# STAFF TESTIMONY BEFORE THE PENNSYLVANIA MILK MARKETING BOARD COST REPLACEMENT HEARING - MILK MARKETING AREA 5 

March 11, 2019

## Staff Surrebuttal Exhibit 1

Good Morning. My name is Clifford Ackman. As the Statistical Analyst for the Pennsylvania Milk Marketing Board, I collected the information for and produced Staff Surrebuttal Exhibit 1, dealing with the cross-section of milk dealers in Area 5. I have listed these six milk dealers in footnote 3 along with the percentage of sales by those dealers compared to the population of all 39 dealers selling into Area 5. This judgmental sample was selected from available dealers with the largest sales in the area. They account for nearly eighty percent of Area 5's reported milk sales.

The cross-section of dealers used to gather 2017 information has changed from previous Area 5 cost replacement hearings. The closure of Dean's Meadowbrook plant has prompted the Board staff to eliminate the Meadowbrook plant and include Galliker's Dairy in this study.

This Surrebuttal Exhibit offers the cross-section of dealers as presenting a significant portion of all sales into the marketplace. It demonstrates the ratios of controlled product sales by all dealers (the top section of the Surrebuttal Exhibit) and the crosssection dealers (in the lower half of the Surrebuttal Exhibit). This comparison of product sales ratios falls within statistically acceptable limits using the Chi-square goodness of fit test.

I also studied the size and types of deliveries of the cross-section dealers along with the types of customers served by them. As a group, the cross-section dealers serve a variety of customers from small deliveries at schools and restaurants to large deliveries at supermarkets and other dealers using smaller, straight body trucks and tractor-trailers. This reflects all dealer sales into Marketing Area 5.

Based on the amount and type of milk sold by these cross-section dealers, the types of customers and the delivery techniques employed by these listed dealers, I find this cross-section to be representative of all dealers doing business in Milk Marketing Area 5. Their data is used for subsequent Surrebuttal Exhibits.

Good morning. My name is Gary Gojsovich. I am employed by the Pennsylvania Milk Marketing Board as an Audit Supervisor. This morning I will be testifying to Staff Surrebuttal Exhibits 2 through 12.

This is the first cost replacement hearing for two of our Board members. By way of background, the base Order for each milk marketing area calls for annual hearings to receive evidence about annualized and current processing, packaging, and delivery costs for price-controlled packaged products, as well as in-store handling costs, and a reasonable rate of return for milk dealers and retailers.

## Staff Surrebuttal Exhibit 2

Staff Surrebuttal Exhibit 2 provides information about the average weighted cost for processing, packaging and delivering milk for the Area 5 cross-section milk dealers. For each of the major cost centers listed in this Surrebuttal Exhibit, we have matched the expenses associated with the cost center with the volume of milk or other products that flowed through that cost center. The volumes in this Surrebuttal Exhibit are stated in points (where a point equals a quart or quart equivalent). All costs and points are weighted using the sales weighting method. For example, if a dealer has $25 \%$ of their sales in Area 5 then we include $25 \%$ of their costs and $25 \%$ of their points in the Area 5 cost centers.

Staff recommends that the Board replace the costs in the current Order with those costs in Staff Surrebuttal Exhibit 2.

## Staff Surrebuttal Exhibit 3

Staff Surrebuttal Exhibit 3 provides information on the cost of containers for the cross-section dealers. We initially use the costs of the cross-section dealers for plastic containers, paper containers and resin as of April 2018 to calculate weighted cost per units. As has been done in previous hearings, we are using controlled container sales volumes for the previous year. We are therefore pairing current costs with the weighted units sold in the previous year to arrive at the most current weighted cost per unit available. Where the market has both paper and plastic containers, like the half-gallon container, we have provided a combined paper/plastic price. After we established a cost for each container type in Column E, we are updating those April 2018 costs to the costs observed in our most current container surveys in Column F (December 2018). In Column G we are applying factors for container shrinkage. Column H adds the shrinkage factor to the updated container cost in Column F.

Staff recommends that the Board replace the base container costs with those found in Column C and the base weighted units with those found in Column D and continue to update these costs using the audited surveys submitted by the cross-section dealers. Staff also recommends that the Board continue the practice of providing separate plastic and paper half-pint prices through a plastic add-on.

Staff further recommends that the Board replace the current container costs with the container costs found in column E of this Surrebuttal Exhibit.

## Staff Surrebuttal Exhibit 4

Staff Surrebuttal Exhibit 4 provides information on the cost of ingredients added to the various milk products like chocolate powder and sugar used in chocolate milk. This Surrebuttal Exhibit pairs Year 2017 sales activity with April 2018 costs to get current weighted costs.

Staff recommends replacing the current ingredient costs with those found in Staff Surrebuttal Exhibit 4. Staff further recommends the continuance of updating chocolate and sweetener costs quarterly.

## Staff Surrebuttal Exhibit 5

Dealers typically sell off excess bulk milk and cream they are unable to use in their own plants and they will recognize either a profit or a loss on these sales. Dealers also lose small amounts of milk as the milk moves through the plant; this loss is called shrinkage and it has a cost associated with it.

Row 1 shows the calculation for shrinkage cost. Column $G$ shows the weighted costs using the sales weighting methodology.

Rows 2, 3 and 5 show calculations for determining profits and/or losses on diverted or transferred sales of bulk milk and cream. Dealers incur additional costs to process and sell transferred milk and cream (Column E). We add these additional processing costs to the producer costs in Column D to determine if the dealers made a profit or loss on the transactions.

The costs in the top panel are summarized in Column H . We divide these costs by the number of pounds of product sold or manufactured by the dealers (net of purchased packaged products) as represented in Column I. By dividing the costs in Column H by the pounds in Column I we arrive at a weighted cost per pound in Column J.

Staff recommends that the Board use the costs and profits in Staff Surrebuttal Exhibit 5 to replace those in the existing Order.

## Staff Surrebuttal Exhibit 6

Staff Surrebuttal Exhibit 6 summarizes the components of the milk cost prior to the milk going into the container. We are using the most current announced milk prices available prior to the submission date for the Surrebuttal Exhibits. The current fat and skim prices for Class I products are in the top numeric panel of the Surrebuttal Exhibit. In the lower numeric panel we show the actual pounds of the Class I products (Columns A and $B$ ) sold by the cross-section dealers in this Area. We have labeled the columns $A$ through K and show how we arrive at the cost per pound for each of the products in the table.

Staff recommends that the Board continue to use this methodology for establishing the before-bottling costs.

## Staff Surrebuttal Exhibit 7

In Staff Surrebuttal Exhibit 7 we compare the costs and related plant volumes for three significant categories (labor, utilities, and insurance) for the $1^{\text {st }}$ half of Year 2018 with the $1^{\text {st }}$ half of 2017 to update the cost per point from Staff Surrebuttal Exhibit 2. We use bottling points as the denominator for this Surrebuttal Exhibit as they are a good measure of the plants' overall volume or activity. In columns A and B, we list the first halfyear costs for 2018 and 2017 for each of the cost categories. In the next two columns, we list the bottling points for 2018 and 2017 for the first half-year. By dividing the costs by the points in columns $E$ and $F$, we can compare the cost increase or decrease per point in column G.

Staff recommends replacing the first half cost adjustment in the current Order with the adjustment per Staff Surrebuttal Exhibit 7.

## Staff Surrebuttal Exhibit 8

In Staff Surrebuttal Exhibit 8 we update diesel fuel costs from the previous year (Year 2017) by indexing to diesel prices for the most current month (December 2018). Line 1 shows the weighted cost for diesel fuel for the cross-section dealers for Year 2017. Line 2 is the Year 2017 average On-Highway diesel price per gallon as posted by the Energy Information Administration (EIA). Line 3 is the current EIA On-Highway diesel price. Line 4 represents the percentage of change in the diesel price from Year 2017 to the current price. Using the percentage of change on line 4 , line 5 shows the current presumed diesel cost. By subtracting line 1 from line 5 we find the changed diesel cost on line 6. By dividing the changed diesel cost on line 6 by the weighted delivery points of the cross-section dealers, we find the changed cost per point on line 8.

Staff recommends that the Board continue to include this adjustment in the cost replacement process. Staff also recommends that the Board replace the Year 2016 points and costs with the Year 2017 points and costs found in Staff Surrebuttal Exhibit 8.

## Staff Surrebuttal Exhibit 9

Staff has calculated the current heating fuel add-on using the same methodology as in Staff Surrebuttal Exhibit 8 except here we are using Standardization and Pasteurization points and the Pennsylvania Natural Gas Industrial price as posted by the EIA. Staff recommends that the Board continue to include this adjustment in the cost replacement process. Staff also recommends that the Board replace the 2016 points and costs with the 2017 points and costs found in Staff Surrebuttal Exhibit 9.

## Staff Surrebuttal Exhibit 10

The 'cost per points' from Staff Surrebuttal Exhibit 2 for Bottling, Cold Room and Delivery represent overall averages for filling and handling a quart equivalent of product. However, there are efficiencies in filling and handling fluid product in larger sized containers than in smaller sized containers that make it more costly to fill and handle smaller sized containers. In the Bottling cost center, the same amount of product can be filled in less time using half gallon containers than half pint containers. For example, the Statewide cross-section Dealers can fill on average 100 half gallons per minute which equates to 6,400 fluid ounces; whereas they can only fill on average 320 paper half pints per minute which equates to 2,560 fluid ounces. And in the Cold Room and Delivery cost centers where fluid product is handled in plastic milk crates, typically more volume can be handled in a milk crate of larger sized containers than of smaller sized containers. For example, Dealers place nine half gallons in a milk crate which equates to 576 fluid ounces ( $9 \times 64$ ); by comparison they place 50 half pints in a milk crate which equates to only 400 fluid ounces (50 x 8).

To better match the Bottling, Cold Room and Delivery costs with the various container sizes, container efficiency studies were performed at each of the processing cross-section dealers. For each study, the following data was gathered and confirmed: Area 5 specific sales of controlled product by container size for 2017, filling speeds per bottling machine, number of employees working each bottling machine and the number of containers handled in a milk crate.

The Area 5 sales, filling speed and number of employee data were used to calculate the adjustment for Bottling. For each dealer, and for each container size, the Area 5 sales are divided by the applicable filling speed to determine how much time was used to fill those containers for the year. The time for each container is then divided by the total time for all containers to derive percentages. The percentages are then multiplied by total non-labor Bottling costs to determine how much non-labor Bottling costs are allocated to each container size. The same is done for labor Bottling costs with
the only difference being that we multiply the total minutes for each container size by the number of employees working each machine to get weighted minutes. For each container size, the allocated labor and non-labor Bottling costs are combined and compared to the average Bottling costs with the difference between the two amounts being the total Bottling adjustment. The Bottling adjustments for each container size are summed for the Area 5 cross-section Dealers as are the Area 5 sales units; the sum of the adjustment totals is divided by the sum of the Area 5 sales units to derive the Bottling adjustments per Staff Surrebuttal Exhibit 10.

The Area 5 sales and units per crate data were used to calculate the adjustment for Cold Room and Delivery. For each Dealer, and for each container size, the Area 5 sales are divided by the applicable 'units per crate' number to determine how many crates were used to handle those containers for the year. The crates for each container are then divided by the total crates for all containers to derive percentages. The percentages are then multiplied by total Cold Room + Delivery costs to determine how much of those costs are allocated to each container size. For each container size, the allocated Cold Room + Delivery costs are combined and compared to the average Cold Room + Delivery costs with the difference between the two amounts being the total Cold Room + Delivery adjustment. The Cold Room + Delivery adjustments for each container size are summed for the Area 5 cross-section Dealers as are the Area 5 sales units; the sum of the adjustment totals is divided by the sum of the Area 5 sales units to calculate the Cold Room + Delivery adjustments per Staff Surrebuttal Exhibit 10.

The Bottling and the Cold Room + Delivery adjustments for each container size are added to derive the total container efficiency adjustments for each container size.

The container efficiency adjustments were last updated in 2007. The methodology used this time was improved with the following changes: actual sales by Area numbers were used instead of weighted Area sales, and the number of employees per machine was used to weight the Bottling labor costs. Using weighted Area sales resulted in certain container sizes being weighted too heavily or lightly in an Area which flawed the adjustments made then; the use of actual sales by Area numbers corrects this problem. And the use of number of employees to weight the Bottling labor costs results in a better allocation of those costs.

Board Staff recommends that the container efficiency adjustment amounts per the existing order be replaced with those per Staff Surrebuttal Exhibit 10. Board Staff also recommends that the container efficiency adjustments be updated annually during cost replacement by updating the Area 5 controlled sales units and the 'costs per points' used to calculate the adjustments. Filling speed data and 'units per crate' data would not be updated annually.

## Staff Surrebuttal Exhibit 11

Staff Surrebuttal Exhibit 11 summarizes the information from all previous Surrebuttal Exhibits and data from the base Order to arrive at proposed wholesale prices.

Column A is the milk cost from Staff Surrebuttal Exhibit 6 which provides the milk cost per pound. We multiply the milk cost per pound by the number of pounds per container.

Column B lists the container costs from Staff Surrebuttal Exhibit 3.
Column C combines the first half cost adjustment from Staff Surrebuttal Exhibit 7 with the diesel and heating fuel adjustments from Staff Surrebuttal Exhibits 8 and 9. It also includes an adjustment per OGO A-972 for the 'Discount Effect'.

Column D are the container efficiency adjustments per Staff Surrebuttal Exhibit 10.
Column E lists the processing costs from Staff Surrebuttal Exhibit 2.
Column $F$ is the sum of columns $A$ through $E$.
Column $G$ is profit. This percentage profit reflects the profit in the current Order.
Column H is the average price with profit.
Column I removes the average delivery. By removing the average delivery, we arrive at a cost for processing the milk and bringing it to the dock. All milk regardless of its ultimate destination will have the same cost at this point.

Column J adds back the cost of a relatively small high-cost delivery. By adding back the high-cost delivery, we have a price from which applicable discounts can be deducted.

Column K is the sum of Columns $\mathrm{H}, \mathrm{I}$ and J and is our proposed wholesale price.
Column $L$ is the wholesale price under the current cost replacement order.
Column $M$ is the difference between the proposed wholesale price and the current wholesale price.

For Area 5 there are some large variances found in column M in comparing the proposed and current wholesale prices. These variances are mostly attributable to the increase in the processing costs per point (increased from $\$ 0.3033$ per point for Year 2016 to $\$ 0.3238$ per point for Year 2017 for an increase of $\$ 0.0205$ per point) and the changes in the container efficiency adjustments as a result of the update. For example, the container efficiency adjustment for quarts had been $\$ 0.0330$ and is now $\$ 0.0809$ (an increase of $\$ 0.0479$ for quarts).

## Staff Surrebuttal Exhibit 12

Staff Surrebuttal Exhibit 12 provides a methodology for arriving at the retail or out-of-store price for milk.

Column A is the proposed wholesale price from Staff Surrebuttal Exhibit 11.
Column B is the deepest discount from the current general price order.
Column C is the average in-store handling cost from the current general order. This in-store handling cost has been updated monthly by the Consumer Price Index. Staff recommends that the Board continue to employ this form of cost update for the retail price.

Column D reflects the retail profit in the current Order.
Column E is the sum of columns A through D and is the proposed retail or out-ofstore price.

Column F is the most recently announced retail price.
Column G is the difference between the proposed retail price and the current retail price.

Thank you. I'd be happy to answer any questions pertaining to my Surrebuttal Exhibits.

