Testimony of Noel Marzulli

Good afternoon. My name is Noel Marzulli. I have been working in this industry for almost forty years. I started working at CP Kelco in 1973, and was part of the early development of xanthan gum as a new product. I left Kelco in 1988, and began working as an independent consultant to companies selling xanthan gum and other hydrocolloid products. I started working with Deosen in 2003, and have been a marketing and technical consultant for them. My current work with Deosen USA focuses on the food and beverage segment, and also includes other consumer and industrial products other than oil-field applications.

In my testimony this afternoon, I would like to discuss a few key issues about the market dynamics, and about Deosen's participation in the U.S. market, particularly the food and beverage segment.

First, let me describe a bit about the nature of the food and beverage segment of the xanthan gum market. What does xanthan gum do, and why do companies buy it? The product is an additive that imparts various properties to processed food and beverage products.

Take for example cake mixes. Xanthan gum stabilizes the amount of air in a cake mix and thus allowed the cake to bake with more volume and a lighter taste. It avoids the gummy or sticky quality of a flour based product.

Or an other example, consider non-separating salad dressings such as French, Ranch, or Blue Cheese. Xanthan gum helps keep oil and water mixed together, without separating. Xanthan gum also improves the degree to which the dressing clings to the salad ingredients, instead of just rolling off the lettuce like water.

When added to beverages, xanthan gum changes the mouth feel of the product. The beverage takes on a thicker, more juice like consistency, and is no longer watery. The beverage is thicker than water, but allows the flavor of beverage to come through.

Early today you heard a lot of testimony about xanthan gum as a commodity with purchase decisions being made solely on price. In fact, the market realities are more complicated than that. Xanthan gum is actually a high-value-added technical ingredient, and customers care about many factors other than just price.

For example, customers care about the hydration rate. How fast can the powder turn into a solution during the manufacturing process. The faster the

powder converts to a solution, the faster the through-put of the manufacturing process. Faster through-put means lower costs for the end-user.

Another key technical characteristic is the flow properties. Customers need xanthan gum that exhibits smooth-type pouring, and is not gloppy as it pours. In this case, this characteristic adds value to the finished product by making it more appealing to the ultimate customer.

Customers also need product stability and batch consistency. The xanthan stabilized dressing needs to maintain stability for at least a year, or longer.

In addition, Xanthan gum needs to impart the same physical properties from batch to batch, so that the customer can produce a product with the necessary consistency from batch to batch.

These important physical characteristics are precisely why all of our food customers have a comprehensive qualification process. Our food customers require that their xanthan gum suppliers pass their qualification requirement not only for the type of product but also the specific type of application.

For example, at one of our customers we had to pass their qualification requirements for several different type of salad dressing, such as separating dressing, a non-separating dressing, a low calorie dressing. For each of these different types of salad dressings there are unique functionality requirement for the

xanthan gum. For example, in low oil dressing, the customer is concerned about the fact that there is much more water than in regular salad dressing. However, the customer wants the mouth feel of the salad dressing to be the same. This desire establishes a separate requirement for the xanthan gum. In addition to holding the water and oil together (like the xanthan gum does in regular salad dressing,) the xanthan gum for low oil dressing also needs to be able to work with other ingredients to provide a creamy type texture. This is why the customer requires that their xanthan gum suppliers pass their qualification process for each separate application that will use xanthan gum.

And indeed, for some of our customers we have not been able to pass their qualification for certain applications. For example, we have a customer for which we supply an agglomerated product for a type of relish. However, for this very same customer, we have not been able to become qualified to supply xanthan gum for this customer's pourable salad dressing. This particular customer requires very rapid solubility for their salad dressing and our xanthan gum was not able to pass their solubility requirements.

I next want to make a few comments about the differences between the food segment of the market and the non-food segments, gum, the biggest of which for Deosen is oilfield. It is no secret that, in general, food grade xanthan gum

commands a much higher price than does oilfield xanthan gum. There are a few practical, real world reasons for this.

The first reason is that food segments customer are less price sensitive than oilfield segment customers. And the reason for this is because xanthan gum accounts for such a small percentage of the end use product. One of the primary end uses for food grade xanthan gum is salad dressings. Xanthan gum accounts for well under 1 percent of the total cost of making the salad dressing; indeed, it is barely 0.25 percent. In contract, xanthan gum accounts for a much bigger share of the total cost of drilling fluid.

The second reason concerns the relative shipment volumes. Although in total, the two segments may consume comparable quantities, the food grade segments has smaller volume customers. Even our largest costumer of food grade xanthan gum, consumes just a fraction of what the large oilfield segment customers would consume. A universal truth in the business, is that the ability to ship larger quantities in a single shipment results in lower prices.

The third reason for the difference in selling prices has to do with history and the fact that xanthan gum absolutely cannot be sold to food customers if the plate count - the bacteria level – is too high, no matter how good the other attributes are. Please understand that for the most part there is very little difference

between the production process to make food grade xanthan gum and the production process to make oilfield xanthan gum. The real difference becomes evident in the testing phase. If it does not meet the plate count for food quality standards that the bacteria count is too high -- it cannot be sold as food grade xanthan gum. And so, xanthan gum producers needed some outlet for those batches of food grade xanthan gum that, despite their best efforts, did not pass bacteria testing. It was this search for an outlet for xanthan gum with too high a plate count really that led to the development of xanthan gum for the oilfield industrial segments in the first place. And, as you can imagine, the original pricing reflected the fact that food grade xanthan gum producers originally had no other outlet for their xanthan gum that had a high plate count.

These are the reasons why there is such big a difference between the selling price for food grade xanthan gum and oilfield xanthan gum. Importantly, this large difference has <u>always</u> existed. Such difference in selling prices necessarily meant that there was <u>also</u> a larger difference in profitability. For a xanthan gum producer, food grade xanthan gum has always been much more profitable than oilfield xanthan gum.

In my final comment I want to address the future. This morning you heard claims by CP Kelco that if AD duties are not imposed, the Chinese will take over

the xanthan gum market. Commissioners, this is simply not true, and it is particularly not true for many segments of the xanthan gum market.

As a part of Deosen USA, I help manage Deosen's sales of xanthan gum to all segments other than oilfield. And I can tell you that over the past few years my overall business has been relatively flat. And quite honestly, I do not see much change in this trend for the future.

Please understand that there are several segments of the xanthan gum market in which the Chinese do not have real presence and are unlikely to in the future.

For example, I estimate that about 10-15 percent of the U.S. market is for non-oilfield, non-food applications. These applications include products like toothpaste, cosmetics, pharmaceuticals, and other such non-food uses. Deosen has not really participated activity in this segment because of some very specific barriers to entry, and because of certain customer needs in this segment.

First, many of these applications require highly clarified xanthan. The xanthan gum needs to have transparency greater than 85%. Chinese producers have had difficulty in producing such products for a variety of reasons. The differences in the underlying production process thus limits the applications of the resulting xanthan gum.