al., "H2FIRST Hydrogen Contaminant Detector Task: Requirements Document and Market Survey", National Renewable Energy Laboratory, 2015.