

Exhibit \_\_\_\_\_  
Statement of Erick Metzger, National All-Jersey Inc.  
Federal Order Hearing Regarding Class III & IV Price Formulas  
Week of February 26, 2007  
Docket No. AO-14-A77, et al.; DA-07-02

My name is Erick Metzger, and I serve as the General Manager of National All Jersey Inc. (NAJ), a position I have held for approximately three years. I was raised on a dairy farm in Indiana, earned a Bachelor of Science degree from Purdue University in 1982 and a MBA from Franklin University in 1999. I was employed by the American Guernsey Association for 10 years, including five years as its CEO. I have been with the Jersey organizations for the past 14 years. I have testified and filed comments in conjunction with previous federal order hearings.

NAJ is a national membership organization of over 1,000 producers and other people interested in supporting equitable milk pricing. Approximately 30 percent of NAJ members own cows other than Jerseys. NAJ's milk marketing policy is to advocate for milk pricing programs that will price milk based on its most valuable components in accordance with their use in consumer products. It is this policy that compelled NAJ to submit a proposal to value dry whey on a protein basis instead of the current other solids basis.

However, in life, as the old expression goes, timing is everything. In the six months since the September 30, 2006 deadline for submitting proposals to be considered at this hearing, the dry whey price as reported by NASS more than doubled from 29.65 cents per pound in August 2006 to 60.05 cents per pound in February 2007. During the same time period, the lactose (mostly) price reported by Dairy Market News increased from 33.89 cents per pound to 59.34 cents per pound. These unprecedented price increases and price levels bring an entirely different dynamic to the whey solids markets. Yet the underlying principles behind NAJ's proposal remain sound. In analyzing this proposal the most important questions to be asked are:

- Which price series for whey products and lactose is more representative of their true market, the six-and-one-half years from January 2000 to mid-2006, or the few months since mid-2006?
- Which whey solids are the most valuable today and will be in the future?

- If we were designing a formula from scratch today, as opposed to eight years ago, to convert the value of whey solids to producer milk values, what would the ideal formula look like?

The definitive answers to those questions are most likely beyond the predictive powers of anyone involved in this hearing, including myself. However, regardless of the answers, the formula used for converting whey prices to producer pay prices needs to be, at the very least, changed to recognize the value of protein in whey solids. Prices in recent months indicate that whey solids should be priced on a protein and non-protein basis separately instead of both portions of whey solids being valued equally as is done with the current price formula. Prices prior to last fall justify that whey solids be valued simply on protein given that the non-protein whey solids prices (basically lactose) were not much, if any, higher than the costs to process lactose.

During the past four years, production of the more protein-concentrated forms of whey products has increased while production of dry whey has remained virtually unchanged. Table 3 in Exhibit \_\_\_\_\_ shows that from 2003 to 2006 production of dry whey has increased only 1.5%, production of WPCs (25% - 49.9%) has increased 6.6%, production of WPCs (50% - 89.9%) has increased 40.7%, and production of Whey Protein Isolates has increased 45.5%. In addition, assuming:

- WPCs (25% - 49.9%) average 34% protein,
- WPCs (50% - 89.9%) average 70% protein, and
- WPIs average 90% protein,

The total pounds of whey protein in WPCs and WPIs have increased by 24% during the past four years and now exceed the pounds of protein in dry whey by approximately 82 million pounds annually. The annual differences in the amount of whey proteins processed in dry whey versus WPCs and WPIs is further illustrated in Graph 3. Clearly buyers of whey solids prefer products that are protein-rich and protein standardized with lower levels of lactose. These production and buying trends are evidence that whey's value lies in its protein.

In addition, product yields of WPCs and WPIs are dependant on the protein levels in the whey stream resulting from the cheese making process. Higher protein milk results in higher protein whey, which leads to increased yields when producing WPCs and WPIs.

Protein is consistently worth more than lactose. Dairy Market News reports monthly prices for whey protein concentrate-34 (WPC-34) and dry whey, which are sources of protein. Dairy Market News also reports prices for lactose. Table 1 in Exhibit \_\_\_\_\_ compares the monthly values of these two whey products per pound of protein with the value of lactose since January 2000. WPC-34 is assumed to be 34% protein while dry whey is assumed to be 13% protein. Dividing the product price by its percent protein (columns titled “Protein parity”) shows the cost of buying a pound of protein in that product assuming the value of the non-protein solids portion of the product is zero. In all cases the average price based on protein parity far exceeds the average price of lactose. The cost to buy a pound of protein in dry whey or WPC-34 is consistently higher than the price for a pound of lactose. These same data are represented graphically in Graph 1 of Exhibit \_\_\_\_\_.

Lactose purchased in whey products is more expensive per pound than purchasing lactose directly. Table 1 in Exhibit \_\_\_\_\_ also shows the month-by-month per pound lactose parity price for WPC-34 and dry whey along with lactose prices. Lactose parity can be calculated by dividing the product price by its percent lactose. Lactose parity shows the cost of buying a pound of lactose in a given product assuming the non-lactose portion of the product has no value. On average, a pound of lactose purchased in the form of WPC-34 costs \$0.71 more than a pound of lactose purchased in dry whey. In turn, on average a pound of lactose purchased in dry whey cost nearly six cents more than buying lactose itself. Even in the past 12 months when lactose prices have increased from 23 cents per pound to 55 cents, the cost of buying lactose in the form of dry whey has remained higher than simply buying lactose. Therefore, dry whey and WPC-34 are not being purchased for their lactose because it is cheaper to buy lactose directly. Again, these same data are shown graphically in Graph 1 of Exhibit \_\_\_\_\_.

Whey proteins are the preferred source of protein in dry dairy products. Nonfat dry milk and dry buttermilk can also serve as protein sources. Table 2 in Exhibit \_\_\_\_\_ compares the protein

parity prices for nonfat dry milk, dry buttermilk, WPC-34 and dry whey. Both nonfat dry milk and dry buttermilk were assumed to be 34% protein. From January 2000 through December 2005 protein purchased in WPC-34 and dry whey was less expensive per pound than protein purchased in nonfat dry milk and dry buttermilk. The economy of protein purchased in whey products made them the preferred source of protein. These same data are graphed in Graph 2 of Exhibit \_\_\_\_\_.

Protein parity prices for dry whey and WPC-34 track each other much more closely than do the lactose parity prices for those two products. Graph 1 in Exhibit \_\_\_\_\_ shows that the lines for the protein parity prices for dry whey and WPC-34 are very close together, indicating that buyers are willing to spend approximately as much per pound of protein in the form of either dry whey or WPC-34. On the same graph, the lactose parity values for the same two products do not closely track each other, and both are shown to be more expensive than lactose itself. If the value of WPC-34 and dry whey was due to their lactose content buyers would pay about the same amount per pound of lactose in the two products. Clearly lactose purchased in WPC-34 is far more costly than lactose in dry whey, indicating the products are not being purchased for their lactose content.

In addition, recent high prices for lactose reflect a shortage of lactose processing capacity, not a shortage of lactose. If the lactose processing capacity were doubled in a short time frame, the price of lactose would fall precipitously. Lactose processing is very capital intensive leading processors to be reluctant to add lactose processing capacity unless they believe prices will remain at profitable levels long enough for them to recoup their investment. In fact, much of the current lactose processing capacity was developed simply to reduce the costs of disposing of lactose. The costs incurred in processing lactose were less than the costs of meeting all the environmental regulations to dispose of it otherwise. If the current record high prices for lactose are expected to maintain for an extended period of time, processors will be developing additional lactose processing capacity and prices will, in all likelihood, decline.

The value of dry whey serves as the proxy for all whey products. In Graph 1 the protein parity value lines for WPC-34 and dry whey show that dry whey served as a very good proxy for WPC-

34 until the fall of 2005. Even though dry whey is not as good of a proxy for WPC-34 now as it was, it remains the only proxy available in the current system. Whey products include the milk components of lactose, protein, ash, and limited amounts of butterfat. The value of dry whey is assigned to ‘other solids’ in converting whey values to producer milk value. However, when producer milk is tested for other solids, only the components of lactose and ash (including non-protein nitrogen) are measured. Therefore, the major component of value in salable whey products, protein, is not being considered in converting whey value to producer prices.

Producers can purposely impact the protein production of their cows and herds through culling, feeding and breeding decisions, but they cannot impact lactose production. Approximately one-half of the nation’s milking herd participates in Dairy Herd Improvement (DHI) production testing, which includes among its services measuring the protein production for individual cows. Dairy producers can use DHI data to identify and cull low protein-producing cows if they so desire. DHI testing does not include lactose testing.

USDA’s Animal Improvement Programs Laboratory (AIPL) calculates predicted transmitting ability (PTA) genetic estimates for cows and bulls. These PTAs include genetic estimates for protein production. Producers can use these PTAs to make genetic selections for protein improvement through their breeding decisions. AIPL does not calculate PTAs for lactose production.

Significant research has been done regarding feeding programs that increase protein production. Herd owners can use the results of this research to modify their feeding programs and increase their herds’ protein production. Very little, if any, research has been done regarding feeding programs that increase lactose production.

Producers have many tools at their disposal to affect protein production but virtually no tools to affect lactose production. Updating the price formulas, including the producer pay price, for dry whey to be based on protein instead of other solids will give dairy producers more incentive to improve their production of milk’s most valuable component, protein.

However, given the recent high prices associated with other solids in producer milk checks, questions are being asked whether the time is right to offer lactose testing as part of the DHI production records programs and AIPL genetic evaluations. The fact that other solids are contributing nearly \$2.00/cwt. to the Class III price has piqued producer interest in how they can affect their other solids production, which could mainly be accomplished by affecting lactose production.

### **Proposed Price Formula Modification**

Assigning the value of dry whey per pound of protein instead of per pound of other solids can be accomplished as follows:

$$(\text{Dry whey price} - 0.1956) \times 1.03 \text{ yield factor} = \text{Other Solids Price}$$

$$\text{Other Solids Price} \times 5.69 \text{ pounds of Other Solids per cwt. in standard milk} = \text{Value of Other Solids per cwt.}$$

$$\text{Value of Other Solids per cwt. divided by 2.99 pounds of true protein per cwt. of standard milk} = \text{dry whey value per pound of true protein}$$

Combining these three formulas results in the following formula:

$$(\text{Dry whey price} - 0.1956) \times 1.03 \times 5.69 \text{ divided by } 2.99 = \text{dry whey price per pound of true protein.}$$

Combined further, the formula becomes:

$$(\text{Dry whey price} - 0.1956) \times 1.96 = \text{Dry whey value per pound of true protein.}$$

The dry whey value per pound of true protein would be added to the protein price derived from cheese. The revised protein price formula would be as follows (**modification in bold**):

$$\text{Protein Price} = ((\text{Cheese price} - 0.1682) \times 1.383) + (((\text{Cheese price} - 0.1682) \times 1.572) - \text{Butterfat price} \times 0.9) \times 1.17) + ((\text{Dry whey price} - 0.1956) \times 1.96).$$

The Other Solids price then becomes 0.

$$\text{Other Solids Price} = 0.$$

Currently the other solids price is used in combination with the protein price to determine the Class III skim milk price using the following formula:

$$\text{Class III Skim Milk Price} = (\text{Protein price} \times 3.1) + (\text{Other solids price} \times 5.9).$$

The revised Class III skim milk price formula would become:

$$\text{Class III Skim Milk Price} = \text{Protein price} \times 3.1$$

### **Impact of NAJ's Proposal**

This proposal was revenue-neutral for federal order average component milk from April 2003 through September 2006. Table 4 in Exhibit \_\_\_\_\_ compares the whey value per hundredweight of milk using actual monthly other solids and protein test data in combination with NASS dry whey prices. This proposal would have resulted in a less than one cent per hundredweight change, on average, to the Class III price up until September 2006. In the months since this proposal was submitted, the previously mentioned record dry whey prices would have resulted in marginally higher Class III prices.

If the answer to the previously posed question regarding the future of whey solids prices is that future prices will be more in line with recent prices, then this proposal lays the ground work for further modifications and flexibility in milk valuation. If in the future it is determined that whey products other than dry whey should be included in FMMO price formulas, this proposal provides the mechanism through which their protein values can be easily incorporated. Having moved whey's value to be protein based, the next steps could include using WPC-34 prices instead of or in addition to dry whey prices. This could lead to WPC-34 prices being included in NASS surveys as well as the inclusion of WPC-34 processing cost data in plant cost surveys.

If lactose prices remain at their recent levels, the value of whey solids could be expanded to be based on a combination of whey protein values using WPC-34 and/or dry whey, and non-protein whey solids values using lactose prices and associated processing costs.

### **Conclusion**

Federal Order Reform in 2000 was designed to price milk to producers in accordance with the value of dairy products purchased by consumers. Thus, the product values for cheese, butter, nonfat dry milk and dry whey are converted to milk component values for butterfat, protein, other solids and nonfat solids to be used in the classified pricing system to determine minimum regulated prices for producers. In the time since Federal Order reform was enacted, the market for whey solids has evolved to the point where today their value is due to their protein content and not lactose content. Therefore, if dry whey remains the product of choice to convert whey solids value to producer pay prices, the formula needs to be updated to be protein based instead of being lactose and ash based. If the industry determines that the value of whey solids should be separated into protein and non-protein values, this proposal provides the framework for that development.