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California Air Resources Board

Re: Comment on Tier 2 Method 2B Pathway: Cellulosic ethanol produced from Corn kernel fiber using Edeniq process along with regular corn ethanol in Marcus, Iowa (T2N-1153)

Dear Sirs

We have two main comment areas on this application particularly triggered by the fact that most of the details of the application are indicated as business confidential information which makes serious comment on the facts very difficult.

It is indicated that this process will give a .5% yield increase in ethanol so 500,000 additional gallons in a 100 mln gallon plant. Our experience is that it is very difficult to measure this small an amount of ethanol increase in a statistically valid way given the combination of batch and continuous production in an ethanol plant. It is not mentioned in the documents provided how this will be done but we do think it is something that should be rigorously monitored.

It is also not mentioned in the documents the analytical techniques that will be used to determine that the ethanol is cellulosic ethanol. We have done extensive work in this area also collaborating with NREL and working with ASTM. We have observed different test methods and sampling and storage protocols can give very different results leading to questions of credibility regarding the actual amount of cellulosic ethanol produced. Many of the standard methods for fiber, starch and ethanol have standard errors of 2%, often more in the range of 3-5%, such that a high number of validated representative samples is required to reach statistical confidence. For applications that propose yield gains of less than 3%, it is challenging to show statistical difference between the new and baseline means for starting and ending fiber, starch and ethanol – even with an impractically high number of replicate testing.

We think any test methods in this area should be public information and subject to comment and review by the scientific community ultimately leading to standard cross industry tests to avoid any questions of validity.

We appreciate your attention

Best Regards

Steve Hartig
VP Technology Development