per-pound basis will allow producers to see clearly what components have the most value, a result which plainly fits the goal of encouraging producers to produce those components which have the highest value in the marketplace. Per-pound pricing also makes clear to producers that it is the pounds of components that result in payment, rather than the percentages of those components in milk. Producers would be better able to look at the cost of producing pounds of components, and compare those costs with possible returns. Application of a neutral zone would discourage producers from increasing protein production marginally unless such an increase would raise the protein level above the neutral range.

North Dakota Milk Producers Association objected that the reliability of testing and questions about the variance of components on a day-to-day basis would make the recommended pricing plan inaccurate. There is nothing in the record of this proceeding that provides a basis for concern about the ability of the market administrators and handlers in these marketing areas to test milk for the components that will be priced under this decision. In fact, the record indicates that producers currently are being paid on the basis of the component content of their milk.

a. *Protein.* The protein price for milk pooled under the five north central Federal milk orders should be calculated by multiplying the monthly average of 40-pound block cheese prices on the Green Bay Cheese Exchange by 1.32, without including a value for whey protein.

No opposition was expressed at the hearing to pricing protein on the basis of its value in the manufacture of cheese. The differences between participants came in determining the appropriate level of the protein price.

A proposal submitted and supported by National All-Jersey, Inc. (NAJ), and supported by a number of cooperative associations and other dairy organizations, would calculate the protein price in two parts: (1) Multiply the National Cheese Exchange monthly average 40-pound block cheese price by 1.32, and (2) add the monthly average whey protein concentrate price multiplied by .735. The sum of these two values would equal the protein price.

The NAJ proponent witness explained that one of the objectives of the NAJ proposal was to establish a protein price that was high enough to give producers an incentive to produce protein. He added that a second objective was to determine the protein price from market forces rather than as a residual value, as is used in other Federal orders. The witness explained that the 1.32 factor used in the NAJ proposal comes from the modified Van Slyke cheese yield formula that is commonly used by the industry. The 1.32 factor represents the pounds of 38-percent moisture Cheddar cheese obtained from one pound of protein with 75 percent of the protein going into the cheese.

The witness gave four reasons for using the National Cheese Exchange 40pound cheddar block price (block price): (1) The majority of the cheese in the five Federal orders is priced using the block price as the base price, (2) the block price is used in determining the somatic cell adjustment in the Eastern Ohio-Western Pennsylvania, Indiana, and Ohio Valley orders, as well as being used in the determination of the Class 4b price in California, (3) since there is over twice as much American cheese manufactured in blocks as is made in barrels, and the Wisconsin assembly point barrel cheese price is within one cent of the block price, the block price represents a minimum cheese price, and (4) the protein price determined pursuant to this proposal gives a greater incentive to producers to produce protein and is more equitable to handlers and producers than the (lower) protein price contained in the other proposals.

The NAJ witness continued by explaining that the proposal included the value of whey protein in the protein price so that all of the protein in the milk would be accounted for. As explained by the proponent witness, the .735 factor was determined by dividing 25 percent, which is the protein left in whey after making cheese, by 34 percent, which is the percent of protein in whey protein concentrate. The resulting value, .735, is multiplied by the monthly average 34% whey protein concentrate price to yield the whey contribution to the protein price. The witness stated that the whey protein concentrate price was selected because it is a better indicator of the value of the protein contained in whey than is dry whey or animal feed whey.

An economist supporting the NAJ proposal testified that even though the butterfat price is determined at its marginal value, that is, the value of butterfat in butter, the protein price should be determined by the value of protein in the most common use of protein in the five markets included in this proceeding. The witness pointed out that the most common use of protein is in the manufacture of cheese, with 85.9 percent of the milk marketed in 1992 in Wisconsin being used in the manufacture of cheese. The witness testified that the appropriate cheese price to be used in computing the protein price was the block price because it is a "conservative estimate of the price actually received for block cheddar cheese." The witness went on to explain that the reported block price is closer to what manufacturing plants receive for barrel cheese than is the reported barrel price because when the customary premiums are added to the reported barrel cheese price the result is approximately equal to the block price.

The academic NAJ witness reiterated the NAJ position that the value of whey protein should be included in the protein price because the total value of the protein in producer milk would thus be reflected in the protein price, giving producers an incentive to produce more protein.

A witness for Central Milk Producers Cooperative (CMPC) explained that the CMPC proposal would use the monthly average Green Bay Cheese Exchange barrel price (barrel price) instead of the block price, and would not include the value of whey protein. The witness for CMPC testified that the barrel price better represents the value of cheese than the block price because there is a greater volume of trading in barrel cheese than in block cheese. The resulting protein price would be lower than the protein price computed under the NAJ proposal. A witness for CMPC explained that their proposed protein price was based on the understanding that Federal order prices are minimum prices, and that the CMPC proposal, using the barrel cheese price and not including a value for whey protein, would result in a minimum price for protein.

The CMPC protein price proposal was supported at the hearing by other hearing participants, including National Farmers Organization (NFO), Kraft, Inc., Galloway Co., Wisconsin Cheese Makers Association (WCMA), National Cheese Institute (NCI), Farmers Union Milk Marketing Cooperative (FUMMC), and the Trade Association of Proprietary Plants (TAPP). A witness for NCI explained that if the protein price is set at too high a level, cheese manufacturers would experience a declining gross margin as the price for protein increases above the return the plant can obtain from additional protein. He explained that this would be the case with the protein price as proposed by NAJ, but not with the NCI and CMPC proposed protein price.

Other witnesses supporting a lower protein price than that proposed by NAJ explained that protein should not be priced at a high level because the higher